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**PROJECT No. RML 5294**

**PHASE I & PHASE II  
SITE INVESTIGATION AT**

**NORCUTT ROAD, TWICKENHAM**

**ON BEHALF OF  
N & A (GUILDFORD) LIMITED**



**Risk Management Limited**  
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## **1.0 INTRODUCTION & SCOPE OF WORKS**

- 1.1 The work covered by this report has been undertaken by Risk Management Limited to the instructions of the client for the work, Messrs. N & A (Guildford) Limited.
- 1.2 The site under consideration was located adjacent to Alcott House, Norcutt Road, Twickenham TW2 6SR.
- 1.3 It is understood that the currently proposed development at this site will comprise a four-storey block of residential apartments as shown on the appended Proposed Elevation Drawing. The plan layout of the currently proposed building is indicated on the appended Sketch Fieldwork Location Plan, Drawing No. RML 5294/1.
- 1.4 The approximate six-figure grid reference for the site is 515340 E, 173380 N.
- 1.5 It is understood that the proposed development at this site will comprise a single-storey basement beneath the existing property.
- 1.6 Risk Management Limited have now been commissioned to carry out an investigation into the site comprising both a Phase I, *Non-Intrusive*, Desk Study and a Phase II, *Intrusive*, Site Investigation.
- 1.7 The Desk Study comprises a Walkover Survey, an Environmental Disclosure Report, and a Historical Map Search.
- 1.8 It should be noted that the current Desk Study is designed for geo-environmental purposes only and does not include Structural Surveys, Buried Services Surveys, Asbestos Surveys, Unexploded Ordnance Surveys or Invasive Plant Surveys for Japanese Knotweed, Giant Hogweed etc.
- 1.9 The *Intrusive* site investigation provides information on the sub-soil conditions at this site, together with laboratory testing and includes a land-borne gas monitoring survey and an assessment of the permeability of the underlying ground for soakaway purposes.
- 1.10 This report presents the work carried out and discusses the findings.

## **2.0 WALKOVER SURVEY**

- 2.1 A Walkover Survey was carried out across the site on 22<sup>nd</sup> January 2014.
- 2.2 The site was relatively level and rectangular in shape located just to the north of the block of flats known as "Alcott House".
- 2.3 Access to the current site was gained through a gate in the iron railings forming the eastern part of the southern boundary to the site.
- 2.4 The site surface was generally crushed stone and brick or poor quality tarmac and a skip and building materials were in evidence in the north-eastern part of this hard standing area. Other building materials were in evidence stored around the site.
- 2.5 Numerous services were evidenced across the site by a number of manhole covers.
- 2.6 A single storey brick built office and warehouse unit with metal roof and upper sides was located along the western boundary to the current site and with its southern wall comprising roofing felt and timber battens.
- 2.7 The northern boundary to the current site was formed by a metal fence with a railway line beyond in cutting and a Rifle Club and the River Crane further to the north.
- 2.8 The eastern boundary to the current site was formed by the rear brick wall to some warehouse units on the adjacent site with further car park hard standing and industrial units to the east and an electricity sub-station further to the south-east.
- 2.9 The southern boundary to the current site was formed by the block of flats, Alcott House to the west and the iron fence and access gate to the east.
- 2.10 The western boundary to the current site was formed by a large bakery factory with an electricity sub-station located against the northern part of the western boundary to the current site.
- 2.11 Plates 1-3, appended, show general photographs of the site taken at the time of the current Walkover Survey.

### 3.0 PHASE 1 ENVIRONMENTAL RISK ASSESSMENT

- 3.1 An EnviroCheck Report was commissioned for the current site covering an area of up to 1000m from the centre of the site.
- 3.2 Only criteria within 250m of the centre of the site are discussed in detail below but full results of all the search criteria up to 1000m from the centre of the site are summarised within the relevant pages of the appended EnviroCheck Report.

#### Geo-Environmental Hazards

- 3.3 The following table summarises the potential geo-environmental hazards and mitigation measures for this site.

Data Type	Hazard	Mitigation Measures for currently proposed development
Integrated Pollution Prevention & Control	Three Integrated Pollution Prevention & Controls are noted within the 0-250m search band. However all three relate to the same location, some 80m east of the current site at Property Energy Limited allowing use of organic chemicals etc.	None required.
Local Authority Pollution Prevention and Controls	The nearest Local Authority Pollution Prevention and Control is noted to be some 385m north-east of the current site.	None required.
Substantiated Pollution Incident Register	The nearest substantiated pollution incident is registered some 655m west of the current site.	None required.
Landfill & Waste Management Facilities	One Licensed Waste Management Facility lies within the 0-250m search band. Located some 150m north-west of the current site in Langhorne Drive, Twickenham, this relates to a Waste Transfer Station.	None required.
Hazardous Substances	No hazardous substance usages are noted within the 0-1000m search band.	None required.
Coal Mining	The site lies in an area which would not normally be affected by coal mining activity.	None required.
Collapsible Ground Stability	"Very Low Hazard"	None required.
Compressible Ground Stability	"No Hazard"	None required.
Ground Dissolution	"No Hazard"	None required.
Landslide Stability	"Very Low Hazard"	None required.
Running Sand	"Very Low Hazard"	None required.
Swelling/Shrinking	"Moderate Hazard"	None required.
Radon	The site does not fall within shaded sections of Annexe A of BRE Report 211 (2007) "Radon: guidance on protective measures for new dwellings". Therefore, <b>No Radon Protective Measures will be necessary in the construction of new buildings at this location</b>	None required.

Contemporary Trade Directory Entries	As would be expected close to Industrial Estates, eighteen Contemporary Trade Directory Entries are noted within the 0-250m search band. However, the only active uses listed are Garage Services, Car Body Repairs, Printers and a Brewers.	None required.
Fuel Station Entries	No Fuel Stations are noted within the 0-500m search band.	None required.
Sensitive Land Use	No Sensitive Land Uses are noted within 1000m of the current site.	None required.

### Hydrology and Hydrogeology

3.4 The following table summarises the potential Hydrology and Hydrogeology aspects for this site.

Data Type	Hazard	Mitigation Measures for currently proposed development
Pollution Incidents to Controlled Waters	Five Pollution Incidents to Controlled Waters are noted within the 0-250m search band. The nearest of the incidents was in 1994 and located some 138m east of the current site, noted as a Category 3 Minor Incident. All of the other four are also noted as Category 3 Minor Incidents. One Prosecution relating to Controlled Waters is also noted, some 911m north-east of the current site.	None required.
Discharge Consents	The nearest Discharge Consent to the current site is located some 308m north of the current site.	None required.
Nearest Surface Water Feature	The nearest significant water surface feature is the River Crane located some 29m west of the current site as it passes beneath the railway line.	None required.
Water Abstractions	The nearest Water Abstraction is noted as being some 1464m north of the current site.	None required.
Groundwater Vulnerability	The appended Groundwater Vulnerability Map indicates the site is noted to lie over a 'Major Aquifer'.	Contamination testing will be undertaken as part of the current Phase II <i>intrusive</i> site investigation.
Bedrock Aquifer Designations	The Bedrock Aquifer Designation is given as: 'Unproductive Strata'	
Superficial Aquifer Designations	The Superficial Aquifer Designation is given as: 'Principal Aquifer'.	
Source Protection Zones	The appended Environment Agency Groundwater Map indicates that the site does not fall over an Environment Agency Source Protection Zone.	
Flood Risk	The appended Environment Agency Groundwater Map indicates that the site does not fall within an Environment Agency Indicative Flood Plain.	None required.

## **4.0 HISTORICAL MAPS**

4.1 The following eleven historical plans covering the site are discussed below.

### *4.1.1 1874-1875 (1:2,500)*

The current site falls within the 1875 portion of this plan which already shows the sites northern boundary to be formed by the railway line.

The current site lies within a larger Orchard which extends to the south with fields to the west and east.

Largely residential development has already occurred further to the south at this time.

### *4.1.2 1891 (1:2,500)*

Some sixteen years later and this plan shows little change to the current site or immediate surrounding area.

Further residential properties have now been built to the south as the town of Twickenham continues to expand.

The railway line forming the northern boundary to the current site is named as London & South West Railways Windsor Line.

### *4.1.3 1896 (1:2,500)*

Only five years later and the current site is now shown in an open part of the field but with a gravel pit immediately to the south.

Further residential properties have now been built to the south and east and a Sewage Works has been built to the north of the railway line.

4.1.4 1915 (1:2,500)

Some nineteen years later and the site is now occupied by a Laundry with an "Electricity Works" to the east and considerable, largely residential development in the surrounding area, all to the south of the railway line.

4.1.5 1934 (1:2,500)

Again, some nineteen years later and the Laundry has expanded into the site immediately to the south.

Allotment gardens are now noted to the immediate west of the current site, including another Laundry building to the south, and continued, development has occurred in the immediate surrounding area.

4.1.6 1961 (1:1,250)

By 1961 the surrounding area, south of the railway line, has now been almost completely built up with a large factory building now forming the western boundary to the current site.

4.1.7 1961-1982 (1:1,250)

The current site falls within the 1977 portion of this plan, some sixteen years later and the Laundry on the current site has been removed with the current site occupied by part of a larger Printing Works which extends south into the neighbouring site.

The factory to the west is now noted as a "Bakery".

4.1.8 1979-1981 (1:1,250)

The current site falls within the 1979 portion of this plan, only two years later and the site and immediate surrounding area appear relatively unchanged.



4.1.9 1991 (1:2,500)

Some twelve years later and this plan now shows the printing works to have been removed and the building currently occupying the site to be in place.

To the south is now Norcutt House.

4.1.10 2006 (1:10,000)

Some fifteen years later and this plan again indicates no significant change to the current site or immediate surrounding area.

4.1.11 2013 (1:10,000)

The plan of the current date shows once again that the site is relatively unchanged with the current site boundaries as found during the current Walkover Survey.

A new block of flats, Alcott House, now forms part of the southern boundary to the current site.

## **5.0 FIELDWORK**

- 5.1 All fieldwork was generally executed in accordance with the recommendations given in British Standard BS 5930:1999, "Code of Practice for Site Investigations", contamination sampling was undertaken in accordance with BS 10175 : 2011, "Code of Practice for the Investigation of Potentially Contaminated Sites".
- 5.2 Borehole, Dynamic Probe and surface sample locations (S1-S4) are shown on the appended Sketch Fieldwork Location Plan, Drawing No. RML 5294/1.
- 5.3 Fieldwork was undertaken on the 22<sup>nd</sup> January 2014 and comprised the following.

### Drive-in-Sampler Boreholes

- 5.4 Four drive-in-sampler boreholes (DIS1-DIS4) were drilled across the site to depths of between 1.90m and 4.00m below existing ground level.
- 5.5 The drive-in-sampler comprises a series of 1 and 2 metre long metal tubes, varying in diameter from 80 mm down to 35 mm, driven into the ground using a mini-hydraulic breaker unit. The tubes are subsequently jacked out of the ground and side windows enable the tubes to be cleaned and small, disturbed, samples to be taken at regular intervals within each stratum.
- 5.6 Upon completion of borehole DIS1, a combined groundwater/gas monitoring standpipe was installed to a depth of 2.00m below existing ground level.
- 5.7 The gas monitoring installation comprised a 1 metre length of plain 19mm diameter HDPE pipe followed by slotted geotextile wrapped HDPE pipe, capped at the base. A cement/bentonite seal was installed from 1.00m to ground level and the installation was finished with a gas valve on top of the pipe and a lockable stopcock cover concreted in flush with ground level.
- 5.8 Full details of the borehole findings are given on the appended drive-in-sampler borehole record sheets.

### Dynamic Probe Test

- 5.9 One Dynamic Probe test (P1) was undertaken at this site to a depth of 5.10m below existing ground level.
- 5.10 The Dynamic Probe employed at this site is classified as 'heavy' (DPH) and comprises a weight of 50 kg dropping through a free-fall height of 500mm in accordance with British Standard BS 1377 : Part 9. The weight drives a solid 90° cone which has a surface area of 15 cm<sup>2</sup> and is attached to 32mm diameter driving rods. The resistance to penetration is recorded as the number of hammer blows required to drive the cone through successive 100mm increments.
- 5.11 Approximate equivalent SPT 'N' values have been determined by dividing the cumulative blow counts for each 300mm of penetration by 1.5 as recommended by Card and Roche.
- 5.12 The results are appended as plots of blow counts versus depth.

### Landfill Gas Monitoring

- 5.13 Following the initial site work, three return gas/groundwater monitoring visits were undertaken to the installation fitted within borehole DIS1 on 10<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> February 2014.
- 5.14 The barometric pressure was recorded together with the level of Carbon Dioxide, Oxygen and Methane within the borehole. In addition, gas flow measurements were taken and the depth to groundwater recorded.
- 5.15 Full details of the readings are included on the appended Gas/Groundwater Monitoring Record Sheet.

## 6.0 GROUND CONDITIONS

- 6.1 According to information published by the British Geological Survey (South London 1:50,000 Series Solid and Drift Edition, Sheet 270) the underlying geology at this site is shown as being Recent Kempton Park Gravel (River Thames Terrace Gravel) overlying London Clay of the Eocene Period.
- 6.2 River Thames Terrace Deposits generally comprise primarily gravels and sand sourced from varying materials within the rivers local catchment area. These Pleistocene deposits are widespread within the London Basin and occur typically as terraces on the valley sides. These terraces represent ancient floodplain deposits that have become isolated as the river has cut downwards to lower levels.
- 6.3 Full details of the ground conditions encountered are presented on the borehole records appended to this report and can be summarised on the table below:

Depth From (m)	Depth To (m)	Description
0.00	0.10	Tarmac/Asphalt (DIS4 only)
0.00/0.10	0.50/0.70	MADE GROUND
0.50/0.70	1.60/1.80	Silty sandy CLAY with occasional gravel
1.60/1.80	2.00	GRAVEL in a silty sandy clay matrix
2.00	4.00 +	SAND and GRAVEL

- 6.4 The underlying London Clay was not encountered during the current work which was terminated at a maximum depth of 4.00m below existing ground level due to 'hard driving' within the SAND and GRAVEL stratum.
- 6.5 Groundwater was not noted during the current work.

## **7.0 LABORATORY TESTING**

- 7.1 The following geotechnical and contamination tests have been carried out on samples recovered from the boreholes at this site.
- 7.2 Unless otherwise stated, the geotechnical tests have generally been carried out in accordance with the recommendations given in British Standard 1377:1990, "Methods of Test for Soils for Civil Engineering Purposes".
- 7.3 The chemical testing was carried out in accordance with standard industry methods in a UKAS approved laboratory which is also currently accredited in accordance with MCERTS for the majority of its testing. Further information regarding this accreditation is available on request together with a full list of test methods if required.
- 7.4 *Natural Moisture Content & Atterberg Limit Tests*

The Atterberg Limits have been determined for four samples of the upper silty sandy CLAY at this site.

Liquid limits (LL) ranged between 26% and 40%, the plastic limit (PL) between 15% and 16% and the plasticity index (PI) between 11% and 24%. The natural moisture contents for these four samples ranged from 19% to 23%.

These results indicate that the samples tested would be classified as clay of 'low' to 'intermediate' plasticity (CL/CI) in accordance with the Casagrande geotechnical classification system.

In addition, the samples tested would be classified as having a 'low' to 'medium' shrinkage potential in accordance with the National House Building Councils (NHBC) classification system given in Part 4 of their Standards.

### 7.5 *Particle Size Distribution*

The particle size distribution has been determined for four samples of the more granular soils encountered.

The results are presented as grading curves in the appendix to this report.

## 7.6 *pH and Sulphate Tests*

The pH and sulphate content has been determined for two samples recovered from borehole DIS1 at 0.50m and 1.00m depth.

The pH was found to be 7.4 and 9.4 and the sulphate content, on a 2:1 water:soil extract, 0.17 g/l to 0.33 g/l.

## 7.7 *Chemical Analysis*

Four samples of the superficial MADE GROUND have been selected and tested for a range of commonly occurring contaminants and indicators of contamination including those given by the Contaminated Land Exposure Assessment (CLEA).

The contamination suite undertaken at this site includes speciated **PolyAromatic Hydrocarbon (PAH)** and speciated **Total Petroleum Hydrocarbon (TPH)**.

The same four samples were also tested for **PolyChlorinated Biphenyl (PCB)**.

## 7.8 *Previous Testing*

Owing to the previous usage of the site as a Laundry, a number of samples, taken in March 2005 for the same Client as the current work, were tested for **PolyChlorinated Biphenyl (PCB)**, **Volatile Organic Compound (VOC)**, **Semi-Volatile Organic Compound (SVOC)** and Asbestos Fibre Identification.

The locations of four of these previous samples are on the current site and are noted as S1-S4 on the appended Sketch Fieldwork Location Plan, Drawing No. RML 5294/1.

Results from these previous tests are appended to this report and discussed in Section 8.0 below.

## **8.0 DISCUSSION**

### **PROPOSED DEVELOPMENT & SCOPE OF WORKS**

- 8.1 As discussed in Section 1 above, it is understood that the currently proposed development at this site will comprise a four-storey block of residential apartments as shown on the appended Proposed Elevation Drawing. The plan layout of the currently proposed building is indicated on the appended Sketch Fieldwork Location Plan, Drawing No. RML 5294/1.
- 8.2 The current report comprises a *Non-Intrusive*, Desk Study and an *Intrusive*, Site Investigation.

### **DESK STUDY**

- 8.3 The Desk Study has shown that the current property was part of an Orchard in 1875 with the railway line already forming the northern boundary. This area of Twickenham was gradually built up over the years with a gravel pit to the south of the site by 1896. The current site had been developed with a Laundry building by 1915 which was then replaced with the northern part of a larger Printing Works by 1977. The Printing Works had been removed by 1991 and replaced with the current office/warehouse building on site.
- 8.4 No radon remedial measures would be required at this site. The site lies over a Principal Superficial Aquifer but does not lie over an Environment Agency 'source protection zone'. The site does not lie over an Environment Agency indicative flood plain.
- 8.5 Providing the past presence of a Laundry is noted, the environmental search has not found any reason to preclude the currently proposed development.

### **FOUNDATION DESIGN**

- 8.6 The current investigation has found a shallow layer of MADE GROUND across the site, up to 0.70m deep in parts, overlying 'soft' to 'firm' silty sandy CLAY to about 1.60m to 1.80m depth where GRAVEL in a silty sandy clay matrix was encountered. SAND and GRAVEL was found at about 2.00m depth and not penetrated in borehole DIS1 at 4.00m below existing ground level where 'hard driving' was encountered and the borehole terminated.

- 8.7 The results of the Dynamic Probe test indicates that the superficial CLAY was generally 'soft' to 'firm' in consistency and the underlying SAND and GRAVEL, 'dense' to 'very dense'.
- 8.8 From the evidence of the boreholes, shallow foundation or service excavations deeper than about 1 metre may require support against collapse of sides the short term and we would recommend that a contingency is made for this at this stage.
- 8.9 Groundwater was not noted during the current work, however, where seasonal groundwater or surface water accumulates at the base of service or foundation excavations it is very important that these are kept dry by, for example, pumping from a sump, the foundation base is kept square and that any soft spots are replaced and compacted prior to pouring foundation concrete.
- 8.10 Further, we recommend that where groundwater or surface water flows into foundation excavations, 'blinding' concrete is used at the base of the foundation excavations and that foundation concrete is poured as soon as possible thereafter
- 8.11 The results of the Atterberg Limit tests on the Superficial Clay indicates that this would fall into the 'low' to 'medium' shrinkage potential in accordance with the National House Building Councils (NHBC) classification system given in Part 4 of their Standards. Therefore, precautions against foundation sides in the form of compressible material would only be required against foundation sides where they fall within the 'zone of influence' of any past, existing or any proposed trees.
- 8.12 We would recommend that foundations to the proposed four-storey apartments are founded in the top of the underlying SAND and GRAVEL stratum at a depth of some 2.25m-2.50m below existing ground level. At this depth an allowable bearing pressure of 200 kN/m<sup>2</sup> can be adopted for conventional strip or pad foundations, up to 1.25 metres in width. For conventional strip or pad footings at 3.00m depth the above noted allowable bearing pressure could be increased to 250 kN/m<sup>2</sup>.
- 8.13 Settlement due to the above noted order of loading would not be expected to exceed 20-25mm the majority of which would be "short-term", occurring during or shortly after the construction period.
- 8.14 It should be noted that should ground conditions differing significantly from those described in our report be encountered during foundation excavation, then Risk Management Limited should be contacted immediately and that the above noted allowable bearing pressure or recommended foundation type may need to be altered accordingly.



## BURIED CONCRETE

- 8.15 The results of the chemical tests at this site indicate that the soil would fall into Class DS-1 of the Building Research Establishments (BRE) classification system.

## LANDFILL GAS

- 8.16 During the current return gas/groundwater monitoring visits, no methane and a carbon dioxide level of up to 0.2% were found.
- 8.17 CIRIA Publication C665 "Assessing Risks posed by Hazardous Ground gases to Buildings (Revised 2007) includes the NHBC "Traffic Light" system.
- 8.18 The carbon dioxide level was well below 5% and, in addition, no flow was registered. Therefore, in accordance with the NHBC "Traffic Light" system we would consider that the current site would be classified as GREEN and, therefore, no land borne gas remedial measures would be required at this site.

## PRELIMINARY CONTAMINATION ASSESSMENT

- 8.19 Part IIA of the Environmental Protection Act 1990 contains the legislative framework for the regulation of contaminated land and this was implemented in the Contaminated Land (England) Regulations 2000. This legislation allows for the identification and remediation of land where contamination is causing unacceptable risks to human health or the wider environment. The approach adopted by the UK contaminated land policy is "suitable for use" which implies that the land should be suitable for its current use and made suitable for any known future use.
- 8.20 For this **Preliminary Contamination Assessment** the site has been modelled using the Source-Pathway-Receptor approach to produce a Conceptual Site Model.

Source	(substances or potential contaminants which may cause harm)
Pathway	(a linkage route between the source and receptor)
Receptor	(something which may be harmed by the source e.g. humans, plant, groundwater etc.)

## 8.21 Source

Four samples of the superficial MADE GROUND were selected during the current work and tested for a range of commonly occurring contaminants and indicators of contamination including those given by the Contaminated Land Exposure Assessment (CLEA).

The contamination suite undertaken at this site includes speciated **PolyAromatic Hydrocarbon (PAH)** and speciated **Total Petroleum Hydrocarbon (TPH)**.

In addition, owing to the past usage as a Laundry and the presence of an Electricity Sub-Station adjacent to the north-western corner of the site, we have included work from a previous investigation for the same client in the form of Asbestos Fibre Identifications, **PolyChlorinated Biphenyl (PCB)**, **Volatile Organic Compound (VOC)** and **Semi-Volatile Organic Compound (SVOC)**.

## 8.22 Pathways

The pathways needing to be considered, as discussed above, will depend on the land usage, and will include for, example; soil ingestion, inhalation of vapour and dust, and consumption of home-grown vegetables, where this is applicable.

## 8.23 Receptors

From the results of the Desk Study and the intended end site use the following potential receptors have been identified.

- Workers on the site likely to come into contact with the soils.
- Future Users of any shared landscaped areas
- Any proposed additional vegetation.
- Neighbours.

8.24 It should be noted that the CLEA software has limited functionality and contains algorithms, which the EA has publicly expressed its intention to update. As a consequence of this, some of the screening values generated by the CLEA software may not adequately reflect specific site conditions and in some instances are unduly conservative. In addition, it should also be noted that the figures given in the appended table are based on a 6% soil organic matter content.

8.25 The DEFRA/EA model has been developed on the basis of many critical assumptions about possible exposure to soil contamination and the development of conceptual exposure models to describe different land uses as follows:

<i>Residential with plant uptake</i>	Mainly refers to residential gardens in which vegetables are grown.
<i>Residential without plant uptake</i>	Refers to areas which have gardens (e.g. blocks of flats) but without vegetable uptake.
<i>Allotments</i>	Areas allocated for Allotment usage.
<i>Commercial/Industrial</i>	Commercial/industrial usage where there are open areas which are not hard surfaced.

8.26 The Contaminated Land Exposure Assessment (CLEA) model was originally published in March 2002 as joint DEFRA/EA publications; Contaminated Land Research (CLR) Report CLR 10, with Reports CLR7, 8 and 9 as supporting documents, providing toxicity data and human tolerable daily intake (TDI) data to be used with this model. This model enabled the derivation of more site-specific values for contaminants present on a site, rather than the use of 'generic' values, which were previously used.

8.27 DEFRA/EA previously published a number of Soil Guideline Values (SGVs) for certain determinands, (common toxic metals), which were generic guideline criteria for assessing the risks to human health from chronic exposure to soil contamination for standard land-use functions. However, these were withdrawn in late 2008 and DEFRA/EA have now issued a new set of guidance documents. With regard to the Risk Management Limited standard suite of tests, currently SGV figures have only been issued for Arsenic, Cadmium, Mercury, Nickel, Phenols and Selenium.

8.28 In the absence of currently published SGV values for the remaining contaminants, Messrs. W. S. Atkins have derived ATRISK<sup>soil</sup> Soil Screening Values (SSVs) based on the new 2009 guidance (SC050021/SR3 (the CLEA Report) and SC050021/SR2 (the TOX report)) for commercial/industrial, residential without homegrown produce, residential with homegrown produce and allotment land uses. These have been based on the default assumptions provided in the CLEA report which it is understood will be used in the development of future Soil Guideline Values by DEFRA and the Environment Agency. Atkins SSVs have been derived in line with the new guidance using CLEA model v1.04. As the inhalation of vapour pathway contributes less than ten percent of total exposure, this is unlikely to significantly affect the combined assessment criterion and the SSV values used are the combined assessment criterion given by CLEA if free product is not observed.

- 8.29 Neither CLEA or ATRISK currently publish values for Hexavalent Chromium. Therefore, both Total Chromium and Hexavalent Chromium values have been compared against the Land Quality Management/Chartered Institute of Environmental Health (LQM/CIEH) Generic Assessment Criteria published in 2009 and based on CLEA v1.04 with Total Chromium values based on Chromium III.
- 8.30 The SGV and SSV levels represent “intervention” levels above which the levels of contamination may pose an unacceptable risk to the health of site-users such that further investigation and/or remediation is required.
- 8.31 Total Petroleum Hydrocarbons are considered in accordance with the fractions proposed by The Environment Agency, drawing on the TPHCWG methodology. These are contained in Table 4.2 – Petroleum hydrocarbon fractions for use in UK human health risk assessment, based on Equivalent Carbon (EC) number, contained in Science Report P5-080/TR3, *The UK Approach for Evaluating Human Health Risks from Petroleum Hydrocarbons in Soils*.
- 8.32 At this site the contamination results have been compared against the **Residential without plant uptake** criteria.

## ASSESSMENT OF RESULTS

- 8.33 From the samples tested at this site, no determinands exceeded the CLEA Soil Guideline Values (SGV) for **Residential without plant uptake** usage.
- 8.34 The samples from 0.50m depth in borehole DIS1 and 0.15m depth in borehole DIS2 had elevated levels of Benzo(a)pyrene and the sample from 0.50m in borehole DIS3 an elevated Lead level when compared against the ATRISK Contaminated Land Screening Values (SSV) for **Residential without plant uptake** usage.

### Discussion

*Previous work on the current site found no trace of asbestos, minimal PCB detected in sample S1, VOC and SVOC levels all below laboratory detection limits. PCB levels from the current work are all below laboratory detection limits.*

*The current elevated levels of PAH and Lead found in the MADE GROUND, should be noted but the slightly elevated levels are not considered detrimental to the current development as it will have been present for a considerable time and will not be liable to increase from any new “source”. The site is also to be covered with buildings and/or*

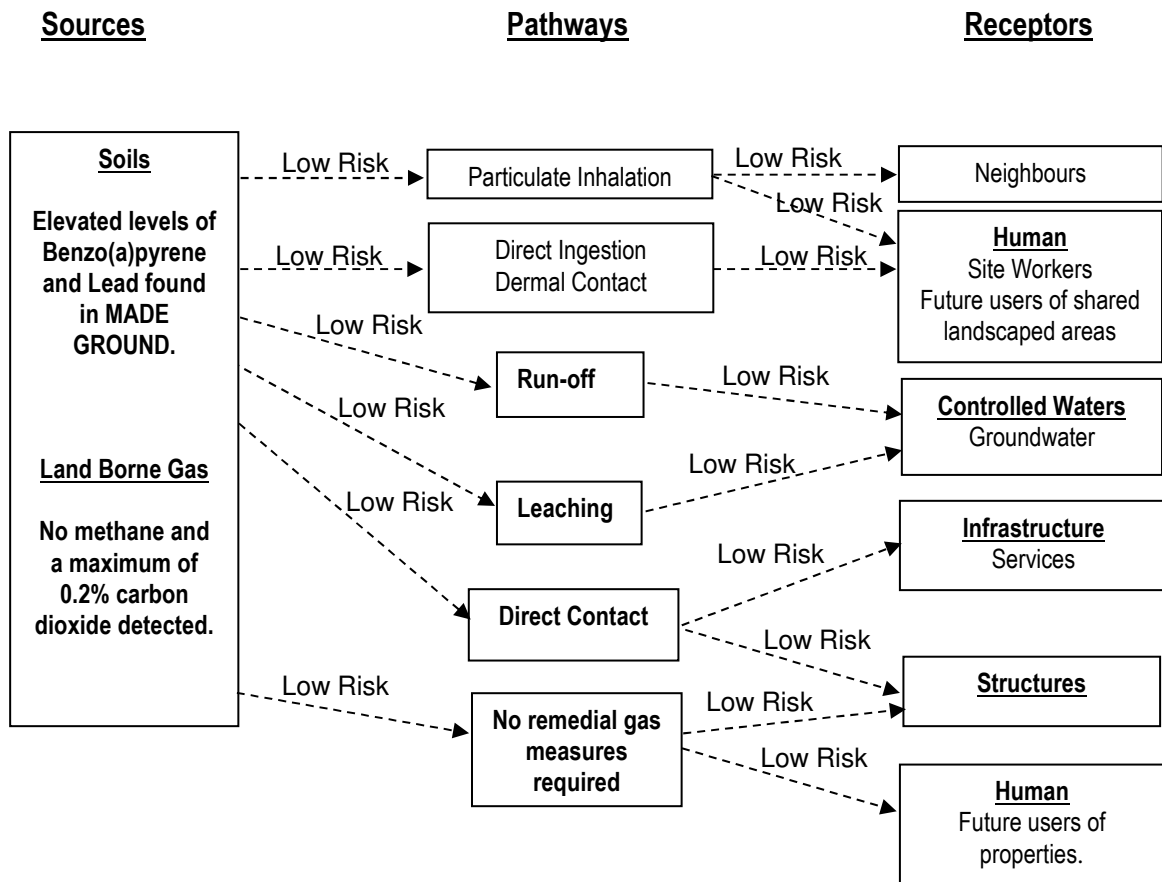
hard standing in parts and therefore much of the surface water will be diverted through a drainage system and not allowed to “leach” down through the MADE GROUND. We would recommend that in shared landscape areas we recommend that a minimum of 0.50-0.60m of the MADE GROUND is removed and replaced with “clean” material and 150-200mm of TOPSOIL.

The elevated levels are therefore not considered detrimental to the site as a whole and we recommend that action is undertaken only in areas of shared landscaped areas as discussed above.

We would recommend that normal Health and Safety requirements are taken with regard to ground workers at this site. Precautions should include, but not be restricted to, the use of PPE equipment such as gloves, overalls and other protective clothing as necessary and access to “hand-wash” facilities should be available to ground workers during construction of the proposed development.

### CONCEPTUAL SITE MODEL

8.35 The following diagram summaries the potential pollution linkages identified for this site in the form of a diagrammatic Conceptual Site Model (CSM).



- 8.36 As always, the above recommendations are based on a selected number of representative samples and further testing may be required if any significant contamination is suspected or encountered during ground works.

## SOIL SAMPLES

- 8.37 All soil samples will be kept for a period of 28 days after the date of the invoice for this project unless otherwise notified to Risk Management Limited in writing. Should samples be required to be stored for longer than 28 days then a storage charge will be levied.

**Prepared By :** Malcolm S. Price B.Sc., M.Sc., M.I.C.E., C.Eng.  
Director

**Distribution :** Premier Design - 1 copy + pdf

*The recommendations made and the opinions expressed in this report are based on the borehole records, examination of samples and the results of site and laboratory tests.*

*The report is issued on the condition that Risk Management Limited will under no circumstances be liable for any loss arising directly or indirectly from ground conditions between the boreholes or trial pits which have not been shown by the boreholes, trial pits or other tests carried out during the investigation.*

*In addition, Risk Management Limited will not be liable for any loss whatsoever arising directly or indirectly from any opinion given on the possible configuration of strata both between the borehole and/or trial pit positions and/or below the maximum depth of the investigation. Such opinions, where given, are for guidance only.*

*Groundwater levels may also vary with time from those reported during our site investigation due to factors such as tidal conditions, heavy pumping from nearby wells or seasonal changes.*

*No person other than the client to whom this report is addressed, shall rely on it in any respect and no duty of care shall be owed to any such third party.*

*Copyright of this Report remains with Risk Management Limited and in addition we will not accept any responsibility for the report and recommendations given until our invoice is settled in full.*



## Envirocheck<sup>®</sup> Report:

### Datasheet

#### Order Details:

**Order Number:**

52900751\_1\_1

**Customer Reference:**

RML 5294

**National Grid Reference:**

515340, 173380

**Slice:**

A

**Site Area (Ha):**

0.08

**Search Buffer (m):**

1000

#### Site Details:

Proposed Apartments

Norcutt Road

Twickenham

TW2 6SR

#### Client Details:

Mr M Price

Risk Management Limited

Unit 8 Paddock Barn Farm

Godstone Road

Caterham

Surrey

CR3 6SF

#### Prepared For:

N & A (Guildford) Limited

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Geological	18
Industrial Land Use	27
Sensitive Land Use	-
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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. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency 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 the attached 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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## Report Version v47.0



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Agency &amp; Hydrological</b>					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1			2	5
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 2		3		
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 3			2	8
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 4		Yes		
Pollution Incidents to Controlled Waters	pg 5		5	3	37
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters	pg 12				1
Registered Radioactive Substances					
River Quality	pg 12		1	2	
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 13				3
Water Abstractions	pg 13				(*7)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 14	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 15	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 15	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 15		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 15		Yes	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
Detailed River Network Lines	pg 15		Yes	Yes	n/a
Detailed River Network Offline Drainage					n/a

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Waste</b>					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 17				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 17		1		
Local Authority Recorded Landfill Sites					
Registered Landfill Sites					
Registered Waste Transfer Sites	pg 17				1
Registered Waste Treatment or Disposal Sites					
<b>Hazardous Substances</b>					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
<b>Geological</b>					
BGS 1:625,000 Solid Geology	pg 18	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 18	Yes		Yes	Yes
BGS Recorded Mineral Sites	pg 22		1		
BGS Urban Soil Chemistry	pg 22		Yes	Yes	Yes
BGS Urban Soil Chemistry Averages	pg 25	Yes			
Brine Compensation Area			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 26	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 26		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 26	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 26	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 26	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

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Industrial Land Use</b>					
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Fuel Station Entries	pg 42				3
<b>Sensitive Land Use</b>					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
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					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p><b>Discharge Consents</b></p> <p>Operator: Thames Water Utilities Ltd  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Twickenham Technical College  Authority: Environment Agency, Thames Region  Catchment Area: Not Supplied  Reference: Temp.2134  Permit Version: 2  Effective Date: 3rd September 2010  Issued Date: 3rd September 2010  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Pumping Station - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Crane  <b>Status: Varied under EPR 2010</b>  Positional Accuracy: Located by supplier to within 100m</p>	A13NE (N)	308	1	515400 173700
1	<p><b>Discharge Consents</b></p> <p>Operator: Thames Water Utilities Ltd  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Twickenham Technical College  Authority: Environment Agency, Thames Region  Catchment Area: Not Supplied  Reference: Temp.2134  Permit Version: 1  Effective Date: 2nd November 1989  Issued Date: 2nd November 1989  Revocation Date: 2nd September 2010  Discharge Type: Sewage Discharges - Pumping Station - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Crane  <b>Status: Temporary Consents (Water Act 1989, Section 113)</b>  Positional Accuracy: Located by supplier to within 100m</p>	A13NE (N)	308	1	515400 173700
2	<p><b>Discharge Consents</b></p> <p>Operator: Rugby Football Union  Property Type: Recreational &amp; Cultural  Location: Dene Estate Social Centre, Chertsey Road, Twickenham, Middlesex  Authority: Environment Agency, Thames Region  Catchment Area: Not Given  Reference: CNTM.0907  Permit Version: 1  Effective Date: 4th June 1993  Issued Date: 4th June 1993  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company  Discharge: Irrigation Area  Environment:  Receiving Water: Gravels  <b>Status: New Consent, by Application (Water Resources Act 1991, Section 88)</b>  Positional Accuracy: Located by supplier to within 100m</p>	A12NW (W)	704	1	514630 173500
3	<p><b>Discharge Consents</b></p> <p>Operator: Thames Water Utilities Ltd  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Campbell Road  Authority: Environment Agency, Thames Region  Catchment Area: Not Supplied  Reference: Temp.0593  Permit Version: 2  Effective Date: 3rd September 2010  Issued Date: 3rd September 2010  Revocation Date: Not Supplied  Discharge Type: Sewage Discharges - Pumping Station - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Crane  <b>Status: Varied under EPR 2010</b>  Positional Accuracy: Located by supplier to within 100m</p>	A7NW (SW)	823	1	514600 173000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	<p><b>Discharge Consents</b></p> <p>Operator: Thames Water Utilities Ltd  Property Type: Sewerage Network - Pumping Station - Water Company  Location: Campbell Road  Authority: Environment Agency, Thames Region  Catchment Area: Not Supplied  Reference: Temp.0593  Permit Version: 1  Effective Date: 2nd November 1989  Issued Date: 2nd November 1989  Revocation Date: 2nd September 2010  Discharge Type: Sewage Discharges - Pumping Station - Water Company  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Crane  <b>Status: Temporary Consents (Water Act 1989, Section 113)</b>  Positional Accuracy: Located by supplier to within 100m</p>	A7NW (SW)	823	1	514600 173000
4	<p><b>Discharge Consents</b></p> <p>Operator: Mr S Pannifer  Property Type: Domestic Property (Single)  Location: 2b Cole Park Road, Twickenham, Middlesex  Authority: Environment Agency, Thames Region  Catchment Area: Not Given  Reference: Ctwc.2291  Permit Version: 1  Effective Date: 21st March 1988  Issued Date: 21st March 1988  Revocation Date: 12th August 1996  Discharge Type: Discharge Of Other Matter-Surface Water  Discharge: Freshwater Stream/River  Environment:  Receiving Water: River Crane  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 100m</p>	A14NE (E)	896	1	516200 173700
5	<p><b>Discharge Consents</b></p> <p>Operator: Havensilver Investments Ltd  Property Type: Undefined Or Other  Location: Rear Of Nos. 1 To 3 Rugby Road, Twickenham, Middlesex  Authority: Environment Agency, Thames Region  Catchment Area: Not Supplied  Reference: Ctwc.1128  Permit Version: 1  Effective Date: 14th August 1986  Issued Date: 14th August 1986  Revocation Date: 3rd May 1995  Discharge Type: Discharge Of Other Matter-Surface Water  Discharge: Freshwater Stream/River  Environment:  Receiving Water: Whitton Brook  <b>Status: Authorisation revokedRevoked</b>  Positional Accuracy: Located by supplier to within 10m</p>	A18NE (N)	974	1	515550 174350
6	<p><b>Integrated Pollution Prevention And Control</b></p> <p>Name: Proper Energy Limited  Location: Twickenham Biodiesel Plant Epr/Bp3334gu/S002, 37, Hamilton Road,, TWICKENHAM, Middlesex, TW2 6SN  Authority: Environment Agency - South East Region, North East Thames Area  Permit Reference: EP3530ZQ  Original Permit Ref: Bp3334gu  Effective Date: 26th February 2013  <b>Status: Surrender Effective</b>  Application Type: Surrender  App. Sub Type: Whole  Positional Accuracy: Automatically positioned to the address  Activity Code: 4.1 A(1) (A) (II)  Activity Description: Organic Chemicals; Oxygen Containing Compounds Eg Alcohols  Primary Activity: Y</p>	A13NE (E)	80	1	515443 173383

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	<p><b>Integrated Pollution Prevention And Control</b></p> <p>Name: Proper Energy Limited            Location: Twickenham Biodiesel Plant, 37, Hamilton Road,, TWICKENHAM, Middlesex, TW2 6SN            Authority: Environment Agency - South East Region, North East Thames Area            Permit Reference: BP3334GU            Original Permit Ref: Bp3334gu            Effective Date: 21st April 2009  <b>Status: Superseded By Variation</b>            Application Type: Application            App. Sub Type: New            Positional Accuracy: Automatically positioned to the address            Activity Code: 4.1 A(1) (A) (II)            Activity Description: Organic Chemicals; Oxygen Containing Compounds Eg Alcohols            Primary Activity: Y</p>	A13NE (E)	80	1	515443 173383
6	<p><b>Integrated Pollution Prevention And Control</b></p> <p>Name: Proper Energy Limited            Location: Twickenham Biodiesel Plant, 37, Hamilton Road,, TWICKENHAM, Middlesex, TW2 6SN            Authority: Environment Agency, Thames Region            Permit Reference: BP3334GU            Original Permit Ref: Bp3334gu            Effective Date: 21st April 2009  <b>Status: Effective</b>            Application Type: Application            App. Sub Type: New            Positional Accuracy: Automatically positioned to the address            Activity Code: 4.1 A(1) (A) (II)            Activity Description: Organic Chemicals; Oxygen Containing Compounds Eg Alcohols            Primary Activity: Y</p>	A13NE (E)	80	1	515443 173383
7	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Beaucare Dry Cleaners            Location: 146 Heath Road, Twickenham, Tw1 4bn            Authority: London Borough of Richmond upon Thames, Environmental Health Department            Permit Reference: LBRUT/DC/01            Dated: 27th March 2007            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/46 Dry cleaning  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A13SE (SE)	392	2	515678 173144
8	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Twickenham Green Dry Cleaners            Location: 4 Staines Road, Twickenham, Tw2 5ah            Authority: London Borough of Richmond upon Thames, Environmental Health Department            Permit Reference: LBRUT/DC/31            Dated: 11th April 2007            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/46 Dry cleaning  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A8NW (SW)	448	2	515074 173004
9	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Crystal Dry Cleaners            Location: 64 High Street, Whitton, Tw2 7ls            Authority: London Borough of Richmond upon Thames, Environmental Health Department            Permit Reference: LBRUT/DC/07            Dated: 27th March 2007            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/46 Dry cleaning  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A17SE (NW)	674	2	514777 173784
10	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Coldel Dry Cleaners            Location: 39 Hampton Road, Twickenham, Tw2 5qe            Authority: London Borough of Richmond upon Thames, Environmental Health Department            Permit Reference: LBRUT/DC/05            Dated: 29th March 2007            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/46 Dry cleaning  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A8SW (S)	720	2	515129 172678

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Mel Dry Cleaners            Location: 24 Heath Road, Twickenham, Tw1 4bz            Authority: London Borough of Richmond upon Thames, Environmental Health Department            Permit Reference: LBRUT/DC/19            Dated: 27th March 2007            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/46 Dry cleaning  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A14SE (E)	743	2	516075 173162
12	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Currie Motors (Twickenham) Ltd            Location: 161 Chertsey Road, TWICKENHAM, Middlesex, TW1 1ER            Authority: London Borough of Richmond upon Thames, Environmental Health Department            Permit Reference: Ep/M/93/03            Dated: 18th October 1993            Process Type: Local Authority Air Pollution Control            Description: PG6/34 Respraying of road vehicles  <b>Status: Authorisation revoked</b>            Positional Accuracy: Automatically positioned to the address</p>	A18NE (N)	802	2	515615 174154
13	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Kings Clothes Care Specialists            Location: 45 King Street, Twickenham, Tw1 3sg            Authority: London Borough of Richmond upon Thames, Environmental Health Department            Permit Reference: LBRUT/DC/15            Dated: 29th March 2007            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/46 Dry cleaning  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A14SE (E)	856	2	516184 173132
14	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Sky Dry Cleaners            Location: 13 York Street, Twickenham, Tw1 3jz            Authority: London Borough of Richmond upon Thames, Environmental Health Department            Permit Reference: LBRUT/DC/28            Dated: 29th March 2007            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/46 Dry cleaning  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A14SE (E)	937	2	516300 173359
15	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Staines Road Service Station            Location: 110-130 Staines Road, TWICKENHAM, Middlesex, TW2 5AW            Authority: London Borough of Richmond upon Thames, Environmental Health Department            Permit Reference: 02/PVR            Dated: 21st December 1998            Process Type: Local Authority Pollution Prevention and Control            Description: PG1/14 Petrol filling station  <b>Status: Permitted</b>            Positional Accuracy: Automatically positioned to the address</p>	A7NW (SW)	953	2	514599 172764
16	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Hanson Quarry Products Ltd            Location: Twickenham Trading Centre, Rugby Road, TWICKENHAM, Middlesex, TW1 1DQ            Authority: London Borough of Hounslow, Environmental Health Department            Permit Reference: Not Given            Dated: 29th September 1992            Process Type: Local Authority Air Pollution Control            Description: PG3/1 Blending, packing, loading and use of bulk cement  <b>Status: Authorisation has varied</b>            Positional Accuracy: Manually positioned within the geographical locality</p>	A18NE (N)	986	3	515561 174360
	<p><b>Nearest Surface Water Feature</b></p>	A13NW (W)	29	-	515296 173391

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 15th January 1994 Incident Reference: NE940030 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NE (E)	138	1	515500 173400
18	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Gould Road, TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 16th April 1996 Incident Reference: N1960180 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	162	1	515180 173320
18	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Gould Road 225M, TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 11th April 1996 Incident Reference: N1960176 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	167	1	515170 173330
19	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Miscellaneous - Unknown Note: Confirmed As A Pollution Incident Incident Date: 9th March 1992 Incident Reference: N1920131 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	216	1	515200 173200
20	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Crane Park, TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Miscellaneous - Unknown Note: Confirmed As A Pollution Incident Incident Date: 5th October 1990 Incident Reference: N1900559 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	243	1	515100 173300
21	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Mereway, TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Unknown Sewage Note: Confirmed As A Pollution Incident Incident Date: 31st May 1989 Incident Reference: N1890298 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12SE (W)	337	1	515001 173301



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Confirmed As A Pollution Incident            Incident Date: 4th April 1995            Incident Reference: N1950156            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A12SE (W)	338	1	515001 173296
21	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: 22 Mereway Road, TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Unknown Sewage            Note: Not Supplied            Incident Date: 11th April 1996            Incident Reference: N1960171            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A12SE (W)	343	1	515001 173281
22	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: The Meadway, TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Chemicals - Unknown            Note: Not Supplied            Incident Date: 2nd July 1996            Incident Reference: N1960061            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A12SE (W)	592	1	514750 173250
23	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Confirmed As A Pollution Incident            Incident Date: 9th April 1992            Incident Reference: N1920218            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A12SE (W)	632	1	514700 173300
23	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Confirmed As A Pollution Incident            Incident Date: 18th February 1994            Incident Reference: NE940094            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A12SE (W)	633	1	514700 173295
24	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Confirmed As A Pollution Incident            Incident Date: 1st February 1990            Incident Reference: N1900047            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A19SW (NE)	695	1	515700 174000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Perivale Park, GREENFORD            Authority: Environment Agency, Thames Region            Pollutant: Storm Sewage            Note: Not Supplied            Incident Date: 17th March 1997            Incident Reference: THN11997031195            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A7NE (SW)	710	1	514850 172850
26	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Near Railway Street, TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Not Supplied            Incident Date: 30th September 1996            Incident Reference: N1960510            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A14NW (NE)	711	1	516000 173700
27	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Marlow Crescent            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Confirmed incident            Incident Date: 23rd March 1999            Incident Reference: THNE1999042288            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Approximate location provided by supplier</p>	A9NW (SE)	737	1	516000 173005
27	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Confirmed As A Pollution Incident            Incident Date: 19th September 1995            Incident Reference: SE950447            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A9NW (SE)	740	1	516000 173000
27	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: 153 Fulwell Park A, TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: General            Note: No Pollution Found            Incident Date: 10th October 1998            Incident Reference: THNE1998040836            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A9NW (SE)	742	1	516005 173005
27	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: The Barmy Elms P/H            Authority: Environment Agency, Thames Region            Pollutant: Miscellaneous - Other            Note: Not Supplied            Incident Date: 1st August 1996            Incident Reference: SE960454            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A9NW (SE)	742	1	516000 172995

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Not Supplied            Incident Date: 5th September 1997            Incident Reference: THN11997029365            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A9NW (SE)	744	1	516005 173000
27	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Ivy Bridge Estate, ISLEWORTH            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Not Supplied            Incident Date: 17th May 1996            Incident Reference: N1960264            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A9NW (SE)	747	1	516005 172995
28	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Marlow Crescent, TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Storm Sewage            Note: Not Supplied            Incident Date: 28th January 1997            Incident Reference: THN11997030965            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A19NW (NE)	784	1	515700 174100
29	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Unknown Sewage            Note: Confirmed As A Pollution Incident            Incident Date: 18th February 1995            Incident Reference: N1950076            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A19NW (NE)	870	1	515700 174195
29	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Confirmed As A Pollution Incident            Incident Date: 13th May 1995            Incident Reference: N1950250            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A19NW (NE)	872	1	515705 174195
29	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Chemicals - Unknown            Note: Confirmed As A Pollution Incident            Incident Date: 7th February 1995            Incident Reference: N1950058            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A19NW (NE)	875	1	515700 174200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Unknown Sewage            Note: Confirmed As A Pollution Incident            Incident Date: 16th November 1995            Incident Reference: N1950617            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A19NW (NE)	877	1	515705 174200
29	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: 27 Marlow Cresnet            Authority: Environment Agency, Thames Region            Pollutant: Storm Sewage            Note: Confirmed incident            Incident Date: 6th January 1999            Incident Reference: THNE1999041501            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A19NW (NE)	879	1	515700 174205
29	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: Twickenham Trading Estate            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Confirmed As A Pollution Incident            Incident Date: Not Supplied            Incident Reference: N1890495            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 2 - Significant Incident            Positional Accuracy: Located by supplier to within 100m</p>	A19NW (NE)	881	1	515705 174205
30	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Confirmed As A Pollution Incident            Incident Date: 23rd March 1990            Incident Reference: SE900082            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A14SE (E)	881	1	516200 173100
30	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Oils - Unknown            Note: Confirmed As A Pollution Incident            Incident Date: 28th April 1995            Incident Reference: SE950185            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A14SE (E)	883	1	516200 173095
30	<p><b>Pollution Incidents to Controlled Waters</b></p> <p>Property Type: Not Given            Location: TWICKENHAM            Authority: Environment Agency, Thames Region            Pollutant: Unknown Sewage            Note: Confirmed As A Pollution Incident            Incident Date: 14th June 1995            Incident Reference: SE950302            Catchment Area: Not Given            Receiving Water: Not Given            Cause of Incident: Not Given            Incident Severity: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 100m</p>	A14SE (E)	887	1	516205 173095

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Ditch At Rugby Road Authority: Environment Agency, Thames Region Pollutant: Chemicals - Unknown Note: Confirmed As A Pollution Incident Incident Date: 7th March 1989 Incident Reference: N1890122 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	916	1	515500 174300
32	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Unknown Sewage Note: Confirmed As A Pollution Incident Incident Date: Not Supplied Incident Reference: NE920706 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19NW (N)	921	1	515700 174250
32	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Twickenham Trading Estate Authority: Environment Agency, Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 26th September 1992 Incident Reference: NE920524 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19NW (N)	963	1	515700 174295
32	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 3rd October 1992 Incident Reference: NE920546 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (N)	965	1	515705 174295
32	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 19th September 1992 Incident Reference: NE920508 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (N)	968	1	515700 174300
32	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Unknown Sewage Note: Confirmed As A Pollution Incident Incident Date: 13th February 1995 Incident Reference: N1950068 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19NW (N)	969	1	515705 174300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: General Note: Confirmed incident Incident Date: 25th May 1999 Incident Reference: THNE1999043124 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m	A19NW (N)	971	1	515695 174305
32	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Marlow Crescent, TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 22nd March 1997 Incident Reference: THN11997031209 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (N)	972	1	515700 174305
32	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Marlow Crescent, TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 22nd February 1997 Incident Reference: THN11997031089 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (N)	974	1	515705 174305
33	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 18th October 1992 Incident Reference: NE920575 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	923	1	515750 174230
33	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Marlow Crescent, TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 8th March 1997 Incident Reference: THN11997031138 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Unknown	A19NW (NE)	941	1	515750 174250
34	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Unknown Sewage Note: Confirmed As A Pollution Incident Incident Date: 29th October 1995 Incident Reference: SE950500 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	940	1	516300 173300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 11th May 1995 Incident Reference: SE950210 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	953	1	516300 173200
35	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Embankment, TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Storm Sewage Note: Not Supplied Incident Date: 4th July 1998 Incident Reference: THSE1998039493 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	954	1	516300 173195
36	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: TWICKENHAM Authority: Environment Agency, Thames Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 2nd May 1997 Incident Reference: THSE1997032206 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	977	1	516300 173100
37	<b>Prosecutions Relating to Controlled Waters</b> Location: Marlow Crescent, TWICKENHAM, Middlesex, TW1 Prosecution Text: EA Data 11/02/2000, Sewage effluent found in the Whitton Brook at Twickenham. After complaints from residents in Marlow Crescent EA officers found a blocked foul sewer some distance away allowing raw sewage to pollute the watercourse. Prosecution Act: WRA91 s85(3a) Hearing Date: 6th January 2000 Verdict: Guilty Fine: 7000 Cost: 700 Positional Accuracy: Manually positioned to the road within the address or location	A19NW (NE)	911	1	515729 174227
	<b>River Quality</b> Name: Crane GQA Grade: River Quality C Reach: Duke Of N'S R (Lower) - Tideway Estimated Distance (km): 3.4 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A13NW (N)	76	1	515316 173468
	<b>River Quality</b> Name: Duke Of Northumberland'S GQA Grade: River Quality C Reach: Crane - Tideway Estimated Distance (km): 4.3 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A13NW (W)	318	1	515013 173453
	<b>River Quality</b> Name: Crane GQA Grade: River Quality D Reach: Yeading Bk - Duke Of N'S R (Lower) Estimated Distance (km): 10.2 Flow Rate: Flow less than 0.62 cumecs Flow Type: River Year: 2000	A12SE (W)	451	1	514887 173285

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	<b>Substantiated Pollution Incident Register</b> Authority: Environment Agency - Thames Region, South East Area Incident Date: 23rd July 2006 Incident Reference: 419938 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Pollutant Not Identified: Not Identified	A12SE (W)	655	1	514695 173214
39	<b>Substantiated Pollution Incident Register</b> Authority: Environment Agency - Thames Region, South East Area Incident Date: 14th August 2003 Incident Reference: 181948 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Pollutant Not Identified: Not Identified	A19SE (NE)	852	1	516139 173734
40	<b>Substantiated Pollution Incident Register</b> Authority: Environment Agency - Thames Region, South East Area Incident Date: 1st November 2001 Incident Reference: 46774 Water Impact: Category 1 - Major Incident Air Impact: Category 2 - Significant Incident Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	A19NW (NE)	941	1	515750 174250
	<b>Water Abstractions</b> Operator: Thames Water Utilities Ltd Licence Number: Th/039/0037/004 Permit Version: 1 Location: Duke Of Northumberland River - Mogden Sewage Treatment Works Authority: Environment Agency, Thames Region Abstraction: Water supply related: General Use (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Mogden Stw, Isleworth, Middlesex Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2013 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NE (N)	1464	1	515406 174858
	<b>Water Abstractions</b> Operator: Thames Water Utilities Ltd Licence Number: Th/039/0037/001 Permit Version: 1 Location: Duke Of Northumberland River - Mogden Sewage Treatment Works Authority: Environment Agency, Thames Region Abstraction: Water supply related: General Use (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Na Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 12th August 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NE (N)	1464	1	515406 174858
	<b>Water Abstractions</b> Operator: Thames Water Utilities Ltd Licence Number: 28/39/37/0007 Permit Version: 1 Location: D.Of Northumberland- Mogden Sewage Treatment Wrks, Isleworth Authority: Environment Agency, Thames Region Abstraction: Water supply related: General Use (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Mogden Stw, Isleworth Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NE (N)	1466	1	515410 174860



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Water Abstractions</b> Operator: St Margarets Res Grounds Licence Number: 28/39/34/0006 Permit Version: 100 Location: Borehole At St. Margaret'S Lake, Twickenham Authority: Environment Agency, Thames Region Abstraction: Private Non-Industrial Amenity: Lake And Pond Throughflow Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 20 Yearly Rate (m3): 7168 Details: St. Margaret'S Lake, Twickenham Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 8th October 1982 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A25SE (NE)	1880	1	516800 174600
	<b>Water Abstractions</b> Operator: Trustees Of Ham Polo Club Licence Number: 28/39/35/0008 Permit Version: 101 Location: River Thames At Ham Polo Club, Petersham, Surrey Authority: Environment Agency, Thames Region Abstraction: Sports Grounds/Facilities: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Tidal Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ham Polo Club - Petersham Surrey Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 23rd June 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(E)	1968	1	517330 173290
	<b>Water Abstractions</b> Operator: Trustees Of Ham Polo Club Licence Number: 28/39/35/0008 Permit Version: 101 Location: River Thames At Ham Polo Club, Petersham, Surrey Authority: Environment Agency, Thames Region Abstraction: Sports Grounds/Facilities: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Tidal Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ham Polo Club - Petersham Surrey Authorised Start: 01 May Authorised End: 31 October Permit Start Date: 23rd June 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(E)	1968	1	517330 173290
	<b>Water Abstractions</b> Operator: Trustees Of Ham Polo Club Licence Number: 28/39/35/0008 Permit Version: 100 Location: River Thames At Ham Polo Club, Petersham, Surrey Authority: Environment Agency, Thames Region Abstraction: Sports Grounds/Facilities: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Tidal Daily Rate (m3): 227 Yearly Rate (m3): 3410 Details: River Thames At Ham Polo Club, Petersham, Surrey Authorised Start: 01 May Authorised End: 30 September Permit Start Date: 1st October 1981 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(E)	1968	1	517330 173290
	<b>Groundwater Vulnerability</b> Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 39 West London Scale: 1:100,000	A13NW (S)	0	1	515344 173383
	<b>Drift Deposits</b> None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Unproductive Strata	A13NW (S)	0	4	515344 173383
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Principal Aquifer	A13NW (S)	0	4	515344 173383
	<b>Extreme Flooding from Rivers or Sea without Defences</b> Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (W)	29	1	515296 173392
	<b>Extreme Flooding from Rivers or Sea without Defences</b> Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (NW)	33	1	515297 173408
	<b>Extreme Flooding from Rivers or Sea without Defences</b> Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	143	1	515463 173491
	<b>Flooding from Rivers or Sea without Defences</b> Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (W)	29	1	515296 173392
	<b>Flooding from Rivers or Sea without Defences</b> Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (NW)	33	1	515297 173408
	<b>Flooding from Rivers or Sea without Defences</b> Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	190	1	515509 173510
	<b>Areas Benefiting from Flood Defences</b> None				
	<b>Flood Water Storage Areas</b> None				
	<b>Flood Defences</b> None				
41	<b>Detailed River Network Lines</b> River Type: Primary River River Name: River Crane Hydrographic Area: D006 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk: Flood Risk Management Indicative/Statutory Main River Management Status: Water Course: Crane Name: Water Course: 36CR Reference:	A13NW (W)	33	1	515292 173391
42	<b>Detailed River Network Lines</b> River Type: Primary River River Name: Duke of Northumberland's River Hydrographic Area: D006 River Flow Type: Secondary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk: Flood Risk Management Indicative/Statutory Main River Management Status: Water Course: Duke Of Northumberland's Name: Water Course: 36DH Reference:	A13NW (W)	301	1	515027 173438

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	<b>Detailed River Network Lines</b> River Type: Primary River River Name: River Crane Hydrographic Area: D006 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk: Flood Risk Management Indicative/Statutory Main River Management Status: Water Course: Crane Name: Water Course: 36CR Reference:	A12SE (W)	393	1	514945 173292
	<b>Detailed River Network Offline Drainage</b> None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	<b>Historical Landfill Sites</b> Licence Holder: Not Supplied Location: St. Maragrets, Isleworth, Hounslow, London Name: Twickenham Trading Estate Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD11226 First Input Date: 31st December 1946 Last Input Date: 31st December 1963 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 5540/0036 BGS Ref: Not Supplied Other Ref: 8HO038	A18NE (N)	896	1	515627 174249
45	<b>Licensed Waste Management Facilities (Locations)</b> Licence Number: 400101 Location: Central Depot, Langhorne Drive, Twickenham, TW2 7SG Operator Name: London Borough Of Richmond Upon Thames Operator Location: Not Supplied Authority: Environment Agency - South East Region, North East Thames Area Site Category: Household, Commercial And Industrial Transfer Stations <b>Licence Status: Issued</b> Issued: 16th May 2013 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	156	1	515275 173539
	<b>Local Authority Landfill Coverage</b> Name: London Borough of Richmond Upon Thames - Has no landfill data to supply		0	8	515344 173383
	<b>Local Authority Landfill Coverage</b> Name: London Borough of Hounslow - Has no landfill data to supply		819	3	515610 174175
46	<b>Registered Waste Transfer Sites</b> Licence Holder: J & S M C Armstrong et al t/a J & G Metal Group Licence Reference: DL456 Site Location: Unit B 9/23 Third Cross Road, TWICKENHAM, Middlesex, TW2 5DU Operator Location: As Site Address Authority: Environment Agency - Thames Region, South East Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st June 1993 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Aluminium Litho Sheets, Type Metal Max.Waste Permitted By Licence Photographic Film Silver Flake (Sludge/Powder) Spent Photographic Fixer Or Developer Prohibited Waste: Clinical - As In Coll/Disp.Reg. Of '88 Special Wastes	A8NW (SW)	673	1	515029 172768

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS 1:625,000 Solid Geology</b> Description: London Clay	A13NW (S)	0	4	515344 173383
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A13NW (S)	0	5	515344 173383
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A12NE (W)	325	5	515000 173383
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A8NW (S)	368	5	515344 173000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A12SE (W)	392	5	514942 173308
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A12NE (W)	497	5	514831 173442
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A7NE (SW)	498	5	515000 173000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A12SE (SW)	553	5	514879 173056
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A7NE (SW)	558	5	514915 173000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A9NW (SE)	586	5	515840 173037
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A9NW (SE)	589	5	515815 173000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A18SW (N)	605	5	515344 174000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A7NE (SW)	621	5	515000 172845

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A14NW (E)	636	5	516000 173383
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A14SW (E)	638	5	516000 173326
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A12SE (W)	640	5	514723 173174
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A17SE (NW)	690	5	515000 174000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A9NW (SE)	740	5	516000 173000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A17SE (NW)	787	5	514826 174000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A12SW (W)	798	5	514565 173148
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A18NE (N)	876	5	515633 174227
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A19SW (NE)	882	5	516000 174000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A18NE (N)	886	5	515618 174242
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A7NW (SW)	903	5	514512 173000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic: no data Concentration: Cadmium: no data Concentration: Chromium: no data Concentration: Lead Concentration: no data Nickel: no data Concentration:	A7NW (SW)	916	5	514497 173000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic no data Concentration: Cadmium no data Concentration: Chromium no data Concentration: Lead Concentration: no data Nickel no data Concentration:	A9NE (SE)	920	5	516149 172898
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic no data Concentration: Cadmium no data Concentration: Chromium no data Concentration: Lead Concentration: no data Nickel no data Concentration:	A9NE (SE)	931	5	516215 173000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic no data Concentration: Cadmium no data Concentration: Chromium no data Concentration: Lead Concentration: no data Nickel no data Concentration:	A7NW (W)	992	5	514414 173000
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: London Arsenic no data Concentration: Cadmium no data Concentration: Chromium no data Concentration: Lead Concentration: no data Nickel no data Concentration:	A9SW (SE)	992	5	516000 172617
47	<b>BGS Recorded Mineral Sites</b> Site Name: Twickenham Gravel Pit Location: , Twickenham, Surrey Source: British Geological Survey, National Geoscience Information Service Reference: 164159 Type: Opencast <b>Status: Ceased</b> Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Quaternary, Devensian Geology: Kempton Park Gravel Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	82	4	515383 173298
	<b>BGS Measured Urban Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Grid: 515208, 173268 Soil Sample Type: Topsoil Sample Area: London Arsenic Measured 20.00 mg/kg Concentration: Cadmium Measured 0.30 mg/kg Concentration: Chromium Measured 58.00 mg/kg Concentration: Lead Measured 459.00 mg/kg Concentration: Nickel Measured 21.00 mg/kg Concentration:	A13SW (SW)	162	4	515208 173268

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Measured Urban Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Grid: 515184, 173801 Soil Sample Type: Topsoil Sample Area: London Arsenic Measured 12.00 mg/kg Concentration: Cadmium Measured 0.30 mg/kg Concentration: Chromium Measured 64.00 mg/kg Concentration: Lead Measured 92.00 mg/kg Concentration: Nickel Measured 14.00 mg/kg Concentration:	A18SW (N)	433	4	515184 173801
	<b>BGS Measured Urban Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Grid: 515794, 173274 Soil Sample Type: Topsoil Sample Area: London Arsenic Measured 18.00 mg/kg Concentration: Cadmium Measured 0.30 mg/kg Concentration: Chromium Measured 56.00 mg/kg Concentration: Lead Measured 356.00 mg/kg Concentration: Nickel Measured 20.00 mg/kg Concentration:	A14SW (E)	443	4	515794 173274
	<b>BGS Measured Urban Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Grid: 514850, 173256 Soil Sample Type: Topsoil Sample Area: London Arsenic Measured 24.00 mg/kg Concentration: Cadmium Measured 1.10 mg/kg Concentration: Chromium Measured 62.00 mg/kg Concentration: Lead Measured 466.00 mg/kg Concentration: Nickel Measured 31.00 mg/kg Concentration:	A12SE (W)	494	4	514850 173256
	<b>BGS Measured Urban Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Grid: 515276, 172853 Soil Sample Type: Topsoil Sample Area: London Arsenic Measured 15.00 mg/kg Concentration: Cadmium Measured 0.30 mg/kg Concentration: Chromium Measured 58.00 mg/kg Concentration: Lead Measured 179.00 mg/kg Concentration: Nickel Measured 19.00 mg/kg Concentration:	A8NW (S)	518	4	515276 172853
	<b>BGS Measured Urban Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Grid: 515724, 173777 Soil Sample Type: Topsoil Sample Area: London Arsenic Measured 19.00 mg/kg Concentration: Cadmium Measured 0.30 mg/kg Concentration: Chromium Measured 77.00 mg/kg Concentration: Lead Measured 265.00 mg/kg Concentration: Nickel Measured 19.00 mg/kg Concentration:	A19SW (NE)	529	4	515724 173777