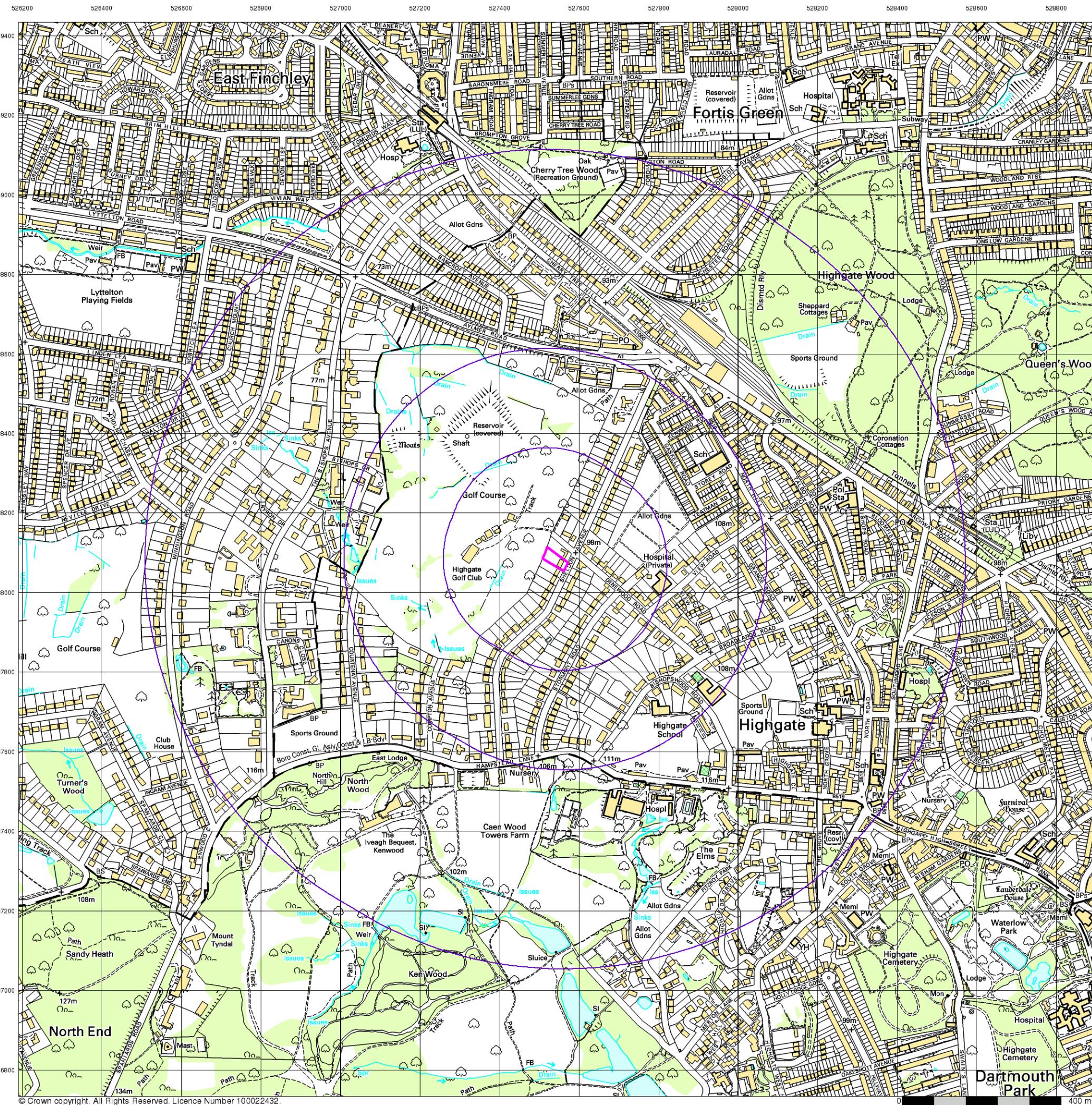




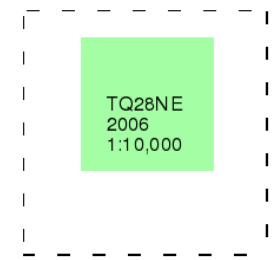
10k Raster Mapping

Published 2006

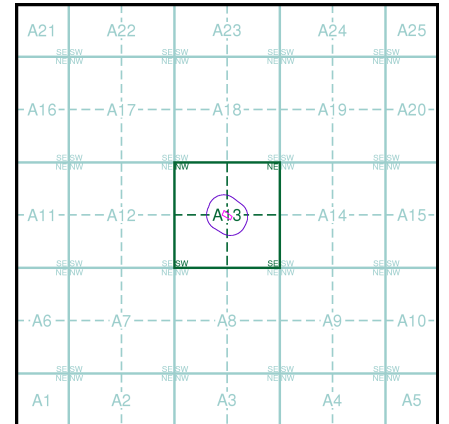
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

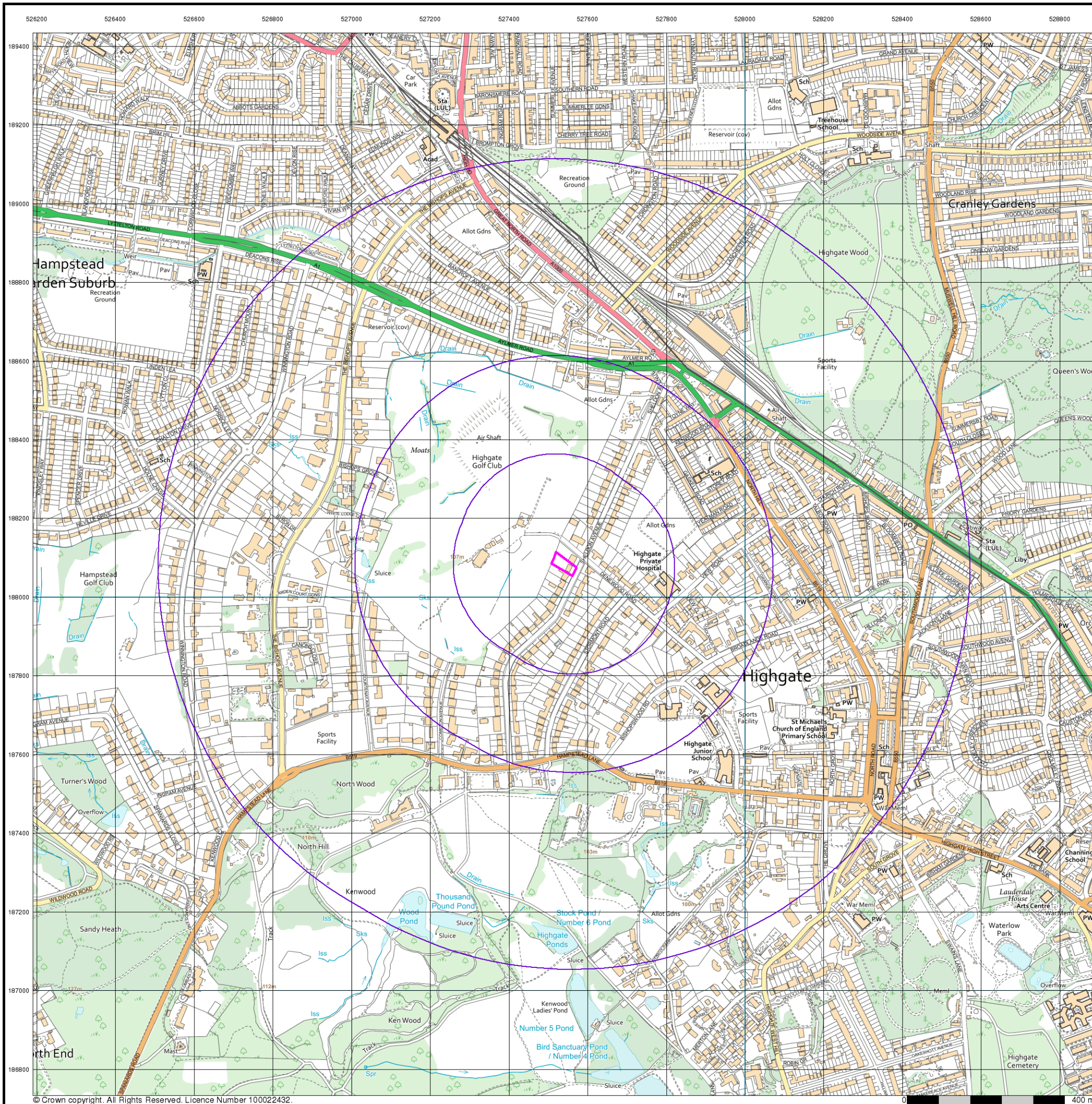
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Customer Ref: J23243
National Grid Reference: 527540, 188080
Slice: A
Site Area (Ha): 0.17
Search Buffer (m): 1000

Site Details

41, Sheldon Avenue, LONDON, N6 4JP



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VectorMap Local

Published 2023

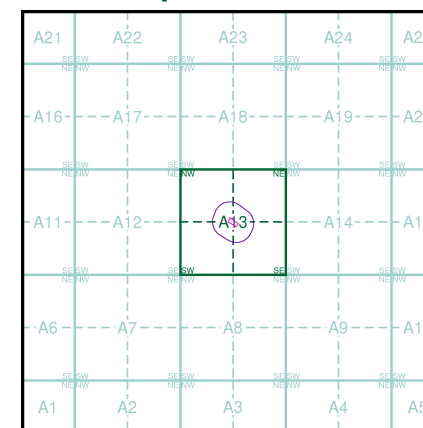
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

TQ28NE
2023
Variable

Historical Map - Slice A



Order Details

Order Number: 316763849_1_1
Customer Ref: J23243
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Preliminary Unexploded Ordnance (UXO) Risk Assessment

Project Name	41 Sheldon Avenue, Highgate
Client	GEA Ltd
Site Address	41 Sheldon Avenue, Highgate, London, N6 4JP
Report Reference	PA18617-00
Date	06/09/2023
Author	JBM
Quality Assurance	HW

1st Line Defence

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Assessment Objective

This preliminary unexploded ordnance (UXO) risk assessment is a qualitative screening exercise to assess the likely potential of encountering UXO at the 41 Sheldon Avenue site. The assessment involves the consideration of the basic factors that affect the potential for UXO to be present at a site as outlined in Stage One of the UXO risk management process.

Background

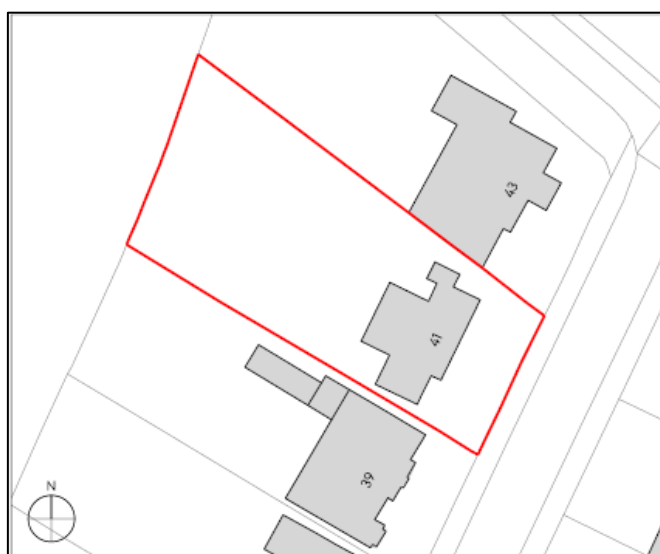
This assessment uses the sources of information available in-house to 1st Line Defence Ltd to enable the placement of a development site in context with events that may have led to the presence of German air-delivered or Allied military UXO. The report will identify any immediate necessity for risk mitigation or additional research in the form of a Detailed UXO Risk Assessment. It makes use of 1st Line Defence's extensive historical archives, library and unique geo-databases, as well as internet resources, and is researched and compiled by UXO specialists and graduate researchers.

The assessment directly follows CIRIA C681 guidelines "Unexploded Ordnance, a Guide for the Construction Industry". The document will therefore assess the following factors:

- Basic Site Data
- Previous Military Use
- Indicators of potential aerial delivered UXO threat
- Consideration of any Mitigating Factors
- Extent of Proposed Intrusive Works
- Any requirement for Further Work

It should be noted that the vast majority of construction sites in the UK will have a low or negligible risk of encountering UXO and should be able to be screened out at this preliminary stage. The report is meant as a common sense 'first step' in the UXO risk management process. The content of the report and conclusions drawn are based on basic, preliminary research using the information available to 1st Line Defence at the time this report was produced. It should be noted that the only way to entirely negate risk from UXO to a project would be to support the works proposed with appropriate UXO risk mitigation measures. It is rarely possible to state that there is absolutely 'no' risk from UXO to a project.

Site Boundary



Risk Assessment Considerations	
Site location and description/current use	The site is located in the Borough of Haringey, north London. Recent aerial imagery indicates that the site comprises a detached property and garden adjacent to Sheldon Avenue. Other detached properties stand to the north-east and south-west. Immediately east is Sheldon Avenue, and to the west are the grounds of Highgate Golf Club. The site is centred approximately on the OS grid reference: TQ 27546 88079.
Are there any indicators of current/historical military activity on/close to the site?	In-house records do not indicate that the site footprint had any former military use. No features such as WWII defensive positions, encampments or firing ranges are recorded to have been located at the site. In addition, no information of ordnance being stored, produced, or disposed of within the proposed site boundary could be found. The closest Heavy Anti-Aircraft (HAA) battery was situated approximately 1.9km north-east of the site. The range of HAA batteries could be up to 15km. The conditions under which unexploded anti-aircraft ordnance may have fallen within the proposed site are analogous to that of aurally delivered Luftwaffe bombs.
What was the pre- and post-WWII history of the site?	Pre-WWII OS mapping dated 1935-1936 indicates that the site comprised a detached property and associated garden adjacent to <i>Sheldon Avenue</i>. Detached properties border the site to the north-east and south-west, with others on the opposite site of <i>Sheldon Avenue</i> to the east. The grounds of a <i>Golf Course</i> border the site to the west. Post-WWII OS mapping dated 1950 provides indications largely analogous the pre-war mapping, although the property on site, as well as several others in the wider surrounds, appear to have undergone some renovation. <i>Sheldon Avenue</i> has been extended, and continues further north-east of the site.
Was the area subject to bombing during WWII?	During WWII the site was located in the Municipal Borough of Hornsey, which sustained an overall high bombing density according to official Home Office statistics, with an average of 123.6 items of ordnance recorded per 1,000 acres. This included 292 high explosive (HE) bombs, nine parachute mines, 28 oil bombs, five phosphorus bombs, 17 V-1 pilotless aircraft, and four V-2 rockets, comprising 355 items across 2,872 acres. Consolidated London bomb census mapping and local Hornsey bomb mapping were consulted, and neither plot any bomb strikes on or immediately adjacent to the site boundary. Hornsey mapping plots a HE bomb strike approximately 75m north-west, too distant to substantially increase the risk of UXO contamination on site.
Is there any evidence of bomb damage on/close to the site?	On this occasion, low-resolution WWII-era aerial imagery was available for consultation. No major evidence of bomb damage such as ruined or repaired buildings, cratering, or indentations in the ground are obvious on or in the immediate vicinity of the site. Properties on and around the site are also not indicated to have sustained damage according to Middlesex County Council war damage mapping.
To what degree would the site have been subject to access?	As the site existed in an urbanised area of London, adjacent to residential properties and a road, wartime access is anticipated to have been high, increasing the likelihood of evidence of UXO being discovered and a reported.

To what degree has the site been developed post-WWII?	Comparison of historical and recent aerial imagery indicates that some development to the property on site has occurred since WWII, including the addition of a conservatory.
What is the nature and extent of the intrusive works proposed?	The proposed works are understood to include the drilling of three 15m deep cable percussion boreholes.

Summary and Conclusions

During WWII the site was located in the Municipal Borough of Hornsey, which sustained an overall high bombing density according to official Home Office statistics, with an average of 123.6 items of ordnance recorded per 1,000 acres.

Consolidated London bomb census mapping and local Hornsey bomb mapping were consulted, and no evidence of bombing in the immediate vicinity of the site could be located at this preliminary stage. This lack of bombing is corroborated by low-resolution WWII-era aerial imagery, available on this occasion, in which major evidence of bomb damage such as ruined or repaired buildings, cratering, or indentations in the ground are obvious on or in the immediate vicinity of the site; Middlesex wartime damage mapping also does not record damage to buildings in the site area.

As the site existed in an urbanised area of London, adjacent to residential properties and a road, wartime access is anticipated to have been high, increasing the likelihood of evidence of UXO being discovered and a reported.

Recommendations

Given the findings of this preliminary report, the risk on site is not considered to be significantly elevated above the 'background level' for this part of the country. Whilst it would be possible to conduct further research in the form of a Detailed UXO Risk Assessment for this site, it is not anticipated that any further information would be discovered that would significantly alter the findings of this report. It is therefore recommended that **no further research** is undertaken.

If the client has any anecdotal or empirical evidence of UXO risk on site, please contact 1st Line Defence.

It should be noted that although the risk from unexploded ordnance on this site has been assessed as low/minimal, this does not mean there is 'no' risk of encountering UXO. This preliminary report has been undertaken with due diligence, and all reasonable care has been taken to access and analyse relevant historical information. By necessity, when dealing with historical evidence, and when making assessments of UXO risk, various assumptions have to be made which we have discussed and justified within this report. Our reports take a common-sense and practical approach to the assessment of UXO risk, and we strive to be reasonable and pragmatic in our conclusions. As referenced, it would be possible to undertake further research into this site, but based on the evidence to hand, this is not deemed strictly necessary, and no reasonably justifiable requirement for proactive on-site mitigation has been identified.

It should however be stressed that if any suspect items are encountered during the proposed works, 1st Line Defence should be contacted for advice/assistance, and to re-assess the risk as necessary. Furthermore, we would recommend that ground personnel are always made aware of the potential for encountering UXO, what to look out for and what to do in the unlikely event that a suspect item is encountered, and that a UXO Risk Management Plan is put together for the proposed works. We would be happy to provide a template and guidance for this – contact us on 01992 245020. Should the scope of works change or additional works be proposed, 1st Line Defence should be contacted to re-evaluate the risk.

1st Line Defence

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appendix d

Ground Movement Analysis

PDisp Analysis – Contour output - Short Term Movements – Excavation

PDisp Analysis – Contour output - Short Term Movements – Completion of construction

PDisp Analysis – Contour output - Total Movements

XDisp Analysis – Vertical movements - Installation

XDisp Analysis – Horizontal movements - Installation

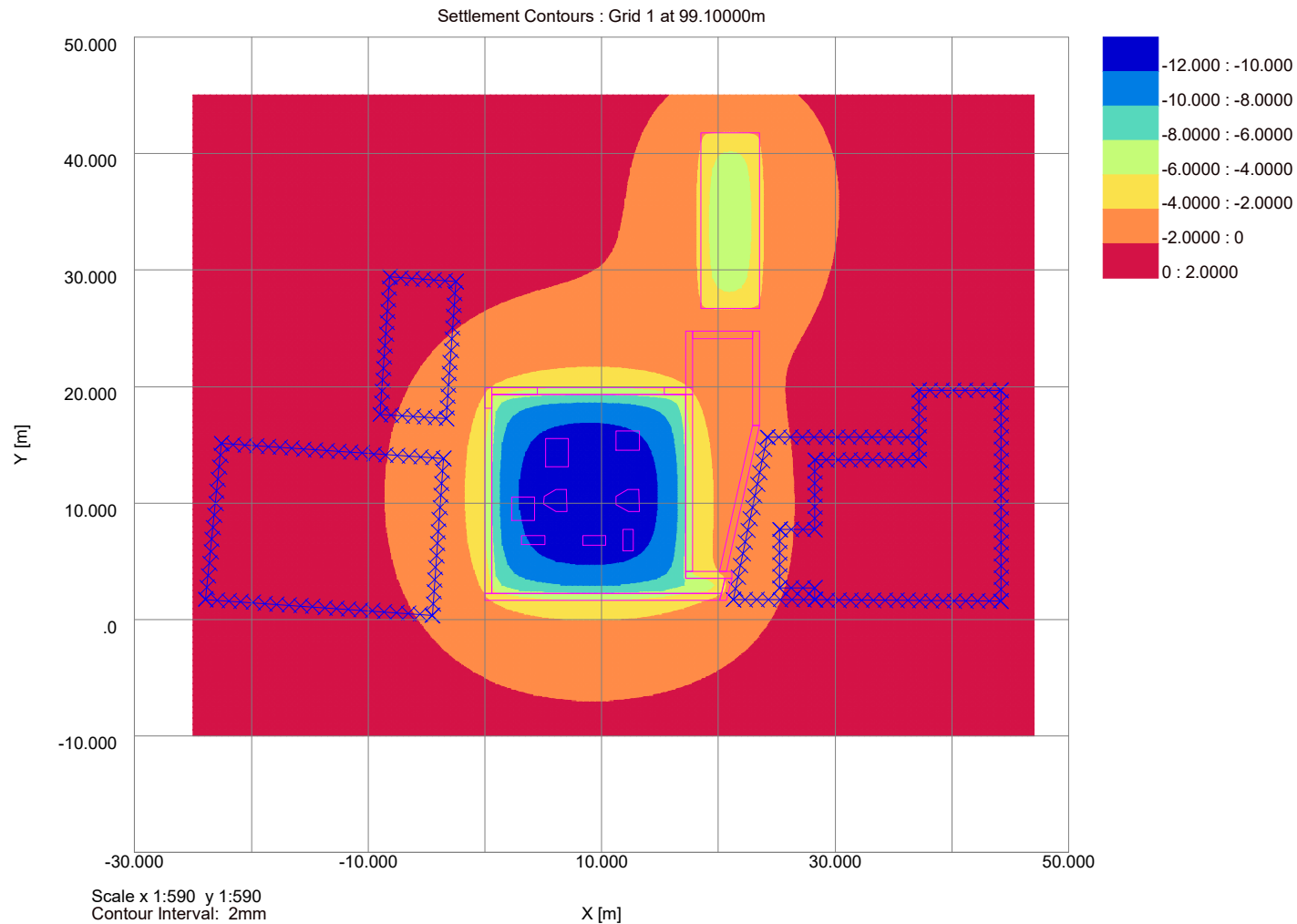
XDisp Analysis – Vertical movements - Installation and Excavation

XDisp Analysis – Horizontal movements - Installation and Excavation

XDisp Analysis – Tabular output - Installation

XDisp Analysis – Tabular output - Installation and Excavation

Job No.	Sheet No.	Rev.
J23243		
Drg. Ref.		
Made by AG	Date	Checked Date

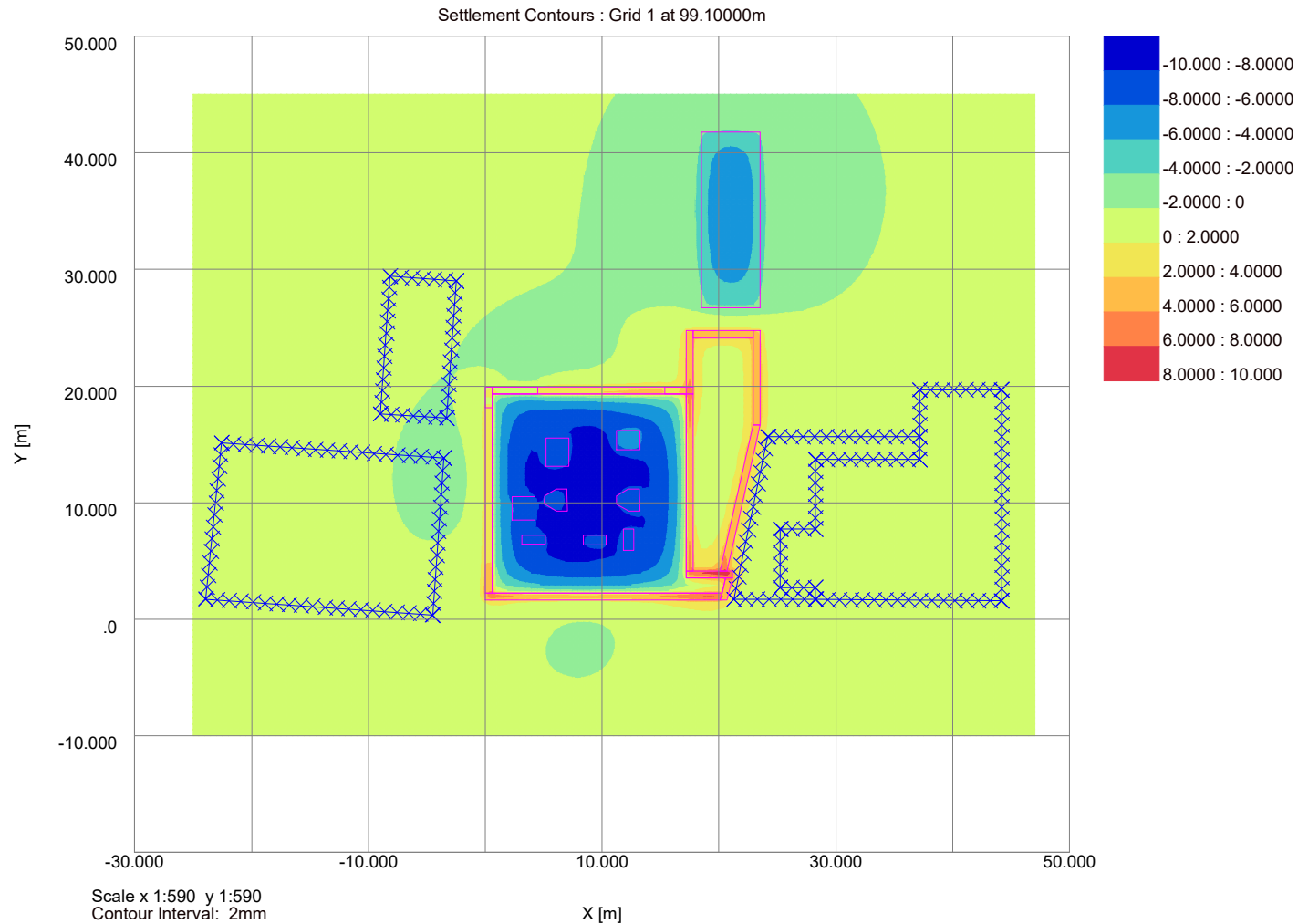




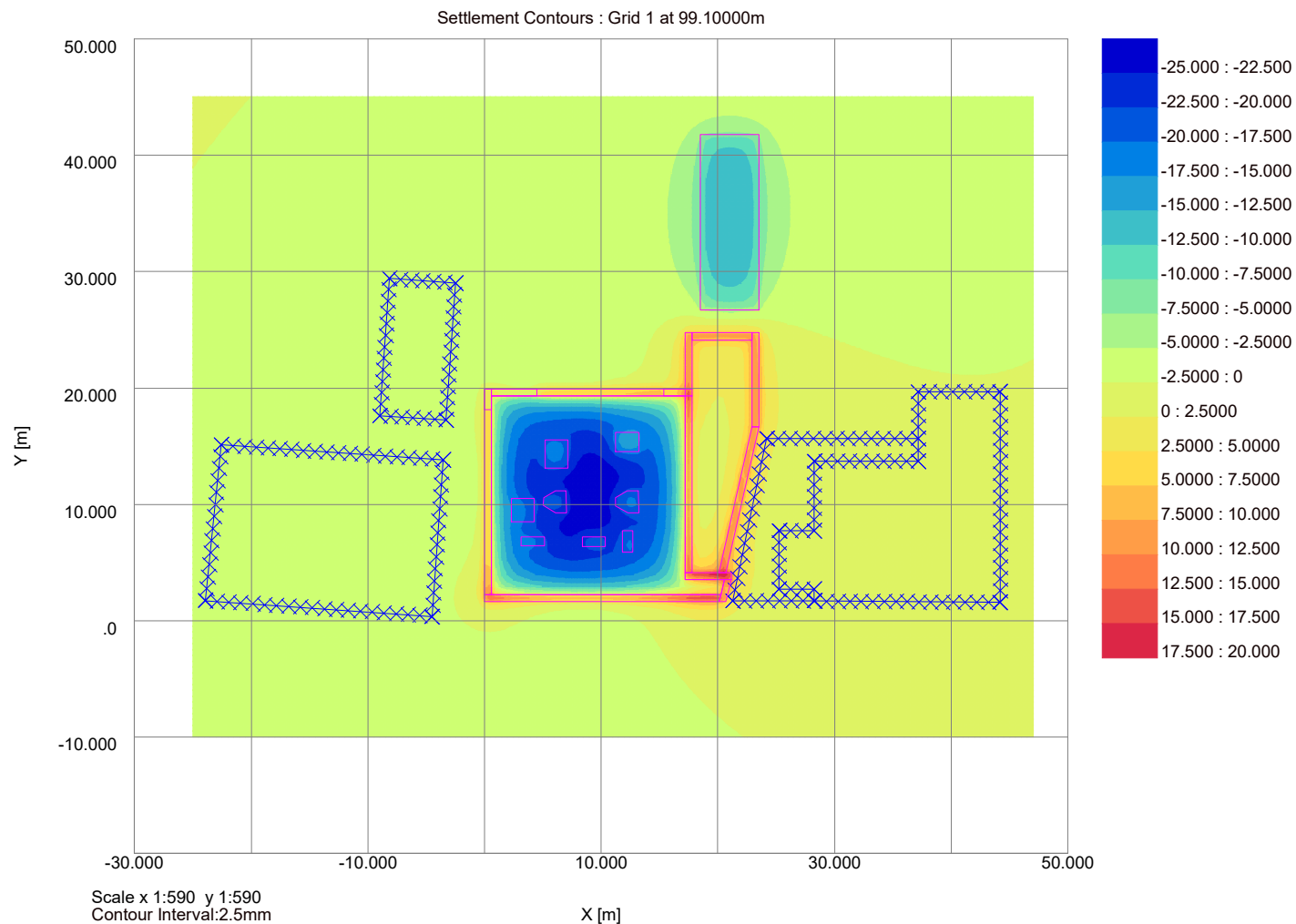
GEOTECHNICAL AND ENVIRONMENTAL ASSOCIATES LTD

41 Sheldon Avenue
Stage 2
Short term movements

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J23243		
Drg. Ref.		
Made by AG	Date	Checked Date

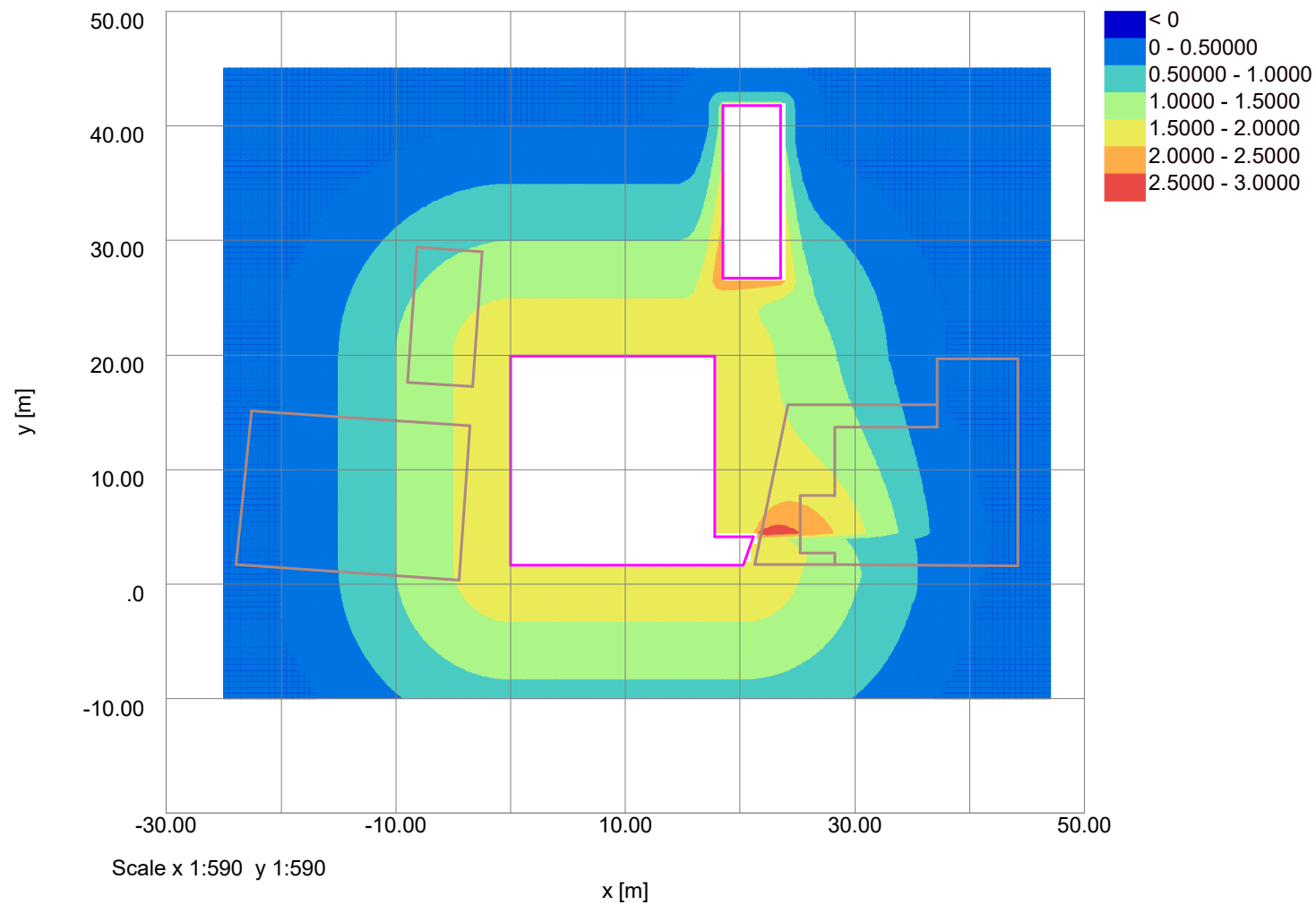


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Drg. Ref.		
Made by AG	Date	Checked Date



Job No.	Sheet No.	Rev.
J23243		
Drg. Ref.		
Made by AG	Date 22-Feb-2024	Checked Date

Vertical Settlement Contours: Grid 1 (level 99.200m) (Interval 0.5mm)



Job No.	Sheet No.	Rev.
J23243		
Drg. Ref.		
Made by AG	Date 22-Feb-2024	Checked Date

Horizontal Displacement Contours: Grid 1 (level 99.200m) Interval 0.5mm

