



Land and Partners Limited

LAND NORTH OF LONG COPSE LAND, EMSWORTH

Preliminary Contaminated Land Risk Assessment



Land and Partners Limited

LAND NORTH OF LONG COPSE LAND, EMSWORTH

Preliminary Contaminated Land Risk Assessment

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 70052250

OUR REF. NO. 70052250-PH1

DATE: AUGUST 2021

Land and **Partners Limited**

LAND NORTH OF LONG COPSE LAND, EMSWORTH

Preliminary Contaminated Land Risk Assessment

WSP

4th Floor

6 Devonshire Square

London

EC2M 4YE

Phone: +44 20 7337 1700

WSP.com



QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Date	November 2018	November 2018	December 2018	August 2021
Prepared by	K Smith	K Smith	K Smith	C Harris
Signature				
Checked by	Dr. R Hares	Dr. R Hares	Dr. R Hares	Dr. R Hares
Signature				
Authorised by	Dr. P Dowson	Dr. P Dowson	Dr. P Dowson	Dr R Hares
Signature				
Project number	70052250	70052250	70052250	70052250
Report number	70052250-PH1	70052250-PH1	70052250-PH1	70052250-PH1
Remarks		Regulatory correspondence included.		Remarks from Client included

CONTENTS

1	INTRODUCTION	2
1.1	TERMS OF REFERENCE	2
1.2	AIMS	2
1.3	DEVELOPMENT PROPOSAL	2
1.4	PROJECT SCOPE	2
1.5	LEGISLATIVE CONTEXT AND GUIDANCE	3
1.6	SOURCES OF INFORMATION	3
1.7	LIMITATIONS	3
1.8	UNDERSTANDING RISK	4
2	SUMMARY OF THE SITE AND SURROUNDING AREA	5
2.1	SITE DESCRIPTION AND CURRENT USE	5
3	HISTORICAL LAND USE	6
3.1	HISTORICAL MAPS	6
4	ENVIRONMENTAL SETTING	9
4.1	GEOLOGY	9
4.2	HYDROGEOLOGY AND HYDROLOGY	9
4.3	ENVIRONMENTALLY SENSITIVE SITES	9
4.4	FLOODING	9
4.5	RADON	10
5	REGULATORY INFORMATION AND CONSULTATION	11
5.1	REGULATORY DATABASE	11
5.2	LOCAL AUTHORITY	12
5.3	ENVIRONMENT AGENCY	12

5.4	PLANNING HISTORY	12
5.5	UNEXPLODED ORDNANCE (UXO)	13
6	PRELIMINARY CONCEPTUAL SITE MODEL	14
6.1	INTRODUCTION	14
6.2	POTENTIAL SOURCES OF CONTAMINATION	14
6.3	POTENTIAL RECEPTORS	15
6.4	PLAUSIBLE PRELIMINARY CONTAMINANT LINKAGES	15
7	CONCLUSIONS AND RECOMMENDATIONS	18
7.1	CONCLUSIONS	18
7.2	RECOMMENDATIONS	18

APPENDICES

APPENDIX A

FIGURES AND DRAWINGS

APPENDIX B

REPORT LIMITATIONS

APPENDIX C

CIRIA RISK DEFINITIONS

APPENDIX D

ENVIROCHECK

APPENDIX E

REGULATORY CORRESPONDENCE

APPENDIX F

UXO INFORMATION

EXECUTIVE SUMMARY

WSP was instructed by Land and Partners Limited ('the Client') to undertake a desk-based assessment of contaminated land and associated liabilities and constraints to support the proposed residential redevelopment of the parcel of land north of Long Copse Lane in Emsworth. This Preliminary Contaminated Land Risk Assessment is required to support an outline planning application for a new residential scheme (C3 use to include affordable housing) and associated landscaping, access and supporting infrastructure.

The key aim of this Preliminary Contaminated Land Risk Assessment is to develop a preliminary Conceptual Site Model (CSM) to identify potential contamination risks associated with the site through evaluation of possible contaminated land exposure pathways and their potential significance on identified receptors.

At present, the site comprises paddocks/open land laid to grass, two farmsteads with associated access tracks and a residential dwelling. A watercourse is located along the northern boundary of the site, which is a tributary to the River Ems and a drain is located in the south-west of the site.

Historically the site has been mainly open fields, with some areas of farm buildings in the south and north-west. The surrounding area has also been mainly open fields with limited contaminative uses in close proximity to the site.

The site is underlain by bedrock of the London Clay Formation (Unproductive Stratum), with potentially the Lambeth Group (Secondary A aquifer) being the surface bedrock in the north-east of the site. Superficial deposits have not generally been identified on the site, although Head deposits (Secondary Undifferentiated aquifer) may be present in north-east and Made Ground may be present in the areas around the site buildings.

Given the history of the site there is currently generally a **Low to Moderate** risk to receptors based on the historical use of the site and a **Very Low to Low** risk from off site sources. The risk to construction workers is considered to be **Moderate** due to there being a risk of workers coming in to contact with potential asbestos or contaminated soils. The risks to workers should be managed through health and safety protocols under Construction (Design and Management) Regulations 2015.

There is a **Moderate** UXO risk at the site.

Based on the findings of the Preliminary Contaminated Land Risk Assessment the following is recommended:

- An intrusive ground investigation should be undertaken at the site, particularly in and around the former buildings. The ground investigation should be compliant with current UK guidance e.g. BS10175 and include a Generic Quantitative Risk Assessment (GQRA) to allow the assessment of identified plausible contaminant linkages and if remedial measures may be required;
- If not already completed, an asbestos survey should be undertaken on the buildings, prior to demolition to confirm if asbestos containing material is present; and,
- Completion of a detailed UXO assessment report highlighting the potential risk of UXO on the site and/or employment of a UXO clearance engineer during intrusive works, if required.

1 INTRODUCTION

1.1 TERMS OF REFERENCE

WSP was instructed by Land and Partners Limited ('the Client') to undertake an assessment of contaminated land and associated liabilities and constraints to support the proposed residential redevelopment of the parcel of land north of Long Copse Lane in Emsworth. The site location and current layout are presented in Appendix A.

1.2 AIMS

The overall project aim is to undertake a desk-based assessment of the site with respect to ground contamination.

The key aims of this assessment are to:

- Develop a preliminary Conceptual Site Model (CSM) to identify potential groundwater contamination risks associated with the potential redevelopment of the site; and
- Evaluate likely contaminated land exposure pathways and their potential significance on identified receptors and provide risk management advice to support redevelopment.

1.3 DEVELOPMENT PROPOSAL

The application is for about 210 dwellings and associated landscaping, access and supporting infrastructure. This Site forms part of wider masterplan area which proposes approximately 260 dwellings to correspond with a proposed housing allocation in the emerging Havant Local Plan. Following pre-application advice and a Development Control Forum, it was agreed with Council officers to prepare a masterplan for the proposed allocation area to demonstrate how the application Site related to this. Policy H8 of the emerging Local Plan anticipates that a Contaminated Land Investigation Report (to include gas monitoring) is prepared to support development proposals for the Site.

The proposed masterplan is included in Appendix A.

1.4 PROJECT SCOPE

To assist in meeting the aims as stated in Section 1.2, the scope of this assessment comprised:

- A review of relevant previous reports pertaining to the site;
- A review of publicly available historical maps and site plans (where available) to identify former land uses and potential contaminative activities on and surrounding the site;
- A review of relevant regulatory databases and contact with relevant regulatory authorities including: Local Council planning website, the Contaminated Land Officer (CLO) and Environment Agency (EA);

- A review of relevant publicly available information relating to hydrological features, hydrogeology, neighbouring land use, ecologically sensitive uses and geology in order to establish the environmental setting of the site;
- Develop a preliminary CSM via the source-pathway-receptor contaminant linkage approach; and
- Outline the environmental risks and / or opportunities, with respect to ground, groundwater and ground gas conditions, which may potentially arise as liabilities or constraints associated with future use of the Site.

1.5 LEGISLATIVE CONTEXT AND GUIDANCE

The assessment was undertaken in the legislative context of:

- Part 2A of The Environmental Protection Act (1990); and,
- The National Planning Policy Framework (2021).

The following good practice and statutory guidance was considered and the assessment was undertaken in general accordance with:

- Environment Agency 'Model Procedures for the Management of Land Contamination', CLR11 (2004); and,
- CIRIA C552 'Contaminated Land Risk Assessment. A guide to good practice' (2001).

1.6 SOURCES OF INFORMATION

The following relevant sources of information were used in the production of this report:

- Landmark Envirocheck report, dated 25 October 2018, Order Ref: 184117530_1_1;
- British Geological Survey (BGS) Online Viewer (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>) accessed 29 October 2018;
- Flood Maps for Planning Service (<https://flood-map-for-planning.service.gov.uk/>), accessed 29 October 2018;
- MAGIC (<https://magic.defra.gov.uk/MagicMap.aspx>), accessed 29 October 2018;
- Catchment Data Explorer, (<http://environment.data.gov.uk/catchment-planning/WaterBody/GB107041012370>), accessed 29 October 2018;
- Zetica UXO Risk Maps (<https://zeticauxo.com/downloads-and-resources/risk-maps/>), accessed 29 October 2018; and
- Zetica UXO Pre-Desk Study Assessment, dated 31 October 2018.

1.7 LIMITATIONS

This report is addressed to and may be relied upon by Land and Partners Limited and may not be relied upon or transferred to any other parties without the express written agreement of WSP.

This report should be read and used in full. No responsibility will be accepted where this report is used, in its entirety or in part, by any other party. WSP cannot be held liable for third party information. Full details of the limitations are provided as Appendix B.

1.8 UNDERSTANDING RISK

It is important to understand that any risks identified during a preliminary assessment, such as the one presented in this document, are perceived risks based on the information reviewed. A more detailed assessment of the actual risks can only be assessed following further intrusive investigations. The preliminary assessments presented herein are qualitative based on professional judgements following the review of available data and within the context of the existing/proposed use. Those risk categories presented (very low, low, low to moderate, moderate, high and very high) follow guidance presented in CIRIA Publication C552, Contaminated Land Risk Assessment – A Guide to Good Practice. CIRIA states that the risk levels should be based on an understanding of both the probability (likelihood) of a risk occurring and the magnitude of the potential consequence (severity) of a risk. CIRIA defines four levels of probability and four levels of severity with relation to contaminated land, as presented in Appendix C.

2 SUMMARY OF THE SITE AND SURROUNDING AREA

2.1 SITE DESCRIPTION AND CURRENT USE

Site location and current layout plans are presented in Appendix A.

A site walkover was carried out by WSP on 5 April 2018. Additional information on the site description was obtained from aerial photographs and Ordnance Survey maps.

Table 1 provides a summary of relevant site details.

Table 1 – Summary of Site Details

Detail	Comment
Name and Address of Site	Land North of Long Copse Lane, PO10 7UR
National Grid reference	474950E, 108050N
Site Description and Current Use	The site use currently comprises paddocks/open land laid to grass, two farmsteads with associated access tracks and a residential dwelling. A watercourse is present along the northern boundary and is a tributary to the River Ems. Ditches are present along the southern edge of the site adjacent Long Copse Lane and a drain runs approximately north to south in the west of the site.
Area	Approximately 14.6 Ha
Site Setting and Surrounding Area	The site mostly comprises open fields, which continue in the surrounding area, with wooded areas to the north and west. Where fields and woodland are not present the surrounding area is mostly residential.
Topography and Ground Cover	The site is bisected by an east-west natural topographic ridge/spur. The northern part of site falls toward Ems tributary and southern part falls toward Long Copse Lane.
Boundaries	The surrounding area generally comprises residential developments and woodlands. The land adjacent the site comprises woodland to the north, a residential dwelling and paddocks to the east, residential dwellings to the south, and residential dwellings and commercial units to the west. The site is bounded by a watercourse to the north and Long Copse Lane to the south.

3 HISTORICAL LAND USE

3.1 HISTORICAL MAPS

Historical maps were obtained as part of the Envirocheck report (Appendix D) and were reviewed to identify potentially contaminative former land uses on site and within a 250 m to 500 m radius of the site boundary. A summary of the on-site and off-site features relevant to contaminated land are presented in Table 2.

Table 2 – Summary of Pertinent History of the Site and Surrounding Area

Date of Historical Map (Scale)	On-site Feature	Off-site Feature
1866 to 1869 (1:2,500)	The site is generally open fields with some areas of trees. Hollybank Farm is located in the centre of the site. Long Coppice is located to the south-east of the site and may be partially present on the site.	The surrounding area is generally open fields with a wooded area, with sporadic buildings and what appears to be a tennis court to the west (John North's Hole and Holly Bank). The southern boundary is bounded by a road. A pond is noted along the northern boundary.
1879 to 1880 (1:10,560)	No significant change.	A wooded area is located immediately to the north of the site. A Brick & Tile Works is located approximately 350 m to the north of the site beyond Monk Farm, which is located approximately 250 m north-east of the site. A Union Workhouse is located approximately beyond 500 m to the east of the site, along with a Mill and Engine House.
1898 (1:10,560)	No significant change.	Clay Pits are located near the Brick & Tile Works with a gravel pit further north.
1897 (1:2,500)	Some of the Long Coppice buildings in the south-east appear to have been demolished. A drain is identified in the south-west of the site, with a flow direction to the south-south-east.	A well is located to the south-east of the site near Long Coppice. Hollybank Cottage is located to the east, along with a well.

Date of Historical Map (Scale)	On-site Feature	Off-site Feature
		John North's Hole to the west now known as Holly Lodge. A pump is located immediately to the west.
1914 (1:10,560)	No significant change.	The Engine House and Clay Pits are no longer shown. A Saw Mill and Hospital (Infectious Diseases) are located beyond the Brick & Tile Works.
1932 (1:2,500)	Long Coppice is now known as Long Coppice House and a well is located on site in this area. Small buildings are noted in the north-west of the site.	No significant change.
1938 (1:10,560)	No significant change.	Union Workhouse is no longer shown.
1952 to 1969 (1:2,500)	Some minor changes may have occurred at Hollybank Farm. Long Coppice House and well is no longer shown. Further development is noted in the north-west of the site. A drain is noted along with south-western boundary of the site.	To the east Holly Bank is now known as Hollybank House, with the location of the tennis courts moved. Forest Lodge is not located to the north-east of Holly Lodge and a Saw Mill is located further north; approximately 360 m north-west of the site. The pond along the northern boundary appears to have been infilled.
1955 to 1971 (1:2,500) & 1970 (1:2,500)	A couple buildings labelled Longacre are located in the south-east of the site.	The building known as Long Coppice House is now located off-site to the south-east. Residential development has occurred immediately south of the site beyond Long Copse Lane.
1962 to 1963 (1:10,000)	No significant change.	The Mill, Hospital and Saw Mill and Brick & Tile Works in the north and east are no longer shown. Although a Works

Date of Historical Map (Scale)	On-site Feature	Off-site Feature
		is located near where the Brick & Tile Works was present.
1970 to 1977 (1:2,500) 1973 to 1975 (1:10,000)	An electrical substation is noted in the south of the site, south-west of Longacre.	The Works to the north is not present and the area of the former Saw Mill appears to be now Saw Mill's Farm. Residential development has occurred in the surrounding area.
1980 to 1981 (1:2,500)	An additional building is noted at Longacre.	No significant change.
1983 (1:25,000) & 2000 (1:10,000)	No significant change.	A water course is noted along the northern boundary and located maps show that the flow direction is to the south-east.
1996 (1:2,500)	No significant change.	The Saw Mill is no longer shown on the map.
2018 (1:10,000)	The building is the north-west of the site is labelled as The Old Dairy Farm. A tank is noted in the centre of the site near Hollybank Farm.	No significant change.

4 ENVIRONMENTAL SETTING

4.1 GEOLOGY

The British Geological Survey (BGS) 'Geology of Britain' online viewer indicates that the geology underlying the site includes the London Clay Formation. No superficial deposits are noted to the present. However, it is possible that Made Ground is present in some areas of the site, particularly near the buildings.

Along the north-eastern boundary bedrock comprising the Lambeth Group (Clay, Silt and Sand) and superficial Head deposits (Clay, Silt, Sand and Gravel) may be present.

No publicly available BGS borehole logs are located within close proximity of the site in similar geology.

The Envirocheck report stated that there is a moderate hazard potential for shrinking or swelling clay; relating to the presence of the London Clay Formation.

4.2 HYDROGEOLOGY AND HYDROLOGY

The London Clay Formation is classified as an Unproductive Stratum. In the north-east of the site where the Lambeth Group and Head deposits may encroach onto the site, the aquifer is designated as Secondary A and Secondary Undifferentiated, respectively.

The site is not located within a groundwater Source Protection Zone (SPZ), the closest is approximately 750 m to the north-west of the site and the nearest drinking water abstraction point is over 1 km to the east of the site.

The nearest surface water feature is the drain located in the south-west of the site. A watercourse is also present immediately along the northern site boundary. This watercourse flows in a south-easterly direction toward Westbourne where it meets the River Ems. The chemical river quality of the River Ems is described by the Environment Agency as Good.

The closest surface water abstraction point is located approximately 595 m east of the site.

The soils in the north-east of the site (Lambeth Group) are classified as having a high leaching potential.

4.3 ENVIRONMENTALLY SENSITIVE SITES

There are no environmentally sensitive sites within 500 m of the site. However, an ancient woodland is located immediately to the north and north-east of the site, a National Park is located approximately 500 m to the north (South Downs) and the site is within a Nitrate Vulnerable Zone.

4.4 FLOODING

A review of the flood map for planning website indicates that the site is located within Flood Zone 1, which is defined as land having a low probability of flooding.

4.5 RADON

The site is in an area where less than 1% of homes are estimated to be at or above the Radon Action Level. Therefore, radon protection is not required for new dwellings.

5 REGULATORY INFORMATION AND CONSULTATION

5.1 REGULATORY DATABASE

The Envirocheck report includes information and data collected from several organisations including the Environment Agency (EA), the Local Authority, the British Geological Survey (BGS), Department for Environment, Food & Rural Affairs (Defra) and Health & Safety Executives (HSE).

It is considered that the information listed in Table 3 represents those of potential concern in relation of contamination at the site. The full Envirocheck report is provided in Appendix D.

Table 3 – Summary of Database Searches (all distances are approximate)

Descriptor	On-site	0-249 m	250-500 m	Details
Discharge Consents	1	1	3	The discharge consent on site relates to a dwelling adjacent to Holly Brook Farm and is for the disposal of sewage (final/treated effluent) to a freshwater stream/river (tributary of the River Ems).
Local Authority Pollution Prevention and Controls (PCC)	0	0	1	There was one PCC within 500 m of the site, 381 m east for Dave Lashley Garage (waste oil burners). This was revoked.
Contemporary Trade Directory Entries	0	5	6	These included marine equipment & supplies, printers, wheelie bin cleaning, car engine tuning & diagnostic services, boatbuilders & repairers, commercial cleaning services, garage/car services, marine engineers, tyre dealers and plastic injection moulding.
Pollution Incidents to Controlled Waters	0	2	0	There were two incidents approximately 100 m south-west of the site; both relating to inert suspended solids and oil discharged into a drain and both were categorised as minor incidents.
Substantiated Pollution Incident Register	0	0	1	The closest is 455 m south west of the site and was a significant incident based on impact to air as a result of landfill odour.
Potential Infilled Land (Non-Water)	0	1	2	The closest is 197 m north-east of the site (unknown filled ground - pit, quarry)
Potential Infilled Land (Water)	0	5	4	The closest is 116 m south-west of the site (unknown filled ground – pond, marsh, river, stream, dock)
BGS Recorded Mineral Site	0	1	2	The closest relates to the ceased clay pits at the Westbourne Brick & Tile Works, 248 m north-east of the site.

Descriptor	On-site	0-249 m	250-500 m	Details
Fuel Station Entries	0	1	0	A petrol station was once present 383 m east of the site.

5.2 LOCAL AUTHORITY

Havant Borough Council was contacted by WSP via email on 25 October 2018 regarding environmentally pertinent information held relating to the site.

A response was received from the Environmental Control Officer (ECO) on 13 November 2018. The response from the ECO is provide in Appendix E and a summary of the key points are presented below:

- Farm premises within the site boundary are considered to have potential to lead to localised contamination which could be of significance to overlying or adjacent contaminant sensitive properties.
- Although the Council holds no records of storage tanks at the site these may be present in association with agricultural buildings and in association with off-main services properties. It is understood that domestic fuel use is not unlikely in this area.
- Former agricultural premises are regarded as being a fuel/pollution risk, as well as representing elevated likelihood of informal waste activities having occurred (deposit to land).
- Based on the information available from the Council the ECO has considered that there is no suggestion that an active pollutant linkage is likely to be active to such an extent that a SPOSH (significant potential of significant harm) is considered likely to be determinable.

HBC planning offices confirmed to the Client December 2019 that following discussions with the Environmental Control Officer, it is accepted that gas monitoring could be dealt with by planning condition (dealt with as part of the required intrusive ground investigation for the reserved matter stage).

5.3 ENVIRONMENT AGENCY

The Environment Agency was contacted by WSP via email on 25 October 2018. A response was received on 15 November 2018. A summary of the key information provided by the Environment Agency is provided below and a copy of the response is included in Appendix E.

- The Environment Agency is not aware of any soil or groundwater remedial works at the site.
- The Southleigh licenced landfill is approximately 500m north-west of the site (Envirocheck quoted distance as approximately 600m).
- The Blackbush Range and Southleigh Forest historic landfills are approximately 500m north-west (Envirocheck quoted distance as approximately 580m to 670m respectively).

5.4 PLANNING HISTORY

A search of the Havant Borough Council Planning Portal was undertaken on 29 October 2018. The following pertinent information was obtained:

- Planning documents were available for the discharge of planning condition No. 4 relating to new landscaping and a stable extension at Hollybank Farm.
- Application for use of the land at the Old Dairy Farm to station a mobile home.
- Application for the conversion of 3 No. stables into 2 No. bed & breakfast rooms for use with the equestrian centre at the Old Dairy Farm.
- Application for a 3 bed dwelling to provide owners accommodation and 5 No. bed and breakfast rooms for users of the centre at the Old Dairy Farm.

5.5 UNEXPLODED ORDNANCE (UXO)

The Zetica online bomb map indicates that the site has a moderate UXO risk rating. A preliminary Pre-Desk Study UXO Assessment was obtained from Zetica (see Appendix F) and key information is summarised below:

- Strategic targets were located in the vicinity of the site.
- Hollybank Woods, adjacent to the site, was used as a marshalling camp prior to D-Day landings.
- The site was located in the Urban District of Havant and Waterloo, adjacent to the Rural District of Chichester, each recoding 423 and 1221 high explosive bombs, respectively. Although no readily available records have been found to indicate that the site was bombed.
- Zetica recommended that a detailed UXO desk study is required to potentially zone the UXO hazard level on the Site, this can be carried out at a later stage prior to commencement.

6 PRELIMINARY CONCEPTUAL SITE MODEL

6.1 INTRODUCTION

The preliminary CSM is based upon the environmental conditions of the site as described in the previous sections and was developed in the context of the current condition of the site.

The assessment followed a risk-based approach; with the potential environmental risk assessed qualitatively using the 'source-pathway-receptor' contaminant linkage concept introduced in the guidance documents (principally the EA's CLR 11) on the practical implementation of the Environmental Protection Act 1990.

Environmental risk can be defined as the combination of the consequence of a harmful effect and the probability of its occurrence. The existence of a contaminant linkage is primarily dependant on site usage and environmental conditions.

The environmental risk assessment has been carried out by identifying and evaluating the significance of the following:

- Potential sources of contamination: these include actual or potentially contaminating materials and activities, located either on or in the vicinity of the site;
- Potential receptors of contamination: these include site users, groundwater and surface waters; and
- Potential pathways for contamination migration: these are the routes or mechanisms by which contaminants may migrate from the source to the receptor.

6.2 POTENTIAL SOURCES OF CONTAMINATION

Table 4 provides a summary of the potential sources of contamination that may be present at the site, as well as the likely nature of such sources.

Table 4 – Potential Sources of Contamination

Potential Source	Potential Contaminants of Concern	Likely / Anticipated Distribution
ON-SITE		
Made Ground	Petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), metals, inorganics, asbestos, organic matter.	Made Ground may be present in the areas around The Old Diary Farm, Hollybank Farm and Longacre, where buildings are present.
Building fabric	Asbestos containing material may be present.	Within buildings on site.
Farm equipment, including tanks	Oils, hydrocarbons, volatile and semi-volatile organic compounds.	In the area of The Old Diary Farm and Hollybank Farm.
Electrical substation	Polychlorinated biphenyls (PCB)	South of the site.
OFF-SITE		

<250 m from site: infilled pond and infilled land.	Metals, inorganics, petroleum hydrocarbons, PAHs, asbestos, ground gas.	Infilled pond on northern boundary and infilled land 116 m south-west and 197 m north-east of the site.
250 m and greater from site: Brick & Tile Works, Works, Union Workhouse, Saw Mills, Engine House, Hospital, Fuel Station and Landfills.	Metals, inorganics, petroleum hydrocarbons, PAHs, volatile and semi-volatile organic compounds and asbestos.	To the north, west and east.

6.3 POTENTIAL RECEPTORS

In the context of the proposed residential end-use, the following potential receptors were identified:

Human Health

- Future site users;
- Construction workers;
- Third party neighbours;
- Plants and vegetation; and
- Buildings and structures.

Controlled waters

- River Ems and tributaries; and
- Groundwater within the Lambeth Group (if present).

6.4 PLAUSIBLE PRELIMINARY CONTAMINANT LINKAGES

Table 5 provides an evaluation of the potential contaminant linkages that were considered to be plausible on the basis of the information currently available for the site and the proposed end use.

Table 5 – Plausible Contaminant Linkages

Potential Contaminant Sources	Receptor	Pathways	Comments
ON-SITE			
Made Ground and farm equipment	▪ Future site users ▪ Construction workers	▪ Dermal contact ▪ Indirect ingestion of contaminants	The site has been mainly open fields, with some areas of farm buildings. Therefore, the risk of contamination present in the ground is considered to be Low to

Potential Contaminant Sources	Receptor	Pathways	Comments
	- Controlled waters - Third party neighbours - Plants and vegetation - Building and structures	- Inhalation of dust/asbestos fibres - Migration along drains - Vertical and lateral leaching from impacted soil - Ground gas/vapour migration	Moderate. Contamination is unlikely to be widespread and if present would be localised to the areas where the buildings are present (i.e. where Made Ground is likely to be located) or where equipment or tanks were placed. Although contamination may be localised, the risk to construction workers is considered to be Moderate due to potential close contact with contaminated soil and asbestos.
Building fabric	- Future site users - Construction workers - Third party neighbours	Inhalation of asbestos fibres	Asbestos containing material may be present in old farm buildings and the associated risk to considered to be Low to Moderate to future site users and neighbours and Moderate to construction workers.
Electrical substation	- Future site users - Construction workers - Third party neighbours	- Dermal contact - Indirect ingestion of contaminants - Migration along drains - Vertical and lateral leaching from impacted soil	If contamination is present this is likely to be isolated to the area in the immediately vicinity of the substation and the risk is considered to be Low to Moderate.
OFF-SITE			
<250 m from site: infilled pond and infilled land.	- Future site users - Construction workers - Controlled waters - Building and structures	- Indirect ingestion /inhalation of contaminants/dust windblown from adjacent sites. - Vertical leaching from impacted soil/sediment & subsequent lateral migration via groundwater	Given the unknown nature of the infilled ground, there may be the risk of contaminant migration. However, there is only a very small area of potentially permeable soils in the north-east where the Lambeth Group may be present and the site is mainly underlain by the London Clay Formation, which would mitigate the migration of contaminants and

Potential Contaminant Sources	Receptor	Pathways	Comments
		Ground gas/vapour migration	ground gas. Therefore, the risk is considered to be Low .
250 m and greater from site: Brick & Tile Works, Works, Union Workhouse, Saw Mills, Engine House, Hospital, Fuel Station and Landfills.	- Future site users - Construction workers - Controlled waters - Building and structures	- Indirect ingestion/inhalation of contaminants/dust windblown from adjacent sites. - Vertical leaching from impacted soil/sediment & subsequent lateral migration via groundwater - Ground gas/vapour migration	Given the distance from the site and the presence of the impermeable London Clay the risk from these off-site sources is considered to be Very Low .

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

Based on the information detailed within this report, the following conclusions have been made in the context of the proposed residential development at the land north of Long Copse Lane.

At present, the site comprises paddocks/open land laid to grass, two farmsteads with associated access tracks and a residential dwelling.

Historically the site has been mainly open fields, with some areas of farm buildings in the south and north-west. The surrounding area has also been mainly open fields with limited contaminative uses in close proximity to the site.

The site is underlain by the bedrock of the London Clay Formation (Unproductive Stratum), with potentially the Lambeth Group (Secondary A aquifer) being the surface bedrock in the north-east of the site. Superficial deposits have not generally been identified on the site, although Head deposits (Secondary Undifferentiated aquifer) may be present in north-east and Made Ground may be present in the areas around the site buildings.

Given the history of the site there is currently generally a **Low to Moderate** risk to receptors based on the historical use of the site and a **Very Low to Low** risk from off site sources.

The risk to construction workers is considered to be **Moderate** due to there being a risk of workers coming in to contact with potential asbestos or contaminated soils. The risks to workers should be managed through health and safety protocols under Construction (Design and Management) Regulations 2015.

There is a **Moderate** UXO risk at the site.

7.2 RECOMMENDATIONS

The following is recommended based on this Preliminary Contaminated Land Risk Assessment:

- An intrusive ground investigation should be undertaken at the site, particularly in and around the former buildings. The ground investigation should be compliant with current UK guidance e.g. BS10175 and include a Generic Quantitative Risk Assessment (GQRA) to allow the assessment of identified plausible contaminant linkages and if remedial measures may be required. It is recommended that the ground investigation is designed based on the following technical objectives;
 - Characterisation of the ground and groundwater conditions underlying the site;
 - Soil and groundwater sampling for contamination testing;
 - Groundwater and ground gas monitoring; and
 - Provision a GQRA to assess risks to human health and controlled waters in the context of the proposed development.
- If not already completed, an asbestos survey should be undertaken on the buildings, prior to demolition to confirm if asbestos containing material is present.



- Completion of a detailed UXO assessment report highlighting the potential risk of UXO on the site and/or employment of a UXO clearance engineer during intrusive works, if required.

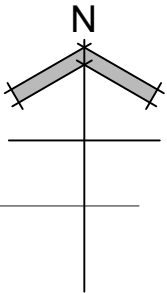
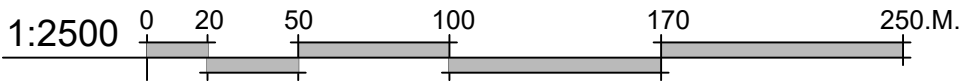
Appendix A

FIGURES AND DRAWINGS

wsp



Ordnance Survey, (c) Crown Copyright 2017. All rights reserved. Licence number 100022432



Drawn by : CDC Checked by :
Date: 2/10/17
© This drawing and the works depicted contains information that is the copyright of Carlton Design Partnership Ltd. This drawing may also contain copyrighted information of third parties. This drawing or part thereof may not be reproduced, re-used or altered except with the written permission of the originators. No liability will be accepted for amendments made by third parties. Scaled measurements must not be taken from this drawing. Any discrepancy or disparity must be notified to the originator in writing. This drawing may contain Ordnance Survey Data that is subject to Crown Copyright. All Rights reserved.

Revisions			
Rev	Date	Drawn	Checked

Project:
LAND NORTH OF LONG COPSE LANE
EMSWORTH

Drawing Title:
LOCATION PLAN



carlton
design partnership
Selwyn House, 32a Castle Way, Southampton, SO14 2AW
023 8011 8866 www.carltondesignpartnership.com

Scale: 1:2500	@ A3
Drg No: 170116/SL/LP	Rev: F

X:\CURRENT PROJECTS\LAND AND PARTNERS\LONG COPSE LANE EASWORTH\SITE LAYOUT\28



Drawn by: Checked by:

Date:

© The drawing and the works depicted contains information that is the copyright of Carlton Design Partnership Ltd. This drawing may also contain copyrighted information of third parties. This drawing or part thereof may not be reproduced, re-used or altered except with the written permission of the originator. No liability will be accepted for amendments made by third parties. Scaled measurements must not be taken from this drawing. Any discrepancy or discrepancy must be notified to the originator in writing. This drawing may contain Ordnance Survey Data that is subject to Crown Copyright. All Rights reserved.

Revisions

Rev	Date	Drawn	Checked
-----	------	-------	---------

Project:
LAND NORTH OF LONG COPSE LANE
EMS WORTH

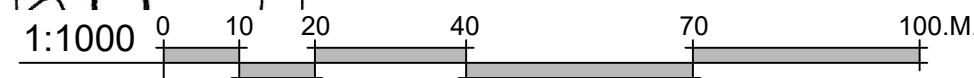
Drawing Title:
SKETCH MASTERPLAN



carlton
design partnership
Selwyn House, 32a Castle Way, Southampton, SO14 2AW
023 8011 8864 www.carltondesignpartnership.com

Scale: 1:1000 @ A1

Dwg No: 170116/SU/SK1 Rev: N



Appendix B

REPORT LIMITATIONS



REPORT LIMITATIONS - GROUND RISK AND REMEDIATION

GENERAL

1. WSP UK Limited has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed and outlined in the body of the report.
2. Unless explicitly agreed otherwise, in writing, this report has been prepared under WSP UK Limited standard Terms and Conditions as included within our proposal to the Client.
3. Project specific appointment documents may be agreed at our discretion and a charge may be levied for both the time to review and finalise appointments documents and also for associated changes to the appointment terms. WSP UK Limited reserves the right to amend the fee should any changes to the appointment terms create an increase risk to WSP UK Limited.
4. The report needs to be considered in the light of the WSP UK Limited proposal and associated limitations of scope. The report needs to be read in full and isolated sections cannot be used without full reference to other elements of the report and any previous works referenced within the report.

PHASE 1 GEO ENVIRONMENTAL AND PRELIMINARY RISK ASSESSMENTS

Coverage: *This section covers reports with the following titles or combination of titles: phase 1; desk top study; geo environmental assessment; development appraisal; preliminary environmental risk assessment; constraints report; due diligence report; geotechnical development review; environmental statement; environmental chapter; project scope summary report (PSSR), program environmental impact report (PEIR), geotechnical development risk register; and, baseline environmental assessment.*

5. The works undertaken to prepare this report comprised a study of available and easily documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the Site and correspondence with relevant authorities and other interested parties. Due to the short timescales associated with these projects responses may not have been received from all parties. WSP UK Limited cannot be held responsible for any disclosures that are provided post production of our report and will not automatically update our report.
6. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only for the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, WSP UK Limited reserves the right to review such information and, if warranted, to modify the opinions accordingly.
7. It should be noted that any risks identified in this report are perceived risks based on the information reviewed. Actual risks can only be assessed following intrusive investigations of the site.
8. WSP UK Limited does not warrant work / data undertaken / provided by others.

REPORT LIMITATIONS - GROUND RISK AND REMEDIATION

INTRUSIVE INVESTIGATION REPORTS

Coverage: *The following report titles (or combination) may cover this category of work: geo environmental site investigation; geotechnical assessment; GIR (Ground Investigation reports); preliminary environmental and geotechnical risk assessment; and, geotechnical risk register.*

9. The investigation has been undertaken to provide information concerning either:
 - i. The type and degree of contamination present at the site in order to allow a generic quantitative risk assessment to be undertaken; or
 - ii. Information on the soil properties present at the site to allow for geotechnical development constraints to be considered.
10. The scope of the investigation was selected on the basis of the specific development and land use scenario proposed by the Client and may be inappropriate to another form of development or scheme. If the development layout was not known at the time of the investigation the report findings may need revisiting once the development layout is confirmed.
11. For contamination purposes, the objectives of the investigation are limited to establishing the risks associated with potential contamination sources with the potential to cause harm to human health, building materials, the environment (including adjacent land), or controlled waters.
12. For geotechnical investigations the purpose is to broadly consider potential development constraints associated with the physical property of the soils underlying the site within the context of the proposed future or continued use of the site, as stated within the report.
13. The amount of exploratory work, soil property testing and chemical testing undertaken has necessarily been restricted by various factors which may include accessibility, the presence of services; existing buildings; current site usage or short timescales. The exploratory holes completed assess only a small percentage of the area in relation to the overall size of the Site, and as such can only provide a general indication of conditions.
14. The number of sampling points and the methods of sampling and testing do not preclude the possible existence of contamination where concentrations may be significantly higher than those actually encountered or ground conditions that vary from those identified. In addition, there may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report.
15. The inspection, testing and monitoring records relate specifically to the investigation points and the timeframe that the works were undertaken. They will also be limited by the techniques employed. As part of this assessment, WSP UK Limited has used reasonable skill and care to extrapolate conditions between these points based upon assumptions to develop our interpretation and conclusions. The assumption made in forming our conclusions is that the ground and groundwater conditions (both chemically and physically) are the same as have been encountered during the works undertaken at the specific points of investigation. Conditions can change between investigation points and these interpretations should be considered indicative.
16. The risk assessment and opinions provided are based on currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective

REPORT LIMITATIONS - GROUND RISK AND REMEDIATION

effects of any future changes or amendments to these values. Specific assumptions associated with the WSP UK Limited risk assessment process have been outlined within the body or associated appendix of the report.

17. Additional investigations may be required in order to satisfy relevant planning conditions or to resolve any engineering and environmental issues.
18. Where soil contamination concentrations recorded as part of this investigation are used for commentary on potential waste classification of soils for disposal purposes, these should be classed as indicative only. Due consideration should be given to the variability of contaminant concentrations taken from targeted samples versus bulk excavated soils and the potential variability of contaminant concentrations between sampling locations. Where major waste disposal operations are considered, targeted waste classification investigations should be designed.
19. The results of the asbestos testing are factually reported and interpretation given as to how this relates to the previous use of the site, the types of ground encountered and site conceptualisation. This does not however constitute a formal asbestos assessment. These results should be treated cautiously and should not be relied upon to provide detailed and representative information on the delineation, type and extent of bulk ACMs and / or trace loose asbestos fibres within the soil matrix at the site.
20. If costs have been included in relation to additional site works, and / or site remediation works these must be considered as indicative only and must be confirmed by a qualified quantity surveyor.

EUROCODE 7: GEOTECHNICAL DESIGN

21. On 1st April 2010, BS EN 1997-1:2004 (Eurocode 7: Geotechnical Design – Part 1) became the mandatory baseline standard for geotechnical ground investigations.
22. In terms of geotechnical design for foundations, slopes, retaining walls and earthworks, EC7 sets guidance on design procedures including specific guidance on the numbers and spacings of boreholes for geotechnical design, there are limits to methods of ground investigation and the quality of data obtained and there are also prescriptive methods of assessing soil strengths and methods of design. Unless otherwise explicitly stated, the work has not been undertaken in accordance with EC7. A standard geotechnical interpretative report will not meet the requirements of the Geotechnical Design Report (GDR) under Eurocode 7. The GDR can only be prepared following confirmation of all structural loads and serviceability requirements. The report is likely to represent a Ground Investigation Report (GIR) under the Eurocode 7 guidance.

DETAILED QUANTITATIVE RISK ASSESSMENTS AND REMEDIAL STRATEGY REPORTS

23. These reports build upon previous report versions and associated notes. The scope of the investigation, further testing and monitoring and associated risk assessments were selected on the basis of the specific development and land use scenario proposed by the Client and may not be appropriate to another form of development or scheme layout. The risk assessment and opinions provided are based on currently available approaches in the generation of Site Specific Assessment Criteria relating to contamination concentrations and are not considered to represent a risk in a specific land use scenario to a specific receptor. No liability can be accepted for the retrospective effects of any future changes or amendments to these values, associated models or associated guidance.

REPORT LIMITATIONS - GROUND RISK AND REMEDIATION

- 24. The outputs of the Detailed Quantitative Risk Assessments are based upon WSP UK Limited manipulation of standard risk assessment models. These are our interpretation of the risk assessment criteria.
- 25. Prior to adoption on site they will need discussing and agreeing with the Regulatory Authorities prior to adoption on site. The regulatory discussion and engagement process may result in an alternative interpretation being determined and agreed. The process and timescales associated with the Regulatory Authority engagement are not within the control of WSP UK Limited. All costs and programmes presented as a result of this process should be validated by a quantity surveyor and should be presumed to be indicative.

GEOTECHNICAL DESIGN REPORT (GDR)

- 26. The GDR can only be prepared following confirmation of all structural loads and serviceability requirements. All the relevant information needs to be provided to allow for a GDR to be produced.

MONITORING (INCLUDING REMEDIATION MONITORING REPORTS)

- 27. These reports are factual in nature and comprise monitoring, normally groundwater and ground gas and data provided by contractors as part of an earthworks or remedial works.
- 28. The data is presented and will be compared with assessment criteria.

Appendix C

CIRIA RISK DEFINITIONS



CIRIA RISK DEFINITIONS

Table A1 - Classifications of Probability

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

Table A2 - Classifications of Consequence

Classification	Definition
Severe	Short-term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem.
Medium	Chronic damage to Human Health ("significant harm" as defined in DETR, 2000). Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such ecosystem.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services (significant harm as defined in the Draft Circular on Contaminated Land, DETR, 2000). Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve, Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.). Easily repairable effects of damage to buildings, structures and services

The risk categories presented in this report, taking into account both probability and severity, are based on the matrix presented in **Table A3** below, following CIRIA C552.

Table A3 - Adopted Risk Categories / Comparison of Consequence Against Probability

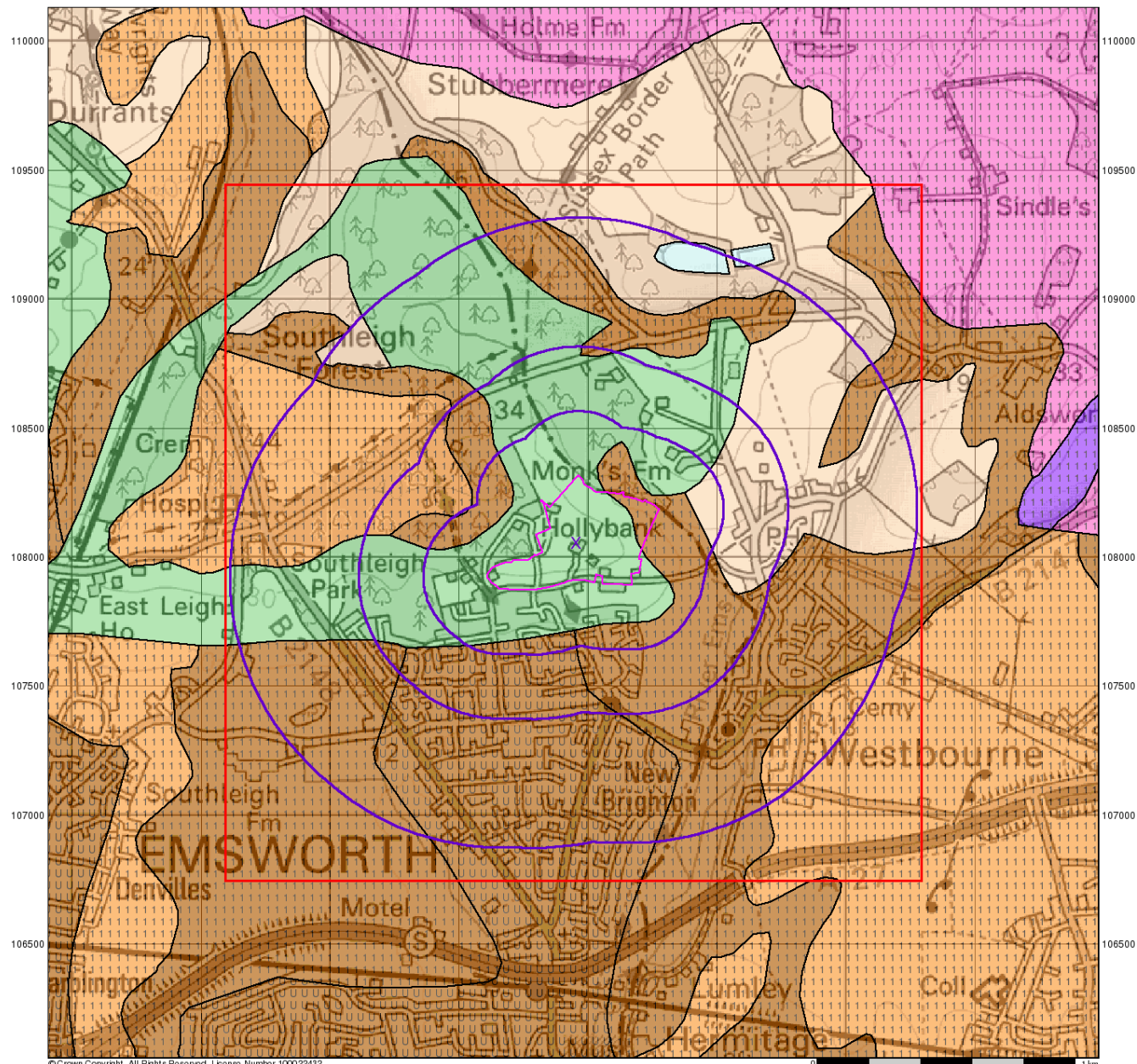
Probability	Consequence			
	Severe	Medium	Mild	Minor
High Likelihood	Very High Risk	High Risk	Moderate Risk	Low to Moderate Risk
Likely	High Risk	Moderate Risk	Low to Moderate Risk	Low Risk
Low Likelihood	Moderate Risk	Low to Moderate Risk	Low Risk	Very Low Risk
Unlikely	Low to Moderate Risk	Low Risk	Very Low Risk	Very Low Risk

Appendix D

ENVIROCHECK



473000 473500 474000 474500 475000 475500 476000 476500



© Crown Copyright. All Rights Reserved. License Number 100022432.

0 1 km

Envirocheck®

LANDMARK INFORMATION GROUP®

Groundwater Vulnerability

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

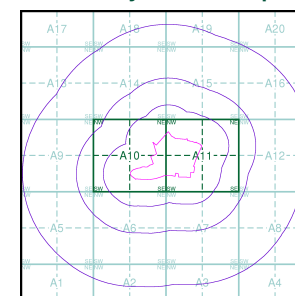
Agency and Hydrological

Geological Classes

- | | |
|---|-----------------------|
| Major Aquifer (Highly Permeable) | High (H) 1, 2, 3, U |
| | Intermediate (I) 1, 2 |
| | Low |
| Minor Aquifer (Variably Permeable) | High (H) 1, 2, 3, U |
| | Intermediate (I) 1, 2 |
| | Low |
| Non Aquifer (Negligibly Permeable) | |
| Water or Sea | |
| Drift Deposit | |

Soil Classes

Site Sensitivity Context Map - Slice A



Order Details

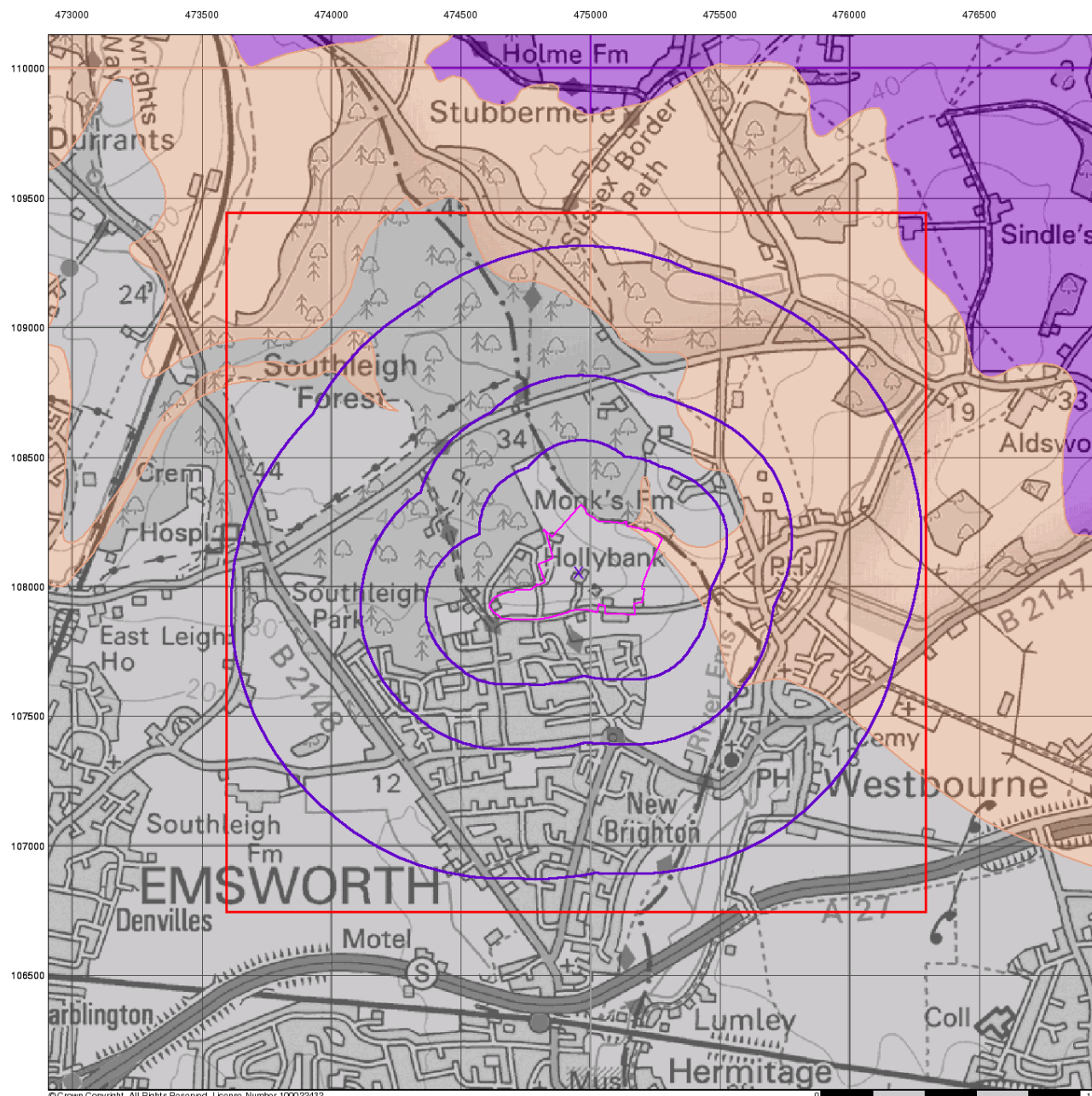
Order Number: 184117530_1_1
 Customer Ref: 70052250
 National Grid Reference: 474950, 108050
 Slice: A
 Site Area (Ha): 16.02
 Search Buffer (m): 1000

Site Details

Land North of Long Copse Lane, EMSWORTH, PO10 7UL

Landmark®
 INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



© Crown Copyright. All Rights Reserved. License Number 100022432.

0 1 km

Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

Bedrock Aquifer Designation

General

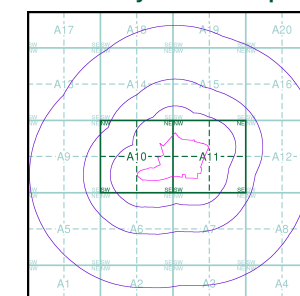
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

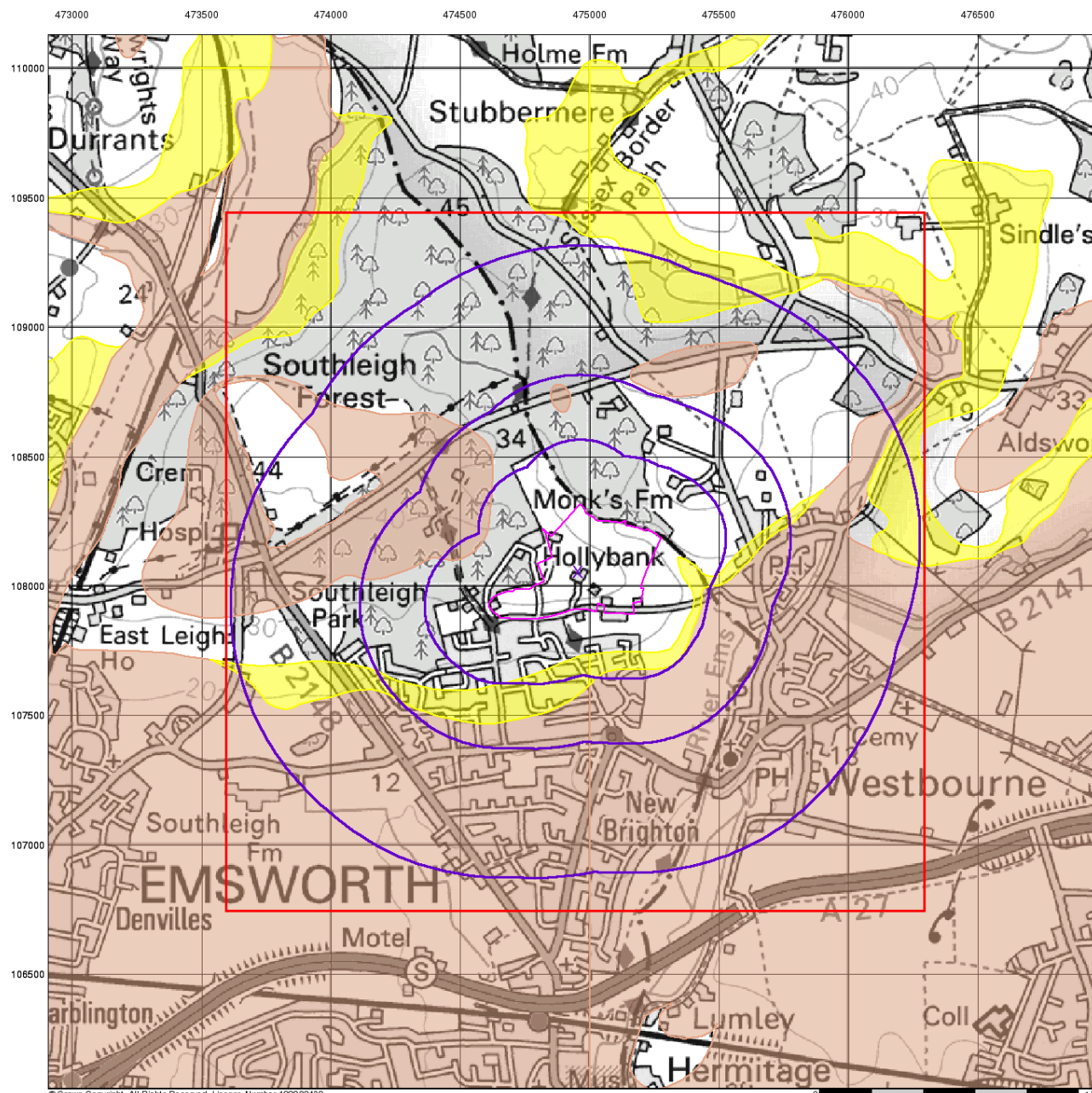
Order Number: 184117530_1_1
Customer Ref: 70052250
National Grid Reference: 474950, 108050
Slice: A
Site Area (Ha): 16.02
Search Buffer (m): 1000

Site Details

Land North of Long Copse Lane, EMSWORTH, PO10 7UL

Landmark[®]
LANDMARK INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



© Crown Copyright. All Rights Reserved. License Number 100022432.

0 1 km

Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

Superficial Aquifer Designation

General

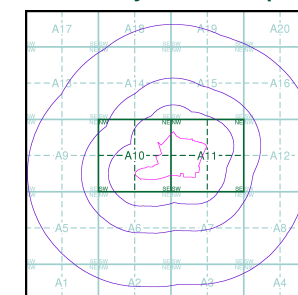
- ◊ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

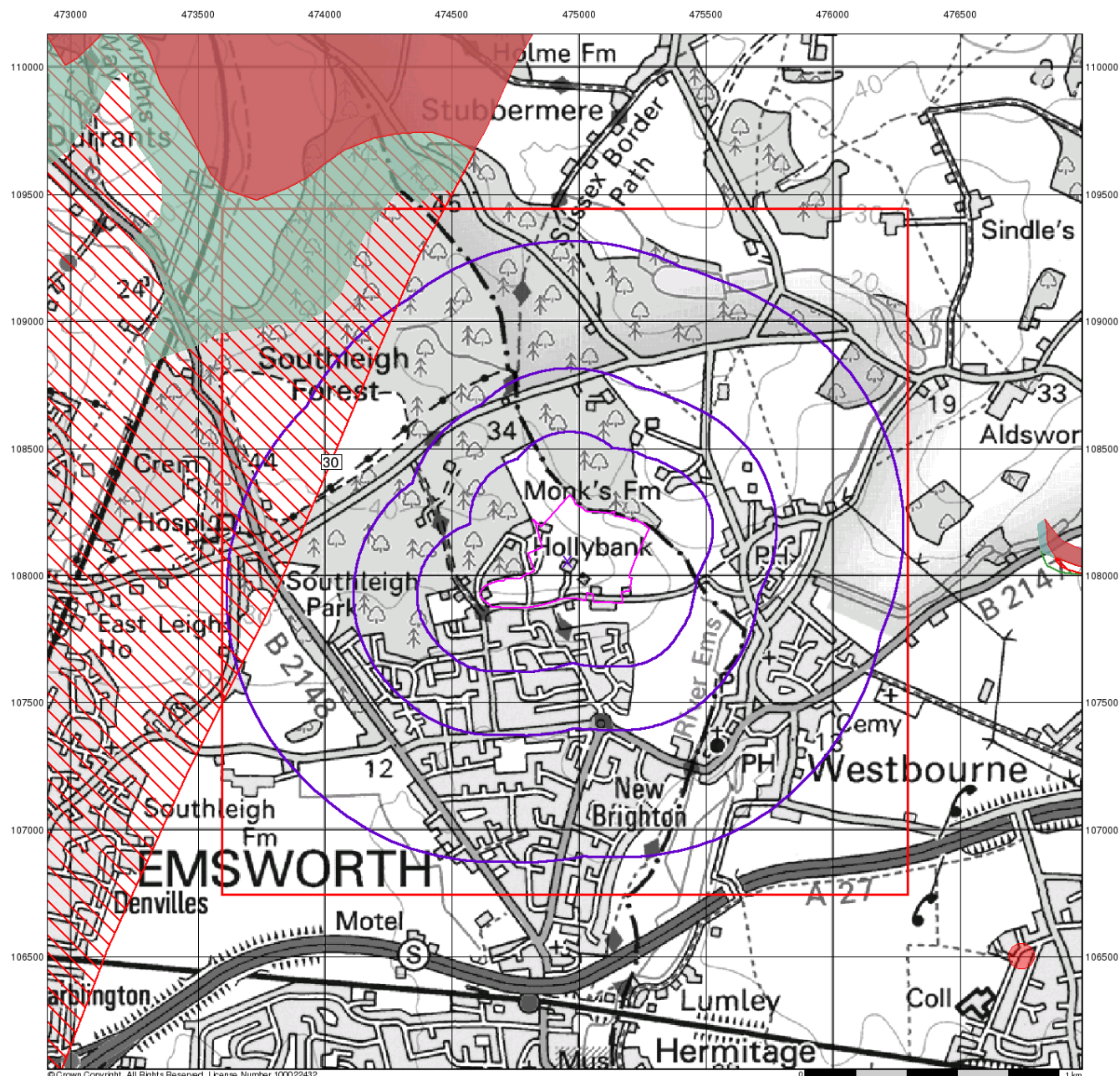
Order Number: 184117530_1_1
 Customer Ref: 70052250
 National Grid Reference: 474950, 108050
 Slice: A
 Site Area (Ha): 16.02
 Search Buffer (m): 1000

Site Details

Land North of Long Copse Lane, EMSWORTH, PO10 7UL

Landmark[®]
 LANDMARK INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



© Crown Copyright. All Rights Reserved. License Number 100022432.

Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

Source Protection Zones

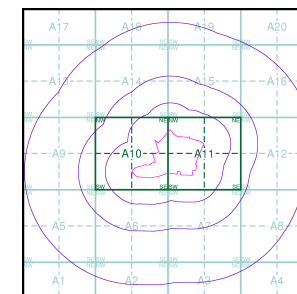
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



Order Details

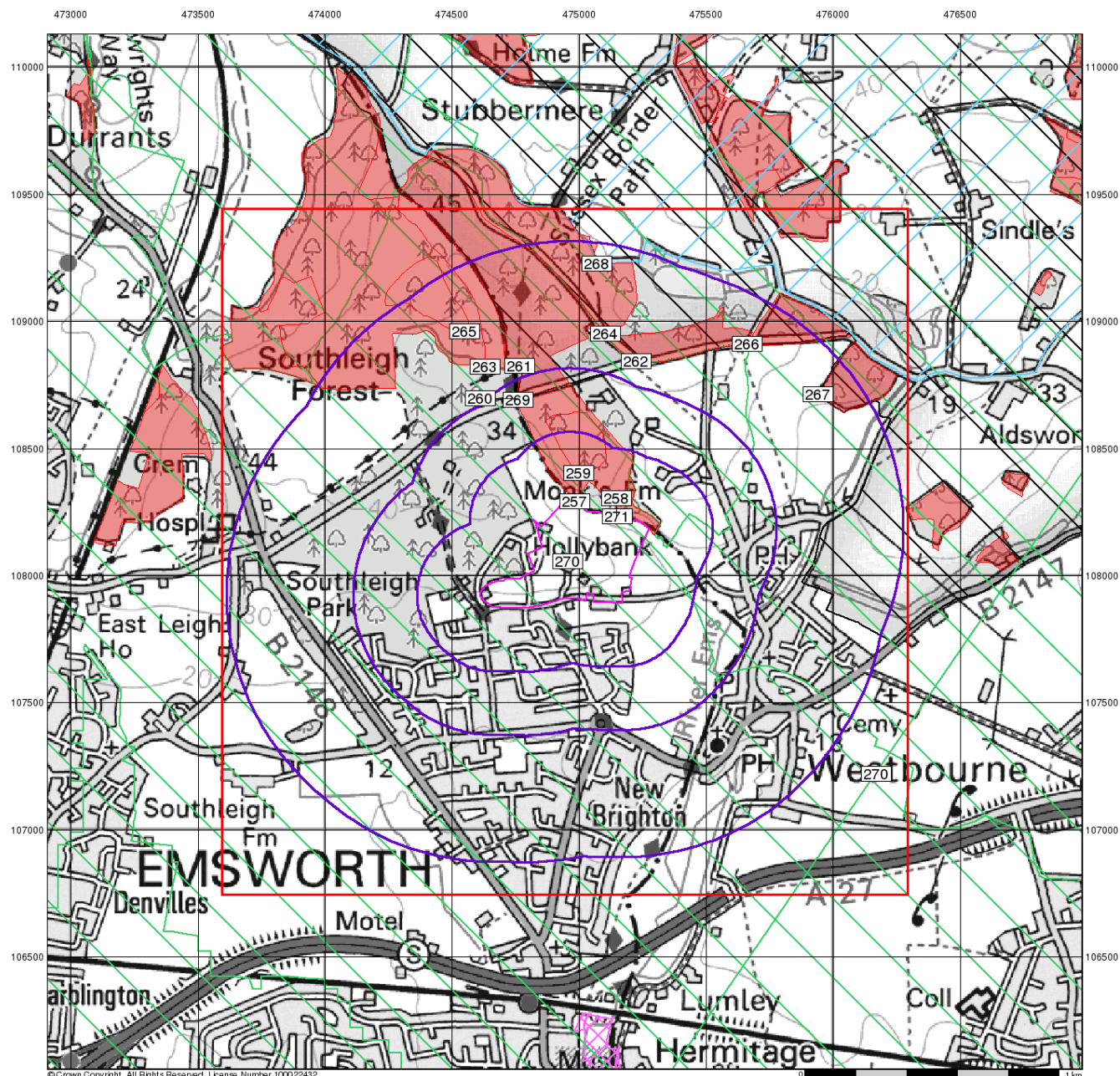
Order Number: 184117530_1_1
 Customer Ref: 70052250
 National Grid Reference: 474950, 108050
 Slice: A
 Site Area (Ha): 16.02
 Search Buffer (m): 1000

Site Details

Land North of Long Copse Lane, EMSWORTH, PO10 7UL

Landmark[®]
 LANDMARK INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



Envirocheck®

LANDMARK INFORMATION GROUP®

Sensitive Land Uses

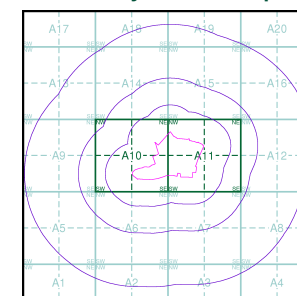
General

- ◊ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- N National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



Order Details

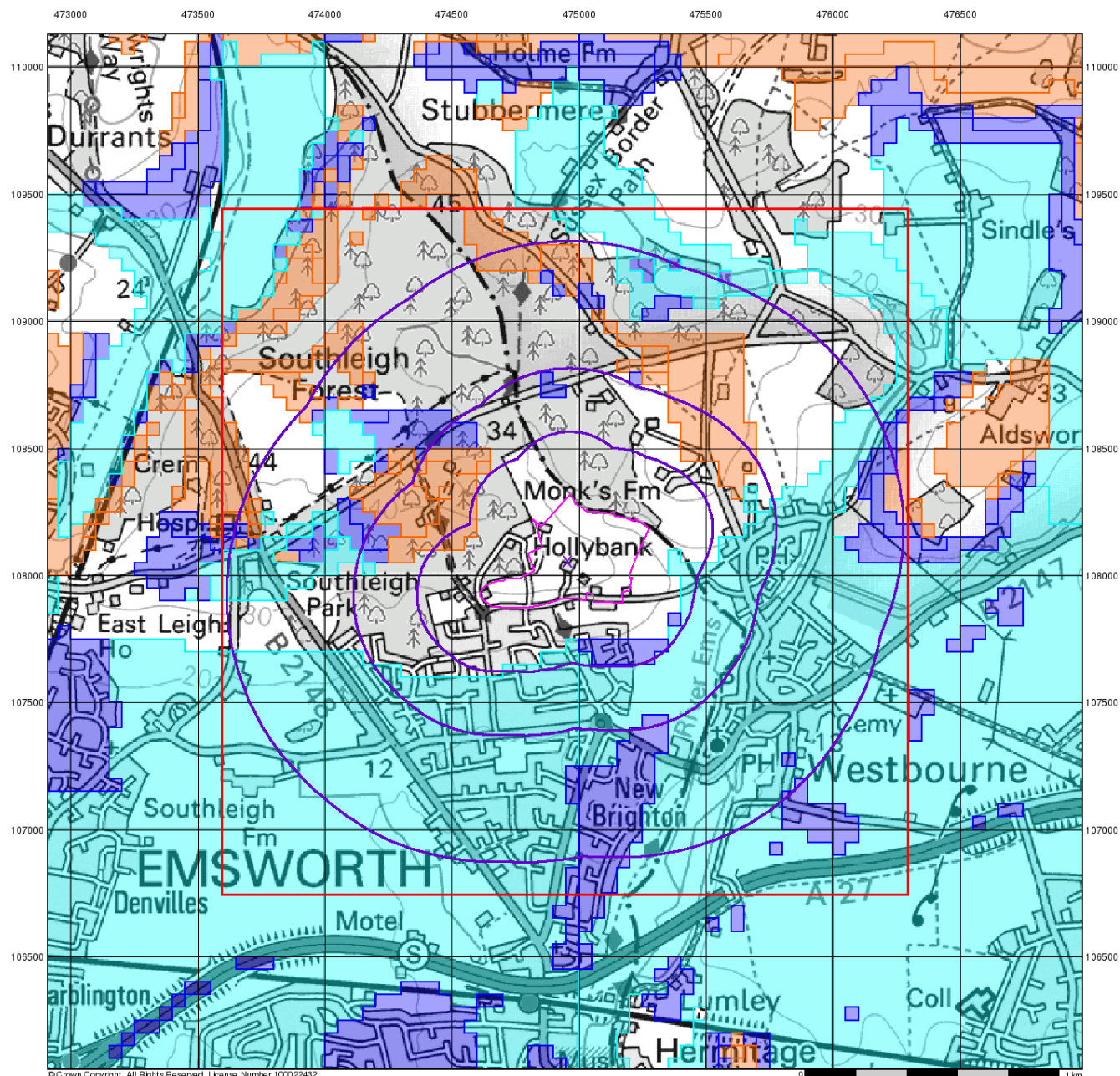
Order Number: 184117530_1_1
 Customer Ref: 70052250
 National Grid Reference: 474950, 108050
 Slice: A
 Site Area (Ha): 16.02
 Search Buffer (m): 1000

Site Details

Land North of Long Copse Lane, EMSWORTH, PO10 7UL

Landmark®
 LANDMARK INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



© Crown Copyright. All Rights Reserved. License Number 100022432.

Envirocheck®

LANDMARK INFORMATION GROUP®

BGS Flood GFS Data

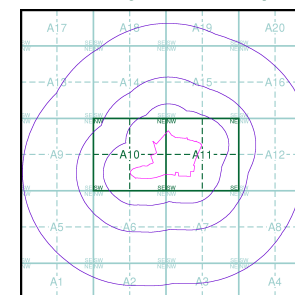
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 184117530_1_1
 Customer Ref: 70052250
 National Grid Reference: 474950, 108050
 Slice: A
 Site Area (Ha): 16.02
 Search Buffer (m): 1000

Site Details

Land North of Long Copse Lane, EMSWORTH, PO10 7UL

Landmark®
 LANDMARK INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

184117530_1_1

Customer Reference:

70052250

National Grid Reference:

474950, 108050

Slice:

A

Site Area (Ha):

16.02

Search Buffer (m):

1000

Site Details:

Land North of Long Copse Lane

EMSWORTH

PO10 7UL

Client Details:

Mr S Barber

WSP UK Ltd

WSP House

70 Chancery House

London

WC2A 1AF

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	27
Hazardous Substances	-
Geological	34
Industrial Land Use	38
Sensitive Land Use	47
Data Currency	49
Data Suppliers	54
Useful Contacts	55

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

Copyright Notice

© Landmark Information Group Limited 2018. The Copyright on the information and data and its format as contained in this Envirocheck® Report ("Report") is the property of Landmark Information Group Limited ("Landmark") and several other Data Providers, including (but not limited to) Ordnance Survey, British Geological Survey, the Environment Agency/Natural Resources Wales and Natural England, and must not be reproduced in whole or in part by photocopying or any other method. The Report is supplied under Landmark's Terms and Conditions accepted by the Customer.

A copy of Landmark's Terms and Conditions can be found with the Index Map for this report. Additional copies of the Report may be obtained from Landmark, subject to Landmark's charges in force from time to time. The Copyright, design rights and any other intellectual rights shall remain the exclusive property of Landmark and /or other Data providers, whose Copyright material has been included in this Report.

© Environment Agency & United Kingdom Research and Innovation 2018. © Natural Resources Wales & United Kingdom Research and Innovation 2018.

Natural England Copyright Notice

Site of Special Scientific Interest, National Nature Reserve, Ramsar, Special Protection Area, Special Conservation Area, Marine Nature Reserve data (derived from Ordnance Survey 1:10000 raster) is provided by, and used with the permission of, Natural England who retain the copyright and Intellectual Property Rights for the data.

Scottish Natural Heritage Copyright

Contains SNH information licensed under the Open Government Licence v3.0.

Ove Arup Copyright Notice

The Mining Instability data was obtained on licence from Ove Arup & Partners Limited (for further information, contact mining.review@arup.com). No reproduction or further use of such Data is to be made without the prior written consent of Ove Arup & Partners Limited. The supplied Mining Instability data is derived from publicly available records and other third party sources and neither Ove Arup & Partners nor Landmark warrant the accuracy or completeness of such information or data.

Peter Brett Associates Copyright Notice

The cavity data presented has been extracted from the PBA enhanced version of the original DEFRA national cavity databases. PBA/DEFRA retain the copyright & intellectual property rights in the data. Whilst all reasonable efforts are made to check that the information contained in the cavity databases is accurate we do not warrant that the data is complete or error free. The information is based upon our own researches and those collated from a number of external sources and is continually being augmented and updated by PBA. In no event shall PBA/DEFRA or Landmark be liable for any loss or damage including, without limitation, indirect or consequential loss or damage arising from the use of this data.

Radon Potential dataset Copyright Notice

Information supplied from a joint dataset compiled by The British Geological Survey and Public Health England.

Natural Resources Wales Copyright Notice

Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Contains Ordnance Survey Data. Ordnance Survey Licence number 100019741. Crown Copyright and Database Right. Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Some features of this information are based on digital spatial data licensed from the Centre for Ecology & Hydrology © NERC (CEH). Defra, Met Office and DARD Rivers Agency © Crown copyright. © Cranfield University. © James Hutton Institute. Contains OS data © Crown copyright and database right 2018. Land & Property Services © Crown copyright and database right.

Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1		Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2	1	1	3	6
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 4				6
Local Authority Integrated Pollution Prevention And Control	pg 6				1
Local Authority Pollution Prevention and Controls	pg 6			1	
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature		Yes			
Pollution Incidents to Controlled Waters	pg 6		2		2
Prosecutions Relating to Authorised Processes	pg 7				1
Registered Radioactive Substances					
River Quality	pg 7				2
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 7			1	11
Water Abstractions	pg 9				2 (*13)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 12	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 12	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones	pg 13				1
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 13	5	33	13	71

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 27				3
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 27				2
Licensed Waste Management Facilities (Locations)	pg 28				1
Local Authority Landfill Coverage	pg 28	4	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 28		1	2	4
Potentially Infilled Land (Water)	pg 28		5	4	7
Registered Landfill Sites	pg 30				4
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 34	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 34	Yes			
BGS Recorded Mineral Sites	pg 34		1	2	7
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities	pg 36				2
Non Coal Mining Areas of Great Britain	pg 36	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 36	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 36	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 37	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 37	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 38		5	6	42
Fuel Station Entries	pg 42			1	1
Points of Interest - Commercial Services	pg 42		2	3	9
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 44				6
Points of Interest - Public Infrastructure	pg 44			2	16
Points of Interest - Recreational and Environmental	pg 46			5	3
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 47	1	2	1	7
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas	pg 47				1
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks	pg 47			1	
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 48	2			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					