Archaeological Evaluation of Land at Stone Recreation Ground, Hayes Road, Horns Cross, Greenhithe, Kent

Site Code: SRG-EV-23

NGR Site Centre: 557155 173968

Planning Application Number: DA/21/00174/FUL



Report for; Stone Parish Council 08/09/2023

Document Reference: 33740.01 Version: v02

SWAT ARCHAEOLOGY

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Archaeological Evaluation of Land at Stone Recreation Ground, Hayes Road, Horns Cross, Greenhithe, Kent. DA9 9DS

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Summary

Swale & Thames Survey Company (SWAT Archaeology) were commissioned by Stone Parish Council to undertake an archaeological evaluation on land at Stone Recreation Ground on Hayes Road, in Greenhithe, Kent. The works have been carried out as part of a planning condition which required an archaeological evaluation in order to further characterise the potential archaeological impact from any proposed development.

The archaeological evaluation has been successful in evaluating the proposed development site for the possibility of archaeological remains. Despite the archaeological potential of the surrounding area no archaeological finds or defined archaeological features were present within either of the two trenches excavated. The results from this work will be used to aid and inform the Senior Archaeological Officer of any further archaeological mitigation measures that may be necessary in connection with any future development proposals.

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1 INTRODUCTION

1.1 Project Background

- 1.1.1 Swale & Thames Survey Company (SWAT Archaeology) were commissioned by Stone Parish Council to undertake an archaeological evaluation on land at Stone Recreation Ground on Hayes Road, in Greenhithe, Kent (Figure 1).
- 1.1.2 A planning application (PAN: DA/21/00174/FUL) for development was submitted to Dartford Borough Council (DBC) whereby Kent County Council Heritage and Conservation (KCCHC), on behalf of KCC, requested that an archaeological evaluation be undertaken in order to determine the possible impact of the development on any archaeological remains.
- 1.1.3 The proposed development includes:

(1) Provision of new public toilet block and retention of temporary cafe for a further temporary period;

(2) Amendments to internal access road from London Road, including additional parking provision and cycle storage; Outline development (consideration of siting, access and landscaping only) comprising:

- (3) The relocation of the multi-use games area;
- (4) Demolition of groundskeeper's house, toilets and workshop;
- (5) Erection of replacement grounds depot and workshop (including staff welfare facilities);

(6) Replace existing temporary café with a new mixed use building containing a cafe and public community and exhibition space;

(7) Erection of ancillary clubhouse building to include changing rooms, toilets and offices in connection with existing outdoor sport and recreation use,

1

1.1.4 The following conditions were attached to the planning consent:

No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of;

- *i* archaeological field evaluation works in accordance with a specification and written timetable which has been submitted to and approved by the Local Planning Authority; and
- ii following on from the evaluation, any safeguarding measures to ensure preservation in situ of important archaeological remains and/or further archaeological investigation and recording in accordance with a specification and timetable which has been submitted to and approved by the Local Planning Authority

Reason: To ensure that features of archaeological interest are properly examined and recorded, and that due regard is given (Ed.) to the preservation in situ of important archaeological remains. (DA/21/00174/FUL, Condition 03, 10th March)

- 1.1.5 The archaeological evaluation comprised the excavation of two trenches measuring 15m and 20m in length and up to 2m in width. Site obstructions meant that some trenches required relocation to avoid extant playground equipment and playing courts. The location and length of each trench is described below in Section 5.3.
- 1.1.6 The archaeological works were carried out over the course of two days in August 2023 (see Table 1 below). The evaluation was carried out in accordance with an archaeological Written Scheme of Investigation (WSI) prepared by SWAT Archaeology (2023), prior to commencement of works.

1.2 Timetable

1.2.1 A timetable for the archaeological programme of works, to date, is provided below:

Task	Dates	Personnel/Company
Submission of an Archaeological	January 2022	SWAT Archaeology
Desk-Based Assessment		
Submission of the Written Scheme	24 th July 2023	SWAT Archaeology
of Investigation		
Archaeological Evaluation –	14 th – 15 th August 2023	SWAT Archaeology
Fieldwork	14 15 //0502025	David Britchfield BA MCIfA
Archaeological Evaluation Report	This document	SWAT Archaeology
		David Britchfield BA MCIfA

Table 1 Timetable for the archaeological programme of works

1.3 Site Description and Topography

- 1.3.1 The site is centred on NGR 557155 173968 within Stone Recreation Ground and measured approximately 723sq.m in area (Figure 1); currently an area of play space with playground equipment (Plate 1). The recreation ground is located south of the London Road (A226) and is broadly 'L' shaped. The southeastern section of the recreation ground is north of Hayes Road. The area is predominately grass containing football and cricket pitches. At the southern end of the recreation ground located in the southeastern corner is a brick-built hall with adjoining further hall and offices. There is a small car parking area in front. Opposite this pavilion is a temporary café. At the rear of the café is a basketball court and children's playground within a fenced area. These areas lay within the eastern portion of the proposed development area (Plates 1 and 2).
- 1.3.2 Ground levels ranged between a height of approximately 38.9m and 37.5m Ordnance Datum (OD). The Geological Survey of Great Britain (1:50,000) shows that the site is located on Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation Chalk, sedimentary bedrock formed between 93.9 and 72.1 million years ago during the Cretaceous period. No superficial deposits are recorded.

1.4 Scope of Report

1.4.1 This report has been produced to provide initial information regarding the results of the archaeological evaluation. The results from this work will be used to aid and inform the Senior Archaeological Officer (KCC) of any further archaeological mitigation measures that may be necessary in connection with any future development proposals.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

- 2.1.1 The proposed development area is located close to a number of archaeological sites which are identified on the KCCHER database. The HER also records designated protected military remains (PMR) adjacent to the west of the recreation ground (TQ 57 SE 368). A PMR under the Protection of Military Remains Act 1986 is where the wreckage of all military aircraft (UK or other nations) that crashed in the United Kingdom, in United Kingdom territorial waters, or in United Kingdom controlled waters are automatically protected irrespective of whether there was loss of life or whether the wrecking occurred during peacetime or in combat. The PMR has been located to a general grid square, not necessarily reflecting its actual location. The HER records show that this crash site was excavated in 1978 by the Wealden Aviation Archaeology Group (WAAG). Personal correspondence with a member of that archaeological group (Saunders, 2021) who holds original WAAG documentation revealed that the crash site associated with that aircraft at High House Farm in Stone is 1.5 miles northwest of Stone-in-Oxney, near Appledore (location approx. NGR TQ 92607 29700) and that the HER has applied the crash site to the wrong Stone settlement in Kent.
- 2.1.2 The significant quarrying across the area has reduced opportunities for modern archaeological investigations. There was a site excavated at Horns Cross (EKE9625), circa 470m to the NE of the development area in 2008 in an area containing Boyn Hill Gravel. The evaluation comprised the machine excavation of six test trenches. Natural Pleistocene gravel deposits were identified at between 35.31m OD and 36.27m OD. Sealing the gravels was a layer of homogenous mid greyish brown, sandy clay subsoil, beneath a deposit of dark blackish brown, sandy clay buried topsoil, underlying modern made ground and a levelling layer of demolition rubble. A pit and linear ditch, both dated as late prehistoric from recovered worked flints, were found cutting into the natural Pleistocene gravels. A single flint flake was found from a context interpreted as a reworked Pleistocene terrace deposit.
- 2.1.3 A site at Hedge end (EKE16416) circa 780m east of the site, had an evaluation in 2016 also in an area of Boyn Hill Gravel; a shallow undated gully was recorded in one trench that was considered likely to be of late 19th or early 20th century origin. A more substantial ditch was recorded in a separate trench which contained fragments of pottery and a worked flint that are dated as broadly prehistoric and was sealed beneath colluvium. The ditch could be associated with prehistoric activity previously recorded to the east of the site. All other trenches were archaeologically negative.

2.1.4 An Archaeological Desk-Based Assessment prepared by SWAT Archaeology (2022) suggested that the site was within an area of high archaeological potential for remains dating to the Iron Age, Romano-British, and modern periods (2022: 6).

3 AIMS AND OBJECTIVES

3.1 General Aims

- 3.1.1 The specific aims of the archaeological fieldwork were set out in a Written Scheme of Investigation (SWAT Archaeology 2023; 6.1-6.3) which stated that;
 - The primary objective of the archaeological evaluation is to establish or otherwise the presence of any potential archaeological features which may be impacted by the proposed development. The aims of this investigation are to determine the potential for archaeological activity and in particular the earlier prehistoric, Roman, early medieval, and later archaeological activity.
 - The programme of archaeological work should be carried out in a phased approach and will commence with evaluation through trial trenching. This initial phase should determine whether any significant archaeological remains would be affected by the development and if so, what mitigation measures are appropriate. Such measures may include further detailed archaeological excavation, or an archaeological watching brief during construction work or an engineering solution to any preservation in situ requirements.
 - This specification sets out the requirements for trial trenching on the site and any further archaeological work, such as detailed excavation work or a watching brief, would need to be subject to further specifications.
- 3.1.2 The general aims (or purpose) of the evaluation, in compliance with the CIfA *Standard and guidance for archaeological field evaluation* (CIfA 2014a), are therefore to:
 - provide information about the archaeological potential of the site; and
 - inform either the scope and nature of any further archaeological work that may be required; or the formation of a mitigation strategy (to offset the impact of the development on the archaeological resource); or a management strategy.

3.2 General Objectives

3.2.1 In order to achieve the above aims, the general objectives of the evaluation are to:

- determine the presence or absence of archaeological features, deposits, structures, artefacts or ecofacts within the specified area;
- establish, within the constraints of the evaluation, the extent, character, date, condition, and quality of any surviving archaeological remains;
- place any identified archaeological remains within a wider historical and archaeological context in order to assess their significance; and
- make available information about the archaeological resource within the site by reporting on the results of the evaluation.

4 METHODOLOGY

4.1 Introduction

4.1.1 All fieldwork was conducted in accordance with the methodology set out in the Specification (SWAT Archaeology 2023) and carried out in compliance with the standards outlined in the Chartered Institute for Archaeologists' Standards Guidance for Archaeological Evaluations (CIFA 2014).

4.2 Fieldwork

- 4.2.1 A total of two trenches were excavated (Figure 2). Excavation was carried out using a mechanical excavator fitted with a toothless ditching bucket, removing the overburden to the top of the first recognisable archaeological horizon, under the constant supervision of an experienced Archaeologist.
- 4.2.2 Where appropriate, trenches, or specific areas of trenches, were subsequently hand-cleaned to reveal features in plan and carefully selected cross-sections through the features were to be excavated to enable sufficient information about form, development date, and stratigraphic relationships to be recorded without prejudice to more extensive investigations, should these prove to be necessary. All archaeological work was carried out in accordance with KCC and ClfA standards and guidance. A complete photographic record was maintained on site that included working shots; during mechanical excavation, following archaeological investigations, and during back filling.
- 4.2.3 On completion, the trenches were made safe and left open in order to provide the opportunity for a curatorial monitoring visit. Backfilling was carried out once all recording, survey, and monitoring had been completed.

4.3 Recording

- 4.3.1 A complete drawn record of the evaluation trenches comprising both plans and sections, drawn to appropriate scales (1:20 for plans, 1:10 for sections) was undertaken. The plans and sections were annotated with coordinates and OD heights.
- 4.3.2 Photographs were taken as appropriate, providing a record of excavated features and deposits, along with images of the overall trench to illustrate their location and context. The record also includes images of the site overall. The photographic record comprises digital photography and drone photography. A photographic register of all photographs taken is contained within the project archive.
- 4.3.3 A single context recording system was used to record the deposits. A full list is presented in Appendix 1. Layers and fills are identified in this report thus (101), whilst the cut of the feature is shown as [101]. Context numbers were assigned to all deposits for recording purposes. Each number has been attributed to a specific trench with the primary number(s) relating to specific trenches (i.e., Trench 1, 101+, Trench 2, 201+).

5 RESULTS

5.1 Introduction

- 5.1.1 All trenches were mechanically excavated under archaeological supervision. Trenches were positioned to cover as many areas of the site as possible as set out in the WSI (Plate 1 and Plate 2). Relocation and re-orientation of the trenches was required when on site obstacles were present (details presented in individual trench description below).
- 5.1.2 The site, as shown on Figure 2, provides the trench layout with Figure 3 illustrating the results for each individual archaeological evaluation trench. Plates 1-7 consist of photographs that have been provided to supplement the text. Appendix 1 provides the stratigraphic sequence and contextual information for both trenches.

5.2 Stratigraphic Deposit Sequence

- 5.2.1 A relatively consistent stratigraphic sequence was recorded across most of the site comprising topsoil sealing subsoil, which overlay the natural chalk. Further details for individual trenches are provided below.
- 5.2.2 Removal of the topsoil and subsoil was carried out using a toothless ditching bucket until clean natural geology was observed.

5.3 Archaeological Narrative

Trench 1 (Figure 3, Plates 3-4)

- 5.3.1 Trench 1 was located within the northern extent of the site, directly south of the northern boundary (Figure 2) and was excavated on a broadly E-W alignment. The trench was relocated further towards the east of the site in order to maintain a safe working distance from an adjacent playground (Figure 2).
- 5.3.2 This trench measured 21.45m in length, 1.8m in width and had a maximum depth of 0.40m (Figure 3). Natural geological deposits (103) were recorded at levels between 37.12m OD and 37.28m OD.
- 5.3.3 A test pit was excavated at the western extent of the trench in order to test the Palaeolithic potential of the natural silt clay banding within the chalk (103). The banding was continued to a depth of approximately 0.5m below the existing ground level and was clean with occasional small rounded gravel (Plate 7).
- 5.3.4 No archaeological finds or features were present in Trench 1.

Trench 2 (Figure 3, Plates 5 and 6)

- 5.3.5 Within the southern area of the site (Figure 2), Trench 2 was excavated on a NW-SE alignment and measured approximately 14.64m in length, 1.8m in width with a maximum depth of 0.31m (Figure 3). Natural geological deposits (203) were recorded at a level ranging between 38.63m OD and 38.24m OD.
- 5.3.6 No archaeological finds or features were present in Trench 2.

6 FINDS

6.1 Overview

6.1.1 No archaeological finds were retrieved during this evaluation.

7 DISCUSSION

7.1 Introduction

7.1.1 The archaeological investigation on land at Stone Recreation Ground on Hayes Road, in Greenhithe, Kent has investigated the extents of the proposed development area using two trenches, measuring between 21.45m and 14.64m in length and up to 1.8m in width. The natural

geology was encountered within both trenches at an average depth of approximately 0.23m below the existing ground surface, directly underlying topsoil and subsoil.

7.2 Archaeological Narrative

- 7.2.1 Despite the archaeological potential of the site no archaeological finds or features were recorded within any of the trenches.
- 7.2.2 The recording of an intact subsoil within each trench may suggest that preservation conditions are favourable within the local area, although the shallow depth of the chalk and the absence of a more substantial overlying soils matrix should be considered. The relatively flat and terraced recreation ground is likely to have been subject to extensive landscaping following its use as an orchard. It is therefore suggested that an element of truncation would have occurred during this transition and that shallower archaeological features, should they have existed, would heave been lost as a result.

7.3 Conclusions

7.3.1 The archaeological evaluation has been successful in fulfilling the primary aims and objectives of the Specification and has assessed the archaeological potential of land intended for development. The results from this work will be used to aid and inform the Senior Archaeological Officer of any further archaeological mitigation measures that may be necessary in connection with any future development proposals.

8 ARCHIVE

8.1 General

- 8.1.1 The Site archive, which will include paper records, photographic records, graphics, and digital data, will be prepared following nationally recommended guidelines (SMA 1995; CIFA 2009; Brown 2011; ADS 2013).
- 8.1.2 All archive elements will be marked with the site/accession code, and a full index will be prepared. The physical archive comprises 1 file/document case of paper records and A4 graphics. The Site Archive will be retained at SWAT Archaeology offices until such time it can be transferred to a Kent Museum.

9 ACKNOWLEDGMENTS

- 9.1.1 SWAT Archaeology would like to thank Stone Parish Council for commissioning the project. Thanks are also extended to Casper Johnson, Senior Archaeological Officer at Kent County Council, for his advice and assistance.
- 9.1.2 David Britchfield BA (Hons) MCIfA carried out the archaeological fieldwork; illustrations were produced by Ravelin Archaeological Services. David Britchfield produced the draft text for this report. The Project Manager for the project was Dr Paul Wilkinson MCIfA, FRSA of SWAT Archaeology.

10 REFERENCES

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SWAT Archaeology (2023) Specification for an Archaeological Evaluation on Land at Stone Recreation Ground on Hayes Road, in Greenhithe, Kent

11 APPENDIX 1 – TRENCH TABLES

Trench 1	Dimensions: 21.45m x 1.8m Depth: 0.40m Ground Level: 38.34m OD – 37.50m OD 37.50m OD		
Context	Interpretation	Description	Depth (m)
(101)	Layer	TOPSOIL – Mid grey brown silty clay with occasional rounded stone, topped with grass	0.00-0.11
(102)	Layer	SUBSOIL – Light grey brown sandy silt with occasional charcoal flecks	0.11-0.22
(103)	Layer	NATURAL – Compact grey white chalk with occasional flint with patches of orange brown silt clay	0.22-0.40+

Dimensions: 14.64m x 1.8m Depth: 0.43m Ground Level: 38.87m OD – 38.44m OD			
Context	Interpretation	Description	Depth (m)
(201)	Layer	TOPSOIL – Mid grey brown silty clay with occasional rounded stone, topped with grass	0.00-0.05
(202)	Layer	SUBSOIL – Light grey brown sandy silt with occasional charcoal flecks	0.05-0.0.24
(203)	Layer	NATURAL – Compact grey white chalk with occasional flint with patches of orange brown silt clay	0.24-0.31+

12 APPENDIX 2 – HER FORM

Site Name: Archaeological Evaluation on Land at Stone Recreation Ground on Hayes Road, in Greenhithe, Kent

SWAT Site Code: SRG-EV-23

Site Address: As above

Summary. Swale & Thames Survey Company (SWAT Archaeology) were commissioned by Stone Parish Council to undertake an archaeological evaluation on land at Stone Recreation Ground on Hayes Road, in Greenhithe, Kent. The works have been carried out as part of a planning condition which required an archaeological evaluation in order to further characterise the potential archaeological impact from any proposed development.

The archaeological evaluation has been successful in evaluating the proposed development site for the possibility of archaeological remains. Despite the archaeological potential of the surrounding area no archaeological finds or defined archaeological features were present within any of the two trenches excavated. The results from this work will be used to aid and inform the Senior Archaeological Officer of any further archaeological mitigation measures that may be necessary in connection with any future development proposals.

District/Unitary: Dartford Borough Council & Kent County Council

Period(s): NA

NGR (centre of site to eight figures) NGR 557155 173968 Type of Archaeological work: Archaeological Evaluation Date of recording: August 2023 Unit undertaking recording: Swale and Thames Survey Company (SWAT Archaeology) Geology: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation Title and author of accompanying report: D Britchfield (2023) Archaeological Evaluation of Land at Stone Recreation Ground on Hayes Road, in Greenhithe, Kent. SWAT Archaeology Ref. SRG-EV-2023 Location of archive/finds: SWAT. Archaeology. Graveney Rd, Faversham, Kent. ME13 8UP Contact at Unit: Paul Wilkinson Date: 08/09/2023 PLATES



Plate 1 The proposed development site, viewed from the northwest, prior to the erection of safety fencing



Plate 2 Panoramic view of the site, viewed from the south



Plate 3 Trench 1, viewed from the west



Plate 4 Trench 1, viewed from the east



Plate 5 Trench 2, viewed from the southeast

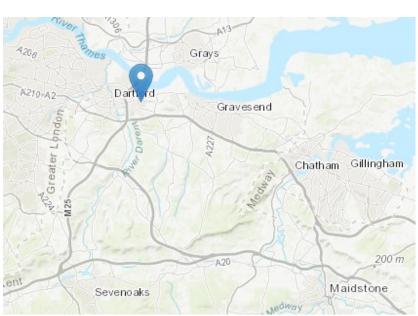


Plate 6 Trench 2, viewed from the northwest



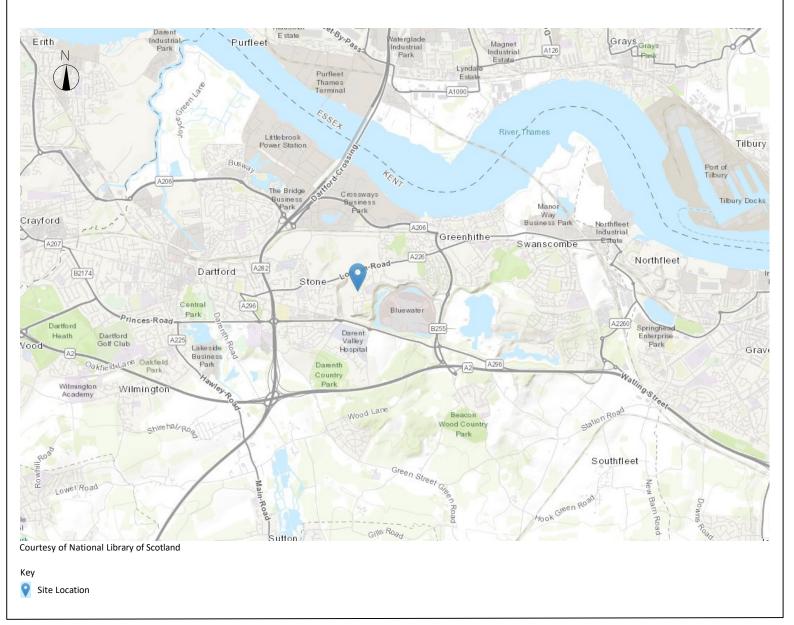
Plate 7 Excavation of pit in Trench 1 to test Palaeolithic potential

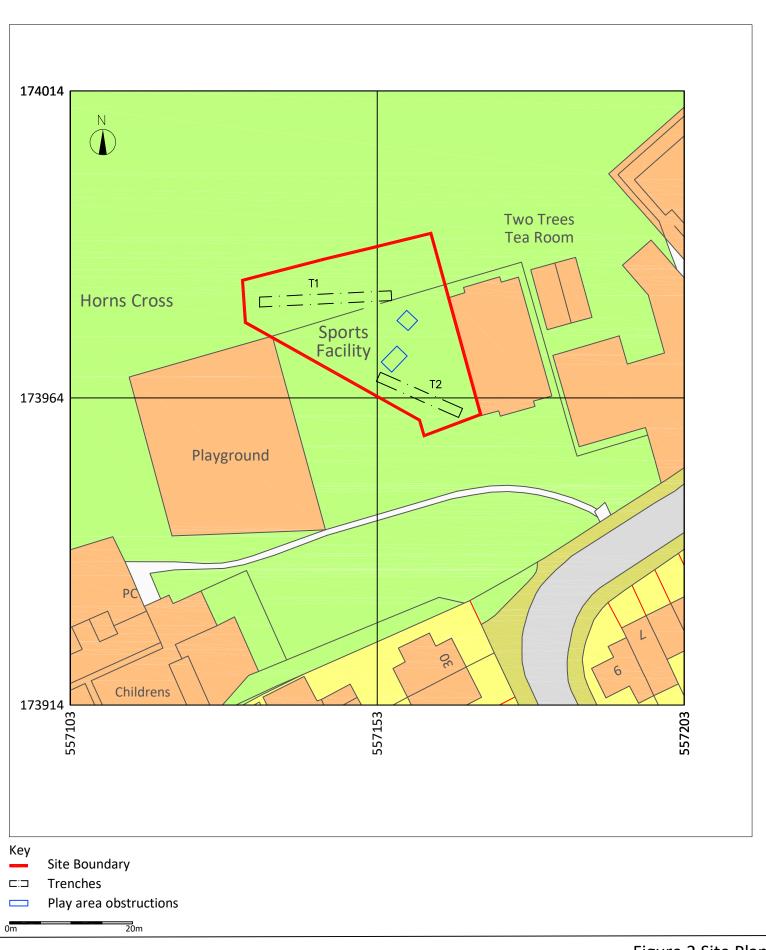




Map of UK (NTS)

Map of Kent (NTS)





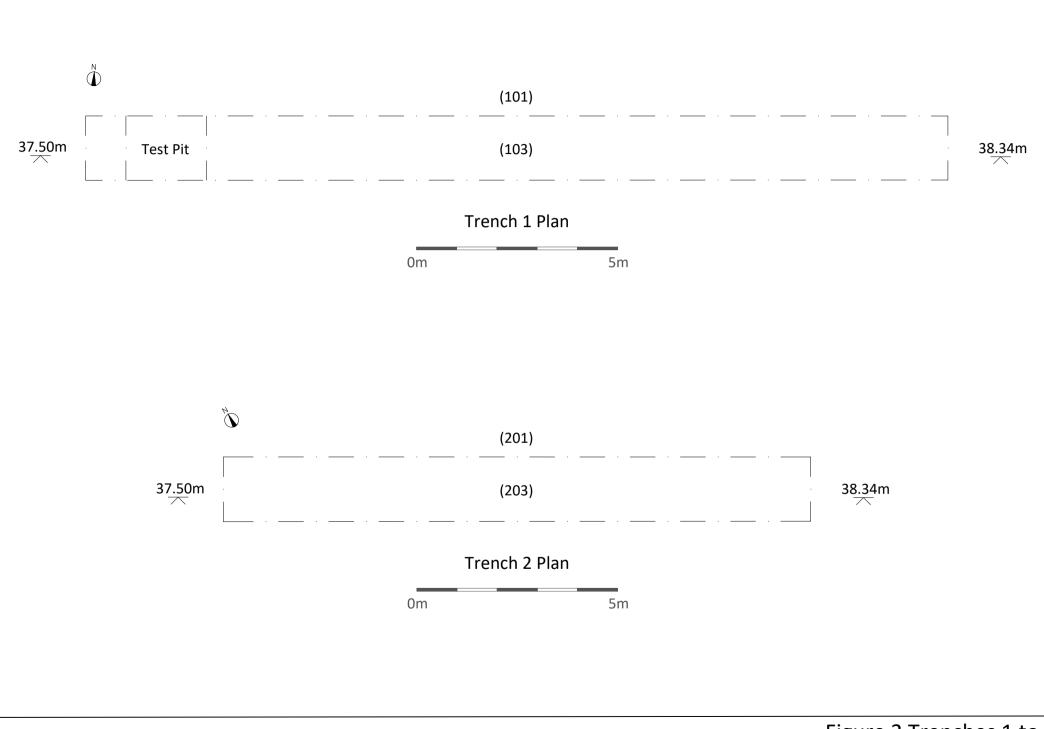


Figure 3 Trenches 1 to 2