Southern Testing
Environmental & Geotechnical

ST Consult
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Site Investigation
Factual Report (Second Phase)

Desk Studies | Risk Assessments | Site Investigations | Geotechnical | Contamination Investigations | Remediation Design and Validation

Site: 62 Avenue Road, London, NW8 6HT

Client: VV Media Limited

Report Date: 26 August 2016

Project Reference: J12733

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SUMMARY

The site, No 62 Avenue Road, London, NW8 6HT is located on the north east side of Avenue Road.

We understand that the proposed redevelopment of 62 Avenue Road, London NW8 comprises the demolition of the existing 4 –storey house (a raised ground floor level plus first, second floor and a lower ground) and the construction of a new 5-storey bespoke residential building on approximately the same footprint of the existing building. The proposed building is to have 3 storeys above ground for residential use, a lower ground floor for staff accommodation and pool/fitness area and a basement for car park and pool plant rooms.

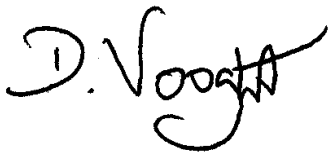
This report is an updated version of our earlier report (J10871 dated 6th February 2012) and includes the borehole logs of three additional windowless sampling boreholes (MW1, MW2 and MW3). These additional boreholes were carried out for the purpose of installing groundwater monitoring wells in locations close to the original boreholes. This report also includes the results of two rounds of subsequent measurements of the groundwater monitoring wells.

Geological records indicate the site to be underlain by London Clay.

A historical Ordnance Survey map search was carried out and indicates that the site has a history of residential use and is set in a residential area.

The soils encountered during both phases of investigation comprised made ground, which were in turn underlain by London Clay.

Evidence of soil contamination within the made ground soils in the form of Lead has been identified.



J N Race MSc CGeol
(Countersigned)

D Vooght MSc
(Signed)

For and on behalf of Southern Testing Laboratories Limited

STL: J12773
26 August 2016

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A INTRODUCTION

1 Authority

Our authority for carrying out this second phase of works is contained in a returned Southern Testing Project Order Form dated 13th July from Mr D Draier on behalf of the client VV Media Limited.

2 Location

The site No 62 Avenue Road, London, NW8 6HT is located on the north east side of Avenue Road and approximately 0.5km south east of Swiss Cottage Underground Station. The approximate National Grid Reference of the site is TQ 269 839.

3 Proposed Construction

The proposed redevelopment of 62 Avenue Road, London NW8 comprises the demolition of the existing 4 –storey house (a raised ground floor level plus first, second floor and a lower ground) and the construction of a new 5-storey bespoke residential building on approximately the same footprint of the existing building. The proposed building is to have 3 storeys above ground for residential use, a lower ground floor for staff accommodation and pool/fitness area and a basement for car park and pool plant rooms. The basement, lower ground and ground floor slabs and walls will be constructed in in-situ reinforced concrete.

The new basement structure will be formed with a reinforced concrete box founded on piles, comprising reinforced concrete slabs, perimeter and internal walls and columns. The box will be designed to resist horizontal earth and water pressures and vertical loads from the above superstructure. It is envisaged that a top-down construction sequence will be adopted to build the structure below ground in order to reduce the requirement for temporary works and provide a rigid box-like support to the basement sidewalls so that relatively small ground movements will result from the construction of the new basement.

A contiguous piled wall is to be used in order to support the excavation to form the new basement structures. This has been chosen to maintain structural stability and integrity to the adjacent existing structure during and after the construction of the basement.

For the purposes of the preliminary risk assessment, we have assessed that the proposed development land use would be classified as **Residential (CLEA model[1]).**

4 Object

This is a Phase 1 Desk Study and Walkover and Phase II geotechnical investigation.

The object of the original investigation (J10871 dated 6th February 2012) was to assess foundation bearing conditions and other soil parameters relevant to the proposed development. Contamination testing for waste classification was to be included.

[1] Environment Agency Publication SC050021/SR3 'Updated technical background to the CLEA Model' (2009).

This report is an updated version of the above earlier report and includes boreholes logs for three additional windowless sampling boreholes (MW1, MW2 and MW3), which were carried out for the purpose of installing ground water monitoring wells in locations close to the original boreholes. The results of two subsequent rounds of groundwater monitoring visits are also included.

5 Scope

This factual report presents our desk study findings, exploratory hole logs and test results.

As with any site there may be differences in soil conditions between exploratory hole positions.

This factual report is not an engineering design and the figures and calculations contained in the report should be used by the Engineer, taking note that variations will apply, according to variations in design loading, in techniques used, and in site conditions. Our figures therefore should not supersede the Engineer's design.

The findings and opinions conveyed via this factual Site Investigation Report are based on information obtained from a variety of sources as detailed within this report, and which Southern Testing Laboratories Limited believes are reliable. Nevertheless, Southern Testing Laboratories Limited cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

The site investigation was conducted and this factual report has been prepared for the sole internal use and reliance of VV Media Limited and their appointed Engineers. This factual report shall not be relied upon or transferred to any other parties without the express written authorization of Southern Testing Laboratories Limited. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

Any recommendations contained in this factual report may not be appropriate to alternative development schemes.

B DESK STUDY & WALKOVER SURVEY

6 Desk Study

A desk study has been carried out. Reference has been made to the following information sources.

- Geological Maps
- Hydrogeological/Groundwater Vulnerability maps
- Aerial Photographs
- Historical Ordnance Survey Maps
- Environmental Databases
- Enquiries with Environment Agency (including EA website)
- BRE Radon Atlas[2]

[2] BR 211 (2007) 'Radon: guidance on protective measures for new buildings'

The environmental databases search report compiled for this desk study contains site-specific environmental data drawn from data sets that comprise publicly available information together with data from third parties, some of which is under review. Accordingly, Southern Testing Laboratories Limited does not warrant its accuracy, reliability or completeness.

The full report is included in Appendix E. A summary of the salient features is included in the following sections of this report.

6.1 Geology

The British Geological Survey of the area (Map No. 256 – North London) indicates that the site geology consists of London Clay.

6.1.1 London Clay

London Clay is a well-known stiff (high strength) blue-grey, fissured clay, which weathers to a brown colour near the surface. It contains thin layers of nodular calcareous mudstone - "claystone" - from place to place, and crystals of water clear calcium sulphate (selenite) are common. Although slopes will stand in the clay at steep angles in the short term, the long-term stable slope angle is about 7^{o} for grassed, or cleared slopes, and a few degrees more for wooded slopes.

6.2 Hydrology and Hydrogeology

Data from the Environment Agency and other information relating to controlled waters is summarised below.

Data		Remarks	Possible Hazard to/from Site Y/N
Groundwater Vulnerability	Superficial Deposits	There are no Superficial Deposits located within the site boundary.	N.
	Bedrock	Based on the information provided by the Environment Agency (EA) Website (dated 27th January 2012), the aquifer destination for the bedrock located within the site boundary is **Unproductive Strata**. These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.	N.
Abstractions		Within a 500m radius of the site there is a single Groundwater Abstraction Licence: -	
		Located 360m North of the site Groundwater is Abstracted via a borehole and is operated by the London Borough of Camden.	N. *Aquifer protected by London Clay.*
		Beyond 500m there is another Groundwater Abstraction License located some 720m E of the site, operated by Thames Water Utilities Ltd.	N. *Aquifer protected by London Clay.*

Data	Remarks	Possible Hazard to/from Site Y/N
Source Protection Zones	The site falls within a source protection zone named Barrow Hill, reference Th405. This is of type Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater. The area 420m East of the site lies within a source protection zone named Barrow Hill, reference Th405. This is of type Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	N. *Aquifer protected by London Clay.*
Surface Water Features	The nearest surface water feature is 362m north west of the site, which comprises a small water feature. The closest surface water course is the Grand Union Canal Located 720m southeast of the site.	N.
Flood Risk	As indicated by the EA Website (Dated 27th January 2012) the site is not located within an area that is at risk of flooding from Rivers or Seas.	N.
Discharge Consents	None reported within a 500m radius of the site.	N.

6.3 Historical Map Search

Copy extracts of historical Ordnance Survey plans dating from 1871 to 2011 were obtained and are presented in Appendix F together with a summary of the salient features.

The following summary is a brief historical overview of development on and around the site. From the earliest available map (1871-1880), the site is occupied by a detached house with associated front and rear gardens. The southwestern boundary of the site is adjacent to Avenue Road. Two smaller buildings are marked, attached to the north west side of the house, and a second building apart from the main house is visible encroaching onto the north east part of the site. The building on site forms part of a row of detached houses stretching to the north west and south east of the site. No other significant features are noted within the immediate area

The site itself is shown to be largely unchanged until the 1935-1936 mapping, which indicates the building on the site has been extended along the north eastern boundary of the site, incorporating the two small immediately adjacent buildings. The site then remains unchanged in subsequent mappings, including the most recent 2011 mapping.

Significant changes in the surrounding area include the progressive addition of air shafts (listed within the historical industrial land uses in section 6.4 below), together with the addition of underground stations, schools, hospitals, electricity sub stations and Primrose Hill tunnels all within a 500m radius of the site, listed together with mapping dates in Appendix E.

6.4 Environmental Databases

A summary of the salient features is given below. Generally, only potentially contaminative sources within a 250m radius of the site have been considered, as those further away are unlikely to have a significant impact on the site given that it is underlain by low permeability clay soils.

	Approximate Distance (m)	Direction	Details	Possible Hazard to site
Historical Industrial Land Uses	There are 8 No. historically potentially contaminative land uses within a 500m radius of the site: -			
	243	NE	Air shafts, mapped 1896 to 1991.	N.
	312	SW	Military Land, mapped 1874 – 1951.	N.
	374	NW	Hospitals mapped 1951.	N.
	430	W	Railways mapped 1874 – 1991.	N.
	447	W	Railways mapped 1920 – 1991.	N.
	449	SW	Railways mapped 1991.	N.
	455	W	Air shafts mapped1920 – 1951.	N.
	486	W	Air shafts mapped 1951.	N.
Current Industrial Land Uses	There are no listings within the Trade Directory within a 250m radius of the site. Beyond 250m there are 15 No. Entries within the Trade Directory, a summery of which is below: -			
	250-500	N/NW/ NE/SW/W	4 No. Laundries/Dry Cleaners; 1 No. Engineering Firm; 2 No. Manufactures; 1 No. Ventilation System Firm; 1 No. Garage Services; 1 No. Chemical and Allied Products; 2 No. Commercial Cleaning Firms; 1 no. Cabinet Makers.	N.
Current and Historical Landfills	-	-	None reported within a 500m radius of the site.	N.
Fuel Sites	There is a single fuel station entry within a 500m radius of the site: -			
	490	W	Boundary Road Service Station, NW8 0DH, Brand was Total, now obsolete.	N.
Pollution Incidents	There are no Pollution Incidents into Controlled Waters within a 500m radius of the site.			

Given the distance that all the potentially contaminative land uses are from the site listed above, they are not considered a potential hazard to the site.

6.5 Geological Hazards and Mining Activities

Data from various sources relating to potential geological hazards at the site are summarized below. The Hazard Potentials listed for the BGS data are as presented in the Envirocheck report, derived from various generic BGS sources, which are **not considered as site-specific**. It is

important that this information is considered in context of the actual site topography, ground conditions encountered during future investigation, and development proposals.

Data Source	Hazard	Hazard Potential to Site	Remarks
BGS	Potential for Collapsible Ground Stability Hazard	Very Low	
	Potential for Compressible Ground Stability Hazard	No Hazard	
	Potential for Ground Dissolution Stability Hazard	No Hazard	
	Potential for Landslide Ground Stability Hazard	Very Low	
	Potential for Running Sand Ground Stability Hazard	No Hazard	
	Potential for Swelling or Shrinking Clay Ground Stability Hazard	Moderate	
	Shallow Mining Hazard	No Hazard	
ARUP	Mining Instability	No Hazard	
CSS/KURG*	Underground openings	A search of Southern Testing's internal database of historic underground workings indicates there to be no sites of concern within the immediate vicinity.	

**Chelsea Spelaeological Society/ Kent Underground Research Group*

6.6 Radon Risk

With reference to BRE guidance: no radon protection is required on this site.

7 Walkover Survey

A walkover survey was carried out at the time of our original investigation on 21st December 2011 at the time of the site works.

7.1 General Description and Boundaries

The site area is roughly rectangular in shape and measures approximately 18.5m by 59m in plan. It is accessed via two gateways leading from Avenue Road onto a tarmac driveway/apron at the front of the existing property.

The site is currently occupied by a detached 4-storey property (including a lower ground floor, ground floor, first floor and attic level) with an integral garage on it south west side. The building also has a 3-storey section that extends into the rear garden area.

The rear garden area is mainly set to grass with a small paved patio area to the rear of the property. A small summerhouse is located on the northeast corner of the garden. The site is bounded to the northwest, southeast and northeast by brick boundary walls and detached residential properties with associated rear garden areas.

7.2 Topography

Regionally ground levels gently slope down in a southeasterly direction in the general direction of Avenue Road. Locally ground levels on the site fall from the rear boundary towards the site frontage with Avenue Road with general falls of around 2-3°.

7.3 Vegetation

Various deciduous trees are present on the northwest, northeast and southeast boundaries of the site and within the front pavement area on Avenue Road.

7.4 Buildings and Land Use on Site and Nearby

The site is located within an area of mainly detached residential properties fronting onto Avenue Road.

C PRELIMINARY CONCEPTUAL MODEL

8 Introduction

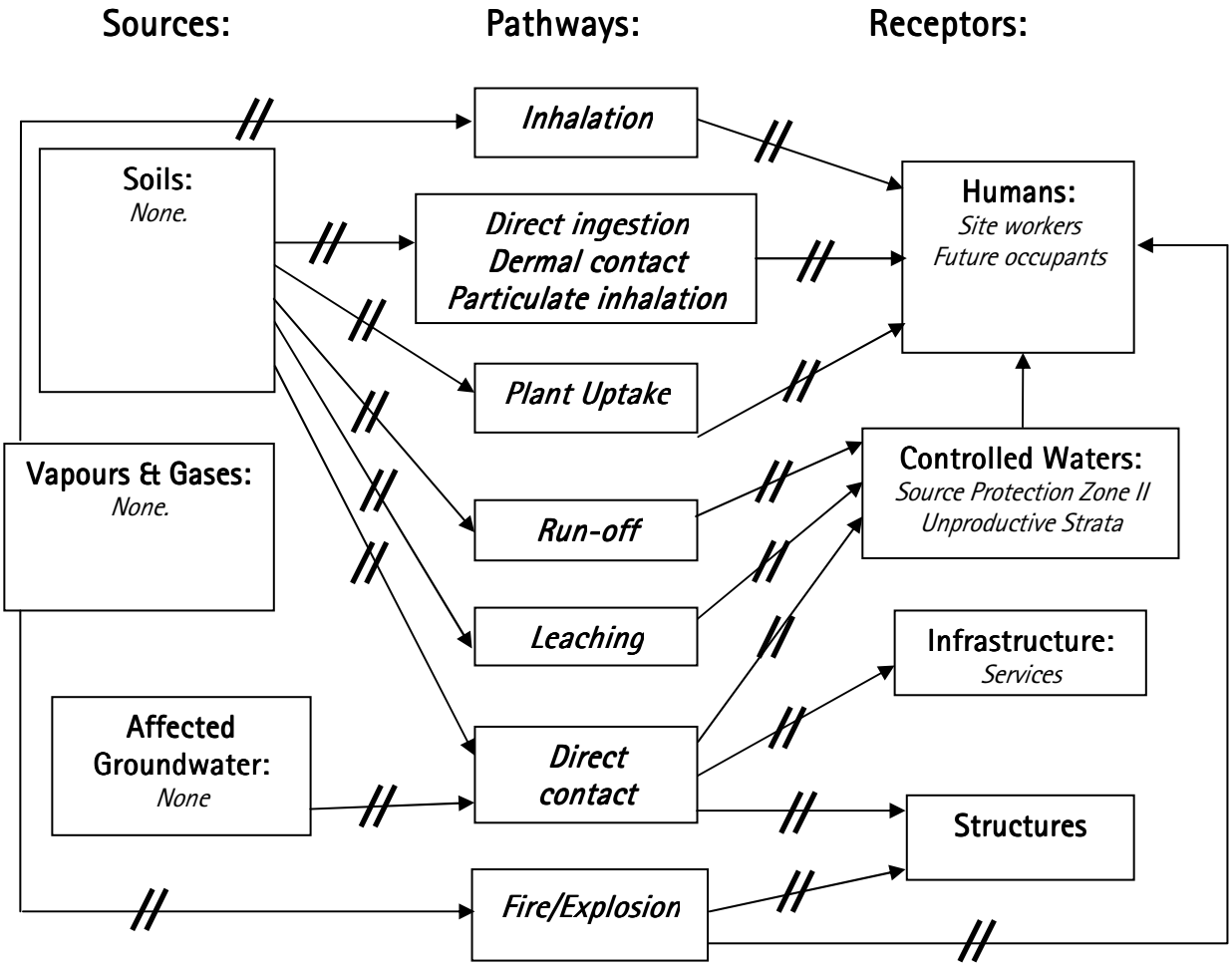
In the context of this report, the conceptual model summarises the potential pollutant linkages identified for the site and forms the basis of the risk assessment for the site. The preliminary model comprises the potential sources of contamination, receptors that could be harmed and exposure pathways identified from the desk study and walkover survey. These potential linkages form the basis upon which the investigation is designed and reported.

9 Potential Sources of Contamination

No significant onsite or off site sources of contamination considered likely to have affected the site have been identified during the desk study or site walkover stage of the investigation.

10 Pollutant Linkages and Model Summary

The following diagram shows the potential pollutant linkages identified for the site and summarises the preliminary conceptual model:



// Denotes potential pollutant linkage not complete.

D SITE INVESTIGATION

11 Method

The strategy adopted for the original intrusive investigation (Report J10871 dated 6th February 2012) was specified by the Engineer and comprised the following:

- 3 No. 21-25m deep boreholes (BH1, BH2 and BH3) were advanced using a breakdown cable percussive drilling rig with insitu testing and sampling.

The original fieldwork was carried out between 21st December 2011 and 5th January 2012.

The strategy adopted for this more recent phase of works comprised the following:

- 3 No 6m deep windowless sampling boreholes (MW1, MW2 and MW3).
- The installation of groundwater monitoring wells in each of the above windowless sampling boreholes.
- Two rounds of groundwater monitoring.

The second phase of works was carried out on 28th July 2016.

The exploratory hole locations for both phases of investigation are shown on the plan (Figure 1) within Appendix A.

12 Soils as Found

The soils encountered are described in detail in the attached exploratory hole logs (Appendix A), but in general comprised a covering of MADE GROUND over LONDON CLAY. A summary is given below.

Depth (m)	Soil Type	Description
GL – 0.05/ 0.26	BLACKTOP/GRASS /PAVING	Blacktop/concrete, or grass/topsoil or paving
- 0.85 /3.6	MADE GROUND	MADE GROUND comprising brick and concrete, clayey/silty sand, tile and glass fragments.
- 9.0/10.2	CLAY	High to very high strength, stiff to very stiff, brown (mottled grey), thinly laminated, silty plastic CLAY. Occasional patches of selenite crystals. (Weathered London Clay)
- 21.0 /25.0+	CLAY	Very high strength, very stiff, dark grey, thinly laminated, silty plastic CLAY. Occasional patches of selenite crystals and claystone. (London Clay)

12.1 Visual and Olfactory Evidence of Contamination

With the exception of MADE GROUND encountered in all the boreholes, no other obvious visual or olfactory evidence of possible contamination was noted during the fieldwork. Representative samples of the made ground and natural soils were submitted for laboratory analysis and the results are discussed in Section G.

13 Groundwater Strikes/Observations

While the investigations were in progress groundwater was not encountered in any of the original boreholes carried out or during this current phase of investigation. However the speed at which drilling takes place and the smearing action of the drilling tool does not allow an accurate assessment of the groundwater regime beneath the site.

A summary table of the groundwater levels recorded within the monitoring wells installed during this current phase of works is given below:

Test Location	Date of Reading	11/08/2016	25/08/2016
	Depth to Base of Installation (mBGL)	Standing Water Level (mBGL)	
MW1	5.89	4.83	3.15
MW2	6.04	5.54	4.45
MW3	5.70	3.26	3.25

E FIELD TESTING AND SAMPLING

The following in-situ test and sampling methods were employed. Descriptions are given in Appendix B together with the test results.

- Disturbed samples;
- Standard Penetration Tests
- Undisturbed U100 sampling

F GEOTECHNICAL LABORATORY TESTS

The following tests were carried out on selected samples. Test method references and results are given in Appendix C.

- Moisture Content and Atterberg limit Determinations;
- pH value and Soluble Sulphate Content Determinations.
- Undrained Triaxial Tests

G LAND QUALITY

14 Site Investigation – Soil

14.1 Sampling Regime

The number of sample locations was limited and was based on providing general coverage. Access was restricted by the presence of the existing building.

14.2 Testing

The potential for contamination by made ground was identified during observations made on site and, therefore, the following tests were selected.

Test Suite	Number of Samples	Soil Tested
STL Key Contaminant Suite	4 3	Made Ground Natural Soils
Asbestos Identification	4	Made Ground
Waste Acceptance Criteria	1 1	Made Ground Natural Soil

The test results are presented in full in Appendix D. A summary and discussion of the significance of the results and identified contamination sources is given below.

14.3 Test Results and Identified contamination sources

14.3.1 General Contaminants

The results of the key contaminant tests have been analysed in accordance with the CLEA methodology. The samples have been grouped into 2 populations comprising made ground and natural soil. No statistical analysis has been carried out because of the small number of samples. The test results are summarised as follows.

Soil Type: Made Ground

Contaminant	Unit	Measured Range (mg/kg)	Screening value
			Residential with Plant Uptake
Arsenic	mg/kg	18-22	32
Cadmium	mg/kg	0.1-1.7	10
Total Chromium	mg/kg	27-40	-
Lead	mg/kg	250-5000	450
Mercury	mg/kg	<1-7.4	7
Selenium	mg/kg	<3	350
Nickel	mg/kg	15-30	130
Copper	mg/kg	30-260	2300
Zinc	mg/kg	89-1700	3700
Phenol	mg/kg	<0.5-0.7	184
Benzo(a)pyrene	mg/kg	<0.1-0.8	0.8
Naphthalene	mg/kg	<0.1	1.5
Total Cyanide	mg/kg	<1	-

Soil Type: Natural Soil

Contaminant	Unit	Measured Range (mg/kg)	Screening value
			Residential with Plant Uptake
Arsenic	mg/kg	11-18	32
Cadmium	mg/kg	<0.1-0.2	10
Total Chromium	mg/kg	42-45	-
Lead	mg/kg	25-48	450
Mercury	mg/kg	<1-1.3	7
Selenium	mg/kg	<3	350
Nickel	mg/kg	37-44	130
Copper	mg/kg	26-31	2300
Zinc	mg/kg	77-100	3700
Phenol	mg/kg	<0.5	184
Benzo(a)pyrene	mg/kg	<0.1	0.8
Naphthalene	mg/kg	<0.1	1.5
Total Cyanide	mg/kg	<1	-

Whilst no asbestos containing materials were detected in the samples analysed and none were observed in the exploratory holes, it should be noted that the exploratory holes are of small diameter/the investigation was constrained by site usage and the samples obtained may not reflect the full composition of the soils on the site. Therefore, there is always the potential for pockets of asbestos or for asbestos containing materials to be present, which have not been detected in the sampling.

15 Summary of Identified Contamination

Elevated concentrations of Lead have been identified within the made ground soils.

16 Recommendations

In general terms, the workforce and general public should be protected from contact with contaminated material. There is a range of relevant documents published by the Health and Safety Executive, and organisations such as CIRIA, and the BRE.

In terms of waste acceptance criteria (WAC) for the soils on site, given the high lead content identified within the made ground soils a preliminary classification of **Hazardous** can be assumed for this material. In terms of the natural soils, based on the WAC testing undertaken to date a preliminary classification of **Inert** can be given.

Please note that the accepting waste management facility decides the final classification and as such the above recommendations maybe subject to change.

17 General Guidance

Allowance should be made for experienced verification of any remedial works.

It may be that specific local requirements apply to this site, of which we are not aware at this time.

In general terms, the workforce and general public should be protected from contact with contaminated material. There is a range of relevant documents published by the Health and Safety Executive, and organisations such as CIRIA, and the BRE.

Some soils will require removal from site and disposal to suitably licensed landfills. Different guidelines and charges will apply to different waste classification. As waste producers, the Developer holds responsibilities under the various governing regulations.

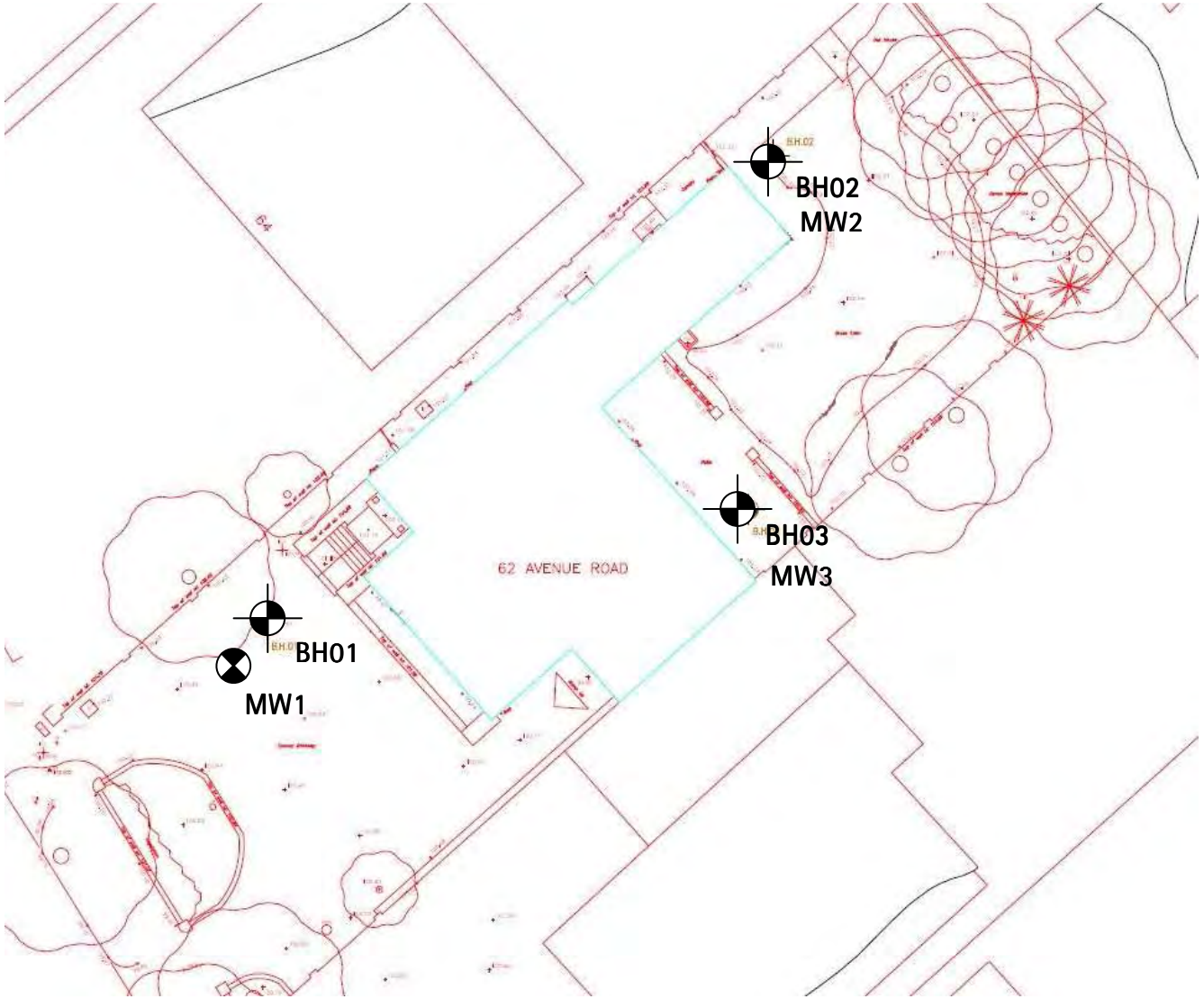
All hazardous and non-hazardous soils leaving site will need to be pre-treated. Waste minimisation by selective excavation is a recognised form of pre-treatment.

It should be noted that organic contaminants present in the soils could affect plastic underground service pipes (such as the types used by water and gas supply companies). Guidance should be sought from the relevant companies regarding any proposed plant in the affected area.

Many water supply companies now require higher specification pipe on contaminated sites, even following remediation.

APPENDIX A

Site Plans and Exploratory Hole Logs



NB: Positions of Boreholes and/or Trial Pits are only indicative unless dimensioned

Site: 62 Avenue Road, London NW8	STL: J12733	Fig No: 1
Date: 26 August 2016	Site plan showing approximate locations of exploratory holes and monitoring wells.	

Southern Testing

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ST Consult

Southern Testing
Environmental & Geotechnical

Job No: **J10871** Hole No: **1**

National Grid Reference		TQ 269 839	
Start date	04/01/2012	End date	05/01/2012
Ground level	100.67	Backfill date	05/01/2012
Logged by	TW	Engineer	DV
Final depth	21.00	Page	1 of 2

Site : 62 Avenue Road, London NW8

Client : **Regent's Park Holdings Ltd**

Drilling Method : Shell and Auger (150mm)

Piezometer or Monitoring well	Testing		Samples		Strata				
	Depth	Penetration Test (N value) U(blows)	Depth	Type	Thickness	Level	Legend	Depth	Strata Descriptions
			0.30	D	0.26	100.41		**0.26**	**BLACKTOP** Tarmac (110mm) over concrete to 260mm bgl
			0.50	D	0.64				**MADE GROUND** Dark orange brown (patched grey and red) silty occasionally patched clayey SAND, with abundant brick and concrete rubble. [MADE GROUND]
			1.00	D		99.77		**0.90**	
			1.30	D					**MADE GROUND** Mid brown (patched grey and red) silty CLAY, with occasional fragments of brick and concrete. [MADE GROUND]
	1.50	SPT(c) (12)							
			2.00	D	2.50				
			2.30	D					
	3.00	U (20)	3.00	U					
	3.45	HP (370)	3.45	D		97.27		**3.40**	**CLAY** Very high strength very stiff thinly laminated brown (occasionally mottled grey) silty plastic CLAY, with occasional patches of selenite crystals.
	4.50	SPT (23)	4.50	D					*Occasional thin band of clay stone between 4.6m and 5.1m.
	5.50	HP (280)	5.50	D					
	6.00	U (28)	6.00	U					
	6.40	HP (350)	6.40	D	6.10				
	7.50	SPT (23)	7.50	D					
	8.50	HP (400)	8.50	D					
	9.00	U (32)	9.00	U					
			9.50	D		91.17		**9.50**	**CLAY** Very high strength very stiff thinly laminated dark grey silty plastic CLAY, with occasional patches of selenite crystals.
	10.50	SPT (27)	10.50	D					
	10.50	HP (450)	10.50	D					
	11.50	HP (350)	11.50	D					
	12.00	U (45)	12.00	U					
	12.40	HP (520)	12.40	D					
	13.50	SPT (31)	13.50	D					
	14.50	HP (370)	14.50	D					
	15.00	U (50)	15.00	U					

Hole Diameters		
Depth (m)	Hole (mm)	Casing (mm)
3.00	150	150

Water Strikes					
Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)

Chiselling Time		
From (m)	To (m)	Time (hrs)

General Remarks

1.Borehole cased to 3.0m

2. Borehole dry during drilling and on completion.

Southern Testing
Environmental & Geotechnical

Job No: **J10871** Hole No: **1**

National Grid Reference		TQ 269 839	
Start date	04/01/2012	End date	05/01/2012
Ground level	100.67	Backfill date	05/01/2012
Logged by	TW	Engineer	DV
Final depth	21.00	Page	2 of 2

Site : 62 Avenue Road, London NW8

Client : **Regent's Park Holdings Ltd**

Drilling Method : Shell and Auger (150mm)

Piezometer or Monitoring well	Testing		Samples		Strata				
	Depth	Penetration Test (N value) U(blows)	Depth	Type	Thickness	Level	Legend	Depth	Strata Descriptions
	15.40	HP (510)	15.40	D	11.50				
	16.50	HP (510)	16.50	D					
	17.50	HP (370)	17.50	D					
	17.50	U (65)	17.50	U					*Clay slightly damp @ 17.50m.
	18.00	HP (500)	18.00	D					
	19.00	HP (530)	19.00	D					
	20.00	HP (520)	20.00	D					
	20.00	U (68)	20.00	U					
			20.50	D					
	21.00	HP (510)	21.00	D		79.67		**21.00**	
									End of Borehole

Hole Diameters		
Depth (m)	Hole (mm)	Casing (mm)
3.00	150	150

Water Strikes					
Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)

Chiselling Time		
From (m)	To (m)	Time (hrs)

General Remarks

1.Borehole cased to 3.0m

2. Borehole dry during drilling and on completion.

Southern Testing
Environmental & Geotechnical

Job No: **J10871** Hole No: **2**

National Grid Reference		TQ 269 839	
Start date	23/12/2011	End date	03/01/2012
Ground level	102.33	Backfill date	03/01/2012
Logged by	TW	Engineer	DV
Final depth	25.00	Page	1 of 2

Site : 62 Avenue Road, London NW8

Client : **Regent's Park Holdings Ltd**

Drilling Method : Shell and Auger (150mm)

Piezometer or Monitoring well	Testing		Samples		Strata				
	Depth	Penetration Test (N value) U(blows)	Depth	Type	Thickness	Level	Legend	Depth	Strata Descriptions
			0.30	D	0.20	102.13		**0.20**	**TOPSOIL** Grass over dark brown sandy Topsoil
			0.70	D	0.65				**MADE GROUND** Dark brown sandy CLAY with fine to medium abundant clay tile fragments. [MADE GROUND]
	1.00	SPT(c) (14)	1.00	D		101.48		**0.85**	**CLAY** High strength stiff thinly laminated brown (occasionally mottled grey) silty plastic CLAY, with occasional patches of selenite crystals.
	1.00	HP (270)	1.20	D					
	2.50	HP (190)	2.50	D					
	2.50	U (8)	2.50	U					
	2.85	HP (270)	2.85	D					
	4.00	SPT (13)	4.00	D					
	5.00	U (22)	5.00	D	8.15				
			5.00	U					
	5.50	HP (220)	5.50	D					
			5.90	D					
	7.00	SPT (22)	7.00	D					
	8.00	HP (270)	8.00	D					
	8.50	U (35)	8.50	D					
			8.50	U					
			9.00	D		93.33		**9.00**	**CLAY** Very high strength very stiff thinly laminated dark grey silty plastic CLAY, with occasional patches of selenite crystals.
	10.00	SPT (23)	10.00	D					
	11.00	HP (450)	11.00	D					
	11.50	U (50)	11.50	U					
			11.90	D					
	13.00	SPT (24)	13.00	D					
	14.00	HP (370)	14.00	D					
	14.50	U (35)	14.50	U					
			14.90	D					

Hole Diameters

Depth (m)	Hole (mm)	Casing (mm)
1.50	150	150

Water Strikes

Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)

Chiselling Time

From (m)	To (m)	Time (hrs)

General Remarks

1.Borehole cased to 1.5m

2. Borehole dry during drilling and on completion.

Southern Testing
Environmental & Geotechnical

Job No: **J10871** Hole No: **2**

National Grid Reference		TQ 269 839	
Start date	23/12/2011	End date	03/01/2012
Ground level	102.33	Backfill date	03/01/2012
Logged by	TW	Engineer	DV
Final depth	25.00	Page	2 of 2

Site : 62 Avenue Road, London NW8

Client : **Regent's Park Holdings Ltd**

Drilling Method : Shell and Auger (150mm)

Piezometer or Monitoring well	Testing		Samples		Strata				
	Depth	Penetration Test (N value) U(blows)	Depth	Type	Thickness	Level	Legend	Depth	Strata Descriptions
	16.00	HP (290)	16.00	D					
	17.00	HP (370)	17.00	D	16.00				
	17.00	U (46)	17.00	U					*Claystone band between 17.1m and 17.4m.
			17.50	D					
	18.50	HP (380)	18.50	D					
	19.50	HP (380)	19.50	D					
	19.50	U (45)	19.50	U					
			20.00	D					
	21.00	HP (420)	21.00	D					
	22.00	HP (370)	22.00	D					
	22.00	U (50)	22.00	U					
			22.50	D					
	23.50	HP (500)	23.50	D					
	24.50	HP (600+)	24.50	D					
	24.50	U (50)	24.50	U					
			25.00	D		77.33		**25.00**	End of Borehole

Hole Diameters		
Depth (m)	Hole (mm)	Casing (mm)
1.50	150	150

Water Strikes					
Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)

Chiselling Time		
From (m)	To (m)	Time (hrs)

General Remarks

1.Borehole cased to 1.5m

2. Borehole dry during drilling and on completion.

Southern Testing
Environmental & Geotechnical

Job No: **J10871** Hole No: **3**

National Grid Reference		TQ 269 839	
Start date	21/12/2011	End date	22/12/2011
Ground level	102.35	Backfill date	22/12/2011
Logged by	TW	Engineer	DV
Final depth	21.00	Page	1 of 2

Site : 62 Avenue Road, London NW8

Client : **Regent's Park Holdings Ltd**

Drilling Method : Shell and Auger (150mm)

Piezometer or Monitoring well	Testing		Samples		Strata				
	Depth	Penetration Test (N value) U(blows)	Depth	Type	Thickness	Level	Legend	Depth	Strata Descriptions
			0.30	D	0.40	101.95		**0.40**	**MADE GROUND** Paving (50mm) over dark brown sand (130mm bgl) over dark brown sandy CLAY with fine to whole brick, metal, slate and roots to 400mmbgl
			0.50	D					**MADE GROUND** Medium dense grey and mid brown (occasionally patched red) silty SAND, with frequent fragments of brick, concrete and glass. [MADE GROUND]
			1.00	D					
	1.50	SPT(c) (11)	1.50	D					
			2.00	D	3.20				
	3.00	SPT(c) (14)	3.00	D					
			3.60	D		98.75		**3.60**	**CLAY** High strength, stiff, thinly laminated brown (occasionally mottled grey) silty plastic CLAY, with occasional patches of selenite crystals.
	4.00	HP (210)	4.00	D					
	4.50	HP (260)	4.50	D					
	4.50	U (12)	4.50	U					
			5.00	D					
	6.00	SPT (23)	6.00	D					
	6.00	HP (250)	6.00	D					
	7.00	HP (230)	7.00	D	6.60				
	7.50	U (20)	7.50	U					
			8.00	D					
	9.00	SPT (24)	9.00	D					
	10.00	HP (340)	10.00	D		92.15		**10.20**	**CLAY** Very high strength, stiff, thinly laminated dark grey silty plastic CLAY, with occasional patches of selenite crystals.
	10.50	U (22)	10.50	U					
			10.90	D					
	12.00	SPT (30)	12.00	D					
	13.00	HP (230)	13.00	D					
	13.50	U (30)	13.50	U					
			13.90	D					
	15.00	SPT (23)	15.00	D					

Hole Diameters

Depth (m)	Hole (mm)	Casing (mm)
4.00	150	150

Water Strikes

Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)

Chiselling Time

From (m)	To (m)	Time (hrs)

General Remarks

1.Borehole cased to 4.0m

2. Borehole dry during drilling and on completion.

Southern Testing
Environmental & Geotechnical

Job No: **J10871** Hole No: **3**

National Grid Reference		TQ 269 839	
Start date	21/12/2011	End date	22/12/2011
Ground level	102.35	Backfill date	22/12/2011
Logged by	TW	Engineer	DV
Final depth	21.00	Page	2 of 2

Site : 62 Avenue Road, London NW8

Client : **Regent's Park Holdings Ltd**

Drilling Method : Shell and Auger (150mm)

Piezometer or Monitoring well	Testing		Samples		Strata				
	Depth	Penetration Test (N value) U(blows)	Depth	Type	Thickness	Level	Legend	Depth	Strata Descriptions
					10.80				
	16.00	HP (390)	16.00	D					
	17.00	HP (340)	17.00	D					
	17.50	U (33)	17.50	U					
			18.00	D					
	19.00	HP (360)	19.00	D					
	20.00	HP (390)	20.00	D					
	20.00	U (30)	20.00	U					
			20.50	D					
	21.00	HP (600+)	21.00	D		81.35		**21.00**	End of Borehole

Hole Diameters		
Depth (m)	Hole (mm)	Casing (mm)
4.00	150	150

Water Strikes					
Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)

Chiselling Time		
From (m)	To (m)	Time (hrs)

General Remarks

1.Borehole cased to 4.0m

2. Borehole dry during drilling and on completion.

Southern Testing ST Consult

www.southerntesting.co.uk tel:01342 333100 www.stconsult.co.uk tel:01604 500020

Start - End Date	Project ID:	Hole Type:	MW1
28/07/2016	J12733	WLS	Sheet 1 of 1

Project Name:	62 Avenue Road	Remarks:	Co-ordinates:	Level:	Logger:
					SM
Location:	London NW8	1. Borehole dry upon completion.			
Client:	VV Media Limited				

Backfill	Water Strikes	Samples and Insitu Testing: Depth (m bgl)	Type	Results	Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description
						(0.10)		0.10	BLACKTOP
						(0.10)		0.20	CONCRETE
						(1.20)			Greyish brown, silty, sandy, CLAY, with frequent fragments of brick, concrete, ash and metal (MADE GROUND).
		1.00	D					1.40	
									Firm to stiff, fissured, brown, CLAY, with occasional selenite crystals.
									[1.4-2.5m Occasional rootlets.]
		2.00	D						
		2.00	HP	UCS(kPa)=170					
		3.00	D						
		3.00	HP	UCS(kPa)=270					
						(4.60)			
		4.00	D						
		4.00	HP	UCS(kPa)=430					*[4.0-5.0m Occasional sandy lenses.]*
		5.00	D						
		5.00	HP	UCS(kPa)=300					
		6.00	D					6.00	
		6.00	HP	UCS(kPa)=320					End of borehole at 6.00m

1 2 3 4 5 6 7

Hole Details		Casing Details		Water Strike (m bgl)				Readings (m bgl)			Standing/Chiselling (m bgl)			
Depth (m bgl)	Dia. (mm)	Depth (m bgl)	Dia. (mm)	Date	Depth	Casing	Sealed	Rose to:	Time (min)	Remarks	From	To	Time	Remarks
1.20	150													
3.00	100													
6.00	75													

Southern Testing ST Consult	Start - End Date	Project ID:	Hole Type:	MW2
www.southerntesting.co.uk tel:01342 333100 www.stconsult.co.uk tel:01604 500020	28/07/2016	J12733	WLS	Sheet 1 of 1

Project Name:	62 Avenue Road	Remarks:	Co-ordinates:	Level:	Logger:
Location:	London NW8	1. Borehole dry upon completion.			SM
Client:	VV Media Limited				

Backfill	Water Strikes	Samples and Insitu Testing: Depth (m bgl)	Type	Results	Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description
		0.20	D			(0.40)			Dark greyish brown, sandy, gravelly, CLAY, with frequent roots and rootlets. Gravel comprises brick, flint and ash (MADE GROUND).
		0.50	D					0.40	Firm to stiff, orange brown mottled bluish grey, CLAY.
		0.50	HP	UCS(kPa)=100					*[0.4-2.5m Occasional to frequent roots and rootlets.]*
		1.50	D						
		1.50	HP	UCS(kPa)=210					
		2.50	D						*[2.5-4.0m Occasional silty lenses.]*
		2.50	HP	UCS(kPa)=220					
		3.50	D			(5.60)			
		3.50	HP	UCS(kPa)=330					
		4.50	D						*[4.5m Claystone nodules.]*
		4.50	HP	UCS(kPa)=400					
		5.50	D						*[5.5-6.0m Selenite crystals.]*
		5.50	HP	UCS(kPa)=350					
								6.00	End of borehole at 6.00m

1 2 3 4 5 6 7

Hole Details		Casing Details		Water Strike (m bgl)				Readings (m bgl)			Standing/Chiselling (m bgl)			
Depth (m bgl)	Dia. (mm)	Depth (m bgl)	Dia. (mm)	Date	Depth	Casing	Sealed	Rose to:	Time (min)	Remarks	From	To	Time	Remarks
1.00	150													
2.00	100													
4.00	75													
6.00	50													

Southern Testing ST Consult

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Start - End Date	Project ID:	Hole Type:	MW3
28/07/2016	J12733	WLS	Sheet 1 of 1

Project Name:	62 Avenue Road	Remarks:	Co-ordinates:	Level:	Logger:
					SM
Location:	London NW8	1. Borehole dry upon completion.			
Client:	VV Media Limited				

Backfill	Water Strikes	Samples and Insitu Testing: Depth (m bgl)	Type	Results	Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description
						(0.05)		0.05	Paving Slab
						(0.15)		0.20	Greyish brown to brown, gravelly, medium to coarse SAND. Gravel comprises medium to coarse fragments of brick and concrete (MADE GROUND).
						(0.30)		0.50	Greyish brown, sandy, gravelly, CLAY. Gravel comprises fine to coarse fragments of brick, concrete, chalk gravel, ash and whole bricks (MADE GROUND).
		2.00	D			(2.90)			Grey, slightly clayey, fine to coarse SAND, with occasional fragments of brick, glass and slate (MADE GROUND).
		4.00	D					3.40	Stiff, brown mottled bluish grey, slightly silty, CLAY.
		4.00	HP	UCS(kPa)=300					
		5.00	D			(2.60)			
		5.00	HP	UCS(kPa)=330					
		6.00	D					6.00	End of borehole at 6.00m
		6.00	HP	UCS(kPa)=320					

1 2 3 4 5 6 7

Hole Details		Casing Details		Water Strike (m bgl)				Readings (m bgl)			Standing/Chiselling (m bgl)			
Depth (m bgl)	Dia. (mm)	Depth (m bgl)	Dia. (mm)	Date	Depth	Casing	Sealed	Rose to:	Time (min)	Remarks	From	To	Time	Remarks
1.20	150													
3.00	100													
5.00	75													
6.00	50													

APPENDIX B

Field Sampling and in-situ Test Methods & Results

Field Sampling and in-situ Test Methods

Disturbed Samples

Disturbed samples were taken from the trial holes intervals and stored in sealed glass jars and polythene bags, as appropriate.

Standard Penetration Test

The Standard Penetration (SPT) Test is specified in BS EN ISO 22476-3 : 2005. In this test, a 51mm diameter open-ended tube is driven into the ground by a 63.5 kg hammer falling freely through 760 mm. The tube is seated by driving to a penetration of 150mm, or by 25 standard blows, whichever occurs first. It is then driven for a maximum of a further 300mm and the number of blows is termed the penetration resistance (N). If 300mm penetration cannot be achieved in 50 blows (100 blows in soft rock), the test drive is terminated.

When testing in gravels, a conical end piece is attached to the tube. The test is then called an SPT(C).

This test provides an indirect method of assessing the properties of cohesionless soils, and the following table (after Terzaghi and Peck) gives the approximate condition:-

Number Blows (N)	Density
0 - 4	Very Loose
4 – 10	Loose
10 – 30	Medium Dense
30 – 50	Dense
Over 50	Very Dense

Clay

An approximate value for the shear strength of clay may be obtained using Stroud (1974), which paper indicates that the cohesive strength is a function of plasticity and SPT 'N' value. The relation is:

$C_u = f_i \times N$ kPa

C_u = undrained shear strength

f_i = factor related to plasticity index and ranging from 4 to more than 6

The SPT test is not generally accepted as giving a reliable indication of the strength of cohesive soils but it does give a guide; often the following table:-

Number Blows (N)	Soil Strength
Less than 2	Very Soft (Very Low Strength)
2 – 5	Soft (Low Strength)

5 – 10	Firm (Medium Strength)
10 – 15	Stiff (High Strength)
15 – 30	Very Stiff (Very High Strength)

Hand Penetrometer Test

The hand penetrometer consists of a spring loaded and calibrated plunger which is forced into the soil. A reading of unconfined compression strength (equal to twice cohesion) is given on a calibrated scale. In common with other hand methods of strength assessment (eg. the shear vane) it does not give an accurate indication of bearing capacity in stiff or fissured soils, because of the small test area. The figures are used for strength classification according to the table below

.

Hand Penetrometer Value (kPa)	Undrained Shear Strength cu (kPa)	Undrained Shear Strength of Clays
Less than 20	Less than 10	Extremely Low
20 to 40	10 to 20	Very Low
40 to 80	20 to 40	Low
80 to 150	40 to 75	Medium
150 to 300	75 to 150	High
300 to 600	150 to 300	Very High
More than 600	More than 300	Extremely High

Undisturbed U100 Samples

Undisturbed U100 samples were taken in the clay soils at appropriate intervals. These samples are taken in a 100 mm diameter, 450 mm long, thin-walled steel tube, and are sealed with paraffin wax and tightly fitting end caps for transporting to the laboratory.

APPENDIX C

Geotechnical Laboratory Test Methods & Results

Summary Sheet Triaxial Compression Test Results (BS1377-7:1990(1994)

Proj No: *J10871* **Project Name:** *62 Avenue Road, London NW8* **Checked By:** CAT **Date:** *26/01/2012*

TH No	Depth (m)	Moisture Content (%)	Bulk Density (Mg/m^3)	Dry Density (Mg/m^3)	Cell Pressure (kPa)	Deviator Stress (kPa)	Apparent Cohesion; C_u (kPa)	Visual Description	Sample Type	UCS by Hand Pen (kN/m^2)
BH1	3.0	*29.0*	*1.97*	*1.52*	*60*	*157.4*	*78.7*	*Very stiff fissured high to very high strength light brown CLAY with selenite crystals*	*U100*	*300*
BH1	6.0	*28.8*	*1.94*	*1.50*	*120*	*260.4*	*130.2*	*Very stiff fissured very high strength brown veined blue CLAY with selenite crystals*	*U100*	*350*
BH1	9.0	*30.8*	*1.93*	*1.48*	*180*	*199.0*	*99.5*	*Very stiff very high strength dark grey brown CLAY*	*U100*	*450*
BH1	12.0	*27.1*	*1.98*	*1.56*	*240*	*313.9*	*157.0*	*Very stiff very high strength dark brown grey CLAY*	*U100*	*460*
BH1	15.0	*26.5*	*1.97*	*1.56*	*300*	*313.9*	*157.0*	*Hard extremely high strength dark grey CLAY with selenite crystals*	*U100*	*>600*
BH1	17.5	*29.2*	*1.96*	*1.52*	*350*	*313.9*	*157.0*	*Hard extremely high strength dark grey brown CLAY with selenite crystals*	*U100*	*>600*
BH1	20.0	*28.0*	*1.98*	*1.55*	*400*	*405.0*	*202.5*	*Hard extremely high strength dark brown CLAY with selenite crystals and pyrites*	*U100*	*>600*
BH2	2.5	*31.7*	*1.93*	*1.46*	*50*	*117.8*	*58.9*	*Stiff high strength light brown CLAY*	*U100*	*210*

Summary Sheet Triaxial Compression Test Results (BS1377-7:1990(1994)

Proj No: *J10871* **Project Name:** *62 Avenue Road, London NW8* **Checked By:** CAT **Date:** *26/01/2012*

TH No	Depth (m)	Moisture Content (%)	Bulk Density (Mg/m^3)	Dry Density (Mg/m^3)	Cell Pressure (kPa)	Deviator Stress (kPa)	Apparent Cohesion; C_u (kPa)	Visual Description	Sample Type	UCS by Hand Pen (kN/m^2)
BH2	4.5	*29.2*	*2.01*	*1.56*	*90*	*315.9*	*157.9*	*Very stiff very high strength brown grey CLAY*	*U100*	*440*
BH2	5.5	*29.5*	*1.97*	*1.52*	*110*	*250.5*	*125.3*	*Stiff fissured very high strength light brown CLAY with selenite crystals*	*U100*	*410*
BH2	8.5	*31.2*	*1.93*	*1.47*	*170*	*244.6*	*122.3*	*Very stiff fissured very high strength brown grey CLAY*	*U100*	*500*
BH2	14.5	*26.6*	*2.01*	*1.59*	*290*	*339.7*	*169.8*	*Hard fissured very high strength dark grey CLAY with occasional pyrites*	*U100*	*550*
BH2	17.0	*27.9*	*1.99*	*1.55*	*340*	*375.3*	*187.7*	*Hard fissured extremely high strength dark grey CLAY*	*U100*	*>600*
BH2	19.5	*27.3*	*1.99*	*1.56*	*390*	*412.9*	*206.5*	*Hard fissured extremely high strength dark grey CLAY*	*U100*	*>600*
BH2	22.0	*28.6*	*1.97*	*1.53*	*440*	*321.8*	*160.9*	*Hard fissured extremely high strength dark grey CLAY*	*U100*	*>600*
BH2	24.5	*23.4*	*2.02*	*1.64*	*490*	*359.5*	*179.7*	*Hard extremely high strength dark grey sandy CLAY*	*U100*	*>600*

Southern Testing

Southern Testing: Keeble House, Stuart Way, East Grinstead, West Sussex RH19 4QA
ST Consult: Twigden Barns, Brixworth Road, Creaton, Northampton NN6 8NN

ST Consult

Summary Sheet Triaxial Compression Test Results (BS1377-7:1990(1994)

Proj No: ***J10871*** **Project Name:** ***62 Avenue Road, London NW8*** **Checked By:** **CAT** **Date:** ***26/01/2012***

TH No	Depth (m)	Moisture Content (%)	Bulk Density (Mg/m^3)	Dry Density (Mg/m^3)	Cell Pressure (kPa)	Deviator Stress (kPa)	Apparent Cohesion; C_u (kPa)	Visual Description	Sample Type	UCS by Hand Pen (kN/m^2)
BH3	4.5	*29.9*	*1.97*	*1.51*	*90*	*210.9*	*105.5*	*Stiff fissured very high strength light brown CLAY with selenite crystlas*	*U100*	*390*
BH3	7.5	*29.6*	*1.97*	*1.52*	*150*	*224.8*	*112.4*	*Very stiff fissured very high strength light brown CLAY with selenite crystals*	*U100*	*410*
BH3	10.5	*31.0*	*1.94*	*1.48*	*210*	*216.9*	*108.4*	*Very stiff fissured very high strength dark grey CLAY*	*U100*	*420*
BH3	13.5	*28.7*	*1.96*	*1.53*	*270*	*274.3*	*137.1*	*Very stiff fissured very high strength dark grey CLAY*	*U100*	*500*
BH3	17.5	*28.9*	*1.96*	*1.52*	*350*	*240.6*	*120.3*	*Hard fissured extremely high strength dark grey CLAY*	*U100*	*>600*
BH3	20.0	*27.6*	*1.99*	*1.56*	*400*	*337.7*	*168.8*	*Hard fissured extremely high strength dark grey CLAY*	*U100*	*>600*

Southern Testing

Southern Testing: Keeble House, Stuart Way, East Grinstead, West Sussex RH19 4QA
ST Consult: Twigden Barns, Brixworth Road, Creaton, Northampton NN6 8NN

ST Consult

Soil / Groundwater Sulphate Content Test Results

Test carried out in accordance with BS 1377-3:1990 (2003) cl. 5.3, 5.4, 5.6 & 9.5

Project No : ***J10871*** **Client :** ***Regent's Park Holdings Ltd***

Project Name : ***62 Avenue Road, London NW8***

Tested By : ***AS*** **Checked :** ***TG*** **Date :** ***26-Jan-12***

TH No.	Depth	Sample Type	Soil Sulphate in 2:1 Water Extract		Groundwater Sulphate		Total Potential Sulphate		pH Value	Percentage Passing 2mm Sieve	Visual Description
	(m)		g /l SO_3	BRE mg /l SO_4	g /l SO_3	BRE mg /l SO_4	% SO_3	BRE % SO_4			
BH1	**7.50**	SOIL	***1.62***	***1939***					***7.5***	***100.0***	Very stiff very high strength brown grey CLAY.
BH1	**12.40**	SOIL	***0.60***	***720***					***8.1***	***100.0***	Hard extremly high strength dark grey CLAY.
BH1	**17.50**	SOIL	***0.44***	***528***					***8.4***	***100.0***	Very stiff very high strength dark grey CLAY.
BH2	**7.00**	SOIL	***2.53***	***3034***					***7.4***	***100.0***	Very stiff extremly high strength light brown CLAY.
BH2	**13.00**	SOIL	***0.65***	***778***					***8.0***	***100.0***	Hard extremly high strength dark grey CLAY.
BH2	**22.00**	SOIL	***0.46***	***554***					***8.4***	***100.0***	Hard extremly high strength dark grey CLAY.
BH3	**6.00**	SOIL	***2.40***	***2880***					***7.5***	***100.0***	Very stiff extremly high strength light brown CLAY.
BH3	**13.90**	SOIL	***0.61***	***730***					***8.1***	***100.0***	Hard extremly high strength dark grey CLAY.

Atterberg Limits Test Result Summary Sheet

Test carried out in accordance with BS 1377-2:1990(2003) cl. 3.2, 4.2, 4.3, 5.3 & 5.4

Project No : ***J10871*** **Checked By :** ***CAT*** **Date:** ***25-Jan-2012***

Project Name : ***62 Avenue Road, London NW8***

Client : ***Regent's Park Holdings Ltd***

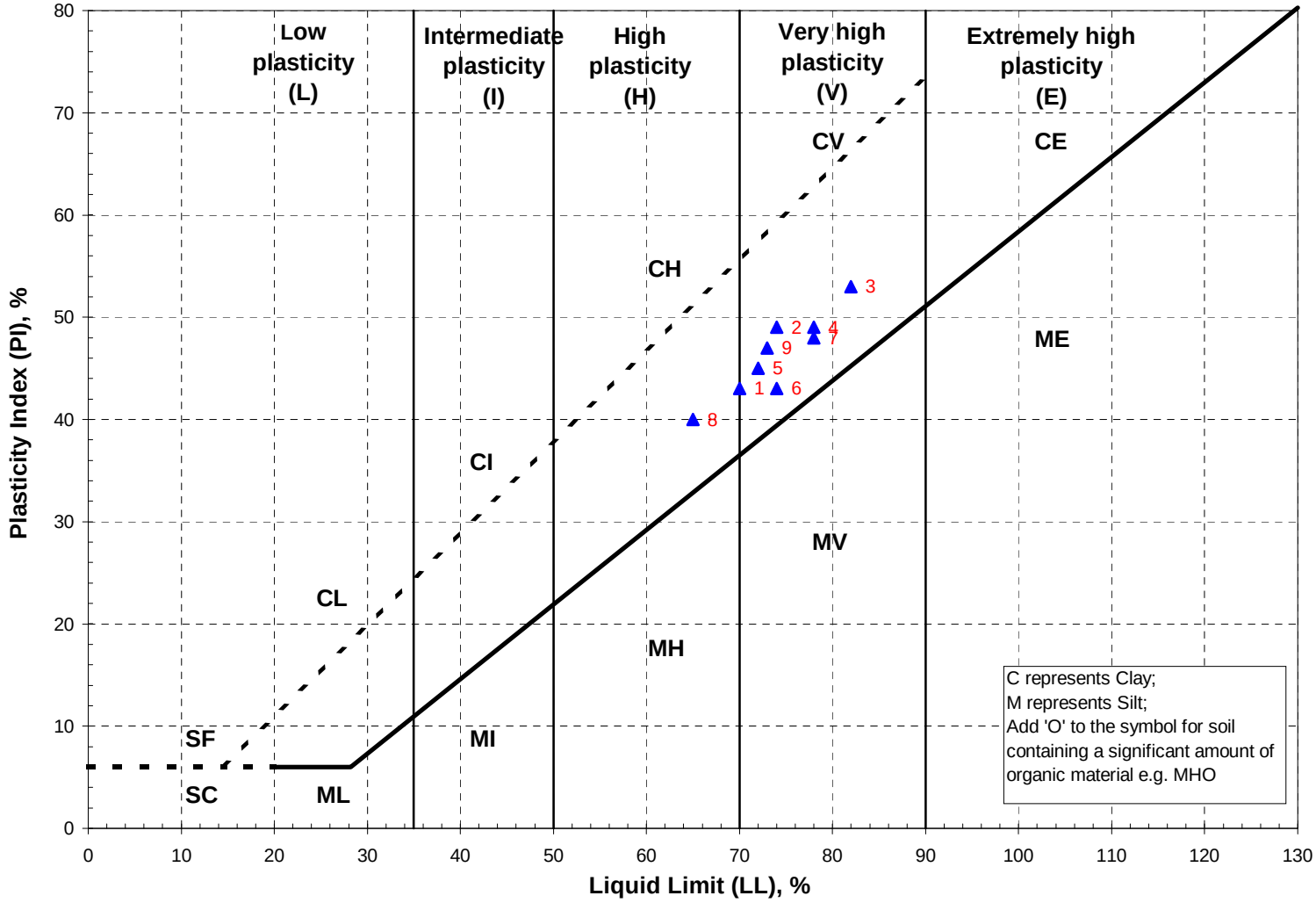
Plot No	TH No.	Depth (m)	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Class-ification	% Passing 425µm (%)	Visual Description
1	***BH1***	***6.40***	***29.6***	***70***	***27***	***43***	***CH/CV***	***100***	***Very stiff very high strength brown CLAY with patches of selenite.***
2	***BH1***	***14.50***	***28.2***	***74***	***25***	***49***	***CV***	***100***	***Very stiff very high strength grey brown CLAY.***
3	***BH2***	***1.20***	***27.8***	***82***	***29***	***53***	***CV***	***100***	***Hard extremely high strength light brown CLAY.***
4	***BH2***	***2.50***	***31.4***	***78***	***29***	***49***	***CV***	***100***	***Very stiff very high strength light brown CLAY.***
5	***BH2***	***4.00***	***27.8***	***72***	***27***	***45***	***CV***	***100***	***Very stiff very high strength light brown CLAY.***
6	***BH2***	***8.00***	***30.4***	***74***	***31***	***43***	***CV***	***100***	***Very stiff extremely high strength grey brown CLAY.***
7	***BH2***	***19.50***	***30.3***	***78***	***30***	***48***	***CV***	***100***	***Hard extremely high strength dark grey CLAY.***
8	***BH3***	***4.50***	***26.8***	***65***	***25***	***40***	***CH***	***100***	***Very stiff very high strength light brown CLAY.***
9	***BH3***	***15.00***	***26.8***	***73***	***26***	***47***	***CV***	***100***	***Hard extremely high strength dark grey CLAY.***

Southern Testing

Southern Testing: Keeble House, Stuart Way, East Grinstead, West Sussex RH19 4QA
ST Consult: Twigden Barns, Brixworth Road, Creaton, Northampton NN6 8NN

ST Consult

Plasticity Chart for Atterberg Limit Test Results



Sample List

1	BH1@6.4m
2	BH1@14.5m
3	BH2@1.2m
4	BH2@2.5m
5	BH2@4m
6	BH2@8m
7	BH2@19.5m
8	BH3@4.5m
9	BH3@15m

Statistics

Liquid Limit	
Max	82
Min	65
Average	74
Plastic Limit	
Max	31
Min	25
Average	28
Plasticity Index	
Max	53
Min	40
Average	46

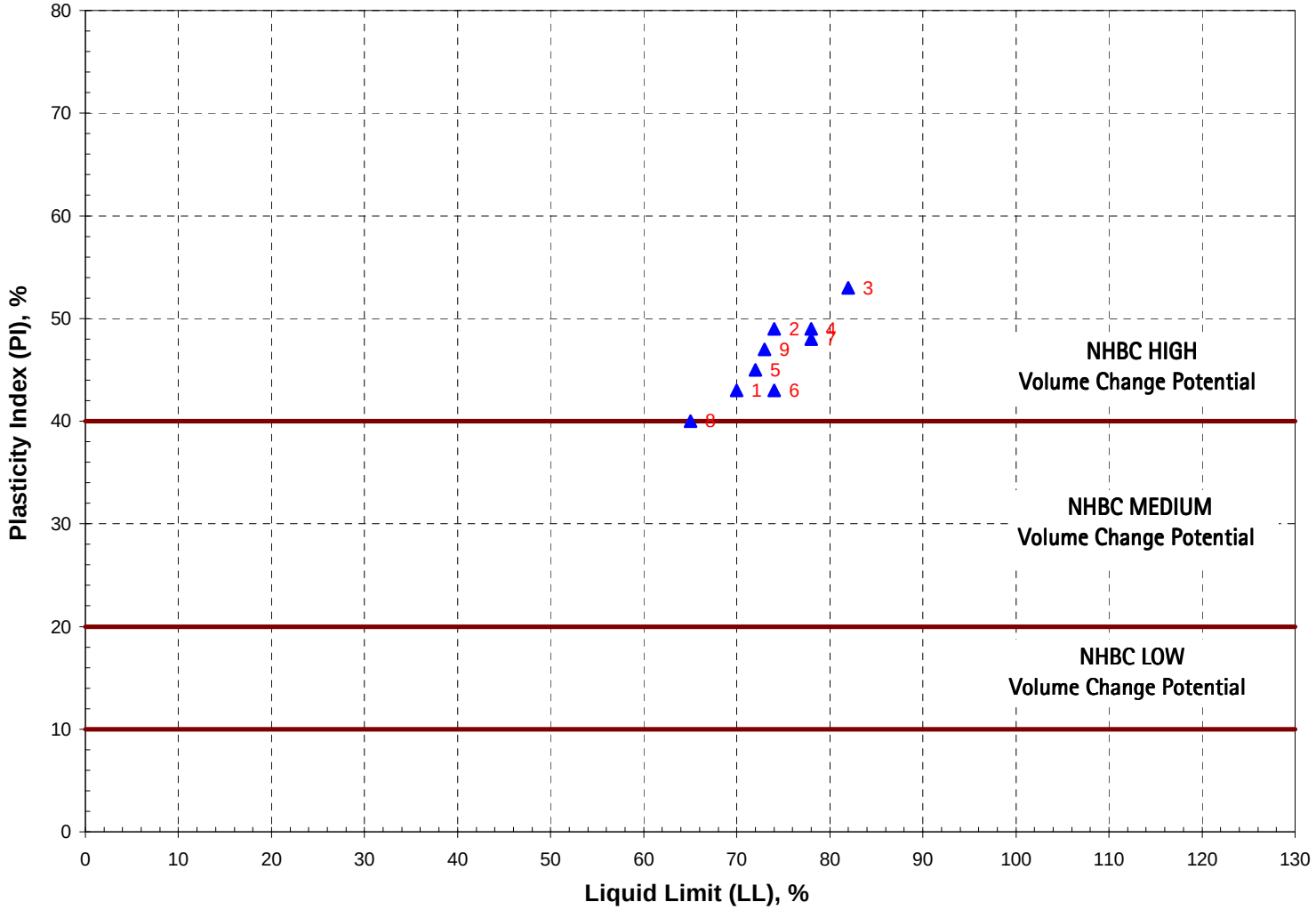
Project Name:	***62 Avenue Road, London NW8***	**Project No:**	***J10871***	**Project Engineer:**	***DV***
Client:	***Regent's Park Holdings Ltd***	**Date:**	***25/01/2012***	***Figure No. 2***	

Southern Testing

Southern Testing: Keeble House, Stuart Way, East Grinstead, West Sussex RH19 4QA
ST Consult: Twigden Barns, Brixworth Road, Creaton, Northampton NN6 8NN

ST Consult

Plot Relating Soil Plasticity to NHBC Classification for Volume Change Potential



Sample List

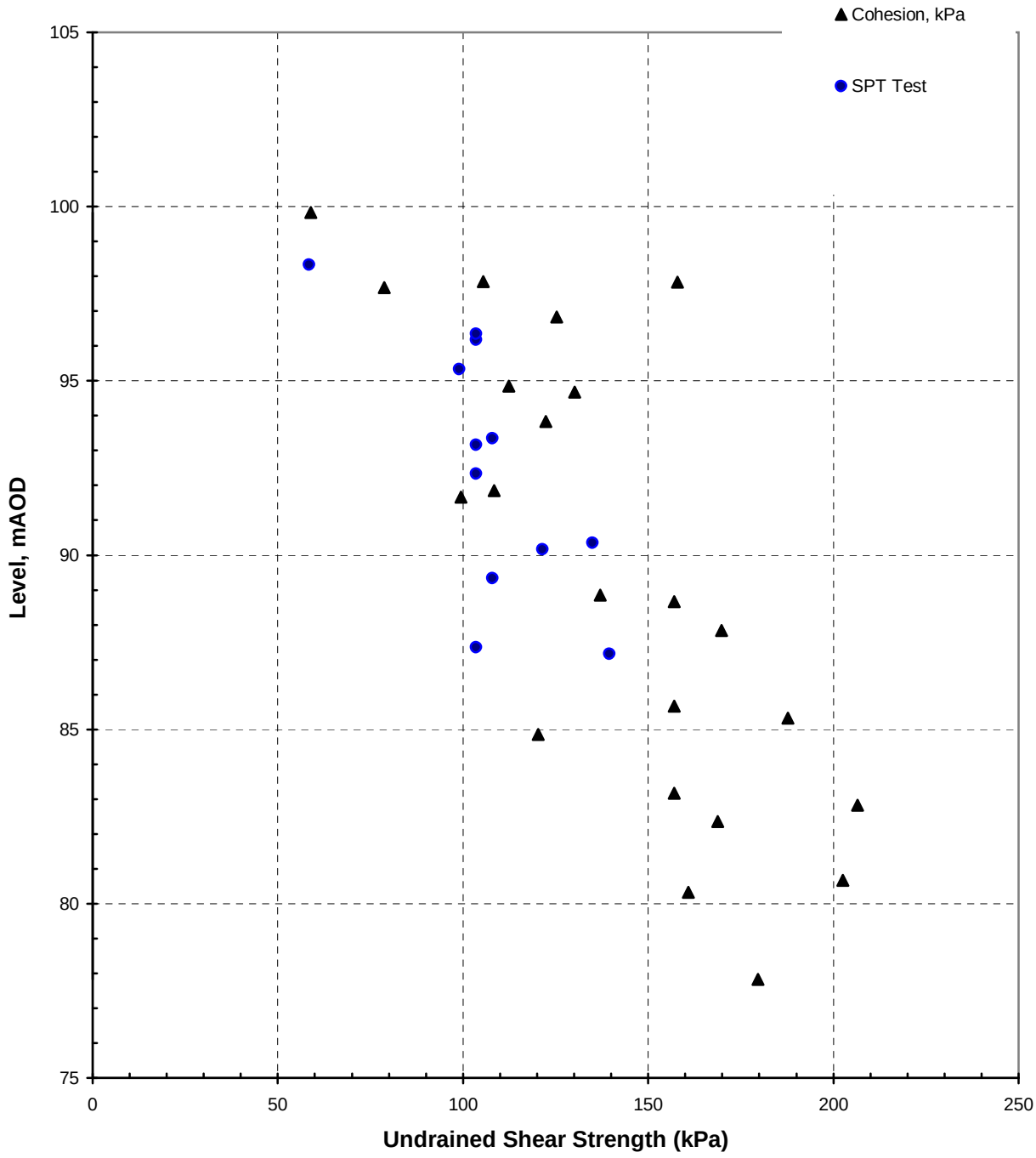
1	BH1@6.4m
2	BH1@14.5m
3	BH2@1.2m
4	BH2@2.5m
5	BH2@4m
6	BH2@8m
7	BH2@19.5m
8	BH3@4.5m
9	BH3@15m

Statistics

Liquid Limit	
Max	82
Min	65
Average	74
Plastic Limit	
Max	31
Min	25
Average	28
Plasticity Index	
Max	53
Min	40
Average	46

Project Name:	***62 Avenue Road, London NW8***	**Project No:**	***J10871***	**Project Engineer:**	***DV***
Client:	***Regent's Park Holdings Ltd***	**Date:**	***25/01/2012***	***Figure No. 3***	

Plot of Undrained Shear Strength vs Level



Client:	**Regent's Park Holdings Ltd**	**Site:**	**62 Avenue Road, London NW8**		
Job No:	J10871	**Date:**	31/01/2012	**Figure No:**	**C1**

APPENDIX D

Contamination Laboratory Test Results

Southern Testing: Keeble House, Stuart Way, East Grinstead, West Sussex RH19 4QA
ST Consult: Twigden Barns, Brixworth Road, Creaton, Northampton NN6 8NN

Statistical Tests for Contaminated Soils

Table 1

Site : 62 Avenue Road, London NW8 **Client :** Regent's Park Holdings Ltd **Job No :** J10871

Sample Group [3] : MADE GROUND **Test Suite :** STL Key Contaminants Suite **Date :** 06/Feb/2012

Contaminant		Test Results and Statistics				Mean Value Test [1]			Max Value Test [2]		
		No. of sample tested	Range	Arithmetic mean	Standard deviation	Upper bound (US_{95})	Residential with plant uptake: Screening value	Check	Max value	Sample Ref. of max value	Outlier check [2]
Arsenic (As) [4]	A40	4	18 - 22	20	1.8	22	32		22	BH3 @ 1.00m@40920	N/A
Cadmium (Cd) [4]	A40	4	0.1 - 1.7	0.68	0.73	1.5	10		1.7	BH3 @ 1.00m@40920	N/A
Total Chromium (Cr) [5]	A40	4	27 - 40	34	5.4	40	/		40	BH2 @ 0.50m@40920	N/A
Hexavalent Chromium (CrVI)* [5]	mg/kg	0					/				
Lead (Pb) [5, 8]	A40	4	250 - 5000	2163	2052	5981	450		5000	BH3 @ 1.00m@40920	Pass
Mercury (Hg) [4, 9]	A40	4	<1 - 7.4	3.3	3.0	6.8	7.0		7.4	BH3 @ 1.00m@40920	Pass
Selenium (Se) [4]	A40	4	<3	3.0	0.00	3.0	350		3	BH1 @ 2.00m@40920	N/A
Nickel (Ni) [4]	A40	4	15 - 30	22	6.6	29	130		30	BH1 @ 2.00m@40920	N/A
Copper (Cu) [6]	A40	4	30 - 260	103	108	231	2300		260	BH3 @ 1.00m@40920	N/A
Zinc (Zn) [6]	A40	4	89 - 1700	647	755	1536	3700		1700	BH3 @ 1.00m@40920	N/A
Phenol [4]	AR	4	<0.5 - 0.7	0.55	0.10	0.67	184		0.7	BH3 @ 1.00m@40920	N/A
Benzo[a]pyrene [6]	AR	4	<0.1 - 0.8	0.28	0.35	0.69	0.80		0.8	BH3 @ 1.00m@40920	Failed
Naphthalene [6]	AR	4	<0.1	0.10	0.00	0.10	1.5		0.1	BH1 @ 2.00m@40920	N/A
Total of 16 PAHs (USEPA)	mg/kg	0					/				
Total Cyanide (CN) [7]	AR	4	<1	1.0	0.00	1.0	/		1	BH1 @ 2.00m@40920	N/A
Free Cyanide * [7]	mg/kg	0					/				
Complex Cyanides * [7]	mg/kg	0					/				
Thiocyanate * [7]	mg/kg	0					/				
Acidity (pH Value)	units	0					/				
Soil Organic Matter	A40	4	1.2 - 2.1	1.7	0.39		/		2.1	BH3 @ 1.00m@40920	N/A

Notes: [1] : Interpretation of test results is based on CLEA publication CLR 7; Colour coding is only valid if read with the key and the related comments.

[2] : Pass: pass the outlier test, I.e. the maximum value does NOT classify as an outlier; Failed: fail the outlier test, I.e. the maximum value classifies as an outlier.

[3] : Assume SOM of 6% for Topsoil and minimum organic content of 1% for Subsoil.

[4] : Soil Guideline Value (SGV) 2009

[5] : Soil Guideline Value (SGV) 2002.

[6] : GAC based on LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment 2nd Edn 2009. Copper and Zinc may have phytotoxic effects at the given concentrations. Alternative criteria shouls be adopted for importation of Topsoil or other soils for cultivation.

[7] : Screening criteria derived on a site specific basis if test results above detection limit occur

[8] : In the case of Lead (Pb), the geometric mean rather than the arithmetic mean, is used as the basis for the comparison of soil concentration data with the SGV, in accordance with the CLEA recommendations.

[9] : SGV/GAC for Methyl Mercury, higher concentrations may be tolerable if inorganic mercury is the only species present.

Pass the Mean Value Test;
Fail the Mean Value Test.

* : Dependent options, see Section Soil Contamination Analysis; ^ : 1:2 extract; - : Not determined; -- : Dependent option; / : No values defined or given; NL : No limit set; N/A : Not applicable.

Statistical Tests for Contaminated Soils

Table 2

Site : 62 Avenue Road, London NW8 **Client :** Regent's Park Holdings Ltd **Job No :** J10871

Sample Group [3] : NATURAL SOILS **Test Suite :** STL Key Contaminants Suite **Date :** 06/Feb/2012

Contaminant		Test Results and Statistics				Mean Value Test [1]			Max Value Test [2]		
		No. of sample tested	Range	Arithmetic mean	Standard deviation	Upper bound (US_{95})	Residential with plant uptake		Max value	Sample Ref. of max value	Outlier check [2]
							Screening value	Check			
Arsenic (As) [4]	A40	3	11 - 18	14	3.8	20	32		18	BH2 @ 2.85m@40920	N/A
Cadmium (Cd) [4]	A40	3	<0.1 - 0.2	0.17	0.06	0.26	10		0.2	BH3 @ 5.00m@40920	N/A
Total Chromium (Cr) [5]	A40	3	42 - 45	43	1.5	46	/		45	BH1 @ 4.50m@40920	N/A
Hexavalent Chromium (CrVI)* [5]	mg/kg	0					/				
Lead (Pb) [5, 8]	A40	3	25 - 48	36	12	60	450		48	BH3 @ 5.00m@40920	N/A
Mercury (Hg) [4, 9]	A40	3	<1 - 1.3	1.1	0.17	1.4	7.0		1.3	BH2 @ 2.85m@40920	N/A
Selenium (Se) [4]	A40	3	<3	3.0	0.00	3.0	350		3	BH1 @ 4.50m@40920	N/A
Nickel (Ni) [4]	A40	3	37 - 44	40	3.6	46	130		44	BH2 @ 2.85m@40920	N/A
Copper (Cu) [6]	A40	3	26 - 31	29	2.5	33	2300		31	BH2 @ 2.85m@40920	N/A
Zinc (Zn) [6]	A40	3	77 - 100	88	12	108	3700		100	BH2 @ 2.85m@40920	N/A
Phenol [4]	AR	3	<0.5	0.50	0.00	0.50	184		0.5	BH1 @ 4.50m@40920	N/A
Benzo[a]pyrene [6]	AR	3	<0.1	0.10	0.00	0.10	0.80		0.1	BH1 @ 4.50m@40920	N/A
Naphthalene [6]	AR	3	<0.1	0.10	0.00	0.10	1.5		0.1	BH1 @ 4.50m@40920	N/A
Total of 16 PAHs (USEPA)	mg/kg	0					/				
Total Cyanide (CN) [7]	AR	3	<1	1.0	0.00	1.0	/		1	BH1 @ 4.50m@40920	N/A
Free Cyanide * [7]	mg/kg	0					/				
Complex Cyanides * [7]	mg/kg	0					/				
Thiocyanate * [7]	mg/kg	0					/				
Acidity (pH Value)	units	0					/				
Soil Organic Matter	A40	3	0.3 - 0.3	0.30	0.00		/		0.3	BH1 @ 4.50m@40920	N/A

Notes: [1] : Interpretation of test results is based on CLEA publication CLR 7; Colour coding is only valid if read with the key and the related comments.

[2] : Pass: pass the outlier test, I.e. the maximum value does NOT classify as an outlier; Failed: fail the outlier test, I.e. the maximum value classifies as an outlier.

[3] : Assume SOM of 6% for Topsoil and minimum organic content of 1% for Subsoil.

[4] : Soil Guideline Value (SGV) 2009

[5] : Soil Guideline Value (SGV) 2002.

[6] : GAC based on LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment 2nd Edn 2009. Copper and Zinc may have phytotoxic effects at the given concentrations. Alternative criteria shouls be adopted for importation of Topsoil or other soils for cultivation.

[7] : Screening criteria derived on a site specific basis if test results above detection limit occur

[8] : In the case of Lead (Pb), the geometric mean rather than the arithmetic mean, is used as the basis for the comparison of soil concentration data with the SGV, in accordance with the CLEA recommendations.

[9] : SGV/GAC for Methyl Mercury, higher concentrations may be tolerable if inorganic mercury is the only species present.

Pass the Mean Value Test;
Fail the Mean Value Test.

* : Dependent options, see Section Soil Contamination Analysis; ^ : 1:2 extract; - : Not determined; -- : Dependent option; / : No values defined or given; NL : No limit set; N/A : Not applicable.

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Scientific Analysis Laboratories Ltd

Certificate of Analysis

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Report Number: 264121-1

Date of Report: 31-Jan-2012

Customer: Southern Testing Laboratories
Keeble House
Stuart Way
East Grinstead
West Sussex
RH19 4QA

Customer Contact: Mr David Vooght

Customer Job Reference: J10871
Customer Purchase Order: STL7806C
Customer Site Reference: 62 Avenue Road, London NW8
Date Job Received at SAL: 17-Jan-2012
Date Analysis Started: 18-Jan-2012
Date Analysis Completed: 31-Jan-2012

The results reported relate to samples received in the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs

UKAS TESTING
1650

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

Report checked
and authorised by :
Luke Rayner
Project Manager

Issued by :
Luke Rayner
Project Manager

Waste Acceptance Criteria

Customer Sample Reference : BH1 @ 2.00m
SAL Sample Reference : 264121 001
SAL Reference : 264121
Project Site : 62 Avenue Road, London NW8
Customer Reference : J10871
Test Portion Mass (g) : 175
Date Sampled : 12-JAN-2012
Type : Clay

Soil Summary					Result	Inert Waste Landfill	Stable non reactive	Hazardous Waste Landfill
Determinand	**Technique**	**LOD**	**Units**	**Symbol**				
pH	Probe	0.0		M	8.4		>6.0	
Loss on Ignition @450C	Ign 450C/Grav	0.1	%	M	7.1			10.0
Total Organic Carbon	OX/IR	0.1	%	WN	0.7	3.0	5.0	6.0
Acid Neutralising Capacity (pH 7)	Titration	2.0	Mol/kg	N	<2.0			
BTEX (Sum)	Calc	0.0040	mg/kg	U	<0.040	6.0		
PAH (Sum)	Calc	1.6	mg/kg	N	<1.6	100.0		
PCB EC7 (Sum)	Calc	0.00035	mg/kg	WU	<0.0035	1.0		
TPH (C10-C40)	GC/FID (SE)	10	mg/kg	M	<10	500.0		
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	20			
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	27			
Retained on 2mm	Grav	0.1	%	N	<0.1			

10:1 Leachate					Result	Inert Waste Landfill	Stable non reactive	Hazardous Waste Landfill
Determinand	**Technique**	**LOD**	**Units**	**Symbol**				
Antimony	Calc / ICP/OES(Sim)(PreconcB)	0.020	mg/kg	N	<0.020	0.06	0.7	5.0
Arsenic	Calc / ICP/OES(Sim)(PreconcB)	0.020	mg/kg	N	<0.020	0.5	2.0	25.0
Barium	Calc / ICP/OES(Sim)(PreconcB)	0.10	mg/kg	N	0.15	20.0	100.0	300.0
Cadmium	Calc / ICP/OES(Sim)(PreconcB)	0.010	mg/kg	N	<0.010	0.04	1.0	5.0
Chloride	Calc / IC (D)	1.0	mg/kg	N	60	800.0	15000.0	25000.0
Chromium	Calc / ICP/OES(Sim)(PreconcB)	0.020	mg/kg	N	<0.020	0.5	10.0	70.0
Copper	Calc / ICP/OES(Sim)(PreconcB)	0.10	mg/kg	N	<0.10	2.0	50.0	100.0
Dissolved Organic Carbon	Calc / OX/IR	10	mg/kg	N	<10	500.0	800.0	1000.0
Fluoride	Calc / IC (D)	0.50	mg/kg	N	4.3	10.0	150.0	500.0
Lead	Calc / ICP/OES(Sim)(PreconcB)	0.020	mg/kg	N	<0.020	0.5	10.0	50.0
Mercury	Calc / AAS (CV)	0.0020	mg/kg	N	<0.0020	0.01	0.2	2.0
Molybdenum	Calc / ICP/OES(Sim)(PreconcB)	0.050	mg/kg	N	<0.050	0.5	10.0	30.0
Nickel	Calc / ICP/OES(Sim)(PreconcB)	0.020	mg/kg	N	<0.020	0.4	10.0	40.0
Phenols(Mono)	Calc / Colorimetry (CE)	0.050	mg/kg	N	<0.050	1.0		
Selenium	Calc / ICP/OES(Sim)(PreconcB)	0.050	mg/kg	N	<0.050	0.1	0.5	7.0
SO4--	Calc / IC (D)	1.0	mg/kg	N	1600	**1000.0**	20000.0	50000.0
Total Dissolved Solids	Calc / Grav (4 Sig)(1l)	100	mg/kg	N	<100	4000.0	60000.0	100000.0
Zinc	Calc / ICP/OES(Sim)(PreconcB)	0.050	mg/kg	N	0.35	4.0	50.0	200.0

From: EC Directive 99/31/EC and Landfill Regulations 2002 (as ammended)

Note:- Sample failed to produce sufficient eluate within the specified time after vacuum filtration for 1 hour and centrifugation for 30 minutes. Therefore, the exact application of the two-step leaching test is precluded on technical grounds. (ref: Section 5.2.4 BS EN 12457-3:2002) Results are derived from a single step leaching at L/S 10/1 as prescribed by the EA guidance. (Ref Section C4.1.1 Guidance on Sampling and Testing of Wastes to meet Landfill Waste Acceptance Procedures Version 1 April 2005, Environment Agency)

Notes:- Cumulative release at L/S=10 (mg/kg of dry matter) in accordance with BS EN 12457. Soil leaching procedure is not covered by our UKAS accreditation

Waste Acceptance Criteria

Customer Sample Reference : BH1 @ 4.50m
SAL Sample Reference : 264121 002
SAL Reference : 264121
Project Site : 62 Avenue Road, London NW8
Customer Reference : J10871
Date Sampled : 12-JAN-2012
Test Portion Mass (g) : 175
Type : Clay

Soil Summary					Result	Inert Waste Landfill	Stable non reactive	Hazardous Waste Landfill
Determinand	**Technique**	**LOD**	**Units**	**Symbol**				
pH	Probe	0.0		M	8.0		>6.0	
Loss on Ignition @450C	Ign 450C/Grav	0.1	%	M	7.8			10.0
Total Organic Carbon	OX/IR	0.1	%	WN	0.2	3.0	5.0	6.0
Acid Neutralising Capacity (pH 7)	Titration	2.0	Mol/kg	N	<2.0			
BTEX (Sum)	Calc	0.0040	mg/kg	U	<0.040	6.0		
PAH (Sum)	Calc	1.6	mg/kg	N	<1.6	100.0		
PCB EC7 (Sum)	Calc	0.00035	mg/kg	WU	<0.00035	1.0		
TPH (C10-C40)	GC/FID (SE)	10	mg/kg	M	<10	500.0		
Moisture	Grav (1 Dec) (40 C)	0.1	%	N	20			
Moisture @ 105 C	Grav (1 Dec) (105 C)	0.1	%	N	23			
Retained on 2mm	Grav	0.1	%	N	<0.1			

10:1 Leachate					Result	Inert Waste Landfill	Stable non reactive	Hazardous Waste Landfill
Determinand	**Technique**	**LOD**	**Units**	**Symbol**				
Antimony	Calc / ICP/OES(Sim)(PreconcB)	0.020	mg/kg	N	<0.020	0.06	0.7	5.0
Arsenic	Calc / ICP/OES(Sim)(PreconcB)	0.020	mg/kg	N	<0.020	0.5	2.0	25.0
Barium	Calc / ICP/OES(Sim)(PreconcB)	0.10	mg/kg	N	<0.10	20.0	100.0	300.0
Cadmium	Calc / ICP/OES(Sim)(PreconcB)	0.010	mg/kg	N	<0.010	0.04	1.0	5.0
Chloride	Calc / IC (D)	1.0	mg/kg	N	160	800.0	15000.0	25000.0
Chromium	Calc / ICP/OES(Sim)(PreconcB)	0.020	mg/kg	N	<0.020	0.5	10.0	70.0
Copper	Calc / ICP/OES(Sim)(PreconcB)	0.10	mg/kg	N	<0.10	2.0	50.0	100.0
Dissolved Organic Carbon	Calc / OX/IR	10	mg/kg	N	21	500.0	800.0	1000.0
Fluoride	Calc / IC (D)	0.50	mg/kg	N	7.5	10.0	150.0	500.0
Lead	Calc / ICP/OES(Sim)(PreconcB)	0.020	mg/kg	N	<0.020	0.5	10.0	50.0
Mercury	Calc / AAS (CV)	0.0020	mg/kg	N	<0.0020	0.01	0.2	2.0
Molybdenum	Calc / ICP/OES(Sim)(PreconcB)	0.050	mg/kg	N	<0.050	0.5	10.0	30.0
Nickel	Calc / ICP/OES(Sim)(PreconcB)	0.020	mg/kg	N	0.024	0.4	10.0	40.0
Phenols(Mono)	Calc / Colorimetry (CE)	0.050	mg/kg	N	<0.050	1.0		
Selenium	Calc / ICP/OES(Sim)(PreconcB)	0.050	mg/kg	N	<0.050	0.1	0.5	7.0
SO4--	Calc / IC (D)	1.0	mg/kg	N	5500	**1000.0**	20000.0	50000.0
Total Dissolved Solids	Calc / Grav (4 Sig)(1l)	100	mg/kg	N	<100	4000.0	60000.0	100000.0
Zinc	Calc / ICP/OES(Sim)(PreconcB)	0.050	mg/kg	N	0.45	4.0	50.0	200.0

From: EC Directive 99/31/EC and Landfill Regulations 2002 (as ammended)

Note:- Sample failed to produce sufficient eluate within the specified time after vacuum filtration for 1 hour and centrifugation for 30 minutes. Therefore, the exact application of the two-step leaching test is precluded on technical grounds. (ref: Section 5.2.4 BS EN 12457-3:2002) Results are derived from a single step leaching at L/S 10/1 as prescribed by the EA guidance. (Ref Section C4.1.1 Guidance on Sampling and Testing of Wastes to meet Landfill Waste Acceptance Procedures Version 1 April 2005, Environment Agency)

Notes:- Cumulative release at L/S=10 (mg/kg of dry matter) in accordance with BS EN 12457. Soil leaching procedure is not covered by our UKAS accreditation

SAL Reference: 264121
Project Site: 62 Avenue Road, London NW8
Customer Reference: J10871

Soil Analysed as Soil
BTEX

					SAL Reference	**264121 001**	**264121 002**
					Customer Sample Reference	**BH1 @ 2.00m**	**BH1 @ 4.50m**
					Test Sample	**AR**	**AR**
					Date Sampled	**12-JAN-2012**	**12-JAN-2012**
					Type	**Clay**	**Clay**
Determinand	**Method**	**LOD**	**Units**	**Symbol**		
Benzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	(13) <10	(13) <10
EthylBenzene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Meta/Para-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Ortho-Xylene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10
Toluene	GC/MS(Head Space)(MCERTS)	10	µg/kg	M	<10	<10

SAL Reference: 264121
Project Site: 62 Avenue Road, London NW8
Customer Reference: J10871

Soil Analysed as Soil
PCB EC7

					SAL Reference	**264121 001**	**264121 002**
					Customer Sample Reference	**BH1 @ 2.00m**	**BH1 @ 4.50m**
					Test Sample	**AR**	**AR**
					Date Sampled	**12-JAN-2012**	**12-JAN-2012**
					Type	**Clay**	**Clay**
Determinand	**Method**	**LOD**	**Units**	**Symbol**		
Polychlorinated biphenyl BZ#101	GC/MS (HR)	0.05	µg/kg	WM	(9) <0.50	<0.05
Polychlorinated biphenyl BZ#118	GC/MS (HR)	0.05	µg/kg	WM	(9) <0.50	<0.05
Polychlorinated biphenyl BZ#138	GC/MS (HR)	0.05	µg/kg	WM	(9) <0.50	<0.05
Polychlorinated biphenyl BZ#153	GC/MS (HR)	0.05	µg/kg	WM	(9) <0.50	<0.05
Polychlorinated biphenyl BZ#180	GC/MS (HR)	0.05	µg/kg	WM	(9) <0.50	<0.05
Polychlorinated biphenyl BZ#28	GC/MS (HR)	0.05	µg/kg	WM	(9) <0.50	<0.05
Polychlorinated biphenyl BZ#52	GC/MS (HR)	0.05	µg/kg	WM	(9) <0.50	<0.05

SAL Reference: 264121
Project Site: 62 Avenue Road, London NW8
Customer Reference: J10871

Soil Analysed as Soil
Total and Speciated USEPA16 PAH (SE) (MCERTS)

					SAL Reference	**264121 001**	**264121 002**
					Customer Sample Reference	**BH1 @ 2.00m**	**BH1 @ 4.50m**
					Test Sample	**AR**	**AR**
					Date Sampled	**12-JAN-2012**	**12-JAN-2012**
					Type	**Clay**	**Clay**
Determinand	**Method**	**LOD**	**Units**	**Symbol**		
Naphthalene	GC/MS	0.1	mg/kg	U	<0.1	<0.1
Acenaphthylene	GC/MS	0.1	mg/kg	U	<0.1	<0.1
Acenaphthene	GC/MS	0.1	mg/kg	M	<0.1	<0.1
Fluorene	GC/MS	0.1	mg/kg	M	<0.1	<0.1
Phenanthrene	GC/MS	0.1	mg/kg	U	<0.1	<0.1
Anthracene	GC/MS	0.1	mg/kg	M	<0.1	<0.1
Fluoranthene	GC/MS	0.1	mg/kg	N	<0.1	<0.1
Pyrene	GC/MS	0.1	mg/kg	N	<0.1	<0.1
Benzo(a)Anthracene	GC/MS	0.1	mg/kg	M	<0.1	<0.1
Chrysene	GC/MS	0.1	mg/kg	M	<0.1	<0.1
Benzo(b/k)Fluoranthene	GC/MS	0.1	mg/kg	M	<0.1	<0.1
Benzo(a)Pyrene	GC/MS	0.1	mg/kg	M	<0.1	<0.1
Indeno(123-cd)Pyrene	GC/MS	0.1	mg/kg	M	<0.1	<0.1
Dibenzo(ah)Anthracene	GC/MS	0.1	mg/kg	M	<0.1	<0.1
Benzo(ghi)Perylene	GC/MS	0.1	mg/kg	M	<0.1	<0.1
Polyaromatic Hydrocarbons (Total)	GC/MS	0.1	mg/kg	U	<0.1	<0.1

Index to symbols used in 264121-1

Value	Description
A40	Assisted dried < 40C
AR	As Received
8:1	Leachate to BS EN 12457-3 (8:1)
2:1	Leachate to BS EN 12457-3 (2:1)
13	Results have been blank corrected.
9	LOD raised due to dilution of sample
W	Analysis was performed at another SAL laboratory
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

pH, LOI & TOC were performed on assisted dried samples (<40 degree centigrade). All other results relate to samples as received.
Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except ANC
Retained on 2mm is removed before analysis
Sub contracted analysis performed by SAL Manchester

Scientific Analysis Laboratories is a
limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Scientific Analysis Laboratories Ltd

Certificate of Analysis

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Tel : 01376 328646
Fax : 01376 552923

Report Number: 264126-1

Date of Report: 31-Jan-2012

Customer: Southern Testing Laboratories
Keeble House
Stuart Way
East Grinstead
West Sussex
RH19 4QA

Customer Contact: Mr David Vooght

Customer Job Reference: J10871
Customer Purchase Order: STL7806C
Customer Site Reference: 62 Avenue Road, London NW8
Date Job Received at SAL: 17-Jan-2012
Date Analysis Started: 18-Jan-2012
Date Analysis Completed: 31-Jan-2012

The results reported relate to samples received in the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs

UKAS TESTING
1650

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

Report checked
and authorised by :
Luke Rayner
Project Manager

Issued by :
Luke Rayner
Project Manager

SAL Reference: 264126
Project Site: 62 Avenue Road, London NW8
Customer Reference: J10871

Soil Analysed as Soil
STL Key Contamintion Suite

				SAL Reference	**264126 001**	**264126 002**	**264126 003**	**264126 004**	**264126 005**
				Customer Sample Reference	**BH1 @ 2.00m**	**BH1 @ 4.50m**	**BH2 @ 0.50m**	**BH3 @ 1.00m**	**BH3 @ 2.00m**
				Date Sampled	**12-JAN-2012**	**12-JAN-2012**	**12-JAN-2012**	**12-JAN-2012**	**12-JAN-2012**
				Type	**Clay**	**Clay**	**Clay**	**Topsoil**	**Clay**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**					
Arsenic	T257	A40	2	mg/kg	**21**	**11**	**18**	**22**	**19**
Cadmium	T257	A40	0.1	mg/kg	**0.2**	<0.1	**0.1**	**1.7**	**0.7**
Chromium	T257	A40	0.5	mg/kg	**34**	**45**	**40**	**35**	**27**
Copper	T257	A40	2	mg/kg	**31**	**26**	**30**	**260**	**91**
Lead	T257	A40	2	mg/kg	**1200**	**34**	**250**	**5000**	**2200**
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0	<1.0	**7.4**	**3.7**
Nickel	T257	A40	0.5	mg/kg	**30**	**37**	**23**	**15**	**18**
Selenium	T257	A40	3	mg/kg	<3	<3	<3	<3	<3
Zinc	T257	A40	2	mg/kg	**110**	**77**	**89**	**1700**	**690**
Asbestos ID	T27	A40			Asbestos not detected **-**	-	Asbestos not detected **-**	Asbestos not detected **-**	Asbestos not detected **-**
Fraction Organic Carbon - F(oc)	T21	A40	1	%	<1	<1	<1	<1	<1
pH	T7	A40			**8.4**	**8.0**	**8.2**	**8.6**	**8.3**
Soil Organic Matter	T287	A40	0.1	%	**1.2**	**0.3**	**1.6**	**2.1**	**1.9**
(Water Soluble) SO4-- expressed as SO4	T242	A40	0.01	g/l	**1.5**	**2.9**	**0.15**	**0.20**	**1.5**
Sulphide	T4	A40	10	mg/kg	<10	<10	<10	<10	**18**
Cyanide(Total)	T4	AR	1	mg/kg	<1	<1	<1	<1	<1
Phenols(Mono)	T221	AR	0.5	mg/kg	<0.5	<0.5	<0.5	**0.7**	<0.5
Moisture	T277	AR	0.1	%	**20**	**20**	**15**	**18**	**19**
Moisture @ 105 C	T162	AR	0.1	%	**27**	**23**	**20**	**19**	**22**
Retained on 2mm	T2	A40	0.1	%	<0.1	<0.1	**6.2**	**11.6**	**6.1**

SAL Reference: 264126
Project Site: 62 Avenue Road, London NW8
Customer Reference: J10871

Soil Analysed as Soil
STL Key Contamintion Suite

				SAL Reference	**264126 006**	**264126 007**
				Customer Sample Reference	**BH3 @ 5.00m**	**BH2 @ 2.85m**
				Date Sampled	**12-JAN-2012**	**12-JAN-2012**
				Type	**Clay**	**Clay**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**		
Arsenic	T257	A40	2	mg/kg	**12**	**18**
Cadmium	T257	A40	0.1	mg/kg	**0.2**	**0.2**
Chromium	T257	A40	0.5	mg/kg	**42**	**43**
Copper	T257	A40	2	mg/kg	**29**	**31**
Lead	T257	A40	2	mg/kg	**48**	**25**
Mercury	T245	A40	1.0	mg/kg	<1.0	**1.3**
Nickel	T257	A40	0.5	mg/kg	**39**	**44**
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	**88**	**100**
Fraction Organic Carbon - F(oc)	T21	A40	1	%	<1	<1
pH	T7	A40			**7.9**	**8.1**
Soil Organic Matter	T287	A40	0.1	%	**0.3**	**0.3**
(Water Soluble) SO4-- expressed as SO4	T242	A40	0.01	g/l	**2.7**	**0.95**
Sulphide	T4	A40	10	mg/kg	<10	<10
Cyanide(Total)	T4	AR	1	mg/kg	<1	<1
Phenols(Mono)	T221	AR	0.5	mg/kg	<0.5	<0.5
Moisture	T277	AR	0.1	%	**18**	**21**
Moisture @ 105 C	T162	AR	0.1	%	**22**	**25**
Retained on 2mm	T2	A40	0.1	%	<0.1	<0.1

SAL Reference: 264126
Project Site: 62 Avenue Road, London NW8
Customer Reference: J10871

Soil Analysed as Soil
Total and Speciated USEPA16 PAH (SE) (MCERTS)

				SAL Reference	**264126 001**	**264126 002**	**264126 003**	**264126 004**	**264126 005**
				Customer Sample Reference	**BH1 @ 2.00m**	**BH1 @ 4.50m**	**BH2 @ 0.50m**	**BH3 @ 1.00m**	**BH3 @ 2.00m**
				Date Sampled	**12-JAN-2012**	**12-JAN-2012**	**12-JAN-2012**	**12-JAN-2012**	**12-JAN-2012**
				Type	**Clay**	**Clay**	**Clay**	**Topsoil**	**Clay**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**					
Naphthalene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	**0.4**	<0.1
Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	**0.1**	<0.1
Fluoranthene	T16	AR	0.1	mg/kg	<0.1	<0.1	**0.1**	**1.4**	**0.2**
Pyrene	T16	AR	0.1	mg/kg	<0.1	<0.1	**0.1**	**1.2**	**0.2**
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	**0.8**	**0.1**
Chrysene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	**0.8**	**0.1**
Benzo(b/k)Fluoranthene	T16	AR	0.1	mg/kg	<0.1	<0.1	**0.1**	**1.3**	**0.2**
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	**0.8**	**0.1**
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	**0.4**	<0.1
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	**0.2**	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1	**0.4**	<0.1
PAH(total)	T16	AR	0.1	mg/kg	<0.1	<0.1	**0.3**	**7.8**	**0.9**

SAL Reference: 264126
Project Site: 62 Avenue Road, London NW8
Customer Reference: J10871

Soil Analysed as Soil
Total and Speciated USEPA16 PAH (SE) (MCERTS)

				SAL Reference	**264126 006**	**264126 007**
				Customer Sample Reference	**BH3 @ 5.00m**	**BH2 @ 2.85m**
				Date Sampled	**12-JAN-2012**	**12-JAN-2012**
				Type	**Clay**	**Clay**
Determinand	**Method**	**Test Sample**	**LOD**	**Units**		
Naphthalene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1	<0.1
Fluorene	T16	AR	0.1	mg/kg	<0.1	<0.1
Phenanthrene	T16	AR	0.1	mg/kg	<0.1	<0.1
Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1
Fluoranthene	T16	AR	0.1	mg/kg	<0.1	<0.1
Pyrene	T16	AR	0.1	mg/kg	<0.1	<0.1
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1
Chrysene	T16	AR	0.1	mg/kg	<0.1	<0.1
Benzo(b/k)Fluoranthene	T16	AR	0.1	mg/kg	<0.1	<0.1
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	<0.1	<0.1
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	<0.1	<0.1
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	<0.1	<0.1
PAH(total)	T16	AR	0.1	mg/kg	<0.1	<0.1

Index to symbols used in 264126-1

Value	Description
AR	As Received
A40	Assisted dried < 40C
W	Analysis was performed at another SAL laboratory
S	Analysis was subcontracted
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Where an asbestos result of none detected is reported, this is obtained from analysis of a representative sub sample.
Sub contracted analysis performed by SAL Manchester & REC Asbestos South East Limited
Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis
Retained on 2mm is removed before analysis

Method Index

Value	Description
T242	2:1 Extraction/ICP/OES (TRL 447 T1)
T277	Grav (1 Dec) (40 C)
T7	Probe
T21	OX/IR
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T27	PLM
T287	Calc TOC/0.58
T4	Colorimetry
T2	Grav
T245	ICP/OES(Aqua Regia Extraction)
T16	GC/MS
T221	Colorimetry (CE)
T162	Grav (1 Dec) (105 C)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Arsenic	T257	A40	2	mg/kg	M	001-007
Cadmium	T257	A40	0.1	mg/kg	M	001-007
Chromium	T257	A40	0.5	mg/kg	M	001-007
Copper	T257	A40	2	mg/kg	M	001-007
Lead	T257	A40	2	mg/kg	M	001-007
Mercury	T245	A40	1.0	mg/kg	U	001-007
Nickel	T257	A40	0.5	mg/kg	M	001-007
Selenium	T257	A40	3	mg/kg	U	001-007
Zinc	T257	A40	2	mg/kg	M	001-007
Asbestos ID	T27	A40			SU	001,003-005
Fraction Organic Carbon - F(oc)	T21	A40	1	%	WN	001-007
pH	T7	A40			M	001-007
Soil Organic Matter	T287	A40	0.1	%	WN	001-007
(Water Soluble) SO4-- expressed as SO4	T242	A40	0.01	g/l	M	001-007
Sulphide	T4	A40	10	mg/kg	N	001-007
Cyanide(Total)	T4	AR	1	mg/kg	M	001-007
Phenols(Mono)	T221	AR	0.5	mg/kg	M	001-007
Moisture	T277	AR	0.1	%	N	001-007
Moisture @ 105 C	T162	AR	0.1	%	N	001-007
Retained on 2mm	T2	A40	0.1	%	N	001-007
Naphthalene	T16	AR	0.1	mg/kg	U	001-007
Acenaphthylene	T16	AR	0.1	mg/kg	U	001-007
Acenaphthene	T16	AR	0.1	mg/kg	M	001-007
Fluorene	T16	AR	0.1	mg/kg	M	001-007
Phenanthrene	T16	AR	0.1	mg/kg	U	001-007
Anthracene	T16	AR	0.1	mg/kg	M	001-007
Fluoranthene	T16	AR	0.1	mg/kg	N	001-007
Pyrene	T16	AR	0.1	mg/kg	N	001-007
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	001-007
Chrysene	T16	AR	0.1	mg/kg	M	001-007
Benzo(b/k)Fluoranthene	T16	AR	0.1	mg/kg	M	001-007
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	001-007
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	001-007
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	001-007
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	001-007
PAH(total)	T16	AR	0.1	mg/kg	U	001-007

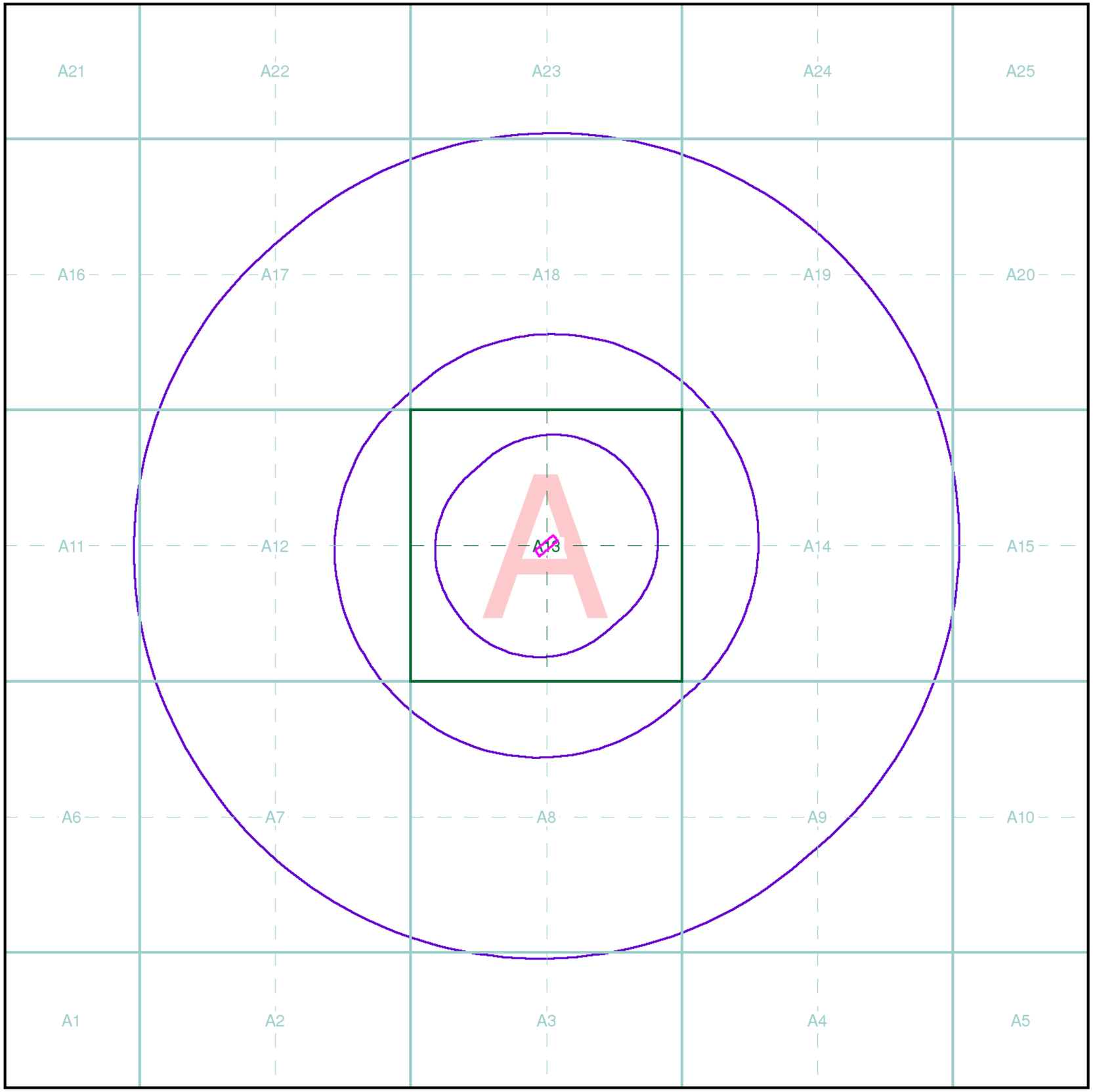
APPENDIX E

Desk Study Results

Historical Ordnance Survey Map Interpretation				
Map Date	**Scale**	**Features on site**	**Features in surrounding area**	**Significant Potential Contamination Sources**
1871-1880	1: 2,500	The site is occupied by a detached house with gardens in front and at the back of the house. There are some trees in the south west part of the site, and the south western boundary of the site is adjacent to Avenue Road. Two smaller buildings are marked, attached to the north west side of the house. A second building apart from the main house is visible encroaching onto the north east part of the site.	The building on the site forms part of a row of detached houses stretching to the north west and south east of the site. The garden of the house which is on the site extends to the north east beyond the boundary of the site. The boundary of the garden is adjacent to a large open, undeveloped area which extends to the East of the site. The area to the west, north and south of the site is covered with residential buildings and streets.	
1873-1882	1:10,560	Similar to the 1871-1880 mapping above.	A railway line is shown approximately 500m north west of the site. A railway line is shown approximately 1000m north east of the site. A Barracks is shown approximately 300m south west of the site. Swiss Cottage Station is shown approximately 500m north west of the station. West Middlesex Waterworks is shown approximately 500m south east of the site.	
1896	1:2,500	Similar to the previous mappings above.	A Nursery is shown approximately 50m north east of the site. An air shaft is shown approximately 250m north east of the site.	
1896	1:10,560	Similar to the previous mapping above.	A railway line is shown approximately 1000m north east of the site. A saw mill is shown approximately 500m north east of the site.	

Historical Ordnance Survey Map Interpretation				
Map Date	**Scale**	**Features on site**	**Features in surrounding area**	**Significant Potential Contamination Sources**
			Barrow Hill reservoir is shown approximately 500m south east of the site. Regent's Canal is shown approximately 900m south east of the site.	
1915	1:2,500	Similar to the previous mappings above.	The area to the east of the site is now visibly developed, with residential buildings and roads covering the area.	
1920	1:10,560	Similar to the previous mappings above.	An air shaft is shown approximately 500m west of the site. A hospital is shown approximately 500m south west of the site. A grave yard is shown approximately 1000m south of the site. An Air shaft is shown approximately 700m north west of the site. A public baths is shown approximately 750m north west of the site.	
1935-36	1:2,500	The main building has been extended along the north eastern boundary of the site, incorporating the two small immediately adjacent buildings.	An air shaft is shown approximately 200m north of the site. A Picture Theatre is shown approximately 250m north west of the site.	
1951	1: 10,000	Similar to the 1935-1936 mapping above.	A hospital is shown approximately 500m north west of the site. A fire station is marked approximately 600m north east of the site.	
1953-1954	1:1,250	Similar to the 1935-36 mapping above.	Primrose Hill Tunnels are indicated 400m north east and 200m north west of the site.	
1957-1958	1:10,000	Similar to the 1935-36 mapping above.	Several of the neighbouring plots north of the site have	

Historical Ordnance Survey Map Interpretation				
Map Date	**Scale**	**Features on site**	**Features in surrounding area**	**Significant Potential Contamination Sources**
			been cleared of buildings. School buildings are shown approximately 350m south west of the site.	
1968	1:10,000	Similar to the 1935-36 mapping above.	School buildings are shown approximately 100m north west of the site. The school buildings 350m south west of the site have been developed and enlarged. A large civic centre building is shown approximately 250m north west of the site.	
1967-1972	1:1,250	Similar to the 1935-36 mapping above.	A sub station is shown approximately 100m north east of the site.	
1974-1976	1:10,000	Similar to the 1935-36 mapping above.	Similar to the 1967-1972 mapping above.	
1991-1996	1:10,000	Similar to the 1935-36 mapping above.	A new underground rail station (LT) is shown approximately 500m north west of the site.	
1999	1:10,000	Similar to the 1935-36 mapping above.	Similar to the 1991-1996 mapping above.	
2006	1:10,000	Similar to the 1935-36 mapping above.	A new underground rail station (LUL) is shown approximately 550m south west of the site.	
2011	1:10,000	Similar to the 1935-36 mapping above.	Similar to the 2006 mapping above.	



Southern Testing
Environmental & Geotechnical

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:

Ordnance Survey® Licensed Partner

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Environment Agency

NATURAL ENGLAND

Envirocheck reports are compiled from 136 different sources of data.

Client Details

MR D Spearman, Southern Testing, Keeble House, Stuart Way, East Grinstead, West Sussex, RH19 4QA

Order Details

Order Number:	36985955_1_1
Customer Ref:	J10871 - DV
National Grid Reference:	526940, 183930
Site Area (Ha):	0.11
Search Buffer (m):	1000

Site Details

62 Avenue Road, LONDON, NW8 6HT

Landmark Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

LANDMARK STANDARD TERMS AND CONDITIONS

DEFINITIONS

In these Terms, the following terms have the following meanings:
"Agreement" has the meaning set out in clause 1.d.
"Authorised Reseller" means an agent or reseller who We have duly appointed to resell Our Reports and Services.
"Consumer" means a natural person acting for purposes other than his trade, business or profession.
"Content" means any data, computing and information services and software, and other content and documentation or support materials and updates included in and/or supplied by or through the Websites, in Reports or Services or in any other way by Us and shall include both material developed by or on behalf of Us and Third Party Content.
"End User" means either: (i) a Consumer or a Consumer's friend or family member who uses the Services provided to the Consumer; or (ii) where You are not a Consumer, an employee of Yours who uses the Services provided to You; or (iii) a person identified in clause 2.b or their respective employees.
"Fees" means any charges levied by Us or an Authorised Reseller for Services provided to You.
"First Purchaser" means the first person, or legal entity to purchase the Property Site following provision of a Report.
"First Purchaser's Lender" means the funding provider for the First Purchaser.
"Information Pack" means a pack compiled by or on behalf of the owner or prospective buyer of the Property Site, designed to aid the marketing or purchase of the Property Site and containing information provided by or on behalf of the owner or prospective buyer of the Property Site.
"Intellectual Property Rights" means copyright, patent, design right (registered or unregistered), service or trade mark (registered or unregistered), database right or other data right, moral right or know how or any other intellectual property right.
References to **"We"**, **"Us"** and **"Our"** are references to Landmark Information Group Limited, whose registered office is 7 Abbey Court, Eagle Way, Exeter, EX2 7HY.
"Order" means the request for Services from Us by You.
"Property Site" means a land site in relation to which We provide a Service.
"Report" includes any information that We supply to You including all reports, services, datasets, software or information contained in them.
"Services" means the provision of any service by Us pursuant to these Terms, including without limitation, any Report.
"Supplier" means any third party organisation that provides services, software, data, information and other content or functionality of any form to Us.
"Terms" means these terms and conditions.
"Third Party Content" means the services, software, data, information and other content or functionality provided by Suppliers and linked to or contained in the Services.
"Website" means any website hosted by Us and includes the Content and any report, service, document, data-set, software or information contained in such websites or derived from them.

References to **"You"**, **"Your"** and **"Yourself"** refer to the contracting party who accesses the Website or places an Order with Us.

1. Basis of Contract

a. These Terms govern the relationship between Us and You where You purchase Services from Us. Where these Terms are not expressly accepted by You, they will be deemed to have been accepted by You, and You agree to be bound by these Terms, when You place any Order, or pay for any Services provided to You by Us.

b. You shall take all reasonable steps to check that the details that You provide in relation to Your Order are complete, accurate and correct and that the Report has been prepared for the correct location and property type. Neither We nor any Suppliers shall have any liability for errors or omissions in information provided by or on behalf of You or from Your failure to check that the Report relates to the correct location or property.

c. We may modify these Terms, and may discontinue or revise any or all other aspects of the Services at Our sole discretion, with immediate effect and without prior notice, including without limitation changing the Services available at any given time. Any amendment or variation to these Terms shall be posted on Our Websites. You acknowledge that it shall remain Your responsibility to check Our Website from time to time for any such amendments or variation to these Terms. Continued Orders of the Services by You shall be deemed an acceptance by You to be bound by any such amendments to the Terms.

d. These Terms together with Your Order, the Fees and delivery details in relation to Your Order and Our privacy policy, which is available on the Website, constitute the entire agreement between the parties relating to the supply of Services to You by Us (**"Agreement"**). You acknowledge that You have not relied on any statement, promise or representation made or given by or on behalf of Us which is not set out in the Agreement or delivery details. Nothing in this clause 1.d shall limit or exclude any liability for fraud.

e. These Terms shall prevail at all times to the exclusion of all other terms and conditions including any terms and conditions which You may purport to apply even if such other provisions are submitted in a later document or purport to exclude or override these Terms and neither the course of conduct between parties nor trade practice shall act to modify these Terms.

2. Services and Licensed Use

a. Subject to clauses 6.d, 6.k and 6.l, We shall use all reasonable skill, care and diligence in the performance of the Services.

b. Subject always to these Terms You may, without further charge, make the Services available to:

i. the owner of the whole or part of the Property Site at the date of the Report;
ii. any person who purchases the whole or part of the Property Site;
iii. any person who provides funding secured on the whole or part of the Property Site;
iv. any person for whom You act in a professional or commercial capacity in relation to the Property Site;
v. any person who acts for You in a professional or commercial capacity in relation to the Property Site; and/or
vi. prospective buyers of the whole or part of the Property Site as part of an Information Pack but for the avoidance of doubt, We shall have no liability to such prospective buyer unless the prospective buyer subsequently purchases the Property Site, and the prospective (or actual) buyer shall not be entitled to make the Service available to any other third party.

c. You shall not hold yourself out or describe yourself as Our agent or an agent of any of the Suppliers.

d. You shall ensure that acknowledgements of copyright and database right ownership are included in a conspicuous position in all copies of the Content. You may not delete any of Our or the Suppliers' intellectual property protection notices (including without limitation copyright notices or trade marks) from the Content.

e. You shall use Your best endeavours to use adequate technological and security measures, including measures We or Suppliers may reasonably recommend from time to time, to ensure that all Content which You hold or are responsible for is secure from unauthorised use or access.

f. The Content shall only be used strictly in accordance with these Terms and not for any other purpose; nor shall any use of the Content be made that would or might be deemed to be disparaging to Us, the Suppliers or any of them. You shall not be entitled to resell or rent any Content or otherwise any supply products incorporating such Content for commercial sale or rental.

g. You shall not reverse engineer, separate or otherwise tamper with the Content so that Content can be extracted and used for any purpose outside the scope of the Agreement.

h. If You are a Company or public body, You agree that the licensed use of Content pursuant to the Agreement always excludes its use by any of Your subsidiaries, holding companies or subsidiaries of such holding companies (as such terms are defined in section 1159 of the Companies Act 2006) or by any government entity associated with You (in each case as applicable). You agree, and shall procure, that any such company or entity shall enter into a separate agreement with Us.

i. All other uses of the Content are prohibited. If You wish to use the Content in a manner which is not authorised by the Terms, then You must contact Us to seek the necessary consents or licences (which may include further licences from the Suppliers), for which there may be additional Fees.

j. You agree to notify Us as soon as You suspect any infringement of Our or any of Our Supplier's intellectual property rights and You agree to give Us all reasonably required assistance in pursuing any potential infringement.

3. Intellectual Property and Confidentiality

a. You acknowledge and agree that all Intellectual Property Rights in Content are and shall continue to be owned by Us or Our Suppliers and nothing in the Agreement shall transfer, assign or grant any rights to You (save for the licence as set out above).

b. Subject to any use of the Content in accordance with these Terms, You acknowledge and agree that You shall, and shall procure that any person to whom You provide access to the Content shall, treat as strictly private and confidential the Services, the Content and all information which they obtain from the Services and Content. You agree to indemnify Us against all liabilities, damages, penalties, costs, expenses (including legal expenses on an indemnity basis) or other loss suffered or incurred by Us in relation to any breach or alleged breach of this clause 3.b.

4. Termination

a. At any time, We may terminate the Agreement with immediate effect by giving You written notice:

i. if You are in breach of the Terms and, if such breach is capable of remedy, You fail to remedy the breach within 30 days of written notice from Us specifying the breach and requiring it to be remedied; and
ii. if You have a receiver or administrative receiver or administrator appointed over You or any part of Your undertaking or assets or shall pass a resolution for winding up (otherwise than for the purpose of a bona fide scheme of solvent amalgamation or reconstruction) or if a court of competent jurisdiction shall make an order to that effect or if You become subject to an administration order or enter into a voluntary arrangement with Your creditors or shall cease or threaten to cease to carry on business or if You are presented with a bankruptcy petition.

b. In the event of the termination or expiry of the Agreement:

i. You shall, subject to clause 4.b.iii, immediately cease to use the Report and any Content;
ii. You shall, subject to clause 4.b.iii, within 30 days of such termination or expiry, destroy all Content in any media which You hold or for which You are responsible and provide, at Our request, a sworn statement by a duly authorised person that You no longer hold such Content;
iii. except in the event of termination by Us under clause 4.a, You may retain Content in an archive following expiry of the Agreement for the sole purpose of addressing a complaint or challenge from a regulator or other third party regarding Your use of such Content during the term of the Agreement. Your rights are on condition that: (a) the archive rights do not apply to Content that include third party Intellectual Property Rights (other than Content provided by Ordnance Survey to the extent that the Intellectual Property Rights in such Content are owned by Ordnance Survey); (b) You shall not disclose Content retained under this clause 4.b.iii to any regulator or other third party except strictly to the extent necessary for the relevant purpose of addressing a complaint or challenge from a regulator or other third party and in paper or read-only electronic format only; (c) You must store such Content separately from any other data which You hold; and (d) subject to clause 6.a, We shall have no liability for Your use of it following termination or expiry of the Agreement; and
iv. the parties shall have no further obligations or rights under the Agreement, without prejudice to those which have accrued to either party prior to termination or expiry save that the "Definitions", clauses 2.c to 2.j (inclusive), this clause 4.b, clauses 5.d, 6, 7, 9, 10 and 11 together with those other clauses the survival of which is necessary for the interpretation or enforcement of the Agreement or which by their nature can be reasonably interpreted as surviving the expiry or termination of the Agreement, shall continue to have effect after such expiry or termination.

5. Payments

a. An individual or a monthly invoice showing all Orders created by You will be generated subject to these Terms. You will pay the Fees at the rates set out in Our or Our Authorised Reseller's invoice within 30 days of the date of each invoice without deduction, counterclaim or set off. Where Your order comprises a number of Services or severable elements within any one or more Services, any failure by Us or its Authorised Reseller to provide an element or elements of the Services shall not prejudice Our or Our Authorised Reseller's ability to require payment in respect of the Services delivered to You. You acknowledge that time is of the essence with respect to the payment of such invoices.

b. VAT shall be due in addition to any Fees. You shall pay any other applicable indirect taxes related to Your use of the Services.

c. Neither We nor any Authorised Reseller shall be required to notify You in advance of any amendment to the Fees and the placing of any further Order for Services shall be deemed acceptance of any revisions to the Fees.

d. If You fail to pay by the due date any amount due and payable by You under the Agreement, We shall be entitled, but not obliged to, charge You interest on the overdue amount, payable by You immediately on demand, accruing from the due date up to the date of actual payment, after as well as before judgment, at the rate set out in the Late Payment of Commercial Debts (Interest) Act 1998 from time to time and fixed sum compensation under the Late Payment of Commercial Debts Regulations 2002. Such interest shall accrue on a daily basis.

6. Liability

a. Nothing in these Terms excludes or limits either party's liability for death or personal injury caused by that party's negligence or wilful default or for fraud, and the remainder of this clause 6 is subject to this provision. If You are a Consumer, Your statutory rights (which include, for example, that We will provide the Services to a reasonable standard and within a reasonable time) are not affected by anything in these Terms.

b. Save as set out in clause 6.a, We shall not be liable to You or to any End User in contract, tort (including negligence) or for breach of statutory duty or in any other way for:

i. any indirect or consequential losses (which includes any loss that could not have been reasonably expected by You and Us at the time of entering into these Terms);
ii. loss arising from or in connection with loss of revenues, profits, contracts or business or failure to realise anticipated savings; or
iii. loss of goodwill or reputation.

c. Save as set out in clause 6.a, Our total liability to You and/or any End User in contract or tort (including negligence) or for breach of statutory duty shall not exceed an amount of ten million pounds (£10,000,000) per claim or series of connected claims.

d. The Content that Services are based on is derived from third party sources. Therefore, save as set out in clause 6.l in respect of risk assessments and professional opinions, We do not warrant the accuracy or completeness of any information or Content provided, unless We should reasonably have been alerted to any omission, error or inaccuracy in the Content. Such Content is provided specifically from the sources as described by Us and We do not claim that these represent an exhaustive or comprehensive list of all sources that might be consulted.

e. You acknowledge and agree that neither You nor any End User shall have any claim or recourse against any Supplier of Third Party Content.

f. You acknowledge and agree that We do not warrant that the online supply of Content or Services or any internet ordering service will be: uninterrupted or error free or provide any particular facilities or functions; free from defects; free from software viruses; free of error from computer malfunction, inaccurate processing; free from corruption of data whilst geo-coding, processing by computer or electronic means or in the course of transmission; or similar, although We will use reasonable endeavours to correct any such issues within a reasonable period of them becoming known (which may be limited to notifying the relevant Supplier). Time shall not be of the essence in providing the Content or Services.

g. You acknowledge and agree that no

physical inspection of the Property Site reported on is carried out as part of any Services offered by Us and We do not warrant that all land uses or features whether past or current will be identified in the Services. The Services do not include any information relating to the actual state or condition of any Property Site nor should they be used or taken to indicate or exclude actual fitness or unfitness of a Property Site for any particular purpose nor should it be relied upon for determining saleability or value or used as a substitute for any physical investigation or inspection.

h. You acknowledge and agree that We will not be held liable in any way if a Report is used otherwise than as provided for in these Terms and/or in the Report.

i. You acknowledge and agree that the Services have not been prepared to meet Your or anyone else's individual requirements and it is Your responsibility to ensure that the Services ordered are suitable for Your (or the End User's) intended purpose.

j. You acknowledge and agree that You shall, on receipt of a Report carry out a reasonable inspection to satisfy Yourself that there are no apparent defects or failures with respect to the description and location of the Property Site and shall promptly inform Us if there are any such defects or failures.

k. All liability for any insurance products purchased by You rests solely with the insurer. We do not endorse any particular product or insurer and no information contained within the Services should be deemed to imply otherwise. You acknowledge that if You Order any such insurance We will deem such as Your consent to forward a copy of the Report to the insurers. Where such policy is purchased, You acknowledge and agree that all liability shall remain with the insurers and that You are entirely responsible for ensuring that the insurance policy offered is suitable for Your needs and should seek independent advice. We do not guarantee that an insurance policy will be available on a Property Site. You acknowledge and agree that all decisions with regard to the offer of insurance policies for any premises will be made solely at the discretion of the insurers and We accept no liability in this regard. The provision of a Report does not constitute any indication by Us that insurance will be available on the Property Site.

l. We may provide You with professional opinions or a risk assessment in a Report. You acknowledge and agree that We shall carry out (or procure that third parties carry out) such assessment with reasonable skill and care and that We shall be liable where any such risk assessment is carried out negligently. Notwithstanding the foregoing We shall not be liable for any inaccurate statement, opinion or risk rating in a Report which resulted from a reasonable interpretation of the Content.

m. Neither You, nor any End User or any other person may rely on a Service more than 12 months after it was originally provided.

n. You shall use all reasonable endeavours to ensure that End Users acknowledge and agree to the limitations and exclusions of liability set out in this clause 6.

7. Contribution

a. Save where expressly provided, this clause 7 shall apply solely to Envirosearch Residential Reports (regardless of the result of such Report). Nothing in this clause 7 shall operate to override or vary the provisions of clause 6.

b. We are prepared to offer, without any admission or inference of liability, a contribution towards the costs of any remediation works required under a Notice (as defined below) on the terms of this clause 7 ("the Contribution").

c. In the event that a Remediation Notice is served on the First Purchaser or First Purchaser's Lender of a Property Site under Part IIA of the Environmental Protection Act 1990 ("the Notice") We shall contribute to the cost of such works as either the First Purchaser or First Purchaser's Lender (but not both) are required to carry out under the Notice subject to the provisions of this clause 7 and on the following terms:

   i. the Contribution shall only apply to contamination or a pollution incident present or having occurred prior to the date of the Report;

   ii. the Contribution shall only apply where the Property Site is a single residential dwelling house or a single residential flat within a block of flats. For the avoidance of doubt, this obligation does not apply to any commercial property, nor to any Property Site being developed or redeveloped whether for residential purposes or otherwise;

   iii. the Contribution is strictly limited to the cost of works at the Property Site and at no other site; and

   iv. the Contribution will not be paid in respect of any of the following: (1) radioactive contamination of whatsoever nature, directly or indirectly caused by or contributed to or arising from ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel or the radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof; (2) asbestos arising out of or related in any way to asbestos or asbestos-containing materials on or in structures or services serving the structures; (3) naturally occurring materials arising from the presence or required removal of naturally occurring materials except in circumstances where such materials are present in concentrations which are in excess of their natural concentration; (4) intentional non-compliance arising from the intentional disregard of or knowing wilful or deliberate non-compliance by any owner or occupier of the Property Site with any statute, regulation, administrative complaint, notice of violation, or notice letter of any Regulatory Authority; (5) any condition which is known or ought reasonably to have been known to the First Purchaser or the First Purchaser's Lender prior to the purchase of the Report; (6) any condition which is caused by acts of war or an act of terrorism; (7) any property belonging to or in the custody or control of the First Purchaser which does not form a fixed part of the Property Site or the structure; (8) any fines liquidated damages punitive or exemplary damages; (9) any bodily injury including without limitation, death, illness or disease, mental injury, anguish or nervous shock; (10) any financial loss in respect of any loss of any rental, profit, revenue, savings or business or any consequential indirect or economic loss damage or expense including the cost of rent of temporary premises or business interruption; and/or (11) any losses incurred following a material change in use of, alteration or development of the Property Site.

d. Without prejudice to Your other rights and remedies under the Agreement, the maximum sum that shall be contributed by Us in respect of any Contribution shall be limited to £60,000. In the event that more than one Report is purchased on the Property Site the Contribution will only be payable under the first Report purchased by or on behalf of any First Purchaser or First Purchaser's Lender and no Contribution will be made in respect of subsequent Reports purchased by or on behalf of such First Purchaser, First Purchaser's Lender or any person connected to them.

e. We shall only pay a Contribution where the Notice is served within 36 months of the issue date of the Report.

f. Any rights to a Contribution under this clause 7 are not assignable in the event of a sale of the Property Site and We shall not make any Contribution after the date of completion of such sale.

g. In the event the First Purchaser or First Purchaser's Lender wishes to claim any Contribution, it shall notify Us in writing within 3 months of the date of the Notice. The First Purchaser or First Purchaser's Lender (as applicable) shall comply with all Our reasonable requirements with regard to the commission and conduct of the remediation works to be carried out under the Notice, and in the event the First Purchaser or First Purchaser's Lender (as applicable) does not do so, including without limitation, obtaining Our prior written consent to any estimates for such works or complying with any other reasonable request by Us, We shall not be required to pay any Contribution. Notwithstanding the payment of the Contribution by Us the First Purchaser or First Purchaser's Lender as applicable shall take all reasonable steps to mitigate any costs incurred in connection with the conduct of works required under the terms of any Notice.

h. In the event that the First Purchaser or First Purchaser's Lender receives any communication from a statutory authority to the effect that there is an intent to serve a notice received under Part IIA of the Environmental Protection Act 1990 You shall ensure that they advise Us within a maximum period of two months from receipt of such communication. This clause 7.h and the service of any notice under it shall not affect the provisions of clauses 7.e and 7.g, and any such communications, even if advised to Us will not operate as notice under clause 7.e.

i. We reserve the right at any time prior to a claim for Contribution being made in accordance with clause 7.g above, to withdraw the offer of payment of Contributions without further notice.

8. Assignment and Sub-contracting

a. We shall be entitled to assign or transfer the Agreement as We reasonably see fit.

b. The Agreement is personal to You. You shall not assign, transfer, sub-licence or otherwise deal with any of Your rights and obligations under the Agreement without Our prior written consent.

c. We may authorise or allow Our contractors and other third parties to provide to Us and/or to You services necessary or related to the Services and to perform Our obligations and exercise Our rights under these Terms, which may include collecting payment on Our behalf.

9. Events Beyond Our Control

a. Neither party to the Agreement shall be liable for any delay or failure to perform their obligations caused by any circumstance beyond their control, and such party shall be entitled to a reasonable extension of time for the performance of such obligation.

10. Complaints and Dispute Resolution

a. Any complaints in relation to the Services should, in the first instance, be in writing addressed to the Customer Service Support Manager at Our registered office. We will (or Our agents will) respond to any such complaints in writing as soon as practicably possible.

b. If any dispute arises out of or in connection with the Terms of the Agreement or their validity (**"Dispute"**) the parties undertake, subject to clause 10.c, that prior to commencement of court proceedings they will negotiate in good faith to settle such Dispute by mediation in accordance with the Centre for Effective Dispute Resolution Model Mediation Procedure as in force from time to time, which Procedure is deemed to be incorporated by reference into this clause. Unless otherwise agreed between the parties, the mediator will be nominated by the Centre for Effective Dispute Resolution. To initiate the mediation a party shall give notice in writing to the other party to the dispute requesting a mediation. The mediation will start not later than 21 days after the date of service of such notice. If the Dispute has not been resolved to the mutual satisfaction of the parties within 60 days (or such other period as they shall agree) after the date of service of such notice then either party may refer the Dispute to the courts in accordance with clause 11.f.

c. Clause 10.b shall be without prejudice to the rights of termination stated in clause 4.a and in addition shall not prevent Us from:

   i. applying for injunctive relief in the case of: (1) breach or threatened breach of confidentiality; or (2) infringement or threatened infringement of Our or Our Suppliers' intellectual property rights; or

   ii. pursuing a debt claim for the payment of the Fees.

11. General

a. If any provision of the Agreement is found by either a court or other competent authority to be void, invalid, illegal or unenforceable, that provision shall be deemed to be deleted from the Agreement and never to have formed part of the Agreement and the remaining provisions shall continue in full force and effect.

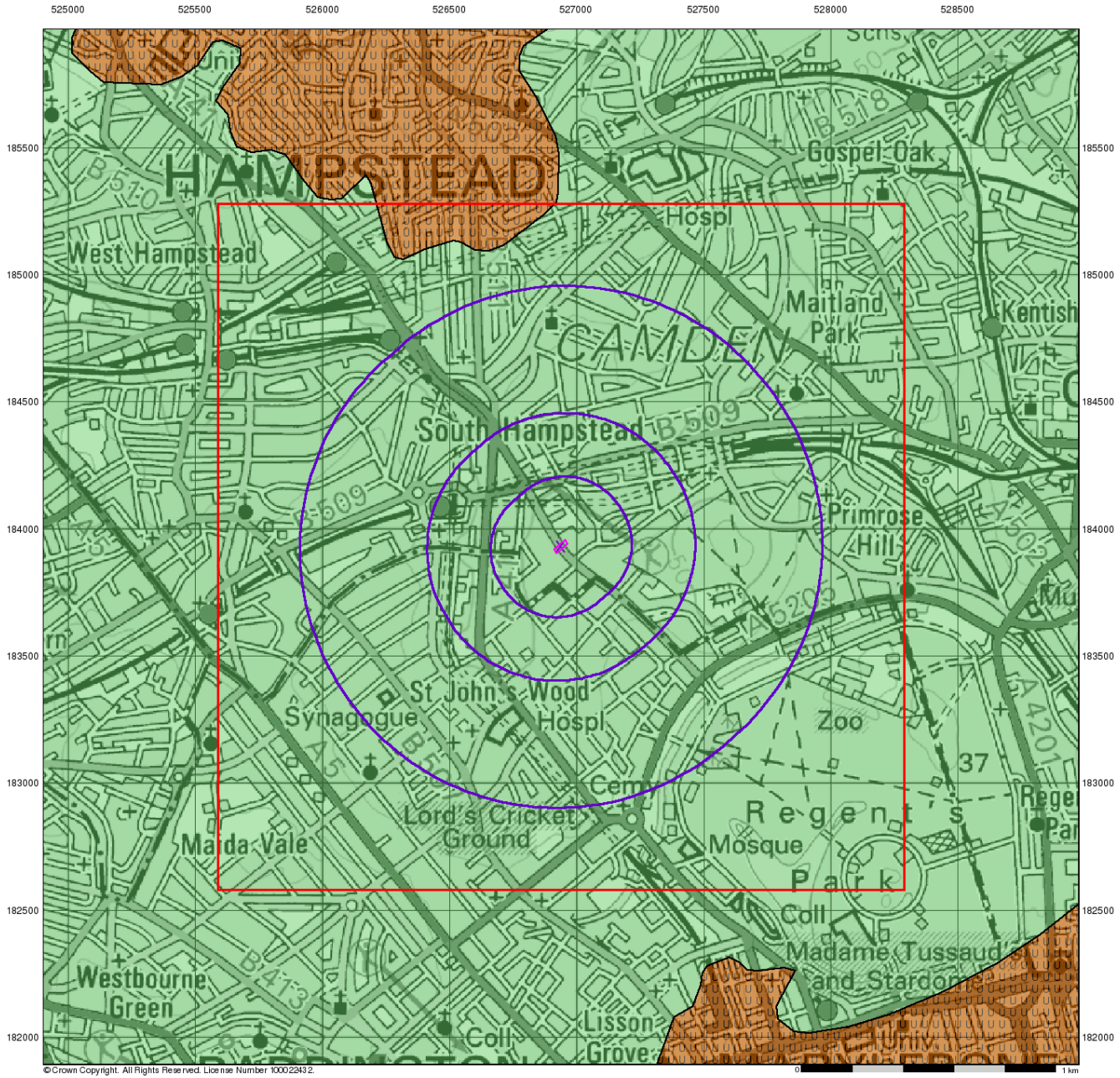
b. No delay, failure or omission on Our, or any Supplier's, part in enforcing, exercising or pursuing any right, power, privilege, claim or remedy conferred by or arising under the Agreement or by law shall be deemed to be or construed as a waiver of that or any other right, power, privilege, claim or remedy, nor shall any single or partial exercise of any such right, power, privilege, claim or remedy preclude the exercise of that or any other right, power, privilege, claim or remedy.

c. Our privacy policy as displayed on Our Website and updated from time to time governs the use that We shall make of any information provided by You or an End User.

d. A person who is not a party to any contract made pursuant to these Terms shall have no right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Agreement and We shall not be liable to any such third party in respect of the Products, save that any Supplier may enforce any of these terms and conditions against You in accordance with the Contracts (Rights of Third Parties) Act 1999. Notwithstanding any other provisions of the Agreement, We may rescind or vary the Agreement in accordance with its terms without the consent of the Suppliers and accordingly section 2(1) of the Contracts (Rights of Third Parties) Act 1999 shall not apply.

e. You shall ensure that each End User complies with and is bound by the Terms and shall procure that We may in Our own right enforce such terms and conditions against the End User pursuant to the Contracts (Rights of Third Parties) Act 1999. You shall be responsible for End User's compliance with the Terms and You shall be liable for all breaches of the Terms by the End Users as if they were breaches by You.

f. The Agreement and any non-contractual obligations arising out of or in connection with it shall be governed by and construed in accordance with the laws of England and, subject to clause 10.b, each party irrevocably submits to the exclusive jurisdiction of the courts of England and Wales.



Southern Testing
Environmental & Geotechnical

Groundwater Vulnerability

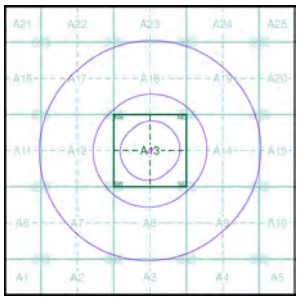
General

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

Agency and Hydrological

Geological Classes	Soil Classes
Major Aquifer (Highly Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Minor Aquifer (Variably Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Non Aquifer (Negligibly Permeable)	
Water or Sea	
Drift Deposit	

Site Sensitivity Context Map - Slice A



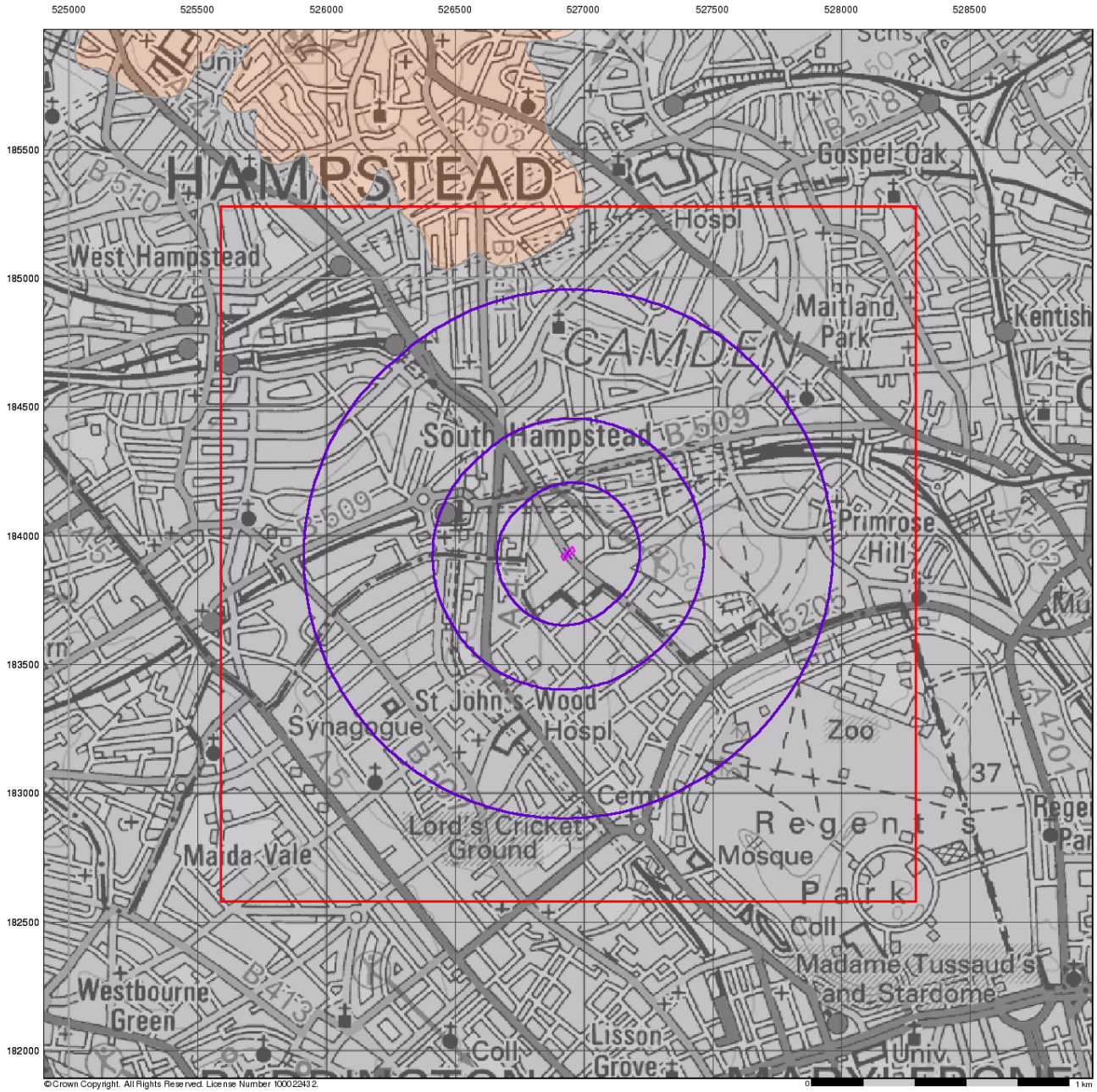
Order Details

Order Number:	36985955_1_1
Customer Ref:	J10871 - DV
National Grid Reference:	526940, 183930
Slice:	A
Site Area (Ha):	0.11
Search Buffer (m):	1000

Site Details

62 Avenue Road, LONDON, NW8 6HT

Landmark Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Southern Testing
Environmental & Geotechnical

Bedrock Aquifer Designation

General

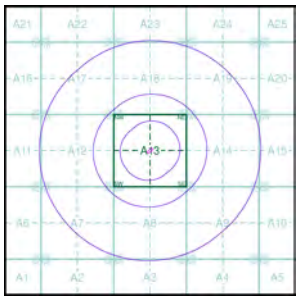
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



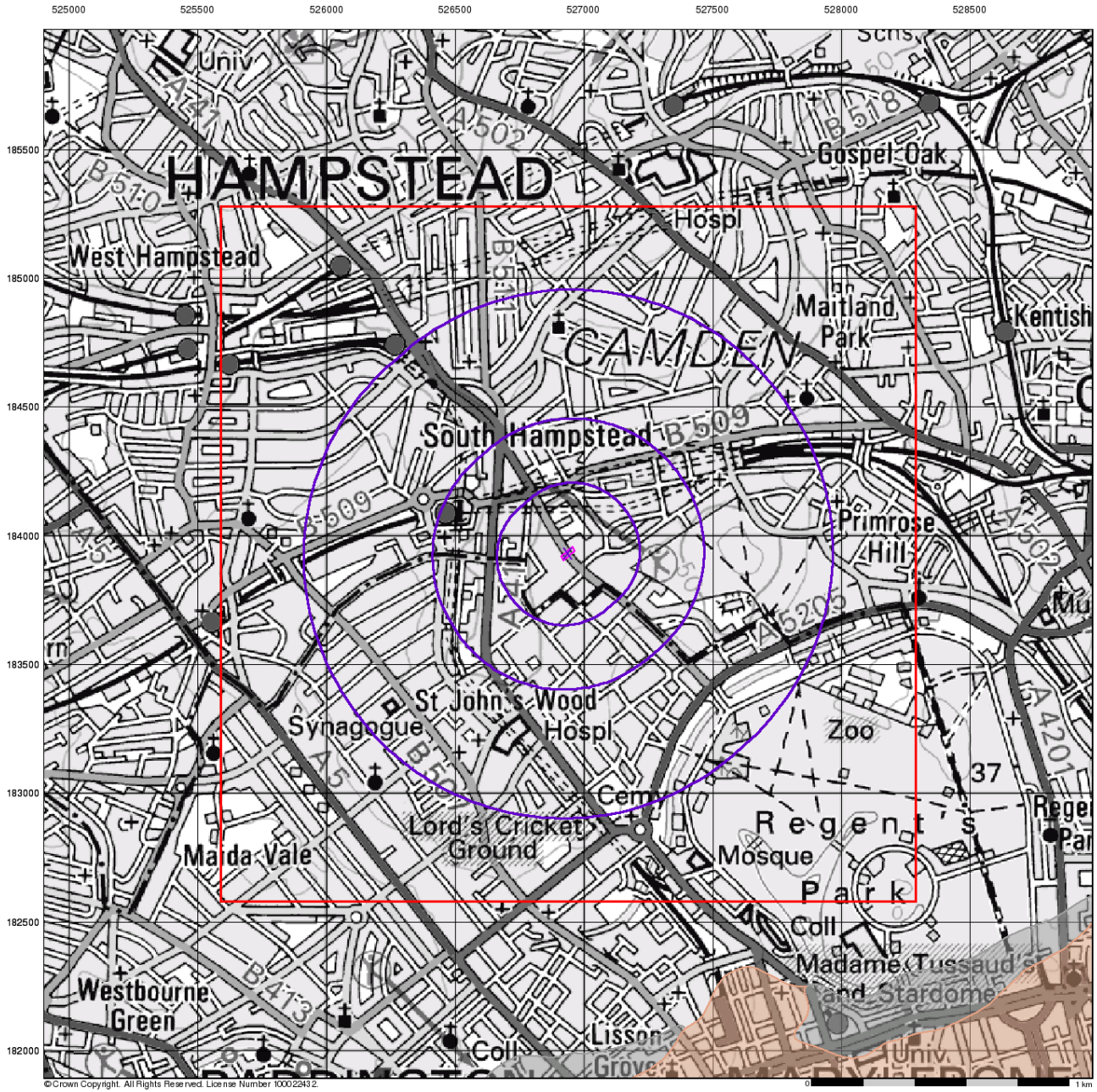
Order Details

Order Number:	36985955_1_1
Customer Ref:	J10871 - DV
National Grid Reference:	526940, 183930
Slice:	A
Site Area (Ha):	0.11
Search Buffer (m):	1000

Site Details

62 Avenue Road, LONDON, NW8 6HT

Landmark Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Southern Testing
Environmental & Geotechnical

Superficial Aquifer Designation

General

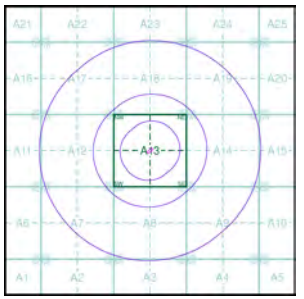
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



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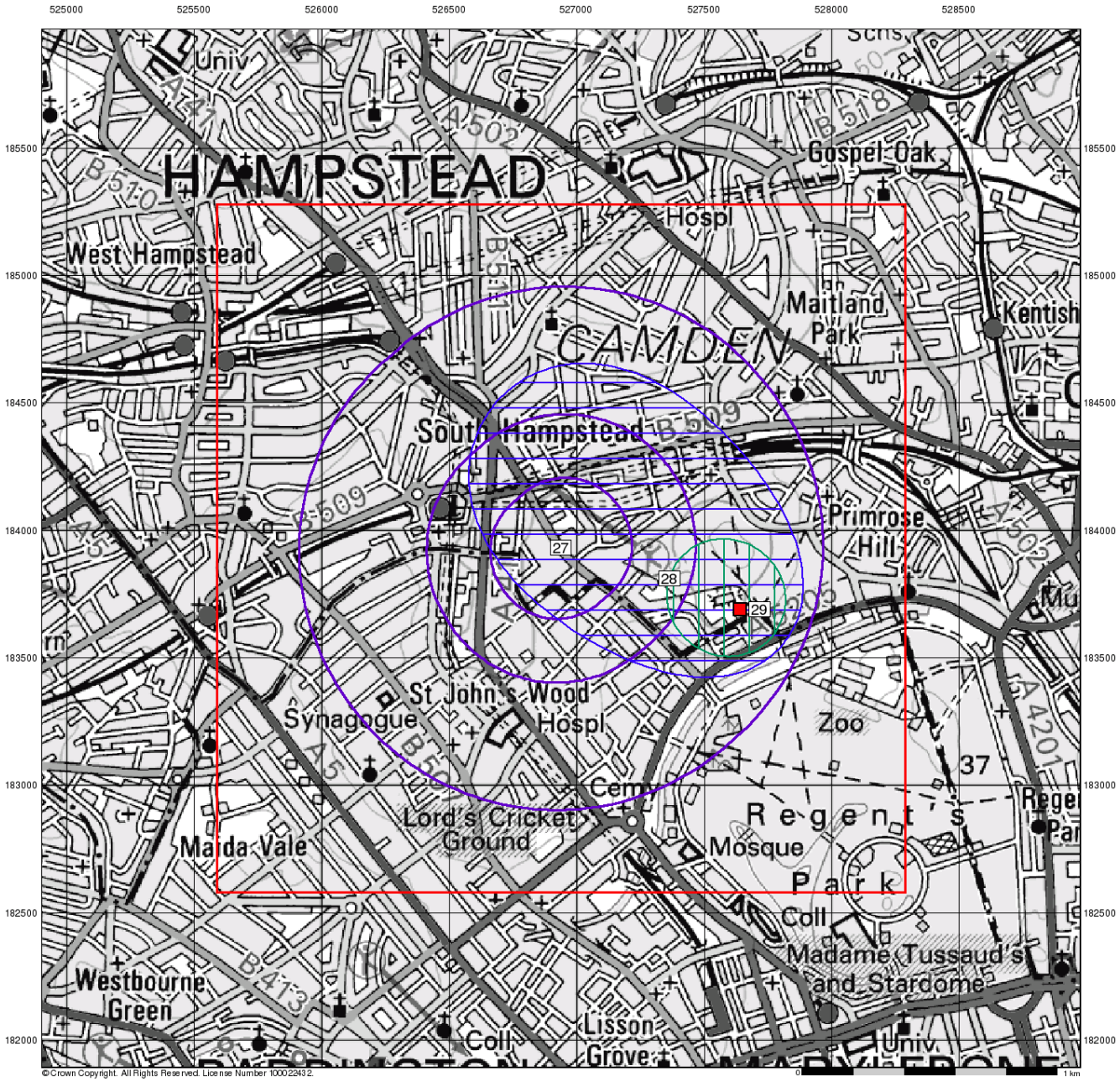


Southern Testing
Environmental & Geotechnical

Source Protection Zones

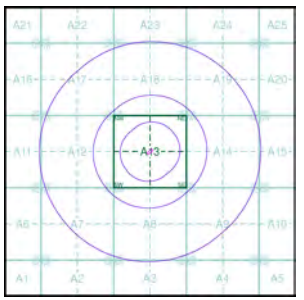
General

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

Agency and Hydrological

- Source Protection Zone I
- Source Protection Zone II
- Source Protection Zone III
- Zone of Special Interest
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



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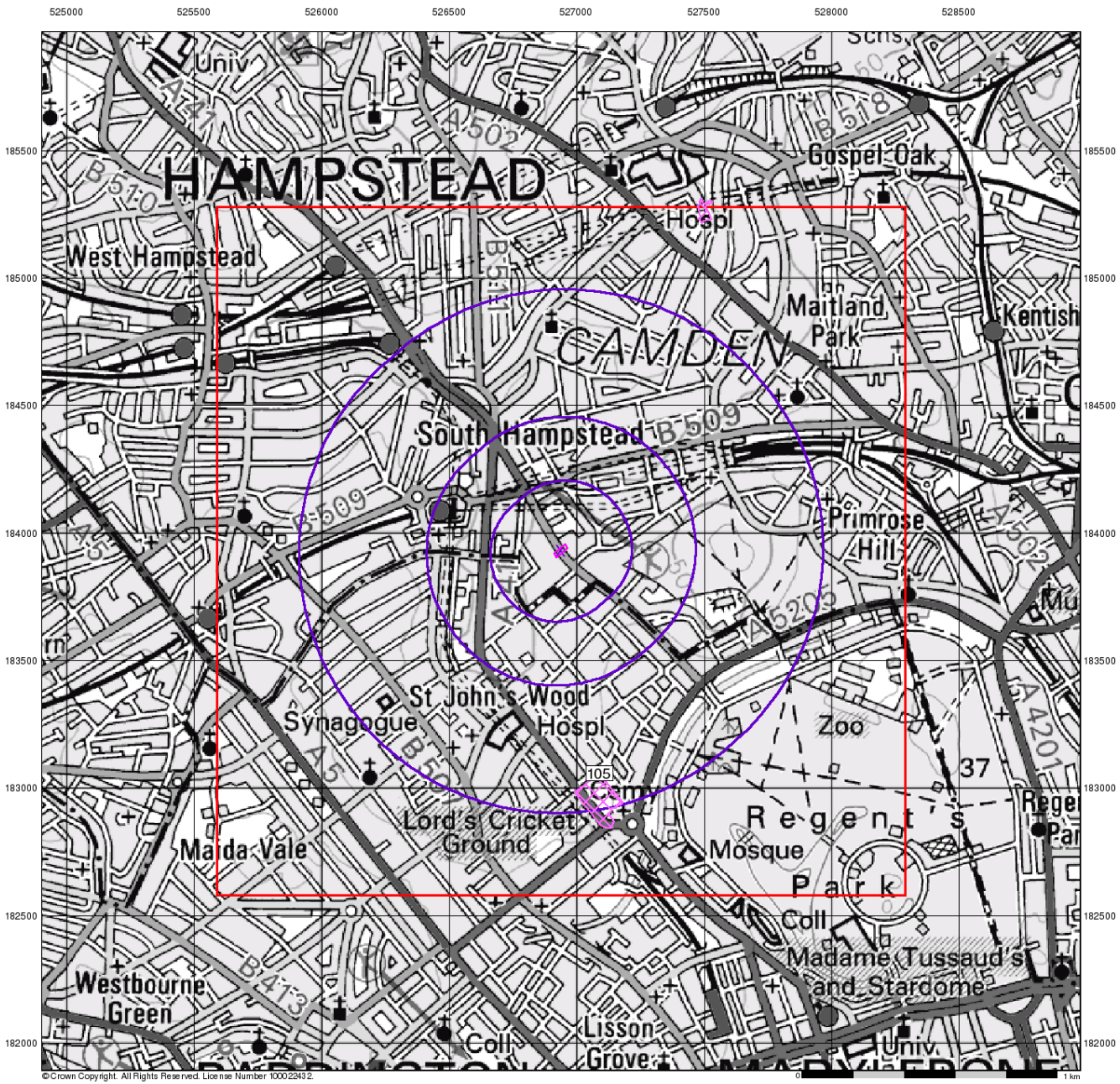

Southern Testing
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Sensitive Land Uses

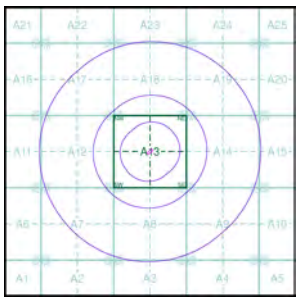
General

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

Sensitive Land Uses

- 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

Site Sensitivity Context Map - Slice A



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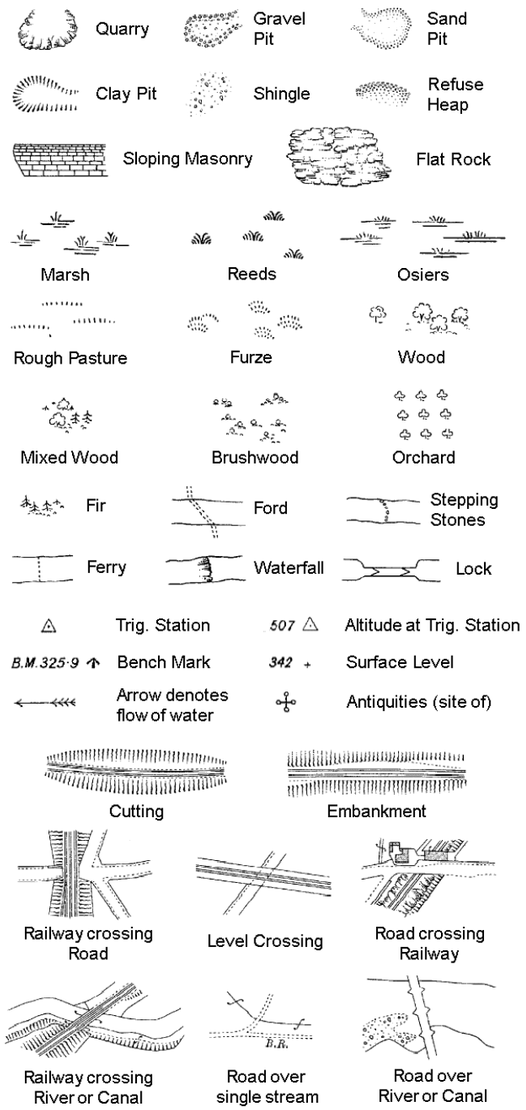
Historical Mapping Legends

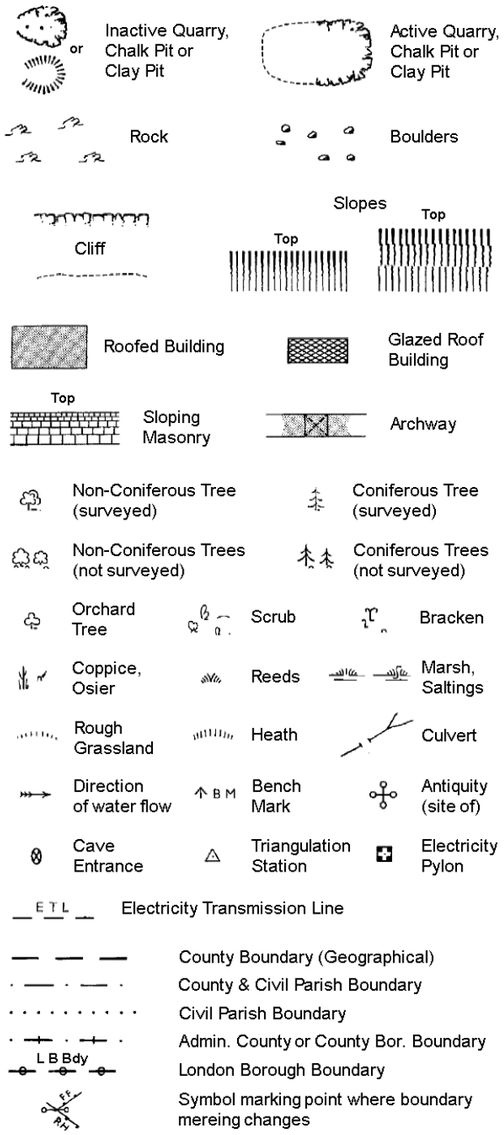
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy.
County Borough Boundary (England)
Co. Burgh Bdy.
County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

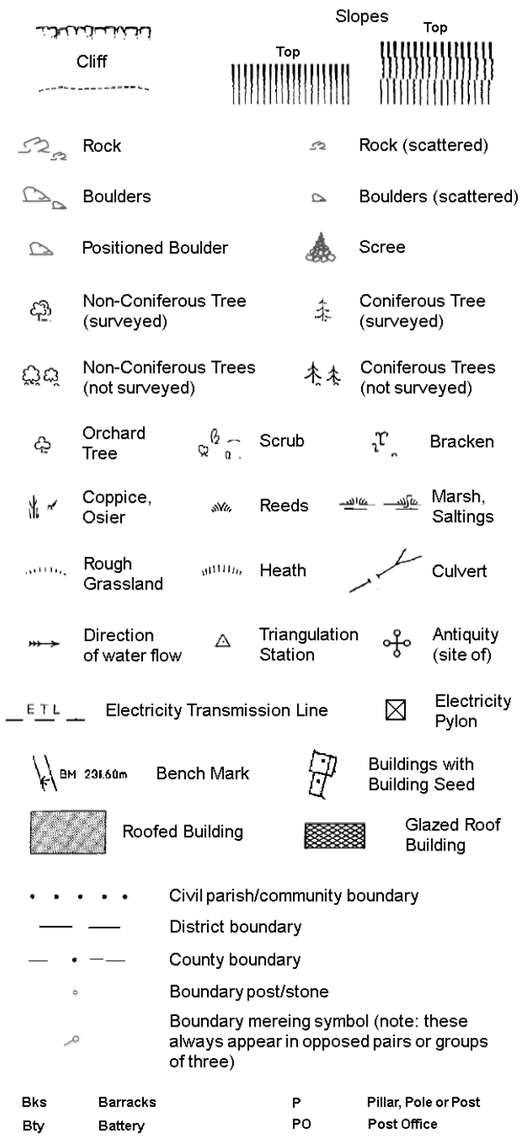
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy
London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

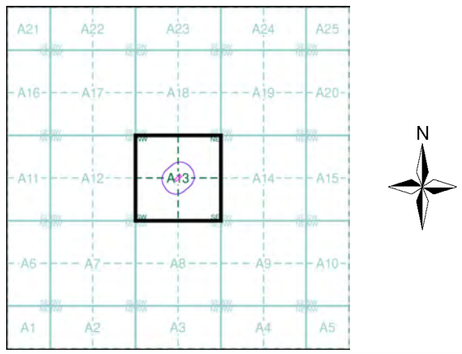
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Southern Testing
Environmental & Geotechnical

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
London	1:2,500	1871 - 1880	2
London	1:2,500	1896	3
London	1:2,500	1915	4
London	1:2,500	1935 - 1936	5
Historical Aerial Photography	1:1,250	1946	6
Ordnance Survey Plan	1:1,250	1953 - 1954	7
Ordnance Survey Plan	1:2,500	1954 - 1955	8
Additional SIMs	1:2,500	1954	9
Ordnance Survey Plan	1:1,250	1960 - 1966	10
Ordnance Survey Plan	1:1,250	1967 - 1972	11
Ordnance Survey Plan	1:1,250	1973 - 1988	12
Supply of Unpublished Survey Information	1:1,250	1973 - 1974	13
Additional SIMs	1:1,250	1978 - 1979	14
Additional SIMs	1:1,250	1984 - 1985	15
Large-Scale National Grid Data	1:1,250	1991	16
Large-Scale National Grid Data	1:1,250	1992 - 1995	17

Historical Map - Segment A13



Order Details

Order Number:	36985955_1_1
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Slice:	A
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Search Buffer (m):	100

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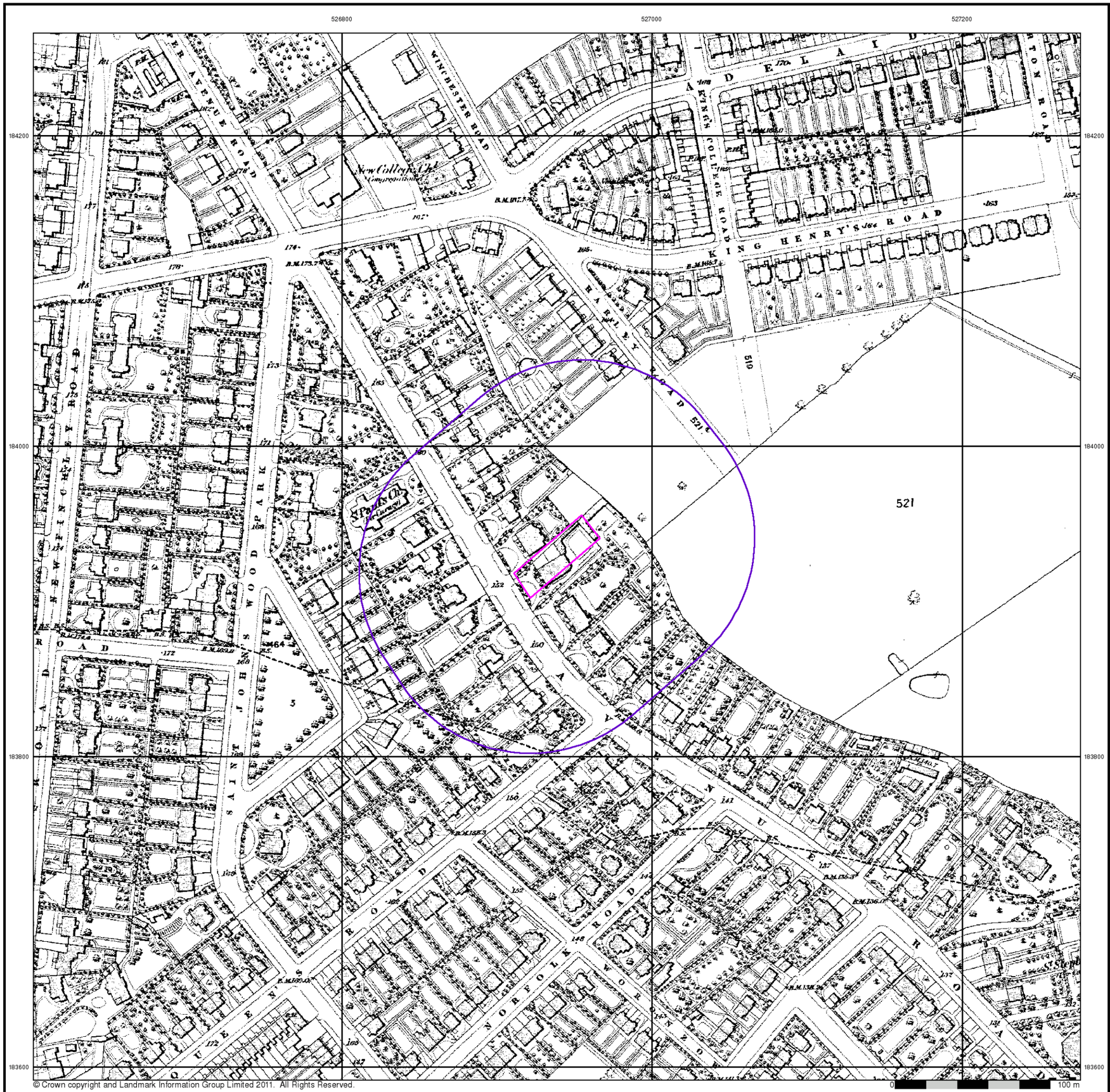


Southern Testing
Environmental & Geotechnical

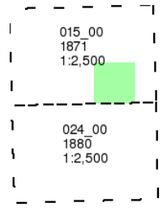
London

Published 1871 - 1880

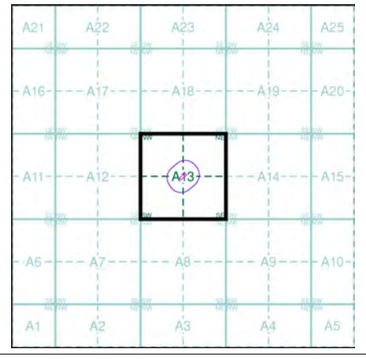
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



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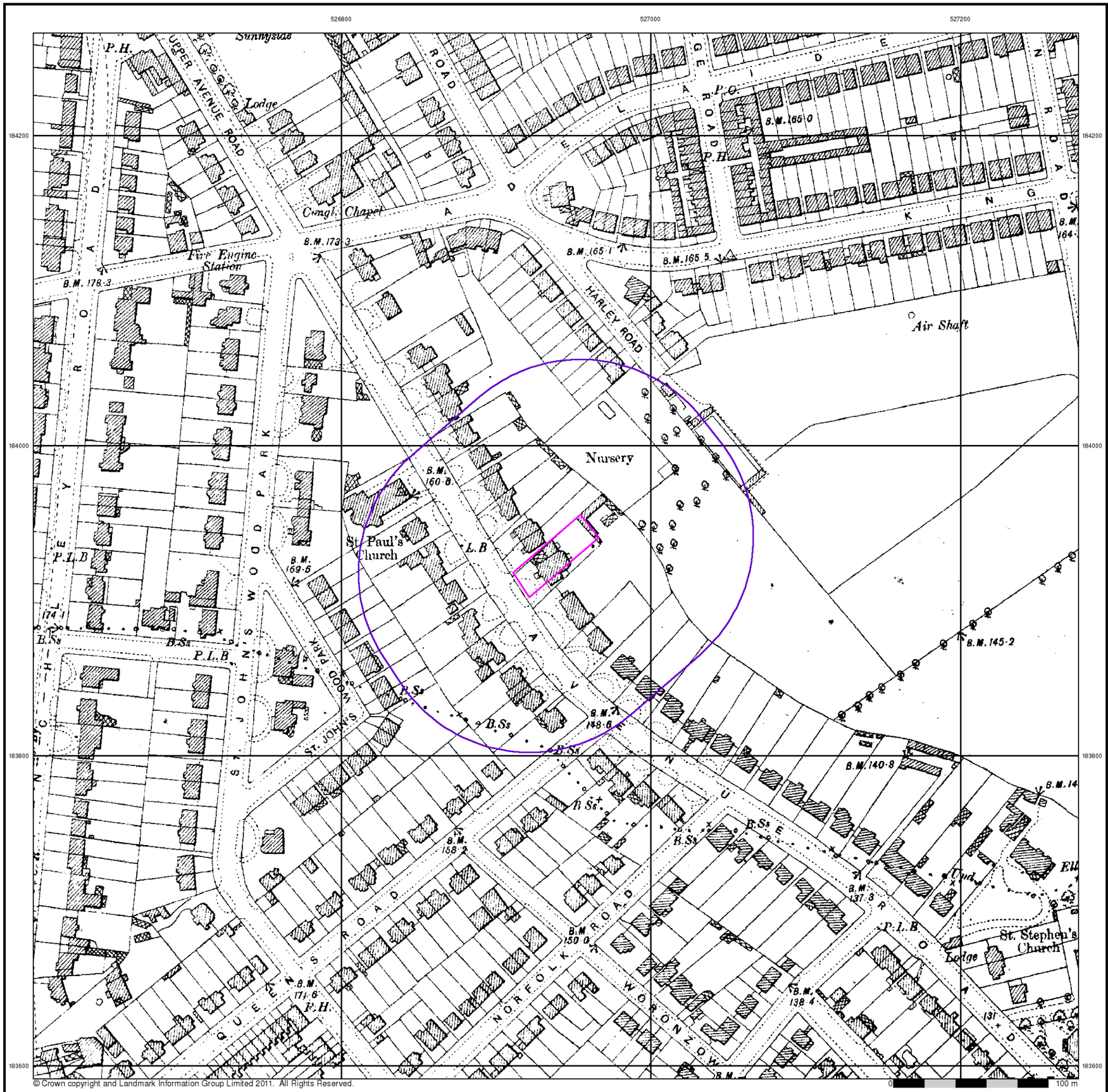


Southern Testing
Environmental & Geotechnical

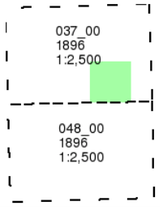
London

Published 1896

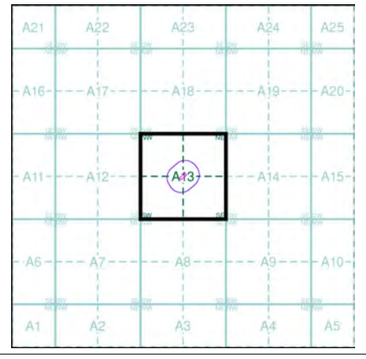
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

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Southern Testing
Environmental & Geotechnical

London

Published 1915

Source map scale - 1:2,500

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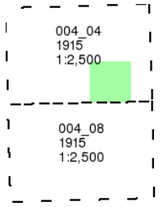
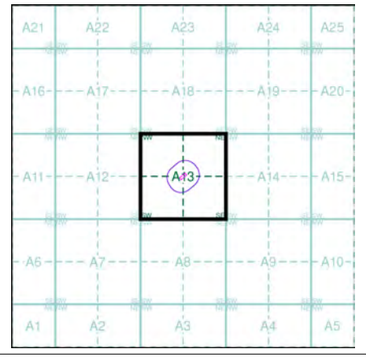


Historical Map - Segment A13



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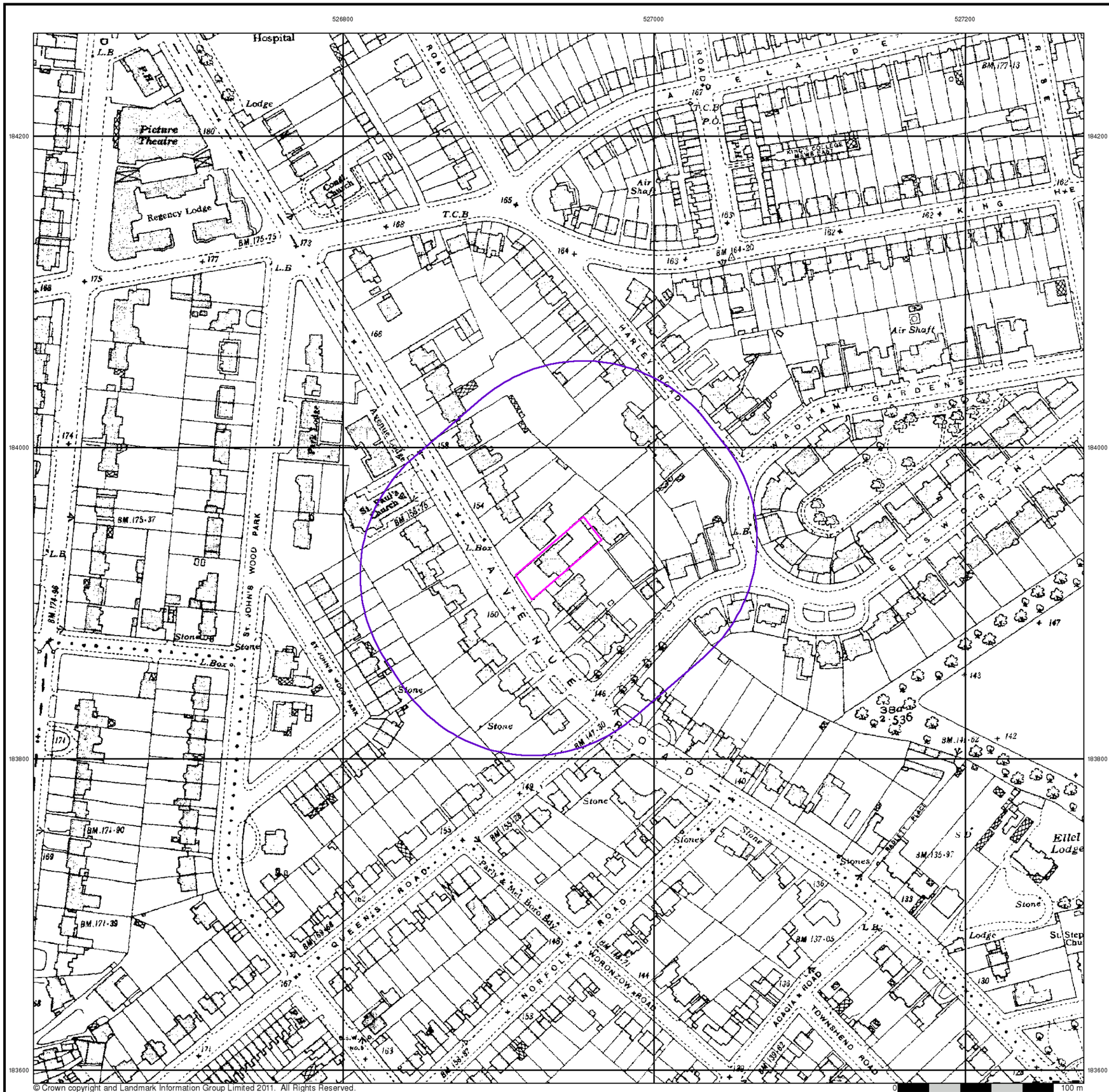

Southern Testing
Environmental & Geotechnical

London

Published 1935 - 1936

Source map scale - 1:2,500

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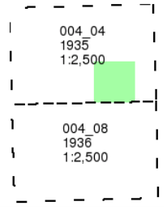
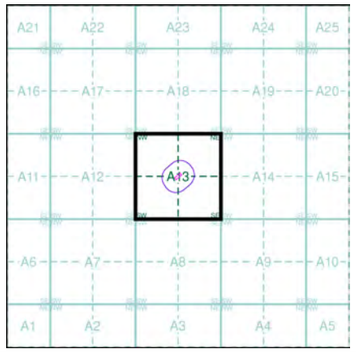
Map Name(s) and Date(s)



Historical Map - Segment A13



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Southern Testing
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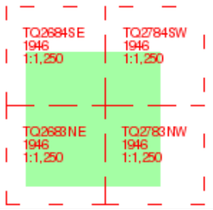
Historical Aerial Photography

Published 1946

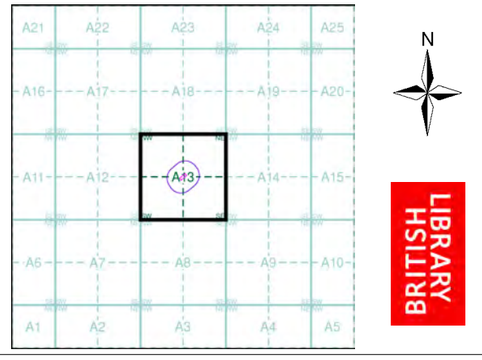
Source map scale - 1:1,250

The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

Map Name(s) and Date(s)



Historical Aerial Photography - Segment A13



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