

Katherine McCullough
Merchant Land Investments Limited
66 Leman Street
London
E1 8EU

Dear Katherine,

Re: Manor Lodge, Northwood – Ground Investigation

Background

Erda Associates Ltd. were requested by Merchant Land Investments Limited. (hereafter referred to as the client) to undertake a ground investigation at the subject site to assess the risk of potentially contaminated soils at the site known as *Manor Lodge, Northwood*.

Site location and boundary plans are included in **Appendix A**. Finalised proposed development plans are not available at the time of writing, however, it is understood that the site will be redeveloped with residential apartments.

A previous contaminated land desk study completed by Argyll Environmental identified a moderate risk of contamination at the subject site due to a historic garage and filling station located 10m and 15m to the west, respectively. A copy of the previous desk study is included in **Appendix B**, for reference.

In light of the above, the client required an initial ground investigation to be undertaken in order to determine if the identified historic offsite activities had impacted the site.

Site Works

Erda Associates Ltd. (Erda) were asked to attend the subject site on 15th July 2021 to undertake the necessary ground investigation works at the subject site.

Three window sample boreholes were advanced to a maximum depth of 5.00mbgl in the eastern part of the site to assess the potential presence of contamination. A total of nine shallow soil samples were retrieved and sent for analysis at a UKAS/MCERTS accredited laboratory.

An exploratory hole location plan and exploratory hole logs are included in **Appendix C**.

Laboratory Analysis

Nine shallow soil samples were screened for TPH, BTEX, MTBE, VOC and SVOC's. The laboratory test results are included in **Appendix D**.

Contamination Assessment

The Contaminated Land Exposure Assessment (CLEA) guidance and published Soil Guideline Values (SGV) have been incorporated with Generic Assessment Criteria (GAC), for determinands which do not have a published SGV, to provide a competent Tier 1 Assessment. The analysis results were assessed against Tier 1 Assessment Criteria for a

residential with produce end use (the most stringent scenario). The GAC and methodology references are contained in **Appendix E**.

An assessment of the analysis results for TPH, BTEX, MTBE, VOC and SVOC's contained in **Appendix D**, revealed that all samples do not exceed the respective GAC for residential end use with produce.

Based on the above, no contamination likely to be associated with the historic nearby garage and filling station has been identified. Therefore, the risk from these land uses is considered to be negligible and further remediation work with regard to these historic land uses is not required.

Conclusion and Recommendations

No significant contamination in relation to the nearby historic garage and filling station has been identified. Therefore, further remediation relating to these nearby land uses is not considered to be required.

Should you have any queries, or require any further information, please do not hesitate to contact us.

Yours Sincerely

A handwritten signature in black ink that reads 'P. Devitt'.

Phil Devitt, BSc MSc MRICS
Director

Encl.

Appendix A – Site Plans

Appendix B – Argyll Environmental Desk Study

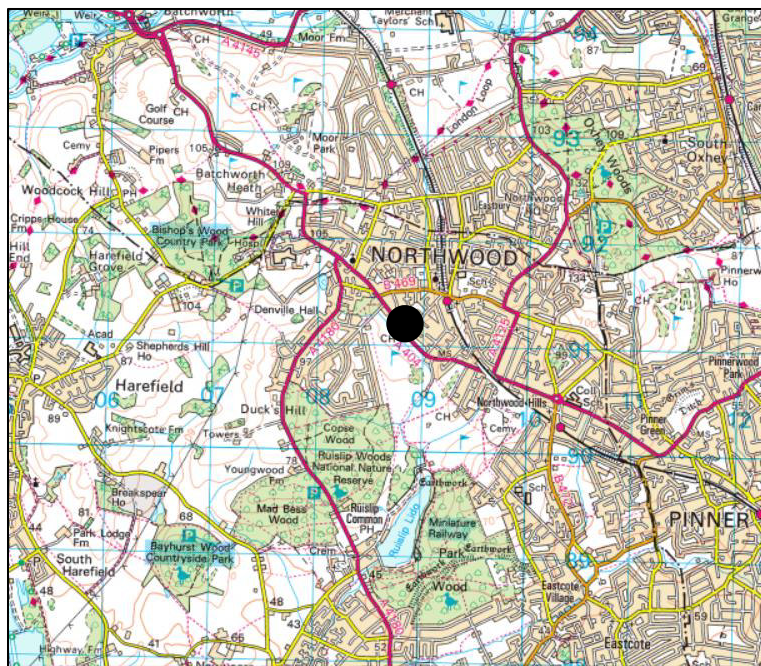
Appendix C - Exploratory Hole Location Plan & Logs

Appendix D – Chemical Analysis Results

Appendix E – Erda Associates Tier 1 GACs and Methodology

Appendix A

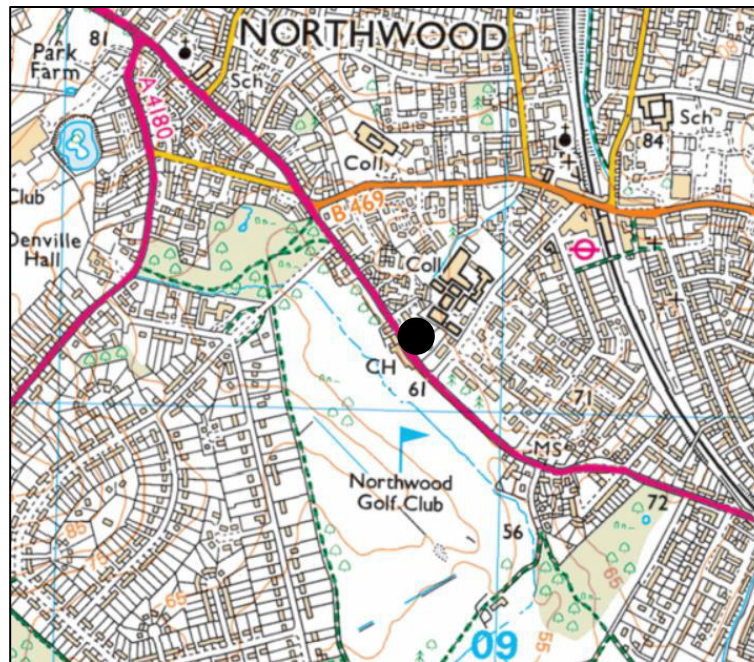




KEY:

● Approximate Site Location

DO NOT SCALE



TITLE:

Site Location Plan

PROJECT:

Manor Lodge, Northwood

PROJECT No:

EAL.67.21

DATE:

07/2021

SCALE :

NTS

DRAWN :

PD

DWG No:

Figure 1



KEY:



Site Boundary



DO NOT SCALE



TITLE:

Site Layout

PROJECT:

Manor Lodge, Northwood

PROJECT No:

EAL.67.21

DATE:

07/2021

SCALE :

NTS

DRAWN :

PD

DWG No:

Figure 2

Appendix B





Manor Lodge Rickmansworth Road, Northwood, HA6 2QT

Report Prepared for: Search Acumen

Report Reference: 280979077

Client Reference: 11883.0006/MGW_SSC

Date: 24 June 2021



Contaminated Land

FURTHER ACTION

Recommendations | SEE PAGE 1

[CLICK HERE](#)

Consultant Commentary | SEE PAGE 4

[CLICK HERE](#)



Flood Risk

PASSED

Recommendations | SEE PAGE 2

[CLICK HERE](#)

Consultant Commentary | SEE PAGE 6

[CLICK HERE](#)



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Operational Compliance

NOT IDENTIFIED | SEE PAGE 1

Operations at the Site are unlikely to require a permit or present a risk.

[CLICK HERE](#)

Natural and Mining Related Hazards

IDENTIFIED | SEE PAGE 5

We have identified potential ground stability issues.

[CLICK HERE](#)



Authored by:

Samuel Hackett BSc (Hons), MSc, MEnvSci

t: 0330 036 6115 **e:** Sam.Hackett@landmark.co.uk



Executive Summary



Contaminated Land

FURTHER ACTION



Liability Assessment

We have identified potential soil and/or groundwater liabilities. To quantify these we recommend you undertake the action outlined below.

What is the overall risk of contaminants from on Site activities?

LOW

What is the risk of contaminants from off-site activities impacting the Site?

MODERATE

What is the environmental sensitivity (pathways and receptors) rating?

HIGH



Argyll's Recommendations

Phase 1 Environmental Audit (from £1250.00 + VAT including third-party costs)

Risk: The nearby former filling station may have caused contamination. As the Site is being redeveloped, Planning Conditions will be used as a mechanism to investigate the nature and extent of contamination, and if necessary, remediate the Site to an acceptable standard.

Action: A Phase 1 Environmental Assessment is the first step in the phased approach to contaminated land assessments. If potential contaminant linkages are identified, this will likely lead on to a Phase 2 Intrusive Investigation.

Operational Compliance



Argyll's Comment

The Site does not appear to be engaged in activities that require permitting.



Executive Summary



Flood Risk

PASSED



Consultant's Comment

The Site is not considered to be at significant risk of flooding. However, it would be prudent to consider our recommendations below.

Would a Flood Risk Assessment be required if development is proposed?

NO

What is the risk of flooding in an undefended scenario or assuming defences fail?

LOW TO MODERATE

Are there existing flood defences within 500m of the Site?

NO

Insurance

The flood risk identified is unlikely to affect obtaining buildings and contents insurance at standard terms.



Recommendations

No action required - standard enquiries only

Standard Enquiries

- Ask the seller whether flooding has occurred in the area before. If it has, please contact us for advice.
- Establish the availability of buildings and contents insurance before exchanging contracts.



Report Scope

Report Prepared on: **Manor Lodge Rickmansworth Road, Northwood, HA6 2QT**

Current Use: **Light Industrial**

Proposed Use: **Residential**

Transaction Type: **Assumed purchase**

Site Area (m²): **1852.14**

National Grid Reference: **508810 191170**



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Contaminated Land Consultant Commentary



On-site Sources

LOW

A review of historical maps show the Site remained undeveloped until c.1913 when it was occupied for residential use. No further significant changes were identified in later mapping.

Off-site Sources

MODERATE

A review of historical maps dating from 1865 show the following potentially contaminative uses within 100m of the Site: a pond 50m east filled c.1913, a garage 10m west c.1959-c.1965, and a filling station 15m west c.1992-c.2006 with an associated environmental permit.

Pathways and Receptors

HIGH

The general area appears to be in residential use, with both residential properties currently on Site and proposed on Site.

No superficial deposits have been identified underlying the Site. The bedrock hydrogeology is classified as a Secondary Aquifer - A.

The Site lies within a Source Protection Zone II.

There are no abstraction licences located within 500m.

The nearest watercourse is 32m west.

Finally, no designated eco-receptors were identified within a 500m radius of the Site.

Additional Sources of Information

No additional sources of information have been used.

Natural and Mining Related Hazards



Natural and Mining Related Hazards: This section contains information on natural and mining related hazards which may affect the Site. These include subsidence, radon and mining. Hazards that may need further investigation are detailed here. This report is neither a guarantee of the physical condition of the subject Site nor a substitute for any physical investigation or inspection.

Ground Stability Considerations

Risk	Argyll's Summary	Suggested Action
Former Mining	<p>Our search indicates that the Site is not within a Coalfield Consultation Area.</p> <p>The Site has been identified in an area that might have been used for mining other than coal in the past.</p>	<p>As such, no action is required.</p> <p>We recommend that you consult a local RICS accredited surveyor to arrange the most suitable survey for the Site, to assess whether or not it is affected by ground stability issues.</p> <p>If it has been built recently, contact Building Control at the Local Authority in order to check whether it was constructed to a standard that will minimise the risk of structural damage. Alternatively, the Site may benefit from building warranty through companies such as the NHBC.</p>
Natural Ground Instability	<p>Information from the BGS indicates that the ground in the area is prone to changing shape or volume, usually because of varying amounts of water in the ground throughout the year. This means that there is a moderate potential that problems could occur in the area.</p>	<p>Whether or not a Site is affected by ground movement can depend on a number of factors – including property age and type of construction.</p> <p>We recommend that you consult a local RICS accredited surveyor to arrange the most suitable survey for the Site, to assess whether or not it is affected by ground stability issues.</p> <p>If it has been built recently, contact Building Control at the Local Authority in order to check whether it was constructed to a standard that will minimise the risk of structural damage. Alternatively, the Site may benefit from building warranty through companies such as the NHBC.</p>
Coal Mining Subsidence Damage Claims	<p>Our search indicates that the Site is not within an area where Coal Mining Subsidence Damage Claims have been recorded.</p>	<p>As such, no action is required.</p>

Radon

No Risk Identified.

Flood Risk

Consultant Commentary



Flood Analysis

Would a Flood Risk Assessment be required if development is proposed?

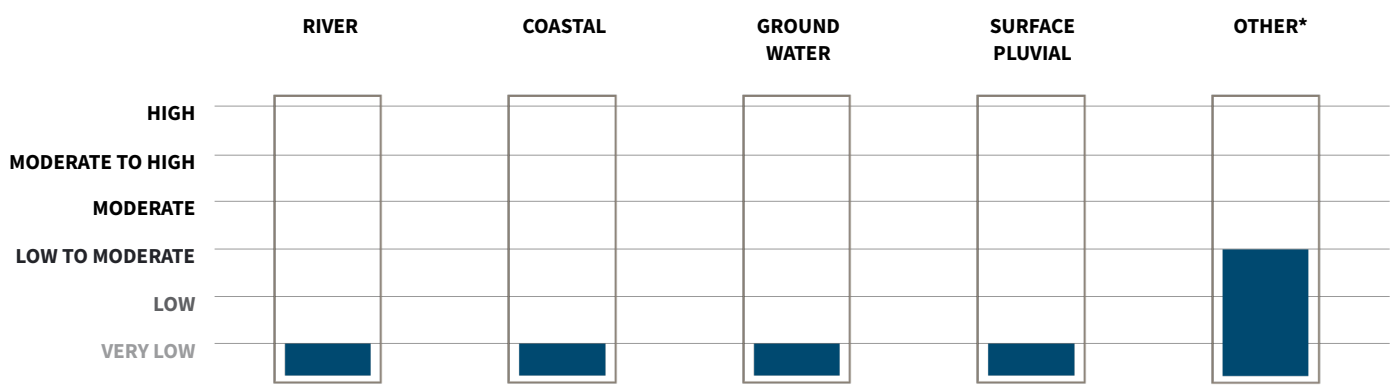
NO

What is the risk of flooding in an undefended scenario or assuming defences fail?

LOW TO MODERATE

Are there existing flood defences within 500m of the Site?

NO



* Other factors influencing flood risk include flood storage areas, historical floods, and proximity to water features.



Argyll's Comment

River No commentary required.

Coastal No commentary required.

Groundwater No commentary required.

Surface Water No commentary required.

Other Factors A watercourse is located 32m west. Given the size and nature of this watercourse it is unlikely to present a significant risk.

Flood Risk

Other Considerations



Flood Risk Considerations: In this section we highlight issues that may be relevant to your transaction. These issues fall outside of the flood risk analysis above, but still warrant consideration.

Additional Considerations

Risk	Summary	Suggested Action
Dam and Reservoir Failure NOT IDENTIFIED	This Site is not within an area that would be flooded in the event of a significant infrastructure failure.	Contact Canal and Rivers Trust
Sewer Flooding NOT SEARCHED	In times of extreme rainfall events sewers can overflow and cause local flooding. At Risk Registers are maintained by water and sewerage companies in England and Wales. These registers are not always complete so asking the seller is equally important.	Review Con29DW and send enquiries to the seller.

Flood Risk Management Options

Flood protection measures can help manage risk, while planning for a flood event is key to minimise impact and disruption. Where a risk has been identified, the best next step is to better understand the flood depths and likely extent. Refining the risk will then inform the right solution. Where property level protection is still required, a surveyor will be best placed to advise on the configuration.

Options	Summary
Resistance	Flood resistance measures are physical barriers designed to keep water out of the property and can either be mountable or passive. They include flood doors or guards, non return valves on plumbing and airbrick covers. If buying products, make sure they are kitemarked.
Resilience	Flood resilience measures are incorporated into building design to minimise damage. Once flood water subsides a resilient design avoids a major drying out spell or gutting.
Business Continuity Plan	A business continuity plan is a strategic plan of action to implement in an emergency (i.e. flood event). This plan ensures a business can continue to operate during emergency situations and reduces the risk of avoidable losses.
Flood Evacuation Plan	A flood evacuation plan sets out clear steps to ensure the safe evacuation of staff during a flood. It will form part of the Business Continuity Plan.

Contaminated Land

Data Section



Contaminated Land Data: This section details the data used as part of our Contaminated Land Risk analysis. Each key dataset is mapped with the detail outlined beneath. We only show section headers beyond the tabular summary where we have found data to report. The relevant data has been reviewed by the report writer, supplemented by a review of historical mapping.

contents

Tabular Summary	This section gives an overview of the data found at the Site and in the surrounding area. We present the data in three buffer zones, extending to a maximum of 500m. The search distances vary based on the scale of the activity and regulatory guidance. We display the number of records found in each database under the relevant heading. Where we have not searched a database, we will display the abbreviation N/A instead.
Authorised Industrial Processes	This section shows current and licensed activities relevant to contaminated land and environmental controls from a range of regulatory bodies. The search distances vary based on the scale of the activity.
Incidents and Enforcements	This section shows pollution incidents, licence enforcements and prosecutions. It also includes Contaminated Land Register Entries and Notices.
Landfill and Waste sites	This section presents detailed information on waste and landfill sites for the Site and surrounding area.
Current Land Use	This section shows contemporary trade directories and fuel stations. This information is indicative of operations at the Site and surrounding area, and may also relate to inactive or former land uses.
Historical Land Use	This section presents selected information on historical land use for the Site and surrounding area. The data shows historical land use information collected from 1:10,000 scale mapping, and for tanks and energy facilities 1:2,500 scale mapping. This includes polygon and point based land uses digitised by Landmark.
Groundwater Vulnerability	This section presents information relating to the aquifer designations beneath the Site. The aquifer designation of the Superficial and Bedrock geology are both mapped, followed by the detail. These aquifer designations are followed by information on the local geology. This information is considered in our Pathways and Receptors section.
Environmental Sensitivity	This section presents designated eco-receptors and sensitive area designations at the Site and in the surrounding area. This information is considered in our Pathways and Receptors section.
Natural and Mining Related Hazards	This section contains information on natural and mining related hazards, which may affect the Site. These include subsidence, radon and mining.



Contaminated Land: Tabular Summary

Authorised Industrial Processes

Authorisations	On-site	1-100m	101-250m
Local Authority Pollution Prevention and Controls	0	1	N/A
Local Authority Integrated Pollution Prevention And Control	0	0	N/A
Integrated Pollution Controls	0	0	N/A
Environmental Permitting Regulations - Industry	0	0	N/A
Radioactive Substances Register*	0	0	N/A
Discharges	On-site	1-100m	101-250m
Consented Discharges to Controlled Waters**	0	0	N/A
Referrals of Red List Discharges to Sewers (Corporate Entities)**	0	0	N/A
Hazardous Sites	On-site	1-100m	101-250m
Control of Major Accident Hazards Sites (COMAH)	0	0	0
Explosive Sites	0	0	0
Notification of Installations Handling Hazardous Substances (NIHHS)	0	0	0
Planning Hazardous Substance Consents	0	0	0

Incidents and Enforcements

Contraventions	On-site	1-100m	101-250m
Contaminated Land Register Entries and Notices	0	0	0
Local Authority Pollution Prevention and Control Enforcements	0	0	N/A
Enforcement and Prohibition Notices	0	0	N/A
Planning Hazardous Substance Enforcements	0	0	N/A
Environmental Pollution Incidents	0	0	N/A
Prosecutions (Post 2000)	0	0	N/A

Landfill and Waste Sites

Landfill and Waste	On-site	1-100m	101-250m
BGS Recorded Landfill Sites	0	0	0
Integrated Pollution Control Registered Waste Sites	0	0	0
Permitted Waste Sites - Authorised Landfill Site Boundaries	0	0	0
Environmental Permitting Regulations - Waste Sites	0	0	0
Local Authority Recorded Landfill Sites	0	0	0
Registered Landfill Sites	0	0	0
Registered Waste Transfer Sites	0	0	N/A
Registered Waste Treatment or Disposal Sites	0	0	N/A
Historic Landfill	0	0	0



Contaminated Land: Tabular Summary

Current Land Use

Current Potentially Contaminative Uses	On-site	1-100m	101-250m
Contemporary Trade Directory Entries**	0	0	N/A
Fuel Station Entries	0	1	N/A

Historical Land Use

Historical Potentially Contaminative Uses	On-site	1-100m	101-250m
Historical Tanks And Energy Facilities	0	1	N/A
Potentially Contaminative Industrial Uses (Past Land Use)	0	0	N/A

Potentially Infilled Land	On-site	1-100m	101-250m
Former Marshes	0	0	N/A
Potentially Infilled Land (Non-Water)	0	0	N/A
Potentially Infilled Land (Water)	0	1	N/A

Groundwater Vulnerability

Hydrogeology	On-site	1-250m	251-500m
Superficial Aquifer Designations	No	N/A	N/A
Bedrock Aquifer Designations	Yes	N/A	N/A

Geology

Geology	On-site	1-250m	251-500m
BGS 1:50,000 Bedrock Geology	Yes	N/A	N/A
BGS 1:50,000 Superficial Deposits	No	N/A	N/A
BGS 1:50,000 Geological Mapping Coverage	Yes	N/A	N/A



Contaminated Land: Tabular Summary

Environmental Sensitivity

Environmental Sensitivity	On-site	1-250m	251-500m
Areas of Outstanding Natural Beauty	0	0	0
Environmentally Sensitive Areas	0	0	0
Forest Parks	0	0	0
Local Nature Reserves	0	0	0
Marine Conservation Zones	0	0	0
National Nature Reserves	0	0	0
National Parks	0	0	0
Ramsar Sites	0	0	0
Sites of Special Scientific Interest	0	0	0
Special Areas of Conservation	0	0	0
Special Protection Areas	0	0	0
Water Abstractions	0	0	0
Source Protection Zones	2	1	0

Natural and Mining Related Hazards

Former Mining	On-site	1-100m	101-250m
Coalfield Consultation Areas	0	N/A	N/A
Potentially Contaminative Land Uses (1950-1980) from large scale historical mapping	0	N/A	N/A
Potentially Contaminative Land Uses (1855-1909) from large scale historical mapping*	0	0	N/A
Potentially Contaminative Land Uses (1893-1915) from large scale historical mapping	0	N/A	N/A
Potentially Contaminative Land Uses (1906-1937) from large scale historical mapping	0	N/A	N/A
Potentially Contaminative Land Uses (1924-1949) from large scale historical mapping	0	N/A	N/A
Potentially Contaminative Industrial Uses (Past Land Use)	0	N/A	N/A
Man-Made Mining Cavities	0	0	0
BGS Recorded Mineral Sites	0	0	N/A
Mining Instability	1	N/A	N/A
Non Coal Mining Areas of Great Britain*	0	0	N/A
Potential Mining Areas	0	N/A	N/A
Salt and Brine	On-site	1-100m	101-250m
Brine Compensation Area	0	N/A	N/A
Brine Pumping Related Features	0	N/A	N/A
Brine Subsidence Solution Area	0	N/A	N/A
Salt Mining Related Features	0	N/A	N/A



Contaminated Land: Tabular Summary

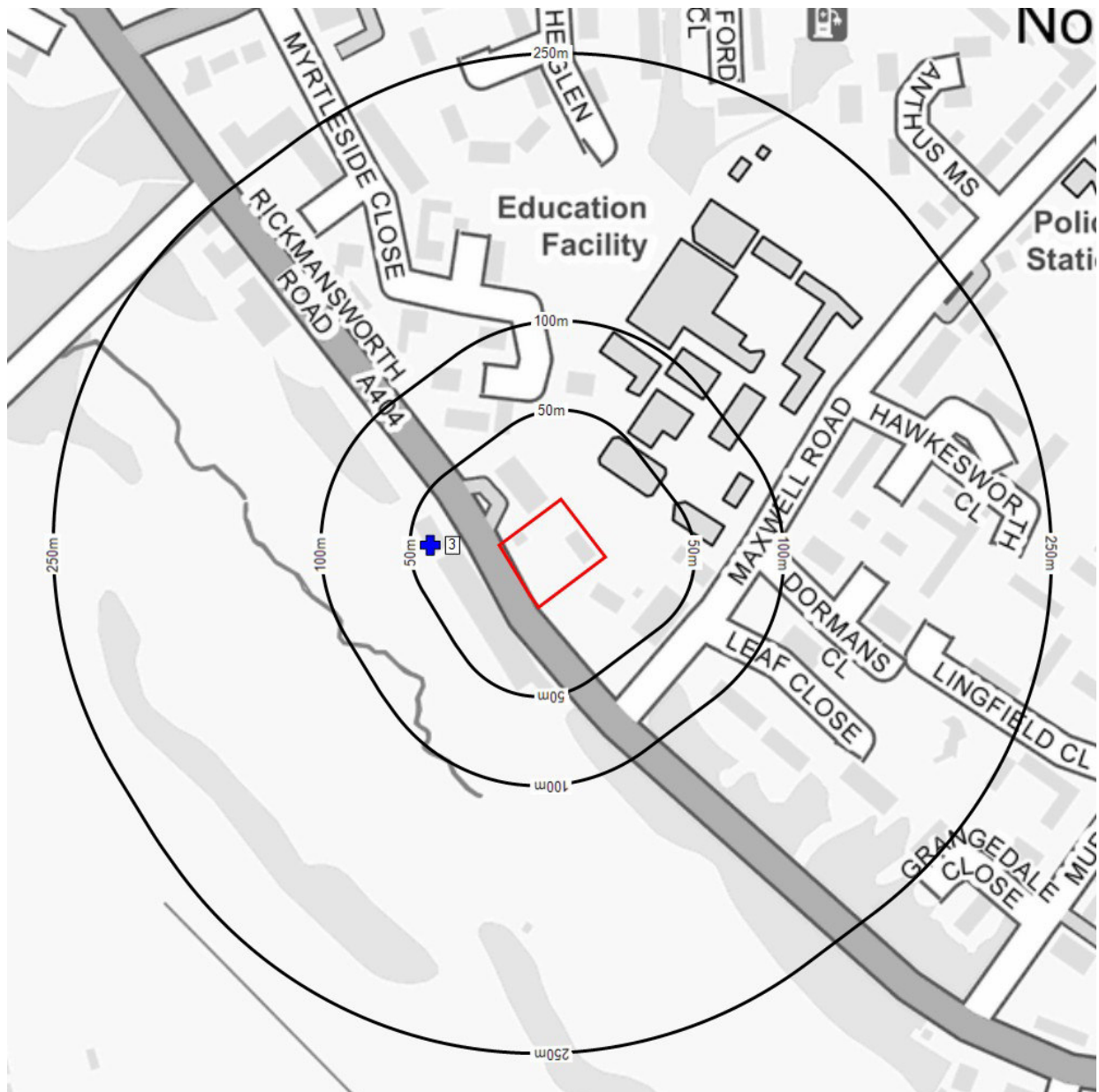
Landfill Sites and Infilled Land	On-site	1-100m	101-250m
Former Marshes	0	N/A	N/A
Potentially Infilled Land (Non-Water)	0	N/A	N/A
Potentially Infilled Land (Water)	0	N/A	N/A
Potentially Contaminative Industrial Uses (Past Land Use)	0	N/A	N/A
BGS Recorded Landfill Sites	0	N/A	N/A
Permitted Waste Sites - Authorised Landfill Site Boundaries	0	N/A	N/A
Registered Landfill Sites	0	N/A	N/A
Local Authority Recorded Landfill Sites	0	N/A	N/A
Historic Landfill	0	N/A	N/A
Natural Ground Instability	On-site	1-100m	101-250m
Natural Cavities	0	0	0
Potential for Landslide Ground Stability Hazards*	0	0	N/A
Potential for Ground Dissolution Stability Hazards*	0	0	N/A
Potential for Compressible Ground Stability Hazards*	0	0	N/A
Potential for Shrinking or Swelling Clay Ground Stability Hazards*	1	0	N/A
Potential for Running Sand Ground Stability Hazards*	0	0	N/A
Potential for Collapsible Ground Stability Hazards*	0	0	N/A
Coal Mining Subsidence Damage Claims	On-site	1-100m	101-250m
Coal Mining Subsidence Damage Claims*	0	0	N/A
Insurance Claims from Subsidence	On-site	1-100m	101-250m
Postcode Unit Insurance Claims Rating - Subsidence	0	N/A	N/A
Radon	On-site	1-100m	101-250m
Radon Potential	0	N/A	N/A

**dataset searched to 25m

*dataset searched to 50m



Contaminated Land: Authorised Industrial Processes



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- | | |
|---|---|
| Site | Consented Discharges to Controlled Waters |
| Multiple Features Present | Referrals of Red List Discharges to Sewers (Corporate Entities) |
| Local Authority Pollution Prevention and Controls | Control of Major Accident Hazards Sites (COMAH) |
| Local Authority Integrated Pollution Prevention And Control | Explosive Sites |
| Integrated Pollution Controls | Notification of Installations Handling Hazardous Substances (NIHHS) |
| Environmental Permitting Regulations - Industry | Planning Hazardous Substance Consents |
| Radioactive Substances Register | |



Contaminated Land: Authorised Industrial Processes

Authorisations

Local Authority Pollution Prevention and Controls

Map ID	Details	Distance	Direction	Contact
3	<p>Name: Texaco Northwood</p> <p>Reference: NOT GIVEN</p> <p>Date of Issue:</p> <p>Location: 279 Rickmansworth Road, NORTHWOOD, Middlesex, HA6 2QW</p> <p>Description: PG1/14 Petrol filling station</p> <p>Status: Authorised</p>	39m	W	3

Local Authority Integrated Pollution Prevention And Control

No features identified.

Integrated Pollution Controls

No features identified.

Environmental Permitting Regulations - Industry

No features identified.

Radioactive Substances Register

No features identified.



Discharges

Consented Discharges to Controlled Waters

No features identified.

Referrals of Red List Discharges to Sewers (Corporate Entities)

No features identified.



Hazardous Sites

Control of Major Accident Hazards Sites (COMAH)

No features identified.

Explosive Sites

No features identified.

Notification of Installations Handling Hazardous Substances (NIHHS)

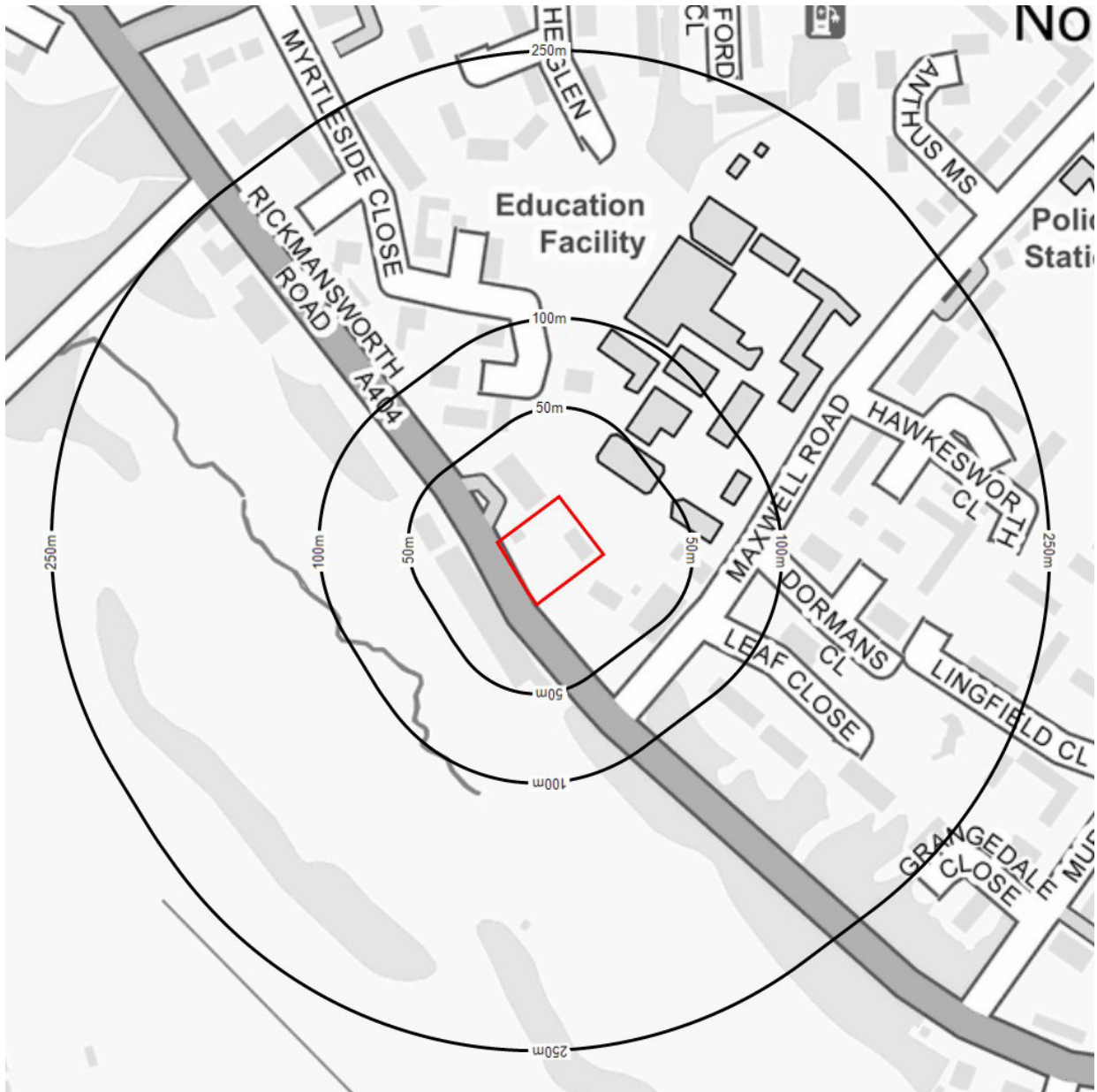
No features identified.

Planning Hazardous Substance Consents

No features identified.



Contaminated Land: Incidents and Enforcements



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- | | | | |
|--|---|--|---|
| | Site | | Enforcement and Prohibition Notices |
| | Multiple Features Present | | Planning Hazardous Substance Enforcements |
| | Contaminated Land Register Entries and Notices | | Environmental Pollution Incidents |
| | Local Authority Pollution Prevention and Control Enforcements | | Prosecutions (Post 2000) |



Contaminated Land: Incidents and Enforcements

Contraventions

Contaminated Land Register Entries and Notices

No features identified.

Local Authority Pollution Prevention and Control Enforcements

No features identified.

Enforcement and Prohibition Notices

No features identified.

Planning Hazardous Substance Enforcements

No features identified.

Environmental Pollution Incidents

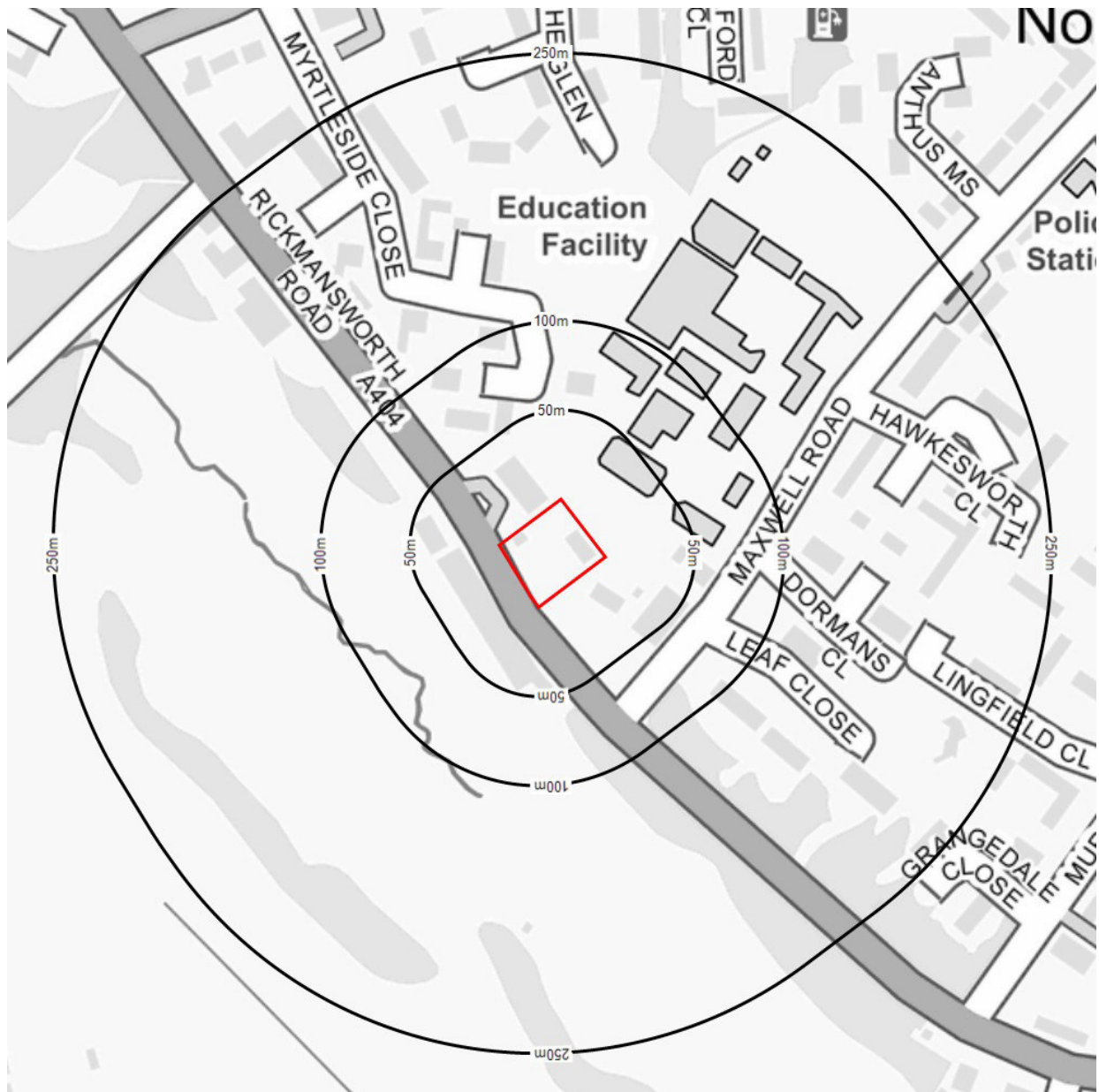
No features identified.

Prosecutions (Post 2000)

No features identified.



Contaminated Land: Landfill and Waste



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- | | | | |
|--|---|--|--|
| | Site | | Local Authority Recorded Landfill Sites |
| | Multiple Features Present | | Registered Landfill Sites |
| | BGS Recorded Landfill Sites | | Registered Waste Transfer Sites |
| | Integrated Pollution Control Registered Waste Sites | | Registered Waste Treatment or Disposal Sites |
| | Permitted Waste Sites - Authorised Landfill Site Boundaries | | Historic Landfill |
| | Environmental Permitting Regulations - Waste Sites | | |



Landfill and Waste

BGS Recorded Landfill Sites

No features identified.

Integrated Pollution Control Registered Waste Sites

No features identified.

Permitted Waste Sites - Authorised Landfill Site Boundaries

No features identified.

Environmental Permitting Regulations - Waste Sites

No features identified.

Local Authority Recorded Landfill Sites

No features identified.

Registered Landfill Sites

No features identified.

Registered Waste Transfer Sites

No features identified.

Registered Waste Treatment or Disposal Sites

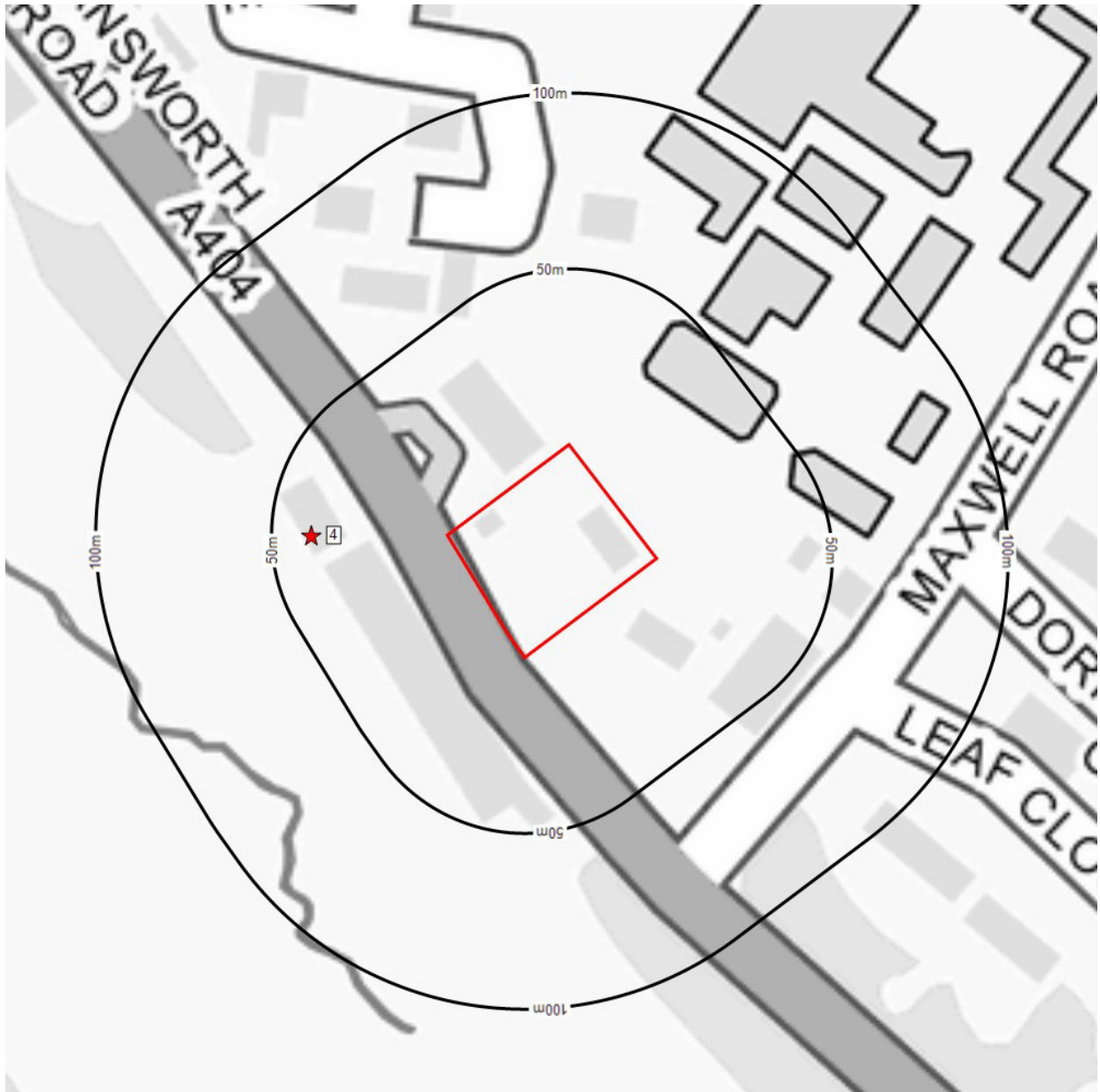
No features identified.

Historic Landfill

No features identified.



Contaminated Land: Current Land Uses



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Site



Multiple Features Present



Contemporary Trade Directory Entries



Fuel Station Entries



Contaminated Land: Current Land Uses

Current Potentially Contaminative Uses

Contemporary Trade Directory Entries

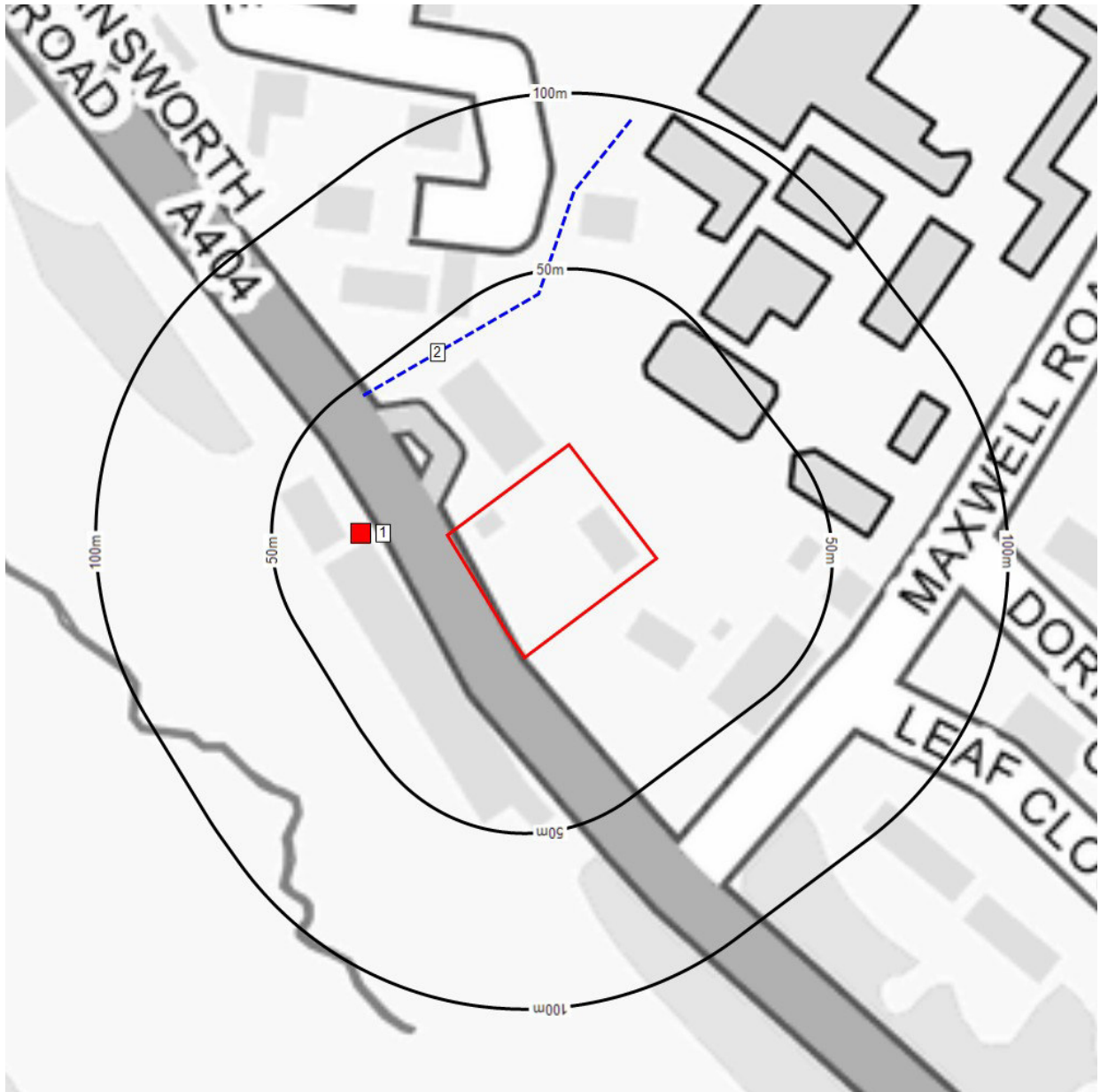
No features identified.

Fuel Station Entries

Map ID	Details	Distance	Direction	Contact
4	Name: Northwood Service Station Status: Obsolete Premises Type: Not Applicable Location: Rickmansworth Road, Northwood, Outer London, HA6 2QW	39m	W	4



Contaminated Land: Historical Land Uses



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	Site		Former Marshes
	Multiple Features Present		Potentially Infilled Land (Non-Water)
	Historical Tanks And Energy Facilities		Potentially Infilled Land (Water)
	Potentially Contaminative Industrial Uses (Past Land Use)		



Contaminated Land: Historical Land Uses

Historical Potentially Contaminative Uses

Historical Tanks And Energy Facilities

Map ID	Details	Distance	Direction	Contact
1	Type: Potential Tanks Date of Mapping: 1959	25m	W	1

Potentially Contaminative Industrial Uses (Past Land Use)

No features identified.



Contaminated Land: Historical Land Uses

Potentially Infilled Land

Former Marshes

No features identified.

Potentially Infilled Land (Non-Water)

No features identified.

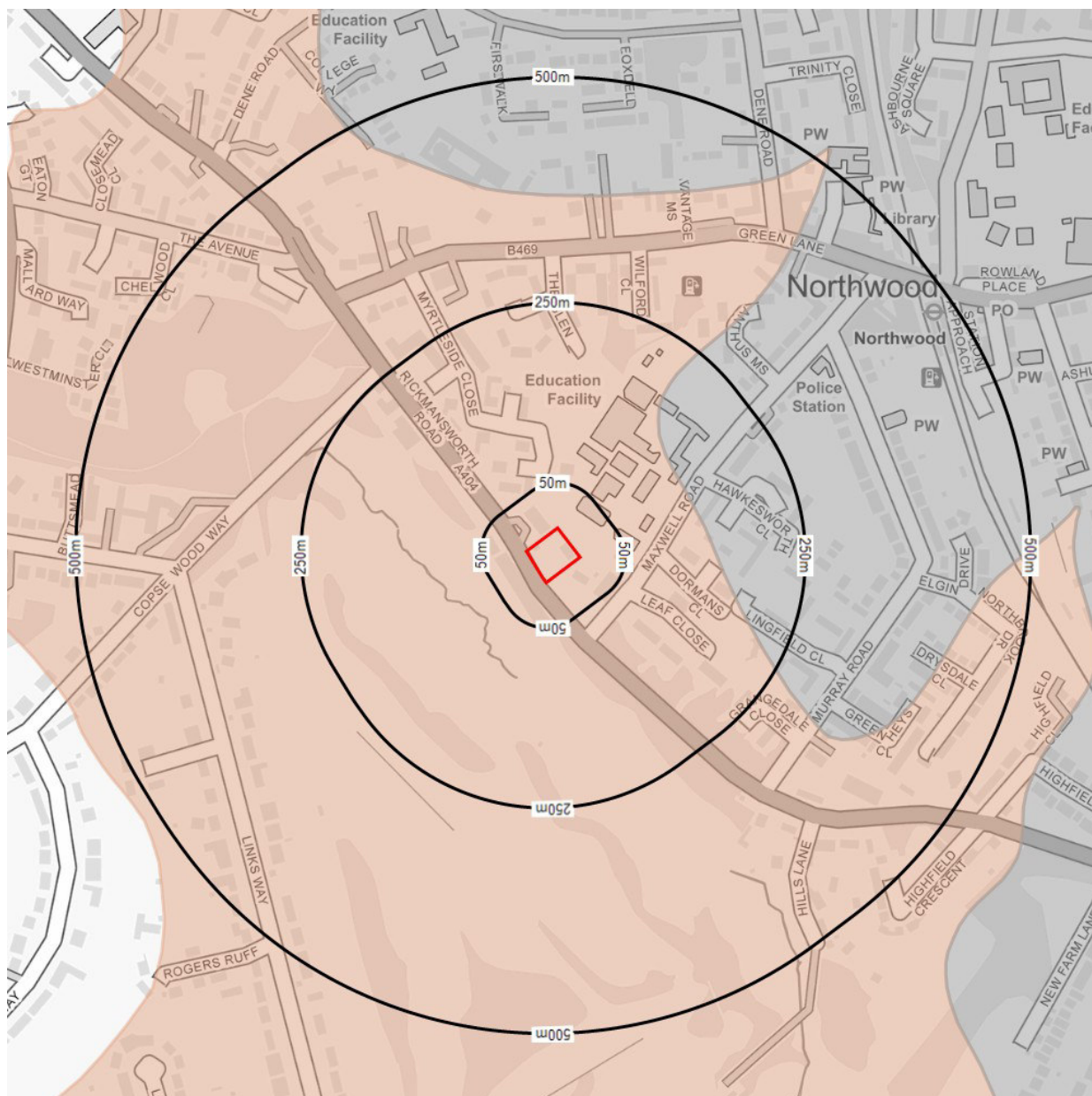
Potentially Infilled Land (Water)

Map ID	Details	Distance	Direction	Contact
2	Details: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Map Published Date: 1960	42m	NW	1



Contaminated Land: Groundwater Vulnerability

Bedrock



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Site



Principal Aquifer



Secondary Aquifer A



Secondary Aquifer B



Secondary Aquifer Undifferentiated



Unproductive Strata



Unknown



Contaminated Land: Groundwater Vulnerability

Superficial



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Site



Principal Aquifer



Secondary Aquifer A



Secondary Aquifer B



Secondary Aquifer Undifferentiated



Unproductive Strata



Unknown



Unknown (lakes and Landslips)



Hydrogeology

Bedrock Aquifer Designations

Details	Distance	Direction	Contact
Aquifer Designation: Secondary Aquifer - A	0m	N	5

Superficial Aquifer Designations

No features identified.



Geology

BGS 1:50,000 Bedrock Geology

Details	Distance	Direction	Contact
Lex Code: LMBE	0m	N	6
Rock Name: Lambeth Group			
Rock Type: Clay, Silt and Sand			
Min Age: Not Supplied			
Max Age: Thanetian			

BGS 1:50,000 Superficial Deposits

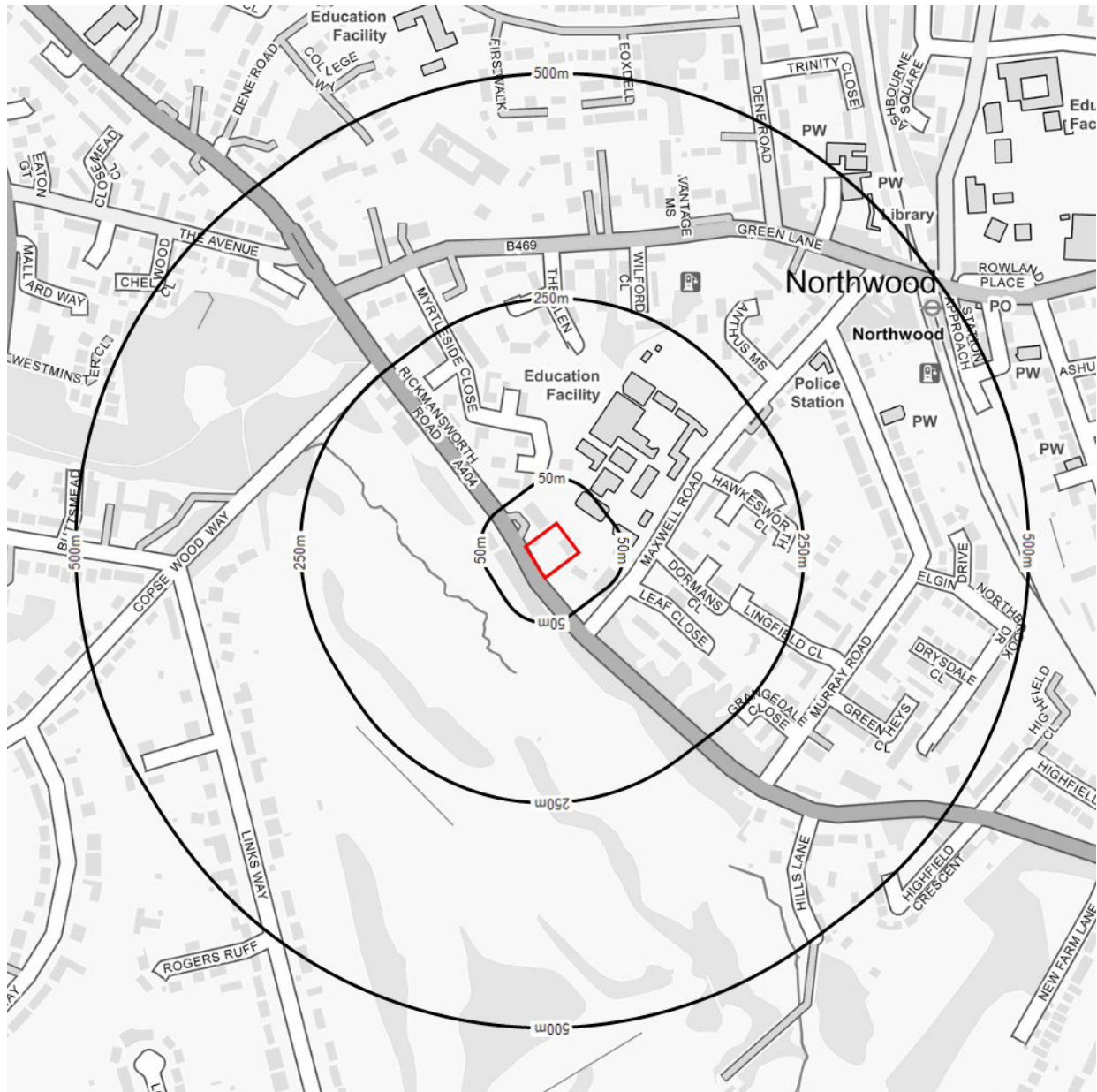
No features identified.

BGS 1:50,000 Geological Mapping Coverage

Details	Distance	Direction	Contact
Map Sheet No: 255	0m	N	6
Map Name: Beaconsfield			
Bedrock Geology: Available			
Superficial Geology: Available			



Contaminated Land: Environmental Sensitivity



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Site	Local Nature Reserves	RAMSAR Sites
Multiple Features Present	Marine Nature Reserves	Sites of Special Scientific Interest
Areas of Outstanding Natural Beauty	National Nature Reserves	Special Areas of Conservation
Environmentally Sensitive Areas	National Parks	Special Protection Areas
Forest Parks	National Scenic Areas	



Contaminated Land: Source Protection Zones



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- | | |
|---------------------------|---------------------------|
| Site | Outer Zone (Zone 2c) |
| Multiple Features Present | Total Catchment (Zone 3) |
| Inner Zone (zone 1) | Total Catchment (Zone 3c) |
| Inner Zone (zone 1c) | Special Interest (Zone 4) |
| Outer Zone (Zone 2) | Water Abstractions |



Environmental Sensitivity

Areas of Outstanding Natural Beauty

No features identified.

Environmentally Sensitive Areas

No features identified.

Forest Parks

No features identified.

Local Nature Reserves

No features identified.

Marine Conservation Zones

No features identified.

National Nature Reserves

No features identified.

National Parks

No features identified.

Ramsar Sites

No features identified.

Sites of Special Scientific Interest

No features identified.

Special Areas of Conservation

No features identified.

Special Protection Areas

No features identified.

Water Abstractions

No features identified.

Source Protection Zones

Map ID	Details	Distance	Direction	Contact
5	Name: Not Supplied Reference: Not Supplied Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	0m	N	7
6	Name: Not Supplied Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	0m	N	7



Contaminated Land: Environmental Sensitivity

Map ID	Details	Distance	Direction	Contact
7	<p>Name: Not Supplied</p> <p>Reference: Not Supplied</p> <p>Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.</p>	176m	S	7



Contaminated Land: Natural and Mining Related Hazards

Former Mining

Coalfield Consultation Areas

No features identified.

Potentially Contaminative Land Uses (1950-1980) from large scale historical mapping

No features identified.

Potentially Contaminative Land Uses (1855-1909) from large scale historical mapping

No features identified.

Potentially Contaminative Land Uses (1893-1915) from large scale historical mapping

No features identified.

Potentially Contaminative Land Uses (1906-1937) from large scale historical mapping

No features identified.

Potentially Contaminative Land Uses (1924-1949) from large scale historical mapping

No features identified.

Potentially Contaminative Industrial Uses (Past Land Use)

No features identified.

Man-Made Mining Cavities

No features identified.

BGS Recorded Mineral Sites

No features identified.

Mining Instability

Details	Distance	Direction	Contact
Mining Evidence: Conclusive Rock Mining Mining Type: Rock Source: Ove Arup & Partners Boundary Quality: As Supplied	0m	N	8

Non Coal Mining Areas of Great Britain

No features identified.

Potential Mining Areas

No features identified.

Salt and Brine

Brine Compensation Area

No features identified.



Contaminated Land: Natural and Mining Related Hazards

Brine Pumping Related Features

No features identified.

Brine Subsidence Solution Area

No features identified.

Salt Mining Related Features

No features identified.

Landfill Sites and Infilled Land

Former Marshes

No features identified.

Potentially Infilled Land (Non-Water)

No features identified.

Potentially Infilled Land (Water)

No features identified.

Potentially Contaminative Industrial Uses (Past Land Use)

No features identified.

BGS Recorded Landfill Sites

No features identified.

Permitted Waste Sites - Authorised Landfill Site Boundaries

No features identified.

Registered Landfill Sites

No features identified.

Local Authority Recorded Landfill Sites

No features identified.

Historic Landfill

No features identified.

Natural Ground Instability

Natural Cavities

No features identified.

Potential for Landslide Ground Stability Hazards

No features identified.



Contaminated Land: Natural and Mining Related Hazards

Potential for Ground Dissolution Stability Hazards

No features identified.

Potential for Compressible Ground Stability Hazards

No features identified.

Potential for Shrinking or Swelling Clay Ground Stability Hazards

Details	Distance	Direction	Contact
Hazard Potential: Moderate	0m	N	6
Hazard Description: Ground conditions predominantly high plasticity.			
Hazard Guidance: Do not plant or remove trees or shrubs near to buildings without expert advice about their effect and management.			

Potential for Running Sand Ground Stability Hazards

No features identified.

Potential for Collapsible Ground Stability Hazards

No features identified.

Coal Mining Subsidence Claims

Coal Mining Subsidence Damage Claims

No features identified.

Insurance Claims

Postcode Unit Insurance Claims Rating - Subsidence

No features identified.

Radon

Radon Potential

No features identified.

Flood Risk

Data Section



Flood Risk Data: This section details the data used as part of our Flood Risk analysis. Each key source of flooding has the data mapped with the detail outlined beneath. All relevant data in this section has been reviewed by the report writer and taken into account in the overall analysis. As a result, the individual risks in the data below may vary from our overall opinion.

contents

Tabular Summary

This section gives an overview of the data at the Site and in the surrounding area. We present the data in three buffer zones, extending to a maximum of 500m. Where we have not been able to search a database, we will display the abbreviation N/A instead.

River and Coastal Flooding

The data used to form our river and coastal flood risk analysis includes:

- **Flood Zones:** Created for land-use planning, Flood Zones map the likelihood of flooding assuming no defences are present, fail or are over-topped. This data is presented as FZ1, FZ2 or FZ3.
- **Risk of Flooding from Rivers and Seas (RoFRS):** Provides an indication of flood risk taking into account the presence of defences and the level of protection they offer.
- **Flood Defences:** Recorded by the regulatory body, and includes defence type and standard of protection.
- **Areas Benefiting from Flood Defences:** Areas defined as having protection of at least 1 in 100 for river and 1 in 200 for coastal.
- **Flood Storage Areas:** Areas that store floodwater during flood events.

Surface Water Flooding

We present the risk of surface water flooding in three separate return periods:

- 1:75
- 1:200
- 1:1000

Each map will show the likely flood depth bandings within each of these return periods.

Groundwater Flooding

The data takes into account the two key mechanisms of groundwater flooding; clearwater and permeable superficial deposits.

Other Factors

This section accounts for risk that is not tied to modelled data. It includes historical floods, proximity to water features and elevation above both of these features.



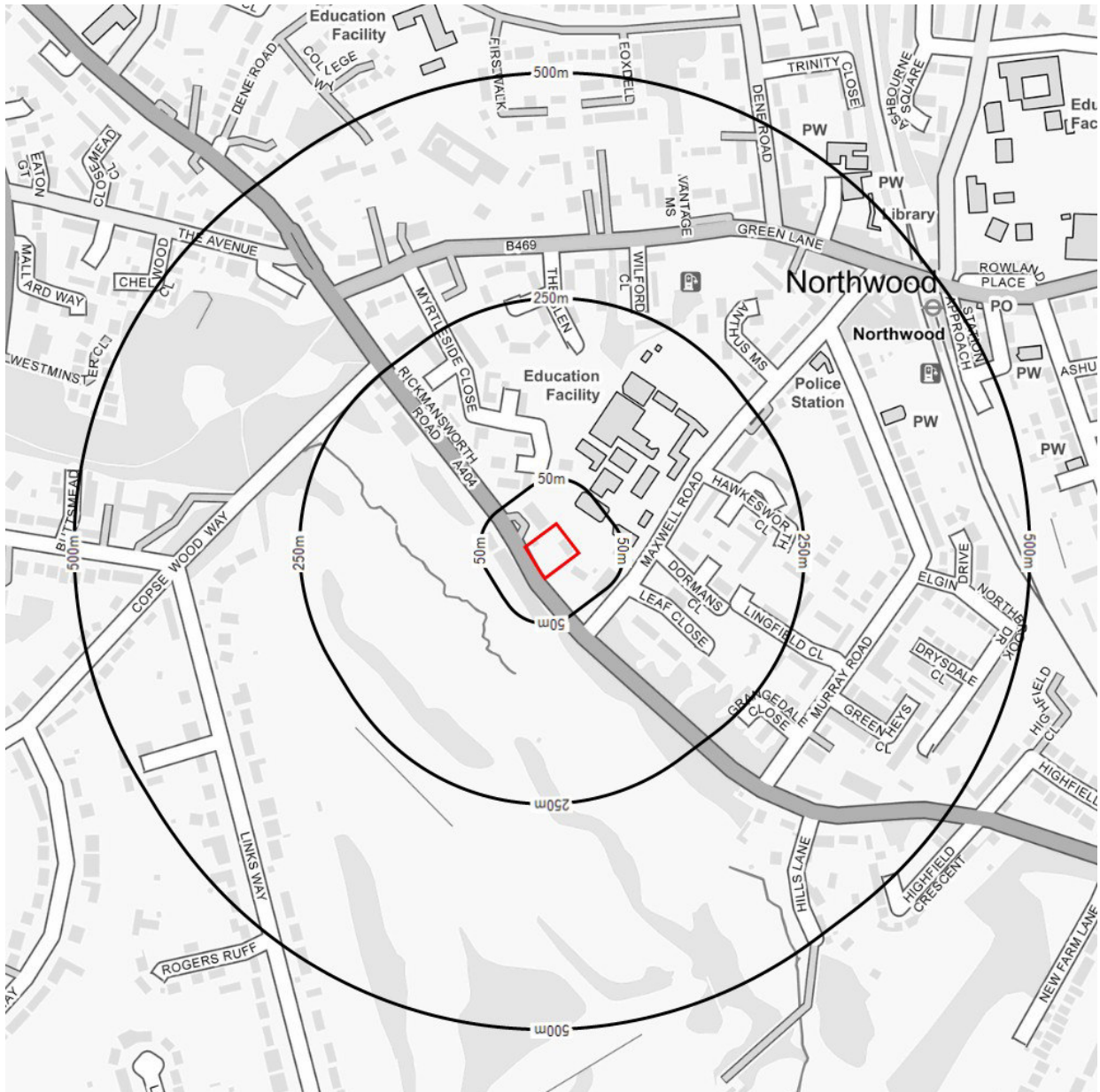
Flood Risk: Tabular Summary

Flooding

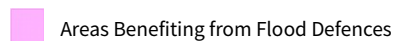
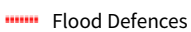
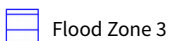
River and Coastal Flooding	On-site	1-250m	251-500m
Flooding from Rivers or Sea without Defences (Flood Zone 3)	No	No	No
Extreme Flooding from Rivers or Sea without Defences (Flood Zone 2)	No	No	No
Areas Benefitting from Flood Defences	No	No	No
Spatial Flood Defences (with attributes)	No	No	No
Risk of Flooding from Rivers and Sea (RoFRS)	No	No	No
Surface Water Flooding	On-site	1-250m	251-500m
JBA Pluvial 75 Depths	No	Yes	Yes
JBA Pluvial 200 Depths	No	Yes	Yes
JBA Pluvial 1000 Depths	No	Yes	Yes
Groundwater Flooding	On-site	1-250m	251-500m
Groundwater Flood Risk 5m	Yes	No	No
Other Factors	On-site	1-250m	251-500m
Flood Storage Areas	No	No	No
Recorded Flood Outlines	No	No	No
OS VectorMap District - Water Features	No	No	No
OS MasterMap Water Network	No	Yes	Yes



Flood Risk: River and Coastal (map 1)

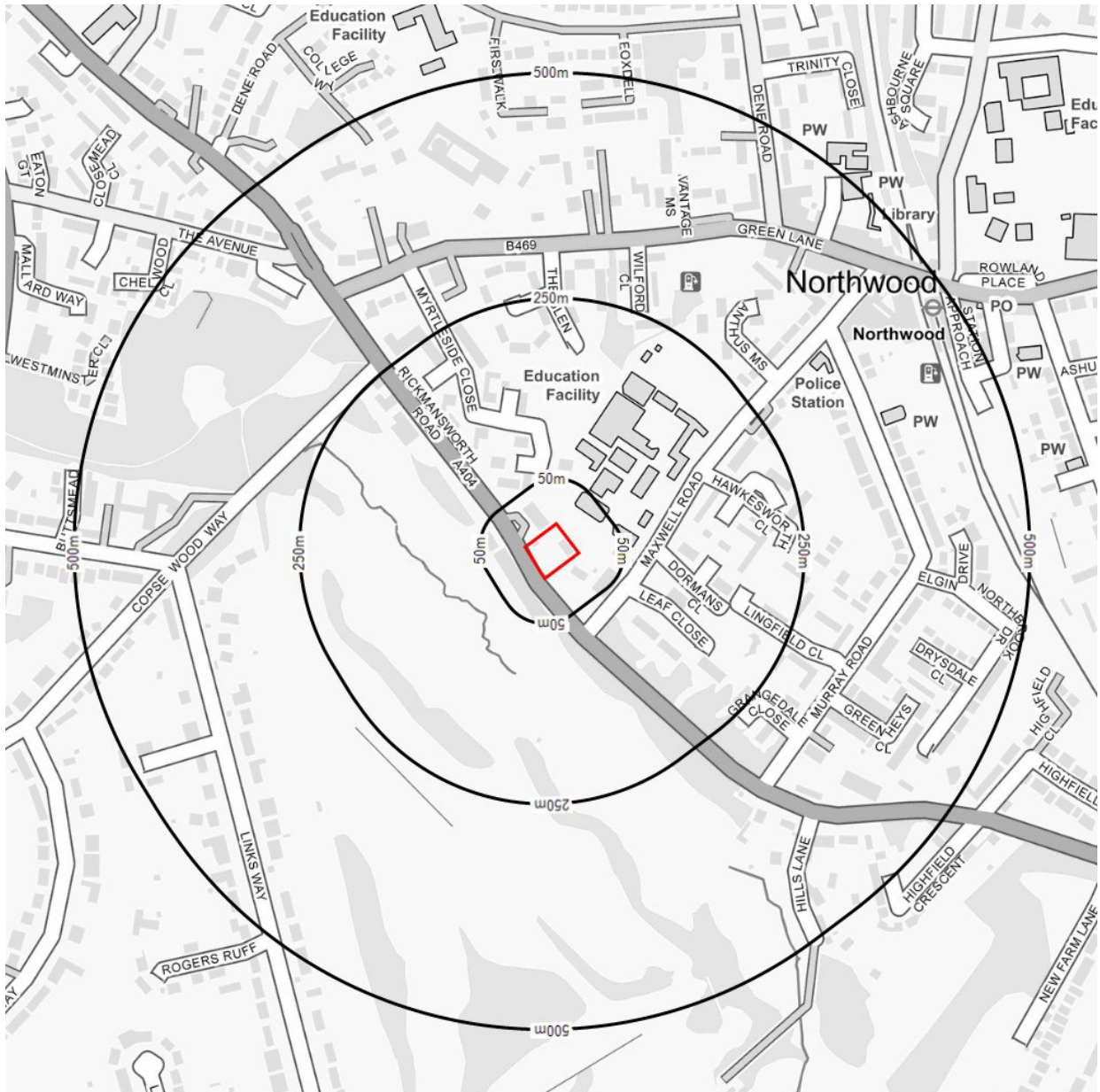


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Flood Risk: River and Coastal (map 2)



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RoFRS - Very Low

RoFRS - Low

RoFRS - Medium

RoFRS - High



Flood Risk: River and Coastal

Flooding from Rivers or Sea without Defences (Flood Zone 3)

No features identified.

Extreme Flooding from Rivers or Sea without Defences (Flood Zone 2)

No features identified.

Areas Benefitting from Flood Defences

No features identified.

Spatial Flood Defences (with attributes)

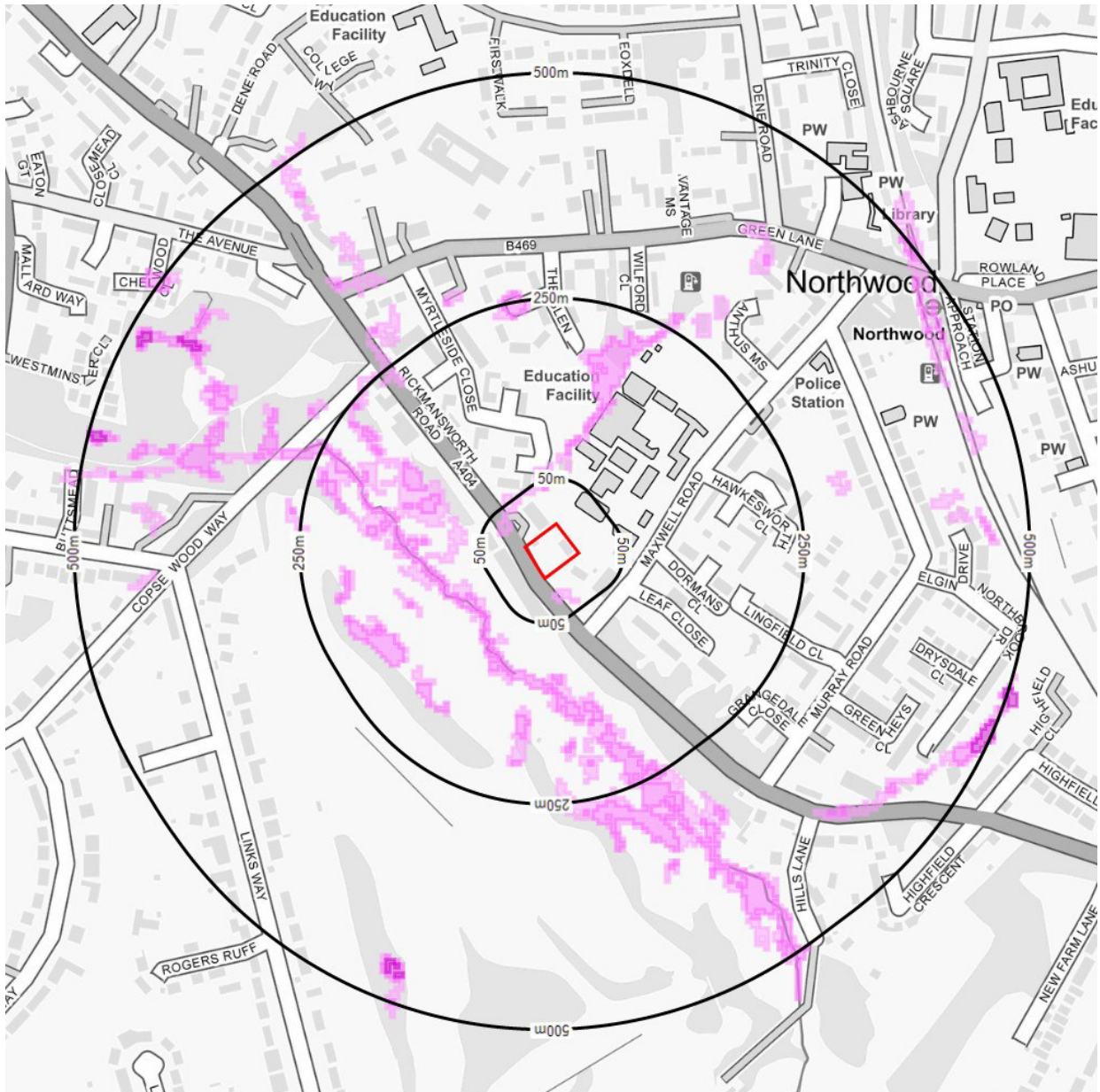
No features identified.

Risk of Flooding from Rivers and Sea (RoFRS)

No features identified.





Flood Risk: Surface Water (1:75 year event)




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 Site

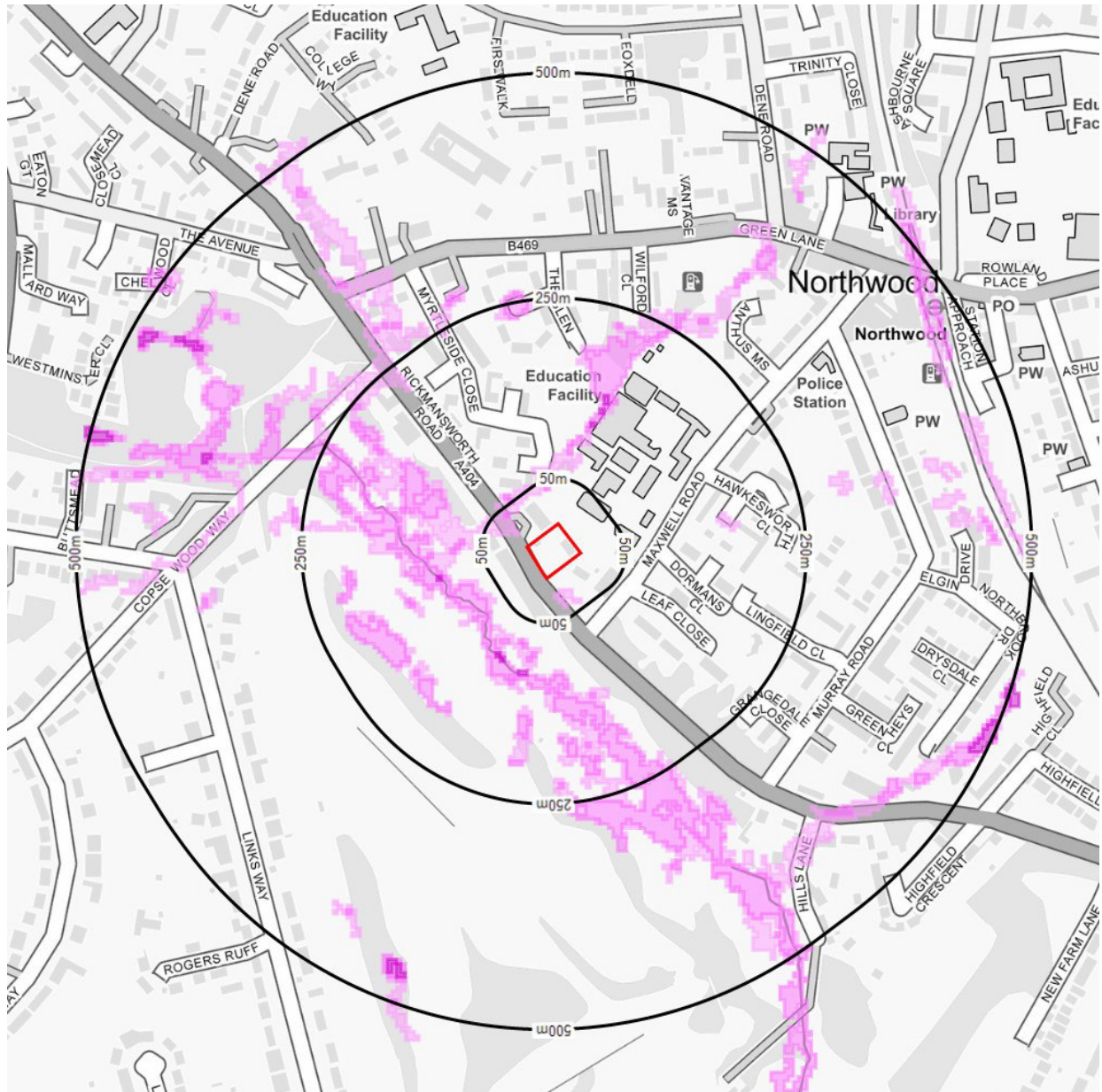
 10cm - 30cm depth

 30cm - 1m depth

 1m + depth



Flood Risk: Surface Water (1:200 year event)



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Site

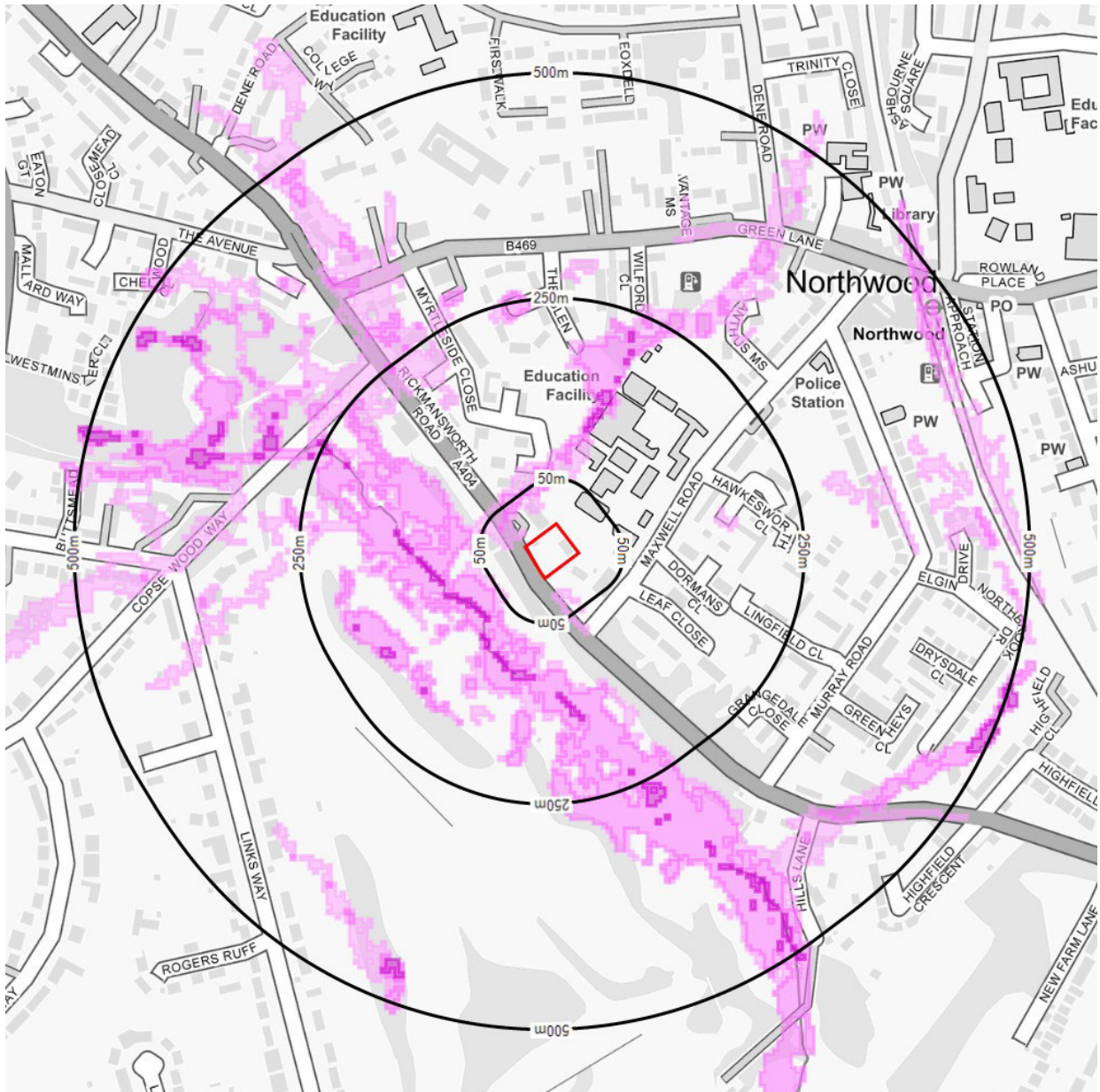
10cm - 30cm depth

30cm - 1m depth

1m + depth





Flood Risk: Surface Water (1:1000 year event)




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 Site

 10cm - 30cm depth

 30cm - 1m depth

 1m + depth



Flood Risk: Surface Water

JBA Pluvial 75 Depths

Details	Distance	Direction	Contact
Type: Greater than 0.1m and Less than or equal to 0.3m	18m	S	1
Type: Greater than 0.3m and Less than or equal to 1.0m	39m	N	1
Type: Equal to 0.1m	53m	N	1
Type: Greater than 1.0m	421m	NW	1

JBA Pluvial 200 Depths

Details	Distance	Direction	Contact
Type: Greater than 0.1m and Less than or equal to 0.3m	17m	NW	1
Type: Greater than 0.3m and Less than or equal to 1.0m	39m	NW	1
Type: Greater than 1.0m	98m	SW	1
Type: Equal to 0.1m	104m	S	1

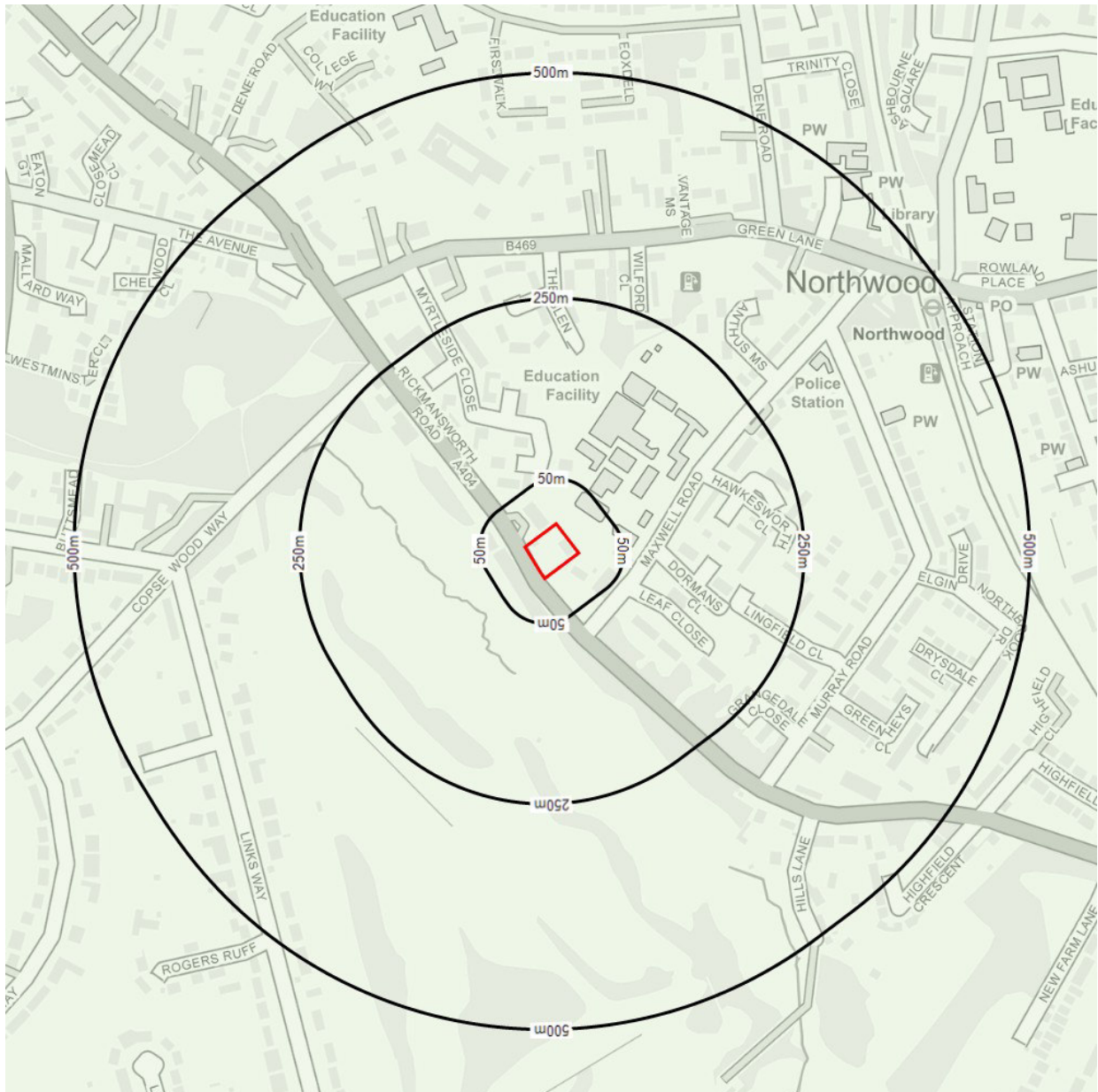
JBA Pluvial 1000 Depths

Details	Distance	Direction	Contact
Type: Greater than 0.1m and Less than or equal to 0.3m	10m	W	1
Type: Greater than 0.3m and Less than or equal to 1.0m	31m	W	1
Type: Equal to 0.1m	36m	N	1
Type: Greater than 1.0m	75m	SW	1

Flood data provided by JBA Risk Management Limited. © Copyright JBA Risk Management Limited 2008-2021



Flood Risk: Groundwater



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Site



High Risk



Moderate Risk



Low Risk



Negligible Risk



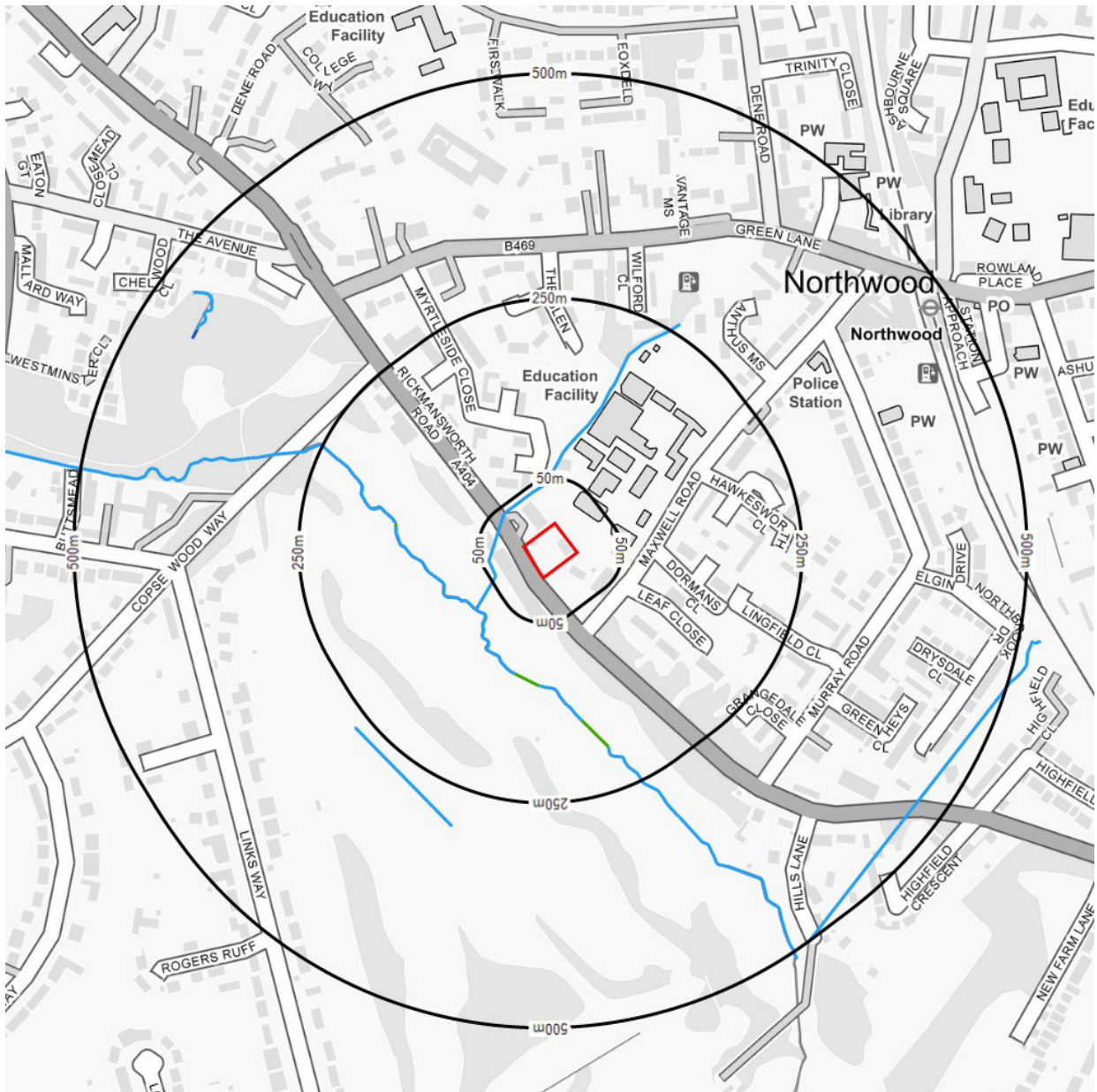
Flood Risk: Groundwater

Groundwater Flood Risk 5m

Details	Distance	Direction	Contact
Type: Negligible	0m	N	1



Flood Risk: Other



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- | | |
|-------------------------|-------------------------|
| Site | Tidal River |
| Water Feature | Lake or Reservoir |
| Flood Storage Areas | Forshore and Sea |
| Recorded Flood Outlines | Underground River |
| Primary Flow (named) | Marsh |
| Primary Flow (un-named) | Canal, Lock or Transfer |
| Secondary Flow | |



Flood Risk: Other

Flood Storage Areas

No features identified.

Recorded Flood Outlines

No features identified.

OS VectorMap District - Water Features

No features identified.

OS MasterMap Water Network

Details	Distance	Direction	Contact
Name: Type: Primary Flow (un-named)	32m	W	2
Name: Type: Underground River	112m	S	2
Name: Type: Lake or Reservoir	435m	NW	2

Site Solutions Combined

About this report



Site Solutions Combined Limitations

Site Solutions Combined reports help you and your clients make informed property decisions. Our reports are 'desktop' assessments, written and quality checked by our team of expert consultants. We carry out the work in our Brighton office using data, maps and our expertise. We do not carry out a physical inspection of the property nor do we contact any regulator. This means that we cannot guarantee that we will have identified all issues of concern.

In the Data Section of the report we list the data sources that we have used. Most of these data sets come from third party sources such as the Environment Agency. We cannot guarantee the accuracy of this data and are not responsible for any inaccuracies in third party data.

All **Site Solutions** reports are covered by our terms and conditions, a copy of which is available on our website, www.argyllenvironmental.com. If you need any further information please contact us on 0330 036 6115.




Contaminated Land Risk Analysis Methodology

For this section of the report we assess the condition of the land. We see whether the land could be 'Contaminated Land' under the relevant legislation. This section of the report meets the requirements for an independent site report. This is the recommendation of the Law Society Practice Note on Contaminated Land.

The main legislation is Part 2A of the Environmental Protection Act 1990. We also assess whether similar requirements could arise under the Water Resources Act 1991. The Contaminated Land legislation asks whether a 'plausible contaminant-pathway-receptor relationship' exists. If we identify a relationship, then our consultants will assess the potential significance. We define Liabilities as the potential for remedial works under Part 2A of the Environmental Protection Act 1990 and/or the Water Resources Act 1991.

If the Site is to have a change of use, then we also consider relevant requirements under the Planning Regime. It may be that the level of contamination will only become an issue if the Site is to be redeveloped. An example of this is when former industrial land is redeveloped for housing. If the Site is to be redeveloped then it could also include remedial works required under the planning regime. These remedial works may be the responsibility of the Site owner or occupier.

We will issue one of the following Liability statements, in line with Defra's recommended four stage test.

Assessment	Liability Statement	Defra Category
PASSED 	Within the scope of this assessment no Liabilities have been identified. No further action is required.	3 or 4
PASSED – PRUDENT ACTION 	Within the scope of this assessment no Liabilities have been identified. However, your attention is drawn to the prudent action suggested below.	3 or 4
FURTHER ACTION 	We have identified potential soil and/or groundwater liabilities. To quantify these we recommend you undertake the action outlined below.	Potentially 1 or 2






Flood Risk Analysis Methodology

For this section of the report, we assess the risk of flooding at the Site. A Consultant will analyse the data within the report, and take into account factors such as source of flooding, extent, and which part of the Site is at risk (is it operationally sensitive).

Three key areas are addressed:

- the overall risk of flooding (taking into account defences)
- how flood risk affects the availability of insurance
- how flood risk affects the potential to redevelop

We report the overall risk in a summary statement, with the three outcomes listed below:

Assessment	Risk Statement
PASSED 	Negligible, Low & Low-Moderate Risk: The Site is not considered to be at significant risk of flooding. No further action is deemed necessary. Recommendations: Some simple advice may be provided. Insurability: Insurance should be readily available.
PASSED – PRUDENT ACTION 	Moderate Risk: Data indicates some risk exists to the Site and its occupants. However, this is expected to be associated with an 'extreme' event. Recommendations: Practical advice will be provided. This may be to obtain further information or to write a flood preparation plan. Insurance: In most cases insurance should be readily available.
FURTHER ACTION 	Moderate to High and High: This report reveals a significant risk of flooding which should be addressed. Recommendations: Further assessment is recommended to clarify the risk of flooding at the Site. This will inform whether flood protection measures should be installed. Insurance: Insurance may not be available without a higher premium or excess.

The flood risk gauges provide an analysis of each of the four main types of flooding: river, coastal, groundwater and surface water. A fifth gauge provides analysis of 'other factors'. This includes historical floods, proximity to water features and elevation above both of these features. The purpose of this gauge is to account for risk that is not tied to modelled data.

Environment Agency defences protect large areas of England and Wales from river and coastal flooding. Our analysis of flood risk from these sources takes defences into account. Where defences are present we will report both defended and undefended risk to present the full risk profile. However, our overall assessment and recommendations will be based on the defended risk.

In Scotland, we do not have access to data from the Scottish Environmental Protection Agency (SEPA). As a result, we are unable to take into account defences. Consequently, in Scotland our assessment is always based on the undefended risk.

An Argyll Consultant will write Site-specific commentary to summarise the risk. The purpose of this is to explain the drivers of the risk, and where possible, the extent and impact. This will be a non-technical account, explaining our assessment in simple terms. Our Consultants generate the risk assessment using several sources. This means the gauges in the front of the report will supersede any risk reported in the data section. We also consider the implications of flood risk under the National Planning Policy Framework (NPPF). We always provide a view on whether a Flood Risk Assessment would be required if development is proposed. Where the client lets us know that the Site is to be redeveloped, we provide recommendations on the most appropriate next step.



Useful Contacts

Please see below the contact details of the suppliers referred to within this report. For all queries please contact:

Argyll Environmental Ltd
1st Floor
98-99 Queens Road
Brighton
BN1 3XF

If you require assistance please contact our customer services team on:

0330 036 6115

Or by email at:

orders@argyllenviro.com

Contact	Name	Address	Contact Details
	Public Health England	Centre for Radiation Chemical and Environmental Hazards Chilton Didcot Oxon OX11 0RQ	T: 01235 822622 F: 01235 833891 E: radon@phe.gov.uk W: www.ukradon.org
1	Landmark Information Group Limited	Imperium Imperial Way Reading Berkshire RG2 0TD	T: 0844 844 9966 E: helpdesk@landmark.co.uk W: www.landmark.co.uk
2	Ordnance Survey	Adanac Drive Southampton Hampshire SO16 0AS	T: 03456 05 05 05 E: customerservices@ordnancesurvey.co.uk W: www.ordnancesurvey.gov.uk
3	London Borough of Hillingdon, Environmental Health Department	Civic Centre High Street Uxbridge Middlesex UB8 1UW	T: 01895 250111 W: www.hillingdon.gov.uk
4	Catalist Ltd, Experian	Richmond House 22 Richmond Hill Clifton Bristol Avon BS8 1BA	T: 0117 923 7113 E: Mark@catalist-uk.com



Useful Contacts

Contact	Name	Address	Contact Details
5	Environment Agency, Head Office	Rio House Waterside Drive Aztec West, Almondsbury Bristol Avon BS32 4UD	T: 01454 624400
6	British Geological Survey, Enquiry Service	British Geological Survey Environmental Science Centre Keyworth Nottingham Nottinghamshire NG12 5GG	T: 0115 936 3143 E: enquiries@bgs.ac.uk W: www.bgs.ac.uk
7	Environment Agency, National Customer Contact Centre (NCCC)	PO Box 544 Templeborough Rotherham S60 1BY	T: 03708 506 506 E: enquiries@environment-agency.gov.uk
8	Ove Arup & Partners	Central Square Forth Street Newcastle upon Tyne Tyne and Wear NE1 3PL	T: 0191 261 6080

Please note that if you choose to contact any of the above organisations, they may have a charging policy in place for enquiries.



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Argyll works in association with:



British
Geological
Survey





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Tel: 03300 366 115

Email: orders@argyllenviro.com

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- Compliance with the Conveyancing Information Executive Standards will be a condition within the Conveyancing Information Executive Member's Terms and Conditions.
- Conveyancing Information Executive Members will promote the benefits of and deliver the Search to the agreed standards and in the best interests of the customer and associated parties.
- The standards can be seen here: <http://www.conveyinfoexec.com>

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If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Standards.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPO.

TPOs Contact Details:

The Property Ombudsman scheme
Milford House
43-55 Milford Street
Salisbury
Wiltshire SP1 2BP

Tel: 01722 333306
Fax: 01722 332296
Website: www.tpos.co.uk
Email: admin@tpos.co.uk



Argyll Environmental Complaints Procedure

If you want to make a complaint to Argyll Environmental, we will:

- Acknowledge it within 5 working days of receipt
- Normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- Keep you informed by letter, telephone or e-mail, as you prefer, if we need more time
- Provide a final response, in writing, at the latest within 40 working days of receipt
- Liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

Legal Director
Argyll Environmental Ltd
1st Floor
98 - 99 Queens Road
Brighton
BN1 3XF

Tel: 03300 366 115

Email: orders@argyllenviro.com

If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs):

Tel: 01722 333306,

Email: admin@tpos.co.uk

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

Appendix C





KEY:



Proposed WS Borehole



DO NOT SCALE



TITLE:

Exploratory Hole Location Plan

PROJECT:

Manor Lodge, Northwood

PROJECT No:

EAL.67.21

DATE:

07/2021

SCALE :


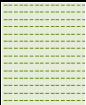



NTS

DRAWN :


PD

DWG No:

Figure 3







<div></div> <div>CLIENT Merchant Land Investments Limited</div>			<div>Web: www.erda-ltd.co.uk Email: p.devitt@erda-ltd.co.uk Mob: 07531 051197</div>			<div>Date: 16th July 2021 Ground Level: Orientation: Coordinates: Plant: Window Sample Rig Dimensions:</div>			<div>BOREHOLE NO. WS01</div> <div>Sheet No. 1 of 1</div> <div>Job No. EAL.67.21</div>					
<div>SITE LOCATION Manor Lodge, Northwood</div>														
Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS			SPT Results					N Value	Installation	Test Sample Details
				Depth	No	Type	Seating	Test Drive						
Dark brown slightly gravelly sandy TOPSOIL. Gravel is fine to coarse sub-rounded to angular chert.	0.10		0.40 (0.40)											
Loose light yellowish brown slightly gravelly SAND. Gravel is fine to coarse sub-rounded to angular chert.	0.50		1.60 (1.20)											
	Medium dense light greenish yellow slightly gravelly SAND. Gravel is fine to coarse sub-rounded to angular chert.													
Medium dense to dense light yellowish brown mottled greenish yellow SAND & GRAVEL. Gravel is fine to coarse sub-rounded to angular chert.		3.70		4.00 (0.40)										
Borehole terminated at 4.00mbgl.	4.10													

Casing record			Chiselling records								
Date	Diameter (mm)	Depth (m)	Time	From (m)	To (m)	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
Remarks: 1. Borehole reinstated with arisings upon completion. 2. No groundwater encountered. 3. Borehole remained stable throughout drilling.								Logged By:	Checked By:	Date	Scale
								PD	PD	27.07.21	NTS

<div></div> <div>Web: www.erda-ltd.co.uk Email: p.devitt@erda-ltd.co.uk Mob: 07531 051197</div>			Date: 16th July 2021			BOREHOLE NO. WS02							
CLIENT Merchant Land Investments Limited			Ground Level:			Sheet No. 1 of 1							
SITE LOCATION Manor Lodge, Northwood			Orientation:			Job No. EAL.67.21							
			Coordinates:										
			Plant: Window Sample Rig										
			Dimensions:										
Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS			SPT Results						Test Sample Details
				Depth	No	Type	Seating		Test Drive			N Value	
Dark brown slightly gravelly sandy TOPSOIL. Gravel is fine to coarse sub-rounded to angular chert.	0.10 0.20 0.30		0.30 (0.30)	0.20	1	ES							
Medium dense light yellowish brown slightly gravelly SAND. Gravel is fine to coarse sub-rounded to angular chert.	0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50		1.50 (1.20)	0.50 1.10	2 3	ES							
Medium dense light greenish yellow slightly gravelly SAND. Gravel is fine to coarse sub-rounded to angular chert.	1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20 3.30		3.30 (1.80)	2.40	4	ES							
Medium dense to dense light yellowish brown mottled greenish yellow SAND & GRAVEL. Gravel is fine to coarse sub-rounded to angular chert.	3.40 3.50 3.60 3.70 3.80 3.90 4.00 4.10 4.20 4.30 4.40 4.50 4.60 4.70 4.80 4.90 5.00		5.00 (1.70)	4.60	5	ES							

Borehole terminated at 5.00mbgl.

Casing record			Chiselling records								
Date	Diameter (mm)	Depth (m)	Time	From (m)	To (m)	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
Remarks: 1. Borehole reinstated with arisings upon completion. 2. No groundwater encountered. 3. Borehole remained stable throughout drilling.								Logged By:	Checked By:	Date	Scale
								PD	PD	27.07.21	NTS

<div></div> <div>CLIENT Merchant Land Investments Limited</div>			<div>Web: www.erda-ltd.co.uk Email: p.devitt@erda-ltd.co.uk Mob: 07531 051197</div>			<div>Date: 16th July 2021</div> <div>Ground Level:</div> <div>Orientation:</div> <div>Coordinates:</div> <div>Plant: Window Sample Rig</div> <div>Dimensions:</div>										<div>BOREHOLE NO. WS03</div> <div>Sheet No. 1 of 1</div> <div>Job No. EAL.67.21</div>	
<div>SITE LOCATION Manor Lodge, Northwood</div>																	
Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS			SPT Results						N Value	Installation	Test Sample Details		
				Depth	No	Type	Seating		Test Drive								
Dark brown slightly gravelly sandy TOPSOIL. Gravel is fine to coarse sub-rounded to angular chert.	0.10 0.20 0.30		0.30 (0.30)	0.20	1	ES											
Medium dense light yellowish brown slightly gravelly SAND. Gravel is fine to coarse sub-rounded to angular chert.	0.40 0.50 0.60 0.70 0.80 0.90 1.00		1.00 (0.70)	0.70	2	ES											
Medium dense light grey slightly gravelly SAND. Gravel is fine to coarse rounded quartzite.	1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80 2.90		2.90 (1.90)	1.30	3	ES											
				2.40	4	ES											
Medium dense to dense light yellowish brown mottled greenish yellow SAND & GRAVEL. Gravel is fine to coarse sub-rounded to angular chert.	3.00 3.10 3.20 3.30 3.40 3.50 3.60 3.70 3.80 3.90 4.00 4.10 4.20 4.30 4.40		4.40 (1.50)	3.50	5	ES											
				4.30	6	ES											
Stiff white sandy CLAY. Completely weathered chalk.	4.50 4.60 4.70 4.80 4.90 5.00		5.00 (0.60)														

Borehole terminated at 5.00mbgl.

Casing record			Chiselling records								
Date	Diameter (mm)	Depth (m)	Time	From (m)	To (m)	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
Remarks: 1. Borehole reinstated with arisings upon completion. 2. No groundwater encountered. 3. Borehole remained stable throughout drilling.								Logged By:	Checked By:	Date	Scale
								PD	PD	27.07.21	NTS

Appendix D





ANALYTICAL TEST REPORT

Contract no: 98524

Contract name: Manor Lodge, Northwood

Client reference: EAL.67.21

Clients name: Erda Associates

Clients address: 102 Scalpcliffe Road
Burton on Trent
Staffordshire
DE15 9AB

Samples received: 19 July 2021

Analysis started: 19 July 2021

Analysis completed: 26 July 2021

Report issued: 26 July 2021

Notes: Opinions and interpretations expressed herein are outside the UKAS accreditation scope.
Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.
All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.
Methods, procedures and performance data are available on request.
Results reported herein relate only to the material supplied to the laboratory.
This report shall not be reproduced except in full, without prior written approval.
Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.
BTEX compounds are identified by retention time only and may include interference from co-eluting compounds.

Key: U UKAS accredited test
M MCERTS & UKAS accredited test
\$ Test carried out by an approved subcontractor
I/S Insufficient sample to carry out test
N/S Sample not suitable for testing

Approved by:

Rachael Burton
Customer Support Squad Leader

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

All results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

Analytical results are inclusive of stones.

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
98524-1	WS01	2.10	Clayey Sand	-	-	7.5
98524-2	WS01	3.30	Clayey Sand	-	-	5.4
98524-3	WS02	1.10	Clayey Sand	-	-	12.5
98524-4	WS02	2.40	Sandy Clay	-	-	8.4
98524-5	WS02	4.60	Sandy Clay with Gravel	-	-	13.9
98524-6	WS03	1.30	Clayey Sand	-	-	6.4
98524-7	WS03	2.40	Clayey Sand	-	-	3.2
98524-8	WS03	3.50	Clayey Sand with Gravel	-	-	4.1
98524-9	WS03	4.30	Clayey Sand with Gravel	-	-	4.4

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SOILS

Lab number Sample id Depth (m) Date sampled			98524-1 WS01 2.10 15/07/2021	98524-2 WS01 3.30 15/07/2021	98524-3 WS02 1.10 15/07/2021	98524-4 WS02 2.40 15/07/2021	98524-5 WS02 4.60 15/07/2021	98524-6 WS03 1.30 15/07/2021
Test	Method	Units						
VPH (>C5-C7)	CE067	mg/kg	<0.1	<0.1	<0.1	-	<0.1	<0.1
VPH (>C7-C8)	CE067	mg/kg	<0.1	<0.1	<0.1	-	<0.1	<0.1
VPH (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1	-	<0.1	<0.1
EPH (>C10-C12)	CE033 ^U	mg/kg	<4	<4	<4	-	<4	<4
EPH (>C12-C16)	CE033 ^M	mg/kg	<4	<4	<4	-	<4	<4
EPH (>C16-C21)	CE033 ^M	mg/kg	<4	<4	<4	-	56	<4
EPH (>C21-C35)	CE033 ^M	mg/kg	9	<6	<6	-	273	<6
EPH (>C35-C44)	CE033 ^M	mg/kg	<10	<10	<10	-	39	<10
BTEX								
MTBE	CE192 ^U	mg/kg	<0.02	-	-	<0.02	<0.02	-
Benzene	CE192 ^U	mg/kg	<0.01	-	-	<0.01	<0.01	-
Toluene	CE192 ^U	mg/kg	<0.01	-	-	<0.01	<0.01	-
Ethylbenzene	CE192 ^U	mg/kg	<0.01	-	-	<0.01	<0.01	-
m & p-Xylene	CE192 ^U	mg/kg	<0.02	-	-	<0.02	<0.02	-
o-Xylene	CE192 ^U	mg/kg	<0.01	-	-	<0.01	<0.01	-
Volatiles								
Dichlorodifluoromethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Chloromethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Vinyl chloride	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Bromomethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Chloroethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Trichlorofluoromethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,1-Dichloroethene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Trans-1,2-Dichloroethene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,1-Dichloroethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
2,2-Dichloropropane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Cis-1,2-Dichloroethene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Bromochloromethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Chloroform	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,1,1-Trichloroethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Carbon tetrachloride	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,1-Dichloro-1-propene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,2-Dichloroethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Trichloroethene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,2-Dichloropropane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Dibromomethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Bromodichloromethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
cis-1,3-Dichloro-1-propene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
trans-1,3-Dichloro-1-propene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,1,2-Trichloroethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Tetrachloroethene	CE174	mg/kg	<0.01	-	-	<0.01	-	-

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SOILS

Lab number Sample id Depth (m) Date sampled			98524-1 WS01 2.10 15/07/2021	98524-2 WS01 3.30 15/07/2021	98524-3 WS02 1.10 15/07/2021	98524-4 WS02 2.40 15/07/2021	98524-5 WS02 4.60 15/07/2021	98524-6 WS03 1.30 15/07/2021
Test	Method	Units						
1,3-Dichloropropane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Dibromochloromethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,2-Dibromoethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Chlorobenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,1,1,2-Tetrachloroethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Styrene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Tribromomethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Isopropylbenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Bromobenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,1,2,2-Tetrachloroethane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,2,3-Trichloropropane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Propylbenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
2-Chlorotoluene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
4-Chlorotoluene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,3,5-Trimethylbenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
tert-Butylbenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,2,4-Trimethylbenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
sec-Butylbenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,3-Dichlorobenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
4-Isopropyltoluene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,4-Dichlorobenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,2-Dichlorobenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Butylbenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,2-Dibromo-3-chloropropane	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,2,4-Trichlorobenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Hexachloro-1,3-butadiene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
1,2,3-Trichlorobenzene	CE174	mg/kg	<0.01	-	-	<0.01	-	-
Semi-volatiles								
Naphthalene	CE087 ^M	mg/kg	<0.02	-	-	<0.02	-	-
Acenaphthylene	CE087 ^M	mg/kg	<0.02	-	-	<0.02	-	-
Acenaphthene	CE087 ^M	mg/kg	<0.02	-	-	<0.02	-	-
Fluorene	CE087 ^U	mg/kg	<0.02	-	-	<0.02	-	-
Phenanthrene	CE087 ^M	mg/kg	<0.02	-	-	<0.02	-	-
Anthracene	CE087 ^U	mg/kg	<0.02	-	-	<0.02	-	-
Fluoranthene	CE087 ^M	mg/kg	<0.02	-	-	<0.02	-	-
Pyrene	CE087 ^M	mg/kg	<0.02	-	-	<0.02	-	-
Benzo(a)anthracene	CE087 ^U	mg/kg	<0.02	-	-	<0.02	-	-
Chrysene	CE087 ^M	mg/kg	<0.03	-	-	<0.03	-	-
Benzo(b)fluoranthene	CE087 ^M	mg/kg	<0.02	-	-	<0.02	-	-
Benzo(k)fluoranthene	CE087 ^M	mg/kg	<0.03	-	-	<0.03	-	-
Benzo(a)pyrene	CE087 ^U	mg/kg	<0.02	-	-	<0.02	-	-

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SOILS

Lab number Sample id Depth (m) Date sampled			98524-1 WS01 2.10 15/07/2021	98524-2 WS01 3.30 15/07/2021	98524-3 WS02 1.10 15/07/2021	98524-4 WS02 2.40 15/07/2021	98524-5 WS02 4.60 15/07/2021	98524-6 WS03 1.30 15/07/2021
Test	Method	Units						
Indeno(123cd)pyrene	CE087 ^M	mg/kg	<0.02	-	-	<0.02	-	-
Dibenz(ah)anthracene	CE087 ^M	mg/kg	<0.02	-	-	<0.02	-	-
Benzo(ghi)perylene	CE087 ^M	mg/kg	<0.02	-	-	<0.02	-	-
N-Nitrosodimethylamine	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Phenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Bis(2-chloroethyl)ether	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2-Chlorophenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
1,3-Dichlorobenzene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
1,4-Dichlorobenzene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2-Methylphenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
1,2-Dichlorobenzene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Bis(2-chloroisopropyl)ether	CE189	mg/kg	<0.1	-	-	<0.1	-	-
3&4-Methylphenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
N-Nitrosodi-n-propylamine	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Hexachloroethane	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Nitrobenzene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Isophorone	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2,4-Dimethylphenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2-Nitrophenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Bis(2-chloroethoxy)methane	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2,4-Dichlorophenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
1,2,4-Trichlorobenzene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
4-Chloroaniline	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Hexachlorobutadiene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
4-Chloro-3-methylphenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2-Methylnaphthalene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
1-Methylnaphthalene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Hexachlorocyclopentadiene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2,4,6-Trichlorophenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2,4,5-Trichlorophenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2-Chloronaphthalene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2-Nitroaniline	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Dimethyl phthalate	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2,6-Dinitrotoluene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
3-Nitroaniline	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2,4-Dinitrophenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
4-Nitrophenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2,4-Dinitrotoluene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Dibenzofuran	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Diethyl phthalate	CE189	mg/kg	<0.1	-	-	<0.1	-	-
4-Chlorophenylphenyl ether	CE189	mg/kg	<0.1	-	-	<0.1	-	-

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SOILS

Lab number			98524-1	98524-2	98524-3	98524-4	98524-5	98524-6
Sample id			WS01	WS01	WS02	WS02	WS02	WS03
Depth (m)			2.10	3.30	1.10	2.40	4.60	1.30
Date sampled			15/07/2021	15/07/2021	15/07/2021	15/07/2021	15/07/2021	15/07/2021
Test	Method	Units						
4-Nitroaniline	CE189	mg/kg	<0.1	-	-	<0.1	-	-
2-Methyl-4,6-dinitrophenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Azobenzene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
4-Bromophenylphenyl ether	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Hexachlorobenzene	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Pentachlorophenol	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Carbazole	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Di-n-butyl phthalate	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Butylbenzyl phthalate	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Bis(2-ethylhexyl)phthalate	CE189	mg/kg	<0.1	-	-	<0.1	-	-
Di-n-octyl phthalate	CE189	mg/kg	<0.1	-	-	<0.1	-	-

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SOILS

Lab number Sample id Depth (m) Date sampled			98524-7 WS03 2.40 15/07/2021	98524-8 WS03 3.50 15/07/2021	98524-9 WS03 4.30 15/07/2021
Test	Method	Units			
VPH (>C5-C7)	CE067	mg/kg	<0.1	-	<0.1
VPH (>C7-C8)	CE067	mg/kg	<0.1	-	<0.1
VPH (>C8-C10)	CE067	mg/kg	<0.1	-	<0.1
EPH (>C10-C12)	CE033 ^U	mg/kg	<4	-	<4
EPH (>C12-C16)	CE033 ^M	mg/kg	<4	-	<4
EPH (>C16-C21)	CE033 ^M	mg/kg	<4	-	<4
EPH (>C21-C35)	CE033 ^M	mg/kg	7	-	9
EPH (>C35-C44)	CE033 ^M	mg/kg	<10	-	<10
BTEX					
MTBE	CE192 ^U	mg/kg	<0.02	<0.02	-
Benzene	CE192 ^U	mg/kg	<0.01	<0.01	-
Toluene	CE192 ^U	mg/kg	<0.01	<0.01	-
Ethylbenzene	CE192 ^U	mg/kg	<0.01	<0.01	-
m & p-Xylene	CE192 ^U	mg/kg	<0.02	<0.02	-
o-Xylene	CE192 ^U	mg/kg	<0.01	<0.01	-
Volatiles					
Dichlorodifluoromethane	CE174	mg/kg	<0.01	<0.01	-
Chloromethane	CE174	mg/kg	<0.01	<0.01	-
Vinyl chloride	CE174	mg/kg	<0.01	<0.01	-
Bromomethane	CE174	mg/kg	<0.01	<0.01	-
Chloroethane	CE174	mg/kg	<0.01	<0.01	-
Trichlorofluoromethane	CE174	mg/kg	<0.01	<0.01	-
1,1-Dichloroethene	CE174	mg/kg	<0.01	<0.01	-
Trans-1,2-Dichloroethene	CE174	mg/kg	<0.01	<0.01	-
1,1-Dichloroethane	CE174	mg/kg	<0.01	<0.01	-
2,2-Dichloropropane	CE174	mg/kg	<0.01	<0.01	-
Cis-1,2-Dichloroethene	CE174	mg/kg	<0.01	<0.01	-
Bromochloromethane	CE174	mg/kg	<0.01	<0.01	-
Chloroform	CE174	mg/kg	<0.01	<0.01	-
1,1,1-Trichloroethane	CE174	mg/kg	<0.01	<0.01	-
Carbon tetrachloride	CE174	mg/kg	<0.01	<0.01	-
1,1-Dichloro-1-propene	CE174	mg/kg	<0.01	<0.01	-
1,2-Dichloroethane	CE174	mg/kg	<0.01	<0.01	-
Trichloroethene	CE174	mg/kg	<0.01	<0.01	-
1,2-Dichloropropane	CE174	mg/kg	<0.01	<0.01	-
Dibromomethane	CE174	mg/kg	<0.01	<0.01	-
Bromodichloromethane	CE174	mg/kg	<0.01	<0.01	-
cis-1,3-Dichloro-1-propene	CE174	mg/kg	<0.01	<0.01	-
trans-1,3-Dichloro-1-propene	CE174	mg/kg	<0.01	<0.01	-
1,1,2-Trichloroethane	CE174	mg/kg	<0.01	<0.01	-
Tetrachloroethene	CE174	mg/kg	<0.01	<0.01	-

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SOILS

Lab number Sample id Depth (m) Date sampled			98524-7 WS03 2.40 15/07/2021	98524-8 WS03 3.50 15/07/2021	98524-9 WS03 4.30 15/07/2021
Test	Method	Units			
1,3-Dichloropropane	CE174	mg/kg	<0.01	<0.01	-
Dibromochloromethane	CE174	mg/kg	<0.01	<0.01	-
1,2-Dibromoethane	CE174	mg/kg	<0.01	<0.01	-
Chlorobenzene	CE174	mg/kg	<0.01	<0.01	-
1,1,1,2-Tetrachloroethane	CE174	mg/kg	<0.01	<0.01	-
Styrene	CE174	mg/kg	<0.01	<0.01	-
Tribromomethane	CE174	mg/kg	<0.01	<0.01	-
Isopropylbenzene	CE174	mg/kg	<0.01	<0.01	-
Bromobenzene	CE174	mg/kg	<0.01	<0.01	-
1,1,2,2-Tetrachloroethane	CE174	mg/kg	<0.01	<0.01	-
1,2,3-Trichloropropane	CE174	mg/kg	<0.01	<0.01	-
Propylbenzene	CE174	mg/kg	<0.01	<0.01	-
2-Chlorotoluene	CE174	mg/kg	<0.01	<0.01	-
4-Chlorotoluene	CE174	mg/kg	<0.01	<0.01	-
1,3,5-Trimethylbenzene	CE174	mg/kg	<0.01	<0.01	-
tert-Butylbenzene	CE174	mg/kg	<0.01	<0.01	-
1,2,4-Trimethylbenzene	CE174	mg/kg	<0.01	<0.01	-
sec-Butylbenzene	CE174	mg/kg	<0.01	<0.01	-
1,3-Dichlorobenzene	CE174	mg/kg	<0.01	<0.01	-
4-Isopropyltoluene	CE174	mg/kg	<0.01	<0.01	-
1,4-Dichlorobenzene	CE174	mg/kg	<0.01	<0.01	-
1,2-Dichlorobenzene	CE174	mg/kg	<0.01	<0.01	-
Butylbenzene	CE174	mg/kg	<0.01	<0.01	-
1,2-Dibromo-3-chloropropane	CE174	mg/kg	<0.01	<0.01	-
1,2,4-Trichlorobenzene	CE174	mg/kg	<0.01	<0.01	-
Hexachloro-1,3-butadiene	CE174	mg/kg	<0.01	<0.01	-
1,2,3-Trichlorobenzene	CE174	mg/kg	<0.01	<0.01	-
Semi-volatiles					
Naphthalene	CE087 ^M	mg/kg	<0.02	<0.02	-
Acenaphthylene	CE087 ^M	mg/kg	<0.02	<0.02	-
Acenaphthene	CE087 ^M	mg/kg	<0.02	<0.02	-
Fluorene	CE087 ^U	mg/kg	<0.02	<0.02	-
Phenanthrene	CE087 ^M	mg/kg	<0.02	<0.02	-
Anthracene	CE087 ^U	mg/kg	<0.02	<0.02	-
Fluoranthene	CE087 ^M	mg/kg	<0.02	<0.02	-
Pyrene	CE087 ^M	mg/kg	<0.02	<0.02	-
Benzo(a)anthracene	CE087 ^U	mg/kg	<0.02	<0.02	-
Chrysene	CE087 ^M	mg/kg	<0.03	<0.03	-
Benzo(b)fluoranthene	CE087 ^M	mg/kg	<0.02	<0.02	-
Benzo(k)fluoranthene	CE087 ^M	mg/kg	<0.03	<0.03	-
Benzo(a)pyrene	CE087 ^U	mg/kg	<0.02	<0.02	-

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SOILS

Lab number Sample id Depth (m) Date sampled			98524-7 WS03 2.40 15/07/2021	98524-8 WS03 3.50 15/07/2021	98524-9 WS03 4.30 15/07/2021
Test	Method	Units			
Indeno(123cd)pyrene	CE087 ^M	mg/kg	<0.02	<0.02	-
Dibenz(ah)anthracene	CE087 ^M	mg/kg	<0.02	<0.02	-
Benzo(ghi)perylene	CE087 ^M	mg/kg	<0.02	<0.02	-
N-Nitrosodimethylamine	CE189	mg/kg	<0.1	<0.1	-
Phenol	CE189	mg/kg	<0.1	<0.1	-
Bis(2-chloroethyl)ether	CE189	mg/kg	<0.1	<0.1	-
2-Chlorophenol	CE189	mg/kg	<0.1	<0.1	-
1,3-Dichlorobenzene	CE189	mg/kg	<0.1	<0.1	-
1,4-Dichlorobenzene	CE189	mg/kg	<0.1	<0.1	-
2-Methylphenol	CE189	mg/kg	<0.1	<0.1	-
1,2-Dichlorobenzene	CE189	mg/kg	<0.1	<0.1	-
Bis(2-chloroisopropyl)ether	CE189	mg/kg	<0.1	<0.1	-
3&4-Methylphenol	CE189	mg/kg	<0.1	<0.1	-
N-Nitrosodi-n-propylamine	CE189	mg/kg	<0.1	<0.1	-
Hexachloroethane	CE189	mg/kg	<0.1	<0.1	-
Nitrobenzene	CE189	mg/kg	<0.1	<0.1	-
Isophorone	CE189	mg/kg	<0.1	<0.1	-
2,4-Dimethylphenol	CE189	mg/kg	<0.1	<0.1	-
2-Nitrophenol	CE189	mg/kg	<0.1	<0.1	-
Bis(2-chloroethoxy)methane	CE189	mg/kg	<0.1	<0.1	-
2,4-Dichlorophenol	CE189	mg/kg	<0.1	<0.1	-
1,2,4-Trichlorobenzene	CE189	mg/kg	<0.1	<0.1	-
4-Chloroaniline	CE189	mg/kg	<0.1	<0.1	-
Hexachlorobutadiene	CE189	mg/kg	<0.1	<0.1	-
4-Chloro-3-methylphenol	CE189	mg/kg	<0.1	<0.1	-
2-Methylnaphthalene	CE189	mg/kg	<0.1	<0.1	-
1-Methylnaphthalene	CE189	mg/kg	<0.1	<0.1	-
Hexachlorocyclopentadiene	CE189	mg/kg	<0.1	<0.1	-
2,4,6-Trichlorophenol	CE189	mg/kg	<0.1	<0.1	-
2,4,5-Trichlorophenol	CE189	mg/kg	<0.1	<0.1	-
2-Chloronaphthalene	CE189	mg/kg	<0.1	<0.1	-
2-Nitroaniline	CE189	mg/kg	<0.1	<0.1	-
Dimethyl phthalate	CE189	mg/kg	<0.1	<0.1	-
2,6-Dinitrotoluene	CE189	mg/kg	<0.1	<0.1	-
3-Nitroaniline	CE189	mg/kg	<0.1	<0.1	-
2,4-Dinitrophenol	CE189	mg/kg	<0.1	<0.1	-
4-Nitrophenol	CE189	mg/kg	<0.1	<0.1	-
2,4-Dinitrotoluene	CE189	mg/kg	<0.1	<0.1	-
Dibenzofuran	CE189	mg/kg	<0.1	<0.1	-
Diethyl phthalate	CE189	mg/kg	<0.1	<0.1	-
4-Chlorophenylphenyl ether	CE189	mg/kg	<0.1	<0.1	-

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SOILS

Lab number			98524-7	98524-8	98524-9
Sample id			WS03	WS03	WS03
Depth (m)			2.40	3.50	4.30
Date sampled			15/07/2021	15/07/2021	15/07/2021
Test	Method	Units			
4-Nitroaniline	CE189	mg/kg	<0.1	<0.1	-
2-Methyl-4,6-dinitrophenol	CE189	mg/kg	<0.1	<0.1	-
Azobenzene	CE189	mg/kg	<0.1	<0.1	-
4-Bromophenylphenyl ether	CE189	mg/kg	<0.1	<0.1	-
Hexachlorobenzene	CE189	mg/kg	<0.1	<0.1	-
Pentachlorophenol	CE189	mg/kg	<0.1	<0.1	-
Carbazole	CE189	mg/kg	<0.1	<0.1	-
Di-n-butyl phthalate	CE189	mg/kg	<0.1	<0.1	-
Butylbenzyl phthalate	CE189	mg/kg	<0.1	<0.1	-
Bis(2-ethylhexyl)phthalate	CE189	mg/kg	<0.1	<0.1	-
Di-n-octyl phthalate	CE189	mg/kg	<0.1	<0.1	-

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE067	VPH (>C5-C7)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH (>C7-C8)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE033	EPH (>C10-C12)	Solvent extraction, GC-FID	As received	U	4	mg/kg
CE033	EPH (>C12-C16)	Solvent extraction, GC-FID	As received	M	4	mg/kg
CE033	EPH (>C16-C21)	Solvent extraction, GC-FID	As received	M	4	mg/kg
CE033	EPH (>C21-C35)	Solvent extraction, GC-FID	As received	M	6	mg/kg
CE033	EPH (>C35-C44)	Solvent extraction, GC-FID	As received	M	10	mg/kg
CE192	MTBE	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	Benzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Toluene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Ethylbenzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	m & p-Xylene	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	o-Xylene	Headspace GC-FID	As received	U	0.01	mg/kg
CE174	Dichlorodifluoromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Chloromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Vinyl chloride	Headspace GC-MS	As received		0.01	mg/kg
CE174	Bromomethane	Headspace GC-MS	As received		0.03	mg/kg
CE174	Chloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Trichlorofluoromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1-Dichloroethene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Trans-1,2-Dichloroethene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1-Dichloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	2,2-Dichloropropane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Cis-1,2-Dichloroethene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Bromochloromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Chloroform	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1,1-Trichloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Carbon tetrachloride	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1-Dichloro-1-propene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2-Dichloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Trichloroethene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2-Dichloropropane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Dibromomethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Bromodichloromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	cis-1,3-Dichloro-1-propene	Headspace GC-MS	As received		0.01	mg/kg
CE174	trans-1,3-Dichloro-1-propene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1,2-Trichloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Tetrachloroethene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,3-Dichloropropane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Dibromochloromethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2-Dibromoethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Chlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1,1,2-Tetrachloroethane	Headspace GC-MS	As received		0.01	mg/kg

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE174	Styrene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Tribromomethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Isopropylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Bromobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,1,2,2-Tetrachloroethane	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2,3-Trichloropropane	Headspace GC-MS	As received		0.01	mg/kg
CE174	Propylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	2-Chlorotoluene	Headspace GC-MS	As received		0.01	mg/kg
CE174	4-Chlorotoluene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,3,5-Trimethylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	tert-Butylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2,4-Trimethylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	sec-Butylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,3-Dichlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	4-Isopropyltoluene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,4-Dichlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2-Dichlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Butylbenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2-Dibromo-3-chloropropane	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2,4-Trichlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE174	Hexachloro-1,3-butadiene	Headspace GC-MS	As received		0.01	mg/kg
CE174	1,2,3-Trichlorobenzene	Headspace GC-MS	As received		0.01	mg/kg
CE087	Naphthalene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE189	N-Nitrosodimethylamine	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Phenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Bis(2-chloroethyl)ether	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Chlorophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	1,3-Dichlorobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	1,4-Dichlorobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE189	2-Methylphenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	1,2-Dichlorobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Bis(2-chloroisopropyl)ether	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	3&4-Methylphenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	N-Nitrosodi-n-propylamine	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Hexachloroethane	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Nitrobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Isophorone	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4-Dimethylphenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Nitrophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Bis(2-chloroethoxy)methane	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4-Dichlorophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	1,2,4-Trichlorobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Chloroaniline	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Hexachlorobutadiene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Chloro-3-methylphenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Methylnaphthalene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	1-Methylnaphthalene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Hexachlorocyclopentadiene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4,6-Trichlorophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4,5-Trichlorophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Chloronaphthalene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Nitroaniline	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Dimethyl phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,6-Dinitrotoluene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	3-Nitroaniline	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4-Dinitrophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Nitrophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2,4-Dinitrotoluene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Dibenzofuran	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Diethyl phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Chlorophenylphenyl ether	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Nitroaniline	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	2-Methyl-4,6-dinitrophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Azobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	4-Bromophenylphenyl ether	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Hexachlorobenzene	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Pentachlorophenol	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Carbazole	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Di-n-butyl phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Butylbenzyl phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Bis(2-ethylhexyl)phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg
CE189	Di-n-octyl phthalate	Solvent extraction, GC-MS	As received		0.1	mg/kg

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DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
98524-1	WS01	2.10	N	
98524-2	WS01	3.30	N	
98524-3	WS02	1.10	N	
98524-4	WS02	2.40	N	
98524-5	WS02	4.60	N	
98524-6	WS03	1.30	N	
98524-7	WS03	2.40	N	
98524-8	WS03	3.50	N	
98524-9	WS03	4.30	N	

Appendix E



Tier 1 Assessment Criteria

Determinand	Residential With Produce	Residential Without Produce	Allotments	Commercial (Office)	Commercial (Warehouse)
Arsenic	32.40	35.00	43.00	635.00	635.00
Cadmium	5.17	17.70	1.05	230.00	230.00
Mercury, elemental	1.02	1.02	316.00	109.00	83.40
Mercury, inorganic	169.00	238.00	80.30	3640.00	3640.00
Mercury, methyl	11.40	14.10	7.97	407.00	409.00
Selenium	350.00	595.00	121.00	13000.00	13000.00
Phenol	415.00	519.00	282.00	37600.00	38000.00
Toulene	611.00	2710.00	118.00	189000.00	166000.00
Lead	210.00	210.00	84.00	2300.00	2300.00
Nickel	130.00	130*	180.00	980.00	980.00
Total Cyanide	34.00	34.00			
Benzo(a)pyrene	3.00	3.20	3.50	36.00	14.40
Dibenz(ah)anthracene	0.30	0.32	0.43	3.60	13.00
Acenaphthene	1100.00	6000.00	200.00	100000.00	103000.00
Acenaphthylene	920.00	6000.00	160.00	100000.00	103000.00
Anthracene	11000.00	37000.00	2200.00	540000.00	542000.00
Benzo(a)anthracene	13.00	15.00	13.00	180.00	97.50
Benzo(b)fluoranthene	3.70	4.00	3.90	45.00	103.00
Benzo(ghi)perylene	350.00	360.00	640.00	4000.00	661.00
Benzo(k)fluoranthene	100.00	110.00	130.00	1200.00	144.00
Chrysene	27.00	32.00	19.00	350.00	143.00
Fluoranthene	890.00	1600.00	290.00	23000.00	22700.00
Fluorene	860.00	4500.00	160.00	71000.00	70700.00
Indeno(123cd)pyrene	41.00	46.00	39.00	510.00	61.70
Phenanthrene	440.00	1500.00	90.00	23000.00	22600.00
Pyrene	2000.00	3800.00	620.00	54000.00	54500.00
Naphthalene	13.00	13.00	24.00	1100.00	875.00
Chromium VI	3.38	4.12	2.11	34.20	34.20
Chromium III	627.00	627.00	15300.00	8840.00	8840.00
Copper	2330.00	6200*	524.00	71700.00	71700.00
Vanadium	79.00	226.00	17.90	5590.00	5590.00
Zinc	3750.00	40400*	618.00	665000.00	665000.00

Note:

All figures are in mg/kg

Values calculated using CLEA v1.071

Soil type chosen is sandy loam, pH 7

All organic determinands calculated using 6% SOM

PAH = S4UL (except warehouse model - CLEA v1.071)

* Phytotoxic assessment based on pH range of <6.0 to >7.0, Copper = 100-200mg/kg, Nickel=60-110mg/kg, Zinc = 200-300mg/kg

Tier 1 Assessment Criteria

Determinand	Residential With Produce	Residential Without Produce	Allotments	Commercial (Office)	Commercial (Warehouse)
Benzene	0.33	1.00	0.07	94.70	80.30
Ethylbenzene	354.00	843.00	91.20	65700.00	55600.00
Phenol	415.00	519.00	282.00	37600.00	38000.00
Toulene	611.00	2710.00	118.00	189000.00	166000.00
Xylene, o-	246.00	321.00	159.00	34600.00	27600.00
Xylene, m-	240.00	302.00	175.00	32700.00	26100.00
Xylene, p-	228.00	288.00	164.00	31400.00	25100.00
Aliphatic C5-C6	113.00	113.00	3910.00	12800.00	10800.00
Aliphatic C6-C8	48.10	48.20	13300.00	5470.00	4620.00
Aliphatic C8-C10	108.00	109.00	1710.00	11900.00	10200.00
Aliphatic C10-C12	537.00	538.00	7280.00	49300.00	43700.00
Aliphatic C12-C16	3030.00	3040.00	13400.00	90500.00	89600.00
Aliphatic C16-C35	88400.00	89100.00	281000.00	1910000.00	1910000.00
Aliphatic C35-C44	88400.00	89100.00	281000.00	1910000.00	1910000.00
Aromatic C5-C7	275.00	978.00	57.30	89900.00	76800.00
Aromatic C7-C8	611.00	2710.00	118.00	189000.00	166000.00
Aromatic C8-C10	151.00	189.00	50.50	17800.00	15700.00
Aromatic C10-C12	346.00	866.00	73.80	34500.00	33800.00
Aromatic C12-C16	593.00	1710.00	134.00	37800.00	37800.00
Aromatic C16-C21	770.00	1340.00	260.00	28600.00	28600.00
Aromatic C21-C35	1230.00	1340.00	1550.00	28600.00	28600.00
Aromatic C35-C44	1230.00	1340.00	1550.00	28600.00	28600.00
Combined Aliphatic and Aromatic C44-C70	1300.00	1340.00	2950.00	28600.00	28600.00

Note:

All figures are in mg/kg

Values calculated using CLEA v1.071

Soil type chosen is sandy loam, pH 7

All organic determinands calculated using 6% SOM