

52 Avenue Road

Phase I Desk Study

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Appendix A: Qualitative F	Risk Assessment Matrix
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- Appendix B: Envirocheck Report
- Appendix C: Unexploded Ordnance Risk Assessment
- Appendix D: Environment Agency Information Request
- Appendix E: Camden Council Information Request



1. Introduction

A-squared Studio Engineers Ltd (A-squared) has been engaged by Heyne Tillett Steel Ltd (HTS) to prepare a Phase I desk study report for the proposed development at 52 Avenue Road, NW8 6HS (herein called the 'site').

1.1. Study Aims and Objectives

The desk study develops an initial Conceptual Site Model (CSM) and provides a qualitative Preliminary Risk Assessment (PRA) for the proposed development in accordance with the principals set out in *Land Contamination Risk Management (LCRM)* guidance, published by the Environment Agency on the UK Government website. The desk study has also been prepared in the context of the *National Planning Policy Framework* (NPPF) and *The Building Regulations 2010, Approved Document C - Site preparation and resistance to contaminants and moisture (2004 Edition incorporating 2010 and 2013 amendments).* The desk study includes an assessment of whether there are any unacceptable risks (ref. *LCRM* guidance) which require further geo-environmental investigation.

Potential historical and current sources of contamination have been identified based on information available in the public domain (including information sources referenced in Section 1.2).

The proposed development is described in Section 6 and comprises the demolition of a two-storey building and construction of 12 two-storey housing units over three separate blocks.

The outcomes of this desk study are of a preliminary nature and have been developed based on information current at the time of writing. The information provided herein has been compiled in order to support design development and is not suitable for detailed design or scheme costing purposes.

1.2. Information Sources

- *Envirocheck Report* for 52 Avenue Road, prepared by Landmark Information Group, dated October 2021 (ref. 286852753_1_1), included in Appendix B.
- *Preliminary Unexploded Ordnance (UXO) Risk Assessment* for 52 Avenue Road, prepared by 6 Alpha Associates, dated October 2021 (ref. 286852753_2), included in Appendix C.
- 52 Avenue Road, HTS Initial Site Considerations and Basement Study, prepared by Heyne Tillett Steel Ltd.
- British Geological Survey, Geolndex Onshore GIS database (accessed 28th October 2021); https://mapapps2.bgs.ac.uk/geoindex/.
- Department for Environment, Food & Rural Affairs (DEFRA), Magic Map Application (accessed 28th October 2021); http://magic.defra.gov.uk/MagicMap.aspx.
- Health Protection Agency and British Geological Survey Document Indicative Atlas of Radon in England and Wales, 2007 (accessed 28th October 2021); http://www.ukradon.org/information/ukmaps.
- The Lost Rivers of London by Nicholas Barton, 1962.
- Google Earth (accessed 28th October 2021); http://earth.google.com/web/.
- Flood Maps for Planning (ref. https://flood-map-for-planning.service.gov.uk/), accessed 28th October 2021.
- Camden Council planning application search (ref. https://planningrecords.camden.gov.uk/Northgate/PlanningExplorer/GeneralSearch.aspx/), accessed 7th November 2021.



2. Site Setting

2.1. Development Location and Current Site Use

The development site is located at 52 Avenue Road, NW8 6HS, as shown in Figure 2.1. The approximate National Grid reference for the site is 527010, 183850 and the site footprint covers approximately 0.28 hectares. The approximate ground surface elevation at the site is 46m above Ordnance Datum (mOD) and ground surface levels in the surrounding area fall toward the south east by approximately 6m over 275m. The development site falls within the administrative boundaries of the London Borough of Camden and currently houses a two-storey L-shaped residential building with a large garden.

The existing superstructure is anticipated to comprise of masonry or timber walls, with timber floors and roofing frame with a loadbearing masonry façade.

The foundations are expected to be shallow strip footings below the walls and pads underneath any internal columns and core.

The current land uses within a 250m radius surrounding the site are summarised in Table 2.1.



Figure 2.1 Location of the proposed development (red-line marks the site boundary for this report)

Table 2.1 Sur	rounding land	uses summary
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Bearing from Site	Features directly adjacent to the site boundary	Other identified land uses and key structures
North 57 Elsworthy Road – a three-storey residential property with a garden.	57 Elsworthy Road – a three-storey residential	Swiss Cottage School Development & Research Centre – 110m north east.
	property with a garden.	The UCL Academy – 210m north east.
		Marriott Hotel – 250m north.



Bearing from Site	Features directly adjacent to the site boundary	Other identified land uses and key structures
South	Avenue Road – a single carriageway road of approximately 10m in width.	Residential properties with gardens – 15m south. Electric car charging stations – 110m south closest.
East	50 Avenue Road – a three-storey residential property with a garden.	Primrose Hill public park – 100m east. Wembrook school – 70m south east.
West	Elsworthy Road – a single carriageway road of approximately 10m in width.	81 Avenue Road: a residential property with an outdoor swimming pool – 100m west.

2.2. Regulatory Consultation

The London Borough of Camden and the Environment Agency (EA) have both been contacted to perform environmental searches for the site. Reponses are pending.

Requests for information have been made to the following bodies:

- Environment Agency (EA), contacted via email on 07/11/2021 (see Appendix D). Awaiting response.
- Camden Council, contacted via email on 29/10/2021 (see Appendix E). Awaiting response.

2.3. Planning Records

A planning application search has taken place on the Camden Council planning portal in order to identify any relevant documents for the site and surrounding area.

The search indicated that the surrounding areas has undergone a moderate level of redevelopment, however no relevant geoenvironmental documents have been identified.

2.4. Unexploded Ordnance

A preliminary unexploded ordnance (UXO) risk assessment has been carried out by 6 Alpha Associates, included in Appendix C. The assessment indicates that Hampstead Metropolitan Borough, the borough that the site was located in during World War II, recorded "moderate" level of bombing.

Air Raid Precaution (ARP) records did not identify any HE bomb strikes on-site. However, five HE bomb strikes were recorded within 130m of the site, the closest being 60m west-north west.

London County Council (LCC) bomb damage mapping documented 'Blast Damage; Minor in Nature' to structures on-site and immediately south of the site boundary.

The potential for unexploded WWI and WWII ordnance to exist at the site is addressed as being *Likely*. Given the findings of the preliminary UXO report, it is recommended that future intrusive works are informed by a Detailed UXO Assessment or appropriate precautionary on-site mitigation measures are implemented. Recommended risk mitigation measures included within the assessment include a UXO risk management plan detailing actions to undertake in the event of encountering UXO and a UXO awareness briefing delivered to all personnel conducting intrusive works. For borehole, piles and trenches, intrusive magnetometer surveys at all positions to the maximum bomb penetration depth (up to 15m) is recommended.

Details of risk management strategies are outlined in CIRIA C681.



3. Geological Setting

3.1. Regional Geological Overview

The development site is located within the London Basin, which refers to an approximately triangular synclinal structure in which the sedimentary units underlying London and much of southeast England were deposited. The London Basin is comprised of the following formations, in order of decreasing depth:

- A deep (~200m thick) layer of Chalk, deposited throughout the Upper Cretaceous period, forms the base of the basin and is the principle aquifer of the region.
- The Thanet Beds, which comprise fine, silty glauconitic sands originating in shallow seas.
- The Lambeth Group, a depositionally and geographically complex unit which comprises layers of sands and gravels, shelly and mottled clays, minor limestones and lignites, and occasional sandstone and conglomerate.
- The London Clay Formation, a fine-grained silty clay which is the dominant Thames Group Deposit.
- River Terrace Gravels, deposited by the River Thames and its tributaries on top of the London Clay.

3.2. Site Geology and Anticipated Ground Conditions

Figure 3.1 illustrates the location of the development within the context of a regional geological map. The map illustrates the spatial distribution of superficial (drift) deposits and bedrock outcrops at the ground surface. Made Ground is generally not shown but is assumed to be present on site due to historical demolition and construction works.

The geology map indicates that the site is situated in an area where the London Clay Formation is the uppermost bedrock stratum and there are no natural superficial deposits. The London Clay Formation is underlain by the Lambeth Group over Thanet Sands overlaying Chalk.

Head propensity is present approximately 200m east of the site. Head is poorly sorted and poorly stratified, angular rock and/or clayey hillwash and soil creep, mantling a hillslope and deposited by the slow viscous downflow of waterlogged soil and other unsorted and unsaturated superficial deposits.



Site marked by red circle
Figure 3.1 Geological context of the site



The British Geological Survey (BGS) Geology of Britain web map services provide access to the geographic locations and logs of historical borehole investigations and well installations. Historical boreholes surrounding the site are shown in Figure 3.2. The following historical records have been reviewed as part of this assessment; TQ28SE409, TQ28SE353, TQ28SE733, TQ28SE255, TQ28SE1231 and TQ28SE2056. Table 3.1 summarises the preliminary ground model adopted in this Phase I assessment based on the information reviewed.



Site marked with red circle

Figure 3.2 Locations of BGS boreholes in close proximity to the site boundary

Table 3.1 Preliminary ground model adopted for the Phase I assessmnet

Unit	Elevation ^[1] (mOD)	Depth ^[1] (mbgl)	Thickness (m)	Description
Made Ground	46	0.0	0.3 – 2.5	Variable anthropogenic deposits
London Clay	45.7 – 43.5	0.2 – 2.5	>60.0	Stiff grey/brown fissured clay with occasional crystals of selenite.

1. Elevation and depth refer to top of stratum.

3.3. Groundwater and Hydrogeology

The preliminary evaluation of the groundwater regime has been based on data arising from the site setting, general geomorphology and relevant project experience in the area.

The groundwater model is likely to comprise localized perched water within Made Ground overlying the low permeability London Clay Formation. A continuous groundwater table within the London Clay Formation is unlikely to be present. It is considered that the pore water pressure distribution within the London Clay and upper Lambeth Group clays is hydrostatic. It is likely that the lower portion of the Lambeth Group, Thanet Sands and Chalk Formation are underdrained. Due to historical dewatering from the Chalk aquifer at depth, underdrainage effects are frequently observed within the strata at depth within the London Basin.

The Groundwater Vulnerability Map of England and the Environment Agency website have been reviewed to determine the aquifer designations for the underlying geology at the site.



The Head Propensity is classified as an Undifferentiated Secondary Aquifer. Undifferentiated Secondary Aquifers are Secondary Aquifers that cannot be classified into A or B categories due to their variable characteristics. Undifferentiated Secondary Aquifers are of low value.

The London Clay Formation is listed as Unproductive Strata. Unproductive Strata are low permeability strata which are not considered to retain significant quantities of groundwater. If groundwater is present within Unproductive Strata, for example within more permeable lenses or small fissures, it is typically discontinuous, of low value and very low sensitivity.

Water was encountered in one of the local historical BGS boreholes at a depth of 35.98mOD, which is likely a localised perched water table.

Groundwater flow within the London Clay Formation is likely to be limited and does not represent a viable pathway for contamination to migrate onto and away from the site.

The site is located within groundwater Source Protection Zone II (Outer Protection Zone). A Source Protection Zone I (Inner Protection Zone) is located 319m east of the site. The associated abstraction well lies approximately 609m east of the site boundary. A map depicting the source protection zone is given in Figure 3.3. The Source Protection Zone is not associated with the London Clay Formation but the deeper aquifers beneath.



Figure 3.3 Groundwater source protection zone map

There are four groundwater abstractions within 500m of the site. They are all operated by the London Borough of Camden and range from 450 – 462m north west of the site. The abstractions are as follows:

- Municipal Grounds: Spray Irrigation Direct 450m NW
- Municipal Grounds: Spray Irrigation Direct 462m NW
- Municipal Grounds: General Washing/Process Washing 462m NW



Municipal Grounds: Lake and Pond Throughflow – 462m NW

The thickness of the London Clay beneath the site will act as an aquiclude between shallow deposits beneath the site and deeper aquifers at the base of the London Clay Formation.

3.4. Hydrology

The closest surface water feature lies 468m north west of the site boundary. The Lost River Tyburn is located approximately 70m east of the site and the River Thames is located approximately 4.79km south east of the site. Given the site geology, none are considered in hydraulic continuity with groundwater beneath the site.

No recorded surface water abstractions have been identified in the vicinity of the site.

3.5. Geological Hazards

The British Geological Survey and Environment Agency (EA) hazard mapping have identified the following potential geotechnical hazards at the site:

- *Very Low* for collapsible ground stability hazards.
- No Hazard for compressible ground stability hazards.
- *No Hazards* for ground dissolution stability hazards.
- *Very Low* for landslide ground stability hazards.
- *Very Low* for running sand ground stability hazards.
- *Moderate* for shrinking or swelling clay ground stability hazards.

3.6. Mining and Mineral Extraction

The site is not listed within the Envirocheck Report as within an area affected by coal mining.

There are no BGS Mineral Site entries listed within the Envirocheck Report within 500m of the site.

No record of mining instability or man-made mining cavities are recorded within 500m.

3.7. Radon

The Envirocheck Report indicates that the site is within a Lower Probability Radon Area (with less than 1% of homes estimated to be at or above the Action Level). *BRE 211: Radon – Guidance on Protective Measures for New Buildings (2015)* indicates that without a site-specific Radon Risk Report the maximum requirement for radon protection is 'None'. On this basis, no further radon assessment is required and it can be considered that no radon protection is required for incorporation into the proposed building fabric.

4. Site History

Detailed historical maps, fire insurance plans and aerial photographs of the site and surrounding area dated between 1871 and 2021 (at scales of 1:500, 1:2,500 and 1:10,000), provided as part of the Envirocheck Report (Appendix B) for the site, have been reviewed as part of the study. This process has been undertaken to identify any former land uses at the site and within the surrounding area that may have geo-environmental implications for the proposed redevelopment.

The findings are summarised in Table 4.1. Only features considered to have a potential geo-environmental impact on the site and usually within a notional 250m radius of the site boundaries are presented and discussed, with the exception of any potentially infilled land which is identified within 500m of the site. Any distances quoted for features remote from the site have been scaled from the maps and are approximate. Other information sources available in the public domain have also been reviewed to support this assessment.

Historical Feature	Distance and Bearing from Site	Date of First Appearance	Date of Last Appearance	Potential to Impact the Site
	On-Site			
Site is split into two properties with gardens and two buildings towards the south.	Entire site footprint	1871	1958	Yes
Extension to westernmost building.	North western area of site	1894	1896	Yes
Small structure appears at the north eastern corner of the site.	North eastern corner	1915	1954	Yes
Further extension of westernmost building.	North western area of site	1915	1960	Yes
Demolition of both buildings and construction of a large building to the north side, with its extent to the north west boundary corner.	Northern side of site	1960	1976	Yes
Demolition of the north western extent of the structure, with an L shaped building remaining.	Northern side of site	1991	2021	Yes
	Off-Site			
Western neighbouring property is demolished for Elsworthy Road.	Western boundary	1915	2021	Yes
Construction of residential properties north of the site.	Northern boundary	1915	2021	Yes
Primrose Hill	75m E	1915	2021	No (unlikely source of contamination)
Potentially infilled land	110m E	1896	1896	No (no hydrogeological pathway or ground gas

Table 4.1 History of the site and surounding areas



Historical Feature	Distance and Bearing from Site	Date of First Appearance	Date of Last Appearance	Potential to Impact the Site
				pathway through the London Clay Formation)
Air shaft	235m NE	1986	1991	No (no hydrogeological pathway)
Electrical sub station	180m NE	1991	1991	No (no hydrogeological pathway)
School	160m NW	1968	1968	No (unlikely source of contamination)

5. Environmental Setting

5.1. Regulatory Data

Regulatory data from the Envirocheck Report in close proximity to the development site (generally within 250m of the site boundary, with the exception of landfill and infilled ground which is identified within 500m of the site) has been summarised in Table 5.1. The information provided for each item in Table 5.1 has been summarized from the Envirocheck Report for risk assessment purposes. For a full breakdown of the regulatory data refer to the Envirocheck Report in Appendix B.

Table 5.1 Summary of regulatory data

ltem	Distance and Bearing from Site	Information	Potential to Impact the Site		
	Agency & Hydrogeological				
		No relevant records			
		Waste and Landfill			
	No relevant records				
	Facilities Registered as using Hazardous Substances				
	No relevant records				
	Industrial Land Uses and Points of Interest				
(potential sources of soil vapour are identified within 50 m of the site, and more distant potential sources of contamination are not identified due to the likely absence of significant groundwater flow within the London Clay Formation precluding a pathway to site)					
Points of Interest		Name: Air Shaft	No		
Records on site: 0	245m NE	Type: Manufacturing and Production	(no pathway to		
Records within 0-250m. 1		Category: Extractive Industries	site given the geology)		

5.2. Flood Risk

The site is classified as having a low risk of groundwater flooding at surface level (1000-year return).

Flood Maps for Planning (ref. https://flood-map-for-planning.service.gov.uk/, accessed 29th October 2021) indicates that the site is located within flood zone 1.

No further consideration of flood risk is given in this report. Specialist flood risk advice should be sought with regards to drainage and flooding.

5.3. Ecology, Flora and Fauna

No records of potentially sensitive ecological receptors as defined by the *Environmental Protection Act (1990) Part 2a (as amended)* have been identified.

An assessment of potential invasive species is not included in this report.



6. Proposed Development

The site currently houses a two-storey L-shaped residential building with a large, open garden and a swimming pool to the south of the house. The scheme comprises the demolition of the current structure on-site, excavation of a 9.175m single level basement and lower ground floor and construction of 12 housing units over three separate blocks. Each unit will have a private garden to the rear and a communal garden space to the front. A section view is presented in Figure 6.1 and the proposed ground floor plan is shown in Figure 6.2.

The basement will be used as a health and wellness centre with plant space above. The scheme also comprises 62 boreholes over the extent of the site including the basement to power ground source heat pumps for heating and cooling of the whole complex.



Figure 6.1 Proposed site elevations





Figure 6.2 Proposed ground floor plan

At present, there are two basement foundation options being considered: a piled raft which will maximise the basement space, and a standalone raft which will minimise the construction programme. These two options are shown in Figure 6.3 and Figure 6.4.











7. Conceptual Site Model (CSM) and Preliminary Risk Assessment (PRA)

A means to qualitatively assess the risk posed by potential land contamination to a proposed development is to prepare an initial CSM and carry out a PRA. An initial CSM represents the characteristics of the site which influence the possible relationships between identified potential contaminant sources, pathways and receptors. A PRA is undertaken for each potentially complete source-pathway-receptor linkage (potential contaminant linkage). The PRA assessment matrix used in this report is included as Appendix A. The risk assessment approach is in accordance with the principals set-out in the *Land Contamination Risk Management (LCRM)* guidance, published by the Environment Agency on the UK Government website.

An initial CSM and PRA for the proposed development is set-out below in consideration of all the information detailed in the earlier sections of this report. Should changes be made to the proposed development then the assessments presented herein must be updated.

7.1. Potential Contaminants of Concern

The potential contamination sources identified as part of this assessment are summarised in this section. Off-site potential sources of contamination are identified and considered further where a potential source of soil vapour is located within 50m of the site, a potential source of contamination is located within 250m of the site and the anticipated groundwater flow direction towards the south-east indicates a pathway to the site may be present, or where there is a potential ground gas source within 500m of the site.

Current and former residential land-uses, retail units, offices and other general commercial uses (non-industrial) are not considered potential sources of contamination unless stated otherwise.

Naturally occurring radon risks are discussed in Section 3.

Please be aware that the nature of historical records mean that every potential source of contamination may not be detailed in the available documents. Therefore, there is potential for additional sources of contamination be present.

7.1.1. On-Site Sources

- Made Ground due to former demolition and construction (anticipated to be localised and include fills and subbases associated with the current building rather than substantial reconstituted ground) – heavy metals and metalloids, acids / alkalis, PAHs, asbestos, elevated sulphate and ground gases.
- Current and former residential use heavy metals and metalloids, acids / alkalis, PAHs, TPH (inc. BTEX) and asbestos.

Asbestos containing materials (ACMs) in the current building fabric is considered below separate to Table 7.1.

7.1.2. Off-Site Sources

- Demolition of former neighbouring property to the west heavy metals and metalloids, acids / alkalis, PAHs, asbestos, elevated sulphate and ground gases.
- Construction of residential properties immediately north heavy metals and metalloids, acids / alkalis, PAHs, asbestos, elevated sulphate and ground gases.

Exclusion of other identified potential off-site sources of contamination has been justified in earlier sections of this Desk Study, and principally due to the ground conditions including that the London Clay Formation (with no natural superficial cover) will not enable notable transmission of groundwater, ground gas or soil vapour.

Notes:

TPH – total petroleum hydrocarbons.PAH – polycyclic aromatic hydrocarbons.BTEX – benzene, toluene, ethylbenzene, xylenes.



Asbestos – potential free fibres, debris and / or fragments of asbestos containing material (ACM). Ground gas – methane and carbon dioxide (excludes soil vapour).

7.2. Potential Pathways

The potential pathways identified as part of this assessment include:

7.2.1. On-Site Human Health

- Dermal contact or ingestion of soils at the site.
- Inhalation of ground gas, soil vapour or soils at the site.
- Consumption of water from impacted water supply pipes installed as part of the proposed redevelopment.

7.2.2. Off-Site Human Health

- Inhalation of wind-blown soil derived from the site.
- Migration off-site at shallow depth via preferential pathways and / or shallow perched groundwater followed by direct contact / inhalation / ingestion of contaminated soils.
- Off-site migration of ground gas or soil vapour followed by accumulation and inhalation within neighbouring properties.
- Migration off-site at shallow depth via preferential pathways and / or shallow perched groundwater followed by impact to water supply pipes and ingestion.

7.2.3. On-Site Buildings and Below Ground Structures

- Direct contact of 'aggressive' ground and / or grossly impacted soils with building structures / foundations.
- Accumulation of ground gas or soil vapour within buildings followed by ignition.

7.2.4. Off-Site Buildings and Below Ground Structures

- Migration off-site via preferential pathways, shallow groundwater and / or shallow perched groundwater followed by direct contact with building structures / foundations.
- Off-site migration of ground gas or soil vapour followed by accumulation within buildings and ignition.

7.2.5. Controlled Waters

- Leaching from the unsaturated zone.
- Perched water percolation and / or lateral migration.
- Migration via advection and diffusion in the saturated zone.
- Vertical and lateral migration of free-phase product in the unsaturated and saturated zones.
- Preferential pathways created by borehole construction or piling.

7.2.6. Sensitive Ecology, Flora and Fauna

No sensitive ecology, flora or fauna have been identified in the context of the Environmental Protection Act (1990) Part 2a (as amended).

7.3. Potential Receptors

The potential receptors identified as part of this assessment include:

- Human health of proposed site end users (residential including garden use).
- Human health of off-site residential end users (closest adjacent east 50 Avenue Road) including open garden space immediately east and north of the site.



- Property including on-site (proposed) and off-site buildings and below ground structures (buried concrete and underground services).
- Controlled waters (groundwater) Secondary A Aquifer associated with the Lambeth Group and Thanet Sand at the base of the London Clay Formation.

The London Clay Formation beneath the site does not represent a viable pathway to the identified surface waters. Therefore, surface waters are not considered a potential receptor.

The London Clay Formation is classified as Unproductive Strata so is not considered a relevant groundwater receptor. However, the proposed development may include piles and boreholes as part of a heating and cooling system. The termination depth for the boreholes and piles is not yet confirmed and they may penetrate the base of the London Clay Formation with the potential for preferential pathways to the created to deeper aquifers. Without these potential penetrative activities, the London Clay is considered to act as an aquiclude between shallow soils and deeper aquifers at the base of the London Clay Formation.

Risks to site workers and the environment during the construction phase of the proposed redevelopment can be appropriately managed by successful implementation of construction phase risk assessments and method statements (RAMS). The associated construction phase risks from potential contamination are not considered further in this document but should be appropriately considered and mitigated by the Principal Contractor in their preparation and implementation of construction phase RAMS and Construction Phase Plan (CPP).

7.4. Summary of Potential Contaminant Linkages

The information presented in this assessment has been compiled to produce a summary of the identified potential contaminant linkages, based on the initial CSM presented herein. Table 7.1 presents a PRA for the proposed redevelopment based on the identified potential contaminant linkages. This assessment has been performed considering the details of the proposed development presented in this report. Qualitative risk classifications are provided in accordance with *CIRIA C552: Contaminated Land Risk Assessment, A Guide to Good Practice (Rudland et al., 2001)* (see summary in Appendix A). Where no potentially complete contaminant linkage is identified then no risk classification is provided.

Potential Contaminant Source	Potential Pathway	Potential Receptor	Potential Contaminant Linkage	Risk Level Classification
	Direct contact with soil		Yes	Low
	Inhalation of windblown soil		(residential site history but areas of open ground are	Low
	Ingestion of soil		proposed in garden areas)	Low
On-site See Section 7.1.1	Impact to water supply pipes followed by ingestion of contaminated water supply	Human health of proposed site end users (see Section 7.3)	Yes (pipes may be laid in soils impacted by potential contamination, although it is unlikely that notable contamination is present on-site) (standard construction water supply pipe likely suitable)	Very low

Table 7.1 Preliminary Risk Assessment (PRA)



Potential Contaminant Source	Potential Pathway	Potential Receptor	Potential Contaminant Linkage	Risk Level Classification
	Ground gas / soil vapour generation and inhalation		Yes (Made Ground anticipated to be localised and include fills and subbases rather (an unlikely ground gas source) rather than substantial reconstituted ground	Very low
	Inhalation of windblown soil from the site		Yes (the proposed development includes garden, although the potential for liberation of notable wind-blown dust is low)	Very low
	Off-site migration and direct contact with impacted soil		Yes	Very low
	Off-site migration and ingestion of impacted soil	Off-site human health (see Section 7.3)	(residential site history indicates that it is unlikely	Very low
	Impact to water supply pipes followed by ingestion of contaminated water supply		with the potential to migrate off-site)	Very low
	Ground gas / soil vapour generation, off-site migration and inhalation		Yes (Made Ground anticipated to be localised and include fills and subbases rather (an unlikely ground gas source) rather than substantial reconstituted ground	Very low
	Direct contact		Yes (structures may be constructed soil impacted by sulphates associated with the London Clay and potential Made Ground)	Low to moderate
	Migration followed by ignition of ground gas / soil vapour	On-site below ground structures (proposed)	Yes (Made Ground anticipated to be localised and include fills and subbases rather (an unlikely ground gas source) rather than substantial reconstituted ground	Very low



Potential Contaminant Source	Potential Pathway Potential Receptor		Potential Contaminant Linkage	Risk Level Classification	
	Off-site migration followed by direct contact		Yes (it is unlikely that significant contamination with the potential to migrate off-site and damage nearby buildings is present)	Very low	
	Off-site migration followed by migration followed by ignition of ground gas / soil vapour	Off-site below ground structures	Yes (Made Ground anticipated to be localised and include fills and subbases rather (an unlikely ground gas source) rather than substantial reconstituted ground	Very low	
	Leaching and migration to groundwater via the unsaturated zone; Perched water percolation or lateral migration; Migration via advection and diffusion in the saturated zone; Vertical and lateral migration of free-phase product in the unsaturated and saturated zones; and Preferential pathways created via piling or borehole construction.	Controlled waters (groundwater)	Yes (it is unlikely that on-site contamination is present with the potential to impact aquifers beneath the London Clay Formation, even in consideration of potential piling and borehole construction) (this PRA indicates that the risk is sufficiently low such that further risk assessment of piling and borehole activities – e.g. Foundation Works Risk Assessment – is not required)	Very low	
	On-site migration followed by direct contact or ingestion of soil		Yes (the identified sources indicate that on-site migration is unlikely)	Very low	
Off-site See Section 7.1.2	Inhalation of windblown soil from off-site	Human health of proposed site end users (see Section 7.3)	Yes (the surrounding area is predominantly open gardens so there is a potential for windblown soil, however contamination is unlikely)	Very low	
	On-site migration followed by impact to water supply pipes and ingestion of the water supply		Yes (pipes may be laid in soils impacted by potential off- site sources, although the	Very low	



Potential Contaminant Source	Potential Pathway	Potential Receptor	Potential Contaminant Linkage	Risk Level Classification
			identified sources indicate contamination is unlikely)	
	Ground gas / soil vapour generation, on-site migration and inhalation		Yes (it is unlikely that the identified off-site sources will generate notable ground gas/soil vapour and the London Clay Formation will limit migration potential)	Very low
	On-site migration followed by direct contact		Yes (it is unlikely that contamination is migrating on-site with the potential to damage the proposed structures)	Very low
	On-site migration followed by ignition of ground gas / soil vapour	On-site below ground structures (proposed)	Yes (it is unlikely that the identified off-site sources will generate notable ground gas/soil vapour and the London Clay Formation will limit migration potential)	Very low

The PRA has identified potential contaminant linkages with generally a 'very low' risk classification. This is principally due to the residential history of the site with no current or former commercial / industrial activities identified at the site or in the near vicinity. However, a 'low to moderate' risk classification has been identified for potential sulphate attack of below-ground concrete structures to be incorporated into the proposed development, and 'low' risk has been identified for proposed site residents due to potential direct contact, ingestion and / or inhalation of soil in areas of open ground / garden which are potentially impacted by on-site sources of contamination.

Based on the results of the PRA, it is considered that in accordance with *LCRM* guidance there are no unacceptable risks to off-site human health, controlled waters, off-site property or sensitive ecology.

Unacceptable risks (ref. *LCRM* guidance) have been identified with respect to on-site property i.e. specifically new below-ground concrete structures / foundations to be installed. Therefore, it is recommended that further assessments are made regarding the potential for sulphate attack of below-ground concrete to be incorporated into the proposed development. A sulphate design class should be specified based on appropriate geotechnical ground investigation and assessment.

Unacceptable risks (ref. *LCRM* guidance) have been identified with respect to on-site human health due to the potential for direct contact, ingestion and / or inhalation of soil in proposed open ground and garden areas. No unacceptable risks have been identified with respect to ground gas / soil vapour. Therefore, it is recommended that further appropriately targeted ground investigation is undertaken for geo-environmental purposes to enable a refinement of the CSM and geo-environmental assessments specifically for the unacceptable risks to on-site human health. The next stage of geo-environmental assessment should include a generic quantitative risk assessment (GQRA) for human health purposes, informed by shallow ground investigation including geo-environmental sampling (and appropriate laboratory testing) of Made Ground if encountered at the site. The recommended ground investigation and



assessments should be undertaken and presented in a 'Phase II' type geo-environmental interpretive report in accordance with BS10175:2011 Investigation of Potentially Contaminated Sites – Code of Practice and LCRM guidance.

The PRA indicates that the risk to controlled waters (groundwater) is sufficiently low such that further risk assessment of piling and borehole activities – e.g. Foundation Works Risk Assessment – is not required.

The risk represented by potential ACMs in the building fabric can be addressed by commissioning an asbestos Demolition and Refurbishment Survey for the relevant areas of the current building to be demolished and / or renovated as part of the proposed works. If ACMs are identified then their onward management should be informed by an asbestos specialist, but it is considered that appropriate ACM removal will be required prior to any phases of demolition.



8. Closing Remarks

A-squared Studio Engineers Ltd was appointed by Heyne Tillett Steel Ltd to prepare a Phase I desk study for the proposed development at 52 Avenue Road, London. The desk study provides an initial Conceptual Site Model (CSM) and qualitative Preliminary Risk Assessment (PRA) for the proposed development in accordance with the principals set out in *Land Contamination Risk Management* (LCRM) guidance, published by the Environment Agency on the UK Government website. The desk study has also been prepared in the context of the *National Planning Policy Framework* (NPPF) and *The Building Regulations 2010, Approved Document C - Site preparation and resistance to contaminants and moisture (2004 Edition incorporating 2010 and 2013 amendments).*

The site currently includes a two-storey, L-shaped residential building with a large, open garden and a swimming pool to the south of the house. The scheme comprises the demolition of the current structure on-site, excavation of a 9.175m-deep basement and lower ground floor and construction of 12 housing units over three separate blocks. Each unit will have a private garden to the rear and a communal garden space to the front.

The ground conditions at the site indicate the presence of Made Ground/topsoil which overlies the London Clay Formation.

A *Likely* UXO hazard rating was identified for the project site from a preliminary UXO desk study included within the Envirocheck report. It is recommended that a detailed UXO threat and risk assessment be performed to assess the risk in more detail. If the detailed risk assessment identifies that mitigation measures are required during future site works, a UXO specialist should be engaged to assess the site and provide recommendations on appropriate mitigation measures and strategies.

Unacceptable risks (ref. *LCRM* guidance) have been identified with respect to on-site property i.e. specifically new below-ground concrete structures / foundations to be installed. Therefore, it is recommended that further assessments are made regarding the potential for sulphate attack of below-ground concrete to be incorporated into the proposed development. A sulphate design class should be specified based on appropriate geotechnical ground investigation and assessment.

Unacceptable risks (ref. *LCRM* guidance) have been identified with respect to on-site human health due to the potential for direct contact, ingestion and / or inhalation of soil in proposed open ground and garden areas. No unacceptable risks have been identified with respect to ground gas / soil vapour. Therefore, it is recommended that further appropriately targeted ground investigation is undertaken for geo-environmental purposes to enable a refinement of the CSM and geo-environmental assessments specifically for the unacceptable risks to on-site human health. The next stage of geo-environmental assessment should include a generic quantitative risk assessment (GQRA) for human health purposes, informed by shallow ground investigation including geo-environmental sampling (and appropriate laboratory testing) of Made Ground if encountered at the site. The recommended ground investigation and assessments should be undertaken and presented in a 'Phase II' type geo-environmental interpretive report in accordance with *BS10175:2011 Investigation of Potentially Contaminated Sites – Code of Practice* and *LCRM* guidance.

The risk represented by potential ACMs in the building fabric can be addressed by commissioning an asbestos Demolition and Refurbishment Survey for the relevant areas of the current building to be demolished and / or renovated as part of the proposed works. If ACMs are identified then their onward management should be informed by an asbestos specialist, but it is considered that appropriate ACM removal will be required prior to any phases of demolition.

Risks to site workers and the environment during the construction phase of the proposed redevelopment can be appropriately managed by successful implementation of construction phase risk assessments and method statements (RAMS). The associated construction phase risks from potential contamination should be appropriately considered and mitigated by the Principal Contractor in their preparation and implementation of construction phase RAMS and Construction Phase Plan (CPP).

The risks to maintenance workers during the operational phase of the proposed development can be managed by preparing a site operational Health & Safety File. This desk study should be made available to those preparing the Health & Safety File.



The final specification for newly installed water supply pipes should be based on the risk assessments and recommendations presented herein and also agreed with the utility provider.

The PRA indicates that the risk to controlled waters (groundwater) is sufficiently low such that further risk assessment of piling and borehole activities – e.g. Foundation Works Risk Assessment – is not required.

Should any changes be made to the proposed development compared to the details presented herein, or should any new information become available, then the assessments included in this desk study must be updated.



Appendix A: Qualitative Risk Assessment Matrix

A-squared qualitative risk assessment for geo-environmental purposes is undertaken in accordance with *CIRIA C552: Contaminated Land Risk Assessment, A Guide to Good Practice (Rudland et al., 2001).* The CIRIA C552 risk categories and the assessment methodology are summarised below in Table B.1, Table B.2 and Table B.3. Potential magnitude and potential likelihood are both classified to enable a risk rating to be assessed.

Potential magnitude takes into account the potential consequences should a complete source–pathway–receptor linkage be present. Potential magnitude is classified as per Table B.1.

Category	Definition
Severe	Acute risks to human health, catastrophic damage to buildings / property, major pollution to controlled waters.
Medium	Chronic risk to human health, pollution of sensitive controlled waters, significant effects on sensitive ecosystems or species, significant damage to buildings or structures.
Mild	Pollution of non-sensitive waters, minor damage to buildings or structures.
Minor	Damage to non-sensitive ecosystems or species.

Potential likelihood takes into account the presence of the hazard and receptor as well as the integrity of the pathway for exposure, i.e., whether a source-pathway-receptor linkage is present or not. Potential likelihood is classified as per Table B.2.

Table B.2 Definition of potential likelihood of exposure

Category	Definition
High Likelihood	Pollutant linkage may be present and is almost certain to occur in the long-term. Or there is evidence of harm to the receptor.
Likely	Pollutant linkage may be present, and it is probable that it will occur over the long-term.
Low Likelihood	Pollutant linkage may be present, and there is a possibility that it will occur, although there is no certainty that it will do so.
Unlikely	Pollutant linkage may be present, but it is improbable that it will occur.

The potential magnitude of consequence and the potential likelihood of exposure are assessed in accordance with the risk matrix presented in Table B.3.

Table B.3 Geo-environmental risk assessment matrix

		Potential Magnitude of Consequence					
		Severe	Medium	Mild	Minor		
d of	High Likelihood	Very High	High	Moderate	Low to Moderate		
kelihoo sure	Likely	High	Moderate	Low to Moderate	Low		
ntial Lil Expo	Low Likelihood	Moderate	Low to Moderate	Low	Very Low		
Pote	Unlikely	Low to Moderate	Low	Very Low	Very Low		



Appendix B: Envirocheck Report



Envirocheck® Report:

Datasheet

Order Details:

Order Number: 286852753_1_1

Customer Reference: 1942

National Grid Reference: 527010, 183850

Slice:

Site Area (Ha):

0.28

Search Buffer (m): 1000

Site Details:

52, Avenue Road LONDON NW8 6HP

Client Details:

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



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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.

Volificable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility					n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1				2
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 1			3	16
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 4			Yes	
Pollution Incidents to Controlled Waters	pg 4				3
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances	pg 4				7
River Quality	pg 5				1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 6			4	6 (*22)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 14	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 14	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones	pg 14	1		1	
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 14		1		1

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Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 16				1
Local Authority Landfill Coverage		1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 16				1
Potentially Infilled Land (Water)					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

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Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 17	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry					
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry	pg 17		Yes	Yes	Yes
BGS Urban Soil Chemistry Averages	pg 20	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 20	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 20	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 20	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 20	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 21			20	161
Fuel Station Entries	pg 36				4
Points of Interest - Commercial Services	pg 36			4	40
Points of Interest - Education and Health	pg 40				8
Points of Interest - Manufacturing and Production	pg 40		1		12
Points of Interest - Public Infrastructure	pg 42				19
Points of Interest - Recreational and Environmental	pg 43			7	27
Gas Pipelines					
Underground Electrical Cables	pg 46		6	6	34

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Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves	pg 52				2
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

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Agency & Hydrological

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Discharge Consents	3				
1	Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Thames Water Utilities Ltd WTW/WATER COLLECTION/TREATMENT/SUPPLY Barrow Hill Environment Agency, Thames Region Not Supplied Temp.0018 1 15th September 1989 15th September 1989 5th October 2000 Trade Effluent Freshwater Stream/River River Thames Authorisation revoked Located by supplier to within 100m	A14SW (SE)	610	2	527600 183600
	Discharge Consents	3				
2	Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Marylebone Cricket Club SPORT, AMUSEMENT+RECREATION/GOLF CLUB/GYM/THEME PK/SPA Marylebone Cricket Club Lord'S Cricket Ground Marylebone Cricket Club St John'S Wood London Nw8 8qn Environment Agency, Thames Region Not Supplied Eprkb3091es 2 26th March 2021 26th March 2021 26th March 2021 26th March 2021 Not Supplied Trade Discharge - Process Water Land/Soakaway Groundwater New issued under EPR 2010 Located by supplier to within 10m	A3NW (S)	991	2	526996 182820
	Local Authority Poll	ution Prevention and Controls				
3	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Ivy Dry Cleaner 4 Queens Terrace, London, Nw8 6dx Westminster City Council, Environmental Health Department 06/40583/EE1EP 14th September 2007 Local Authority Pollution Prevention and Control PG6/46 Dry cleaning Permitted Manually positioned to the address or location	A12SE (SW)	426	3	526672 183539
	Local Authority Poll	ution Prevention and Controls				
4	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Kings Dry Cleaners 25 Winchester Road, London, E4 London Borough of Waltham Forest, Environmental Health Department DC05 6th July 2007 Local Authority Pollution Prevention and Control PG6/46 Dry cleaning Permitted Manually positioned to the address or location	A18SW (NW)	471	4	526812 184310
	Local Authority Pollution Prevention and Controls					
5	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	St John'S Wood Dry Cleaners 47 Charlbert Street, London, NW8 6JN Westminster City Council, Environmental Health Department 09/53345/EE1EP 10th November 2009 Local Authority Pollution Prevention and Control PG6/46 Dry cleaning Permitted Manually positioned to the address or location	A8NE (S)	495	3	527114 183327
	Local Authority Pollution Prevention and Controls					
6	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Swiss Cottage Dry Cleaners 121 Finchley Road, London, Nw3 6hy London Borough of Camden, Pollution Projects Team PPC/DC10 12th January 2007 Local Authority Pollution Prevention and Control PG6/46 Dry cleaning Permitted Located by supplier to within 10m	A17SE (NW)	551	5	526626 184270

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Agency & Hydrological

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR	
	Local Authority Poll	ution Prevention and Controls					
7	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Johnsons Cleaners 69 St Johns Wood High Street, London, Nw8 7nl Westminster City Council, Environmental Health Department 06/40583/EE1EP 7th September 2007 Local Authority Pollution Prevention and Control PG6/46 Dry cleaning Site Closed Manually positioned to the address or location	A8NW (S)	586	3	526938 183230	
	Local Authority Poll	ution Prevention and Controls					
7	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Madame George 9 Circus Road, London, Nw8 6nx Westminster City Council, Environmental Health Department 06/39117/EE1EP 7th September 2007 Local Authority Pollution Prevention and Control PG6/46 Dry cleaning Permitted Manually positioned to the address or location	A8NW (S)	594	3	526902 183227	
	Local Authority Poll	ution Prevention and Controls					
8	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Tempo Dry Cleaners 98 St Johns Wood High Street, London, Nw8 7sh Westminster City Council, Environmental Health Department 06/38279/EE1EP 7th September 2007 Local Authority Pollution Prevention and Control PG6/46 Dry cleaning Site Closed Manually positioned to the address or location	A8NE (S)	627	3	527019 183184	
	Local Authority Poll	ution Prevention and Controls					
9	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Masterclean Dry Cleaners 6 Langtry Walk, London, Nw8 Odu London Borough of Camden, Pollution Projects Team PPC/DC38 12th January 2007 Local Authority Pollution Prevention and Control PG6/46 Dry cleaning Permitted Located by supplier to within 10m	A12NE (W)	647	5	526352 184004	
	Local Authority Poll	ution Prevention and Controls					
10	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Elias Dry Cleaners 68 St Johns Wood High Street, London, Nw8 7sh Westminster City Council, Environmental Health Department 08/15232/EE1EP 6th March 2008 Local Authority Pollution Prevention and Control PG6/46 Dry cleaning Permitted Manually positioned to the address or location	A8SE (S)	704	3	527077 183110	
	Local Authority Pollution Prevention and Controls						
11	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Bp Filling Station 21-41 Wellington Road, St John's Wood, LONDON, NW8 9SP Westminster City Council, Environmental Health Department VR 8 7th May 1999 Local Authority Air Pollution Control PG1/14 Petrol filling station Authorised Manually positioned to the address or location	A8SW (S)	746	3	526864 183080	
	Local Authority Pollution Prevention and Controls						
12	Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Connoisseur Dry Cleaners 3-5 Fairhazel Gardens, London, Nw6 3qe London Borough of Camden, Pollution Projects Team PPC/DC11 12th January 2007 Local Authority Pollution Prevention and Control PG6/46 Dry cleaning Permitted Located by supplier to within 10m	A12NW (W)	769	5	526262 184119	