GeoSmart Information

Environmental Thinking

EnviroSmart Standard

Site address	1A Highgate Road London NW5 1JY
Site coordinates	528923, 185288
Report prepared for	Mr. Jay Williams IDM Properties, Office B, West Gainsborough Studios 1 Poole Street London N1 5AE
Report reference	64500R1
Report status	Final
Date issued	December 2015
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Report check & review	Joe Gomme Principal consultant

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Report summary Contaminated Land risks

The purpose of this EnviroSmart report is to provide clear and pragmatic advice regarding the nature and potential significance of contaminated land hazards which may be present at the study site.

As such, potential contaminated land risks have been assessed by considering two key items:

1. The likelihood that **sources of contamination** are present within the sub surface beneath the site. This gives a measure of the potential for contamination to be occurring at the site.
2. The **consequence or severity of any impacts** should contamination be present. The consequence or severity of impact is inferred from the nature of any **potential receptors** (i.e., something that could be adversely affected by a contaminant, such as people, an ecological system, property or a water body) as well as any **relevant pathways** (i.e., a route or means by which a receptor can be exposed to or affected by a contaminant) relating to the site and the surrounding area.

The assessment findings are summarised as follows:

1. **Probability/likelihood** of contamination being present at the Site	High likelihood	
	Likely	
	Low likelihood	
	Unlikely	
2. Potential **severity/consequence** of any impacts	Severe	
	Medium	
	Mild	
	Minor	
3. **Overall land quality risks posed by the Site**	Very high	
	High	
	Moderate	
	Moderate/low	
	Low	
	Very low	

Risk Key

Very High	High	Moderate	Moderate/Low	Low	Very Low
There is a high probability that severe harm could arise to a designated receptor from an identified hazard without appropriate remediation action	Harm is likely to arise to a designated receptor from an identified hazard at the site without appropriate remediation action	It is possible that without appropriate remediation action harm could arise to a designated receptor. It is relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely that such harm would be relatively mild	It is possible that harm could arise to a designated receptor from an identified hazard. It is likely any harm would be mild	It is possible that harm could arise to a designated receptor from an identified hazard. It is likely that, at worst if any harm was realised any effects would be mild	The presence of an identified hazard does not give rise to the potential to cause harm to a receptor

It is acknowledged that the risk assessment findings are based on documentary sources of information alone. Typically a proportionate programme of intrusive site investigations would be required to fully verify these findings.

Recommendations (for next steps)

✓	**No immediate action but observe a watching brief**	It is noted that whilst a limited intrusive site investigation (including appropriate laboratory testing of soil samples) could be adopted in order to validate the preliminary risk assessment conclusions, a watching brief during all proposed redevelopment activities would likely be sufficient.

GeoSmart would be delighted to provide further information and a site specific quotation in relation to the above recommendations.

Please contact **info@geosmartinfo.co.uk** for further advice.

1. Introduction

1.1 Background

The study site (from herein known as 'the Site') is situated at 1A Highgate Road in London, NW5 1JY. A location plan of the Site is shown in Section 1.5.

GeoSmart was commissioned by Mr. Jay Williams in December 2015 to undertake a Phase 1 Land Quality Assessment for the Site. The report has been requested in order to support permitted development application for the Site.

The proposed development is for conversion of the current building on Site to form sixteen residential flats with the retention of hardstanding across the entire Site.

The EnviroSmart report has been undertaken by firstly compiling information concerning the Site and the surrounding area, including current and historical land uses, geological records and registered pollution incidents. The information which is gathered is then used to construct a 'conceptual site model', including an understanding of likely contaminant sources, pathways and receptors. Finally, a preliminary assessment of risks posed to identified receptors (i.e., people, buildings or the natural environment) from the anticipated land quality at the Site is performed. The risk assessment methodology is consistent with CIRIA C552 (2001); see Section 3.4 for details.

1.2 Purpose of this report

The purpose of this EnviroSmart report is to provide clear and pragmatic advice regarding the nature and potential significance of contamination hazards which may be present at the Site.

1.3 Report contents

This report is divided into two sections, as described below:

Section	Content	Purpose
Section 2: **LAND QUALITY ASSESSMENT**	A summary of the site history and environmental setting, the findings of the preliminary risk assessment and associated recommendations	To present a clear and concise overview of the land quality issues facing the Site, including recommendations of how to manage any land contamination which may be present
Section 3: **SUPPORTING INFORMATION**	A collection of site specific information on which the land quality assessment is based	To provide detailed information in support of the risk assessment; this section also represents a source of reference data for use in any subsequent site works/assessments

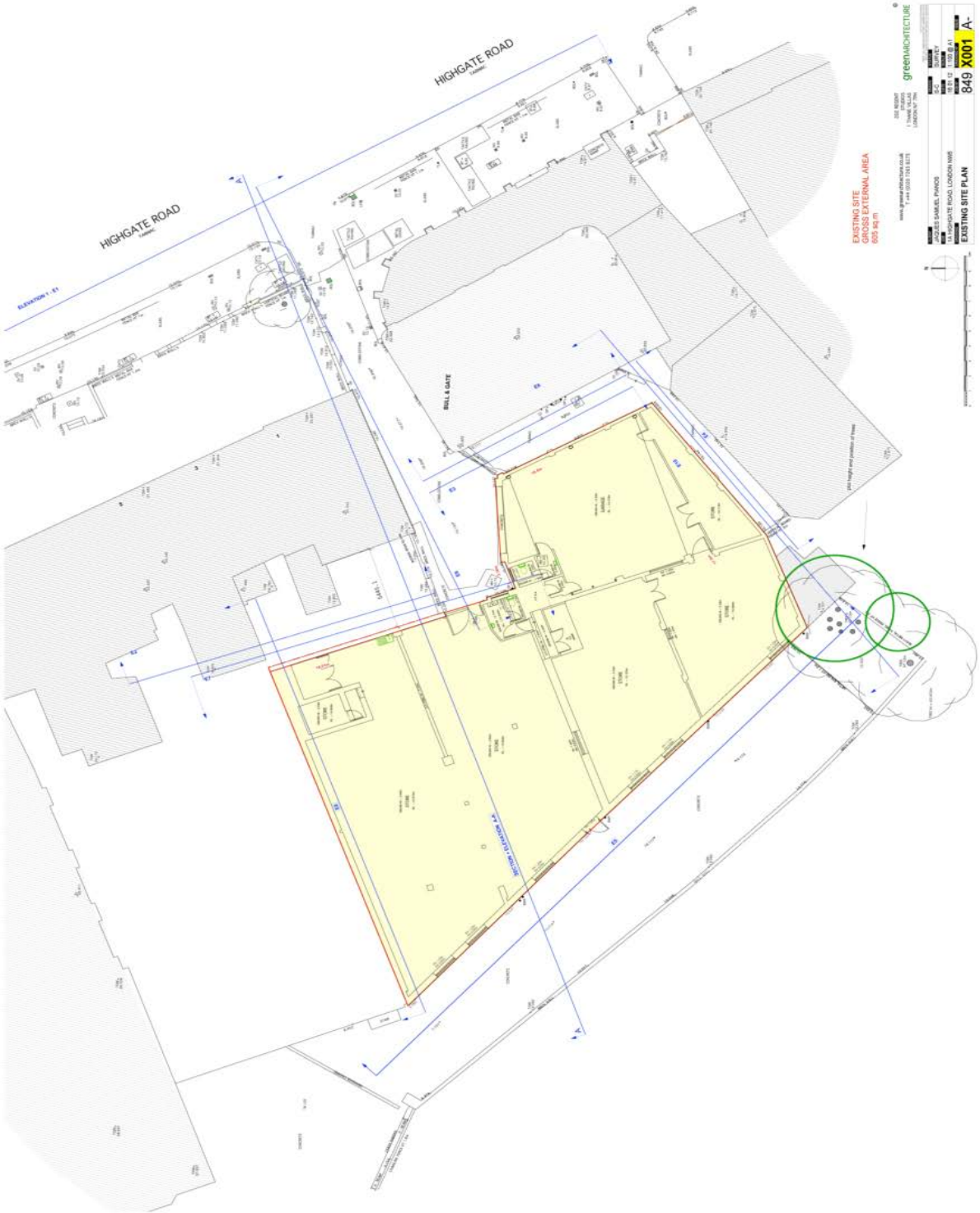
1.4 Report limitations

It is noted that the findings presented in this report are largely based on information supplied by third parties. Whilst we assume that all information is representative of past and present conditions we can offer no guarantee as to its validity.

This report excludes consideration of potential hazards arising from any activities at the Site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities.

1. Introduction

1.5 Site location plan



1. Introduction

1.6 Proposed site development plan

2. Land quality assessment

2.1 Site details

Site name:	1A Highgate Road	Current land cover:	Mix of hardstanding and building cover
Current use:	Active commercial/industrial development		
Proposed use:	Residential flats	Site area:	0.07 ha

2.2 Conceptual understanding (potential sources of contamination)

Site history
(historical land use taken within 250m radius of the Site boundary)

Date	Description of land use
1871/1873	Two buildings have been developed on Site; a large irrgular shaped building is present in the southwestern corner and a small rectangualar building is present in the north eastern corner. The northwestern area of the Site comprises the rear garden areas of two residential properties. There has been significant development surrounding the Site both residential and commercial/ industrial, including a railway line, siding and associated infrastructure c. 40 m south west at its closest point and a public house borders the Site to the north east/ east.
1873-1882	No change.
1895	The building configuration on Site has further altered to a series of irregular shaped elongated buildings. A dye works is located c. 200 m north east. No other significant change in the surrounding area.
1915/1916	The building configuration on Site has changed and now comprisesa single building which extends across the majority of the Site, including the area formerly occupied by residential gardens. The Site appears to be in its current configuration. A bottling store is located c. 100 m north.
1936	No change on Site. A picture theatre is c. 20 m north. A warehouse is located c. 100 m north.
1938	No change on Site. Fire station c. 75 m north.
1953/1954	Site has been identified as 'Welding Works'. The bottling store located c. 100 m north has been identified as a 'heavy chemicals warehouse'. The warehouse located c. 100 m north has now been noted as a 'coachbuilding works'. Multiple industrial units c. 155 m north including a cabinet and wallpaper works. A motor body factory c. 175 m north east.
1963/ 1964	The Site is identified as 'Engineering Works'. The coachbuilding works and cabinet factory are labelled as 'Exhibition Works'. The chemical warehouse is identified as just a warehouse. Many of the sidings located south of the Site have been replaced with a large goods shed c.85 m south of the Site.
1970	No change.
1979	The Site is identified as ' Works'. The former chemical warehouse c. 100 m north is a day centre.
1990/1996	No change.
1999	Aerial imagery shows the Site and the surrounding area are in their current configuration.
2015	Aerial imagery shows no change.
Anecdotal Information	Anecdotal information provided by the client suggests that the Site was most recently used as a warehouse for he storage and distribution of pianos and prior to this, the Site was used for the manufacture and assembly of pianos.

POTENTIAL **SOURCES** OF CONTAMINATION

Source description

The land use history suggests that there is the potential for contamination to have occurred on Site relating to the following:

Potential for bulk storage of fuels and/or miscellaneous chemicals.

Miscellaneous fuel and chemical spills (i.e., fuels used for heating & powering machinery/vehicles, oils and lubricants, paints/thinners, degreasers, etc.).

Asbestos-containing materials (ACM) may have been incorporated within the built structures in the past; the disturbance of any such materials may have resulted in asbestos being present within the subsurface surrounding the buildings.

Chlorinated solvents (welding works).

Herbicide residues (possibly including atrazine and simazine from historical vegetation control) .

Fuel and engine oil spills /leakage from train engines. Lubricant residues from associated rolling stock/carriages.

Made Ground/fill materials associated with the construction of the rail line.

Coal residues associated withe former material stores (in the case of sidings).
Contamination associated with a former piano factory including resins/ adhesives/ resin harderners, binders, polychlorianted biphenyls (PCBs) and dyes.

LIKELY

PROBABILITY OF CONTAMINATION

2. Land quality assessment

2.2 Conceptual understanding (potential sources of contamination)

Current land use	The Site is a former piano factory and piano warehouse. There are no known buried storage tanks at the Site. There is no known bulk fuel or chemical storage on Site.	POTENTIAL **SOURCES** OF CONTAMINATION	The Site's current use is unlikely to have given rise to significant land contamination.	**UNLIKELY**	**PROBABILITY** OF CONTAMINATION
Neighbouring land uses *(see environmental data report in Section 3.3 for full listing)*	One or more potentially contaminative land uses are located within the vicinity of the Site, including: Electrical Equipment Repair and Servicing is located c. 25 m north east Vehicle Cleaning Services c. 65 m south east Fire Brigade Stations c. 90 m north Electrical Features c. 90 m south Construction and Tool Hire c. 100 m north Container and Storage c. 120 m north west and 125 m south west Structural Engineers c. 135 m south east Container and Storage c. 140 m north east Textiles, Fabrics, Silk and Machinery c. 140 m south east Unspecified Works or Factories c. 145 m north and 150 m north east Vehicle Repair, Testing and Servicing c. 150 m north east		Despite the presence of potential contaminative activities in the area surrounding the Site, since none (with the exception of the electrical equipment repair and servicing, which carried a relatively low risk of pollution) occur within close proximity (i.e., within a 50 m radius of the Site) there is a low likelihood that they will pose a significant contamination hazard in relation to the Site itself.	**LOW LIKELI-HOOD**	

Nr	Nearest distance	Land use / permitted activity / authorisation
0	NA	Petrol or fuel sites
0	NA	High pressure oil or gas pipelines
0	NA	Records of IPC or IPPC Authorised Activities
0	NA	Red List / List 1 / List 2 Dangerous Substance Inventory Sites
9	c.55 m	Part A(2) and Part B Activities and Enforcements
0	NA	Records of Category 3 or 4 Radioactive Substance Licences
0	NA	Records of Licensed Discharge Consents.
0	NA	COMAH and NIHHS registered sites
1	c.135 m	Sites determined as Contaminated Land under Part IIA of the Environmental Protection Act 1990

2. Land quality assessment

2.2 Conceptual understanding (potential sources of contamination)

EA recorded pollution incidents	No Environment Agency pollution incidents have been recorded within 250 m of the Site.	POTENTIAL **SOURCES** OF CONTAMINATION	The presence of a former on site pollution incident may have given rise to a relevant contamination hazard.	**NO RISK**	**PROBABILITY** OF CONTAMINATION
Landfills / waste sites *(taken within 500m radius of the Site boundary, see environmental data report in Section 3.3 for full listing)*	There are no Environment Agency listed historical landfills located within 500 m of the Site. There are no Environment Agency listed operational landfills located within 500 m of the Site. There are no Local Authority listed historical landfills located within 500 m of the Site. The following other waste sites are registered within 500 m of the Site: 2 Records of operational waste treatment, transfer or disposal sites. 0 Records of non-operational waste treatment, transfer or disposal sites. 1 Records of Environment Agency waste sites.		Given the absence of any historical or operational landfills within close proximity of the Site no associated contamination hazards have been identified. The nearby waste management sites are not thought to represent a significant source of contamination which may impact on the Site given the relative distance to the Site (the closest is recorded c. 225 m south west) and the regulated nature of the activities.	**LOW LIKELI-HOOD**	
Rn Radon	According to current UK radon mapping the Site lies in an area where 0 to 1 % of homes are at or above the UK radon action level (200 Bq/m3).		0 to 1 % of homes are at or above the UK radon action level (200 Bq/m3).	**UNLIKELY**	

2. Land quality assessment

2.3 Conceptual understanding (environmental sensitivity / potential severity of impacts)

Geology and Groundwater (see the environmental data report in Section 3.3 for full details)	British Geological Survey mapping indicates the absence of any superficial deposits beneath the Site. British Geological Survey (BGS) mapping indicates that the bedrock geology consists of London Clay Formation, which comprises of clay, silt and sand and is classified as Unproductive Strata. The Site lies within a 'not considered to be prone to groundwater flooding' groundwater flood risk susceptibility area based on the underlying geological conditions. The British Geological Survey confidence rating for this susceptibility classification is 'not applicable'. There are no Source Protection Zones (SPZs) within 500 m of the Site. The following groundwater abstraction licences are held within 1 km of the Site: One process water abstraction for laundry and drinking, cooking, sanitary and washing located c. 585 m south of the Site.	POTENTIAL **RECEPTORS**	Unproductive Strata typically have low permeability and offer negligible water supply or river base flow potential. Based on the susceptibility of the Site to groundwater flooding, a groundwater flood risk assessment is not considered necessary for the Site. The depth to groundwater beneath the Site is unknown. The lack of groundwater abstraction licences within close proximity of the Site indicates a poor groundwater resource potential. The London Clay covers the whole area; we therefore presume that the laundry abstraction takes water from an underlying source (probably the Chalk) and is protected from any surface pollution by the London Clay.	**MINOR**	**POTENTIAL SEVERITY** OF IMPACT
Geohazards	The Site does not lie within a 'Coal Mining Reporting Area'. There are no brine affected areas within 75 m of the Site. No or limited artificial ground / Made Ground is anticipated on Site. There are no natural hazards at or within 50 m of the Site. Shrink swell		The Site does not lie within an identified coal mining area and is therefore unlikely to be affected by related ground stability or mine gas issues. The Site does not lie within an area of former brine working and is therefore unlikely to be affected by related ground stability issues. The Site has other ground stability issues that should be considered further as part of the redevelopment plans.	**MINOR**	

2. Land quality assessment

2.3 Conceptual understanding (environmental sensitivity / potential severity of impacts)

Surface water *(see the environmental data report in Section 3.3 for full details)*	There are no significant surface water features within 250 m of the Site. The Lost Rivers of London book shows the Fleet River Eastern branchto have been located c. 40 m west at its closest point. The Groundsure report identifies a culvert approximately 285 m south west from the Site. The Site does not lie within a flood risk zone. There are no surface water abstraction licences within 1 km of the Site.	**POTENTIAL** RECEPTORS	No relevant surface water receptors have been identified.	**NO RISK**
Environmental designations *(see the environmental data report in Section 3.3 for full details)*	There are no environmentally sensitive areas within 500 m of the Site.		No relevant environmentally designated sites/receptors have been identified.	**NO RISK**
Human receptors	Proposed residents/users of the Site.		Human receptors are proposed to be present on Site.	**SEVERE**

POTENTIAL SEVERITY OF IMPACT

2. Land quality assessment

2.4 Regulator perspective		
Consultation date	18/12/15	London Borough of Camden
GeoSmart consultant	Kayleigh Foster	Anona Arthur
Consultation outcome	The Council did not respond to GeoSmart within the time frame of this report.	

2. Land quality assessment

2.5 Preliminary Risk Assessment

Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
On-Site sources								
1	Potential for inorganic and low volatility organic contaminants to be present within the subsurface soils	Dermal contact, soil & soil dust ingestion, inhalation of soil dust	HH	Current/future site occupants	**MEDIUM**	**UNLIKELY**	**LOW RISK**	Given the proposed presence of hard standing across the entire Site, routine exposure to any subsurface contamination is not considered likely.
2		Consumption of home grown produce	HH	Current/future site occupants	**MEDIUM**	**NO RISK**	**NO DISCERNABLE RISK**	The proposed development includes the retention of hardstanding across the entire for the Site.
3		Ingress into water supply pipework and subsequent water ingestion	HH	Current/future site occupants	**MILD**	**LOW LIKELIHOOD**	**LOW RISK**	Given the likely presence of Made Ground beneath the Site, any residual contamination associated with this may have the potential to enter the water supply.
4		Building materials in direct contact with aggressive ground	PROP	Current/future site buildings	**MILD**	**LOW LIKELIHOOD**	**LOW RISK**	Given the industrial use of the Site, aggressive ground conditions are considered possible.
5		Dissolution into pore water/shallow groundwater and subsequent migration	CW	London Clay Formation (Unproductive Strata)	**MINOR**	**LIKELY**	**LOW RISK**	The risk classification reflects the local groundwater sensitivity (low resource value).

2. Land quality assessment

2.5 Preliminary Risk Assessment

Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
6	Potential for **volatile organic** contaminants to be present within the subsurface **soils**	Dermal contact, ingestion & inhalation of soils & soil dust	HH	Current/future site occupants	**MEDIUM**	**UNLIKELY**	**LOW RISK**	Given the proposed presence of hard standing across the entire Site, routine exposure to any subsurface contamination is not considered likely.
7		Consumption of home grown produce	HH	Current/future site occupants	**MEDIUM**	**NO RISK**	**NO DISCERNABLE RISK**	The proposed development plans for the Site show no areas of softstanding for home grown produce.
8		Ingress into water supply pipework and subsequent water ingestion	HH	Current/future site occupants	**MILD**	**LOW LIKELIHOOD**	**LOW RISK**	Given the likely presence of Made Ground beneath the Site, any residual contamination associated with this may have the potential to enter the water supply.
9		Migration of vapours to surface; inhalation indoors	HH	Current/future site occupants	**MEDIUM**	**LOW LIKELIHOOD**	**MODERATE/LOW RISK**	It is plausible that the source mass associated with any volatile contaminants that were originally present on Site may have been significantly reduced due to the effects of volatilisation and degradation given period of time that the Site has been used soley for storage rather than manufacture.
10		Migration of vapours to surface; inhalation outdoors	HH	Current/future site occupants	**MEDIUM**	**UNLIKELY**	**LOW RISK**	
11		Building materials in direct contact with aggressive ground	PROP	Current/future site buildings	**MILD**	**UNLIKELY**	**VERY LOW RISK**	Aggressive ground conditions are not anticipated.
12		Dissolution into pore water/shallow groundwater and subsequent migration	CW	London Clay Formation (Unproductive Strata)	**MINOR**	**LOW LIKELIHOOD**	**VERY LOW RISK**	The risk classification reflects the local groundwater sensitivity (low resource value).

2. Land quality assessment

2.5 Preliminary Risk Assessment

Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
13	Potential for **asbestos**-containing materials within the subsurface **soils**	Liberation of subsurface ACMs and inhalation of asbestos fibres	HH	Occupants of on site buildings	**MEDIUM**	**UNLIKELY**	**LOW RISK**	Asbestos-containing material may have been incorporated into the building fabric and be present within the surrounding subsoils. However, it is noted that the continued presence of hard standing across the entire Site will limit the exposure to any subsurface contamination.
14	Potential for dissolved phase contaminants to be present within shallow groundwater	Lateral and vertical groundwater movement via natural or artificial flow paths	CW	London Clay Formation (Unproductive Strata)	**MINOR**	**LOW LIKELIHOOD**	**VERY LOW RISK**	The risk classification reflects the local groundwater sensitivity (low resource value).
15	Potential for elevated **methane** to be present within the subsurface **soils**	Lateral and vertical migration into on site buildings; potential to cause an explosion	HH	On site properties and their occupants	**MEDIUM**	**UNLIKELY**	**LOW RISK**	The gas generation potential of on site materials is considered to be limited
16		Lateral migration towards off site buildings; potential to cause an explosion	HH	Off site properties and their occupants	**MEDIUM**	**UNLIKELY**	**LOW RISK**	
17	Potential for elevated **carbon dioxide** to be present within the subsurface **soils**	Lateral and vertical migration into on site buildings; potential to cause asphyxiation	HH	Occupants of on site buildings	**MEDIUM**	**UNLIKELY**	**LOW RISK**	
18		Lateral migration towards off site buildings; potential to cause asphyxiation	HH	Occupants of off site buildings	**MEDIUM**	**UNLIKELY**	**LOW RISK**	
19	Potential for **radon** within the subsurface	Lateral migration towards on site buildings; potential to cause long term health effects	HH	Occupants of onsite buildings	**MEDIUM**	**UNLIKELY**	**LOW RISK**	The Site lies in an area where 0 to 1 % of homes are at or above the UK radon action level (200 Bq/m3).
						OVERALL RISK RATING	**LOW RISK**	

2. Land quality assessment

2.5 Preliminary Risk Assessment								
Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
Off Site sources								
20	Railway line	Liberation of subsurface ACMs and inhalation of asbestos fibres	HH	Occupants of on-Site buildings	**MEDIUM**	**UNLIKELY**	**LOW RISK**	Based on available information there is a possibility that the land to the west/ south west of the Site may have been contaminated by its use as a railway line.
		Dissolution of soil phase contaminants into pore water/shallow groundwater system and subsequent migration	CW	London Clay Formation (Unproductive Strata)	**MINOR**	**LOW LIKELIHOOD**	**VERY LOW RISK**	The risk classification reflects the local groundwater sensitivity (low resource value).
		Migration of vapours to surface; inhalation indoors and outdoors	HH	Current/future site occupants	**MEDIUM**	**UNLIKELY**	**LOW RISK**	Unlikely given the distance to the Site (c. 40 m).
						OVERALL RISK RATING	**LOW RISK**	

2. Land quality assessment

2.6 Next steps

✓	**No immediate action but observe a watching brief**		Given the known history of the Site it is considered likely that significant contamination is present within the subsurface. However, given that the proposed development comprises hardstanding across the entire Site, the preliminary risk assessment suggests that the risks posed by in situ land quality to human health is therefore likely to be **low.** It is noted that whilst a limited intrusive site investigation (including appropriate laboratory testing of soil samples) could be adopted in order to validate the preliminary risk assessment conclusions, a watching brief during all proposed redevelopment activities will likely be sufficient. The watching brief should be maintained throughout the entire development phase of works and any possible evidence of contamination encountered during the redevelopment works should be alerted to the Local Authority. Appropriate actions would then be required to further inspect, sample and analyse any suspect materials, and formulate an appropriate remediation plan, as necessary.

3. Supporting information

The following supporting information is contained in this section:

Section	Content
3.1	Referenced materials used in the Phase 1 reporting
3.2	Site photographs
3.3	Published environmental data records (Centremaps EnviroInsight report 1A HIGHGATE ROAD, LONDON, NW5 1JY. REF: CMAPS-CM-488570-34722-171215) including: • Aerial photographs and site map • Environmental permits, incidents and registers • Landfill and other waste sites • Current land use information • Geology • Hydrogeology and hydrology • Flooding • Designated environmentally sensitive sites • Other environmental factors
3.4	Risk assessment methodology

Disclaimer

This report has been prepared by GeoSmart in its professional capacity as soil and groundwater specialists, with reasonable skill, care and diligence within the agreed scope and terms of contract and taking account of the manpower and resources devoted to it by agreement with its client, and is provided by GeoSmart solely for the internal use of its client.
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3. Supporting information

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• handle complaints speedily and fairly
• ensure that products and services comply with industry registration rules and standards and relevant laws
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If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award compensation of up to £5,000 to you if he finds that you have suffered actual loss as a result of your search provider failing to keep to the Code.
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TPOs contact details:

The Property Ombudsman scheme
Milford House
43-55 Milford Street
Salisbury
Wiltshire SP1 2BP
Tel: 01722 333306
Fax: 01722 332296
Email: admin@tpos.co.uk

You can get more information about the PCCB from www.propertycodes.org.uk.

Please ask your search provider if you would like a copy of the search code

3. Supporting information

Important consumer protection information

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If you want to make a complaint, we will:

- Acknowledge it within 5 working days of receipt.
- Normally deal with it fully and provide a final response, in writing, within 20 working days of receipt.
- Keep you informed by letter, telephone or e-mail, as you prefer, if we need more time.
- Provide a final response, in writing, at the latest within 40 working days of receipt.
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The Code's core principles

Firms which subscribe to the Search Code will:

- display the Search Code logo prominently on their search reports
- act with integrity and carry out work with due skill, care and diligence
- at all times maintain adequate and appropriate insurance to protect consumers
- conduct business in an honest, fair and professional manner
- handle complaints speedily and fairly
- ensure that products and services comply with industry registration rules and standards and relevant laws
- monitor their compliance with the Code

If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: admin@tpos.co.uk.

We will co-operate fully with the Ombudsman during an investigation and comply with his final decision.

Complaints should be sent to:
Lisa Davies
Operations Manager

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Tel: 01743 276150
lisadavies@geosmartinfo.co.uk

3. Supporting information

3.1 References

The following references were used to inform the conceptual site model and preliminary risk assessment:

British Standards Institute, 2011. Investigation of potentially contaminated sites – code of practice. ISO 10175:2011.

CIRIA, 2001. Contaminated land risk assessment. A guide to good practice. Publication C552. CIRIA London. ISBN 0-86017-552 9

Groundsure, 2015. Centremaps EnviroInsight report 1A HIGHGATE ROAD, LONDON, NW5 1JY. REF: CMAPS-CM-488570-34722-171215

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Nicholas Baron (1962 and 1992). The Lost Rivers of London. London: Historical Publications Ltd. p34 - 42

3. Supporting information

3.2 Site photographs

Photograph 1: Land to the rear (south) of the Site

Photograph 2: Rear elevation (south west) of 1A Highgate Road

Photograph 3: Rear elevation (south west) of 1A Highgate Road

Photograph 4: Rear of 1A Highgate Road

Photograph 5: Rear elevation (south west) of 1A Highgate Road

3. Supporting information

3.3 Environmental data report

Readily available environmental information relating to the Site and its surrounding area has been provided by Groundsure.

3. Supporting information

3.4 Risk assessment methodology

The method of risk evaluation adopted in this document is consistent with CIRIA C552 (2001). Hence, risk is considered to be a function of both the probability (likelihood) of contamination occurring at the study site and also the potential severity (consequence) of the environmental impacts associated with this contamination.

The classification system used to define contaminant probability, consequence and risk is described in the following tables.

Table A: Classification of probability

Classification	Definition
High likelihood	There is a contaminant linkage and an event that appears either very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a contaminant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term, and likely over the long term.
Low likelihood	There is a contaminant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is contaminant linkage but circumstances are such that it is improbable that an event would occur even in the long term.

Table B: Classification of consequence

Classification	Receptor	Definition	Examples
Severe	Humans	Short-term (acute) risk to human health likely to result in "significant harm" as defined in the CTL Statutory Guidance	High concentrations of cyanide on the surface of an informal recreation area
	Controlled waters	Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource	Major spillage of contaminants from site into controlled water
	Property	Catastrophic damage to buildings/property	Explosion, causing building collapse (can also equate to an acute human health risk if buildings are occupied)
	Ecology	A short-term risk to a particular ecosystem, or organism forming part of such eco-system	Potentially long term derogation of a designated site or protected species
Medium	Humans	Chronic damage to human health ("significant harm" as defined in the CTL Statutory Guidance)	Concentrations of a contaminant from a residential site exceed the site-specific assessment criteria
	Controlled waters	Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution)	Leaching of contaminants from a site to a principal or secondary aquifer
	Property	Significant damage to crops, buildings, structures and services	Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability)
	Ecology	A significant change in a particular ecosystem	Death of a species within a designated nature reserve

3. Supporting information

Table B: Classification of consequence (continued)

Classification	Receptor	Definition	Examples
Mild	Humans	Contamination present although unlikely to constitute a significant chronic health risk	Concentrations of a contaminant from a public access site moderately exceed the generic assessment criteria
	Controlled waters	Pollution of non-water resources	Pollution of non-classified groundwater
	Property	Damage to sensitive buildings/structures/services	Aggressive ground conditions leading to potential for long term degradation of buried concrete
	Ecology	Damage to the environment	Localised damage to aquatic habitat causing temporary relocation of certain species
Minor	Humans	Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc.)	The presence of contaminants at such concentrations that protective equipment is required during site works
	Controlled waters	Potential minor release of contamination to local water features	Short term or low volume release of potentially polluting material to a secondary surface water course of low existing quality
	Property	Easily reparable effects of damage to buildings, structures and services. Harm which may result in a financial loss, or expenditure to resolve	The loss of plants in a landscaping scheme. Discolouration of concrete
	Ecology	Short term, localised damage may occur; consequences are spatially and temporally limited	Short term or localised disruption to in situ flora or fauna; no lasting effects

Table C: Risk classification (comparison of consequence and probability)

Probability	Consequence (severity)			
	Severe	**Medium**	**Mild**	**Minor**
High likelihood	Very high risk	High risk	Moderate risk	Low risk
Likely	High risk	Moderate risk	Moderate/low risk	Low risk
Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk