
Phase 1 Contaminated Land Desk Study Report

Site address: 127a Crescent Road
Cowley
Oxford
OX4 2NY

Report prepared for: Mr Graham Drewett
127a Crescent Road
Cowley
Oxford
OX4 2NY

Report reference: 62378R1

Report status: Final

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Report Summary Contaminated Land Risks

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

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

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

The assessment findings are summarised as follows:

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

Risk Key

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

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



Recommendations (for next steps)

✓	No immediate action but observe a watching brief	It is noted that whilst a limited intrusive site investigation (including appropriate laboratory testing of soil samples) could be adopted in order to validate the preliminary risk assessment conclusions, a watching brief during all proposed redevelopment activities and associated ground works (which would include a thorough inspection of any exposed sub surface soils/Made Ground) would likely be sufficient.
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Envirep would be delighted to provide further information and a site specific quotation if any further work is desired by the client or required by the regulatory authorities.

Please contact [REDACTED] for further advice.



1. INTRODUCTION

1.1 Background

The study site (from herein known as 'the Site') is situated at 127a Crescent Road in Cowley, OX4 2NY. A location plan of the Site is shown in Section 1.5. It is understood that you are overseeing the redevelopment of the existing garage to comprise a single storey side extension.

Envirep was commissioned by Mr Graham Drewett in March 2014 to undertake a Phase 1 Land Quality Assessment for the Site. The report has been requested by Oxford City Council.

The Phase 1 assessment has been undertaken by firstly compiling information concerning the Site and the surrounding area, including current and historical land uses, geological records and registered pollution incidents. The information which is gathered is then used to construct a 'conceptual site model', including an understanding of likely contaminant sources, pathways and receptors. Finally, a preliminary assessment of risks posed to identified receptors (i.e., people, buildings or the natural environment) from the anticipated land quality at the Site is performed. The risk assessment methodology is consistent with CIRIA C552 (2001); see Section 3.4 for details.

1.2 Purpose of this Report

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

1.3 Report Contents

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

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

1.4 Report Limitations

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

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



1. INTRODUCTION

1.5 Site Location Plan



2. LAND QUALITY ASSESSMENT

2.1 Site Details

Site name:	127a Crescent Road	Current land cover:	Hardstanding, some grass growing through the gravel areas
Current use:	Active commercial/industrial development		
Proposed use:	Commercial development	Site area:	0.04 ha

2.2 Conceptual Understanding (POTENTIAL SOURCES OF CONTAMINATION)

Site history <i>(historical land use taken within 250m radius of the Site boundary)</i>	Date	Description of land use	POTENTIAL SOURCES OF CONTAMINATION	Source description	LOW LIKELIHOOD	PROBABILITY OF CONTAMINATION
	1878	Site undeveloped (fields/agricultural land). Crescent Road is present with a limited amount of residential dwellings. A quarry (gravel pit) is present c. 280 m north east.		POTENTIAL SOURCES OF CONTAMINATION		
1899-1900	No change on-Site. A swimming bath is present c. 70 m north. Quarry to the north east is labelled as 'old quarry'. Development of residential dwellings on Crescent Road. c. 70 m west.					
1914-20	No change.					
1921	Small outbuilding present on Site. Development of 127a Crescent Road and residential dwellings to the west.					
1937	Development of unlabelled structure on Site within footprint of current car repair workshop, which we presume to have been constructed at that time. An unknown club is present c. 10 m east of the Site.					
1956	No change on Site. Surrounding area is developing with residential housing.					
1960-61	No change on Site. Old gravel pits are no longer present and have been replaced with residential housing.					
1975-78	No change.					
1975-94	No change.					

2. LAND QUALITY ASSESSMENT

2.2 Conceptual Understanding (POTENTIAL SOURCES OF CONTAMINATION)																																			
Current land use	<p>The Site is currently used as a mechanical car garage</p> <p>There are no known buried storage tanks at the Site.</p> <p>There is no known bulk fuel or chemical storage on Site.</p> <p>Additional information concerning the current Site condition is presented in Section 2.5 (site walkover information).</p>			POTENTIAL SOURCES OF CONTAMINATION	<p>Given the Site's current use, there is potential for localised contamination relating to the following:</p> <p>Miscellaneous fuel or chemical spills/leaks (i.e. fuels used for refilling and storage in UST's, oils, lubricants, greases, antifreeze residues ,etc.) associated with the Site's use as a filling station and garage.</p>	LOW LIKELIHOOD	PROBABILITY OF CONTAMINATION																												
Neighbouring land uses <i>(see environmental data report in Section 3.2 for full listing)</i>	<p>One or more potentially contaminative land uses are located within the vicinity of the Site, including:</p> <p>Electricity substation c. 60 m north</p> <p>Electricity substation c. 90 m north west</p> <p>Miniature Rifle Range c. 110 m north</p> <p>Electricity substation c. 40 m n south</p> <table border="1" data-bbox="489 1008 1439 1606"> <thead> <tr> <th>Nr</th> <th>Nearest distance</th> <th>Land use / permitted activity / authorisation</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>NA</td> <td>Petrol or fuel sites</td> </tr> <tr> <td>0</td> <td>NA</td> <td>High pressure oil or gas pipelines</td> </tr> <tr> <td>0</td> <td>NA</td> <td>Records of IPC or IPPC Authorised Activities</td> </tr> <tr> <td>0</td> <td>NA</td> <td>Red List / List 1 / List 2 Dangerous Substance Inventory Sites</td> </tr> <tr> <td>4</td> <td>On Site</td> <td>Part A(2) and Part B Activities and Enforcements</td> </tr> <tr> <td>0</td> <td>NA</td> <td>Records of Category 3 or 4 Radioactive Substance Licences</td> </tr> <tr> <td>2</td> <td>440m</td> <td>Records of Licensed Discharge Consents.</td> </tr> <tr> <td>0</td> <td>NA</td> <td>COMAH and NIHHS registered sites</td> </tr> <tr> <td>0</td> <td>NA</td> <td>Sites determined as Contaminated Land under Part IIA of the Environmental Protection Act 1990</td> </tr> </tbody> </table>				Nr	Nearest distance		Land use / permitted activity / authorisation	0	NA	Petrol or fuel sites	0	NA	High pressure oil or gas pipelines	0	NA	Records of IPC or IPPC Authorised Activities	0	NA	Red List / List 1 / List 2 Dangerous Substance Inventory Sites	4	On Site	Part A(2) and Part B Activities and Enforcements	0	NA	Records of Category 3 or 4 Radioactive Substance Licences	2	440m	Records of Licensed Discharge Consents.	0	NA	COMAH and NIHHS registered sites	0	NA	Sites determined as Contaminated Land under Part IIA of the Environmental Protection Act 1990
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2. LAND QUALITY ASSESSMENT

2.2 Conceptual Understanding (POTENTIAL SOURCES OF CONTAMINATION)				
EA recorded pollution incidents	<p>One or more Environment Agency pollution incidents have been recorded within 250 m of the Site. These include:</p> <p>An incident occurred in 2003 c. 260 m to the north east of the Site. This included a spillage of petrol, oils and fuel. Minor impacts to water were recorded.</p>	POTENTIAL SOURCES OF CONTAMINATION	<p>Given the scale, timing, location and nature of the recorded incidents these past events do not appear to pose a significant contamination hazard to the Site.</p>	UNLIKELY
Landfills / waste sites <i>(taken within 500m radius of the Site boundary, see environmental data report in Section 3.2 for full listing)</i>	<p>There are no Environment Agency listed historical landfills located within 500 m of the Site.</p> <p>There are no Environment Agency listed operational landfills located within 500 m of the Site.</p> <p>There are no Local Authority listed historical landfills located within 500 m of the Site.</p> <p>The following other waste sites are registered within 500 m of the Site:</p> <ul style="list-style-type: none"> 0 Records of operational waste treatment, transfer or disposal sites. 0 Records of non-operational waste treatment, transfer or disposal sites. 4 Records of Environment Agency waste sites. 		<p>Given the absence of any landfill sites within close proximity of the Site no associated contamination hazards have been identified.</p> <p>The nearby waste management sites are not thought to represent a significant source of contamination which may impact on the Site given the relative distance to the Site and the regulated nature of current activities.</p>	UNLIKELY
Radon	<p>According to current UK radon mapping (HPA, 2007) the Site lies in an area where 1 to 3 % of homes are at or above the UK radon action level (200 Bq/m³).</p>		<p>1 to 3 % of homes are at or above the UK radon action level (200 Bq/m³).</p>	LOW LIKELIHOOD

PROBABILITY OF CONTAMINATION

2. LAND QUALITY ASSESSMENT

2.3 Conceptual Understanding (ENVIRONMENTAL SENSITIVITY / POTENTIAL SEVERITY OF IMPACTS)					
<p>Geology and Groundwater (see the environmental data report in Section 3.2 for full details)</p>	<p>British Geological Survey mapping indicates the absence of any superficial deposits beneath the Site.</p> <p>British Geological Survey mapping indicates that the bedrock geology consists of Wheatley Limestone Member, which comprises of limestone and is classified as a Secondary (A) Aquifer.</p> <p>The Site lies within a 'very low' groundwater flood risk susceptibility area based on the underlying geological conditions. The British Geological Survey have 'high' confidence in this result.</p> <p>The Site does not lie within a Source Protection Zone (SPZ).</p> <p>There are no groundwater abstraction licences within 1 km of the Site.</p>	<p>POTENTIAL RECEPTORS</p>	<p>A Secondary (A) Aquifer comprises permeable layers capable of supporting water supply at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.</p> <p>Based on the susceptibility of the Site to groundwater flooding, a groundwater flood risk assessment is not considered necessary for the Site.</p> <p>The depth to groundwater beneath the Site is unknown.</p> <p>The absence of groundwater abstraction licences within close proximity of the Site indicates a poor groundwater resource potential.</p>	<p>MEDIUM</p>	<p>POTENTIAL SEVERITY OF IMPACT</p>
<p>Geohazards</p>	<p>The Site lies within an area of historical coal mining activity.</p> <p>There are no brine affected areas within 75 m of the Site.</p> <p>No or limited artificial ground / Made Ground is anticipated on Site.</p> <p>The subsidence hazard relating to shallow mining is low.</p> <p>There are no natural hazards at or within 50 m of the Site.</p>		<p>Given the potential for worked coal seams beneath the Site, mine gas and ground stability/coal mining risk assessments should be considered as part of the redevelopment plans.</p> <p>The Site does not lie within an area of former brine working and is therefore unlikely to be affected by related ground stability issues.</p> <p>Site history and photos appear to indicate little likelihood of significant Made Ground.</p>	<p>MINOR</p>	

2. LAND QUALITY ASSESSMENT

2.3 Conceptual Understanding (ENVIRONMENTAL SENSITIVITY / POTENTIAL SEVERITY OF IMPACTS)					
Surface water <i>(see the environmental data report in Section 3.2 for full details)</i>	<p>The nearest water feature is the Boundary Brook, located 180 m from the Site boundary.</p> <p>The Site lies adjacent to a 1 in 100 (Zone 3) year flood risk zone.</p> <p>There are no surface water abstraction licences within 1 km of the Site.</p>	POTENTIAL RECEPTORS	<p>Given the distance from the Site and the nature of the local geology, the sensitivity of local surface waters is judged to be low.</p>	MINOR	POTENTIAL SEVERITY OF IMPACT
Environmental designations <i>(see the environmental data report in Section 3.2 for full details)</i>	<p>The following environmentally sensitive areas are present within 500 m of the Site:</p> <p>Lye Valley SSSI is c. 435 m to the north of the Site.</p> <p>The Site Lies within a Nitrite Vulnerable Zone (NVZ)</p>		<p>Given the distance from the Site and the nature of the local geology, the sensitivity of local environmental designations is judged to be low.</p> <p>The Nitrite Vulnerable Zone is not considered a relevant receptor of concern.</p>	MINOR	
Human receptors	<p>Proposed workers occupying the Site and any associated visitors.</p>		<p>Human receptors are proposed to be present on Site.</p>	MEDIUM	

2. LAND QUALITY ASSESSMENT

2.4 Regulator Perspective		
Consultation date	25/03/14	Oxford City Council
Envirep consultant	Josh Jones	Karen Seal
Consultation outcome	The Council did not respond to Envirep within the time frame of this report.	

2. LAND QUALITY ASSESSMENT

2.5 Site Inspection (see photographs in Section 3.3)			
Inspection date	21/03/2014	General site condition	Generally well maintained Site
Envirep consultant	Charizanis Kyriakou		
Topography	Even ground	Ground cover	entirely hardstanding, 60% Concrete/building cover, 40% Gravel, <1% Tree coverage
Current site land use	In use as a car repair workshop	On-Site structures	Car garage, well maintained, good condition.
Visual / olfactory evidence of contamination	No visual or olfactory signs of contamination noted (i.e; Asbestos, fly tipping) during the Site walkover visit.	On site drainage	3 manhole covers, 1 near Site entrance, 2 in the centre of the Site.
Bulk storage tanks (fuel and chemical storage)	No evidence for above or below ground bulk storage tanks at the Site or in the surrounding area.	Invasive species	No Japanese Knotweed or any other invasive species noted to be present on Site.

2. LAND QUALITY ASSESSMENT

2.5 Site Inspection (see photographs in Section 3.3)				
Neighbouring land uses	North	Residential dwellings	Off-site contaminant sources	None observed
	South	Residential dwellings		
	East	Residential dwellings		
	West	Residential dwellings		
Local water features	None observed		Distance to nearest residential property	Immediately west of the Site.
Comments	Possible sewage services present beneath the Site (manhole covers), Overhead cable running along the entrance to the Site. Rubble/debris on north west of garage (pile of tree branches, timber, old metal sheet and frame, 2 empty old barrels)			

2. LAND QUALITY ASSESSMENT

2.6 PRELIMINARY RISK ASSESSMENT								
Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
On Site sources								
1	Potential for inorganic and low volatility organic contaminants to be present within the sub-surface soils	Dermal contact, soil & soil dust ingestion, inhalation of soil dust	HH	Current/future site occupants	MEDIUM	UNLIKELY	LOW RISK	Limited potential due to site being currently covered by hardstanding and anticipated to retain hardstanding and maintain current land use under development proposals.
2		Consumption of home grown produce	HH	Current/future site occupants	MEDIUM	UNLIKELY	LOW RISK	
3		Ingress into water supply pipework and subsequent water ingestion	HH	Current/future site occupants	MEDIUM	UNLIKELY	LOW RISK	
4		Building materials in direct contact with aggressive ground	PROP	Current/future site buildings	MILD	LOW LIKELIHOOD	LOW RISK	Natural ground conditions unknown
5		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Wheatly Limestone Member (a Secondary (A) Aquifer)	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	Limited potential due to site currently and anticipated to be covered by hardstanding.
6		Dissolution into aqueous phase and preferential migration via drainage structures	CW	Boundary Brook	MEDIUM	UNLIKELY	LOW RISK	Limited potential due to relative distance to the receptor

2. LAND QUALITY ASSESSMENT


2.6 PRELIMINARY RISK ASSESSMENT								
Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
7	Potential for volatile organic contaminants to be present within the sub-surface soils	Dermal contact, ingestion & inhalation of soils & soil dust	HH	Current/future site occupants	MEDIUM	UNLIKELY	LOW RISK	No evidence of VOC spills or leakage; site currently and anticipated to be covered by hardstanding, and no change of land use.
8		Consumption of home grown produce	HH	Current/future site occupants	MEDIUM	UNLIKELY	LOW RISK	
9		Ingress into water supply pipework and subsequent water ingestion	HH	Current/future site occupants	MEDIUM	UNLIKELY	LOW RISK	
10		Migration of vapours to surface; inhalation indoors	HH	Current/future site occupants	MEDIUM	UNLIKELY	LOW RISK	
11		Migration of vapours to surface; inhalation outdoors	HH	Current/future site occupants	MEDIUM	UNLIKELY	LOW RISK	
12		Building materials in direct contact with aggressive ground	PROP	Current/future site buildings	MILD	LOW LIKELIHOOD	LOW RISK	Natural ground conditions unknown
13		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Wheatly Limestone Member (a Secondary (A) Aquifer)	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	Limited potential due to site currently and anticipated to be covered by hardstanding.
14		Dissolution into aqueous phase and preferential migration via drainage structures	CW	Boundary Brook	MEDIUM	UNLIKELY	LOW RISK	Limited potential due to relative distance to the receptor

2. LAND QUALITY ASSESSMENT

2.6 PRELIMINARY RISK ASSESSMENT								
Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
15	Potential for asbestos containing materials within the sub-surface soils	Liberation of sub surface ACMs and inhalation of asbestos fibres	HH	Occupants of on site buildings	MEDIUM	UNLIKELY	LOW RISK	Given the age of the existing building structures asbestos containing material may be present within the building fabric however site covered by hardstanding and no demolition previously occurred at the Site.
16	Potential for dissolved phase contaminants to be present within shallow groundwater	Lateral and vertical groundwater movement via natural or artificial flow paths	CW	Wheatly Limestone Member (a Secondary (A) Aquifer)	MEDIUM	UNLIKELY	LOW RISK	Limited potential due to site currently and anticipated to be covered by hardstanding.
17		Lateral and vertical groundwater movement via natural or artificial flow paths	CW	Boundary Brook	MEDIUM	UNLIKELY	LOW RISK	
18	Potential for elevated methane to be present within the sub-surface soils	Lateral and vertical migration into on site buildings; potential to cause an explosion	HH	On site properties and their occupants	MEDIUM	UNLIKELY	LOW RISK	Appreciable gas source considered unlikely
19		Lateral migration towards off site buildings; potential to cause an explosion	HH	Off site properties and their occupants	MEDIUM	UNLIKELY	LOW RISK	
20	Potential for elevated carbon dioxide to be present within the sub-surface soils	Lateral and vertical migration into on site buildings; potential to cause asphyxiation	HH	Occupants of on site buildings	MEDIUM	UNLIKELY	LOW RISK	
21		Lateral migration towards off site buildings; potential to cause asphyxiation	HH	Occupants of off site buildings	MEDIUM	UNLIKELY	LOW RISK	
OVERALL RISK RATING							LOW RISK	

2. LAND QUALITY ASSESSMENT

2.7 Recommendations for Next Steps

✓	No immediate action but observe a watching brief	 <p>envirep .co.uk <i>environmental report specialists</i></p>	<p>Given the known history of the Site it is considered unlikely that significant contamination is present within the sub-surface. The preliminary risk assessment suggests that the risks posed by in situ land quality are therefore likely to be low.</p> <p>It is noted that whilst a limited intrusive site investigation (including appropriate laboratory testing of soil samples) could be adopted in order to validate the preliminary risk assessment conclusions, a watching brief during all proposed redevelopment activities and associated ground works (which would include a thorough inspection of any exposed sub surface soils/Made Ground) will likely be sufficient.</p> <p>The watching brief should be maintained throughout the entire development phase of works and any possible evidence of contamination encountered during the redevelopment works should be alerted to the Local Authority. Appropriate actions would then be required to further inspect, sample and analyse any suspect materials, and formulate an appropriate remediation plan, as necessary.</p>
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3. SUPPORTING INFORMATION

The following supporting information is contained in this section:

Section	Content
3.1	Referenced materials used in the Phase 1 reporting
3.2	Published environmental data records (Centremaps EnviroInsight report 127a Crescent Road, Cowley, Oxford, OX4 2NY. REF: CMAPS-CM-309544-26493-240314) including: <ul style="list-style-type: none">• Aerial photographs and site map• Environmental permits, incidents and registers• Landfill and other waste sites• Current land use information• Geology• Hydrogeology and hydrology• Flooding• Designated environmentally sensitive sites• Other environmental factors
3.3	Site photographs
3.4	Risk assessment methodology

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

The advice and opinions in this report should be read and relied on only in the context of the report as a whole, taking account of the terms of reference agreed with the client. The findings are based on the information made available to Envirep at the date of the report (and will have been assumed to be correct) and on current UK standards, codes, technology and practices as at that time. They do not purport to include any manner of legal advice or opinion. New information or changes in conditions and regulatory requirements may occur in future, which will change the conclusions presented here.

This report is confidential to the client. The client may submit the report to regulatory bodies, where appropriate. Should the client wish to release this report to any other third party for that party's reliance, Envirep may, by prior written agreement, agree to such release, provided that it is acknowledged that Envirep accepts no responsibility of any nature to any third party to whom this report or any part thereof is made known. Envirep accepts no responsibility for any loss or damage incurred as a result, and the third party does not acquire any rights whatsoever, contractual or otherwise, against Envirep except as expressly agreed with Envirep in writing.



3. SUPPORTING INFORMATION

3.1 References

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

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

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

Groundsure, 2014. Centremaps EnviroInsight report 127a Crescent Road, Cowley, Oxford, OX4 2NY. REF: CMAPS-CM-309544-26493-240314

Environment Agency, 2014. What's in my backyard? (<http://www.environment-agency.gov.uk/homeandleisure/37793.aspx>).

Health Protection Agency, 2000. Spring 2000 Newsletter featuring; Radon: Guidance on Protective Measures for New Dwellings (BR 211).



3. SUPPORTING INFORMATION

3.2 Environmental Data Report

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



CENTREMAPS
Brockamin House,
Worcester, WR6 5JU

GroundSure Reference: CMAPS-CM-309544-26493-240314

Your Reference: 26493

Report Date 24 Mar 2014

Report Delivery Method: Email - pdf

GroundSure EnviroInsight

Address: 127A,CRESCENT ROAD,COWLEY MARSH,OXFORD, OX4 2NY

Dear Sir/ Madam,

Thank you for placing your order with GroundSure. Please find enclosed the **GroundSure Enviroinsight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 01886 832972 quoting the above CENTREMAPS reference number.

Yours faithfully,

CENTREMAPS

Enc.
GroundSure EnviroInsight



GroundSure Envirolnsight

Address: 127A, CRESCENT ROAD, COWLEY MARSH, OXFORD, OX4 2NY

Date: 24 Mar 2014

Reference: CMAPS-CM-309544-26493-240314

Client: CENTREMAPS

NW

N

NE



W

E

SW

S

SE

Aerial Photograph Capture date: 29-Oct-2006

Grid Reference: 454673,204688

Site Size: 0.04ha

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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Environmental Permits, Incidents and Registers						
	On-site	0-50m	51-250	251-500		
1.1 Industrial Sites Holding Environmental Permits and/or Authorisations						
1.1.1 Records of historic IPC Authorisations	0	0	0	0		
1.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0		
1.1.3 Records of Water Industry Referrals (potentially harmful discharges to the public sewer)	0	0	0	0		
1.1.4 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters)	0	0	0	0		
1.1.5 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0		
1.1.6 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0		
1.1.7 Records of Part A(2) and Part B Activities and Enforcements	2	1	0	1		
1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0		
1.1.9 Records of Licensed Discharge Consents	0	0	0	2		
1.1.10 Records of Planning Hazardous Substance Consents and Enforcements	0	0	0	0		
1.2 Records of COMAH and NIHHS sites	0	0	0	0		
1.3 Environment Agency Recorded Pollution Incidents						
1.3.1 National Incidents Recording System, List 2	0	0	0	1		
1.3.2 National Incidents Recording System, List 1	0	0	0	0		
1.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0		
Section 2: Landfill and Other Waste Sites						
	On-site	0-50m	51-250	251-500	501-1000	1000-5000
2.1 Landfill Sites						
2.1.1 Environment Agency Registered Landfill Sites	0	0	0	0	0	Not searched
2.1.2 Environment Agency Historic Landfill Sites	0	0	0	0	0	0
2.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
2.1.4 GroundSure Local Authority Landfill Sites Data	0	0	0	0	0	0
2.2 Landfill and Other Waste Sites Findings						
2.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
2.2.2 Environment Agency Licensed Waste Sites	0	0	0	1	2	1

Section 3: Current Land Use	On-site	0-50m	51-250	251-500
3.1 Current Industrial Sites Data	0	1	13	Not searched
3.2 Records of Petrol and Fuel Sites	0	0	0	0
3.3 Underground High Pressure Oil and Gas Pipelines	0	0	0	0

Section 4: Geology	
4.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
4.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
4.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 5: Hydrogeology and Hydrology	0-500m					
5.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
5.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
5.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
5.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
5.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
5.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
5.7 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
5.8 Detailed River Network entries within 500m of the site	0	0	5	9	Not searched	Not searched
5.9 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 6: Flooding	
6.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	Yes
6.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site?	Yes
6.3 Are there any Flood Defences within 250m of the study site?	No
6.4 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
6.5 Are there any areas used for Flood Storage within 250m of the study site?	No
6.6 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential
6.7 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	High

Section 7: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	1	2	2
7.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
7.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
7.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
7.5 Records of Ramsar sites	0	0	0	0	0	0
7.6 Records of Ancient Woodlands	0	0	0	0	0	1
7.7 Records of Local Nature Reserves (LNR)	0	0	0	0	1	1
7.8 Records of World Heritage Sites	0	0	0	0	0	0
7.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
7.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
7.11 Records of National Parks	0	0	0	0	0	0
7.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
7.13 Records of Nitrate Vulnerable Zones	1	0	0	0	0	0

Section 8: Natural Hazards

8.1 What is the maximum risk of natural ground subsidence?

Very Low

Section 9: Mining

9.1 Are there any coal mining areas within 75m of the study site?

No

9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site?

Negligible

9.3 Are there any brine affected areas within 75m of the study site?

No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between GroundSure and the Client. The document contains the following sections:

1. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

2. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

3. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure underground oil and gas pipelines.

4. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

5. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

6. Flooding

Provides information on surface water flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

7. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

8. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence.

9. Mining

Provides information on areas of coal and shallow mining.

10. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, GroundSure provide a free Technical Helpline (08444 159000) for further information and guidance.

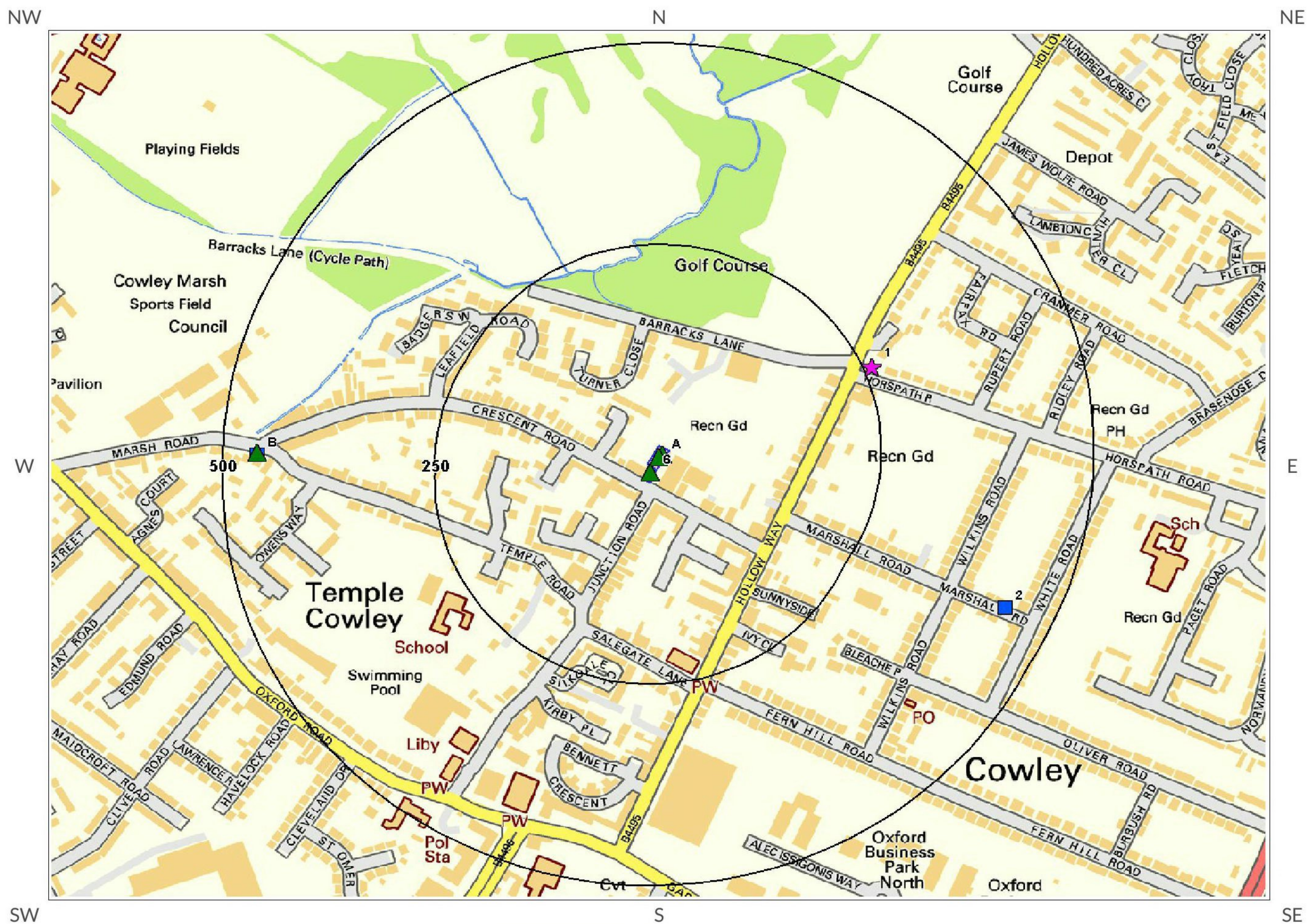
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Environmental Permits, Incidents and Registers Map



Environmental Permits, Incidents and Registers Legend

Mapping sourced from Ordnance Survey

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- | | | | | | |
|--|--------------------|--|-------------------------------|--|--|
| | Site Outline | | Recorded Pollution Incident | | RAS 3 & 4 Authorisations |
| | Search Buffers (m) | | Dangerous Substances (List 1) | | Part A(1) Authorised Processes and Historic IPC Authorisations |
| | 250 | | Dangerous Substances (List 2) | | Part A(2) and Part B Authorised Processes |
| | 500 | | Water Industry Referrals | | COMAH / NIHHS Sites |
| | | | Licensed Discharge Consents | | Sites Determined as Contaminated Land |
| | | | Red List Discharge Consents | | Hazardous Substance Consents and Enforcements |



1. Environmental Permits, Incidents and Registers

1.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

1.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

1.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

1.1.3 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

1.1.4 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

1.1.5 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

1.1.6 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

1.1.7 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

4

The following Part A(2) and Part B Activities are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details
4A	0.0	On Site	454673 204695	Address: Crescent Road Garage, 127 Crescent Road, Cowley, Oxford, OX4 2NY Process: Combustion - Waste Oil Burners 0.4-3MW Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
5A	0.0	On Site	454677 204698	Address: Crescent Road Garage, 127 Crescent Road, Cowley, Oxford, OX4 2NY Process: Combustion - Waste Oil Burners <0.4MW Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
6	3.0	NW	454662 204676	Address: Crescent Road Gge, Crescent Rd, Cowley Process: Waste Oil Burning Process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
7B	460.0	W	454200 204700	Address: Transport Services, Cowley Marsg Depot, Marsh Rd, Cowley Process: Coating & Enamelling Process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

1.1.9 Records of Licensed Discharge Consents within 500m of the study site:

2

The following Licensed Discharge Consents records are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details
2	441.0	SE	455080 204510	Address: House Behind No 45 Wilkins Road, Marshall Road, Oxfordshire, OX4 2NR Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: CAWM.0011 Permit Version: 1 Receiving Water: Land Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 9/6/1999 Effective Date: 19/4/1999 Revocation Date: -
3B	460.0	W	454200 204700	Address: 54-56 Marsh Road, Oxford, Oxfordshi, 54-56 Marsh Road, Oxford, Oxford, Shire Effluent Type: Miscellaneous Discharges - Surface Water Permit Number: CTWC.3128 Permit Version: 1 Receiving Water: Cowley Marshstream Status: Revoked - Unspecified Issue date: 9/2/1989 Effective Date: 9/2/1989 Revocation Date: 20/6/1991

1.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

1.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

1.3 Environment Agency Recorded Pollution Incidents

1.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

1

The following NIRS List 2 records are represented as points on the Authorisations, Incidents and Registers Map:

ID	Distance	Direction	NGR	Details
1	259.0	NE	454923 204808	Incident Date: 09/04/2003 Incident Identification: 149663 Pollutant: Oils and Fuel Pollutant Description: Petrol Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

1.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

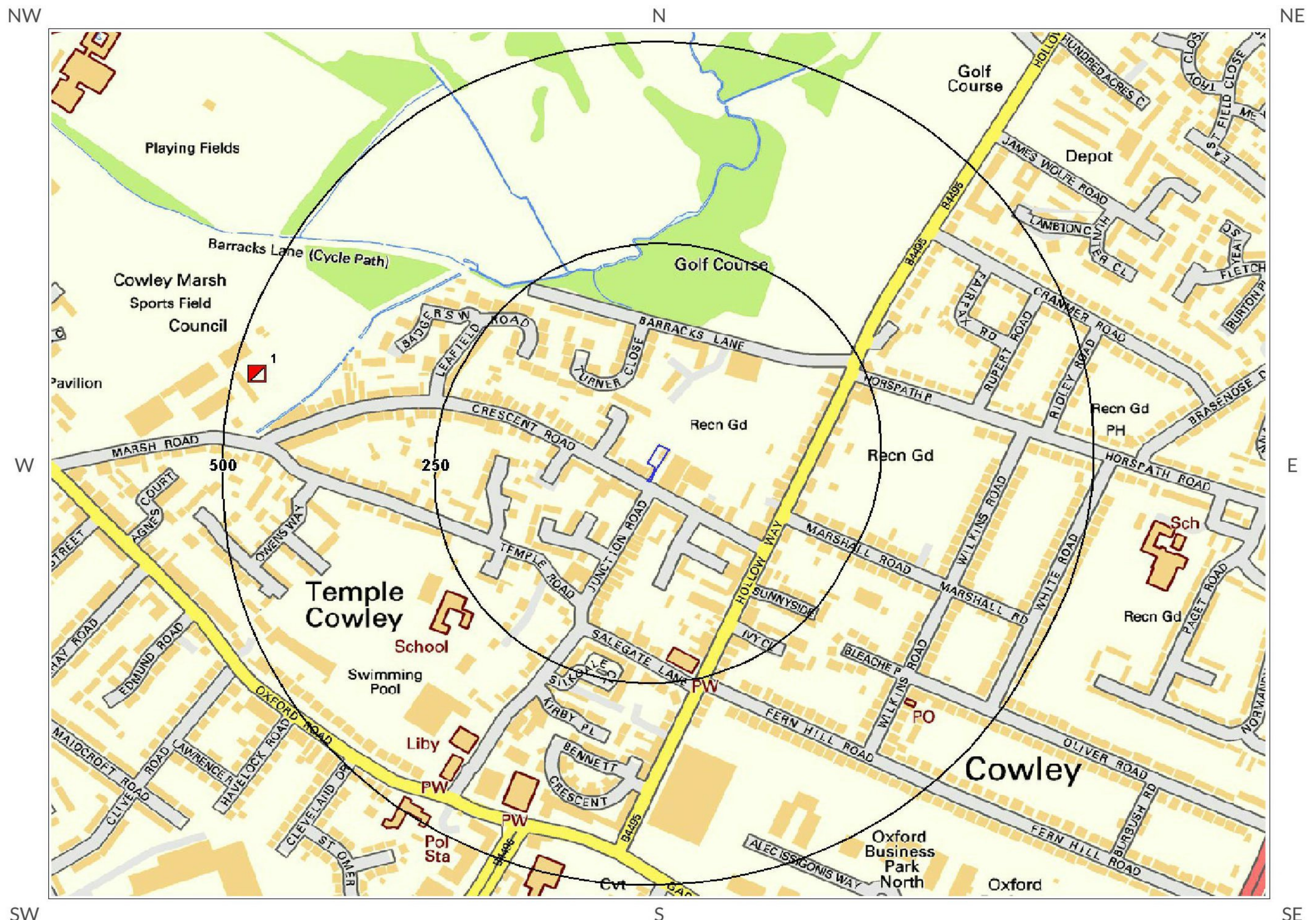
1.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

0

Database searched and no data found.

2. Landfill and Other Waste Sites Map



Landfill and Other Waste Sites Legend



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- | | | |
|------------------------|--------------------------|----------------------------------|
| Site Outline | E.A. Active Landfill | Historic and Planned Waste Sites |
| 250 Search Buffers (m) | E.A. Historic Landfill | E.A. Licensed Waste Site |
| 500 Search Buffers (m) | Local Authority Landfill | BGS / DoE Survey Landfill |



2. Landfill and Other Waste Sites

2.1 Landfill Sites

2.1.1 Records from Environment Agency landfill data within 1000m of the study site:

0

Database searched and no data found.

2.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

0

Database searched and no data found.

2.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

2.1.4 Records of Local Authority landfill sites within 1500m of the study site:

0

Database searched and no data found.

2.2 Other Waste Sites

2.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

Database searched and no data found.

2.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

4

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
1	473.0	W	454200 204800	<p>Site Address: Oxford City Council, Marsh Depot, Marsh Road, Cowley, Oxford, Oxfordshire, OX4 2HH Type: Transfer Station taking Non-Biodegradable Wastes Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: OXF007 EPR reference: EA/EPR/ZP3499EY/V001 Operator: Oxford City Council Waste Management licence No: 86114 Annual Tonnage: 24999.0</p> <p>Issue Date: 08/08/1994 Effective Date: - Modified: 03/12/2009 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: City Works Correspondence Address: -, -</p>
Not shown	921.0	E	455600 204600	<p>Site Address: Oxford Building Solutions, Horspath Road, Cowley, Oxford, Oxfordshire, OX4 2RH Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: OXF018 EPR reference: EA/EPR/PP3395EB/V002 Operator: Oxford City Council Waste Management licence No: 86260 Annual Tonnage: 50.0</p> <p>Issue Date: 28/11/2002 Effective Date: - Modified: 09/12/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Horspath Road Depot Correspondence Address: -, -</p>
Not shown	921.0	E	455600 204600	<p>Site Address: City Works, Horspath Road, Cowley, Oxford, Oxfordshire, OX4 2RH Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: OXF018 EPR reference: - Operator: Oxford City Council Waste Management licence No: 86260 Annual Tonnage: 0.0</p> <p>Issue Date: 28/11/2002 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: - Correspondence Address: -, City Works, Horspath Road, Cowley, Oxford, Oxfordshire, OX4 2RH</p>
Not shown	1009.0	E	455692 204648	<p>Site Address: City Insulation Contractors Ltd, City Insulation, Horspath Industrial Estate, Cowley, Oxford, Oxfordshire, OX4 2RD Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CIT001 EPR reference: EA/EPR/NP3099EB/V002 Operator: City Insulation Contractors Ltd Waste Management licence No: 86121 Annual Tonnage: 104.0</p> <p>Issue Date: 07/03/1995 Effective Date: - Modified: 15/02/2001 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: City Insulation Contractors Ltd Correspondence Address: -, -</p>

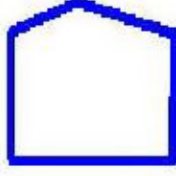



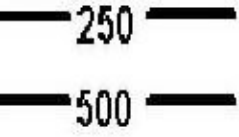
3. Current Land Use Map



Current Land Use Legend



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-  Site Outline
-  Current Industrial Sites
-  Petrol & Fuel Sites
-  Underground High Pressure Oil & Fuel Pipelines
-  Search Buffers (m)



3. Current Land Uses

3.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

14

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	3.0	SW	Crescent Road Garage Ltd	454665 204682	127, Crescent Road, Oxford, OX4 2NY	Vehicle Repair, Testing and Servicing	Repair and Servicing
2	59.0	N	Electricity Sub Station	454674 204770	OX4	Electrical Features	Infrastructure and Facilities
3	86.0	NW	Electricity Sub Station	454635 204788	OX4	Electrical Features	Infrastructure and Facilities
4	112.0	N	Miniature Rifle Range	454679 204823	OX4	Shooting Facilities	Sports Complex
5	142.0	S	Electricity Sub Station	454716 204533	OX4	Electrical Features	Infrastructure and Facilities
6	167.0	W	Electricity Sub Station	454504 204607	OX4	Electrical Features	Infrastructure and Facilities
7	174.0	E	Electricity Sub Station	454849 204646	OX4	Electrical Features	Infrastructure and Facilities
8A	189.0	E	Dunn Car Sales Ltd	454874 204713	138, Hollow Way, Cowley, Oxford, OX4 2NL	Secondhand Vehicles	Motoring
9A	189.0	E	Dunn Car Sales	454874 204713	138, Hollow Way, Cowley, Oxford, OX4 2NL	New Vehicles	Motoring
10	195.0	SE	Electricity Sub Station	454811 204538	OX4	Electrical Features	Infrastructure and Facilities
11	200.0	E	College Computers	454870 204779	169, Hollow Way, Cowley, Oxford, OX4 2NE	Electrical Equipment Repair and Servicing	Repair and Servicing
12	201.0	SE	Holloway Autoparts	454782 204503	74-76, Hollow Way, Cowley, Oxford, OX4 2NH	Vehicle Parts and Accessories	Motoring
13	242.0	W	Electricity Sub Station	454432 204770	OX4	Electrical Features	Infrastructure and Facilities
14	245.0	SW	Tank	454455 204532	OX4	Tanks (Generic)	Industrial Features

3.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

0

Database searched and no data found.

3.3 Underground High Pressure Oil and Gas Pipelines

Records of high pressure underground pipelines within 500m of the study site:

0

Database searched and no data found.



4. Geology

4.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

4.2 Superficial Ground and Drift Geology

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

4.3 Bedrock and Solid Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
WYLS-LMST	WHEATLEY LIMESTONE MEMBER	LIMESTONE

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)
