

Archaeological Desk-Based Assessment
in advance of the Proposed Development at
Hurstwood Garages, Hurstwood Avenue, Erith

NGR: TQ 51450 76640



Report for Peter Taylor Associates Limited

Date of Report: 03/08/2016

SWAT. ARCHAEOLOGY

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**Archaeological Desk-Based Assessment in Advance of the Proposed Development
at Hurstwood Garages, Hurstwood Avenue,
Erith, DA8 3QA**

NGR: TQ 51450 76640

1 SUMMARY

Swale & Thames Survey Company (SWAT Archaeology) has been commissioned to carry out an archaeological desk-based assessment in advance of the proposed residential development at Hurstwood Garages, Hurstwood Avenue, Erith as part of the planning application submitted by Peter Taylor Associates Limited.

This Desk Based Assessment examines the wide variety of archaeological data held by Kent County Council and other sources.

Based on this data the potential for archaeological sites either on or in the near vicinity of the proposed development can be summarised as:

- *Prehistoric: High*
- *Iron Age: Low*
- *Romano-British: Low*
- *Anglo-Saxon: Low*
- *Medieval: Low*
- *Post-medieval: Low*
- *Modern: High*

The Desk Based Assessment concludes that:

- *At least 50% of the site has been quarried and on the remaining area there is moderate potential for archaeological discoveries,*

- *The PDA is located in Erith, which is a district of the London borough of Bexley in South East London. It is situated south of the River Thames north east of Bexleyheath and north west of Dartford. It lies in an area of urban development that was once subject to the agriculture of orchard and hops and quarrying. The plot forms just under an acre of hard-standing with garages to the perimeter and is surrounded on all sides by medium to high-density residential housing (Fig.1).*

2 INTRODUCTION

SWAT Archaeology has been commissioned by Peter Taylor Associates Limited to carry out an Archaeological Desk-Based Assessment to supplement a planning application for the proposed residential development at Hurstwood Garage, Hurstwood Avenue, Erith, DA8 (Figure 1). The report has accessed various sources of information to identify any known heritage assets, which may be located within the vicinity of the Proposed Development Area. The PDA is centered on National Grid Reference: TQ 51450 76640.

Archaeological investigations, both recent and historic have been studied and the information from these investigations has been incorporated in to the assessment. This report is a desk-based appraisal from known cartographic, photographic and archaeological sources and is a research led statement on the archaeological potential of the proposed development.

It may be that intrusive investigations, such as a Geophysical Survey and/or an Archaeological Evaluation, with machine cut trial trenching, may be requested by the Local Planning Authority (LPA) as a Planning Condition.

The site is in an Archaeological Priority Area (DLO37067) that relates to concentrations of Palaeolithic deposits and artefacts recovered from brick earth and clay pits in the Crayford area. The Palaeolithic landscape is thought to consist of chalk cliffs to the west and a sandy beach and river to the east and the remains from

this area are of local, regional and national significance. Most of the flint remains that have been found in situ have been discovered within the lower brick earth at a depth of possibly 7-10 metres below present ground surface.

At Perry Street an Iron Age/Romano-British site was excavated in the 1970's revealing enclosures, post built structures and large number of pits containing domestic pottery and artefactual assemblages.

A Watching brief carried out in 2006 by CGMS Consulting at Bridge Road revealed tree boles, probably from an orchard, dating to the 19/20th century (ELO7012) which is consistent with the agricultural use of the area prior to 1939. In 2010, a watching brief carried out by Pre-Construct Archaeology at North End Road revealed the cellar of a 20th century public house (ELO11786).

The east of the PDA was functioning as a clay pit from at least 1909 which may have caused the destruction of any archaeological features or deposits, however, the west section of the PDA remained orchard until at least 1939 and although by 1960 it was developed into hard standing and garages it may still retain moderate potential for the survival of archaeological features and deposits.

2.1 Geology and Topography

The Geological Survey of Great Britain (1:50,000) shows that to the west of the PDA is Bedrock Geology of Thanet formation – sand, a sedimentary bedrock formed approximately 56 to 59 million years ago in the Paleogene period in a local environment previously dominated by shallows seas.

These rocks were formed in shallow seas with mainly siliciclastic sediments (comprising of fragments or clasts of silicate minerals) deposited as mud, silt, sand and gravel.

To the east of the PDA is a bedrock of Seaford Chalk Formation And Newhaven Chalk Formation (undifferentiated) – Chalk, a sedimentary bedrock formed approximately 71 to 89 million years ago in the Cretaceous Period in a local environment previously dominated by warm chalk seas.

These rocks were formed in warm, shallow, chalk shelf seas with little sediment input from land. They often consist of a calcareous ooze of the microscopic remains of plankton, especially the disc shaped calcite plates or coccoliths that make up the spherical coccolithophores.

Superficial deposits of Crayford Silt Member - Clay And Silt, formed up to 2 million years ago in the Quaternary Period the eroding transporting and depositing of sand and silt-sized material - wind blown deposits.

The PDA sits at an average height of 72.18ft (21.9m) AOD.

2.2 Planning Background

The National Planning Policy Framework (March 2012)

Policy 12 is the relevant policy for the historic environment:

2.2.1 Conserving and Enhancing the Historic Environment

Local planning authorities should set out in their Local Plan a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. In doing so, they should recognise that heritage assets are an irreplaceable resource and conserve them in a manner appropriate to their significance. In developing this strategy, local planning authorities should take into account:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;
- the desirability of new development making a positive contribution to local character and distinctiveness; and
- opportunities to draw on the contribution made by the historic environment to the character of a place.

2.2.2 In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation (NPPF 2012).

2. Vision for Bexley and Spacial Objectives

15. Give high priority to conserving and enhancing Bexley's heritage assets and the wider historic environment, all of which contribute to the borough's distinctiveness, including its archaeology and geology.

4. Managing the Built Environment

Policy CS17 Justification

4.8.10 The natural environment, and particularly our open spaces and waterways are also rich sources of biodiversity and archaeology. Back land areas in the borough include gardens and incidental open space. They should normally be excluded from development where developments results in harm to amenity and biodiversity. Further details in this respect will be set out in future policy documents, such as a development plan document that deals with detailed sites and policies.

4.10. Heritage & Archaeology

4.10.2 Archaeology, specifically the remains below the ground, provides evidence of the evolution of development and settlements in this area. All remains are unique and represent a finite and non-renewable resource.

4.10.10 The Council will seek opportunities to support the identification of heritage assets in the borough, as well as supporting restoration of historic assets, for example, through grants from the Historic Building Fund and support of Bexley Heritage Trust and similar organisations. There are also a number of specific projects being undertaken in the borough to preserve and enhance our heritage and archaeology, including works to Crossness Pumping Station involving various partners to create a museum.

Policy CS19 Heritage & Archaeology

The Council will manage its heritage and archaeological assets, whilst seeking opportunities to make the most of these assets, including adapting to and mitigating the effects of climate change. This will enhance the local sense of place and underpin the revitalisation and development of the borough, including promoting the visitor economy. This will be achieved by:

- a) promoting the borough's heritage assets, such as Danson Mansion, Hall Place and Gardens, Crossness Beam Engine House and Red House;
- b) reviewing the status of existing and identifying new heritage and archaeological assets;
- c) conserving and enhancing the significance of heritage assets, their setting, and the wider historic environment, including statutorily listed buildings; locally listed buildings of architectural or historic interest, conservation areas, registered parks and gardens, and archaeological sites;
- d) protecting heritage assets from development that is likely to adversely impact on the significance, integrity, character or appearance of an asset or its setting;

- e) supporting historic restoration schemes through partnership working and seeking funding to enhance heritage and archaeological assets in an appropriate and sympathetic manner; and
- f) retaining, in situ, archaeological evidence within sites, wherever possible.

Where archaeological evidence cannot be retained, the appropriate levels of archaeological investigation and recording should be undertaken prior to the redevelopment of the site.

This Archaeological Desk-Based Assessment has been prepared in accordance with the guidance in the National Planning Policy Framework and the Good Practise Advice notes 1, 2 and 3, which now supersede the PPS 5 Practise Guide, which has been withdrawn by the Government. The Good Practise Advice notes emphasises the need for assessments of the significance of any heritage assets, which are likely to be changed, so the assessment can inform the decision process. Significance is defined in the NPPF Guidance in the Glossary as “the value of the heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic, or historical. Significance derives not only from a heritage asset’s physical presence, but also it’s setting”. The setting of the heritage asset is also clarified in the Glossary as “the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve”.

This Desk-Based Assessment therefore forms the initial stage of the archaeological investigation and is intended to inform and assist in decisions regarding archaeological mitigation for the proposed development and associated planning applications.

2.3 The Proposed Development

The proposed development will comprise of a planning application for residential development with associated parking, access roads and landscaping.

2.4 Project Constraints

No project constraints were encountered during the data collection for this assessment.

3 AIMS AND OBJECTIVES

3.1 The Desk-Based Assessment was commissioned by Peter Taylor Associates Limited in order to supplement a planning application for the proposed residential development at Hurstwood Garages, Hurstwood Avenue, Erith, DA8 3QA (TQ51450 76640), to establish the potential for archaeological features and deposits.

3.2 Desktop Study – Institute for Archaeologists (revised 2011)

This desktop study has been produced in line with archaeological standards, as defined by the Institute for Archaeologists (2014). A desktop, or desk-based assessment, is defined as being:

“a programme of study of the historic environment within a specified area or site on land, the inter-tidal zone or underwater that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets and, in England, the nature, extent and quality of the known or potential archaeological, historic, architectural and artistic interest. Significance is to be judged in a local, regional, national or international context as appropriate”. (CiFA 2014)

4 METHODOLOGY

4.1 Desk-Based Assessment

4.1.1 Archaeological Databases

The local Historic Environment Record (HER) held at Historic England provides an accurate insight into catalogued sites and finds within both the proposed development area (PDA) and the surrounding environs of Bexley.

The Archaeology Data Service Online Catalogue (ADS) was also used. The search was carried out within a 500m radius of the proposed development site and relevant HER data is included in the report. The Portable Antiquities Scheme Database (PAS) was also searched as an additional source as the information contained within is not always transferred to the local HER.

4.1.2 Historical Documents

Historical documents, such as charters, registers, wills and deeds etc., were considered not relevant to this specific study.

4.1.3 Cartographic and Pictorial Documents

A cartographic and pictorial document search was undertaken during this assessment. Research was carried out using resources offered by Kent County Council, the Internet and Ordnance Survey Historical mapping (Figs. 3-9).

Map Regression 1867 - 1994

In the OS Map of 1865 the PDA forms part of fields 75 and 80, which are predominately orchard or hop. The farmyard is adjacent and to the north and is surrounded by fields, traversed by roads, leading to North End village to the southeast and to small clusters of dwellings and a nursery to the northeast. The village has two Beer Houses - Happy Home and Harrow (Fig.3)

In the OS Map of 1897 the fields have been redesignated and the PDA forms part of field 77 of 'Normandy Farm'. The footpath is still insitu but a clay pit has opened in

the eastern field complete with engine house and access routes. 'Myrtle Farm' is across the road to the northeast and has also opened a large quarry. The nursery that was further northeast has also been replaced by rows of terraced cottages. North End village has been redeveloped into a neat row of houses and glasshouses flanking the high street and the 'beer houses' have disappeared (Fig.4).

In the OS Map of 1909 the clay pit has been extended west and south so that it encompasses the east section of the PDA. Tramways have been installed and one enters into the PDA from the east boundary. Myrtle farm quarry has the addition of an access road and small buildings and a third quarry has opened to the far southeast. A school has appeared adjacent to the northeast houses (Fig.5).

In the OS Map of 1933 the clay pit of Normandy Farm is no longer in operation and is marked as rough pasture, but a new extension to the south has been opened up. The quarry to the southeast has also been extended but is also marked as rough pasture. Several buildings have been added to the quarry at Myrtle farm. The road running through North End village has been named road North End Road (Fig.6).

In the OS Map of 1939 the southern extension of the clay pit is being worked. The buildings have been extended at Myrtle Farm and the village has features of modern development. Electricity pylons run across the fields and a telephone box has been installed. A new public house and letterbox have also appeared (Fig.7)

In the OS Map of 1958-61, the area to the west of the PDA has been almost completely developed into a medium density housing estate. The PDA lies now within an area designated as a recreation ground. The western section has been developed into garages to serve the nearby housing estate. To the east, part of the clay pit is still insitu. Myrtle farm has been developed into medium density housing and the clay pit now houses a depot. North End village has undergone significant development to the east side of North End Road. The school is now named Crayford, North End county primary school (Fig.8 & 9).

In the OS Map of 1969 the eastern section of the PDA has been developed into garages to serve the nearby housing estate. There has been further housing development to the south of the recreation ground, Myrtle Farm has been further extended and is now North End trading estate, and a large building 'Orchard House' and garages has appeared adjacent to the school (Fig.10 & 11).

In the OS map of 1981-85, the area that was once Myrtle Farm has been developed into a small housing estate set around Myrtle Close (Fig.12).

In the OS map of 1990-92, the recreation ground to the east of the PDA has been entirely developed into Drummond Close, a high-density housing estate (Fig.13 & 14).

4.1.4 Aerial Photographs

The study of the collection of aerial photographs held by Google Earth was undertaken. In 1940 the PDA is surrounded by fields of orchard or hop; the northwest section part of the field subject to the agricultural process of orchard or hop growing, the southern section a clay pit. By 1960 the PDA is surrounded to the north and west with a medium density housing estate. The northwest section of the PDA has been developed into garages to serve the nearby houses and the east section forms part of the open ground that was once the quarry. By 2003 the PDA is surrounded on all sides by a medium density housing estate and has now been entirely developed into garages for the near by houses. In 2016 there has been very little change.

4.1.5 Geotechnical Information

To date, no known geotechnical investigations have been carried out at the site.

4.1.6 Secondary and statutory resources

Secondary and statutory sources, such as regional and periodic archaeological studies, landscape studies; dissertations, research frameworks and websites are considered appropriate to this type of study and have been included within this assessment where necessary.

5 ARCHAEOLOGICAL AND HISTORICAL DEVELOPMENT

5.1 Introduction

Prehistoric	Palaeolithic	c. 500,000 BC – c.10,000 BC
	Mesolithic	c.10,000 BC – c. 4,300 BC
	Neolithic	c. 4,300 BC – c. 2,300 BC
	Bronze Age	c. 2,300 BC – c. 600 BC
	Iron Age	c. 600 BC – c. AD 43
Romano-British		AD 43 – c. AD 410
Anglo-Saxon		AD 410 – AD 1066
Medieval		AD 1066 – AD 1485
Post-medieval		AD 1485 – AD 1900
Modern		AD 1901 – present day

Table 1 Classification of Archaeological Periods

The Archaeological record within the assessment area is diverse and should comprise possible activity dating from one of the earliest human period in Britain through to the post-medieval period. The geographic and topographic location of Margate is within a landscape that has been the focus of trade, travel and communication since the Neolithic.

This section of the assessment will focus on the archaeological and historical development of this area, placing it within a local context. Each period classification

will provide a brief introduction to the wider landscape, followed by a full record of archaeological sites, monuments and records within the site's immediate vicinity. Time scales for archaeological periods represented in the report are listed on the previous page in **Table 1**.

5.2 History of the site

The name Erith is believed to be derived from the Saxon '*Ærre hyðe*' meaning 'old haven', 'muddy harbour' or 'gravelly landing place' relating to its position to the south of the River Thames.

Erith has been occupied from the earliest point of human history. The Palaeolithic landscape is thought to consist of chalk cliffs to the west and a sandy beach and river to the east. A Palaeolithic 'Occupation site', a 'Lithic working site', a 'Kill site' with mammoth bones and several examples of flint tools have been discovered in the local quarries. Eleven Mesolithic 'tranchet' axes and two flint artifacts were found close to the River Thames evidencing continued occupation.

The Museum of London Archaeology has revealed that during the Neolithic period, the area was once covered in a dense forest of Oak, Yew and Alder and Neolithic discoveries of two beakers, a polished flint axe-head, a scraper and a boat testify to continued settlement. By the Bronze Age the forest had changed to sedge fen or transitional bog, and Bronze Age and Iron Age coins, a socketed axe and traces of a substantial community or farmstead, dating from the first century AD, have also been found.

In the 5th century Roman rule ended and Saxon invaders claimed Erith along with all of Kent. The pattern of settlement changed; a network of villages occupied by warriors and farmers replaced the old Roman bureaucrats' estates. It is believed that St John the Baptist Church is located on the site of an Anglo-Saxon Church established there at this time. The early settlement would have been based around the church and Erith may have been located west of its current location.

The earliest reference to Erith is in 695 AD recording a grant of land by the Bishop of the East Saxons. It is later recorded in the Domesday Survey of 1086. Following the

Norman Conquest in the 11th century, Erith passed into the possession of Bishop Odo, the Earl of Kent, Bishop of Bayeux and half-brother of William the Conqueror. In 1315, Erith received the grant of a Royal Charter for a market to be held every Thursday but by 1776 the market had long been discontinued. In the 14th century the 'Peasants Revolt' was lead locally by Abel Ker of Erith, who burst into Lesnes Abbey and forced the Abbot to swear an oath to support them before marching to Maidstone to join Wat Tyler.

During the Medieval period Erith prospered from its proximity to the Thames and its function as a small riverside port. King Henry VIII opened a naval dockyard where the current Riverside Gardens are now located and in 1515 the famous warship 'Henri Grace a Dieu', also known as 'Great Harry', the largest and most powerful warship in Europe, was fitted out there. The development of the dockyard is believed to be responsible for the movement of the centre of Erith from around St Johns Church to its present location.

The port continued to be popular until the 19th century and ships often discharged cargo here to reduce their displacement before entering the shallows further upstream.

The Abbot of Lesnes Abbey was an important local landlord and took a leading role in draining the marshland. The cost of the drainage and maintaining the river embankments caused chronic financial difficulties and Cardinal Wolsey closed the abbey in 1525.

In 1797, Edward Hasted described Erith as "consisting of one small street of houses, which leads to the water side" and mentions two annual fairs, at Ascenceion and Michealmas. By 1840, Erith was described as being "composed chiefly of two streets, one leading down to the water side, the other branching off to the left towards the church". The construction of Erith railway station in 1849 encouraged the settlement of wealthy London residents and Erith became a popular riverside resort, where pleasure boats and the railway brought day-trippers to see the pier. Between 1874 and 1902 the population rose from 2,000 to 25,000.

The Victorian era brought industrial development, the formation of the Erith Iron Works in 1864 and a large cable works in 1881 and engineering became an important local industry, particularly for the production of armaments and cables. This continued into World War I with the manufacture of guns and ammunition. The factories that made it so successful also made it a target and during World War II it was heavily bombed.

In the 1960s, the residual bomb damage and the gradual decline in local trade prompted the clearing all sub-standard housing and the development of new housing and roads that could accommodate more cars. The demolition of the old town resulted in the loss of many historical buildings. Queen's Church, Cross Keys Public House, the Police Station, the Library and Christ Church remain. Christ Church is a Grade II listed building known for its rare murals. A few of the Victorian buildings remain; the White Hart in the High Street and St John's Church in West Street.

5.3 This section of the assessment will focus on the archaeological and historical development of this area, placing it within a local context. Each period classification will provide a brief introduction to the wider landscape (500m radius centered on each site of the PDA), followed by a full record of archaeological sites, monuments and records within the site's immediate vicinity. Time scales for archaeological periods represented in the report are listed on page 25 in **Table 1**.

A preliminary review of the cultural heritage data shows that the site has **low** archaeological potential.

5.4 Scheduled Monuments; Listed Buildings; Historic Parks & Gardens and Conservation Areas

No events, monuments listed buildings, or findspots are recorded within the confines of the proposed development area (PDA). Ten monuments, one listed building and six findspots are recorded within a c.500m vicinity of the PDA; No Listed buildings share intervisibility with the PDA.

The report has accessed various sources of information to identify any known heritage assets, which may be located within the vicinity of the Proposed Development Area. Archaeological investigations, both recent and historic have been studied and the information from these investigations has been incorporated in the assessment.

6. ARCHAEOLOGICAL POTENTIAL

6.1 Palaeolithic, Mesolithic, Neolithic and Bronze Age

The Palaeolithic represents the earliest phases of human activity in the British Isles, up to the end of the last Ice Age. Palaeolithic dated material occurs in north and east Kent, especially along the Medway and Stour Valleys. The Crayford Brick earths have proved to be rich in archaeological deposits, and so have been designated an Archaeological Priority Area (DLO37067), c.200m north. Several Palaeolithic tools have been found in the local vicinity; flakes and nodules (MLO23113), a blade (MLO8468), an axe (MLO6847) and a knife (MLO13156). A 'kill site' and 'lithic working site' (MLO102867) and an 'occupation site' (MLO8290) are also within the assessment area.

The Mesolithic period reflects a society of hunter-gatherers active after the last Ice Age. The Kent HER has no record of archaeological evidence from this period within the assessment area.

The Neolithic period, the beginning of a sedentary lifestyle based on agriculture and animal husbandry, is represented within the assessment area. There is one record in the Kent HER for the Neolithic period; a flint dagger, Danish type II (MLO8470).

The Bronze Age was a period of large migrations from the continent and more complex social developments on a domestic, industrial and ceremonial level. There are no records in the Kent HER within the assessment area for this period.

The area is known for its prehistoric settlement and for the survival of features and deposits within the brick earth. The potential for finding remains that date prior to this period within the confines of the proposed development is therefore considered **high**.

6.2 Iron Age

The Iron Age is, by definition a period of established rural farming communities with extensive field systems and large 'urban' centres. The GL HER has one record, within the assessment area, dating to the late Iron Age period, which is shared with the Roman period (*). Fragments of Belgic ware and grooved ware and a Mortarium rim dish have been within the assessment area (MLO10944*). Therefore the potential for finding remains that date to this period within the confines of the development site is considered **low**.

6.3 Romano-British

The Romano-British period is the term given to the Romanised culture of Britain under the rule of the Roman Empire, following the Claudian invasion in AD 43, Britain then formed part of the Roman Empire for nearly 400 years.

The predominant feature of the Roman infrastructure within the South-East is arguably the extensive network of Roman roads connecting administrative centres: the towns to military posts and rural settlements (villas, farmsteads and temples) increasing the flow of trade, goods, communications and troops. Canterbury or *Durovernum Cantiacorum* was a major town of the Roman province of Britannia and the regional capital.

There is one record relating to this period within the assessment area, which is shared with the Iron Age period (*). Fragments of Belgic ware and grooved ware and a Mortarium rim dish have been found within the assessment area (MLO10944*). Therefore, the potential for finding archaeological features or deposits from this period is considered **low**.

6.4 Anglo-Saxon

There are no records dating to the Anglo-Saxon period within the assessment area. Therefore, it is reasonable to conclude that the potential for finding remains dating to the Anglo-Saxon period in the PDA is considered as **low**.

6.5 Medieval

There are no records dating to the Medieval period within the assessment area. Therefore the potential for finding remains dating to the Medieval period is considered as **low**.

6.6 Post Medieval to Modern

The PDA is on the site of a post medieval quarry (DLO73067) shown on the OS map of 1897 and the Post Medieval period is largely represented by landfill sites (MLO72465/LMO72467/MLO72470/MLO72471/MLO72472). One record dates from the post medieval to modern period; the remains of a cellar of a public house found under the site of Harrow public house (MLO103972).

The modern period is represented by a locally listed building 'North Wode' in Collyers Road; a detached 1930's vernacular house (MLO10626).

The environment around the PDA was largely agricultural prior to 1865 however no farmsteads have survived.

The potential for finding remains dating to the post-medieval to modern period is therefore considered as **high**.

There are no undated records.

6.7 Summary of Potential

The desk-based assessment has considered the archaeological potential of the site but this potential can only be tested by fieldwork. Research has shown that the PDA has been the site of a quarry which will have destroyed about 50% of the site. The remaining area may contain archaeological sites and these can be summarised as:

- Prehistoric: **High**
- Iron Age: **Low**
- Roman: **Low**
- Anglo-Saxon: **Low**
- Medieval: **Low**
- Post-Medieval and Modern: **High**

7. IMPACT ASSESSMENT

7.1 Introduction

Cartographic Regression, Topographical Analysis, and Historic Research have provided evidence for the historic use of the site. By collating this information we have assessed the impact on previous archaeological remains through the following method of categorisation:

- **Total Impact** - Where the area has undergone a destructive process to a depth that would in all probability have destroyed any archaeological remains e.g. construction, mining, quarrying, archaeological evaluations etc.
- **High Impact** – Where the ground level has been reduced to below natural geographical levels that would leave archaeological remains partly in situ either in plan or section e.g. the construction of roads, railways, buildings, strip foundations etc.
- **Medium Impact** – Where there has been low level or random disturbance of the ground that would result in the survival of archaeological remains in areas undisturbed e.g. the installation of services, pad-stone or piled foundations, temporary structures etc.

- **Low Impact** – Where the ground has been penetrated to a very low level e.g. farming, landscaping, slab foundation etc.

7.2 Existing Impacts

7.2.1 Cartographic regression (4.1.3), Topographic analysis (4.1.4) and Historical research (5.2) indicate that the site has largely been the subject of agriculture, but at some time between 1865 and 1897 the eastern part of the site was developed into a clay pit including the construction of an engine house and tram ways and in the modern period was developed into garages. Therefore, previous impacts to archaeological remains from construction are considered to be **high** in this area.

7.2.2 Agriculture became gradually more intense over time and by the modern era it was mechanised. Although the farming process rarely penetrates below the upper layers of the ground, plough truncation can have a significant impact on preserved shallow deposits. The site is within an enclosure that was once subject to agricultural use, however, the eastern part of the site has been used as a clay pit and later developed into garage in the modern period. Therefore the residual impact of the agricultural process is considered to be **low**.

7.3 Proposed Impacts

7.3.1 The general development of the site

At the time of preparing this archaeological assessment, the extent of the proposed development was for the construction of residential housing, associated access roads and landscaping.

7.3.2 The very nature of construction can have a negative impact on below ground deposits through the movement of plant, general ground disturbance and

contamination and excavation. Therefore, extensive impact can be expected within the development area once construction begins.

7.3.3 With due consideration to the impacts sited above the following is an assessment of the specific impacts and their relation to this development:

- Ground contamination from the storage and use of materials may have an adverse effect on soil sampling and recording of shallow deposits – **Medium impact**
- Ground vibration, weight displacement and surface disturbance from the movement and use of plant and machinery may cause disruption of shallow features and deposits – **Medium impact**
- Ground penetration from the erection of access equipment, barriers etc. could result in isolated damage to shallow features and deposits – **Medium impact**
- Landscaping may result in the displacement of shallow features and deposits – **Medium impact**
- Ground stripping and levelling could remove shallow deposits and features and leave the archaeological horizon open to damage or destruction from the foot, plant or vehicle traffic – **High impact**
- Trenching for the installation of services may involve the removal of shallow deposits or features and further damage the archaeological horizon sited immediately below or neighbouring archaeology – **High impact**
- The excavation of the foundations may result in the entire removal of the archaeological feature or deposit from a localised area, subsequently intruding on related neighbouring archaeology – **High impact**
- The long-term effect of the development will be in the new use of the site and changes resulting therein. In this case the possibility of higher foot and vehicular traffic to the site – **Low impact**

7.4 Proposed mitigation for the impact of the construction process

The adherence to the general requirements required by HSE to increase safety, reduces risk and lessens the impact of the construction process.

8. MITIGATION

The purpose of this archaeological desk-based assessment was to provide an assessment of the contextual archaeological record, in order to determine the potential survival of archaeological deposits that may be impacted upon during any proposed construction works.

The assessment has generally shown that the area to be developed is within an area of **moderate** archaeological potential.

9. OTHER CONSIDERATIONS

Setting of Listed Buildings

One of the tasks of the site visit was aimed to identify any designated heritage assets within the wider context of the PDA in accordance with *The Setting of Heritage Assets – English Heritage Guidance* (English Heritage 2011). This guidance states that “*setting embraces all of the surroundings (land, sea, structures, features and skyline) from which the heritage asset can be experienced or that can be experienced from or with the asset*” (The Setting of Heritage Assets, English Heritage 2011).

There is one locally listed building within the assessment area. ‘North Wode’ in Collyers Lane (DLO33467) is a 1930s vernacular style house from a period that is well represented in the Borough (Plates 3-6).

9.1 Archive

Subject to any contractual requirements on confidentiality, two copies of this desk-based assessment will be submitted to Bexley Council within 6 months of completion.

9.2 Reliability/Limitations of Sources

The sources that were used in this assessment were, in general, of high quality. The majority of the information provided herewith has been gained from either published texts or archaeological 'grey' literature held at Historic England, and therefore considered as being reliable.

9.3 Copyright

Swale & Thames Survey Company and the author shall retain full copyright on the commissioned report under the Copyright, Designs and Patents Act 1988. All rights are reserved, excepting that it hereby provides exclusive licence to Peter Taylor Associates Limited for the use of this document in all matters directly relating to the project.

Paul Wilkinson PhD., MCifA., FRSA.

3rd August 2016

10 REFERENCES & BIBLIOGRAPHY

IFA (2014) STANDARD AND GUIDANCE for historic environment desk-based assessment.

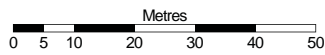
National Planning Policy Framework 2012.

Data provided by Greater London HER

APPENDIX 1 ARCHAEOLOGICAL SITES

KHER Ref	Type	Location	Period	Description
DLO37067	Archaeological priority area	c.500m	Prehistoric	Crayford brick earths
ELO11786	WB	c.500m	Modern	2010- preconstruct archaeology, north end road, 20 th century feature, negative.
ELO5087	DBA	c.500m		2012, Lana road , CGMS consulting
ELO6873	DBA	Bridge road, c.500m		2006
ELO7012	WB	c.500m	Modern	2006-Bridge Road, tree holes/orchard 19/20 th century, CGMS consulting
ELO8563	DBA	Crayford, Erith and Bexley, c.500m		1999- Wessex archaeology
DLO33467	LLB	c.500m	Modern	2006- House c.1930 500mW
071625/00/00-MLO72308	Monument	c.300mNE	N/A	56 Pearswood Road-Chalk pit
MLO100629	LLB	c.500mW	Modern	North wood, collyers road, detached 1930's house
071705/00/00-MLO72465	Monument	c.500+mE	Post medieval	Cray dene road, landfill site
070565/00/00-MLO8470	Find spot	c.500mW	Neolithic	Crayford, flint dagger, Danish type 2
070421/00/00-MLO6841	Find spot	c.500m	Prehistoric	Crayford brick earths, five flints, knives
070448/00/00-MLO23113	Monument	c.500mW	Palaeolithic	Crayford road, 3 flakes and nine pieces from same nodule found 1913
071707/00/00-MLO72467	Monument	c.100mE	Post medieval	Drummonds close, land fill site
070580/00/00-MLO10944	Find spot	c.500m	Late iron age-roman	Erith fragments of Belgic wear and grooved wear, mortarium rim dish
070561/00/00-	Find spot	c.500m	Palaeolithic	1 levallois flake, 7 waste flakes, 1 fragment

MLO8468				blade
MLO6847	Find spot	c.400mNW	Palaeolithic	Chipped Palaeolithic axe found at hemstead road, rounded butt and triangular shape, unstratified- British Museum
070571/00/00- MLO13156	Find spot	c.300mNE	Palaeolithic	North End, Cray ford knife and pointed biface, Mousterian or echeulio-levallois
MLO102867	Monument	c.500m	Palaeolithic	Kill site and a lithic working site, Palaeolithic chips and pieces of mammal bone and lithic artefact manufacturer
00474/00/00- MLO8290	Monument	C.500m	Palaeolithic	Occupation sit
071710/00/00- MLO72470	Monument	c.100mE	Post medieval	North end road- land fill site
071711/00/00- MLO72471	Monument	c.100mE	Post medieval	North end road, land fill
07172/00/00- MLO72472	Monument	c.100mE	Post medieval	North end road, land fill
MLO103972	Monument	c.500m	Post medieval to modern	2010- Remains of a cellar of a public house on the site of Harrow Public house, found in WB
MLO102836	Monument	c.500m	Palaeolithic	Kill site and lithic working site, mammal bone and Palaeolithic chips



Scale: 1:1250

Garages accessed from Hurstwood



Figure 1: Site location map, scale 1:1250

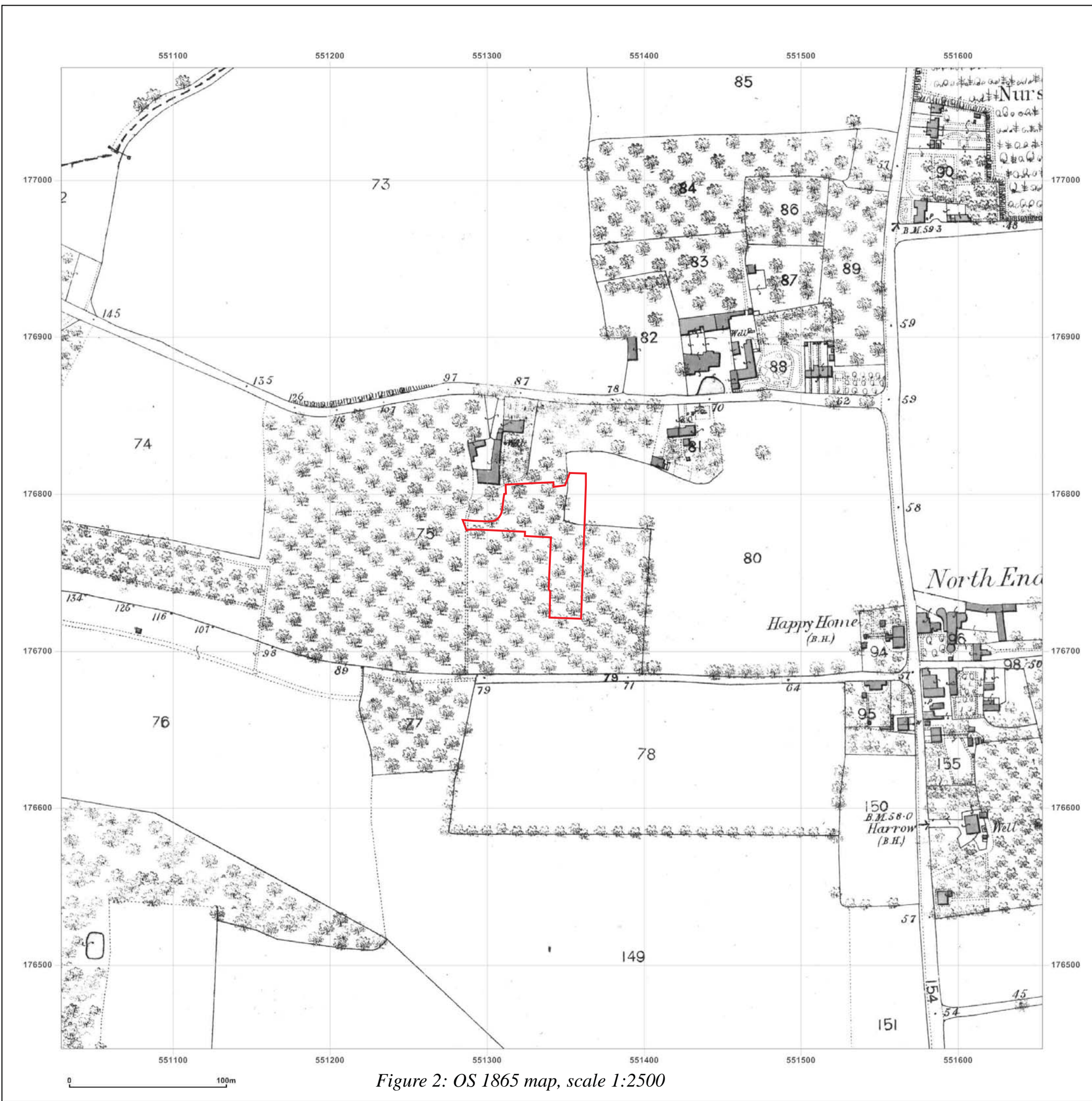


Figure 2: OS 1865 map, scale 1:2500

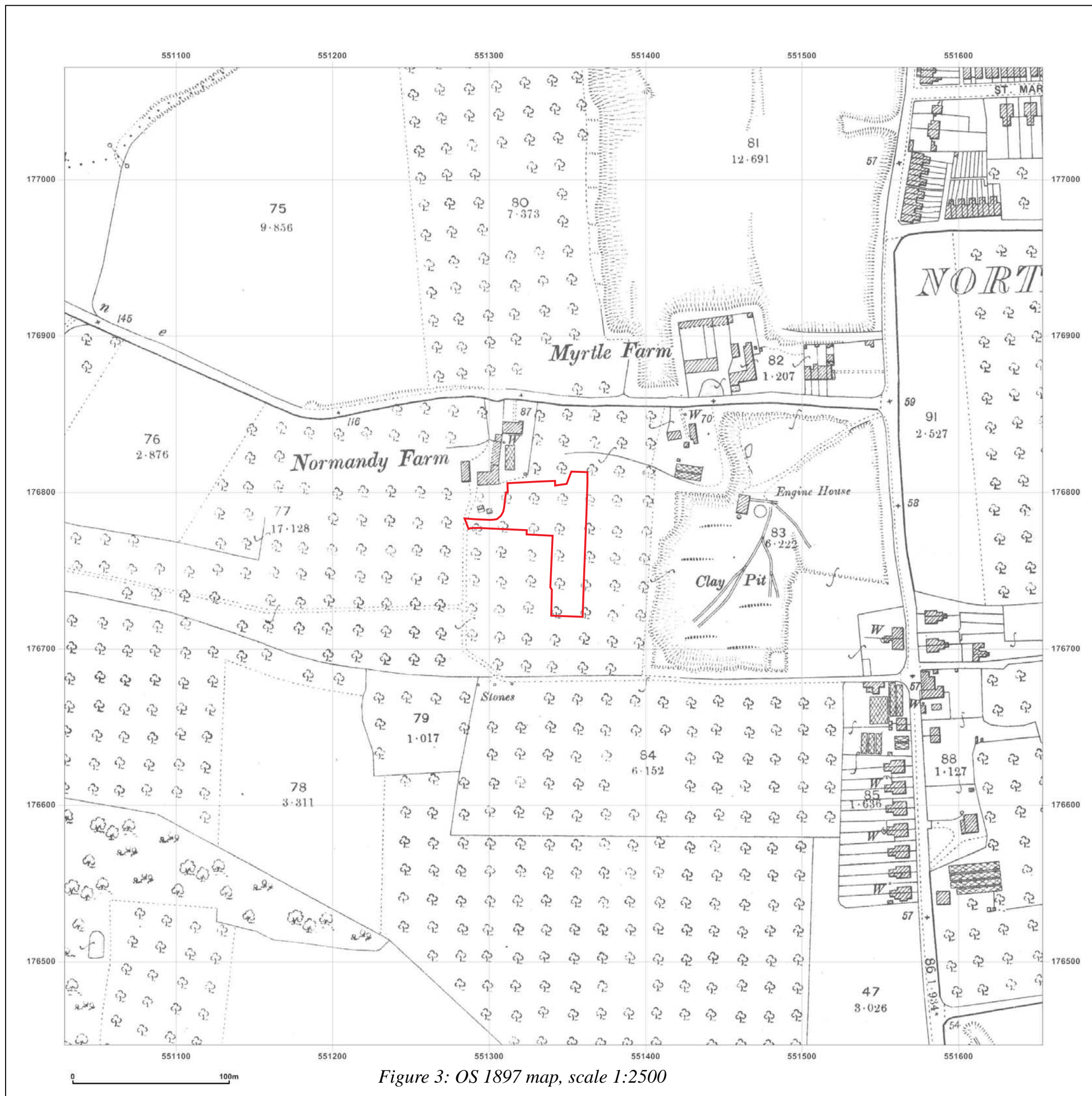


Figure 3: OS 1897 map, scale 1:2500

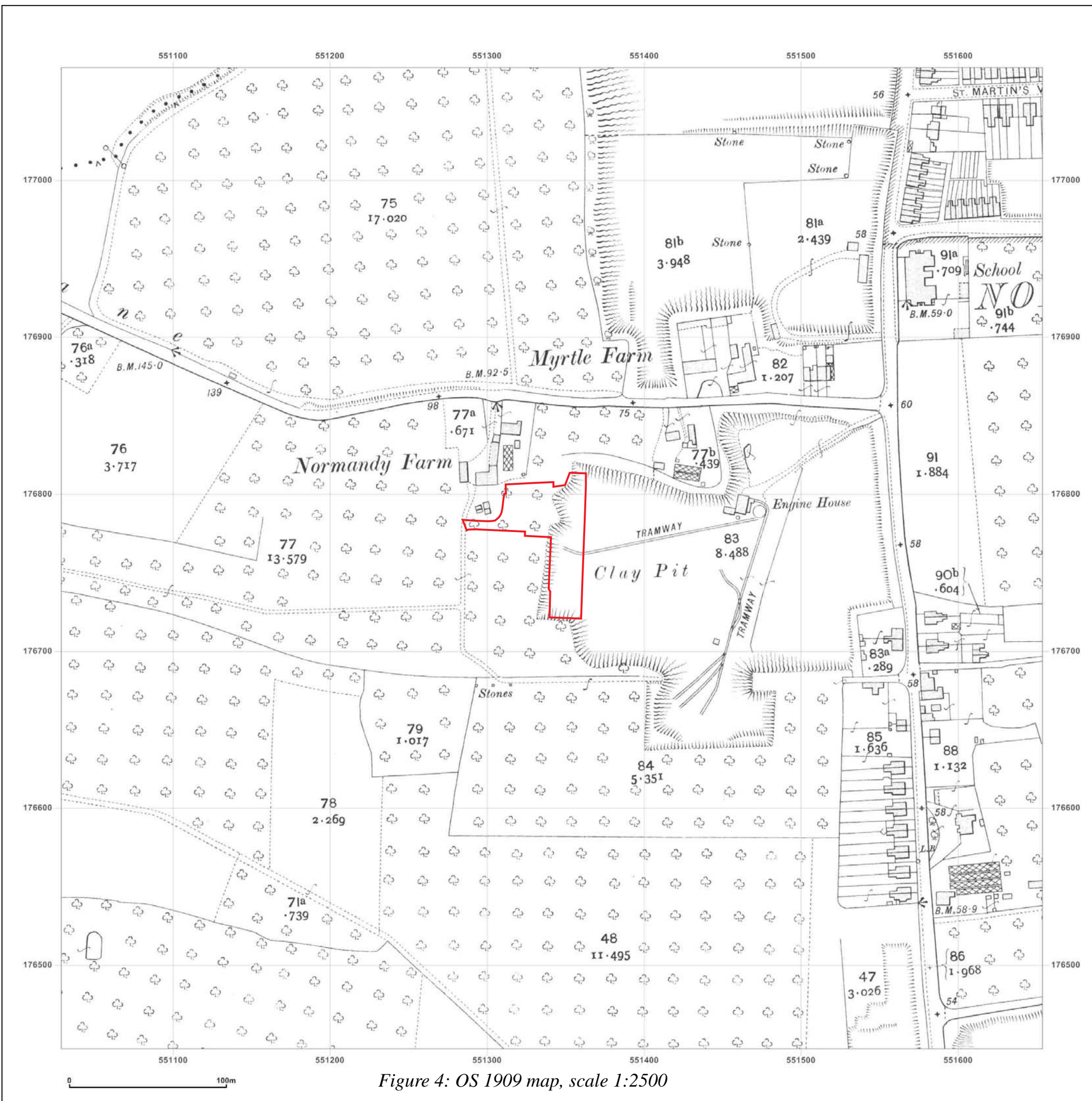


Figure 4: OS 1909 map, scale 1:2500

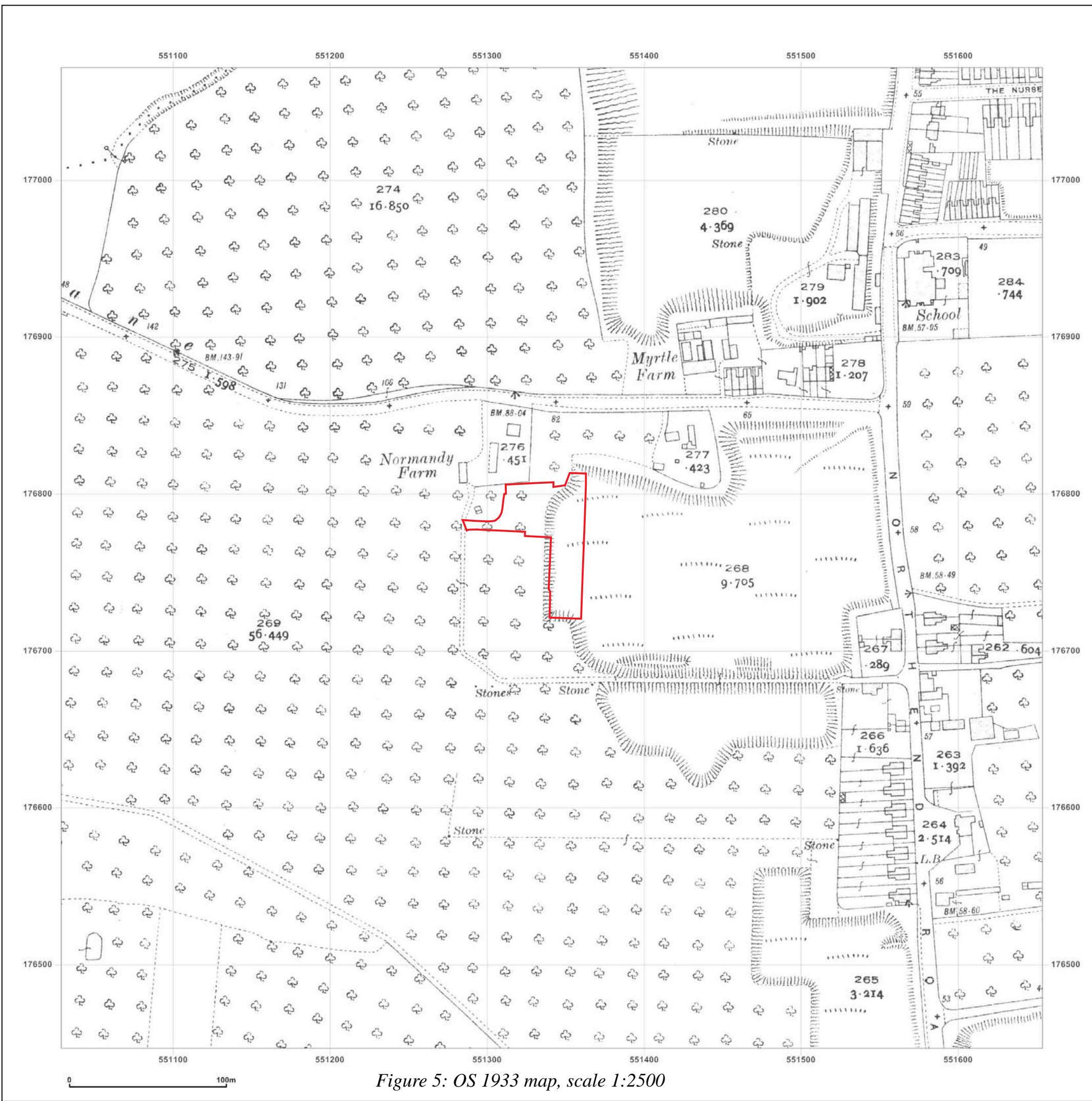


Figure 5: OS 1933 map, scale 1:2500

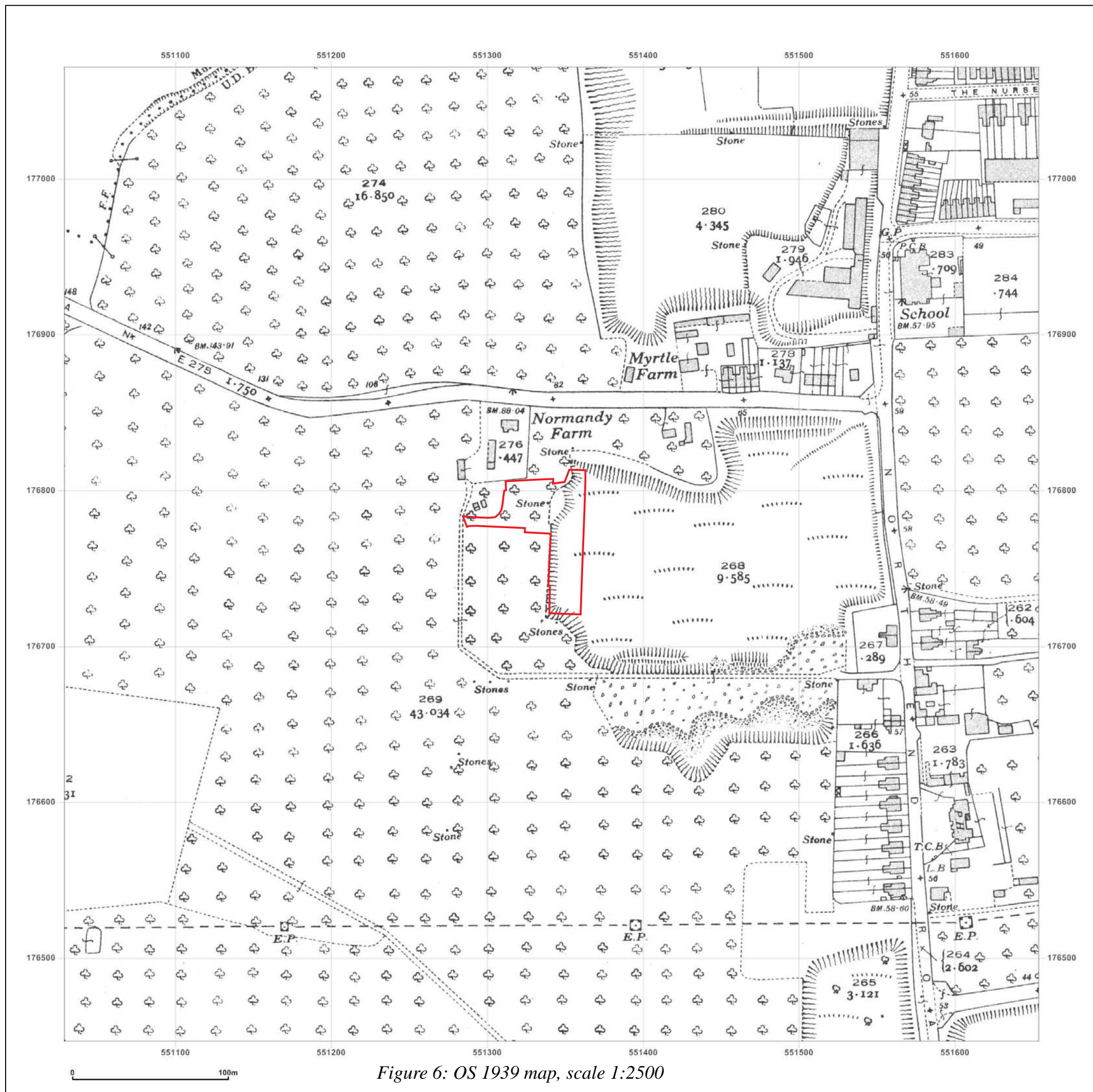


Figure 6: OS 1939 map, scale 1:2500



Figure 7: OS 1958-60 map, scale 1:2500



Figure 8: OS 1958-61 map, scale 1:2000



Figure 9: OS 1969 map, scale 1:2500



Figure 10: OS 1969-72 map, scale 1:2000



Figure 11: OS 1981-85 map, scale 1:2000



Figure 12: OS 1990-92 map, scale 1:2000



Figure 13: OS 1992-93 map, scale 1:2000



Plate 1: Aerial photograph from 1940



Plate 2: Aerial photograph from 1960



Google earth

90 m



Plate 3: Aerial photograph from 2003



Plate 4: Aerial photograph from 2010



Plate 5: Aerial photograph from 2016



Plate 7 Looking out from access road



Plate 8 View of south of the site



Plate 9 View of site (looking south)



Plate 10 View of flats to the east of site