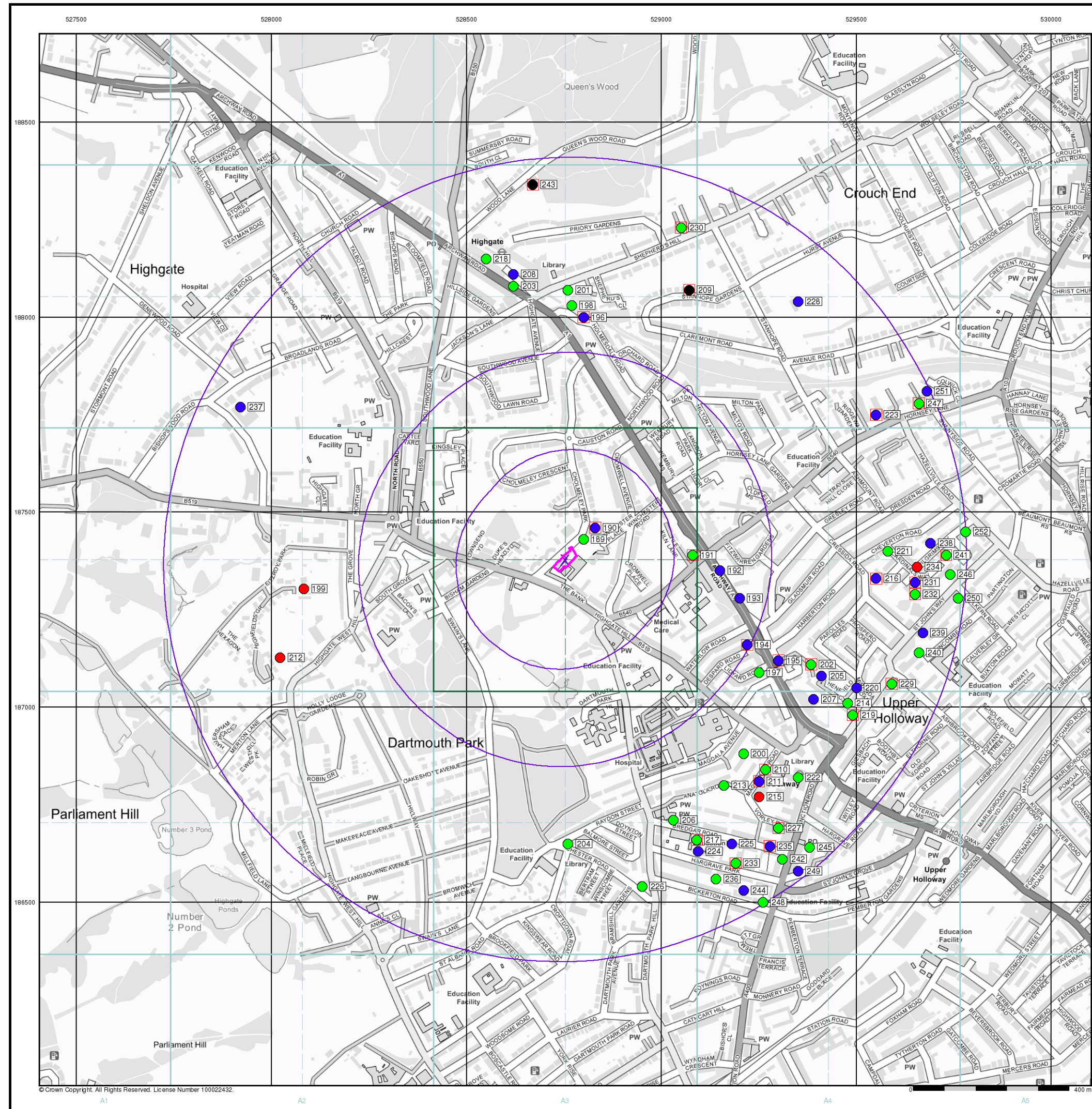




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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

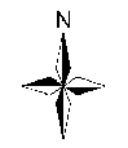
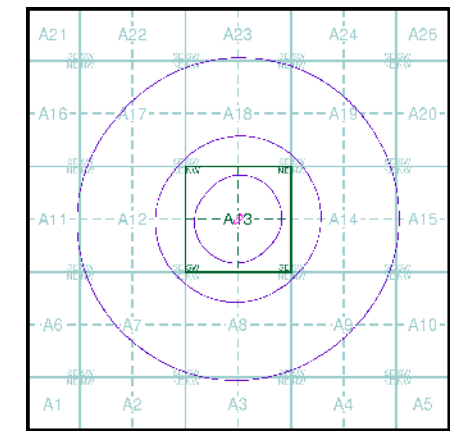
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A

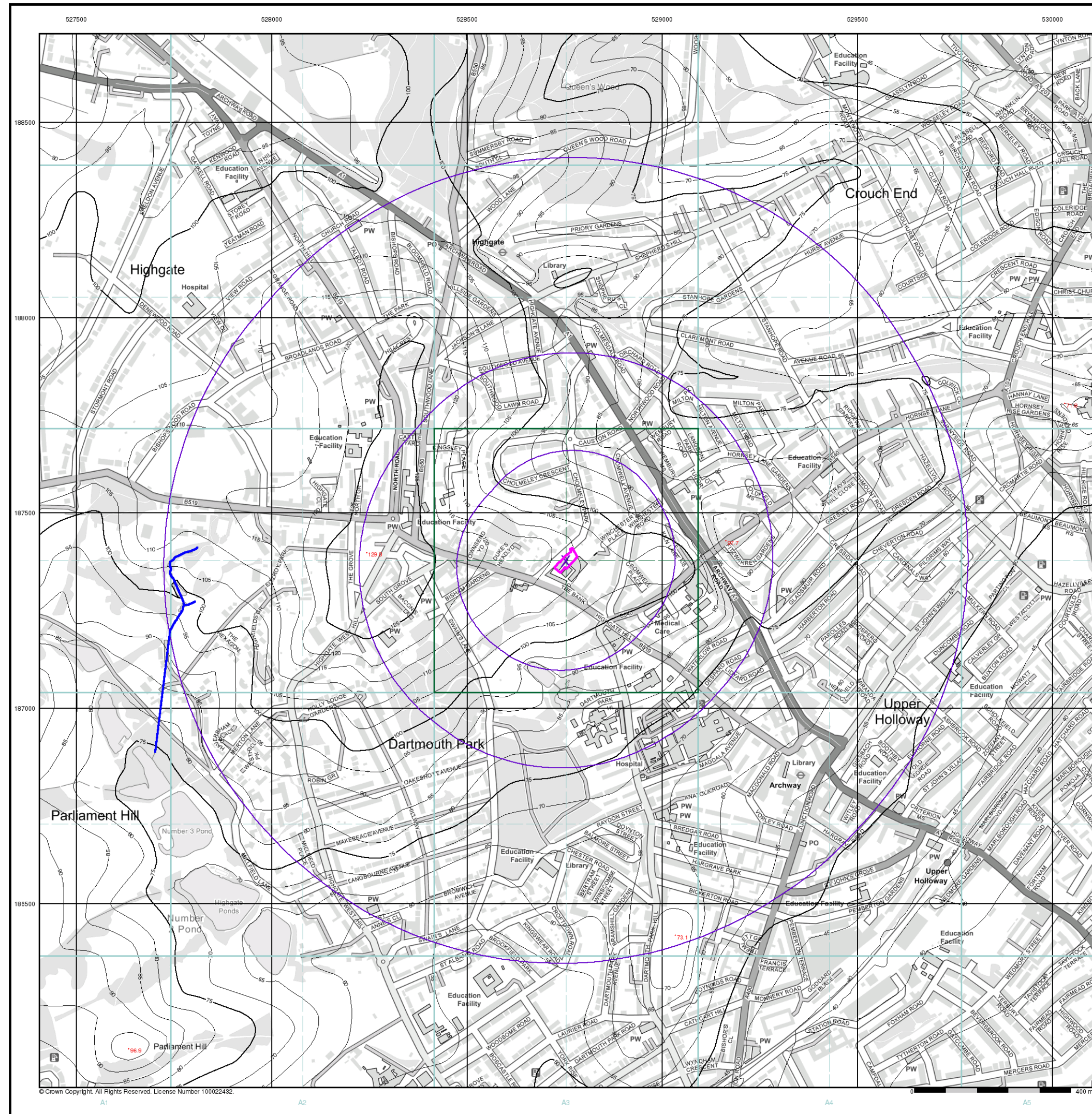


Order Details

Order Number: 319191896_1_1
Customer Ref: 2992
National Grid Reference: 528750, 187380
Slice: A
Site Area (Ha): 0.15
Search Buffer (m): 1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

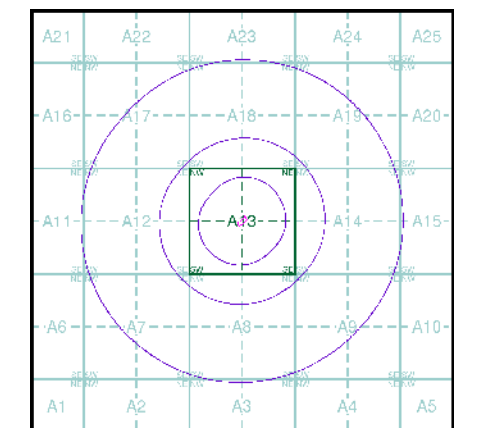
OS Water Network Data

- | | |
|--------------|-------------------------|
| Canal | Drain |
| Reservoir | Other |
| Foreshore | Lake |
| Marsh | Transfer |
| Tidal River | Lock Or Flight Of Locks |
| Inland River | Sea |

Contours (height in meters)

- Standard Contour 105
- Master Contour 100
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

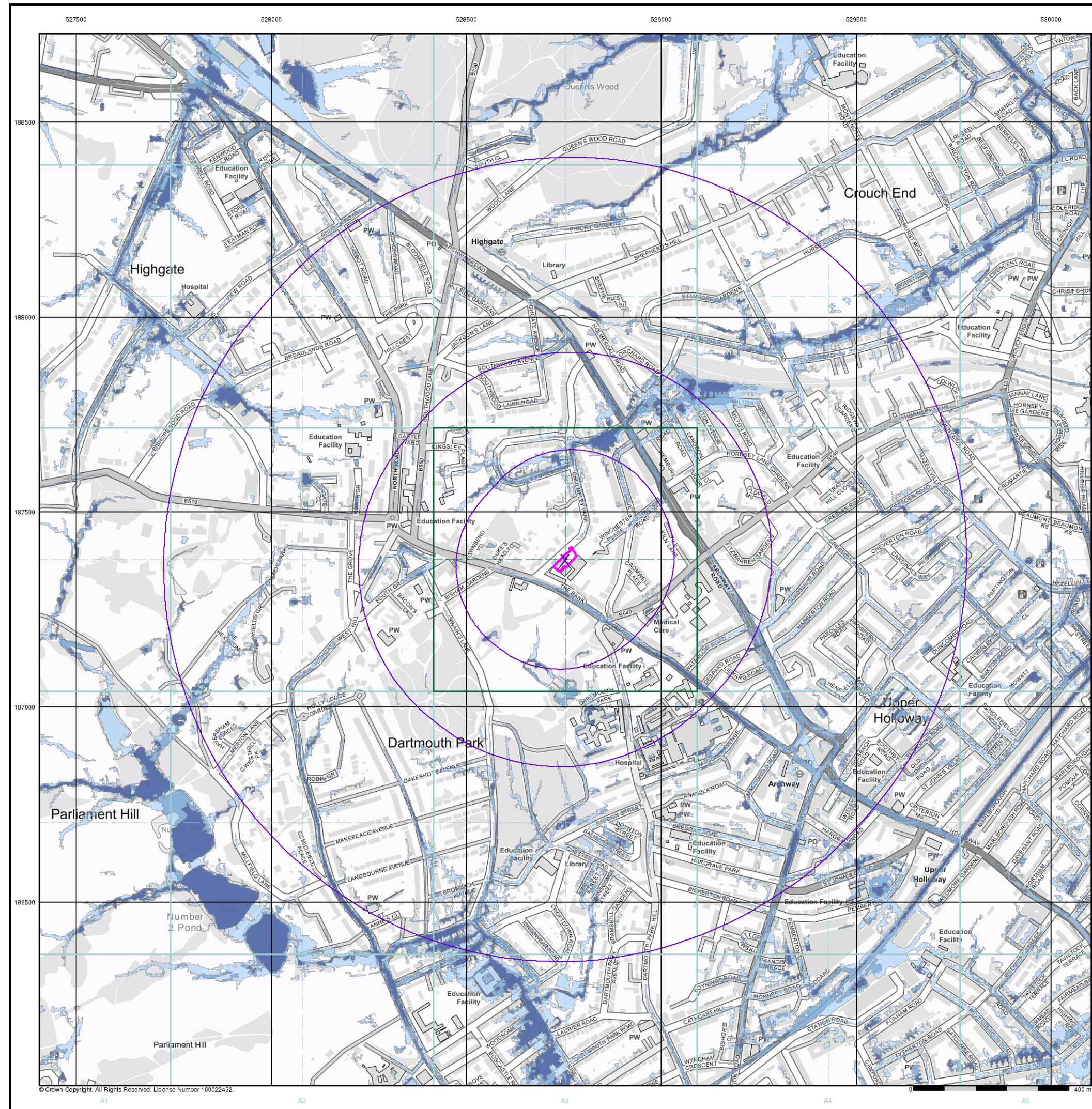
Order Number: 319191896_1_1
Customer Ref: 2992
National Grid Reference: 528750, 187380
Slice: A
Site Area (Ha): 0.15
Search Buffer (m): 1000

Site Details

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General

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- Bearing Reference Point

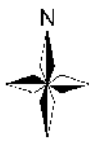
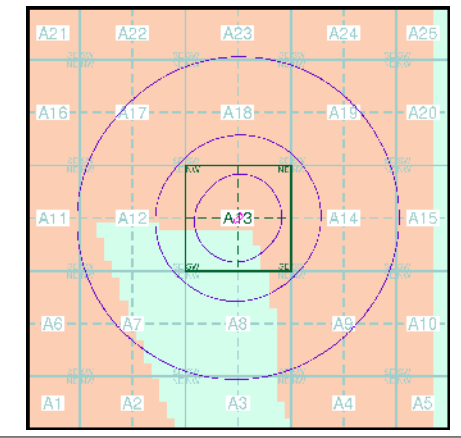
Risk of Flooding from Surface Water

- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

- See the suitability map below
- National to county
 - County to town
 - Town to street
 - Street to parcels of land
 - Property

EA/NRW Suitability Map - Slice A



Order Details

Order Number: 319191896_1_1
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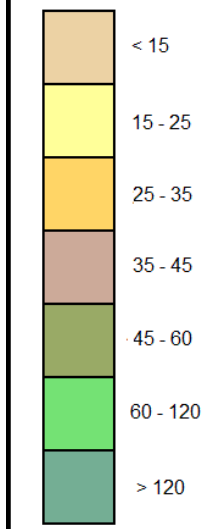
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

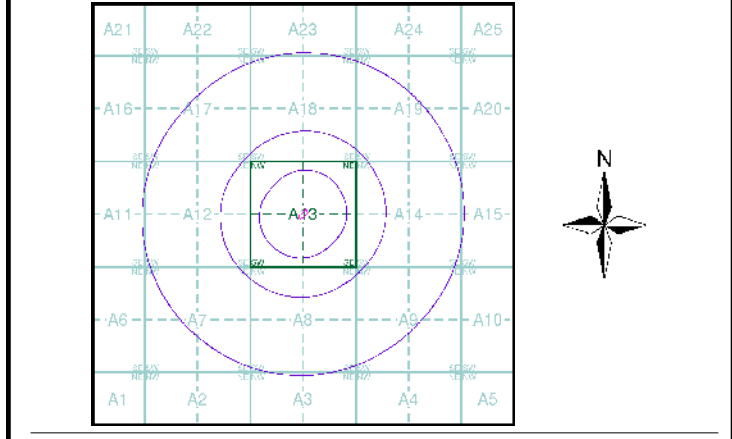
Urban Soil Chemistry Arsenic

BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Arsenic Concentrations mg/kg



Urban Soil Chemistry Arsenic - Slice A



Order Details

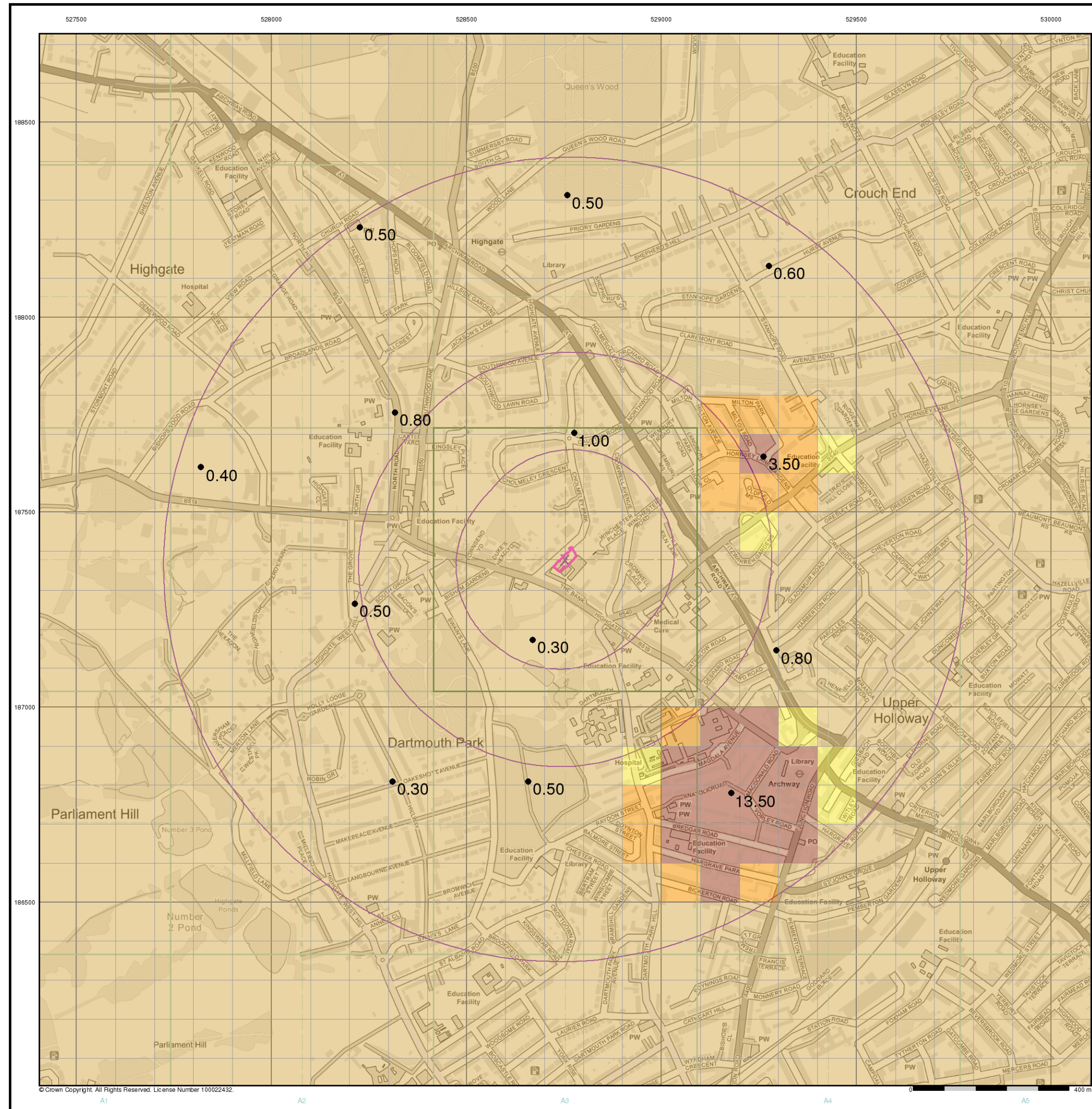
Order Details: 319191896_1_1
Customer Ref: 2992
National Grid Reference: 528750, 187380
Slice: A
Site Area (Ha): 0.15
Search Buffer (m): 1000

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- Bearing Reference Point

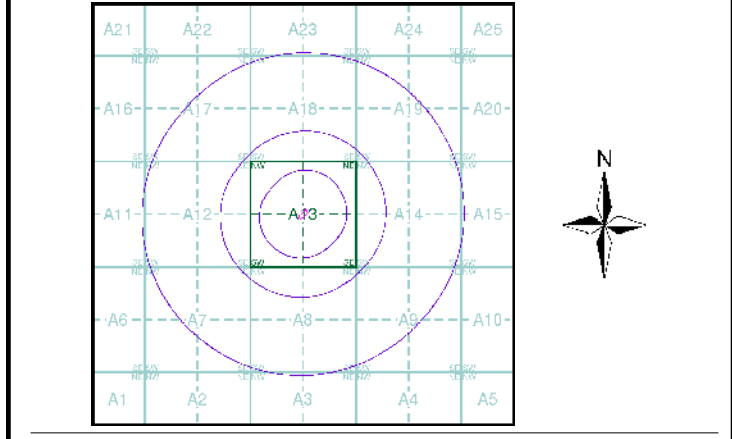
Urban Soil Chemistry Cadmium

BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Cadmium Concentrations mg/kg

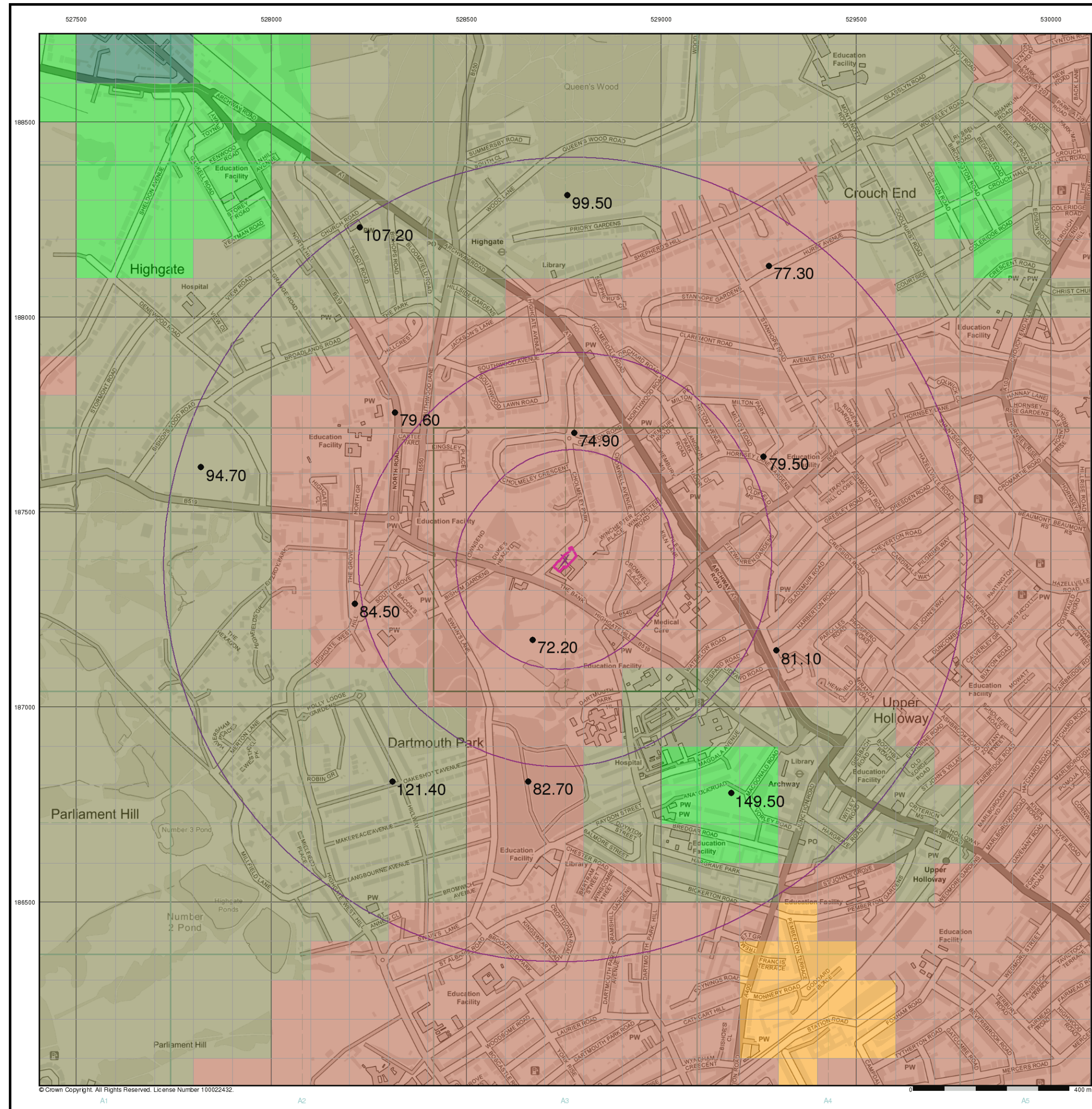


Urban Soil Chemistry Cadmium - Slice A



Order Details
Order Details: 319191896_1_1
Customer Ref: 2992
National Grid Reference: 528750, 187380
Slice: A
Site Area (Ha): 0.15
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Site Details
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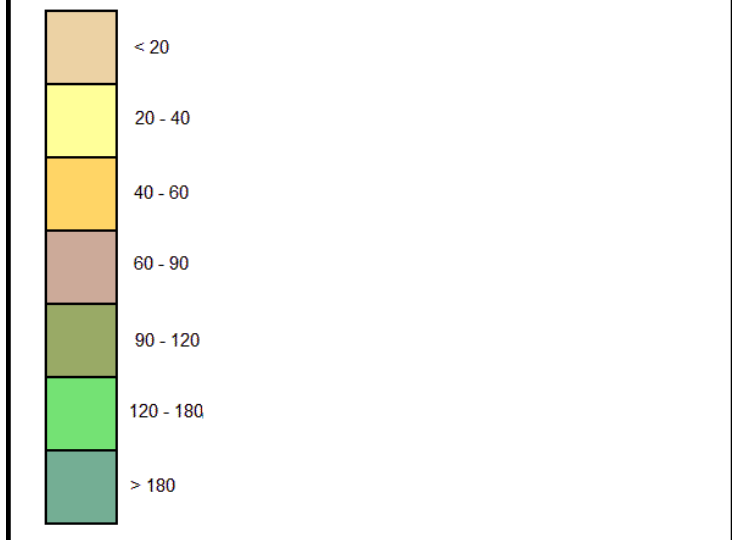
General

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- Specified Buffer(s)
- Bearing Reference Point

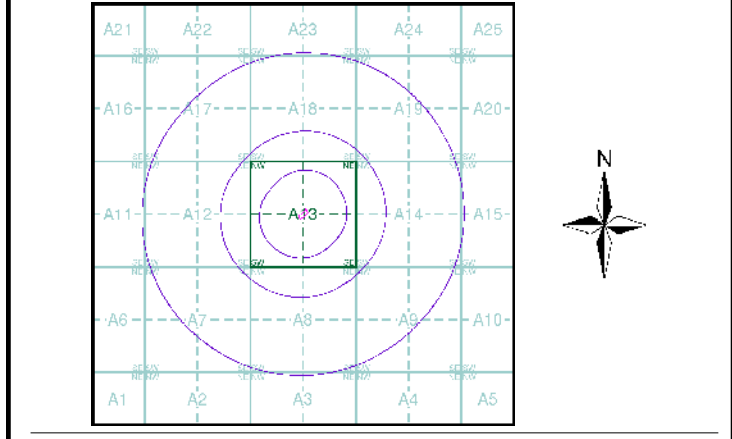
Urban Soil Chemistry Chromium

BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Chromium Concentrations mg/kg

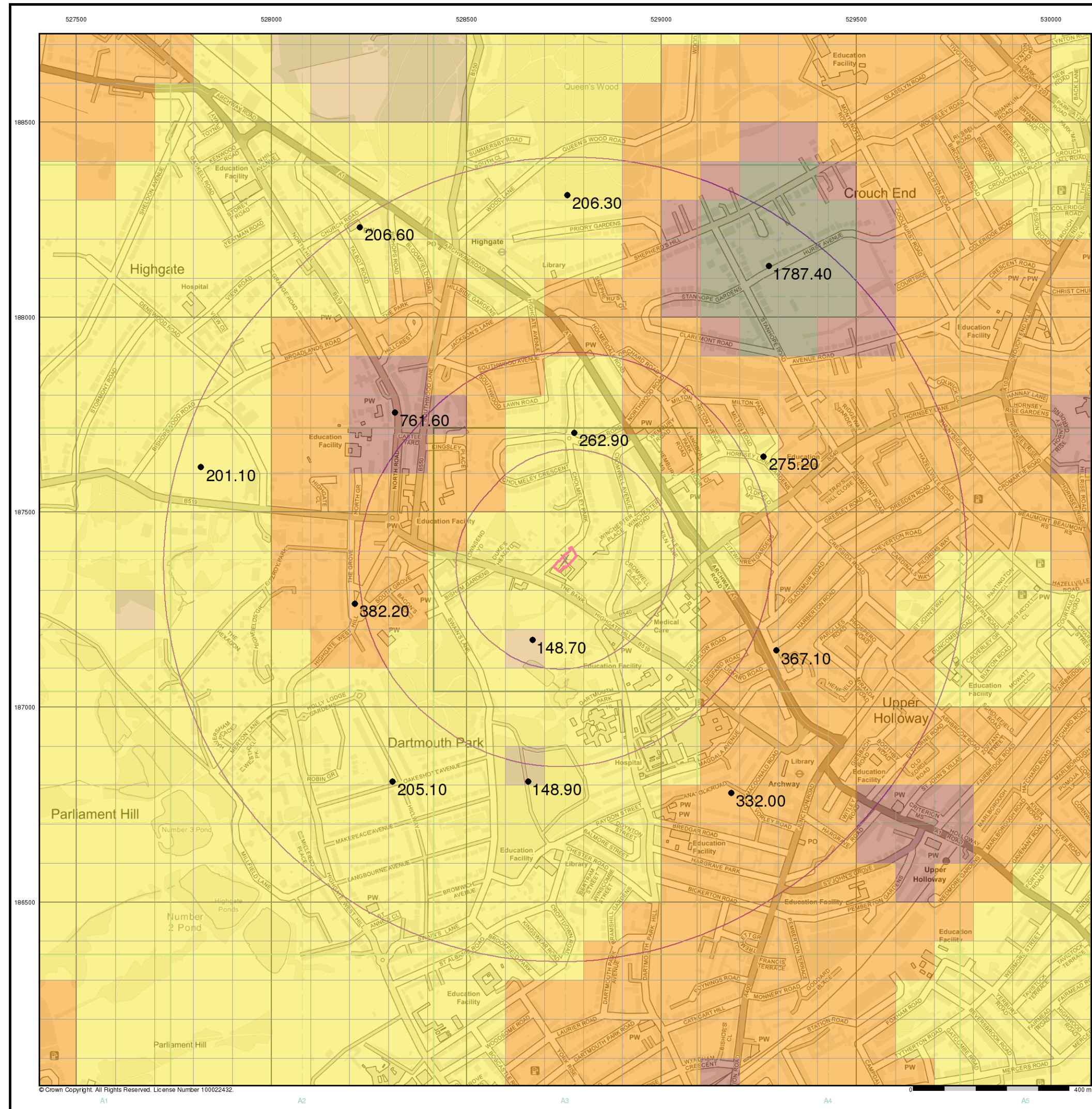


Urban Soil Chemistry Chromium - Slice A



Order Details
Order Details: 319191896_1_1
Customer Ref: 2992
National Grid Reference: 528750, 187380
Slice: A
Site Area (Ha): 0.15
Search Buffer (m): 1000

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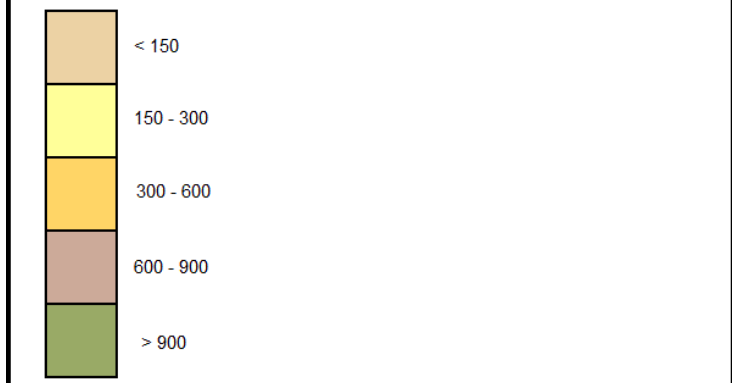
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- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point

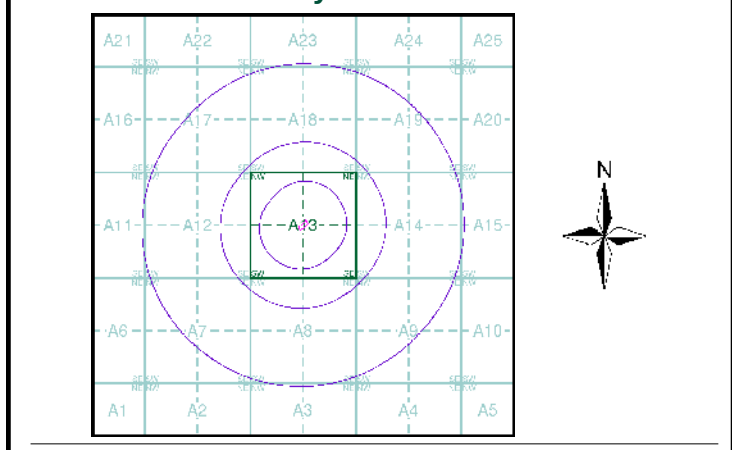
Urban Soil Chemistry Lead

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Lead Concentrations mg/kg



Urban Soil Chemistry Lead - Slice A



Order Details

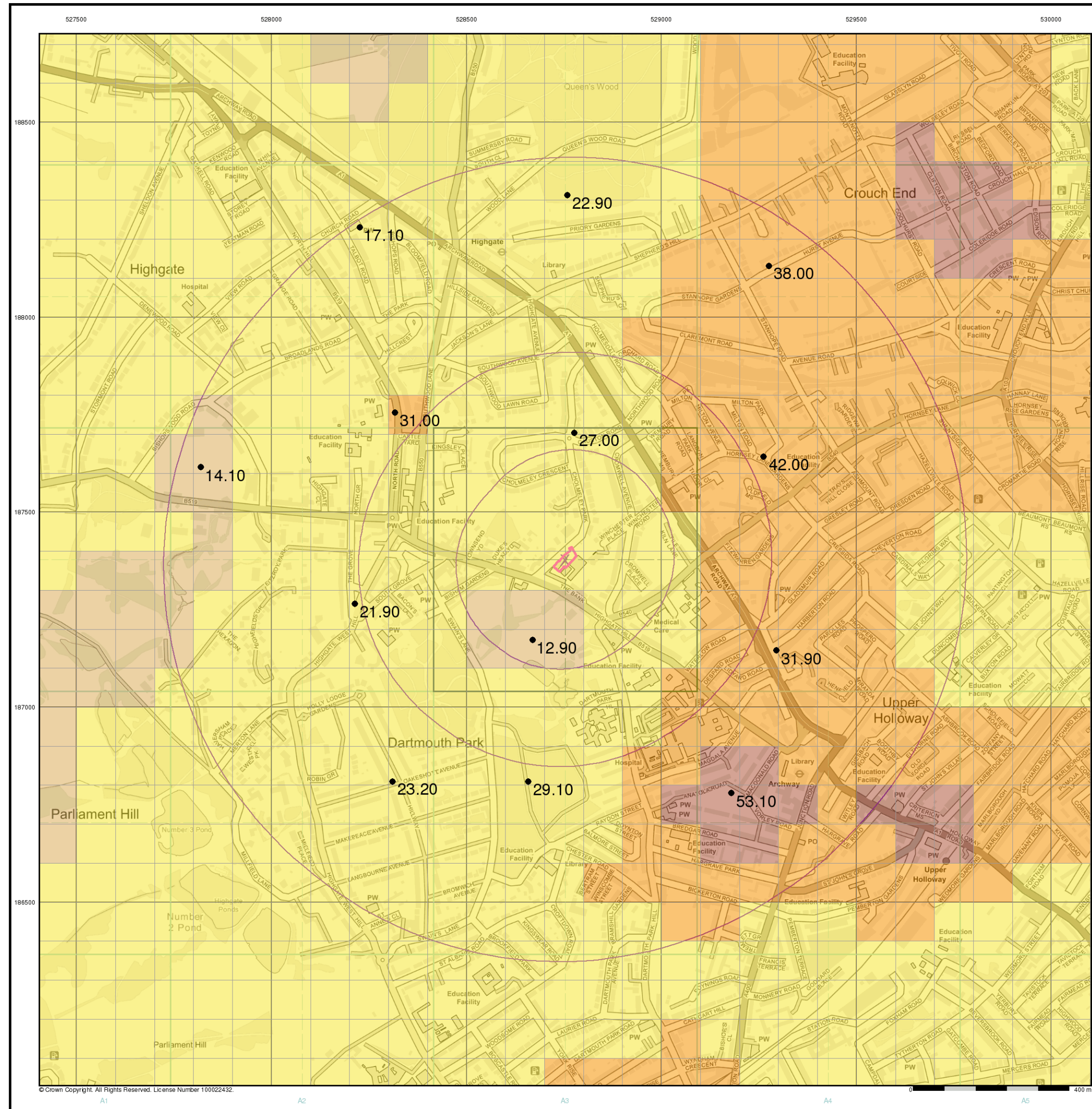
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Customer Ref: 2992
National Grid Reference: 528750, 187380
Slice: A
Site Area (Ha): 0.15
Search Buffer (m): 1000

Site Details

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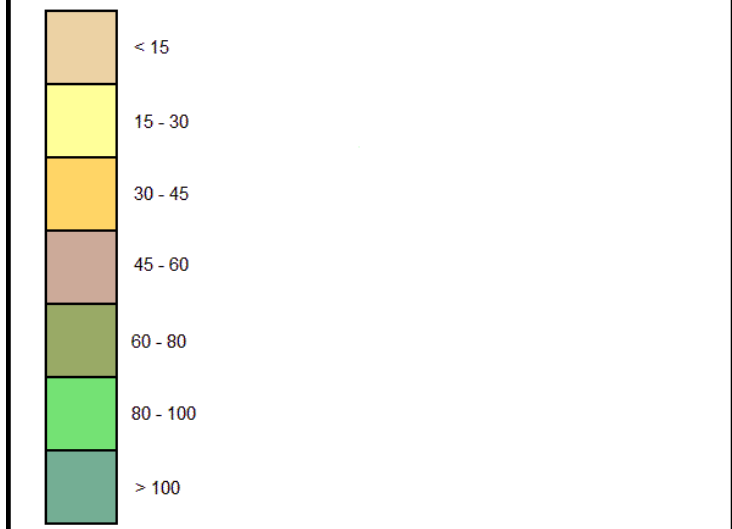
General

Specified Site Specified Buffer(s) Bearing Reference Point

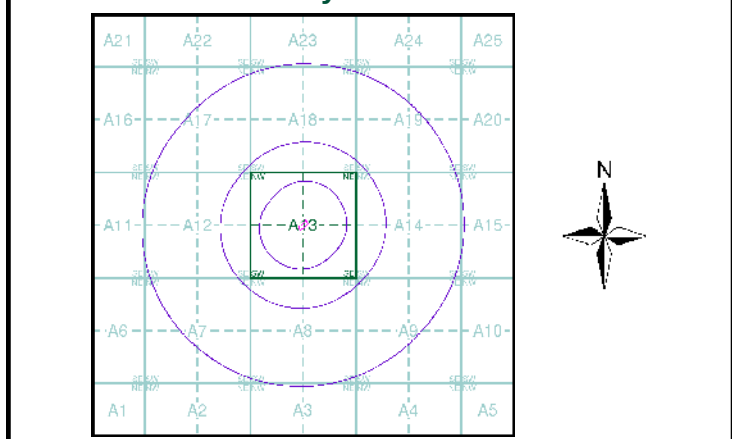
Urban Soil Chemistry Nickel

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Nickel Concentrations mg/kg



Urban Soil Chemistry Nickel - Slice A

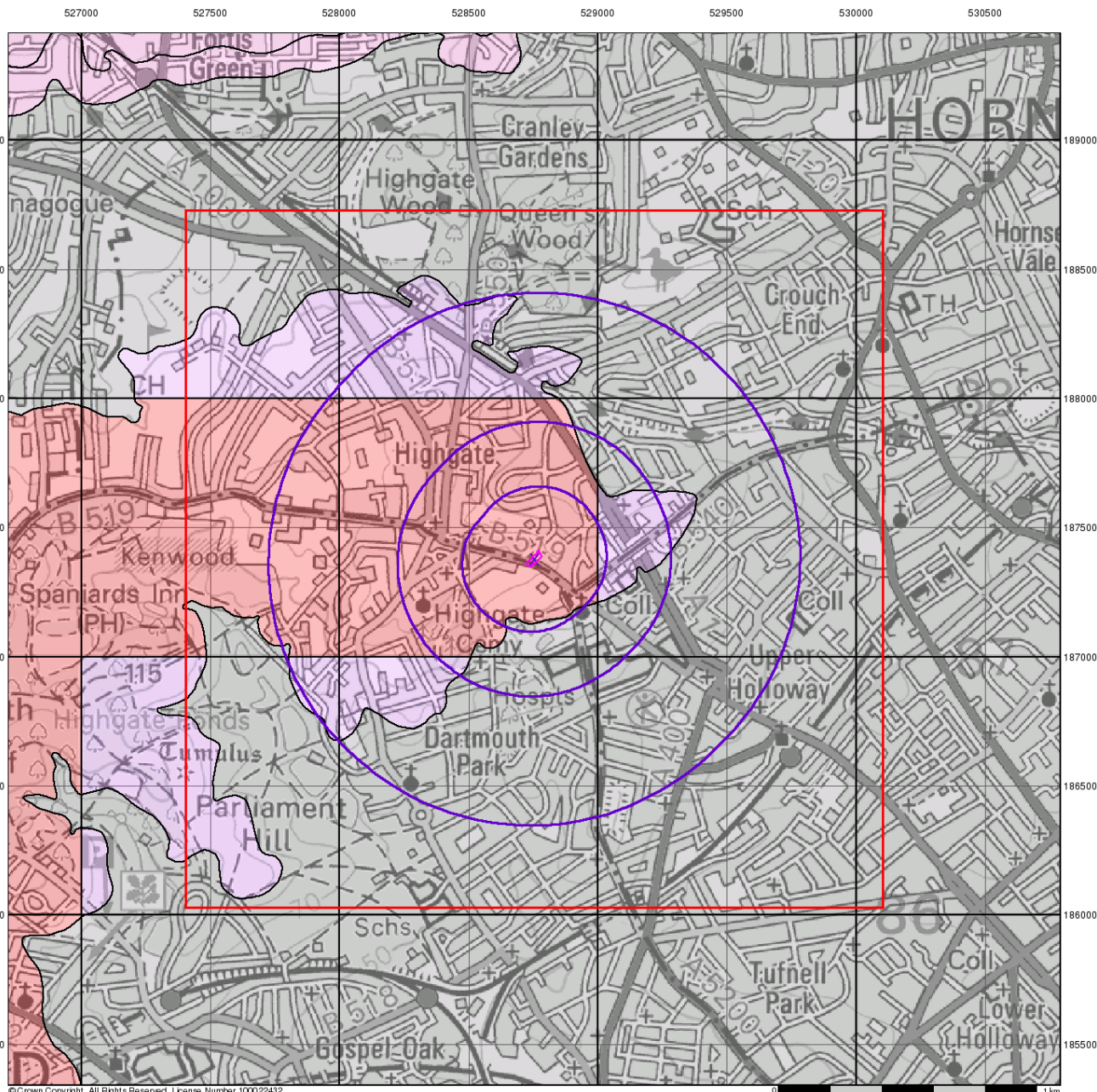


Order Details

Order Details: 319191896_1_1
Customer Ref: 2992
National Grid Reference: 528750, 187380
Slice: A
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0 1 km

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Groundwater Vulnerability

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Bedrock Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

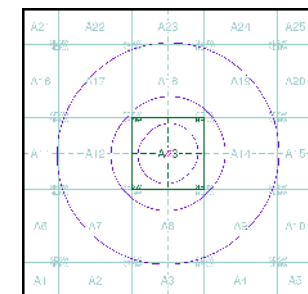
Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A



Order Details

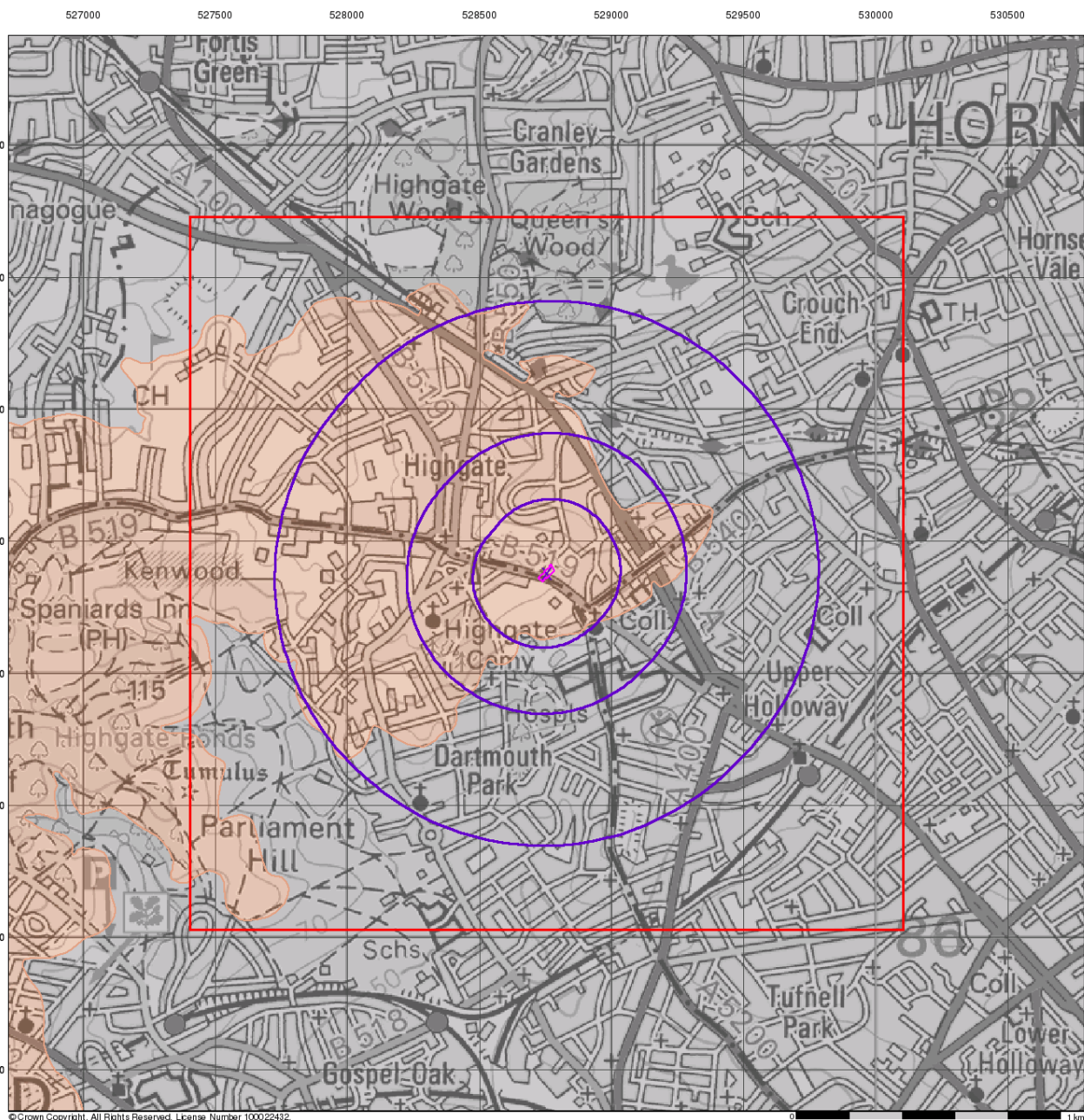
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Customer Ref: 2992
National Grid Reference: 528750, 187380
Slice: A
Site Area (Ha): 0.15
Search Buffer (m): 1000

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Bedrock Aquifer Designation

General

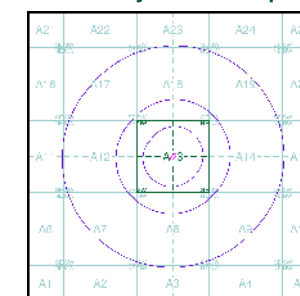
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

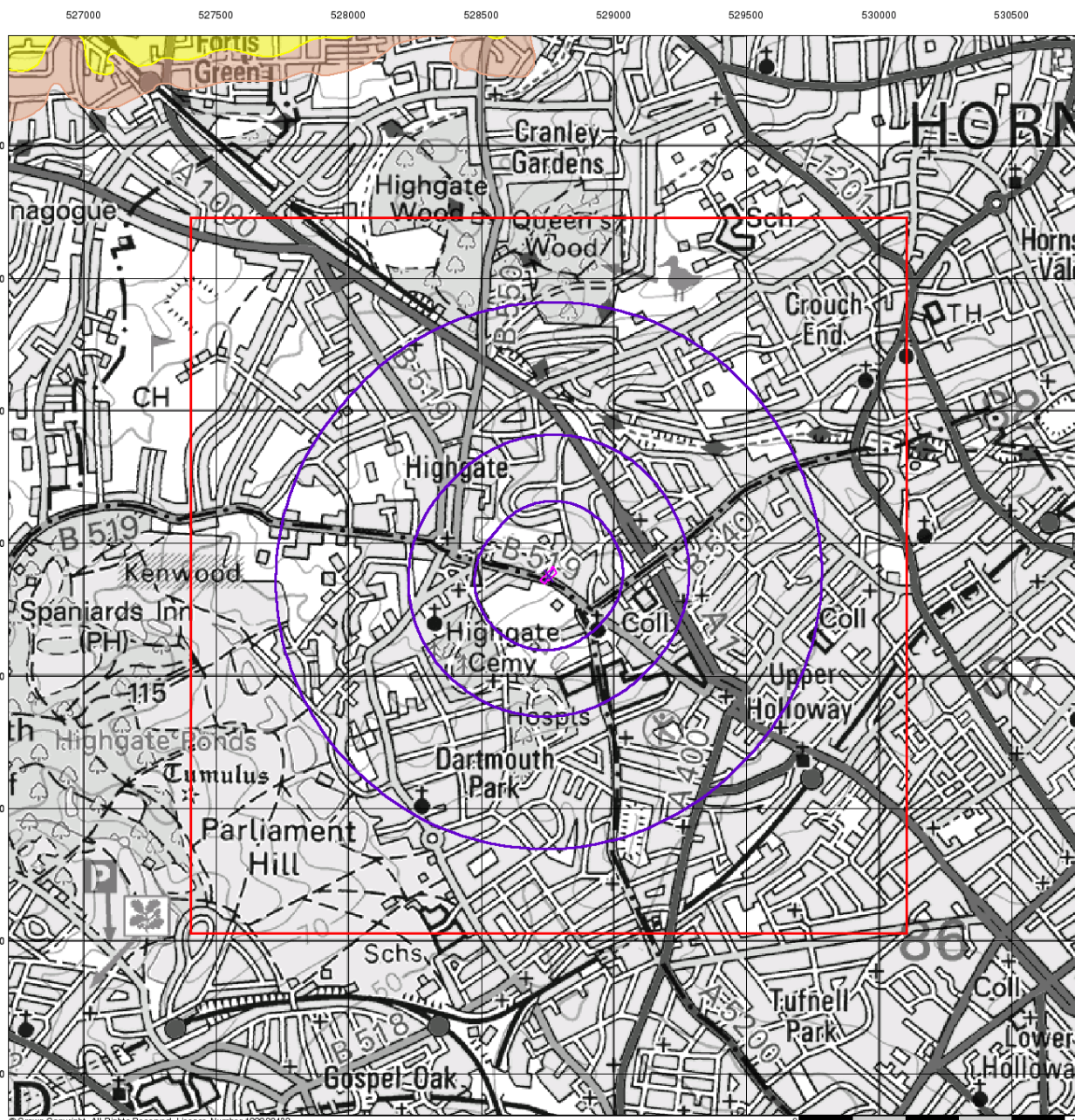
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 Customer Ref: 2992
 National Grid Reference: 528750, 187380
 Slice: A
 Site Area (Ha): 0.15
 Search Buffer (m): 1000

Site Details

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Superficial Aquifer Designation

General

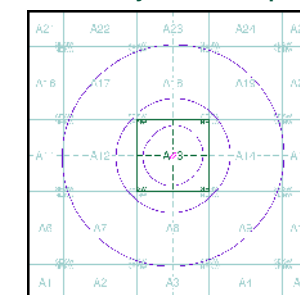
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

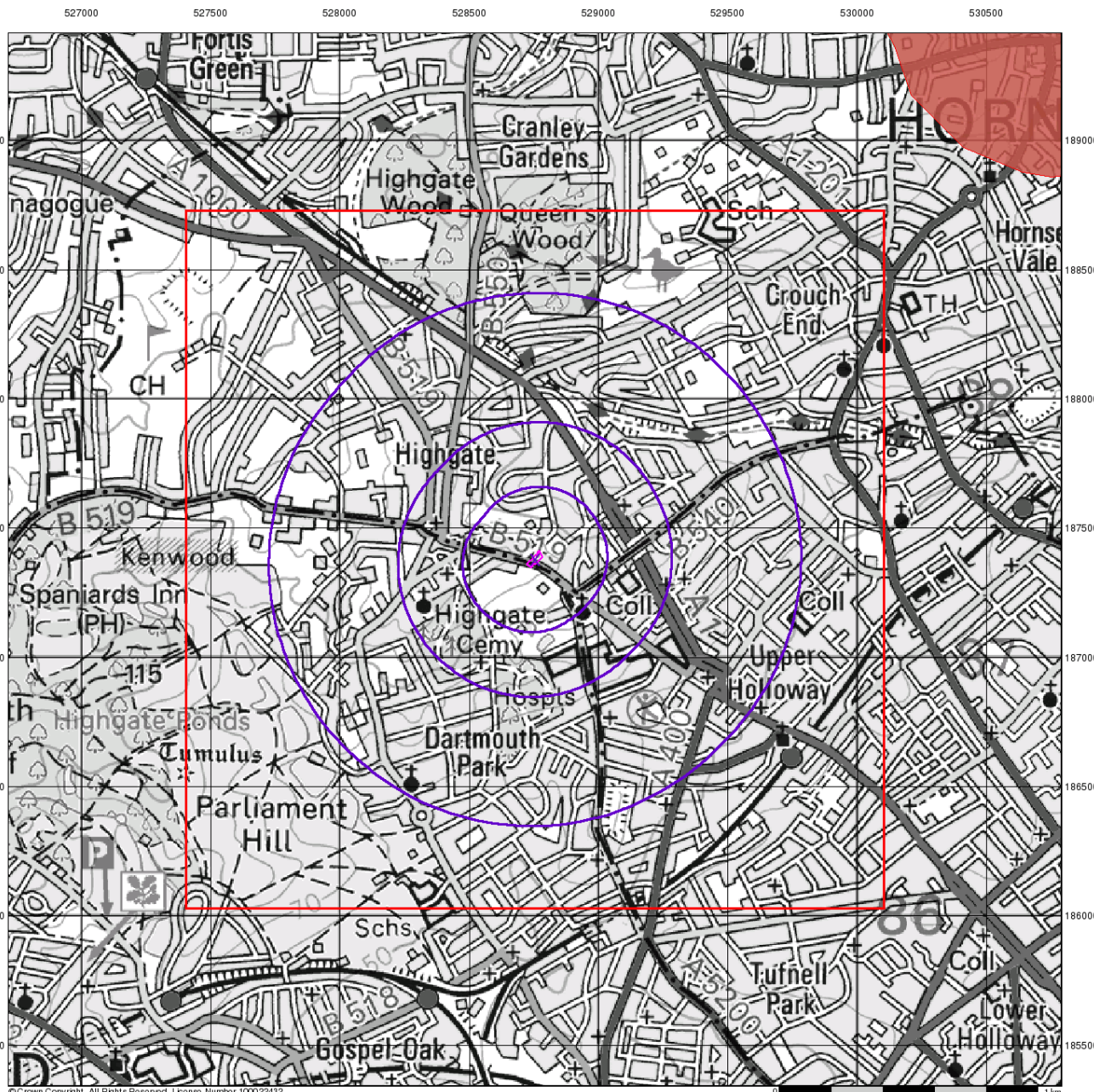
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 Customer Ref: 2992
 National Grid Reference: 528750, 187380
 Slice: A
 Site Area (Ha): 0.15
 Search Buffer (m): 1000

Site Details

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Source Protection Zones

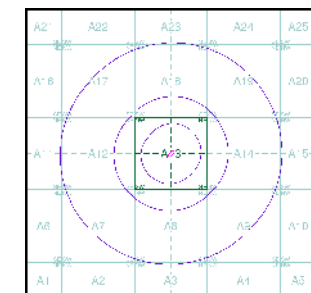
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



Order Details

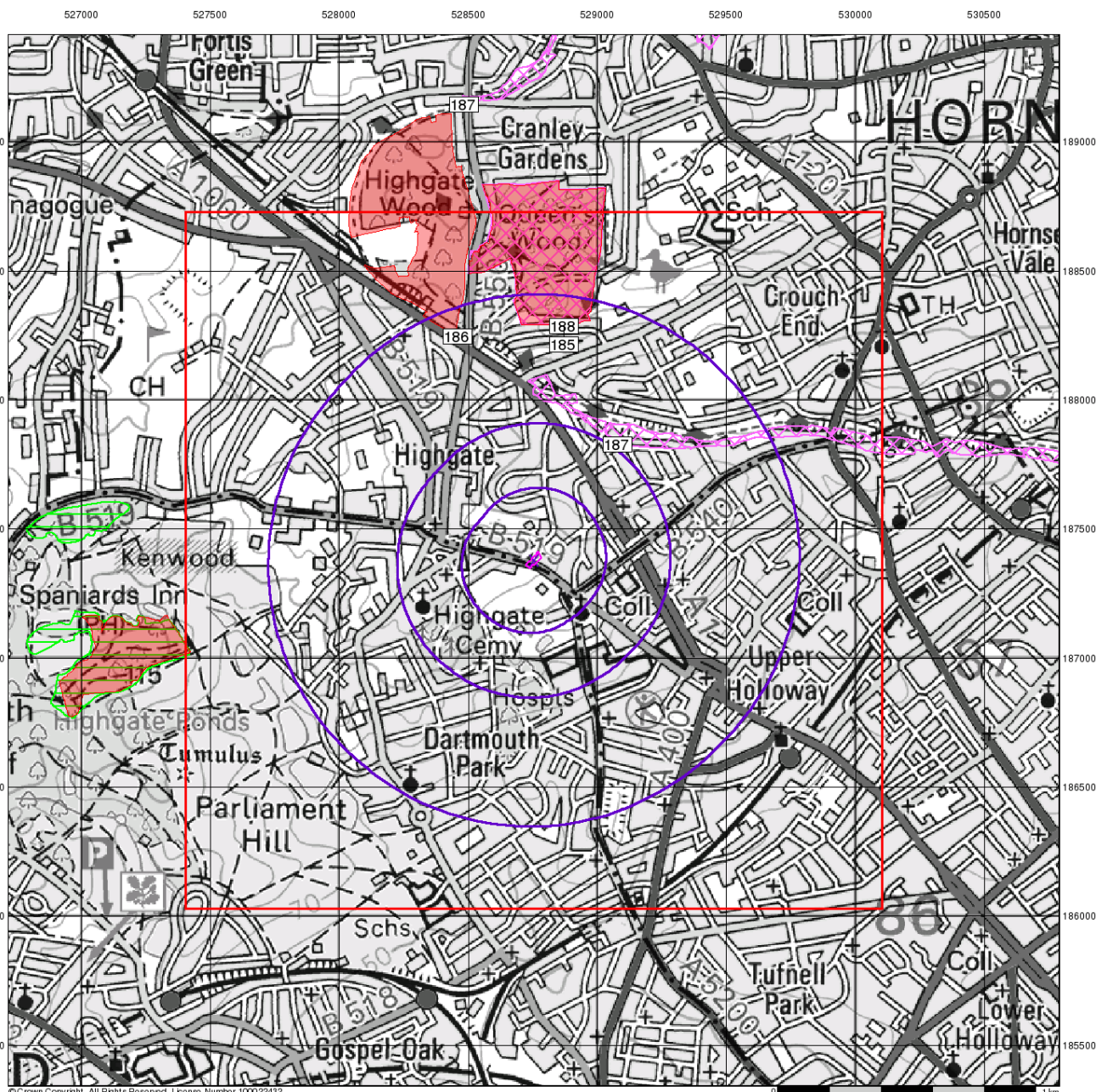
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 Customer Ref: 2992
 National Grid Reference: 528750, 187380
 Slice: A
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Sensitive Land Uses

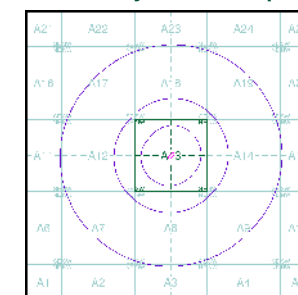
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



Order Details

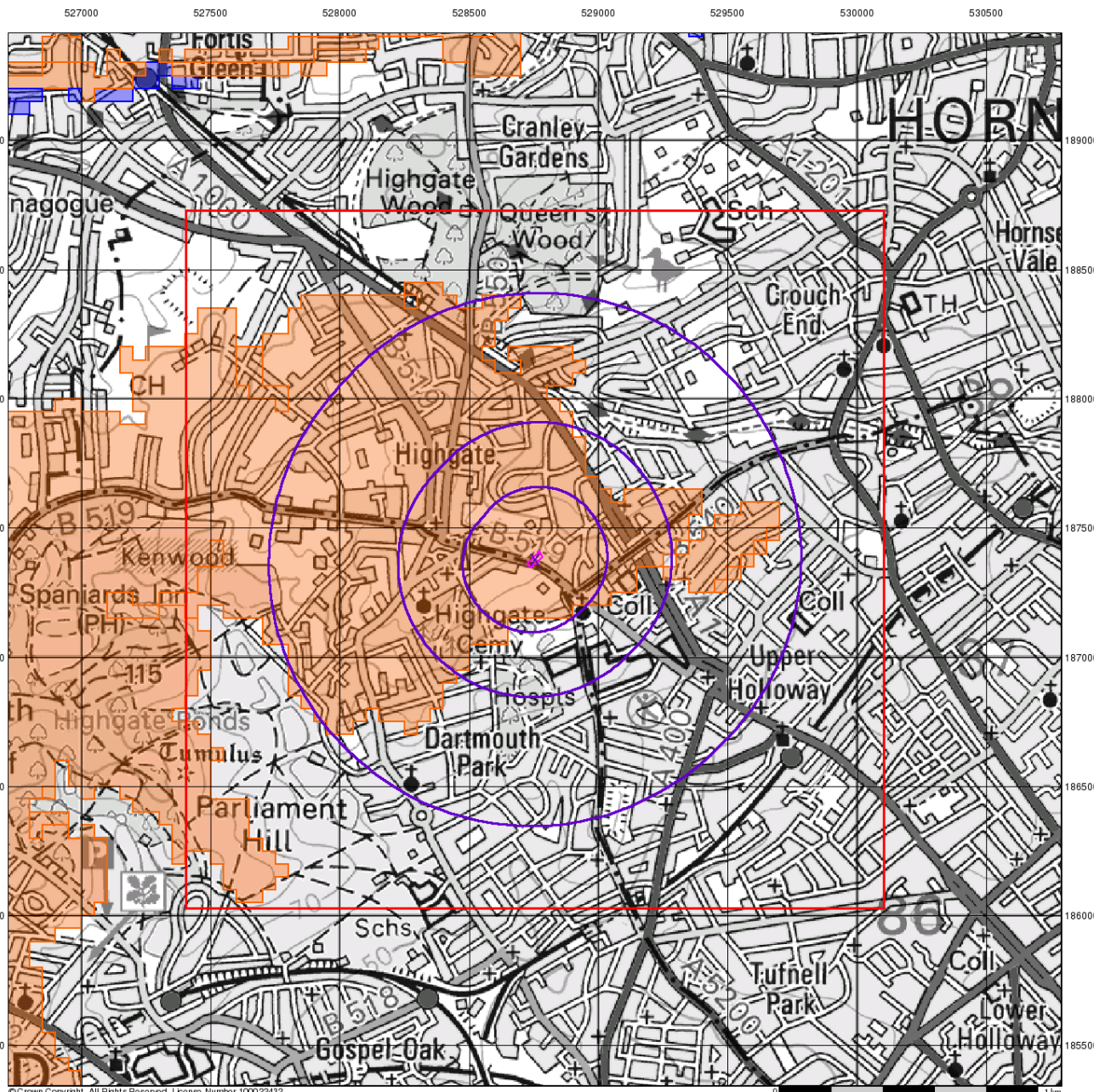
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 Customer Ref: 2992
 National Grid Reference: 528750, 187380
 Slice: A
 Site Area (Ha): 0.15
 Search Buffer (m): 1000

Site Details

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BGS Flood GFS Data

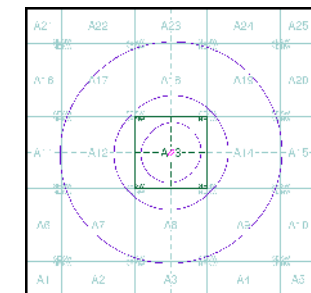
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

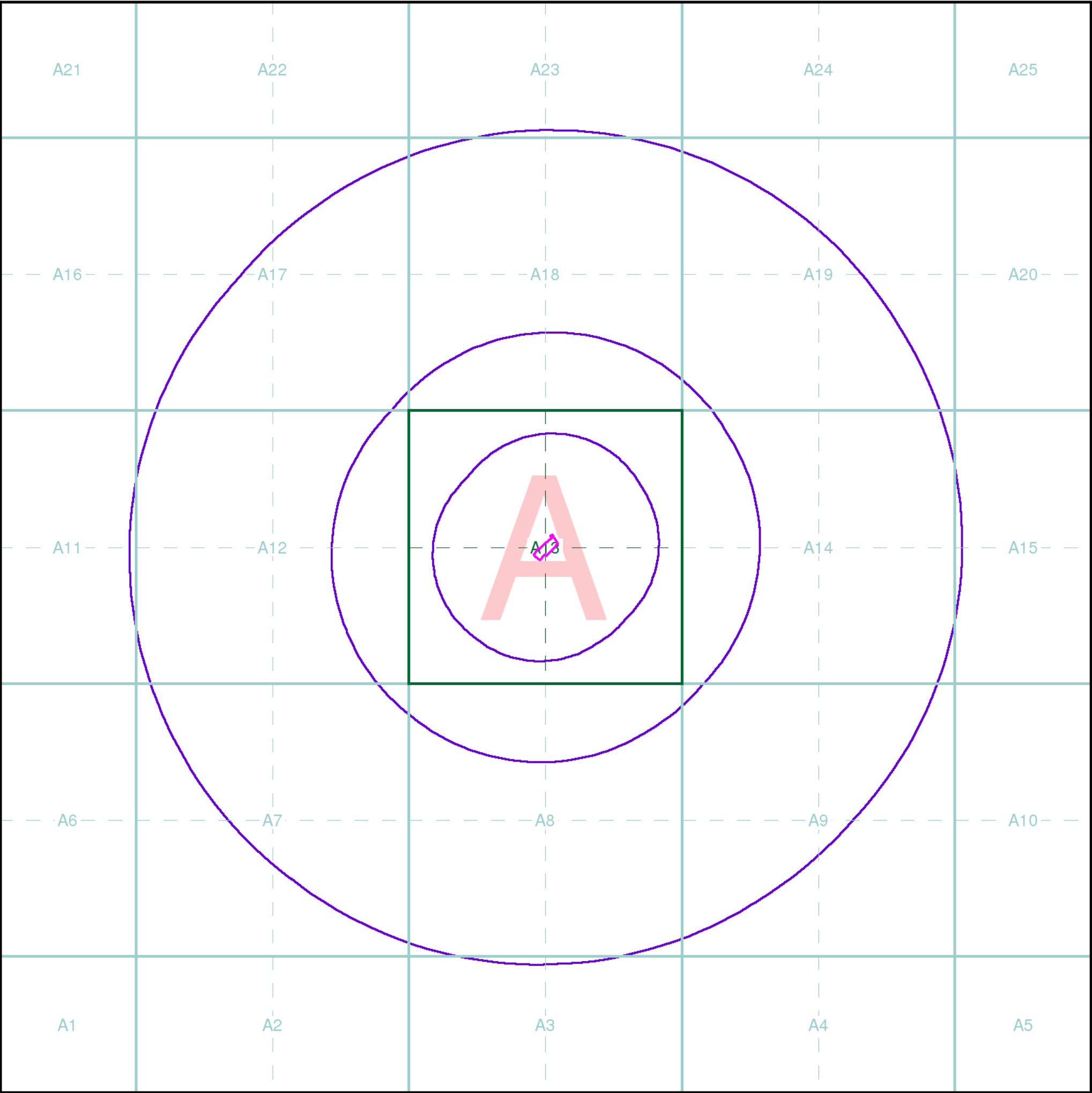
Order Number: 319191896_1_1
 Customer Ref: 2992
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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:





Envirocheck reports are compiled from 136 different sources of data.

Prepared For
Heyne Tillett Steel

Client Details
Mr A Fasano, A-squared Studio, 66 Church Road,
Richmond, TW10 6LN

Order Details
Order Number: 319191896_1_1
Customer Ref: 2992
National Grid Reference: 528750, 187380
Site Area (Ha): 0.15
Search Buffer (m): 1000

Site Details
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<http://www.landmarkinfo.co.uk/Terms/Show/515>



Appendix C: Unexploded Ordnance Risk Assessment

STAGE 1 PRELIMINARY UXO RISK ASSESSMENT

REPORT REF: PRA 23-2269 | Revision: 0

Client: A-squared
Project: Channing School, London
Date: 06/10/2023
Author: DS



Innovation Centre Medway, Maidstone Road,
Chatham, ME5 9FD
0207 117 2492
www.brimstoneuxo.com

INTRODUCTION

The Stage 1 Preliminary Risk Assessment is an initial screening assessment designed to highlight any sources of unexploded ordnance (UXO) with the potential to contaminate a given site.

The aim of the Stage 1 assessment is to identify or discount the need for further detailed research - a Stage 2 Detailed UXO Risk Assessment.

This desktop assessment has been researched and written by a dedicated Researcher / Risk Assessor and produced in accordance with the CIRIA C681 Guidelines: 'Unexploded Ordnance, a Guide for the Construction Industry' (published in 2009).

In preparation for this assessment, original wartime records, historic OS mapping and the *Brimstone UXO Sources Database* have been reviewed. The latter incorporates multiple datasets plotting the positions of a variety of domestic military sites and confirmed historic German bombing targets.

The Stage 1 Preliminary Risk Assessment considers the following:

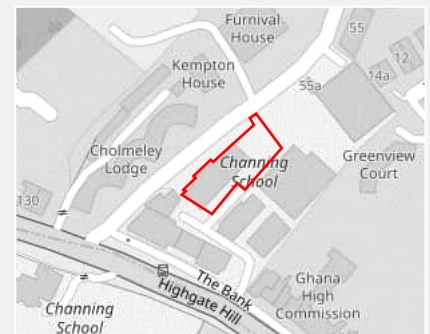
1. The Proposed Works
2. Enemy Action During WWI and WWII
3. British / Allied Military Activity
4. Historic Site Occupancy
5. Risk Mitigating Factors

THE SITE

The Site (approximately centred on the National Grid Ref: TQ 28747 87371) is located in Highgate, within the London Borough of Camden, approximately 780m south of Highgate underground station.

The Site comprises the two-storey Brunner House, on the site of Channing School, associated soft landscaping in the east of the Site, and an area of hardstanding in the south.

The Site is bound to the north by mature vegetation, to the east by an area of landscaping, to the south by structures associated with Channing School, and to the west by further associated structures and hardstanding.



THE PROPOSED WORKS

No details relating to proposed SI works were available at the time of writing.

Development works include the demolition of the existing structure and construction of a new two-storey building with an additional basement level.

ENEMY ACTION DURING WWI AND WWII

Potential Source of UXO	Significant?	Details
WWI German Bombing	✗	Highgate experienced multiple bombing raids during WWI. However, there is no evidence to suggest that these affected the Site.
WWII German Bombing	✓	British District Bombing Density Statistics The Site was situated in the WWII-era Municipal Borough of Hornsey, which sustained 116.3 bombs / 1,000 acres, a high bombing density.

		Evidence of Bomb Strikes / Damage	London bomb census mapping records one incendiary bomb ‘shower’ on Site, as well as three HE bomb strikes and one parachute mine within an approximate 300m radius of the Site. The closest of these was recorded approximately 50m north-west of the Site. A locally produced Hornsey bomb plot map records a further HE bomb strike approximately 50m north-east of the Site. Middlesex County Council (MCC) bomb damage mapping records Category Three damage to the school structure bound to the south-west of the Site, consisting of borderline area damage with the potential for demolition. Structures approximately 50m south-east of the Site on the Bank are listed as Category Two, with repairs possible but with potential to be categorised with ‘total damage.’ Post-WWII aerial photography does not reveal any immediately obvious damage to the Site; however, potential damage to Channing School can be seen. Structures approximately 50m south-east of the Site have also been cleared, likely due to bomb damage. This is corroborated by pre- and post-WWII OS mapping; although, given that no infrastructure was present on Site, such evidence would not be recorded within this source.
		Local Bombing Decoy Sites	None within a significant distance. The closest was situated 11.9km north-east of the Site.
		Local German Bombing targets	No identified Luftwaffe targets in the vicinity. However, the Site is situated approximately 1.2km north-east of Hampstead Heath, which was used by the RAF for military barrage balloons and AA batteries, therefore it is possible that it may have been a target due to its military activity. ¹ The Site is also situated approximately 1.2km north-east of Upper Holloway railway station, which may have been identified as a target of opportunity.
WWII German Cross Channel Artillery Shelling	✘	n/a	
BRITISH / ALLIED MILITARY ACTIVITY			
Potential Source of UXO	Significant?	Details	
WWII Home Guard (HG) Activity	✘	Soldiers of the 28 th Middlesex (Hornsey) HG Battalion would have been active in the local area during WWII. However, it is unlikely that they have utilised the Site in any significant way due to its association with Channing School.	
Site Requisitioned for Wartime Military Use	✘	n/a	
Existing or Historic Army or RAF Training Area / Weapons Range	✘	n/a	
Existing or Historic Military Bases and Other Installations	✘	n/a	
Existing or Historic Munitions or Explosives Factories	✘	n/a	

¹ <https://www.hampsteadheath.net/during-the-wars>

Existing or Historic Military Defensive Fortifications	✘	n/a
WWII Light and / or Heavy Anti-Aircraft (LAA and HAA) Fire	✓	Numerous (>30) HAA batteries were recorded in range of the Site during WWII. LAA guns were likely to have defended vulnerable points in the wider area also. Luftwaffe activity in London was frequent and intense, therefore these HAA batteries were likely to have fired considerable amounts of ammunition. It is possible that an unexploded AA shell struck the Site.
Pipe-Mined Locations and Beach Minefields	✘	n/a
UXO Finds	✘	n/a

SITE HISTORY

What was the Site occupancy historically, especially during WWI and WWII?	During WWII, the Site consisted of undeveloped, open ground or hardstanding situated on the grounds of Channing School, however the exact composition of the ground cover is not ascertainable from available aerial photography. The Site was bound to the north by mature vegetation, to the east by further undeveloped ground, and to the south and west by Channing School structures and associated hardstanding.
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RISK MITIGATING FACTORS

Post-Conflict Ground Works	Post-conflict ground works have comprised the construction of the two-storey Brunner House; this is known to have occurred by 1999. Anticipated general maintenance to the landscaping would have disturbed WWII-era soil to very shallow (<1m bgl) depths, while the construction of Brunner House would have disturbed WWII-era soil to shallow (1-2m bgl) depths.
Likelihood of UXO Remaining	The risk associated with (any) very shallow and (any) shallow buried UXO will have been partially mitigated. The risk associated with (any) deep buried (>2m bgl) UXO likely remains unmitigated.

CONCLUSIONS

German UXO:

- The Site was situated in the WWII-era Municipal Borough of Hornsey, which sustained 116.3 bombs / 1,000 acres, a high bombing density. The Site is approximately 1.2km north-east of Upper Holloway railway station which may have been identified as a target of opportunity.
- Bomb Census Mapping records one incendiary bomb 'shower' on Site, as well as three HE bomb strikes and one parachute mine strike within an approximate 300m radius of the Site, the closest strike recorded approximately 50m north-west of the Site. A locally produced Hornsey bomb plot map records a further HE bomb strike approximately 50m north-east of the Site.
- Middlesex County Council (MCC) War Damage Mapping records Category Three damage to the school structure bound to the Site, as well as Category Two damage to structures approximately 50m south-east of the Site on The Bank. This is corroborated by post-WWII aerial photography and OS mapping which shows damage and clearance to structures approximately 50m south-east of the Site.
- Access levels to the Site at the onset of WWII are considered to have been frequent due to its association with Channing School. Following recorded bombing to the school and damage as a result, access to the Site would have ceased while evacuations and repair works took place. A lack of access reduces the likelihood that evidence of UXO (i.e., cratering, entry holes) would have been observed and dealt with at the time.
- In conclusion, while no immediately obvious evidence of damage has been identified on Site, one incident of incendiary bombing was recorded on Site and evidence of damage to the Channing School, likely a result of this incident, was observed within MCC War Damage Mapping. Damage to the associated school and the likely abandonment of the Site (even if just for a period) increases the chance for a UXB to go undetected. Given the potential for J-Curve – whereby a UXB may travel laterally beneath the ground following penetration – it is possible that UXBs falling in these areas of damage, or adjacent undeveloped ground to the east, may have come to contaminate sections of the Site.
- Furthermore, due to the anticipated deep intrusions in development works to the Site associated with the installation of a basement, as well as the evidence stated above, further research is recommended to attempt to accurately determine the risk of UXO contamination on Site.

British / Allied UXO:

- No evidence for significant military activity specifically on Site has been found and none is likely to have occurred.
- Numerous (>30) HAA batteries were active within range of the Site. It is possible that an unexploded British AA shell may have struck the Site.

RECOMMENDATIONS

SI Works	No details relating to proposed SI works were available at the time of writing.
Development Works	A Stage 2 Detailed Risk Assessment is recommended in order to further assess the risk to proposed works. In lieu of a Detailed UXO Assessment, Brimstone recommends on-Site support for any planned ground works.



Appendix D: Site Walkover Records



Image 1: Southern site boundary, viewing north



Image 2: Eastern site boundary, viewing northwest