

Site Details:

Berewood, WATERLOOVILLE,
PO7 3DB

Client Ref: LPO2302_LP2308_Berewood
Report Ref: GS-6938644
Grid Ref: 467348, 109022

Map Name: County Series

Map date: 1907-1908

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1865
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1865
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1859
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1859
Revised 1907
Edition N/A
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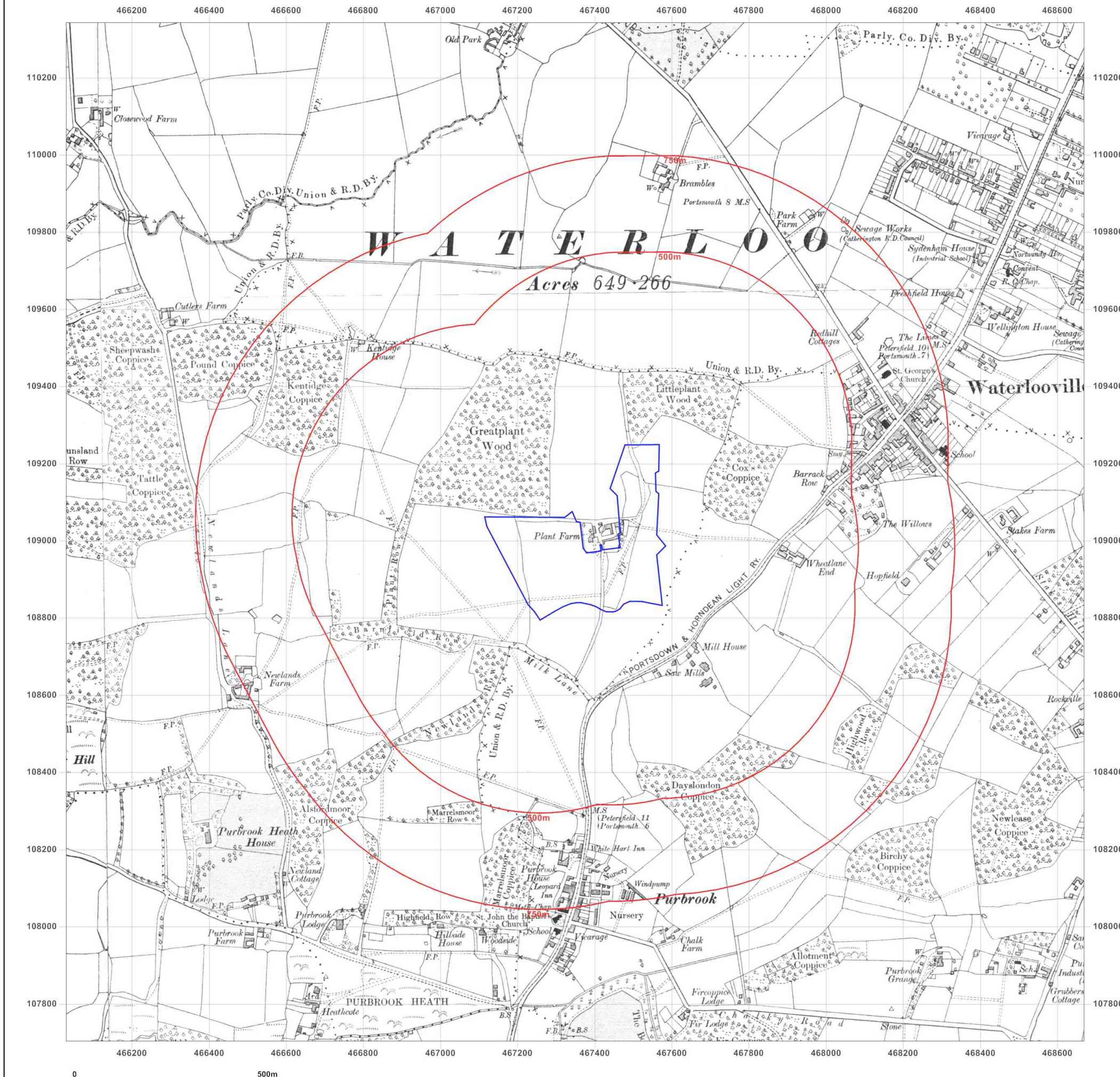


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Client Ref: LPO2302_LP2308_Berewood
Report Ref: GS-6938644
Grid Ref: 467348, 109022

Map Name: County Series

Map date: 1930-1933

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1865
Revised 1933
Edition N/A
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Surveyed 1859
Revised 1930
Edition N/A
Copyright N/A
Levelled N/A

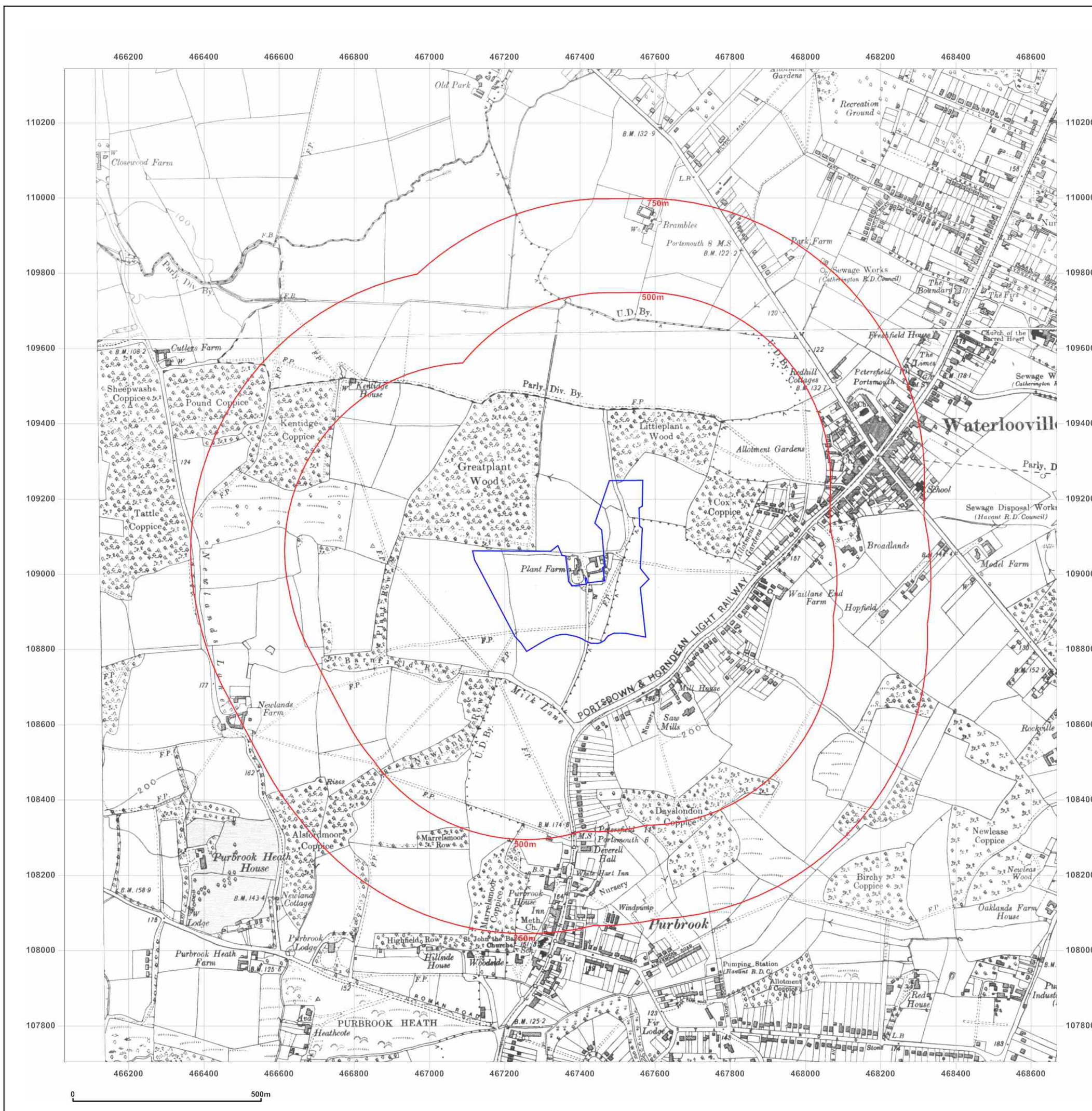


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Client Ref: LPO2302_LP2308_Berewood
Report Ref: GS-6938644
Grid Ref: 467348, 109022

Map Name: County Series

Map date: 1938-1942

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1865
Revised 1942
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1859
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

Surveyed 1859
Revised 1938
Edition N/A
Copyright N/A
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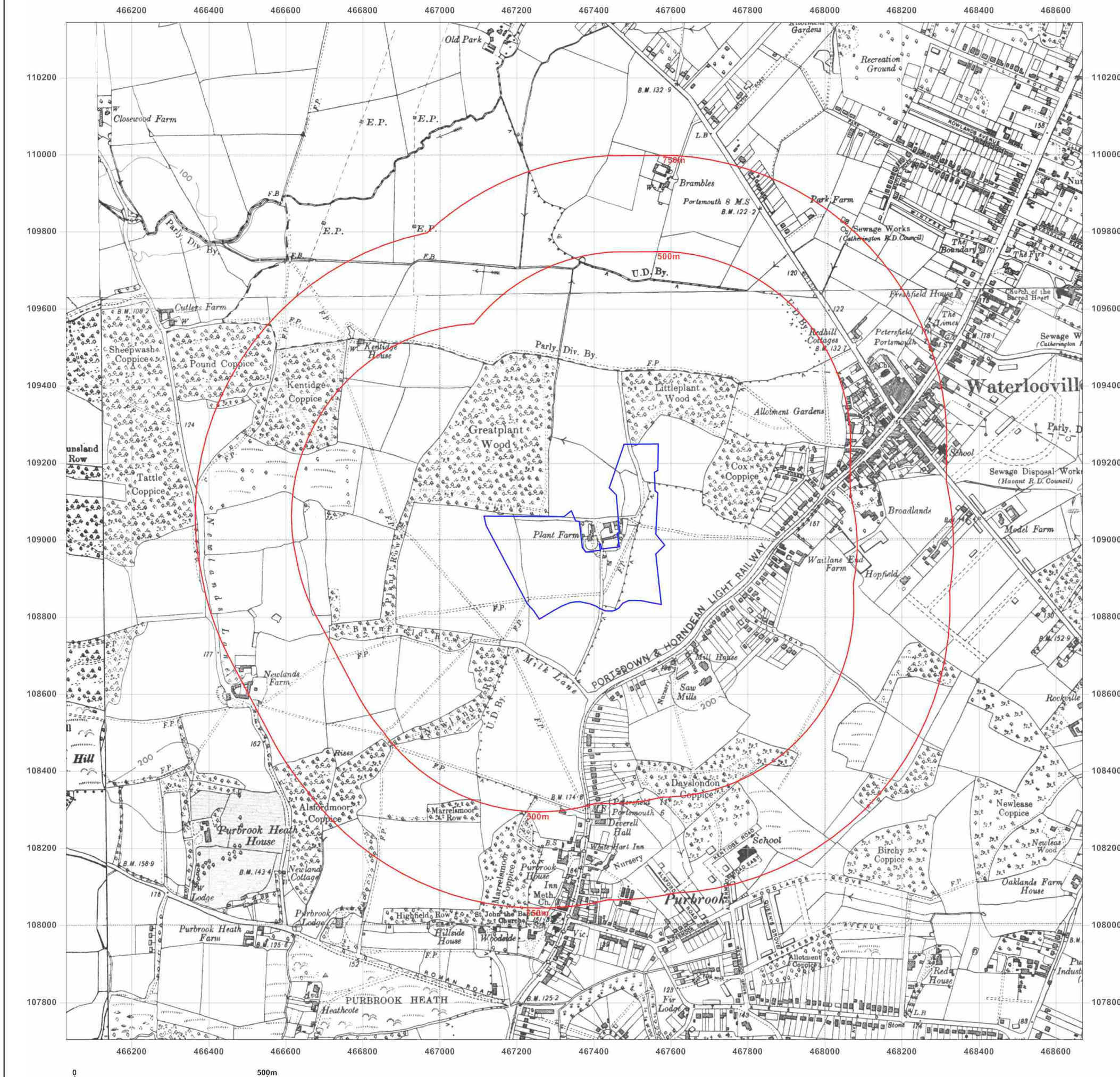


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Site Details:

Berewood, WATERLOOVILLE,
PO7 3DB

Client Ref: LPO2302_LP2308_Berewood
Report Ref: GS-6938644
Grid Ref: 467348, 109022

Map Name: National Grid

Map date: 1980

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1973
Revised 1979
Edition N/A
Copyright 1980
Levelled 1973

Surveyed 1980
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

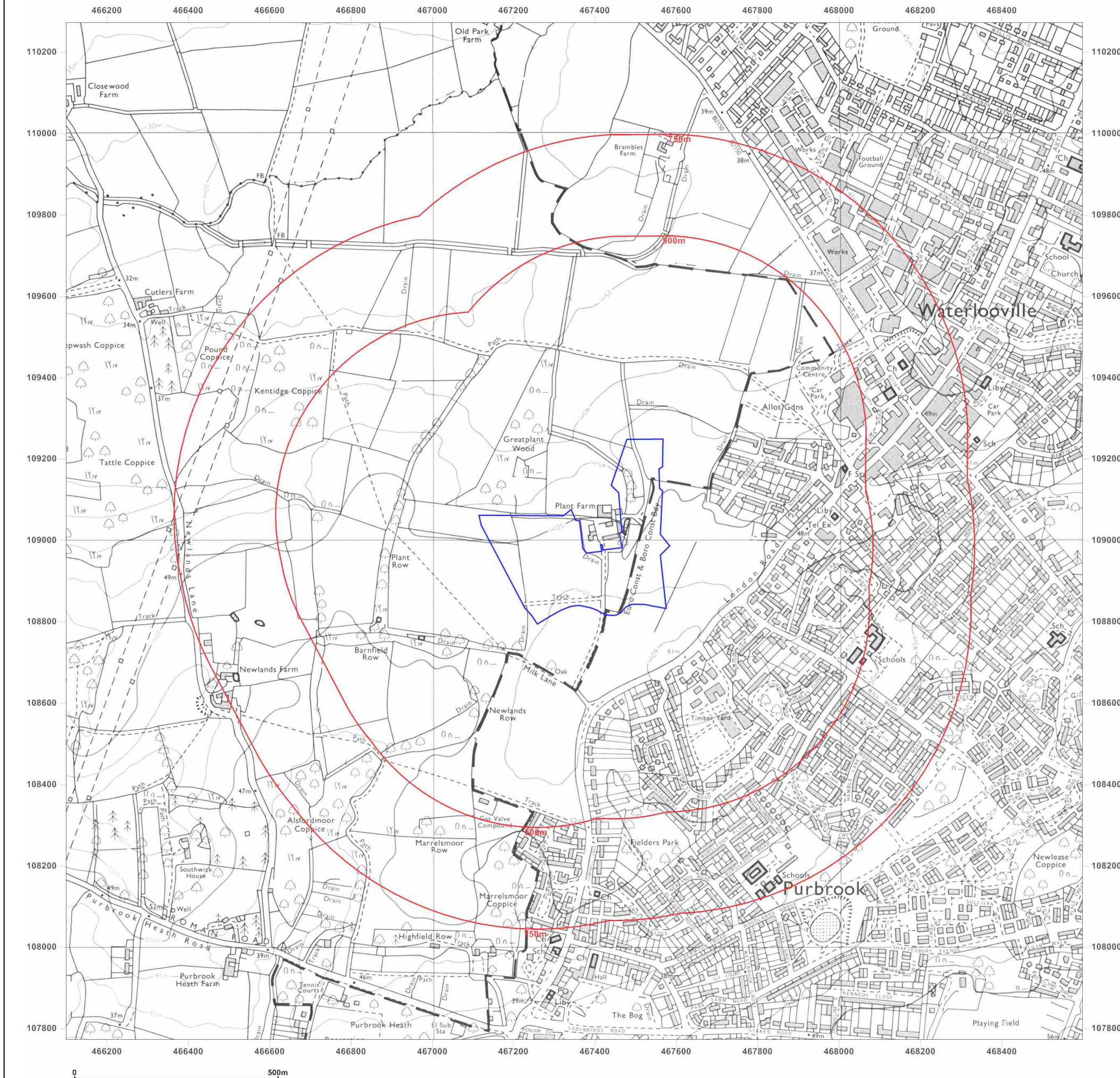


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Production date: 04 August 2020

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Site Details:

Berewood, WATERLOOVILLE,
PO7 3DB

Client Ref: LPO2302_LP2308_Berewood
Report Ref: GS-6938644
Grid Ref: 467348, 109022

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



2001



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Site Details:

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PO7 3DB

Client Ref: LPO2302_LP2308_Berewood
Report Ref: GS-6938644
Grid Ref: 467348, 109022

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010



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Report Ref: GS-6938644
Grid Ref: 467348, 109022

Map Name: National Grid

Map date: 2020

Scale: 1:10,000

Printed at: 1:10,000



2020

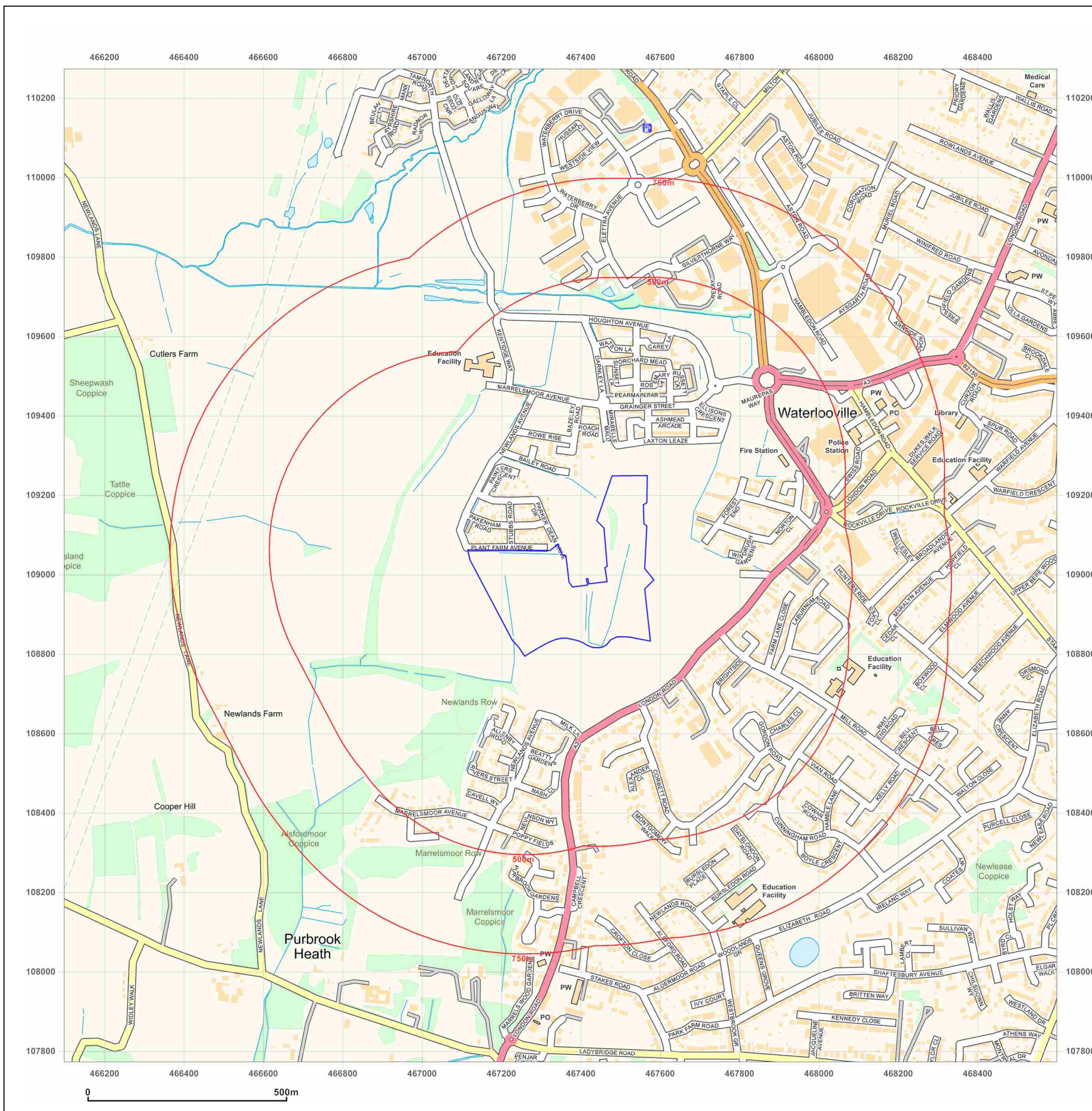


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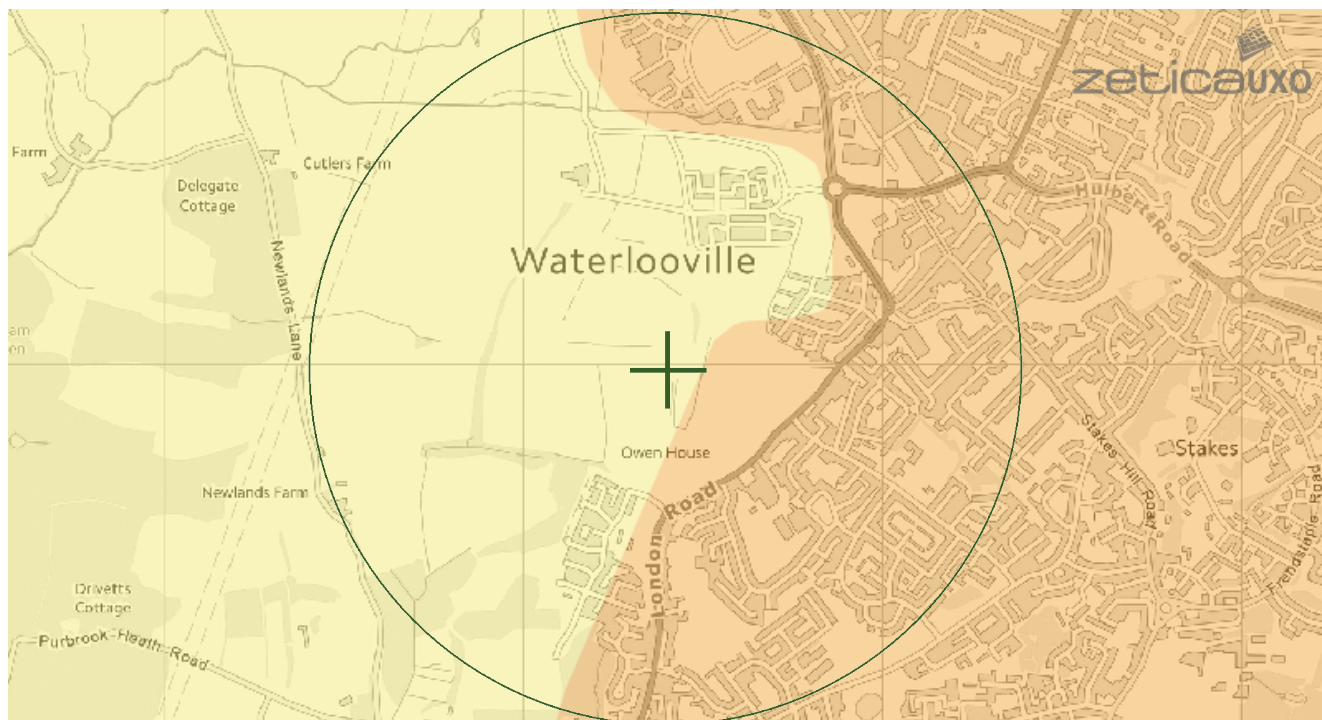


UNEXPLODED BOMB RISK MAP



SITE LOCATION

Map Centre: 467407,108990



LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.

- military**
- industry**
- UXO find**
- transport**
- dock**
- Luftwaffe targets**
- utilities**
- Bombing decoy**
- other**

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgment. The copyright remains with Zetica Ltd.

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.

APPENDIX D – Chemical Testing

Laboratory Testing



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618

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info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-41235

Issue: 1

Date of Issue: 17/06/2022

Contact: Sophie Shafi-Cooke

Customer Details: Leap Environmental Ltd
Book House
Glebelands Centre
Dorking
Surrey RH4 3HW

Quotation No: Q22-02626

Order No: LPO-5897

Customer Reference: LP2962

Date Received: 13/06/2022

Date Approved: 17/06/2022

Details: Town Park, Berewood

Approved by:

Tim Reeve, Quality Officer

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

This report may only be reproduced in full



Sample Summary

Report No.: 22-41235, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
283043	HP1 0.20	09/06/2022	13/06/2022	Silty loam	
283044	HP2 0.25	09/06/2022	13/06/2022	Silty loam	
283045	HP3 0.15	09/06/2022	13/06/2022	Silty loam	
283046	HP4 0.30	09/06/2022	13/06/2022	Silty loam	

Results Summary

Report No.: 22-41235, issue number 1

ELAB Reference	283043	283044	283045	283046
Customer Reference				
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	HP1	HP2	HP3	HP4
Sample Depth (m)	0.20	0.25	0.15	0.30
Sampling Date	09/06/2022	09/06/2022	09/06/2022	09/06/2022

Determinand	Codes	Units	LOD				
Soil sample preparation parameters							
Moisture Content	N	%	0.1	17.4	20.9	12.9	18.2
Material removed	N	%	0.1	< 0.1	12.3	13.8	15.5
Description of Inert material removed	N		0	None	Stones	Stones	Stones, Glass
Metals							
Arsenic	M	mg/kg	1	7.4	< 1.0	6.8	13.3
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	0.9	< 0.5
Chromium	M	mg/kg	5	24.2	< 5.0	20.6	34.0
Copper	M	mg/kg	5	14.5	< 5.0	74.6	46.9
Lead	M	mg/kg	5	42.3	< 5.0	49.9	25.5
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	9.8	< 5.0	11.5	30.5
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	42.3	< 5.0	257	116
Inorganics							
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8
Miscellaneous							
pH	M	pH units	0.1	7.1	7.1	7.5	7.9
Total Organic Carbon	N	%	0.01	1.2	1.3	1.4	0.46
Polyaromatic hydrocarbons							
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1	0.1	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1	0.1	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	< 0.4	< 0.4	< 0.4



Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY

Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

Results Summary

Report No.: 22-41235, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
283043	0.20	HP1	Brown soil, stones	No asbestos detected	n/t	n/t	n/t	n/t
283044	0.25	HP2	Brown soil, stones, clinker	No asbestos detected	n/t	n/t	n/t	n/t
283045	0.15	HP3	Brown soil, stones, clinker, glass	No asbestos detected	n/t	n/t	n/t	n/t
283046	0.30	HP4	Brown soil, stones, glass	No asbestos detected	n/t	n/t	n/t	n/t



2683

Method Summary

Report No.: 22-41235, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	15/06/2022	110	Colorimetry
pH	M	Air dried sample	17/06/2022	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	15/06/2022	118	ICPMS
PAH (GC-FID)	M	As submitted sample	15/06/2022	133	GC-FID
Total organic carbon/Total sulphur	N	Air dried sample	16/06/2022	210	IR
Asbestos identification	U	Air dried sample	16/06/2022	280	Microscopy

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-41235, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

APPENDIX F– PRA TABLE

Preliminary Risk Assessment Table
--

Contaminant	Receptor	Pathway ¹	Likelihood of Exposure	Severity of Exposure	Risk Classification	Notes
All contaminants in soils Including herbicides and pesticides	Future Park Users	Dermal contact, ingestion and inhalation of soil particles	Likely	Medium	Moderate risk	End users of the park site are likely to come into contact with shallow soils and therefore potential metals PAHs and pesticides and herbicides if present .
	Future commercial site workers (Pavilion and groundworkers)	Dermal contact, ingestion and inhalation of soil particles	Likely	Medium	Moderate risk	
	Construction workers	Dermal contact, ingestion and inhalation of soil particles	Likely	Medium	Moderate risk	
	Surface water ditches and drains	Surface water run-off	Low likelihood	Mild	Low risk	
Asbestos fibres in soils	Future Park Users	Inhalation of asbestos fibres	Low likelihood	Severe	Moderate risk	Whilst future site users might not come into direct contact with the asbestos identified (to date) as it is below pathways , the affects are severe if exposed.
	Future commercial site workers (Pavilion and groundworkers)	Inhalation of asbestos fibres	Likely	Severe	High risk	
	Construction workers	Inhalation of asbestos fibres	Likely	Severe	High risk	
Soil gases generated from fill materials	Below ground construction materials such as concrete and plastic water pipes	Inhalation of vapours migrating from on-site contamination (outdoors)	Low likelihood	Medium	Moderate/low risk	Further assessment of the placed soil is needed to quantify this risk.

The classification is based upon the consideration of both the magnitude of consequence and the likelihood of exposure as follows:

Likelihood		Consequence			
		Severe	Medium	Mild	Minor
	High likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very Low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

Derived from Annex 4 of NHBC, Environment Agency & CIEH 'Guidance for the Safe Development of Housing on Land Affected by Contamination' R&D66. 2008.