

**WRITTEN SCHEME OF INVESTIGATION FOR
GEOPHYSICAL SURVEY ON LAND NORTH OF
JAMES ROAD
CROWLAND
LINCOLNSHIRE
V1.1**

**Planning Application No: H02-0669-19
Grid Ref: TF 2486 1112
Accession No: LCNCC:2025.133**

**PREPARED FOR
SEAGATE HOMES**

July 2025



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WRITTEN SCHEME OF INVESTIGATION FOR GEOPHYSICAL SURVEY AT JAMES ROAD, CROWLAND, LINCOLNSHIRE

Version	Date	Change
1.0	22.07.2025	Original
1.1	23.07.2025	4.2 Noted a second WSI will be submitted for subsequent trial trenches

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1 SUMMARY

- 1.1 *A programme of geophysical survey is to gather information on the character and extent of any archaeological deposits within the survey area.*
- 1.2 *The investigation will involve using a magnetometer survey across the site to identify any anomalies which may be archaeological in origin.*
- 1.3 *On completion of the fieldwork the readings will be analysed and results will be shared with the local county archaeologist and Seagate Homes.*

2 INTRODUCTION

- 2.1 This document comprises a specification for geophysical survey land north of James Road, Crowland, Lincolnshire.
- 2.2 This document contains the following parts:
 - 2.2.1 Overview.
 - 2.2.2 Stages of work and methodologies.
 - 2.2.3 Programme of works and staffing structure of the project

3 SITE LOCATION

- 3.1 Crowland is located 13km south of Spalding and 18km southeast of Bourne, in the South Holland district of Lincolnshire. The site is located approximately 500m southeast of the centre of Crowland as defined by the Crowland Abbey, on the north side of James Road, close to its junction with Postland Road, centred on National Grid Reference TF 2486 1112 (Figure 1).

4 PLANNING BACKGROUND

- 4.1 An outline planning application (H02-0669-19) has been submitted and approved for the construction 6 self build eco-homes with access from James Road. Permission is subject to a condition requiring the implementation of an archaeological programme of works, fully detailed in a Written Scheme of Investigation (WSI), prior to groundworks associated with the development. The present document provides such a WSI.
- 4.2 This WSI applies solely to the geophysical survey and does not cover any intrusive archaeological trial trench works. Once the geophysical survey is complete, a separate WSI will need to be prepared, agreed upon with the LPA's archaeological advisor, and formally submitted to the planning portal as a 'background paper' before any intrusive evaluation archaeological work begins

5 SOILS AND TOPOGRAPHY

- 5.1 Local soils are of the Downholland 1 Association, typically clayey humic alluvial gley soils formed over former creeks (Hodge *et al.* 1984, 166). These soils are developed on a drift geology of older marine alluvium which overlies a solid geology of the Jurassic Oxford Clay Formation (BGS 1984). The site is on generally level ground at a height of c. 2.5m OD.

6 ARCHAEOLOGICAL OVERVIEW

- 6.1 The sand and gravel ridge upon which Crowland sites contains evidence spanning the Neolithic to Bronze Age periods. Evidence of Roman activity has also been identified along the spine of the ridge. However, the site is on the lower fringes of the ridge and no prehistoric or Roman material is known from the immediate vicinity. It is likely that any such material lies buried beneath alluvial deposits. Lidar imagery shows roddens, infilled creeks, crossing the area. These are thought to have been open watercourses during the Neolithic and early Bronze Age with the area of the site becoming fen into the medieval period.

6 AIMS AND OBJECTIVES

- 6.1 The aim of the geophysical survey will be to gather sufficient information to determine the presence or absence of archaeology within the application area, which can be used to guide a subsequent phase of evaluation trenches.
- 6.2 The objectives will be to delineate archaeological features (a 'level 2' survey in the terms of EAC guidelines) by identifying:
- the form of the archaeological features present within the site;
 - the spatial arrangement of the archaeological features present within the site and
 - the density of archaeological features present in the investigation area.

7 GEOPHYSICAL SURVEY

7.1 Reasoning for this technique

- 7.1.1 The geophysical survey of the site will use a Bartington Grad 601-2 fluxgate gradiometer. Magnetometry as a technique enables large areas to be investigated rapidly and the results facilitate the rapid identification of the likely archaeological potential of the site. It is particularly well suited to identifying subtle cut features, such as ditches, creeks and some settlement features.

- 8.1.2 The effectiveness of the technique is limited by background magnetic susceptibility and the ground cover. It can struggle to identify stone

structures, or rapidly backfilled features (such as graves), especially on sandy geology.

- 7.1.3 The work will be undertaken according to the relevant codes of practise issued by the Chartered Institute for Archaeologists (CIfA), under the management of a Member of the institute (MCIfA). Archaeological Project Services is CIfA registered organisation no. 21.

7.2 Methodology

- 7.2.1 Upon arrival at the site, a risk assessment will be completed.

- 8.2.2 The entire area of the site will be surveyed by experienced operators to identify areas of enhanced magnetic activity. The survey areas will be divided into 40m squares which are tied into the National Grid using survey grade RTK GPS accurate to 0.03m (Fig 2). Each grid will be walked in a zig-zag pattern taking readings at 0.25m intervals with traverse separations of 1m.

8 **REPORT PREPARATION**

- 8.1 A report will be prepared on completion of the survey detailing the methodologies used and the results of the work. The areas and nature of archaeological activity will be shown on a series of computer generated images and will include;

- Survey grid location (minimum 1:2500)
- Plot(s) of raw data (1:1500 min) minimally enhanced greyscale magnetic data
- Plot(s) of enhanced data (1:1500 min) greyscale magnetic data
- Interpretation diagram (1:1500)

- 9.2 The report will comprise

- A non-technical summary of the results of the investigation.
- A description of the archaeological setting of the investigation.
- Description of the topography and geology of the site.
- Description of the methodologies used during the investigation.
- A description of the steps taken to process the survey data.
- A text describing the findings of the investigation.

- An assessment of achievement of the survey objectives.

9.3 The report will be prepared in accordance with the Historic England guidelines (2008) and EAC Guidelines for the use of Geophysics in Archaeology (2016)

9 REPORT DEPOSITION

9.1 A digital copy of the report, clearly marked 'DRAFT' will be prepared and presented to the archaeological advisor to South Holland District Council within four weeks of the completion of site works unless there are reasonable grounds for more time. Once approved copies of the final report will be sent to the client and the Lincolnshire Historic Environment Record.

10 ARCHIVE

10.1 The documentation and records generated during the investigation will be sorted and ordered into format acceptable to The Collection, Lincoln. This will be undertaken following the requirements of the document titled *Conditions for the Acceptance of Project Archives* for long-term storage and curation.

- Site code: CRJR25
- Accession No: LCNCC:2025.133
- Deposition date: August 2026

11.2 Shapefiles of the survey's interpretation will be made available to the Lincolnshire Historic Environment Record.

11 PUBLICATION

11.1 A downloaded version of the completed OASIS form will be included within the report.

12 CURATORIAL RESPONSIBILITY

12.1 Curatorial responsibility for the archaeological work undertaken on the site lies with Planning Archaeologist, Lincolnshire County Council. They will be given written notice of the commencement of the project.

13 VARIATIONS AND CONTINGENCIES

13.1 Variations to the proposed scheme of works will only be made following written confirmation of acceptance from the archaeological curator.

13.2 Should the archaeological curator require any additional investigation beyond the scope of the brief for works, or this specification, then the cost and duration of those supplementary examinations will be negotiated between the client and curator.

14 PROGRAMME OF WORKS AND STAFFING LEVELS

14.1 The fieldwork is expected to take 1 day. The analysis of the results and report production is expected to take a further 4 days, dependent on the quantity and complexity of information gathered in the survey.

14.2 The project will be overseen by Paul Cope-Faulkner, (Senior Project Manager (Archaeology)) with the daily management undertaken by Jonathon Smith.

14.3 The fieldwork will be undertaken by Jonathon Smith (Senior Project Officer).

14.4 Jonathon Smith has a BA (Hons) in archaeology, an MA in prehistory and is an affiliate member of the Chartered institute for Archaeologists (ACIfA). He began working as a junior geophysicist for APS in 2011 and became responsible for the team in 2016.

15 INSURANCES

15.3 Archaeological Project Services, as part of the Heritage Trust of Lincolnshire, maintains Employers Liability Insurance of £10,000,000, together with Public and Products Liability insurances, each with indemnity of £5,000,000. Copies of insurance documentation can be supplied on request.

17 COPYRIGHT

17.3 Archaeological Project Services shall retain full copyright of any commissioned reports under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Specification.

17.4 Licence will also be given to the archaeological curators to use the documentary archive for educational, public and research purposes.

17.5 In the case of non-satisfactory settlement of account then copyright will remain fully and exclusively with Archaeological Project Services. In these circumstances it will be an infringement under the Copyright, Designs and Patents Act 1988 for the client to pass any report, partial report, or copy of same, to any third party. Reports submitted in good faith by Archaeological Project Services to any Planning Authority or archaeological curator will be removed from said planning Authority and/or archaeological curator. The Planning Authority and/or archaeological curator will be notified by Archaeological Project Services that the use of any such information previously supplied constitutes an infringement under the Copyright, Designs and Patents Act 1988 and may result in legal action.

17.6 The author of any report or specialist contribution to a report shall retain intellectual copyright of their work and may make use of their work for educational or research purposes or for further publication.

18 BIBLIOGRAPHY

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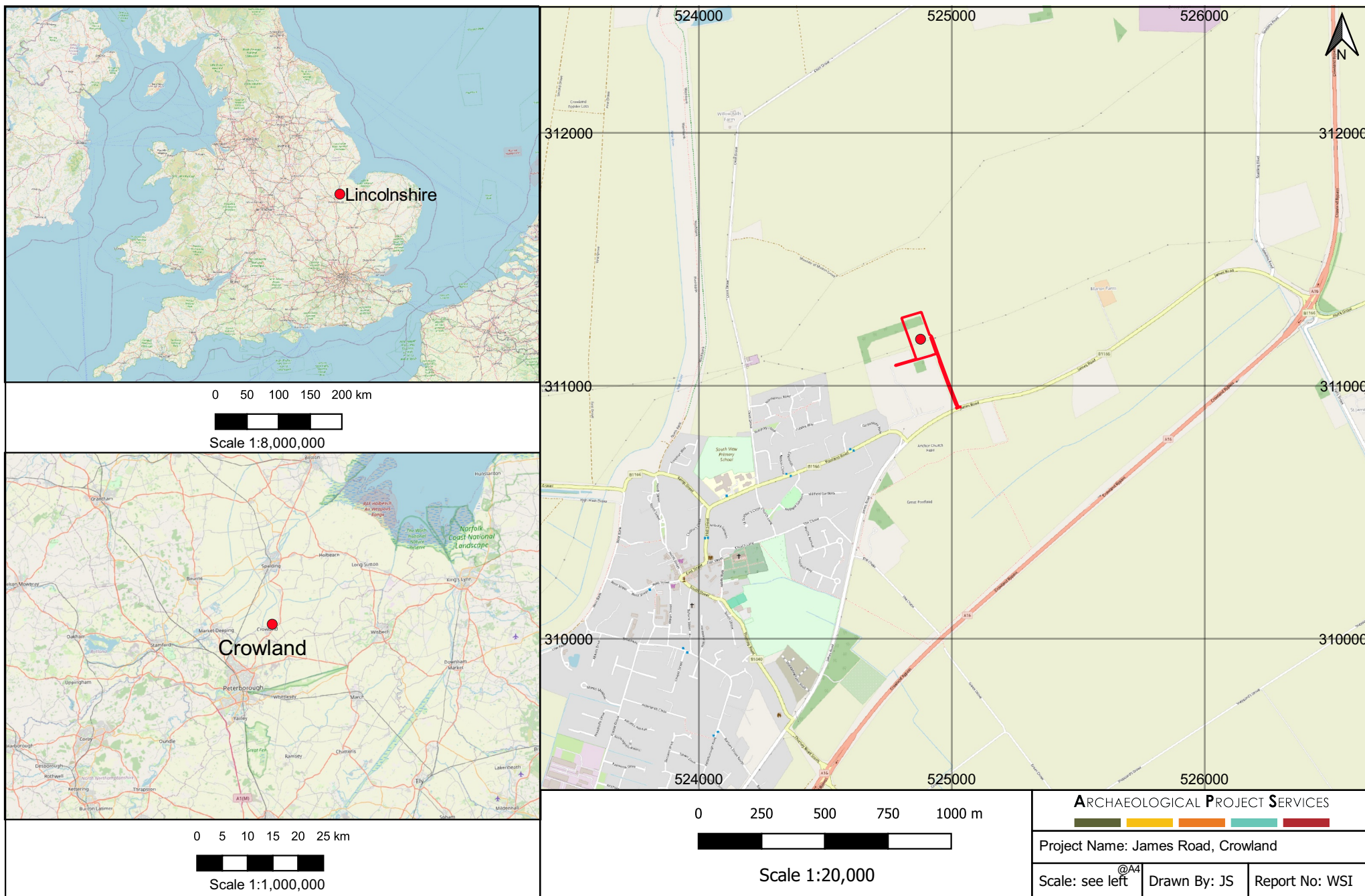


Figure 1 - Site Location

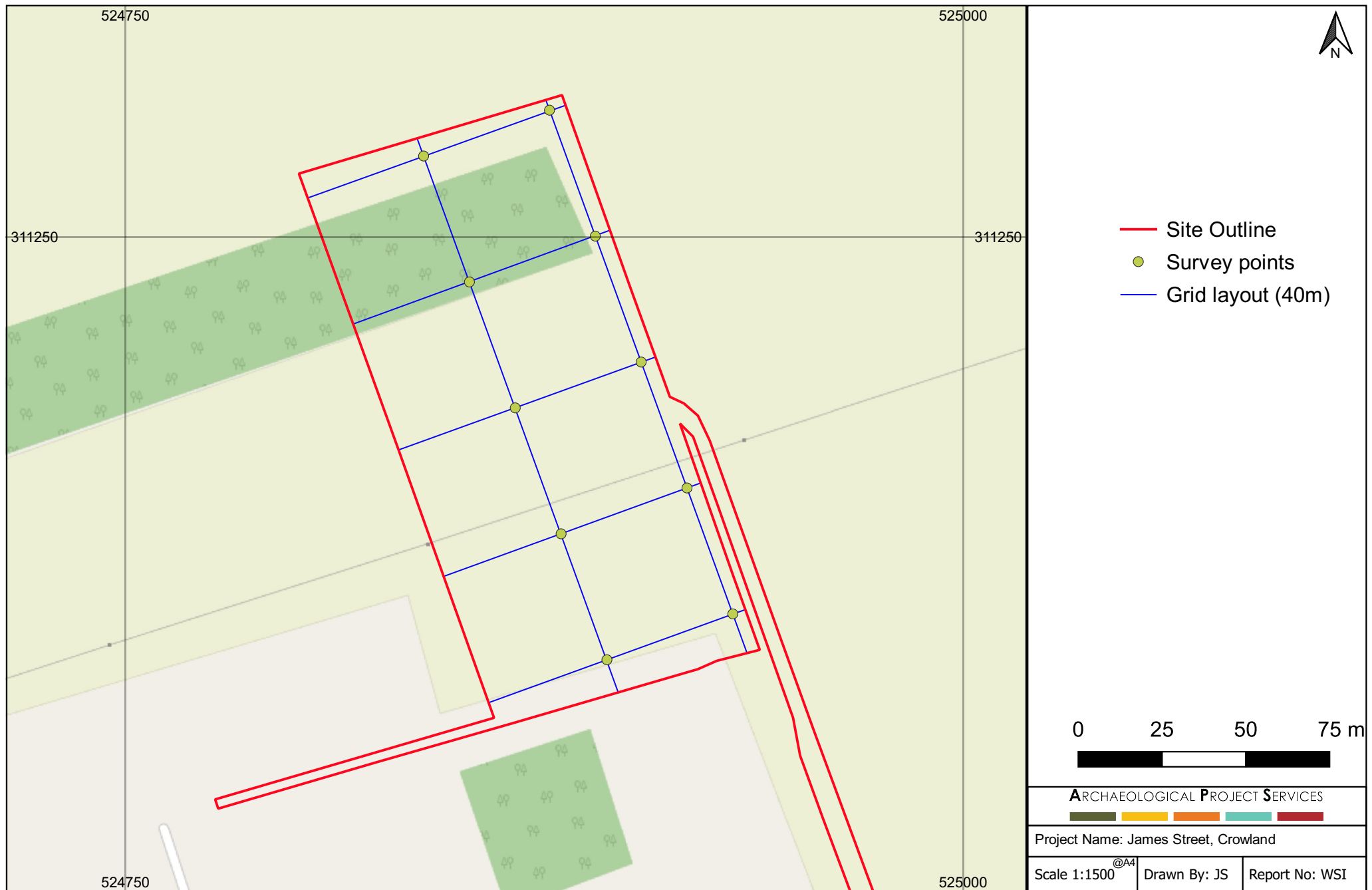


Figure 2 - Survey layout