

3.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

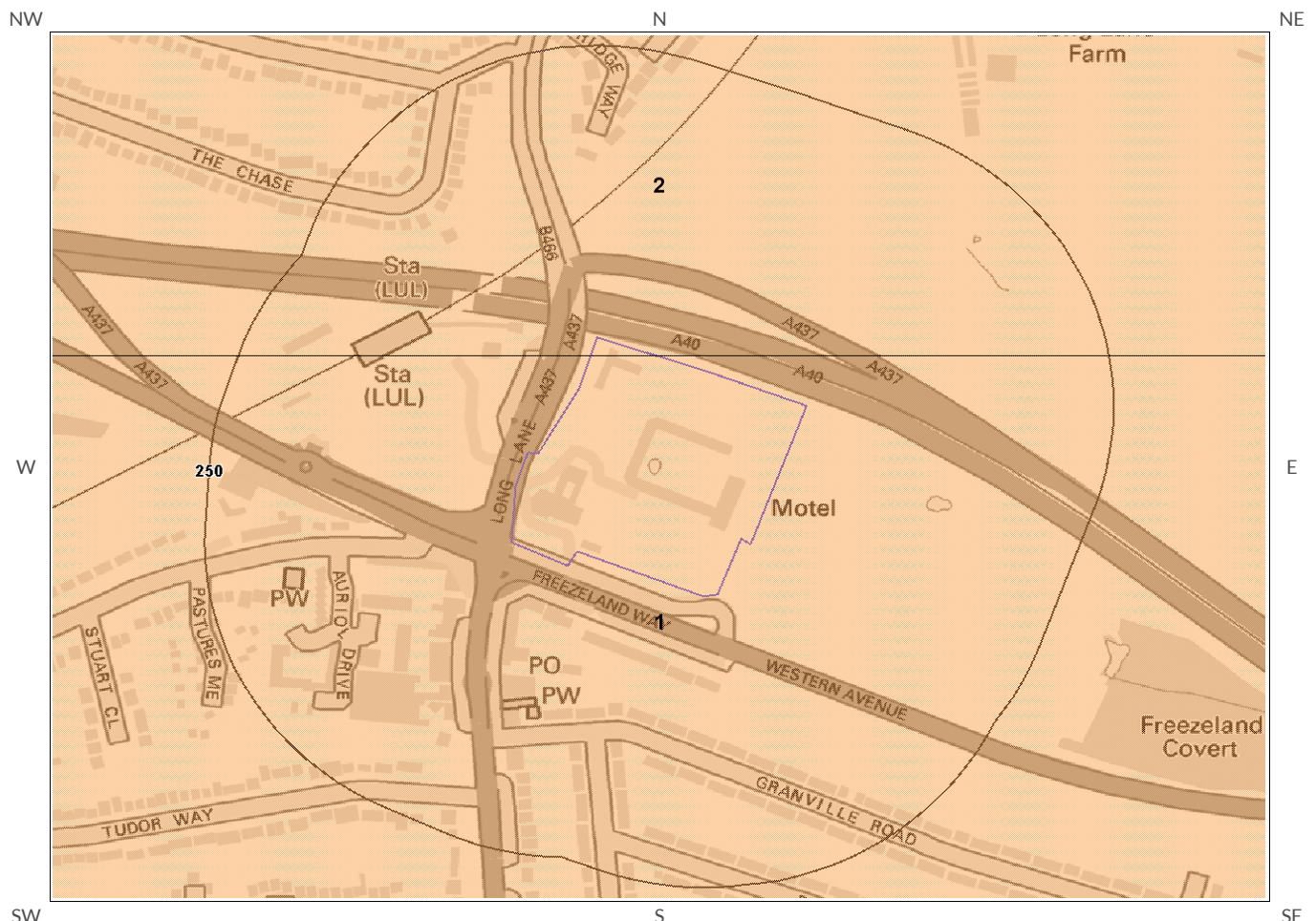
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

4 Natural Ground Subsidence

4.1 Shrink-Swell Clay Map



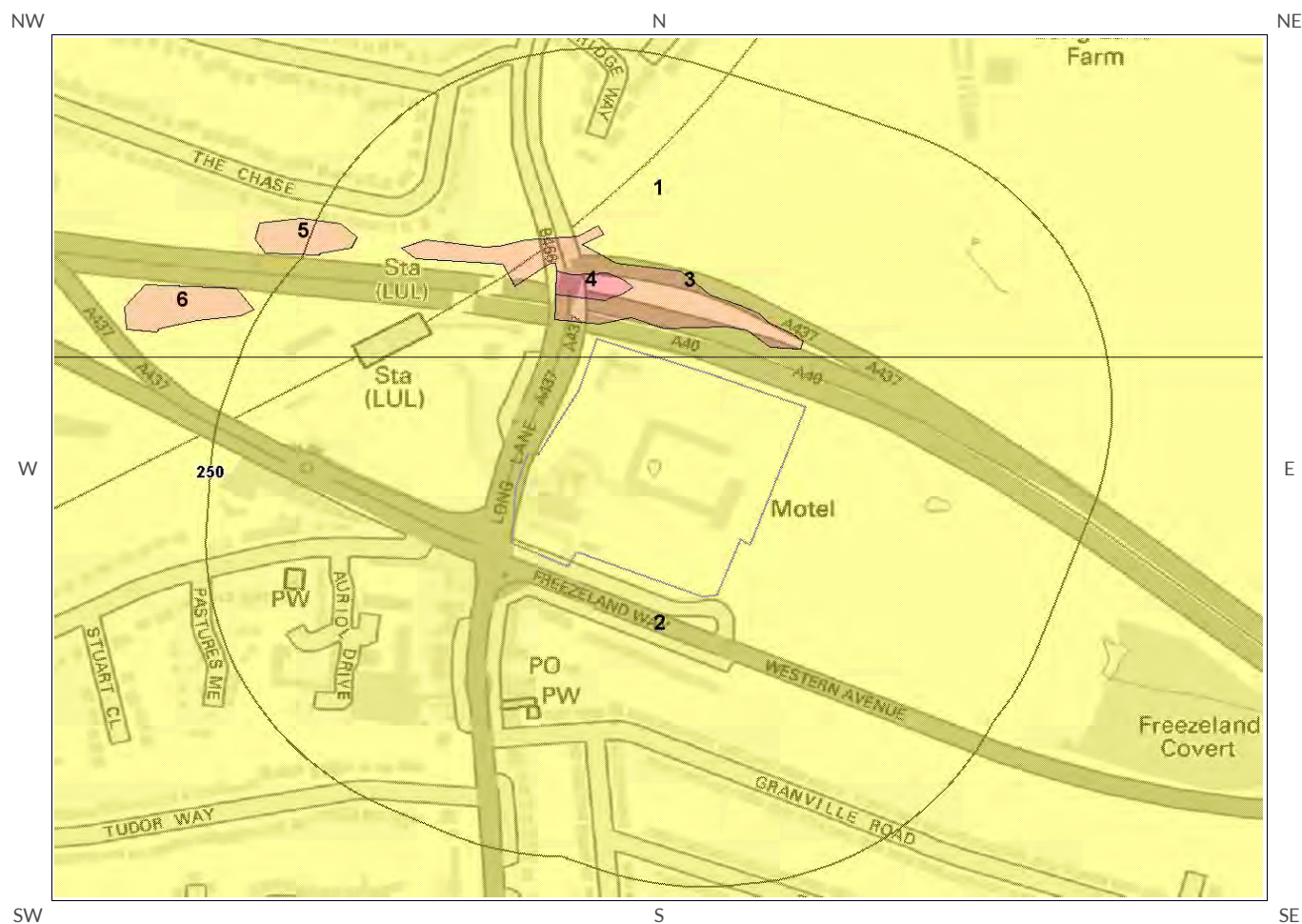
Shrink Swell Clay Legend



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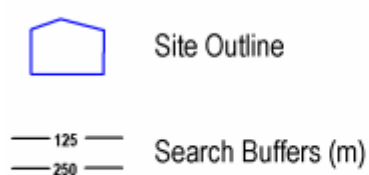
4.2 Landslides Map



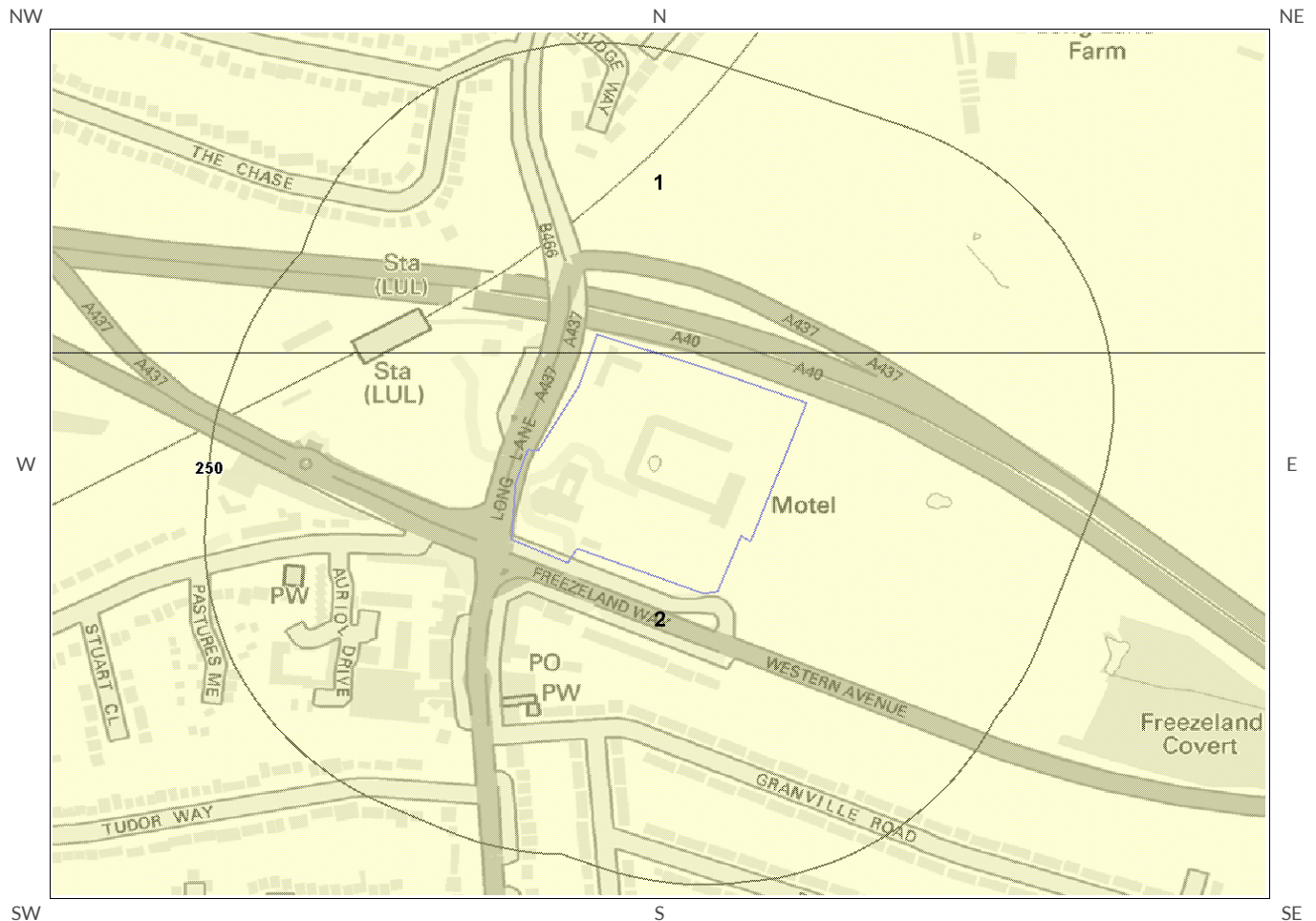
Landslides Legend



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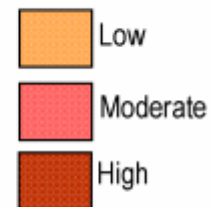
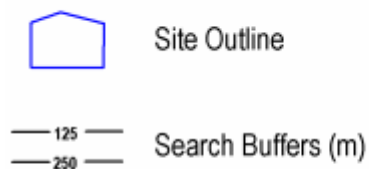
4.3 Ground Dissolution Soluble Rocks Map



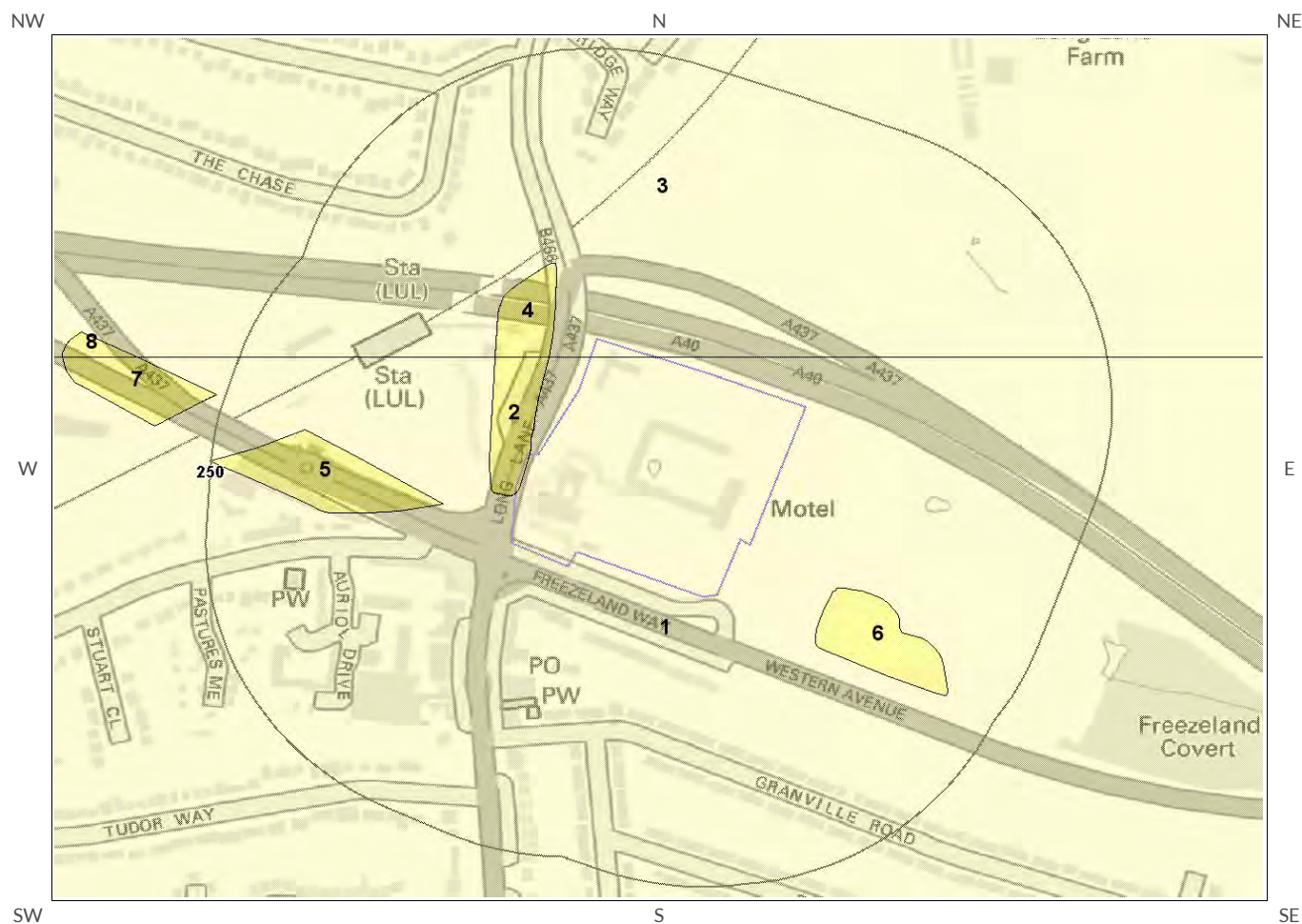
Ground Dissolution
Soluble Rocks Legend



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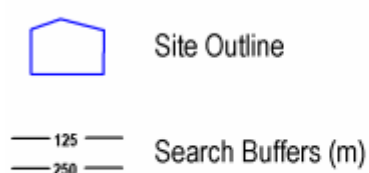
4.4 Compressible Deposits Map



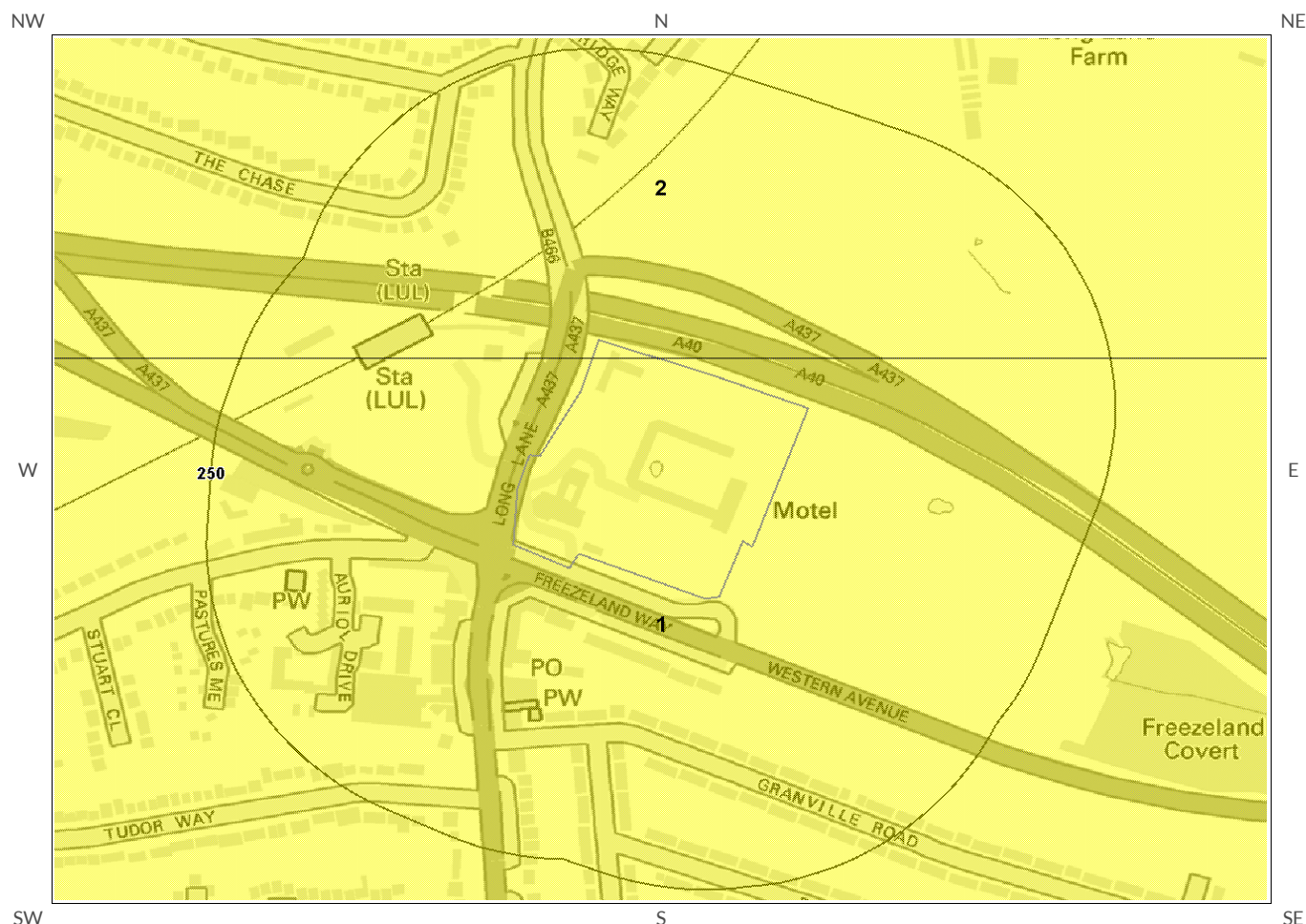
Compressible Deposits Legend



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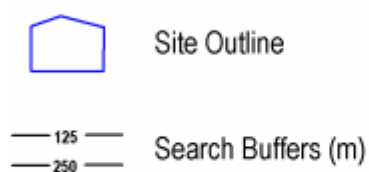
4.5 Collapsible Deposits Map



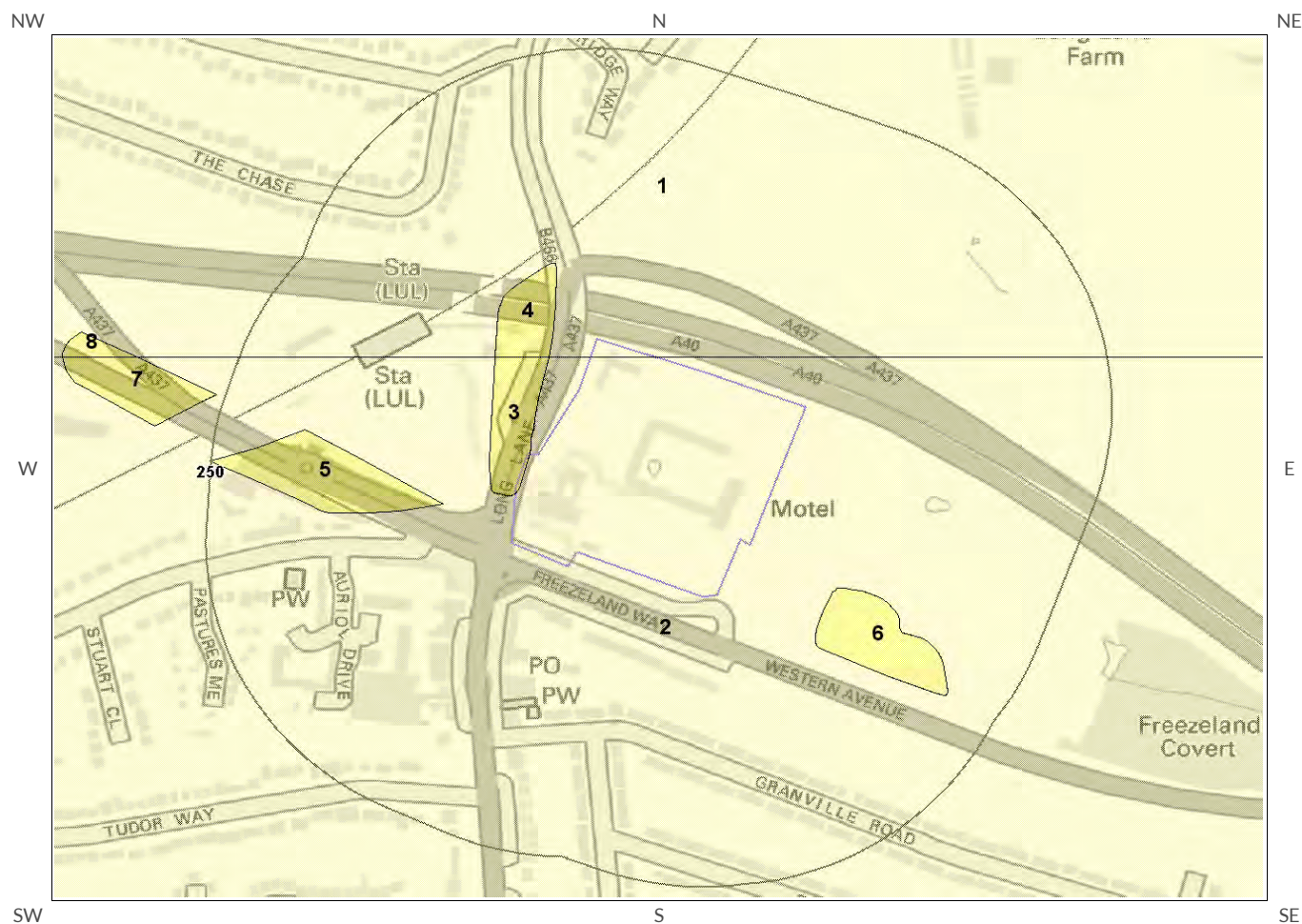
Collapsible Deposits Legend



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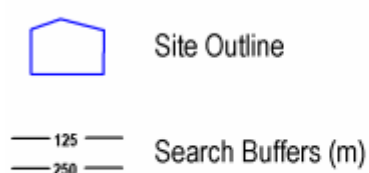
4.6 Running Sand Map



Running Sand Legend



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4 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site* boundary? **Moderate**

4.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.
2	0.0	On Site	Low	Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
2	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
3	13.0	N	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.

* This includes an automatically generated 50m buffer zone around the site

ID	Distance (m)	Direction	Hazard Rating	Details
4	34.0	N	Moderate	Significant potential for slope instability with relatively small changes in ground conditions. Avoid large amounts of water entering the ground through pipe leakage or soak-aways. Do not undercut or place large amounts of material on slopes without technical advice. For new build - consider the potential and consequences of ground movement during excavations, or consequence of changes to loading or drainage. For existing property - probable increase in insurance risk is likely due to potential natural slope instability after changes to ground conditions such as a very long, excessively wet winter.

4.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.
2	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

4.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	0.0	On Site	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
3	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
4	32.0	W	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

4.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

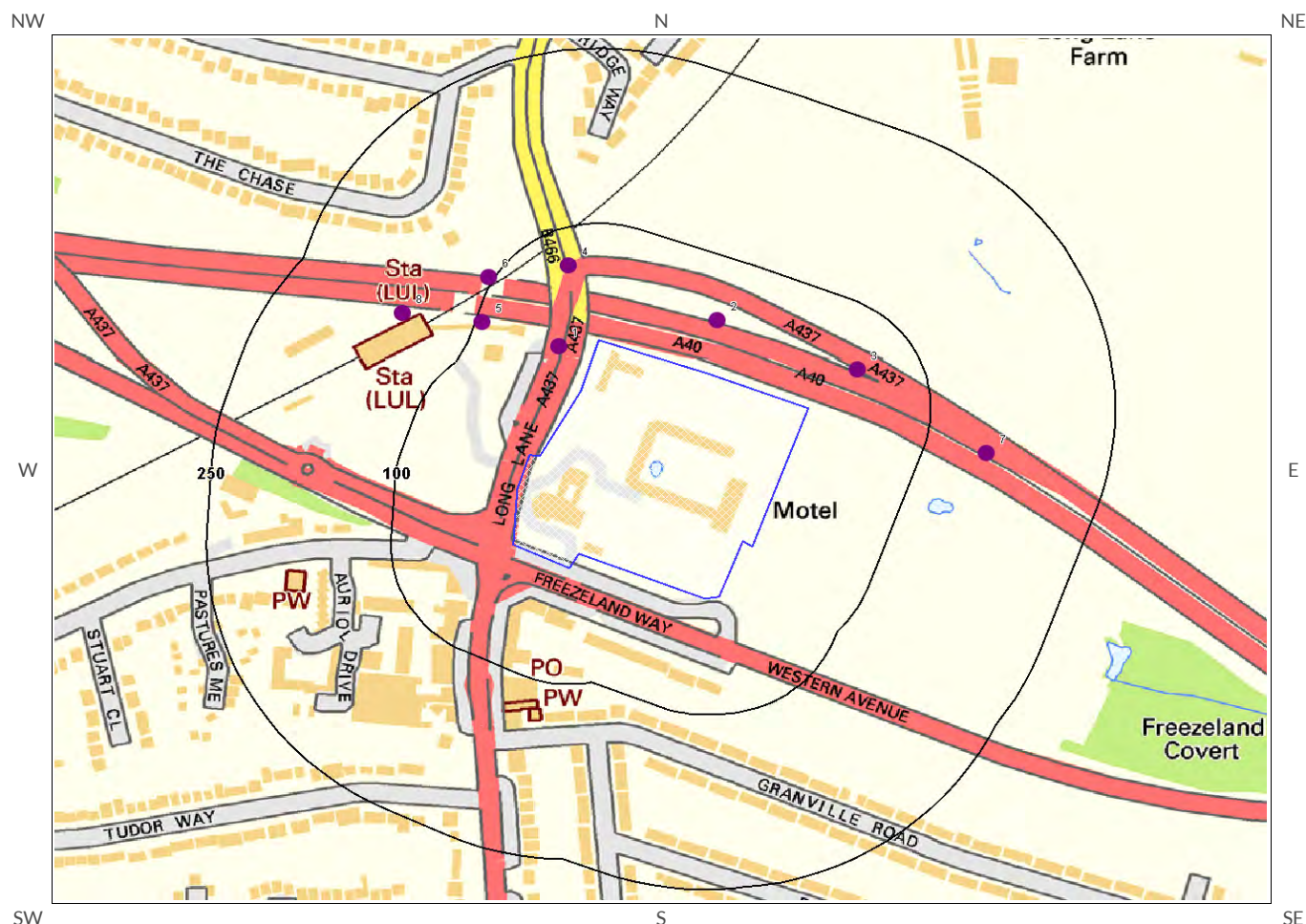
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

4.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
3	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
4	32.0	W	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

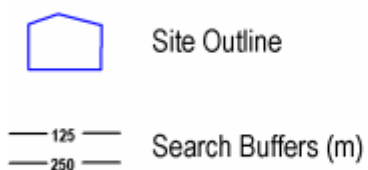
5 Borehole Records Map



Borehole Records Legend



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● Borehole Locations



5 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

8

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	29.0	W	507700 185010	TQ08NE39	20.5	A40 WESTERN AVENUE BH16
2	45.0	N	507829 185032	TQ08NE40	10.0	A40 WESTERN AVENUE BH17
3	52.0	NE	507943 184990	TQ08SE56	3.0	A40 WESTERN AVENUE TP15
4	68.0	N	507708 185079	TQ08NE38	19.8	A40 WESTERN AVENUE BH15
5	95.0	W	507638 185031	TQ08NE37	23.0	A40 WESTERN AVENUE BH14
6	104.0	NW	507643 185069	TQ08NE36	21.5	A40 WESTERN AVENUE BH13
7	150.0	E	508048 184918	TQ08SE57	3.0	A40 WESTERN AVENUE TP16
8	158.0	NW	507573 185038	TQ08NE35	25.0	A40 WESTERN AVENUE BH12

Additional online information is available for the following boreholes listed above:

- #1: scans.bgs.ac.uk/sobi_scans/boreholes/575779
- #2: scans.bgs.ac.uk/sobi_scans/boreholes/575780
- #3: scans.bgs.ac.uk/sobi_scans/boreholes/576389
- #4: scans.bgs.ac.uk/sobi_scans/boreholes/575778
- #5: scans.bgs.ac.uk/sobi_scans/boreholes/575777
- #6: scans.bgs.ac.uk/sobi_scans/boreholes/575776
- #7: scans.bgs.ac.uk/sobi_scans/boreholes/576390
- #8: scans.bgs.ac.uk/sobi_scans/boreholes/575775



6 Estimated Background Soil Chemistry

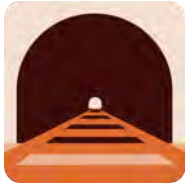
Records of background estimated soil chemistry within 250m of the study site boundary:

4

For further information on how this data is calculated and limitations upon its use, please see the GroundSure GeoInsight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	London	No data	No data	No data	No data	No data
0.0	On Site	London	No data	No data	No data	No data	No data
97.0	E	London	No data	No data	No data	No data	No data
106.0	NE	London	No data	No data	No data	No data	No data

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.



7 Railways and Tunnels

7.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Line
87	NW	London Underground - Metropolitan Line
87	NW	London Underground - Piccadilly Line

The approximate depth value for the nearest London Underground line given in this dataset has been extrapolated from published depths of tube lines at station platforms, and assume a constant gradient between stations. Using this method, topographical variation has resulted in some parts of the line having associated depth values either shallower or deeper than the real-world situation. Depth values are for indication only and should not be relied upon for any calculation or technical purpose and are in no way a substitute for a professional survey.

Line
London Underground Line: Metropolitan Line
Depth: 0mbgl
Track Type: Surface Track

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

7.2 Historical Railway and Tunnel Features

This data is derived from GroundSure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1	91	NW	507463 184934	Railway Sidings	1970
2	97	NW	507309 184891	Railway Sidings	1959
6	111	W	507537 184953	Railway Sidings	1962
3	112	W	507372 184906	Railway Sidings	1938
4	112	W	507372 184906	Railway Sidings	1938
7	112	W	507380 184901	Railway Sidings	1962
8A	117	NW	507375 184899	Railway Sidings	1934
5A	119	W	507372 184899	Railway Sidings	1935
9B	139	NW	507528 184974	Railway Sidings	1962
10B	153	NW	507522 184983	Railway Sidings	1962

Any records that have been identified are represented on the Railways and Tunnels Map.

7.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Note: multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels Map.

7.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Note: multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

7.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail.

Is the study site within 5km of the route of the High Speed 2 rail project? Yes

Is the study site within 500m of the route of the Crossrail rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a GroundSure HS2 and Crossrail Report.

Contact Details

GroundSure Helpline
Telephone: 08444 159 000
info@groundsure.com



British Geological Survey Enquiries

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Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk



BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX



The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



Public Health England

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Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
<https://www.gov.uk/government/organisations/public-health-england>
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Report Reference: GS-1745869

Client Reference: 14-0724.01

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.

"Client" means the party or parties entering into a Contract with GroundSure.

"Commercial" means any building or property which is not Residential.

"Confidential Information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by GroundSure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

"Support Services" means Support Services provided by GroundSure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"Contract" means the contract between GroundSure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

"Third Party Data Provider" means any third party providing Third Party Content to GroundSure.

"Data Reports" means reports comprising factual data with no accompanying interpretation.

"Fees" has the meaning set out in clause 5.1.

"GroundSure" means GroundSure Limited, a company registered in England and Wales under number 03421028.

"GroundSure Materials" means all materials prepared by GroundSure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.

"Order" means an electronic, written or other order form submitted by the Client requesting Services from GroundSure in respect of a specified Site.

"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

"Order Website" means the online platform through which Orders may be placed by the Client and accepted by GroundSure.

"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.

"Residential" means any building or property used as or intended to be used as a single dwelling.

"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by GroundSure.

"Services" means any Report, Mapping and/or Support Services which GroundSure has agreed to provide by accepting an Order pursuant to clause 2.6.

"Site" means the area of land in respect of which the Client has requested GroundSure to provide the Services.

"Third Party Content" means data, database information or other information which is provided to GroundSure by a Third Party Data Provider.

"User Guide" means the user guide, as amended from time to time, available upon request from GroundSure and on the website (www.GroundSure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 GroundSure agrees to provide the Services in accordance with the Contract.

2.2 GroundSure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of GroundSure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, GroundSure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and GroundSure will have no liability therefor. In addition you acknowledge and agree that GroundSure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 GroundSure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by GroundSure. GroundSure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by GroundSure. GroundSure's acceptance of an Order

shall be binding only when made in writing and signed by GroundSure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to GroundSure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to GroundSure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as GroundSure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable GroundSure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the GroundSure Materials, or use the GroundSure Materials in a manner for which they were not intended. The Client may make the GroundSure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that GroundSure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by GroundSure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by GroundSure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

- (i) the Beneficiary,
- (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
- (iv) the first purchaser or first tenant of the Site, and
- (v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by GroundSure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 GroundSure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by GroundSure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to GroundSure in full without deduction, counterclaim or set off within 30 days of the date of GroundSure's invoice or such other period as may be agreed in writing between GroundSure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of GroundSure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

- (i) full payment of all relevant Fees and
- (ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the GroundSure Materials.

6.2 All Intellectual Property in the GroundSure Materials are and shall remain owned by GroundSure or GroundSure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the GroundSure Materials shall:

- (i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to GroundSure or any third party from the Services;
 - (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;
 - (iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
 - (iv) not combine the Services with or incorporate such Services into any other information data or service;
 - (v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);
 - (vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and
 - (vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,
- 6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the GroundSure Materials in order to advise the Beneficiary in a professional capacity. However, GroundSure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify GroundSure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of GroundSure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

- (i) any breach of contract, including any deliberate breach of the Contract by GroundSure or its employees, agents or subcontractors;
- (ii) any use made of the Reports, Services, Materials or any part of them; and
- (iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 GroundSure shall not be liable for

- (i) loss of profits;
- (ii) loss of business;
- (iii) depletion of goodwill and/or similar losses;
- (iv) loss of anticipated savings;
- (v) loss of goods;
- (vi) loss of contract;
- (vii) loss of use;
- (viii) loss or corruption of data or information;
- (ix) business interruption;
- (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;
- (xi) loss or damage that arise as a result of the use of all or part of the GroundSure Materials in breach of the Contract;
- (xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the GroundSure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;
- (xiii) loss or damage to a computer, software, modem, telephone or other property; and
- (xiv) loss or damage caused by a delay or loss of use of GroundSure's internet ordering service.

7.5 GroundSure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 GroundSure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of GroundSure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against GroundSure in relation to the Services or other matters arising pursuant to the Contract.

8 GroundSure's right to suspend or terminate

8.1 If GroundSure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, GroundSure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 GroundSure shall be entitled to terminate the Contract immediately on written notice in the event that:

- (i) the Client fails to pay any sum due to GroundSure within 30

days of the Payment Date; or

- (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
- (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or
- (iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

- (i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon GroundSure's acceptance of the Order; and
- (ii) the Reports and/or Mapping provided under this Contract are
 - (a) supplied to the Client's specification(s) and in any event
 - (b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

- (i) GroundSure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in GroundSure's possession or control; and
- (ii) the Client shall pay to GroundSure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay GroundSure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

- (i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;
- (ii) comply with such of GroundSure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and
- (iii) promptly report to GroundSure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through GroundSure.

12.3 GroundSure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of GroundSure.

12.4 No failure on the part of GroundSure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 GroundSure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

- (i) the Client or Beneficiary's failure to provide facilities, access or information;
- (ii) fire, storm, flood, tempest or epidemic;
- (iii) Acts of God or the public enemy;
- (iv) riot, civil commotion or war;
- (v) strikes, labour disputes or industrial action;
- (vi) acts or regulations of any governmental or other agency;
- (vii) suspension or delay of services at public registries by Third Party Data Providers;
- (viii) changes in law; or
- (ix) any other reason beyond GroundSure's reasonable control.

In the event that GroundSure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then GroundSure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly

given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.




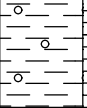
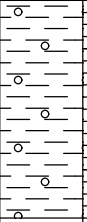
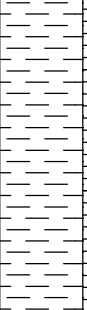
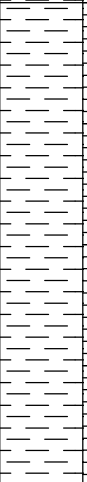
12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.


12.13 GroundSure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at GroundSure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law



Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com										
Project: Hillingdon				Project No: 14-0724.01			Hole ID: CP01			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 30/03/2015 - 31/03/2015			Client: Spenn Hill			
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details	
					TYPE	REF	Depth			
MADE GROUND: Tarmac overlying brown, very sandy, fine to coarse, sub-rounded to sub-angular brick, limestone and concrete GRAVEL.				(0.70) 33.87 0.70	D ES	1 2	0.50	SPT N=9 1,1/2,2,2,3		
Soft brown mottled orange, gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded flint and limestone. (POSSIBLE WEATHERED LONDON CLAY)				(0.90) 32.97 1.60	D ES	3 4	1.00			
Stiff brown mottled orange, slightly gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded flint and limestone. High mineral content. Becoming less gravelly with depth. (POSSIBLE WEATHERED LONDON CLAY)			(1.80)	D	5	2.00	U=15/mm			
				U	6	2.50 -				
				D	7	3.00				
Stiff brown mottled orange, pink and green friable, thinly laminated, slightly gravelly CLAY. Gravel is fine to medium, sub-angular flint. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)			(2.60)	D	8	3.20	SPT N=21 3,3/4,5,6,6			
				D	9	4.00				
				U	10	4.50				
				U	11	4.50 -				
				D	12	5.00				
Very stiff brown, mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)			(7.00)	D	13	5.50	SPT N=37 3,5/6,9,9,13			
				D	14	7.00				
				U	15	7.50 -				
				D	16	8.00				
				D	17	8.50				
				D	18	10.00		SPT N=37 4,6/8,8,10,11		
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater strike at 18.00 m bgl. 4. Installed with a 50 mm HDPE standpipe to 20.00 m bgl.				CHISELLING Depth From Depth To Time Taken			WATER LEVEL OBSERVATIONS Date Time Water Strike Standing Level Casing Depth			
NO CHISELLING UNDERTAKEN:				NO WATER ENCOUNTERED:						
BOREHOLE DIAMETER				CASING DIAMETER			DEPTH SEALED			
				20.00m						
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 1 of 3		
Plant Used: Pilcon Wayfarer		Coordinates / Level (mAOD): E: 507751.429 N: 184882.677 Level: 34.572		Logged By: CB			Checked By: CB		Approved By: SS	

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Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP01						
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 30/03/2015 - 31/03/2015		Client: Spenn Hill						
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details			
					TYPE	REF	Depth	SPT N Value/Drive mm				
Very stiff brown, mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)(BH Continued)					U	19	10.50 -	U=54/mm				
					D	20	11.00					
					D	21	12.00 12.00 - 12.45	SPT N=50/200mm (7,7/8,15,27/50mm)				
					D	22	13.00					
Very stiff reddish brown mottled greyish green CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)				(3.20)	U	23	13.50 -	U=59/mm				
					D	24	14.00					
							15.00 - 15.45	SPT N=50/195mm (6,7/11,20,19/45mm)				
					D	25	16.00					
Brown, slightly clayey fine to medium SAND. (LAMINATED BEDS - WOOLWICH AND READING BEDS)							16.50 - 16.95	SPT N=50/135mm (7,10/24,26/60mm)				
Firm brown mottled grey sandy CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)				(1.50)	D	26	17.50					
Brown fine to medium sand.				(2.00)	D	27	18.00 18.00 - 18.45	SPT N=24/60mm (9,26/24/60mm)				
					D	28	19.00 19.50 - 19.95	SPT N=40 6,8/8,10,11,11				
			20.00	14.57 20.00								
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater strike at 18.00 m bgl. 4. Installed with a 50 mm HDPE standpipe to 20.00 m bgl.					CHISELLING		WATER LEVEL OBSERVATIONS					
					Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
					NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
					BOREHOLE DIAMETER		CASING DIAMETER		DEPTH SEALED			
							20.00m					
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 2 of 3				
Plant Used: Pilcon Wayfarer		Coordinates / Level (mAOD): E: 507751.429 N: 184882.677 Level: 34.572		Logged By: CB		Checked By: CB		Approved By: SS				

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Project: Hillingdon	Project No: 14-0724.01	Hole ID: CP01
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CABLE PERCUSSION BOREHOLE LOG

Date From / To:
30/03/2015 - 31/03/2015

Client:
Spenn Hill

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Borehole completed at 20.00m bgl.									

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Groundwater strike at 18.00 m bgl.
4. Installed with a 50 mm HDPE standpipe to 20.00 m bgl.

CHISELLING

Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:					NO WATER ENCOUNTERED:		

WATER LEVEL OBSERVATIONS
BOREHOLE DIAMETER
CASING DIAMETER
DEPTH SEALED

20.00m

All measurements in metres unless otherwise stated

10m/page Scale: 1:62.50

Coordinates to National Grid
Ground Level to Ordnance Datum

Page 3 of 3

Plant Used: Pilcon Wayfarer	Coordinates / Level (mAOD): E: 507751.429 N: 184882.677 Level: 34.572	Logged By: CB	Checked By: CB	Approved By: SS
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Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP02			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 31/03/2015 - 01/04/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Tarmac overlying brown, very sandy, fine to coarse, sub-rounded to sub-angular brick, limestone and concrete GRAVEL.				34.16 0.40	D		0.50		
POSSIBLE MADE GROUND: Dark brown, sandy, slightly gravelly CLAY. Gravel is sub-angular to sub-rounded flint. High mineral content.				(0.50) 33.66 0.90	ES		0.80		
Firm brown mottled orange and grey friable, bedded, thinly laminated slightly gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded flint. (POSSIBLE WEATHERED LONDON CLAY)				(1.60)	ES		1.00		
					U		1.10		
							1.50 -	U=16/mm	
					D		2.00		
Firm brown silty CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)				32.06 2.50			2.50 - 2.95	SPT N=3/75mm (2,2/3)	
				(1.00)	D		3.00		
Stiff, brown mottled grey and orange friable, bedded, thinly laminated CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)				31.06 3.50	U		3.50 -	U=29/mm	
				(1.00)	D		4.00		
Very stiff brown mottled greenish grey and pink CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)				30.06 4.50			4.50 - 4.95	SPT N=30 3,5/5,7,9,9	
					D		5.00		
					D		5.50		
				(3.00)	U		6.00 -	U=45/mm	
					D		6.50		
Very stiff brown mottled greenish grey CLAY. Occasionally silty. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)				27.06 7.50			7.50 - 7.95	SPT N=35 5,6/7,7,9,12	
					D		8.00		
				(2.00)	D		8.50		
					U		9.00 -	U=58/mm	
				25.06 9.50	D		9.50		
				(mm)					

REMARKS :

- Engineer verified logged in general accordance to BS 5930:2010.
- Area CAT scanned prior to excavation.
- Groundwater encountered at 10.00 m bgl and 17.70 m bgl.
- Installed with a 50 mm HDPE standpipe to 19.5m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS				
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
			20.00m				

All measurements in metres unless otherwise stated

10m/page Scale: 1:62.50

Coordinates to National Grid
Ground Level to Ordnance Datum

Page 1 of 3

Plant Used: Pilson Wayfarer	Coordinates / Level (mAOD): E: 507789.102 N: 184864.457 Level: 34.562	Logged By: CB	Checked By: CB	Approved By: SS
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Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP02			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 31/03/2015 - 01/04/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details					
					TYPE	REF	Depth	SPT N Value/Drive mm						
Very stiff brown mottled grey, bedded, thinly laminated CLAY. Occasionally silty. (LAMINATED BEDS - WOOLWICH AND READING BEDS)(BH Continued)	[Pattern]			(8.20)	D		10.50 - 10.95	SPT N=50/215mm (6,8/10,12,28/65mm)	[Pattern]					
							D	11.50		D	12.00 - 12.45	SPT N=53/175mm (5,7/16,20,17/25mm)		
								D			13.00	U	13.50 -	U=71/mm
											D		14.00	
							D	15.00 - 15.45		D	15.00 - 15.45	SPT N=50/175mm (6,10/12,25,13/25mm)		
								D			16.00	D	16.50 - 16.95	SPT N=50/175mm (8,9/15,20,15/25mm)
							D	17.50		D	18.00 - 18.45		SPT N=50/175mm (7,8/12,20,18/25mm)	
							D	19.00			D	19.50 - 19.95	SPT N=50/200mm (6,8/10,15,25/50mm)	
								20.00		14.56 20.00				
							Brown, fine to medium sand.	[Pattern]				(1.00)	D	
Very stiff slightly sandy CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(1.30)	D		19.00		[Pattern]					
							19.50 - 19.95			SPT N=50/200mm (6,8/10,15,25/50mm)				

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered at 10.00 m bgl and 17.70 m bgl. 4. Installed with a 50 mm HDPE standpipe to 19.5m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS				
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
	BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
				20.00m				

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 2 of 3
Plant Used: Pilcon Wayfarer	Coordinates / Level (mAOD): E: 507789.102 N: 184864.457 Level: 34.562	Logged By: CB	Checked By: CB Approved By: SS

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Project: Hillingdon	Project No: 14-0724.01	Hole ID: CP02
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CABLE PERCUSSION BOREHOLE LOG

Date From / To:
31/03/2015 - 01/04/2015

Client:
Spenn Hill

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Borehole completed at 20.00m bgl.									

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Groundwater encountered at 10.00 m bgl and 17.70 m bgl.
4. Installed with a 50 mm HDPE standpipe to 19.5m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS						
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth		
NO CHISELLING UNDERTAKEN:									
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED			
			20.00m						

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum		Page 3 of 3
Plant Used: Pilcon Wayfarer	Coordinates / Level (mAOD): E: 507789.102 N: 184864.457 Level: 34.562	Logged By: CB	Checked By: CB	Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP03			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 08/04/2015 - 10/04/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Grass overlying brown slightly sandy, slightly gravelly CLAY. Gravel is fine to medium, sub-rounded to sub-angular flint.				34.17 0.40	ES	1	0.30		
					B	2	0.40		
					D	3	0.70		
Soft becoming stiff brown mottled orange slightly gravelly CLAY. Gravel is fine to medium, sub-rounded to sub-angular flint. (POSSIBLE WEATHERED LONDON CLAY)				(2.10)	B	4	1.20 1.20 - 1.65	SPT N=7 1,1/1,2,2,2	
					D	5	2.00	U=72/mm	
					U	6	2.00 -		
				32.07 2.50	D	7	2.50		
Firm brown silty CLAY. (POSSIBLE WEATHERED LONDON CLAY)				(1.00)	B	8	3.00 3.00 - 3.45	SPT N=18 4,3/5,4,4,5	
					D	9	3.60		
				31.07 3.50	D	10	4.00	U=84/mm	
Stiff becoming very stiff brown mottled grey and pink friable CLAY. High mineral content. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)					U	11	4.00 -		
					B	12	5.00	SPT N=36 6,7/8,8,9,11	
					D	13	5.00 - 5.45		
				(4.80)	B	14	6.50 6.50 - 6.95	SPT N=42 6,7/7,8,11,16	
					B	15	8.00 8.00 - 8.45	SPT N=50/205mm (9,13/13,21,16/55mm)	
				26.27 8.30	D	16	9.00		
Very stiff, reddish brown mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)					B	17	9.50 9.50 - 9.95	SPT N=50/180mm (7,14/16,24,10/30mm)	

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered at 15.50 m bgl. 4. Installed with a HDPE standpipe to 15.80m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS					
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:					
	BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED		
			15.80m						

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 2
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 507832.392 N: 184843.574 Level: 34.571	Logged By: CB	Checked By: CB Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP03			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 08/04/2015 - 10/04/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Very stiff, reddish brown mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)(BH Continued)	[Pattern]			(7.20)	B	18	11.00 11.00 - 11.45	SPT N=50/210mm (6,12/14,19,17/60mm)	[Pattern]
					B	19	12.50 12.50 - 12.95	SPT N=50/285mm (4,8/8,14,16,12/60mm)	
					D	20	13.50		
					B	21	14.00 14.00 - 14.45	SPT N=50/200mm (6,11/13,17,20/50mm)	
Very stiff, brown, very sandy CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]		15.80	19.07 15.50 18.77 15.80	B	22	15.50 15.50 - 15.95	SPT N=50/180mm (7,10/17,22,11/30mm)	[Pattern]
Borehole completed at 15.80m bgl.									

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered at 15.50 m bgl. 4. Installed with a HDPE standpipe to 15.80m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS					
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:					
	BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED		
				15.80m					

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 2 of 2
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 507832.392 N: 184843.574 Level: 34.571	Logged By: CB	Checked By: CB Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP04			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 01/04/2015 - 08/04/2015		Client: Spenn Hill			


DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Grass overlying soft dark brown, slightly sandy CLAY.	XXXX			34.11 0.30	ES B	1 2	0.20 0.30		
Soft becoming stiff brown mottled orange, slightly gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded flint. (POSSIBLE WEATHERED LONDON CLAY)	XXXX			(1.90)	ES B	3 4	1.00 1.20 1.20 - 1.65	SPT N=6 1,0/1,1,2,2	
Stiff brown mottled grey and orange friable, bedded, thinly laminated CLAY. (POSSIBLE WEATHERED LONDON CLAY)	XXXX			32.21 2.20	B U D	5 6 7	2.00 2.00 - 2.40	U=37/mm	
Stiff grey and brown mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)	XXXX			(0.80)	B	8	3.00 3.00 - 3.45	SPT N=21 3,2/3,5,6,7	
Stiff grey and brown mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)	XXXX			31.41 3.00	D U	9 10	4.00 4.00 -	U=104/mm	
Hard, becoming very stiff, reddish brown mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)	XXXX			29.61 4.80 29.41 5.00	D B D	11 12 13	4.80 5.00 5.00 - 5.45	SPT N=50/155mm (8,17/21,24,5/5mm)	
Medium dense, brown, fine to medium SAND.	XXXX			(0.60)	D	14	5.60		
Hard, becoming very stiff, reddish brown mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)	XXXX			28.81 5.60	D	15	5.70		
	XXXX				B	16	6.50 6.50 - 6.95	SPT N=28 5,6/6,7,7,8	
	XXXX				D D	17 18	7.00 7.10		
	XXXX				B	19	8.00 8.00 - 8.45	SPT N=31 6,6/8,8,7,8	
	XXXX				D	20	9.00		
	XXXX				B	21	9.50 9.50 - 9.95	SPT N=50/285mm (5,8/11,12,14,13/60mm)	

REMARKS :

- Engineer verified logged in general accordance to BS 5930:2010.
- Area CAT scanned prior to excavation.
- Groundwater encountered at 5.10m bgl and 14.70 m bgl.
- Installed with a HDPE standpipe to 20.00m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS					
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:					
BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
			20.00m					

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 507854.662 N: 184881.994 Level: 34.41	Logged By: CB	Checked By: CB Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com												
Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP04						
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 01/04/2015 - 08/04/2015		Client: Spenn Hill						
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details			
					TYPE	REF	Depth	SPT N Value/Drive mm				
Hard, becoming very stiff, reddish brown mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)(BH Continued)				(9.10)	B	22	11.00 11.00 - 11.45	SPT N=52/215mm (7,10/12,15,25/65mm)				
					B	23	12.90 12.90 - 13.35	SPT N=50/265mm (4,9/10,11,18,11/40mm)				
					D	24	13.50					
					B	25	14.00 14.00 - 14.45	SPT N=50/115mm (11,14/32,18/40mm)				
				19.71 14.70								
Brown, slightly clayey fine to medium SAND. (LAMINATED BEDS - WOOLWICH AND READING BEDS)				(1.70)	B	26	15.50 15.50 - 15.95	SPT N=32 7,8/8,8,8				
				18.01 16.40	D	27	16.50					
					D	28	16.80					
					B	29	17.00 17.00 - 17.45	SPT N=50/115mm (14,11/27,23/40mm)				
Stiff to hard reddish brown CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)				(3.60)	B	30	18.50 18.50 - 18.95	SPT N=50/105mm (16,9/50mm/34,16/30mm)				
				20.00 14.41 20.00			20.00 - 20.45					
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered at 5.10m bgl and 14.70 m bgl. 4. Installed with a HDPE standpipe to 20.00m bgl.				CHISELLING			WATER LEVEL OBSERVATIONS					
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
				NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:					
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
							20.00m					
All measurements in metres unless otherwise stated		10m/page	Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 2 of 3			
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 507854.662 N: 184881.994 Level: 34.41		Logged By: CB		Checked By: CB		Approved By: SS				

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Project: Hillingdon	Project No: 14-0724.01	Hole ID: CP04
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CABLE PERCUSSION BOREHOLE LOG

Date From / To:
 01/04/2015 - 08/04/2015

Client:
Spenn Hill

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Borehole completed at 20.00m bgl.								SPT N=50/200mm (13,12/70mm/16,19,15/50mm)	

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Groundwater encountered at 5.10m bgl and 14.70 m bgl.
4. Installed with a HDPE standpipe to 20.00m bgl.

CHISELLING

Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
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NO CHISELLING UNDERTAKEN:

NO WATER ENCOUNTERED:

BOREHOLE DIAMETER
CASING DIAMETER
DEPTH SEALED

20.00m

All measurements in metres unless otherwise stated

10m/page Scale: 1:62.50

Coordinates to National Grid
 Ground Level to Ordnance Datum

Page 3 of 3

Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 507854.662 N: 184881.994 Level: 34.41	Logged By: CB	Checked By: CB	Approved By: SS
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Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP05			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 07/04/2015 - 08/04/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth		
MADE GROUND: Tarmac overlying brown, very sandy, fine to coarse, sub-rounded to sub-angular brick, limestone and concrete GRAVEL.				34.39 0.20					
MADE GROUND: Reddish brown, fine to coarse, sub-angular to sub-rounded brick, concrete and limestone GRAVEL. Occasional brick cobbles.				33.94 0.65	ES	1	0.40		
					D	2	0.50		
					ES	3	0.70		
					D	4	1.00		
Firm becoming stiff orangeish brown slightly gravelly CLAY. Gravel is fine to medium, sub-rounded to sub-angular flint, limestone and sandstone. Rare flint cobbles. (POSSIBLE WEATHERED LONDON CLAY)				(1.65)			1.50 - 1.95	SPT N=10 1,1/2,2,3,3	
					D	5	2.00		
Firm becoming stiff, friable, bedded, thinly laminated brown mottled grey and orange CLAY. (POSSIBLE WEATHERED LONDON CLAY)				32.29 2.30					
				(0.70)	D	6	2.50	U=20/mm	
					U	7	2.50 -		
				31.59 3.00	D	8	3.00		
Firm becoming stiff, brown mottled grey and pink friable, bedded, thinly laminated CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)				(1.00)					
					D	9	3.50	SPT N=18 2,2/4,4,4,6	
							3.50 - 3.95		
				30.59 4.00	D	10	4.00		
Stiff becoming very stiff brown mottled pink and greyish green friable, bedded, thinly laminated CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)									
					D	11	4.50	U=41/mm	
					U	12	4.50 -		
					D	13	5.00		
							6.00 - 6.45	SPT N=25 3,4/5,5,7,8	
					D	14	7.00		
					U	15	7.50 -	U=52/mm	
					D	16	8.00		
				(9.00)					
							9.00 - 9.45	SPT N=31 4,6/6,8,9,8	
					D	17	10.00		

REMARKS :

- Engineer verified logged in general accordance to BS 5930:2010.
- Area CAT scanned prior to excavation.
- Groundwater encountered at 13.70 m bgl.
- Installed with a 50 mm HDPE standpipe to 20.00 m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS				
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				

BOREHOLE DIAMETER	CASING DIAMETER	DEPTH SEALED
	20.00m	

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 3
Plant Used: Pilson Wayfarer	Coordinates / Level (mAOD): E: 507863.222 N: 184924.368 Level: 34.592	Logged By: CB	Checked By: CB Approved By: SS



Hillingdon

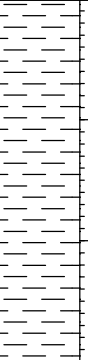
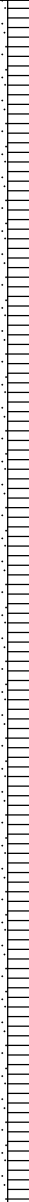

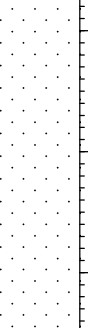
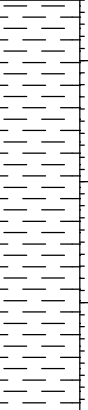
14-0724.01

CP05

CABLE PERCUSSION BOREHOLE LOG

07/04/2015 - 08/04/2015

Spen Hill

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Stiff becoming very stiff brown mottled pink and greyish green friable, bedded, thinly laminated CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)(BH Continued)					D	18	10.50	U=59/mm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Firm to hard brown, very sandy CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)					21.59	13.00	D	22	13.00	U=21/mm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Brown, slightly clayey fine to medium SAND. (LAMINATED BEDS - WOOLWICH AND READING BEDS)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Groundwater encountered at 13.70 m bgl.
4. Installed with a 50 mm HDPE standpipe to 20.00 m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS				
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				

BOREHOLE DIAMETER	CASING DIAMETER	DEPTH SEALED
	20.00m	

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum		Page 2 of 3
Plant Used: Pilson Wayfarer	Coordinates / Level (mAOD): E: 507863.222 N: 184924.368 Level: 34.592	Logged By: CB	Checked By: CB	Approved By: SS

Delta-Simons
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Email: info@deltasimons.com



Project: **Hillingdon** Project No: **14-0724.01** Hole ID: **CP05**

CABLE PERCUSSION BOREHOLE LOG

Date From / To:
 07/04/2015 - 08/04/2015

Client:
Spenn Hill

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Borehole completed at 20.00m bgl.									

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Groundwater encountered at 13.70 m bgl.
4. Installed with a 50 mm HDPE standpipe to 20.00 m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS					
Depth From	Depth To	Time Taken		Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:						NO WATER ENCOUNTERED:		
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED		
			20.00m					

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum			Page 3 of 3	
Plant Used: Pilcon Wayfarer	Coordinates / Level (mAOD): E: 507863.222 N: 184924.368 Level: 34.592	Logged By: CB		Checked By: CB		Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP06			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 01/04/2015 - 02/04/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Tarmac and concrete overlying brown, sandy, fine to medium sub-angular to sub-rounded limestone, flint and concrete GRAVEL.	XXXX			34.31 0.20					
Firm greyish brown, occasionally black CLAY. Slight hydrocarbon odour at interface with Made Ground. (POSSIBLE WEATHERED LONDON CLAY)	XXXX			33.91 0.60	D	1	0.50		
	XXXX				ES	2			
	XXXX				D	3	1.00		
	XXXX				ES	4			
Firm becoming stiff brown mottled grey CLAY. (POSSIBLE WEATHERED LONDON CLAY)	XXXX			(1.90)	D	5	1.50	SPT N=11 1,1/2,2,3,4	
	XXXX				D	6	2.00	1.50 - 1.95	
Firm becoming stiff brown mottled grey friable, bedded, thinly laminated CLAY. (POSSIBLE WEATHERED LONDON CLAY)	XXXX			32.01 2.50	U	7	2.50 -	U=44/mm	
	XXXX			(0.70)	D	8	3.00		
	XXXX			31.31 3.20	D	9	3.40		
Stiff grey mottled orange and pink friable, bedded, thinly laminated CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)	XXXX				D	10	3.50	SPT N=23 2,4/4,5,6,8	
	XXXX			(1.60)	D	11	4.00	3.50 - 3.95	
	XXXX				U	12	4.50 -	U=38/mm	
	XXXX			29.71 4.80	D	13	5.00		
Stiff brown mottled greyish green and pink CLAY. Becoming less pink with depth. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)	XXXX				D	14	6.00	SPT N=28 4,5/5,6,8,9	
	XXXX			(5.20)	D	15	7.00	6.00 - 6.45	
	XXXX				U	16	7.50 -	U=54/mm	
	XXXX				D	17	8.00		
	XXXX				D	18	9.00	9.00 - 9.45	SPT N=48 5,7/10,10,12,16
	XXXX		(mm)	24.51 10.00	D	19	10.00		

REMARKS :
 1. Engineer verified logged in general accordance to BS 5930:2010.
 2. Area CAT scanned prior to excavation.
 3. Groundwater encountered at 15.00m bgl and 18.30 m bgl.
 4. Installed with a 50 mm HDPE standpipe to 20.00 m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS				
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				

BOREHOLE DIAMETER	CASING DIAMETER	DEPTH SEALED
	19.50m	

All measurements in metres unless otherwise stated

10m/page Scale: 1:62.50

Coordinates to National Grid
Ground Level to Ordnance Datum

Page 1 of 2

Plant Used: Pilson Wayfarer	Coordinates / Level (mAOD): E: 507827.832 N: 184941.816 Level: 34.508	Logged By: CB	Checked By: CB	Approved By: SS
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Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP06			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 01/04/2015 - 02/04/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Stiff becoming very stiff reddish brown mottled grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(5.00)	U	20	10.50 -	U=62/mm	[Pattern]
					D	21	11.00		
					D	22	12.00 12.00 - 12.45	SPT N=50/200mm (6,8/11,15,24/50mm)	
					D	23	13.00		
					U	24	13.50 -	U=64/mm	
					D	25	14.00		
Brown, slightly clayey fine to medium SAND. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(1.90)	D	26	15.00 15.00 - 15.45	SPT N=50/180mm (6,10/12,25,13/30mm)	[Pattern]
					D	27	16.00		
					D	28	16.20		
Very stiff reddish brown mottled grey CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(1.40)	D	29	16.50 16.50 - 16.95	SPT N=50/135mm (8,9/23,27/60mm)	[Pattern]
					D	30	17.50		
					D	31	18.00 18.00 - 18.45		
Brown, slightly clayey fine to medium SAND. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(0.60)	D	32	19.00		[Pattern]
					D	33	19.50 19.50 - 19.95		
Very stiff grey very sandy CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(0.60)					[Pattern]
Borehole completed at 19.50m bgl.									[Pattern]

REMARKS :

- Engineer verified logged in general accordance to BS 5930:2010.
- Area CAT scanned prior to excavation.
- Groundwater encountered at 15.00m bgl and 18.30 m bgl.
- Installed with a 50 mm HDPE standpipe to 20.00 m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS					
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:					
BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
			19.50m					

All measurements in metres unless otherwise stated

10m/page Scale: 1:62.50

Coordinates to National Grid
Ground Level to Ordnance Datum

Page 2 of 2

Plant Used: Pilson Wayfarer	Coordinates / Level (mAOD): E: 507827.832 N: 184941.816 Level: 34.508	Logged By: CB	Checked By: CB	Approved By: SS
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Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP07			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 30/03/2015 - 31/03/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL / DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Grass overlying brown slightly sandy, slightly gravelly CLAY. Gravel is fine to medium, sub-rounded to sub-angular flint.				34.68 0.30	B ES	1 2	0.20		
Soft becoming stiff brown mottled orange slightly gravelly CLAY. Gravel is fine to medium, sub-rounded to sub-angular flint. (POSSIBLE WEATHERED LONDON CLAY)				(0.80) 33.88 1.10	B	3	1.20 1.20 - 1.65	SPT N=5 1,0/1,1,1,2	
Soft becoming stiff brown mottled orange silty CLAY. (POSSIBLE WEATHERED LONDON CLAY)				(1.80)	ES D U	4 5 6	1.80 2.00 2.00 -	U=24/mm	
Stiff brown mottled grey and orange friable, bedded, thinly laminated CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)				32.08 2.90	B D	8 9	3.00 3.00 - 3.45	SPT N=26 3,5/6,6,7,7	
Stiff becoming very stiff brown mottled greenish grey and pink CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)				(2.10)	D U D	10 11 12	4.00 4.00 - 4.50	U=62/mm	
				29.98 5.00	B	13	5.00 5.00 - 5.45	SPT N=20 1,1/4,4,6,6	
				(6.00)	D	14	5.50		
					U D	15 16	6.40 - 6.50	U=78/mm	
					D	17	7.00		
					B D	18 19	8.00 8.00 - 8.45	SPT N=42 6,6/5,11,12,14	
					D	20	9.00		
					D U	21 22	9.50 9.50 -	U=120/mm	

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry upon completion. 4. Installed with a HDPE standpipe to 14.30m bgl	CHISELLING			WATER LEVEL OBSERVATIONS				
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
	BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
				14.30m				

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 2
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 507776.095 N: 184983.701 Level: 34.979	Logged By: CB	Checked By: CB Approved By: SS

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Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP07			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 30/03/2015 - 31/03/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL / DEPTH (Thickness)	Sample Details			Test Results	Backfill Details		
					TYPE	REF	Depth	SPT N Value/Drive mm			
Stiff becoming very stiff brown mottled greenish grey and pink CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)(BH Continued)			14.30	23.98 11.00	B	23	11.00 11.00 - 11.45	SPT N=50 4,7/12,13,16,9			
				D	24	11.50					
Very stiff reddish brown, occasionally grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)						(3.50)	B D	25 26		12.50 12.50 - 12.95	SPT N=50/200mm (1,14/70mm/16,18,16/50mm)
						B	27	14.00 14.00 - 14.45		SPT N=50/180mm (12,13/65mm/17,22,11/30mm)	
Borehole completed at 14.50m bgl.				D	28	14.50					

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry upon completion. 4. Installed with a HDPE standpipe to 14.30m bgl	CHISELLING			WATER LEVEL OBSERVATIONS				
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
	BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
				14.30m				

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 2 of 2
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 507776.095 N: 184983.701 Level: 34.979	Logged By: CB	Checked By: CB Approved By: SS

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Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP08			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 09/04/2015 - 10/04/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL / DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Tarmac overlying a brick layer, overlying brown, sandy, fine to medium sub-angular to sub-rounded limestone, flint and concrete GRAVEL.				34.12 0.40	ES	1	0.50		
Firm brown mottled orange CLAY. (POSSIBLE WEATHERED LONDON CLAY)				(0.70) 33.42 1.10	D	3	1.00		
Firm becoming stiff brown mottled orange silty CLAY. (POSSIBLE WEATHERED LONDON CLAY)				(0.85) 32.57 1.95	ES	4	1.50	SPT N=10 1,2/1,2,3,4	
Firm becoming stiff brown mottled grey and pink, friable, bedded, thinly laminated CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)				(2.55)	D	5	2.00		
					U	6	2.50 -	U=20/mm	
					D	7	3.00		
							3.50 - 3.95		
					D	8	4.00	SPT N=16 1,2/3,3,4,6	
				30.02 4.50	U	9	4.50 -	U=45/mm	
Stiff, brown mottled greenish grey friable, bedded, thinly laminated CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)				(2.50)	D	10	5.00		
							6.00 - 6.45	SPT N=33 3,6/6,7,9,11	
				27.52 7.00	D	11	7.00		
Stiff becoming very stiff, reddish brown mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)					U	12	7.50 -	U=48/mm	
					D	13	8.00		
							9.00 - 9.45	SPT N=48 5,7/9,11,12,16	
				(4.90)					
			(mm)		D	14	10.00		

REMARKS :

- Engineer verified logged in general accordance to BS 5930:2010.
- Area CAT scanned prior to excavation.
- Groundwater encountered at 11.90 m bgl.
- Installed with a HDPE standpipe to 20.00 m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS				
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
			20.00m				

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 3
Plant Used: Pilson Wayfarer	Coordinates / Level (mAOD): E: 507742.364 N: 184946.174 Level: 34.522	Logged By: CB	Checked By: CB Approved By: SS

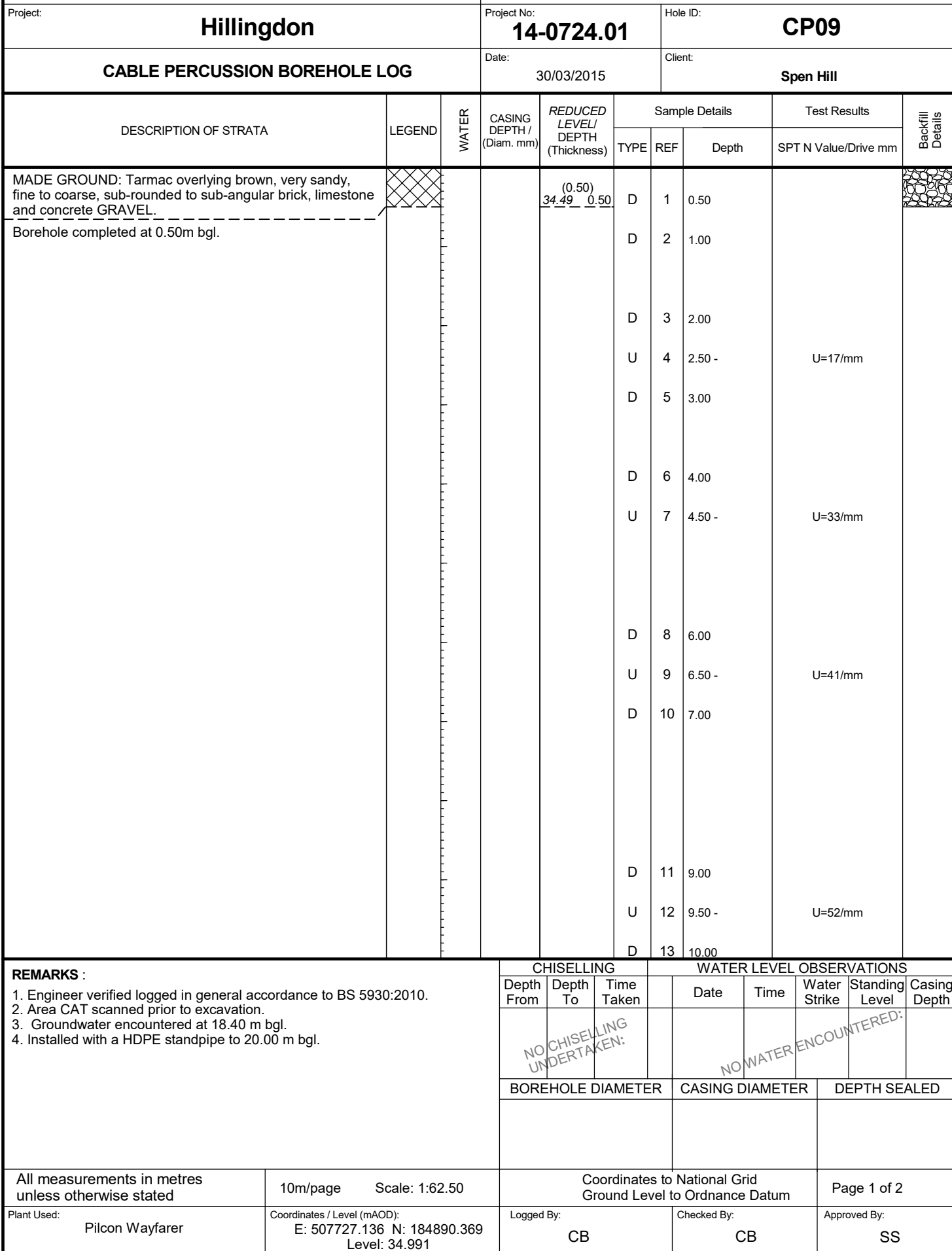
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Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP08			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 09/04/2015 - 10/04/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL / DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Stiff becoming very stiff, reddish brown mottled greenish grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)(BH Continued)	[Pattern]				D	15 16	10.50		[Pattern]
					D	17	11.00		
				22.62 11.90			12.00 - 12.45	SPT N=100 6,10/12,20,18,50	
Very stiff becoming hard, slightly clayey fine to medium SAND. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			22.22 12.30					
Very stiff becoming hard, reddish brown mottled greenish grey CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(2.10)	D	18	13.00		
					U	19	13.50 -	U=68/mm	
					D	20	14.00		
				20.12 14.40					
Very dense brown, slightly clayey fine to medium SAND. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(2.60)	D	21	16.00	SPT N=115/225mm (8,11/29,31,55)	
							15.00 - 15.45		
							16.50 - 16.95	SPT N=85 7,10/19,19,12,35	
				17.52 17.00					
Very stiff, brown mottled grey, very sandy CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(0.50) 17.02 17.50	D	22 23	17.50		
Very stiff becoming hard brown CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(2.00)	D	24	19.00	SPT N=100/225mm (5,10/22,28,50)	
							18.00 - 18.45		
				15.02 19.50			19.50 - 19.95	SPT N=90/225mm (8,11/15,35,40)	
Very dense, brown, slightly clayey fine to medium SAND. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(0.50) 20.00 14.52 20.00					

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered at 11.90 m bgl. 4. Installed with a HDPE standpipe to 20.00 m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS				
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
	BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
			20.00m					

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 2 of 3
Plant Used: Pilson Wayfarer	Coordinates / Level (mAOD): E: 507742.364 N: 184946.174 Level: 34.522	Logged By: CB	Checked By: CB Approved By: SS

Plant Used: Pilcon Wayfarer	Coordinates / Level (mAOD): E: 507742.364 N: 184946.174 Level: 34.522	Logged By: CB	Checked By: CB	Approved By: SS
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Project: **Hillingdon** Project No: **14-0724.01** Hole ID: **CP09**

CABLE PERCUSSION BOREHOLE LOG

Date: **30/03/2015**

Client: **Spenn Hill**

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details	
					TYPE	REF	Depth	SPT N Value/Drive mm		
					D	14	12.00	U=60/mm		
					U	15	12.50 -			
					D	16	13.00			
					D	17	15.00	U=71/mm		
					U	18	15.50 -			
					D	19	16.00			
					D	20	18.00			

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Groundwater encountered at 18.40 m bgl.
4. Installed with a HDPE standpipe to 20.00 m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS						
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth		
NO CHISELLING UNDERTAKEN:									
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED			

All measurements in metres unless otherwise stated

10m/page Scale: 1:62.50

Coordinates to National Grid
Ground Level to Ordnance Datum

Page 2 of 2

Plant Used: **Pilcon Wayfarer**

Coordinates / Level (mAOD):
E: 507727.136 N: 184890.369
Level: 34.991

Logged By:
CB

Checked By:
CB

Approved By:
SS


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Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP09(A)			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 08/04/2015 - 09/04/2015		Client: Spenn Hill			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Tarmac overlying brown, very sandy, fine to coarse, sub-rounded to sub-angular brick, limestone and concrete GRAVEL.				(0.50)	ES	1	0.30		
0.50				ES	2	0.70			
MADE GROUND: Soft to firm, brown gravelly CLAY. Gravel is fine to medium, sub-angular to angular brick.				(0.80)	D	3	1.50	SPT N=11 1,2/2,2,3,4	
1.30				1.50 - 1.95					
Firm brown mottled orange, gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded flint. Occasional flint cobbles. (POSSIBLE WEATHERED LONDON CLAY)				1.70					
Firm, brown mottled orange silty CLAY. (POSSIBLE WEATHERED LONDON CLAY)				(1.60)					
Firm becoming stiff brown mottled grey and pink friable, bedded, thinly laminated CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)				3.30	D	4	3.50	SPT N=14 3,3/4,4,3,3	
				(4.70)			5.00 - 5.45	SPT N=24 3,4/4,5,6,9	
				8.00			8.00 - 8.45	SPT N=49 5,8/11,12,12,14	
Stiff becoming very stiff reddish brown mottled grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)					D	5	8.50		

(mm)

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Backfilled with arisings.				CHISELLING			WATER LEVEL OBSERVATIONS				
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
				NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
							20.00m				

All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50	No Coordinate Data Available No Datum Information Available		Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD):		Logged By: CB	Checked By: CB	Approved By: SS

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Project: Hillingdon				Project No: 14-0724.01		Hole ID: CP09(A)					
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 08/04/2015 - 09/04/2015		Client: Spenn Hill					
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	DEPTH (Thickness)	Sample Details			Test Results	Backfill Details		
					TYPE	REF	Depth	SPT N Value/Drive mm			
Stiff becoming very stiff reddish brown mottled grey CLAY. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)(BH Continued)	[Pattern]			(5.70)			11.00 - 11.45	SPT N=38 5,7/8,8,10,12	[Pattern]		
Very stiff brown mottled grey friable, bedded, thinly laminated silty CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			13.70 (0.80) 14.50	D	6	14.00 14.00 - 14.45	SPT N=70 6,10/10,15,25,20	[Pattern]		
Very stiff reddish brown mottled grey CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(2.50)					[Pattern]		
Very stiff grey sandy CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			17.00 (1.40)			17.50 - 17.95	SPT N=88 8,9/13,22,13,40	[Pattern]		
Dense brown, slightly clayey fine to medium SAND. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			18.40 18.70			18.50 - 18.95	SPT N=50+/150mm (9,50)	[Pattern]		
Very stiff grey CLAY. (LAMINATED BEDS - WOOLWICH AND READING BEDS)	[Pattern]			(1.30)	D	7	19.00 19.50 - 19.95	SPT N=37 5,7/7,8,9,13	[Pattern]		
			20.00	20.00							
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Backfilled with arisings.			CHISELLING			WATER LEVEL OBSERVATIONS					
			Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
			NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:					
			BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
						20.00m					
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50	No Coordinate Data Available No Datum Information Available					Page 2 of 3			
Plant Used: Dando 2000		Coordinates / Level (mAOD):	Logged By: CB		Checked By: CB		Approved By: SS				

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Project: **Hillingdon** Project No: **14-0724.01** Hole ID: **CP09(A)**

CABLE PERCUSSION BOREHOLE LOG

Date From / To:
08/04/2015 - 09/04/2015

Client:
Spenn Hill

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Borehole completed at 20.00m bgl.									

REMARKS :

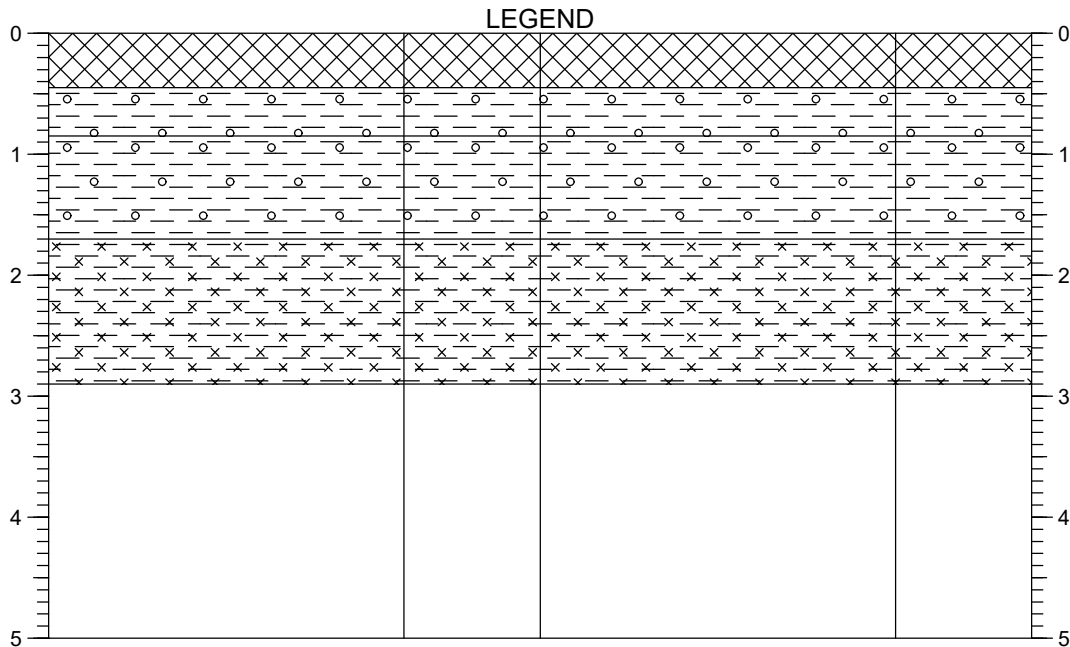
1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Borehole remained dry on completion.
4. Backfilled with arisings.

CHISELLING			WATER LEVEL OBSERVATIONS						
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth		
NO CHISELLING UNDERTAKEN:					NO WATER ENCOUNTERED:				
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED			
			20.00m						
All measurements in metres unless otherwise stated			10m/page Scale: 1:62.50			No Coordinate Data Available No Datum Information Available			Page 3 of 3
Plant Used: Dando 2000			Coordinates / Level (mAOD):			Logged By: CB			Checked By: CB
									Approved By: SS

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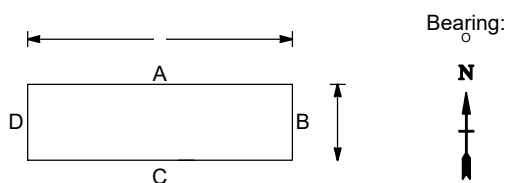


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP01
	TRIAL PIT LOG	Date:	25/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
34.294	0.45	MADE GROUND: Grass overlying soft to firm brown, slightly sandy, gravelly CLAY. Gravel is fine to coarse, sub-angular to sub-rounded flint, brick and limestone. Occasional rootlets and brick cobbles.	0.20	ES		
33.894	0.85		0.50	ES		
(0.85)		Firm grey friable, thinly laminated, slightly gravelly CLAY. Gravel is fine to medium, sub-angular flint. (POSSIBLE WEATHERED LONDON CLAY)	1.00	D		
33.044		1.70	1.00	D		
(1.20)		Firm brown, mottled orange, gravelly CLAY. Gravel is fine to medium, sub-angular flint. Tree root identified at 1.50 m bgl. (POSSIBLE WEATHERED LONDON CLAY)	2.00	D		
31.844	2.90	Firm greyish brown, laminated, thinly bedded silty CLAY. Occasional shell / relic shell. Initially coarse gravel and rounded pebbles / angular concretions from 1.20 to 1.40 m bgl. (POSSIBLE WEATHERED LONDON CLAY).				
		Trial pit completed at 2.9m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

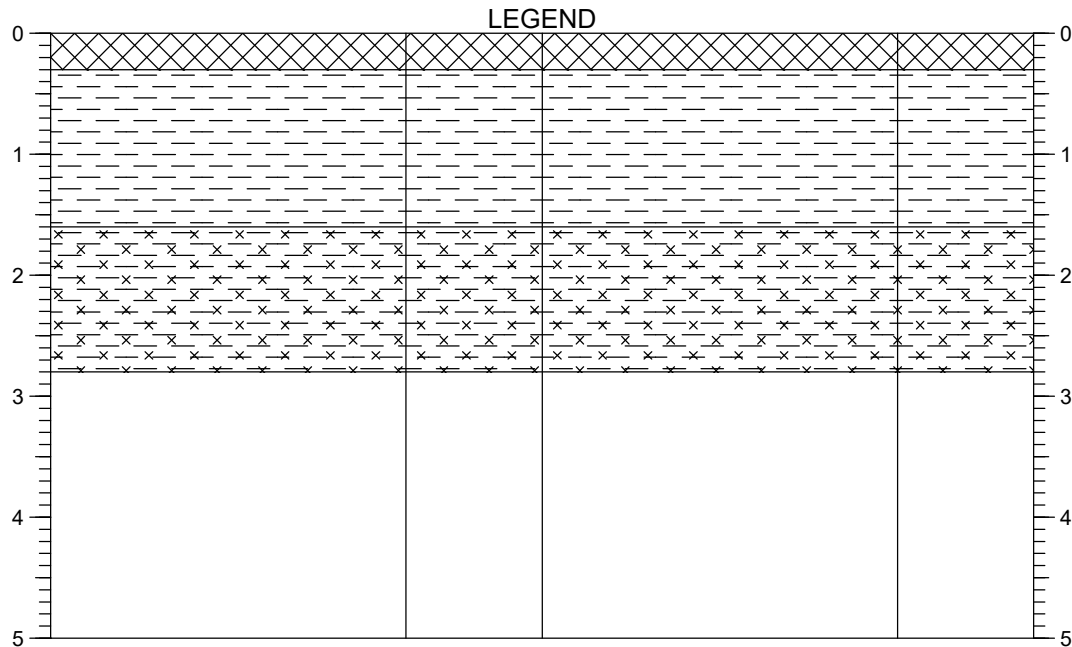
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507740.895 N: 184867.862 Level: 34.744	Logged By:	CB	Checked By:	CB	Approved By:	SS
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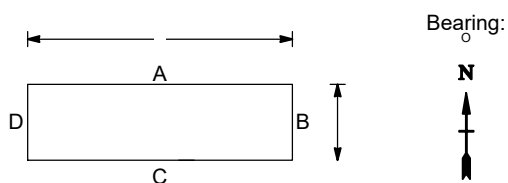


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP02
	TRIAL PIT LOG	Date:	25/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
34.275	0.30	MADE GROUND: Grass overlying soft to firm brown, slightly sandy, gravelly CLAY. Gravel is fine to coarse, sub-angular to sub-rounded flint, brick and limestone. Steel bar removed at 0.10 m bgl. Steel bar at 0.1 m bgl. Firm grey, mottled orange, friable CLAY. (POSSIBLE WEATHERED LONDON CLAY)	0.20	ES		
(1.30)			1.00	D		
32.975	1.60					
(1.20)		Firm brown mottled orange, laminated, thinly bedded silty CLAY. High cream coloured mineral content. Occasional root relics. (POSSIBLE WEATHERED LONDON CLAY).	1.80 2.00	D B		
31.775	2.80	-----				
		Trial pit completed at 2.8m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

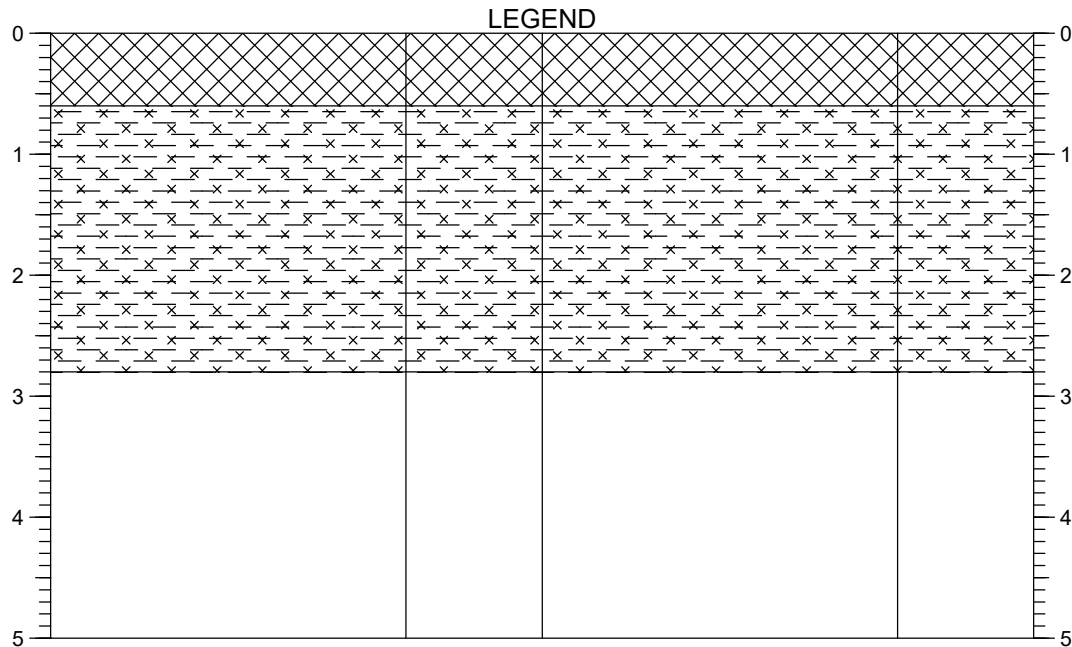
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507765.892 N: 184840.01 Level: 34.575	Logged By:	CB	Checked By:	CB	Approved By:	SS
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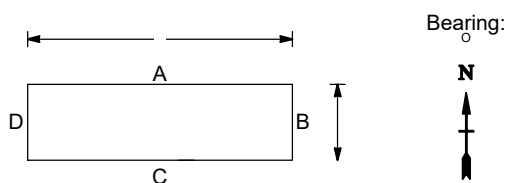


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP03
	TRIAL PIT LOG	Date:	25/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
(0.60) 34.119 0.60		MADE GROUND: Grass overlying soft to firm brown, slightly sandy, gravelly CLAY. Gravel is fine to coarse, sub-angular to sub-rounded flint, brick and limestone. Rare tarmac fragments.	0.50 1.00 2.50	ES ES D		
(2.20) 31.919 2.80		Firm brown mottled orange, laminated, thinly bedded silty CLAY. Becoming less friable with depth. (POSSIBLE WEATHERED LONDON CLAY)				
		Trial pit completed at 2.8m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

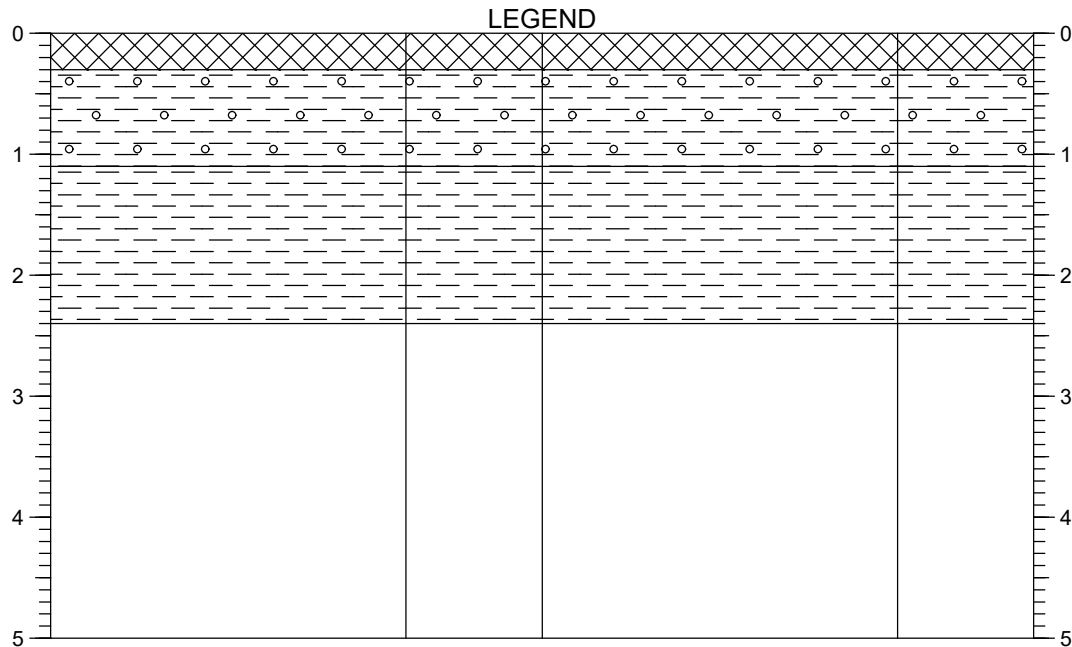
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507816.978 N: 184823.685 Level: 34.719	Logged By:	CB	Checked By:	CB	Approved By:	SS
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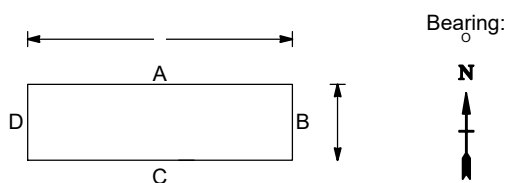


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP04
	TRIAL PIT LOG	Date:	25/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
34.324	0.30	MADE GROUND: Grass overlying soft to firm brown, slightly sandy, gravelly CLAY. Gravel is fine to coarse, sub-angular to sub-rounded flint, brick and limestone. Firm brown mottled orange, slightly gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded flint. Black organic material at 0.35 to 0.40 m. (POSSIBLE WEATHERED LONDON CLAY) Firm, greyish brown mottled orange, friable, thinly laminated CLAY. High cream coloured mineral content. (POSSIBLE WEATHERED LONDON CLAY)	0.20	ES		
(0.80)			0.35	ES		
33.524	1.10		0.70	ES		
(1.30)		2.00	D			
32.224	2.40	Trial pit completed at 2.4m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

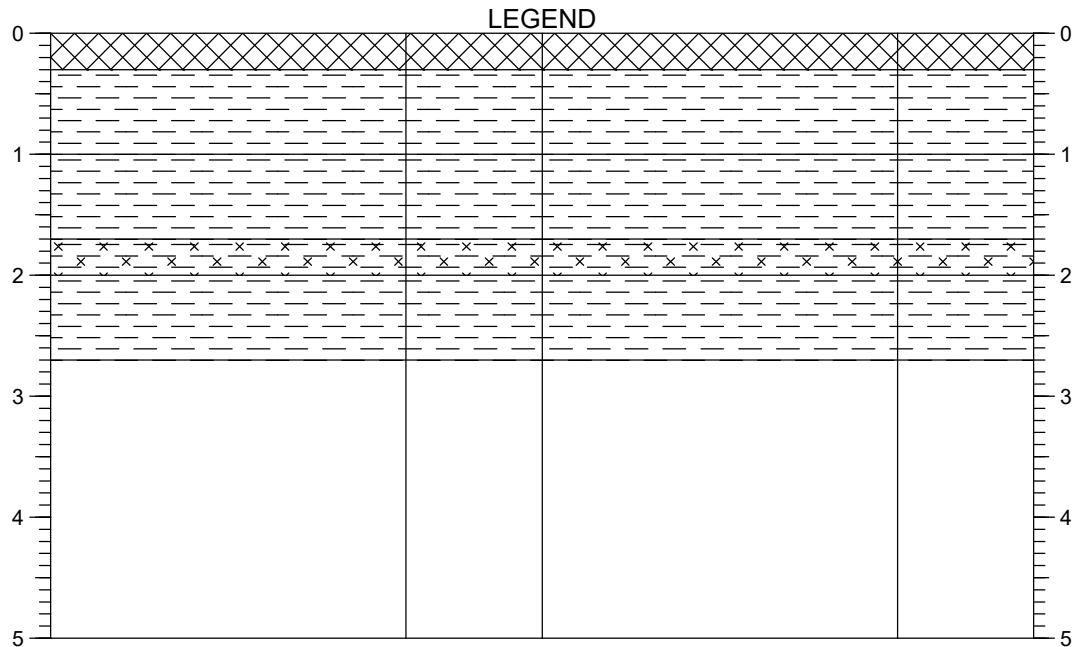
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507800.309 N: 184845.694 Level: 34.624	Logged By:	CB	Checked By:	CB	Approved By:	SS
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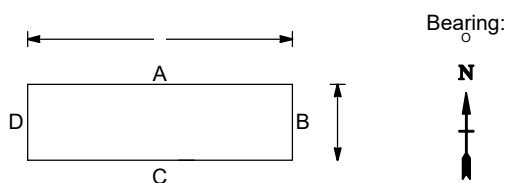


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP05
	TRIAL PIT LOG	Date:	25/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
34.219	0.30	MADE GROUND: Grass overlying soft to firm brown, slightly sandy, gravelly CLAY. Gravel is fine to coarse, sub-angular to sub-rounded flint, brick and limestone. Occasional brick cobbles.	0.20	ES		
(0.70)						
33.519	1.00	Firm brown mottled orange, friable, thinly laminated CLAY. (POSSIBLE WEATHERED LONDON CLAY)	1.00	ES		
(0.70)		Firm, greyish brown mottled orange, friable, thinly laminated CLAY. High cream coloured mineral content. (POSSIBLE WEATHERED LONDON CLAY)				
32.819	1.70					
32.519	2.00	Firm greyish brown, laminated, thinly bedded silty CLAY. (POSSIBLE WEATHERED LONDON CLAY).	2.30	D		
(0.70)		Firm, greyish brown mottled orange, friable, thinly laminated CLAY. High cream coloured mineral content. (POSSIBLE WEATHERED LONDON CLAY)				
31.819	2.70					
		Trial pit completed at 2.7m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

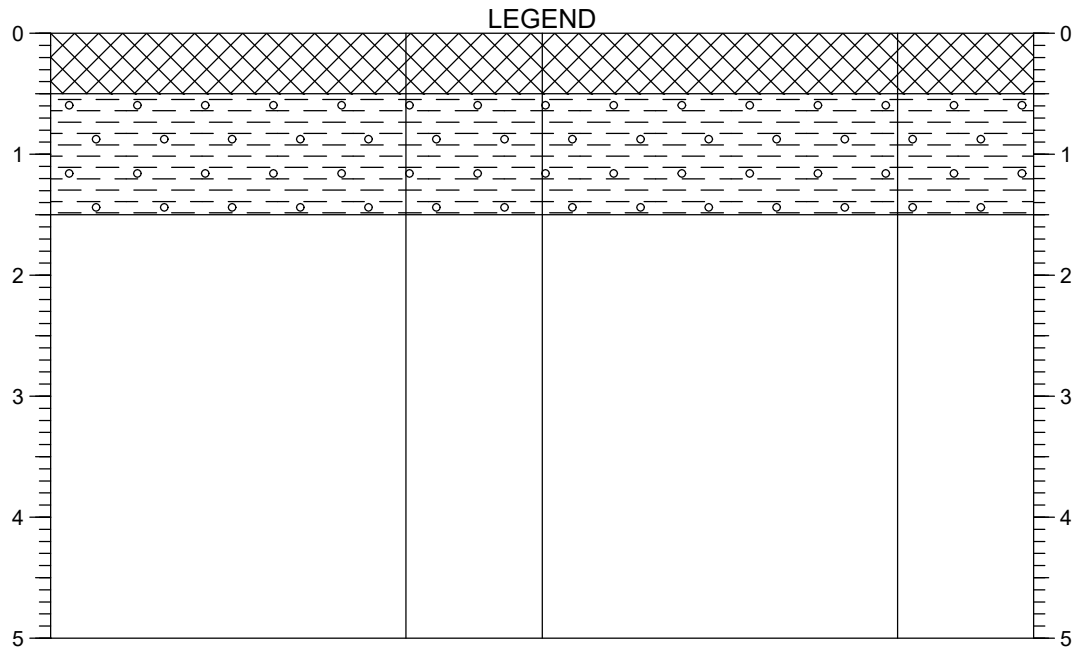
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507766.436 N: 184863.521 Level: 34.519	Logged By:	CB	Checked By:	CB	Approved By:	SS
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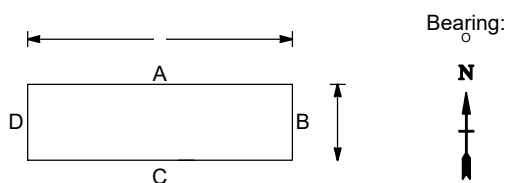


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP06
	TRIAL PIT LOG	Date:	25/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
(0.50) 34.054 0.50		MADE GROUND: Brown, very sandy, fine to coarse, sub-rounded to sub-angular brick, limestone and concrete GRAVEL. Rare wires. Brick wall from ground level to 0.30 m bgl on western side of Trial Pit.	0.20	ES		
(1.00) 33.054 1.50		Firm brown, mottled orange, gravelly CLAY. Gravel is fine to medium, sub-angular flint. Multicoloured, medium, rounded to sub-rounded gravel surrounding disused clay pipe at 0.70 m bgl. Foundations encountered at 0.30 m bgl to 0.90 m bgl. (POSSIBLE WEATHERED LONDON CLAY)				
		Trial pit completed at 1.5m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

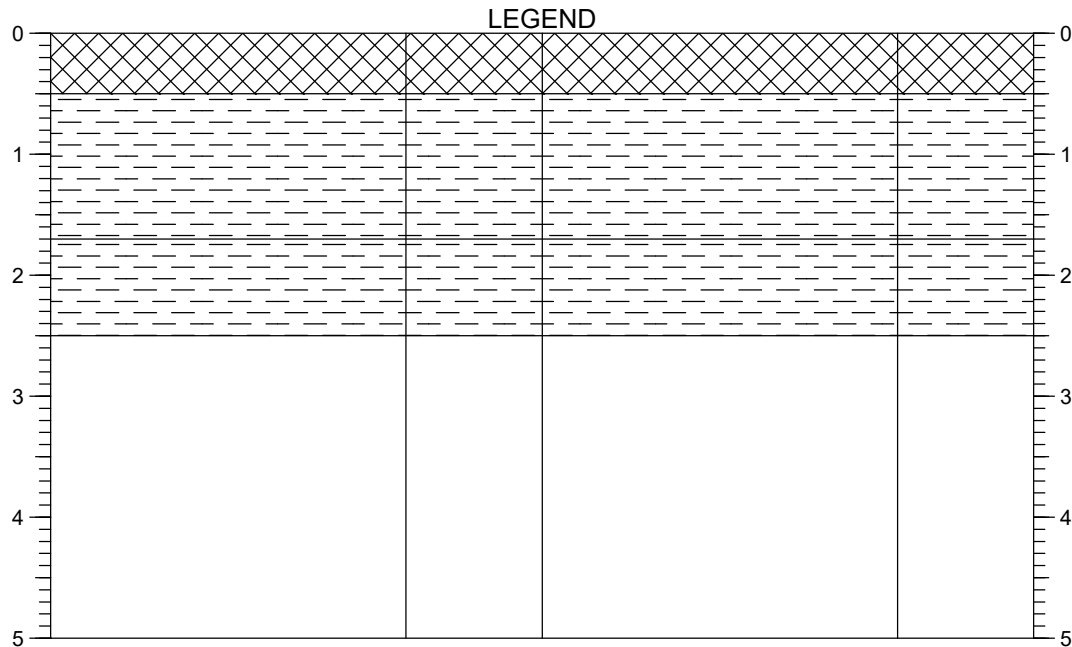
Coordinates to National Grid
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Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507843.594 N: 184868.807 Level: 34.554	Logged By:	CB	Checked By:	CB	Approved By:	SS
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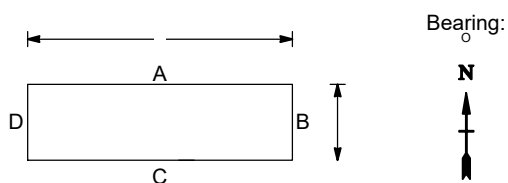


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP07
	TRIAL PIT LOG	Date:	25/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
(0.50) 33.75	0.50	MADE GROUND: Grass overlying soft to firm brown, slightly sandy, gravelly CLAY. Gravel is fine to coarse, sub-angular to sub-rounded flint, brick and limestone.	0.20	ES		
(1.20) 32.55	1.70	Firm to stiff orangeish brown CLAY. (POSSIBLE WEATHERED LONDON CLAY)	1.00	ES		
(0.80) 31.75	2.50	Firm to stiff grey mottled orange laminated, thinly bedded, friable CLAY, becoming occasionally pink with depth. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)	2.30	D		
		Trial pit completed at 2.5m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

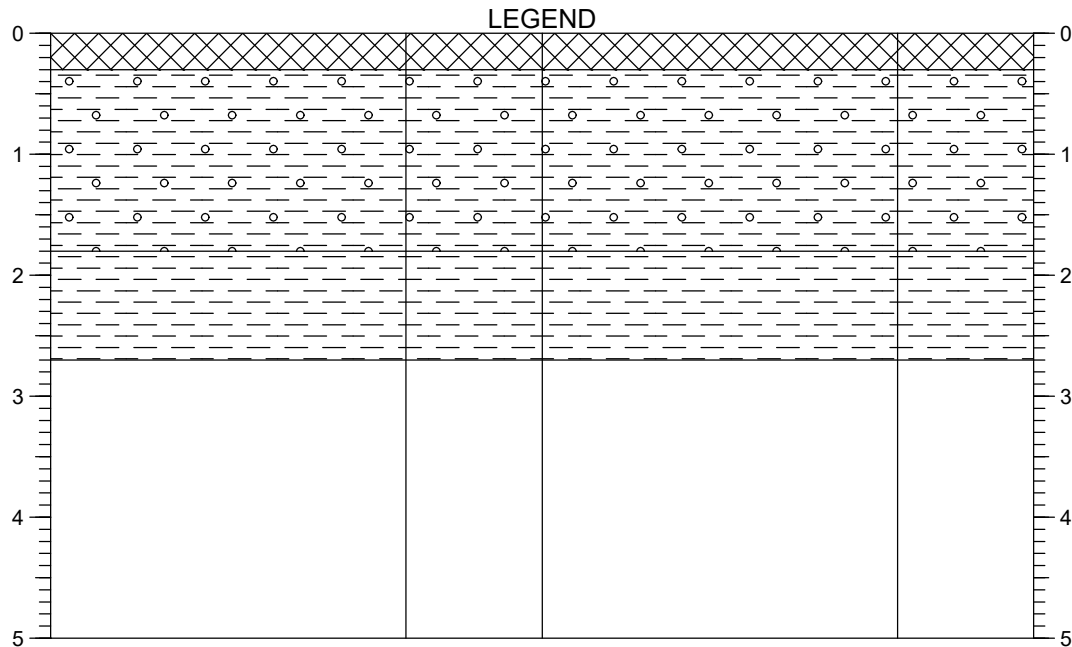
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used: JCB 3X	Coordinates / Level (mAOD): E: 507863.338 N: 184898.926 Level: 34.25	Logged By: CB	Checked By: CB	Approved By: SS
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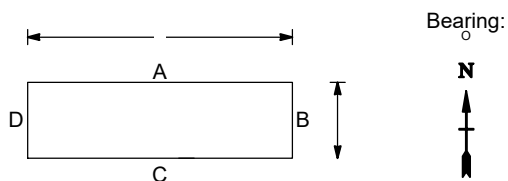


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP08
	TRIAL PIT LOG	Date:	25/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
34.056	0.30	MADE GROUND: Grass overlying soft to firm brown, slightly sandy, gravelly CLAY. Gravel is fine to coarse, sub-angular to sub-rounded flint, brick and limestone.	0.20	ES		
(1.50)		Firm, brown mottled orange, laminated, thinly bedded, gravelly CLAY. Gravel is fine to medium sub-angular to sub-rounded flint. (POSSIBLE WEATHERED LONDON CLAY)				
32.556	1.80		1.50	D		
(0.90)		Firm, grey mottled orange, friable, thinly laminated CLAY, becoming occasionally pink with depth. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)	2.00	ES		
31.656	2.70	Trial pit completed at 2.7m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

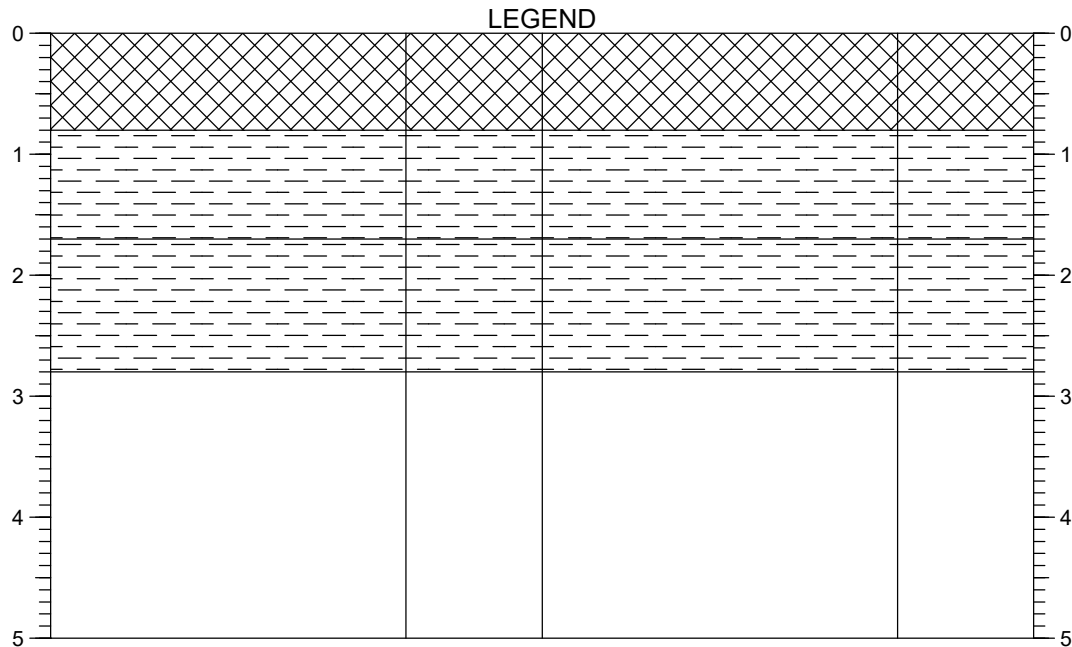
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507881.842 N: 184936.229 Level: 34.356	Logged By:	CB	Checked By:	CB	Approved By:	SS
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Fax: +44 (0) 1522 698393
Email: info@deltasimons.com

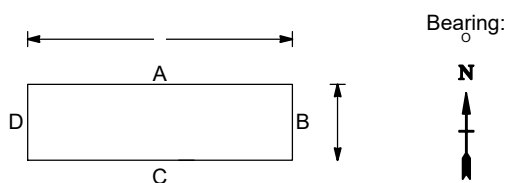


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP09
	TRIAL PIT LOG	Date:	26/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
(0.80) 33.78 0.80		MADE GROUND: Tarmac and concrete overlying brown, very sandy, fine to coarse, sub-rounded to sub-angular brick, limestone and concrete GRAVEL.	0.20	ES		
(0.90) 32.88 1.70		Firm becoming stiff, brown mottled orange CLAY. (POSSIBLE WEATHERED LONDON CLAY)	1.20	D		
(1.10) 31.78 2.80		Firm brown mottled orange and grey friable, bedded, thinly laminated CLAY. (POSSIBLE WEATHERED LONDON CLAY)				
		Trial pit completed at 2.8m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

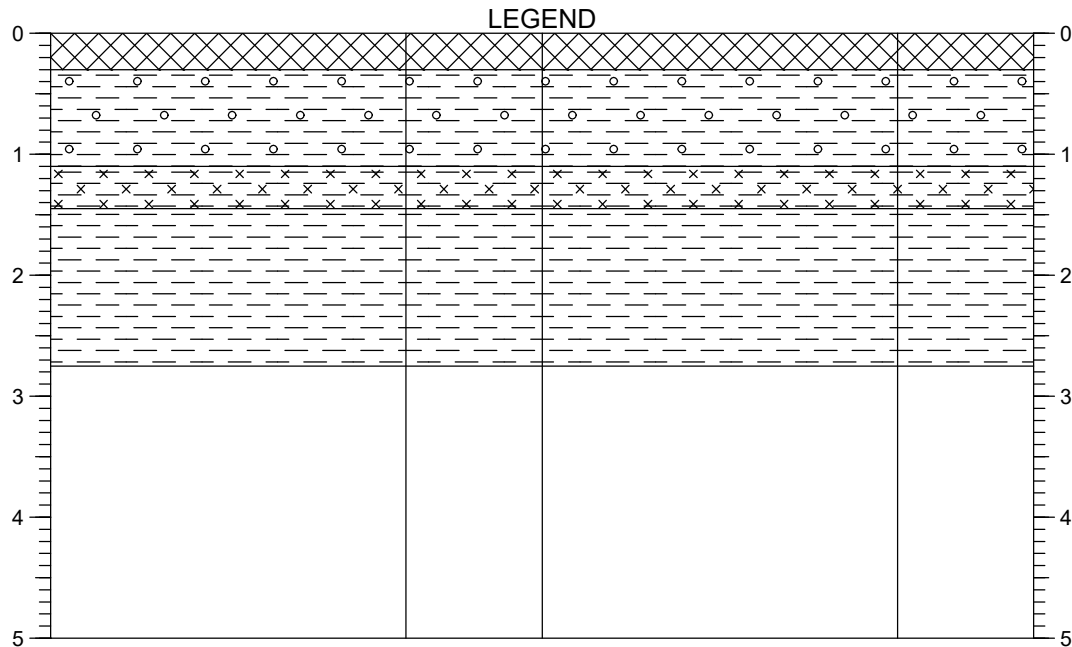
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507846.611 N: 184920.937 Level: 34.58	Logged By:	CB	Checked By:	CB	Approved By:	SS
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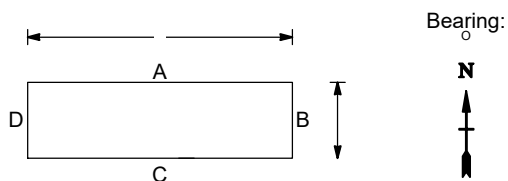


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP10
	TRIAL PIT LOG	Date:	26/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
34.222	0.30	MADE GROUND: Grass overlying soft brown, slightly sandy, gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded, brick, flint and limestone. Concrete removed at 0.05 m bgl. Tree roots at 0.10 m bgl.	0.20	ES		
(0.80)		Firm, brown mottled orange, laminated, thinly bedded, gravelly CLAY. Gravel is fine to medium sub-angular to sub-rounded flint. Occasional roots. Becoming slightly gravelly with depth. Gravel is fine to medium, sub-angular to sub-rounded flint. Occasional flint pebbles. (POSSIBLE WEATHERED LONDON CLAY)				
33.422	1.10		1.20	ES		
33.072	1.45	Soft becoming firm, light brown, silty CLAY. (POSSIBLE WEATHERED LONDON CLAY)				
(1.30)		Firm becoming stiff greyish brown mottled orange laminated, thinly bedded, friable CLAY. (POSSIBLE WEATHERED LONDON CLAY)				
31.772	2.75	-----				
		Trial pit completed at 2.75m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

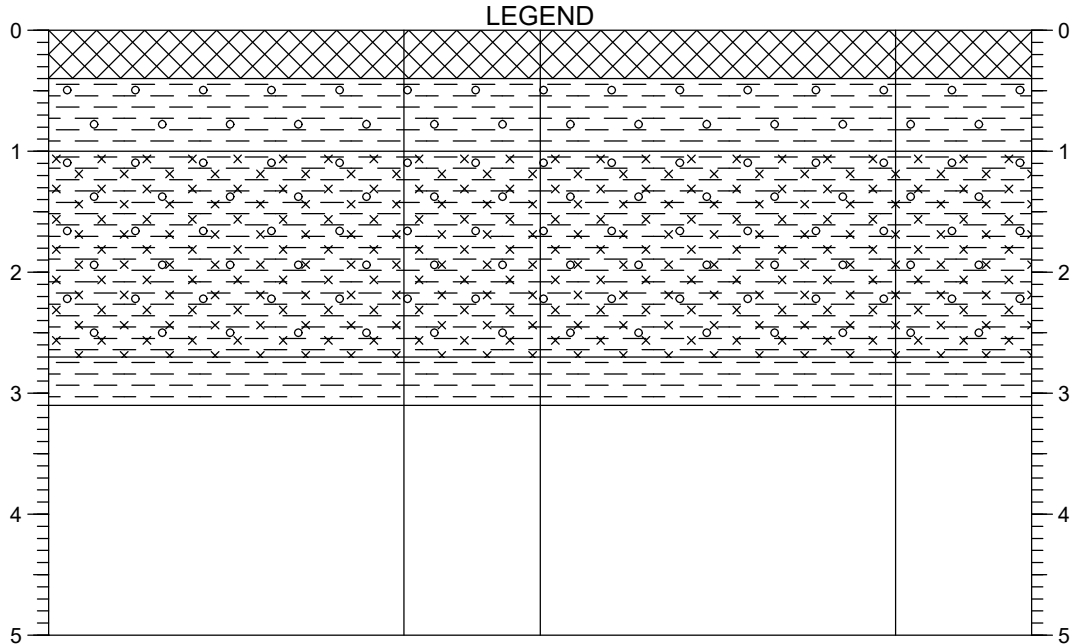
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507856.966 N: 184937.02 Level: 34.522	Logged By:	CB	Checked By:	CB	Approved By:	SS
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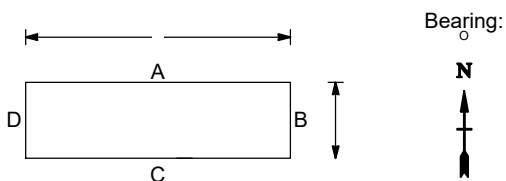


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP11
	TRIAL PIT LOG	Date:	26/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
34.366	0.40	MADE GROUND: Tarmac overlying brown, very sandy, fine to coarse, sub-rounded to sub-angular brick, limestone and concrete GRAVEL.				
(0.60)		Firm becoming stiff brown mottled orange, slightly gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded flint and limestone. (POSSIBLE WEATHERED LONDON CLAY)	0.50	ES		
33.766	1.00					
(1.70)		Firm, light brown mottled orange, gravelly, silty CLAY. Gravel is fine to medium, sub-angular to sub-rounded flint and limestone. (POSSIBLE WEATHERED LONDON CLAY)	1.10	ES		
32.066	2.70					
31.666	3.10	Firm becoming stiff, grey mottled orange, friable, thinly laminated CLAY. High cream coloured mineral content. (POSSIBLE WEATHERED LONDON CLAY)				
		Trial pit completed at 3.1m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page

Scale: 1:62.5

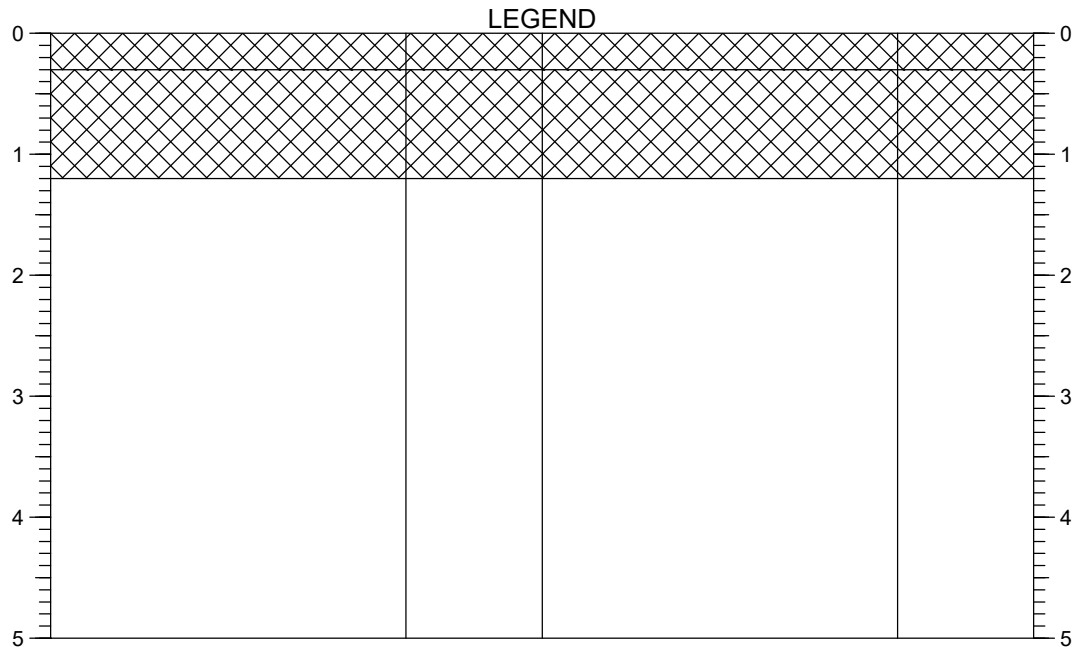
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507756.974 N: 184975.395 Level: 34.766	Logged By:	CB	Checked By:	CB	Approved By:	SS
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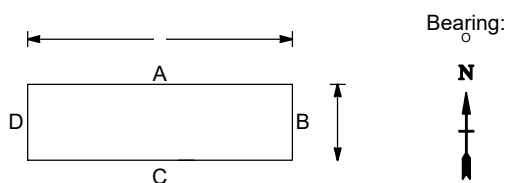


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP12
	TRIAL PIT LOG	Date:	26/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
34.194	0.30	MADE GROUND: Grass overlying soft to firm brown, slightly sandy, gravelly CLAY. Gravel is fine to coarse, sub-angular to sub-rounded flint, brick and limestone. MADE GROUND: Firm brown mottled orange friable, thinly laminated clay. Brick layer from ground level to 0.45 m bgl. Disused clay pipe at 1.00 m bgl.	0.20	ES		
(0.90)						
33.294	1.20	Trial pit completed at 1.2m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

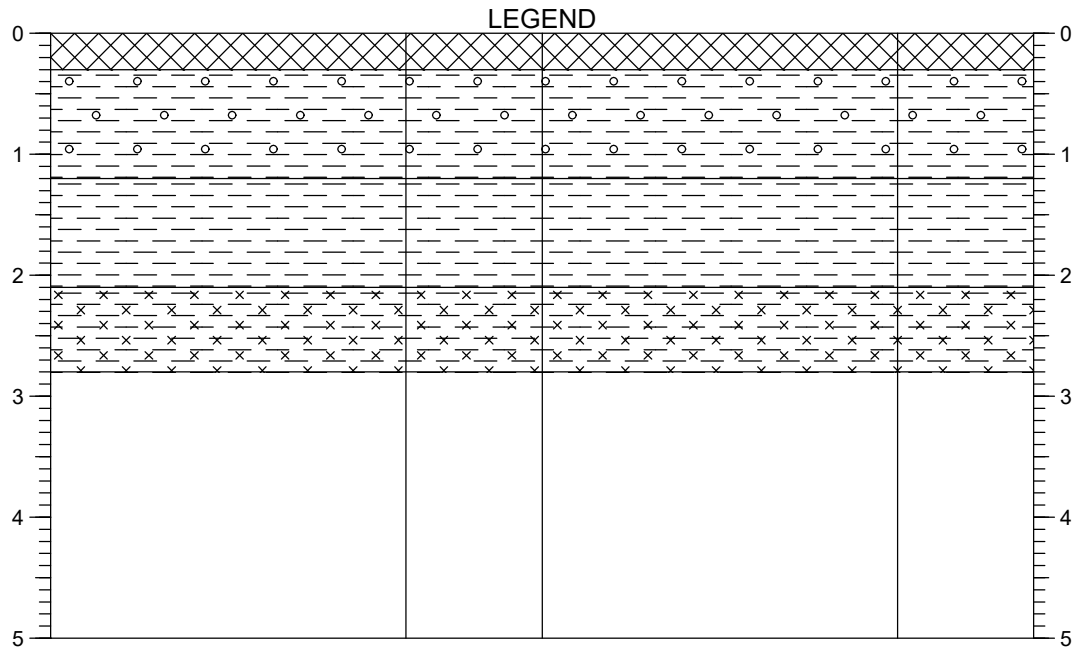
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507795.217 N: 184930.36 Level: 34.494	Logged By:	CB	Checked By:	CB	Approved By:	SS
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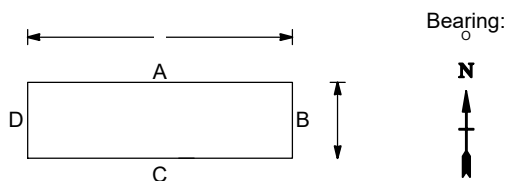


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP13
	TRIAL PIT LOG	Date:	26/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
34.273	0.30	MADE GROUND: Tarmac overlying brown, very sandy, fine to coarse, sub-rounded to sub-angular brick, limestone and concrete GRAVEL.	0.20	ES		
(0.90)		Firm brown mottled orange, slightly gravelly CLAY. Gravel is fine to medium, sub-angular to sub-rounded flint. (POSSIBLE WEATHERED LONDON CLAY)	0.50	ES		
33.373	1.20					
(0.90)		Firm orangeish brown, friable, bedded, thinly laminated CLAY. (POSSIBLE WEATHERED LONDON CLAY)				
32.473	2.10					
(0.70)		Firm brown mottled orange friable, silty CLAY. (POSSIBLE WEATHERED LONDON CLAY).				
31.773	2.80		2.50	D		
		Trial pit completed at 2.8m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

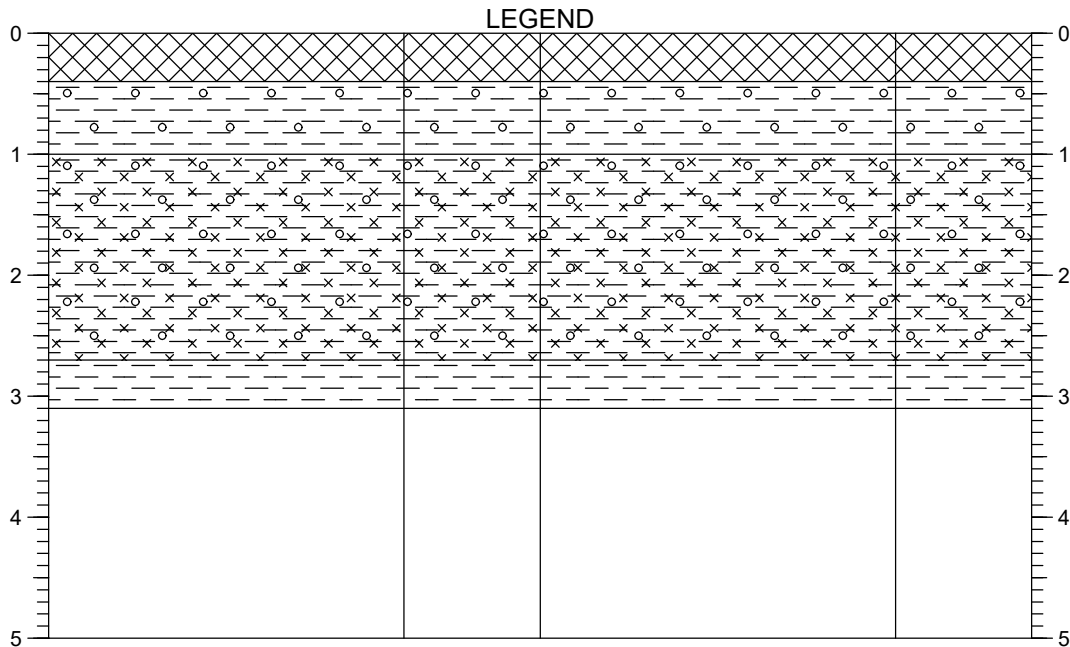
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507761.639 N: 184928.166 Level: 34.573	Logged By:	CB	Checked By:	CB	Approved By:	SS
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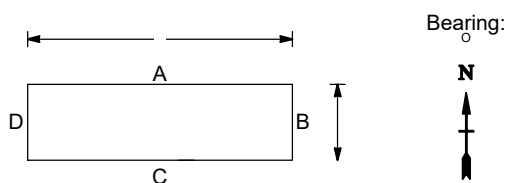


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP14
	TRIAL PIT LOG	Date:	26/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
34.141	0.40	MADE GROUND: Tarmac overlying brown, very sandy, fine to coarse, sub-rounded to sub-angular brick, limestone and concrete GRAVEL.				
(0.60)		Firm orangeish brown slightly gravelly CLAY. Gravel is fine to medium, sub-rounded to sub-angular flint, limestone and sandstone. Rare flint cobbles. (POSSIBLE WEATHERED LONDON CLAY)	0.50	ES		
33.541	1.00					
(1.70)		Firm light brown, slightly gravelly silty CLAY. Gravel is fine to medium, sub-rounded to sub-angular flint and limestone. Shell relic and white/cream mineral present. (POSSIBLE WEATHERED LONDON CLAY)	1.20	B		
31.841	2.70					
31.441	3.10	Firm friable grey mottled orange CLAY, becoming mottled pink with depth. (UPPER MOTTLED BEDS - WOOLWICH AND READING BEDS)	2.80	D		
		Trial pit completed at 3.1m bgl.				

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Trial Pit remained dry on completion.
4. Backfilled with arisings.

All measurements in metres
 unless otherwise stated

5m/page Scale: 1:62.5

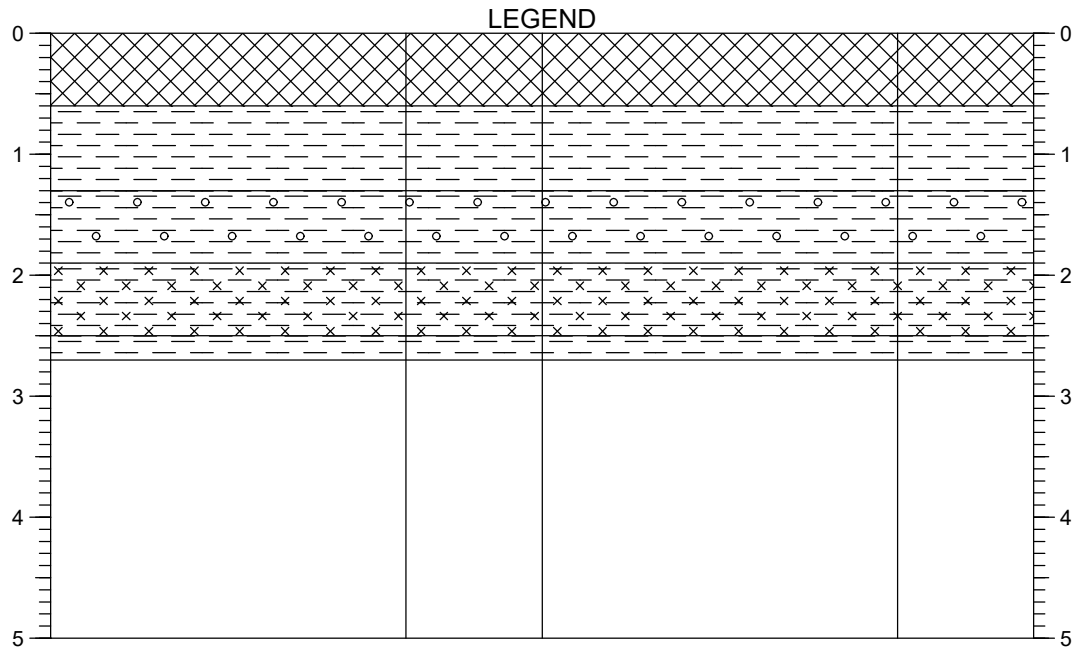
Coordinates to National Grid
 Ground Level to Ordnance Datum

Plant Used:	JCB 3X	Coordinates / Level (mAOD):	E: 507736.462 N: 184910.035 Level: 34.541	Logged By:	CB	Checked By:	CB	Approved By:	SS
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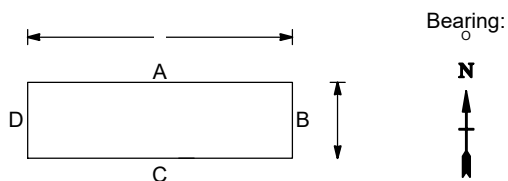


Project:	Hillingdon	Project No:	14-0724.01	Hole ID:	TP15
	TRIAL PIT LOG	Date:	26/03/2015	Client:	Spenn Hill



STRATA			SAMPLES		TESTS	
Depth	No	DESCRIPTION	Depth	No	Depth	Results
(0.60) 34.583 0.60		MADE GROUND: Concrete with re-bar, overlying brown, very sandy, fine to coarse, sub-rounded to sub-angular brick, limestone and concrete GRAVEL. Black geo-textile membrane at 0.28 m bgl. Brick layer at base of strata.	0.35	ES		
(0.70) 33.883 1.30		Firm becoming stiff greyish brown mottled orange laminated, thinly bedded, friable CLAY. Small area of black clay 0.80 m to 1.0 m in west of trial pit only. Slight organic odour. (POSSIBLE WEATHERED LONDON CLAY)	0.85	ES		
(0.60) 33.283 1.90		Firm orangeish brown, friable, bedded, thinly laminated gravelly CLAY. Gravel is fine to coarse, sub-angular to sub-rounded flint and limestone. (POSSIBLE WEATHERED LONDON CLAY)				
(0.60) 32.683 2.50		Firm, orangeish brown friable, bedded, thinly laminated silty CLAY. Shells and relic shells present and high mineral content. (POSSIBLE WEATHERED LONDON CLAY)	2.00	ES		
32.483 2.70		Firm becoming stiff, light brown mottled orange and grey, friable, bedded, thinly laminated CLAY. High mineral content. (POSSIBLE WEATHERED LONDON CLAY) Trial pit completed at 2.7m bgl.	2.55	D		

Shoring/Support:
 Stability:



REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
 2. Area CAT scanned prior to excavation. 3. Trial Pit remained dry on completion. 4. Backfilled with arisings.

All measurements in metres unless otherwise stated	5m/page	Scale: 1:62.5	Coordinates to National Grid Ground Level to Ordnance Datum		
Plant Used: JCB 3X	Coordinates / Level (mAOD): E: 507709.473 N: 184899.754 Level: 35.183	Logged By: CB	Checked By: CB	Approved By: SS	





GROUNDWATER AND GROUND GAS MONITORING RECORD SHEET

Sheet:

1 of 1

Project Name:	Hillingdon	Weather Conditions:	Overcast, warm (16.8 degrees celsius)	Date:
Project Number:	14-0724.01	Gas Kit Model:	GFM435	13/04/2015
Personnel:	CB	Gas Kit Serial No:		

LOCATION	Flow Peak	Flow Steady	CH ₄ Peak	CH ₄ Steady	CO ₂ Peak	CO ₂ Steady	O ₂ Min.	O ₂ Steady	Atmospheric Pressure	PID	Well I.D.	Depth to Product (DTP)	Product Thickness	Depth to Water (DTW)	Depth to Base (DTB)	Height of Water Column	NOTES
	(L/hr)	(L/hr)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(mb)	(ppm)	(mm)	(m)	(m)	(m)	(m)	(m)	
CP01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	15.8	15.8	1026					1.770	15.440	13.670	
CP02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.4	20.4	1026					1.070	9.760	8.690	
CP03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					N/A	N/A	N/A	Borehole was not completed at time of monitoring
CP04	120.0	120.0	<0.1	<0.1	1.0	1.0	18.9	18.9	1026					0.900	12.290	11.390	Newly installed borehole - to be checked on next mo
CP05	<0.1	<0.1	<0.1	<0.1	0.1	0.1	19.9	19.9	1026					1.900	18.130	16.230	
CP06	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.2	20.2	1026					1.540	14.450	12.910	
CP07	<0.1	<0.1	<0.1	<0.1	0.9	0.9	17.0	17.0	1026					2.050	14.340	12.290	
CP08	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.1	20.1	1026					1.230	14.000	12.770	
CP09(A)	<0.1	<0.1	<0.1	<0.1	0.3	0.3	19.5	19.5	1026					2.360	14.430	12.070	

GUIDE TO PURGING VOLUMES

To calculate the number of litres to be purged from a well with a different diameter, use the formula $3\pi r^2 h$ (where r = radius of the well and h = height of the water column). Use the formula $\pi r^2 h$ to calculate the volume of a bailer. Please note that the standard bailers Delta-Simons use are typically 0.95 m in length.	Diameter of Casing (mm)	19	35	50	50	75	100
	Diameter of Bailer (mm)	18	19	19	38	38	38
	No. bails per m	4	12	22	6	13	23

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GROUNDWATER AND GROUND GAS MONITORING RECORD SHEET

Sheet:

1 of 1

Project Name:	Hillingdon	Weather Conditions:	Sunny, warm (15 degrees celsius)	Date:
Project Number:	14-0724.01	Gas Kit Model:	GFM435	21/04/2015
Personnel:	CB	Gas Kit Serial No:		

LOCATION	Flow Peak	Flow Steady	CH ₄ Peak	CH ₄ Steady	CO ₂ Peak	CO ₂ Steady	O ₂ Min.	O ₂ Steady	Atmospheric Pressure	PID	Well I.D.	Depth to Product (DTP)	Product Thickness	Depth to Water (DTW)	Depth to Base (DTB)	Height of Water Column	NOTES
	(L/hr)	(L/hr)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(mb)	(ppm)	(mm)	(m)	(m)	(m)	(m)	(m)	
CP01	<0.1	<0.1	<0.1	<0.1	0.3	0.3	16.6	16.6	1028					1.880	14.870	12.990	
CP02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	19.8	19.8	1028					1.280	9.460	8.180	
CP03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.3	20.3	1028					0.320	14.000	N/A	
CP04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.2	20.2	1028					0.980	12.350	11.370	
CP05	<0.1	<0.1	<0.1	<0.1	0.1	0.1	20.4	20.4	1028					1.920	17.960	16.040	
CP06	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.3	20.3	1028					1.570	14.500	12.930	
CP07	<0.1	<0.1	<0.1	<0.1	0.9	0.9	18.4	18.4	1028					2.190	14.400	12.210	
CP08	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	18.9	18.9	1028					1.550	13.760	12.210	
CP09A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.0	20.0	1028					2.360	14.150	11.790	

GUIDE TO PURGING VOLUMES

To calculate the number of litres to be purged from a well with a different diameter, use the formula $3\pi r^2 h$ (where r = radius of the well and h = height of the water column). Use the formula $\pi r^2 h$ to calculate the volume of a bailer. Please note that the standard bailers Delta-Simons use are typically 0.95 m in length.	Diameter of Casing (mm)	19	35	50	50	75	100
	Diameter of Bailer (mm)	18	19	19	38	38	38
	No. bails per m	4	12	22	6	13	23

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GROUNDWATER AND GROUND GAS MONITORING RECORD SHEET

Sheet:

1 of 1

Project Name: Hillingdon

Weather Conditions: Sunny, warm (13 degrees celsius)

Date:

Project Number: 14-0724.01

Gas Kit Model: GFM435

07/05/2015

Personnel: RM

Gas Kit Serial No:

LOCATION	Flow Peak	Flow Steady	CH ₄ Peak	CH ₄ Steady	CO ₂ Peak	CO ₂ Steady	O ₂ Min.	O ₂ Steady	Atmospheric Pressure	PID	Well I.D.	Depth to Product (DTP)	Product Thickness	Depth to Water (DTW)	Depth to Base (DTB)	Height of Water Column	NOTES
	(L/hr)	(L/hr)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(mb)	(ppm)	(mm)	(m)	(m)	(m)	(m)	(m)	
CP01	<0.1	<0.1	<0.1	<0.1	0.3	0.2	18.6	18.6	1009					1.640	14.870	13.230	
CP02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.1	20.1	1009					1.100	9.460	8.360	
CP03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.0	20.0	1009					0.740	14.000	N/A	
CP04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	19.9	19.9	1009					0.790	12.350	11.560	
CP05	<0.1	<0.1	<0.1	<0.1	0.1	0.1	20.2	20.2	1009					1.530	17.960	16.430	
CP06	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.1	20.1	1009					1.310	14.500	13.190	
CP07	<0.1	<0.1	<0.1	<0.1	0.9	0.6	18.6	18.6	1009					2.110	14.400	12.290	
CP08	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	19.1	19.1	1009					1.380	13.760	12.380	
CP09A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.1	20.1	1009					2.330	14.150	11.820	

GUIDE TO PURGING VOLUMES

To calculate the number of litres to be purged from a well with a different diameter, use the formula $3\pi r^2 h$ (where r = radius of the well and h = height of the water column). Use the formula $\pi r^2 h$ to calculate the volume of a bailer. Please note that the standard bailers Delta-Simons use are typically 0.95 m in length.

Diameter of Casing (mm)	19	35	50	50	75	100
Diameter of Bailer (mm)	18	19	19	38	38	38
No. bails per m	4	12	22	6	13	23

Document No. C101

Version: 4.0

Issue Date: 13/01/12

Author: C Ramsbottom

Authorised By: R Griffiths

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GROUNDWATER AND GROUND GAS MONITORING RECORD SHEET

Sheet:

1 of 1

Project Name: Hillingdon

Weather Conditions: Cloudy, wind at 1.8 m/s

Project Number: 14-0724.01

Gas Kit Model: GFM4

Personnel: AC

Gas Kit Serial No:

Date:

29/04/2015

LOCATION	Flow Peak	Flow Steady	CH ₄ Peak	CH ₄ Steady	CO ₂ Peak	CO ₂ Steady	O ₂ Min.	O ₂ Steady	Atmospheric Pressure	PID	Well I.D.	Depth to Product (DTP)	Product Thickness	Depth to Water (DTW)	Depth to Base (DTB)	Height of Water Column	NOTES
	(L/hr)	(L/hr)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(mb)	(ppm)	(mm)	(m)	(m)	(m)	(m)	(m)	
CP01	<0.1	<0.1	<0.1	<0.1	0.5	0.5	17.2	19.0	1006					1.76	14.79	13.03	
CP02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.2	20.2	1006					1.14	9.47	8.33	
CP03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.2	20.2	1006					0.76	13.60	12.84	
CP04	<0.1	<0.1	<0.1	<0.1	0.6	0.6	19.9	19.9	1006					0.83	12.40	11.58	
CP05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.3	20.3	1006					1.62	17.61	15.99	
CP06	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.4	20.4	1006					1.34	14.36	13.02	
CP07	<0.1	<0.1	<0.1	<0.1	1.0	1.0	18.3	18.3	1006					2.12	14.20	12.08	
CP08	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	18.9	18.9	1006					1.42	13.65	12.23	
CP09(A)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.2	20.2	1006					2.23	14.09	11.86	

GUIDE TO PURGING VOLUMES

To calculate the number of litres to be purged from a well with a different diameter, use the formula $3\pi r^2 h$ (where r = radius of the well and h = height of the water column). Use the formula $\pi r^2 h$ to calculate the volume of a bailer. Please note that the standard bailers Delta-Simons use are typically 0.95 m in length.

Diameter of Casing (mm)	19	35	50	50	75	100
Diameter of Bailer (mm)	18	19	19	38	38	38
No. bails per m	4	12	22	6	13	23

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GROUNDWATER AND GROUND GAS MONITORING RECORD SHEET

Sheet:

1 of 1

Project Name: Hillingdon

Weather Conditions: Cloudy + Sunny

Date:

Project Number: 14-0724.01

Gas Kit Model: GFM4

12/03/2015

Personnel: JC

Gas Kit Serial No:

LOCATION	Flow Peak	Flow Steady	CH ₄ Peak	CH ₄ Steady	CO ₂ Peak	CO ₂ Steady	O ₂ Min.	O ₂ Steady	Atmospheric Pressure	PID	Well I.D.	Depth to Product (DTP)	Product Thickness	Depth to Water (DTW)	Depth to Base (DTB)	Height of Water Column	NOTES
	(L/hr)	(L/hr)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(mb)	(ppm)	(mm)	(m)	(m)	(m)	(m)	(m)	
CP01	<0.1	<0.1	<0.1	<0.1	0.5	0.2	14.5	16.5	1013					1.88	14.79	12.91	
CP02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	19.3	20.3	1012					1.30	9.39	8.09	
CP03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.3	20.3	1013					1.24	13.57	12.33	
CP04	<0.1	<0.1	<0.1	<0.1	0.2	0.2	20.0	20.0	1013					1.05	12.27	11.22	
CP05	<0.1	<0.1	<0.1	<0.1	0.3	0.3	19.9	19.9	1013					1.91	17.85	15.94	
CP06	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.5	20.5	1013					1.52	14.47	12.95	
CP07	<0.1	<0.1	<0.1	<0.1	0.9	0.9	18.4	18.4	1013					2.25	14.23	11.98	
CP08	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	19.2	19.2	1013					1.47	13.87	12.40	
CP09a	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.3	20.3	1013					2.33	14.24	11.91	

GUIDE TO PURGING VOLUMES

To calculate the number of litres to be purged from a well with a different diameter, use the formula $3\pi r^2 h$ (where r = radius of the well and h = height of the water column). Use the formula $\pi r^2 h$ to calculate the volume of a bailer. Please note that the standard bailers Delta-Simons use are typically 0.95 m in length.

Diameter of Casing (mm)	19	35	50	50	75	100
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GROUNDWATER AND GROUND GAS MONITORING RECORD SHEET

Sheet:

1 of 1

Project Name: Hillingdon

Weather Conditions: Rainy, cloudy and windy.

Date:

Project Number: 14-0724.01

Gas Kit Model: GFM4

18/05/2015

Personnel: JC

Gas Kit Serial No:

LOCATION	Flow Peak	Flow Steady	CH ₄ Peak	CH ₄ Steady	CO ₂ Peak	CO ₂ Steady	O ₂ Min.	O ₂ Steady	Atmospheric Pressure	PID	Well I.D.	Depth to Product (DTP)	Product Thickness	Depth to Water (DTW)	Depth to Base (DTB)	Height of Water Column	NOTES
	(L/hr)	(L/hr)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(mb)	(ppm)	(mm)	(m)	(m)	(m)	(m)	(m)	
CP01	<0.1	<0.1	<0.1	<0.1	0.5	0.5	15.4	15.9	997					1.88	14.79	12.91	
CP02	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	19.5	20.0	997					1.22	9.39	8.17	
CP03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.0	20.0	997					1.27	13.57	12.30	
CP04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.2	20.2	997					1.02	12.27	11.25	
CP05	<0.1	<0.1	<0.1	<0.1	0.4	0.4	19.5	19.5	997					1.90	17.85	15.95	
CP06	<0.1	<0.1	<0.1	<0.1	0.4	<0.1	19.6	20.1	997					1.54	14.47	12.93	
CP07	<0.1	<0.1	<0.1	<0.1	0.7	0.7	18.9	18.9	997					2.27	14.23	11.96	
CP08	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	18.9	18.9	997					1.40	13.87	12.47	
CP09a	<0.1	<0.1	<0.1	<0.1	0.1	0.1	19.9	19.9	997					2.35	14.24	11.89	

GUIDE TO PURGING VOLUMES

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Delta-Simons Adopted Human Health Generic Assessment Criteria

For

Residential End Use without Consumption of Home Grown Produce

Version 4.0 – January 2015

Guidance Notes – Using Human Health Soil Screening Values

A tiered risk assessment approach is used for the assessment of soil analysis results considering the ‘pollutant linkages’ on the basis of a ‘source-pathway-receptor’ relationship.

The following tables present conservative Tier 1 generic screening assessment criteria (GAC) used by Delta-Simons to provide an initial assessment of risk to Human Health in the context of the proposed redevelopment of the Site.

GACs are intended to assess:

- Δ Chronic (long-term) on-site exposure risk to contaminants in the soil to future users and occupiers of the Site.
- Δ Concentrations below the GAC considered tolerable or to pose a minimal risk to human health, or low risk in relation to the Category 4 Screening Levels (C4SLs).

GACs are not relevant for assessing:

- Δ Acute (short-term) exposure risks (e.g. construction workers during development);
- Δ Non-human receptors such as controlled waters, ecosystems, buildings and services, animals, domestic pets or plants;
- Δ Aesthetic issues which may render a soil unsuitable for use such as odour or colour;
- Δ GACs do not take account of other non-soil based sources of contamination such as contamination in groundwater or surface waters; and
- Δ GACs are not suitable for assessing whether a soil provides a suitable growing medium for crops or plants.

Exceedences of Generic Assessment Criteria

An exceedence of a GAC:

- Δ Is not an indicator of a significant risk to human health;
- Δ Is an indication that the contaminant *may* pose a possibility harm to human health and, therefore, further consideration is required.

In assessing the significance of an exceedence consideration should be given to:

- Δ The *nature* of the contaminant (e.g. volatile or non-volatile contaminants)
- Δ Site design and potential exposure *pathways* (e.g. hard cover, buildings, landscaping)
- Δ The *distribution* of exceedences (widespread or localised, numerous or few exceedences – **NB: Consider data limitations – site coverage and gaps in data.**)
- Δ The *margin* of the exceedence(s);
- Δ The *duration* and *frequency* of exposure; and
- Δ Any other *site specific* factors.

Generic Assessment Criteria used by Delta-Simons

In the absence of a complete regulatory set of screening values derived using the CLEA Framework, Delta-Simons screening values are based on the following:

- Δ The current Soil Guidance Values (SGVs) published by the EA;
- Δ Category 4 Screening Levels (C4SLs) published by DEFRA;
- Δ The 2014 Land Quality Management (LQM) / Chartered Institute of Environmental Health (CIEH) Suitable for Use Levels for Human Health Risk Assessment (S4ULs);
- Δ The guidance values produced by the Environmental Industries Commission (EIC), the Association of Geotechnical and Geoenvironmental Specialists (AGS) and Contaminated Land: Application in Real Environments (CL:AIRE) in December 2009; and
- Δ In house Generic Screening Values (DS-GACs) derived by Delta-Simons.

Contaminants for which Generic Assessment Criteria are Unavailable

Insufficient toxicological data is available to derive GAC for a number of potential contaminants of concern and GAC cannot be derived for mixtures of compounds (e.g. total petroleum hydrocarbons). In such cases Delta-Simons will endeavour to use conservative surrogate GAC values to provide an initial screening assessment based on the known chemical and physical properties of the contaminant.

Notes and References used in the Tables

Generic Assessment Criteria Source	
SGV	Soil Guidance Values published by the EA
DS-GAC	Delta-Simons Generic Assessment Criteria derived using CLEA V.1.06.
C4SL	Category 4 Screening Levels, DEFRA December 2014
SGV v.1.05	Environment Agency Soil Guideline Values for dioxins, furans and dioxin-like PCBs calculated within CLEA V.1.05.
LQM	LQM/CIEH Suitable for Use Levels for Human Health Risk Assessment (S4UL), November 2014. (<i>Copyright Land Quality Management Limited, reduced with permission; Publication Number S4UL3087. All rights reserved.</i>)
EIC	EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment derived using CLEA V.1.06.
Abbreviations	
Units	All values mg/kg unless otherwise stated.
SOM	Soil Organic Matter – GAC have been derived for a range of soil organic matter content – 1%, 2.5 or 3% and 6%. In the absence of site specific data or robust soil characterisation the most conservative value of 1% soil organic matter should be used as the initial screening value.
(##)	GAC exceed soil saturation concentration (given in brackets). Soil concentrations above the soil saturation may indicate that non-aqueous phase liquid (NAPL) is present. Risks from NAPL may need to be considered separately.

Use of C4SLs as Screening Criteria

Only the lead C4SL should be used as an initial screening level, as there is no ‘minimal risk’ screening value available. Though primarily designed for assessing the risk of land being determined as ‘contaminated’ under Part 2A, Defra have confirmed¹ that the C4SL could be used under the planning regime. Where applicable, the ‘minimal risk’ level should be used as the initial screening level and where exceedances are identified reference to, and consideration of the C4SL levels may be made in the risk assessment process.

¹ Defra/Lord de Mauley letter to all Local Authorities dated 3rd September 2014.

Metals

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Antimony	550	EIC	550	EIC	550	EIC
Arsenic	40	LQM	40	LQM	40	LQM
Arsenic	40	C4SL	40	C4SL	40	C4SL
Barium	1,300	EIC	1,300	EIC	1,300	EIC
Beryllium	1.7	LQM	1.7	LQM	1.7	LQM
Boron	11000	LQM	11000	LQM	11000	LQM
Cadmium	85	LQM	85	LQM	85	LQM
Cadmium	150	C4SL	150	C4SL	150	C4SL
Chromium (III)	910	LQM	910	LQM	910	LQM
Chromium (VI)	6	LQM	6	LQM	6	LQM
Chromium (VI)	21	C4SL	21	C4SL	21	C4SL
Copper	7100	LQM	7100	LQM	7100	LQM
Lead	310	C4SL	310	C4SL	310	C4SL
Mercury (Elemental)	0.2	DS-GAC	0.5	DS-GAC	1.0	DS-GAC
Mercury (Elemental)	-	-	-	-	1.2	LQM
Mercury (Inorganic)	56	LQM	56	LQM	56	LQM
Mercury (Methyl)	8.4	DS-GAC	12	DS-GAC	14	DS-GAC
Mercury (Methyl)	-	-	-	-	15	LQM
Molybdenum	670	EIC	670	EIC	670	EIC
Nickel	180	LQM	180	LQM	180	LQM
Selenium	430	LQM	430	LQM	430	LQM
Vanadium	1200	LQM	1200	LQM	1200	LQM
Zinc	40000	LQM	40000	LQM	40000	LQM

Italics– These values were derived based on a 6% SOM, however, the supporting documentation indicates that SOM has a negligible influence for these metals.

Petroleum Hydrocarbons

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Aliphatic EC5-EC6	42	LQM	78	LQM	160	LQM
Aliphatic >EC6-EC8	100	LQM	230	LQM	530	LQM
Aliphatic >EC8-EC10	27	LQM	65	LQM	150	LQM
Aliphatic >EC10-EC12	130 (48)	LQM	330 (118)	LQM	770 (283)	LQM
Aliphatic >EC12-EC16	1100 (24)	LQM	2400 (59)	LQM	4400 (142)	LQM
Aliphatic >EC16-EC35	65000 (8.48)	LQM	92000 (21)	LQM	110000	LQM
Aliphatic >EC35-EC44	65000 (8.48)	LQM	92000 (21)	LQM	110000	LQM
Aromatic >EC5-EC7	370	LQM	690	LQM	1400	LQM
Aromatic >EC7-EC8	860	LQM	1800	LQM	3900	LQM
Aromatic >EC8-EC10	47	LQM	110	LQM	270	LQM
Aromatic >EC10-EC12	250	LQM	590	LQM	1200	LQM
Aromatic >EC12-EC16	1800	LQM	2300 (419)	LQM	2500	LQM
Aromatic >EC16-EC21	1900	LQM	1900	LQM	1900	LQM
Aromatic >EC21-EC35	1900	LQM	1900	LQM	1900	LQM
Aromatic >EC35-EC44	1900	LQM	1900	LQM	1900	LQM
Aromatic and Aliphatic >EC44-EC70	1900	LQM	1900	LQM	1900	LQM

Polycyclic Aromatic Hydrocarbons (PAH)

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Naphthalene	2.3	LQM	5.6	LQM	13	LQM
Acenaphthylene	2900 (86.1)	LQM	4600 (212)	LQM	6000 (506)	LQM
Acenaphthene	3000 (57)	LQM	4700 (141)	LQM	6000 (336)	LQM
Fluorene	2800 (30.9)	LQM	3800 (76.5)	LQM	4500 (183)	LQM
Phenanthrene	1300 (36)	LQM	1500	LQM	1500	LQM
Anthracene	31000 (1.17)	LQM	35000	LQM	37000	LQM
Fluoranthene	1500	LQM	1600	LQM	1600	LQM
Pyrene	3700	LQM	3800	LQM	3800	LQM
Benz[a]anthracene	11	LQM	14	LQM	15	LQM
Chrysene	30	LQM	31	LQM	32	LQM
Benzo[b]fluoranthene	3.9	LQM	4	LQM	4	LQM
Benzo[k]fluoranthene	110	LQM	110	LQM	110	LQM
Benzo[a]pyrene	3.2	LQM	3.2	LQM	3.2	LQM
Benzo[a]pyrene	5.3	C4SL	5.3	C4SL	5.3	C4SL
Indeno[123-cd]pyrene	45	LQM	46	LQM	46	LQM
Dibenz[ah]anthracene	0.31	LQM	0.32	LQM	0.32	LQM
Benzo[ghi]perylene	360	LQM	360	LQM	360	LQM

C4SL for benzo(a)pyrene is based on 6% SOM only, however, the published C4SL Final Project Report indicates that SOM has a negligible influence for this compound.

Volatile Organic Compounds (VOC)

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
BTEX/MTBE						
Benzene	0.38	LQM	0.7	LQM	1.4	LQM
Benzene	0.89	C4SL	-	-	3.3	C4SL
Toluene	880 (869)	LQM	1900	LQM	3900	LQM
Ethylbenzene	83	LQM	190	LQM	440	LQM
o-Xylene	88	LQM	210	LQM	480	LQM
m-Xylene	82	LQM	190	LQM	450	LQM
p-Xylene	79	LQM	180	LQM	430	LQM
Methyl <i>tert</i> -butyl ether	73	EIC	120	EIC	220	EIC
Chlorinated Solvents						
Vinyl Chloride (Chloroethene)	0.00077	LQM	0.001	LQM	0.0015	LQM
Trichloromethane (Chloroform)	1.2	LQM	2.1	LQM	4.2	LQM
1,2-Dichloroethane (1,2-DCA)	0.0092	LQM	0.013	LQM	0.023	LQM
Trichloroethene (TCE)	0.017	LQM	0.036	LQM	0.08	LQM
1,1,1-Trichloroethane	9	LQM	18	LQM	40	LQM
Tetrachloroethene (PCE)	0.18	LQM	0.4	LQM	0.92	LQM
1,1,1,2-Tetrachloroethanes	1.5	LQM	3.5	LQM	8.2	LQM
1,1,2,2-Tetrachloroethane	3.9	LQM	8	LQM	17	LQM
Tetrachloromethane	0.026	LQM	0.056	LQM	0.13	LQM
1,1,2 Trichloroethane	0.88	EIC	1.8	EIC	3.9	EIC
1,1-Dichloroethane	2.5	EIC	4.1	EIC	7.7	EIC
1,1-Dichloroethene	0.23	EIC	0.41	EIC	0.82	EIC
<i>Cis</i> 1,2-Dichloroethene	0.12	EIC	0.2	EIC	0.39	EIC
<i>Trans</i> 1,2-dichloroethene	0.19	EIC	0.35	EIC	0.71	EIC
Benzenes						
Chlorobenzene	0.46	LQM	1	LQM	2.4	LQM
1,2,4-Trimethylbenzene	0.41	EIC	0.99	EIC	2.3	EIC
Iso-propylbenzene	12	EIC	28	EIC	67	EIC
Propylbenzene	40	EIC	97	EIC	230	EIC
Other						
Bromobenzene	0.91	EIC	2.1	EIC	4.9	EIC
Bromodichloromethane	5.2	EIC	11	EIC	23	EIC
Carbon Disulphide	0.14	LQM	0.29	LQM	0.62	LQM
Chloroethane	8.4	EIC	11	EIC	18	EIC
Chloromethane	0.0085	EIC	0.0099	EIC	0.013	EIC
Dichloromethane	2.1	EIC	2.8	EIC	4.5	EIC
1,2-Dichloropropane	0.024	EIC	0.042	EIC	0.085	EIC
Hexachlorobutadiene	0.32	LQM	0.78	LQM	1.8	LQM
Styrene	35	EIC	78	EIC	170	EIC

Semi-Volatile Organic Compounds (SVOC) and Other Organic Compounds

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Chlorobenzenes						
1,2-Dichlorobenzene	24	LQM	57	LQM	130	LQM
1,3-Dichlorobenzene	0.44	LQM	1.1	LQM	2.5	LQM
1,4-Dichlorobenzene	61	LQM	150	LQM	350	LQM
1,2,3-Trichlorobenzene	1.5	LQM	3.7	LQM	8.8	LQM
1,2,4-Trichlorobenzene	2.6	LQM	6.4	LQM	15	LQM
1,3,5-Trichlorobenzene	0.33	LQM	0.81	LQM	1.9	LQM
1,2,3,4-Tetrachlorobenzene	24	LQM	56	LQM	120	LQM
1,2,3,5-Tetrachlorobenzene	0.75	LQM	1.9	LQM	4.3	LQM
1,2,4,5-Tetrachlorobenzene	0.73	LQM	1.7	LQM	3.5	LQM
Pentachlorobenzene	19	LQM	30	LQM	38	LQM
Hexachlorobenzene	4.1 (0.2)	LQM	5.7 (0.5)	LQM	6.7 (1.2)	LQM
Phthalates						
Bis (2-ethylhexyl)phthalate	2,700 (8.68)	EIC	2,800 (21.6)	EIC	2,800 (51.7)	EIC
Diethyl phthalate	1,800 (13.7)	EIC	3,500 (29.1)	EIC	6,300 (65)	EIC
Di- <i>n</i> -butyl phthalate	450 (4.65)	EIC	450 (11.4)	EIC	450 (27.3)	EIC
Di- <i>n</i> -octyl phthalate	3,400 (32.6)	EIC	3,400 (81.5)	EIC	3,400 (196)	EIC
Butyl benzyl phthalate	42,000 (26.3)	EIC	44,000 (64.7)	EIC	44,000 (154)	EIC
Phenols						
Phenol (see end notes)	750	LQM	1300	LQM	2300	LQM
2,4-Dimethylphenol	210	EIC	410	EIC	730	EIC
Total Cresols (2-, 3- and 4-methylphenol)	3,700	EIC	5,400	EIC	6,900	EIC
Chlorophenols						
Chlorophenols (except Pentachlorophenol)	94	LQM	150	LQM	210	LQM
Pentachlorophenol	27 (16.4)	LQM	29	LQM	31	LQM
Other						
Biphenyl	220 (34.4)	EIC	500 (84.3)	EIC	980 (201)	EIC
Bromoform	0.019	EIC	0.034	EIC	0.070	EIC
2-Chloronaphthalene	3.8	EIC	9.3	EIC	22	EIC
2,4-Dinitrotoluene	170 (141)	EIC	170	EIC	170	EIC
2,6-Dinitrotoluene	78	EIC	84	EIC	87	EIC
Hexachloroethane	0.22	EIC	0.54	EIC	1.3	EIC
Tributyl tin oxide	1.4	EIC	3.1	EIC	5.7	EIC

PCBs, Furans and Dioxins

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Sum of PCDDs, PCDFs and dioxin-like PCBs	-	-	-	-	0.008	SGV v.1.05

Pesticides and Herbicides

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Aldrin	7.3	LQM	7.4	LQM	7.5	LQM
Dieldrin	7	LQM	7.3	LQM	7.4	LQM
Atrazine	610	LQM	620	LQM	620	LQM
Dichlorvos	6.4	LQM	6.5	LQM	6.6	LQM
Endosulfan (alpha)	160 (0.003)	LQM	280 (0.007)	LQM	410 (0.016)	LQM
Endosulfan (beta)	190 (0.00007)	LQM	320 (0.0002)	LQM	440 (0.0004)	LQM
alpha-Hexachlorocyclohexanes	6.9	LQM	9.2	LQM	11	LQM
beta-Hexachlorocyclohexanes	3.7	LQM	3.8	LQM	3.8	LQM
gamma-Hexachlorocyclohexanes (inc. Lindane)	2.9	LQM	3.3	LQM	3.5	LQM

Explosives

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
2,4,6 Trinitrotoluene (TNT)	65	LQM	66	LQM	66	LQM
RDX	13000	LQM	13000	LQM	13000	LQM
HMX	6700	LQM	6700	LQM	6700	LQM





Final Report

Report Number: 15-07419 Issue-1

Initial Date of Issue: 08-Apr-2015

Client: Delta Simons

Client Address: 3 Henley Office Park
Doddington Road
Lincoln
Lincolnshire
LN6 3QR

Contact(s): Cerys Baldwin
Simon Steele

Project: Hillingdon

Quotation No.: **Date Received:** 01-Apr-2015

Order No.: DS24131(T) **Date Instructed:** 31-Mar-2015

No. of Samples: 28

Turnaround: (Wkdays) 5 **Results Due Date:** 08-Apr-2015

Date Approved: 08-Apr-2015

Approved By:

Details: Darrell Hall, Laboratory Director

Results Summary - Soil

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:		15-07419	15-07419	15-07419	15-07419	15-07419	15-07419	15-07419	15-07419	15-07419
Quotation No.:	Chemtest Sample ID.:		122892	122893	122894	122895	122896	122897	122898	122899	
Order No.: DS24131(T)	Client Sample Ref.:										
	Client Sample ID.:		TP03	TP07	TP08	TP10	TP11	TP12	TP13	TP15	
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Top Depth (m):		0.25	1.00	0.20	0.20	1.10	0.20	0.50	0.85	
	Bottom Depth(m):										
	Date Sampled:		25-Mar-15	25-Mar-15	25-Mar-15	25-Mar-15	25-Mar-15	25-Mar-15	25-Mar-15	25-Mar-15	
Determinand	Accred.	SOP	Units	LOD							
ACM Type	U	2192			-		-	-		-	
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.02	25	18	23	22	20	21	18
Soil Colour	N				brown	brown	brown	brown	brown	brown	brown
Other Material	N				none	none	roots	stones	none	stones	stones
Soil Texture	N				clay	clay	clay	clay	clay	clay	clay
pH	M	2010			6.5	7.9	6.5	7.6	7.9	7.6	8.1
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4	2.0	0.90	0.94	0.73	< 0.40	0.96	0.72
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.01		0.033			0.20		0.25
Total Sulphur	M	2175	%	0.01		0.030			0.030		0.17
Cyanide (Total)	M	2300	mg/kg	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.01		0.041			0.056		0.15
Arsenic	M	2450	mg/kg	1	12	23	14	19	14	17	15
Cadmium	M	2450	mg/kg	0.1	0.31	0.36	0.24	0.41	< 0.10	0.27	0.20
Chromium	M	2450	mg/kg	1	43	89	42	49	45	52	51
Copper	M	2450	mg/kg	0.5	26	33	26	25	52	32	18
Mercury	M	2450	mg/kg	0.1	0.44	< 0.10	0.21	0.45	< 0.10	0.23	< 0.10
Nickel	M	2450	mg/kg	0.5	18	69	16	20	34	21	41
Lead	M	2450	mg/kg	0.5	97	56	150	90	23	100	55
Selenium	M	2450	mg/kg	0.2	0.51	1.5	0.41	0.33	0.22	0.59	0.36
Zinc	M	2450	mg/kg	0.5	91	86	76	95	61	88	58
Aliphatic TPH >C5-C6	N	2675	mg/kg	0.1	< 0.10		< 0.10	< 0.10			< 0.10
Aliphatic TPH >C6-C8	N	2675	mg/kg	0.1	< 0.10		< 0.10	< 0.10			< 0.10
Aliphatic TPH >C8-C10	M	2675	mg/kg	0.1	< 0.10		< 0.10	< 0.10			< 0.10
Aliphatic TPH >C10-C12	M	2675	mg/kg	1	< 1.0		< 1.0	< 1.0			< 1.0
Aliphatic TPH >C12-C16	M	2675	mg/kg	1	< 1.0		< 1.0	< 1.0			< 1.0
Aliphatic TPH >C16-C21	M	2675	mg/kg	1	< 1.0		< 1.0	< 1.0			< 1.0
Aliphatic TPH >C21-C35	M	2675	mg/kg	1	< 1.0		< 1.0	< 1.0			< 1.0
Aliphatic TPH >C35-C44	M	2675	mg/kg	1	< 1.0		< 1.0	< 1.0			< 1.0
Total Aliphatic Hydrocarbons	M	2675	mg/kg	5	< 5.0		< 5.0	< 5.0			< 5.0
Aromatic TPH >C5-C7	N	2675	mg/kg	0.1	< 0.10		< 0.10	< 0.10			< 0.10
Aromatic TPH >C7-C8	N	2675	mg/kg	0.1	< 0.10		< 0.10	< 0.10			< 0.10

Results Summary - Soil

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:		15-07419	15-07419	15-07419	15-07419	15-07419	15-07419	15-07419	15-07419	15-07419
Quotation No.:	Chemtest Sample ID.:		122892	122893	122894	122895	122896	122897	122898	122899	
Order No.: DS24131(T)	Client Sample Ref.:										
	Client Sample ID.:		TP03	TP07	TP08	TP10	TP11	TP12	TP13	TP15	
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Top Depth (m):		0.25	1.00	0.20	0.20	1.10	0.20	0.50	0.85	
	Bottom Depth(m):										
	Date Sampled:		25-Mar-15	25-Mar-15	25-Mar-15	25-Mar-15	25-Mar-15	25-Mar-15	25-Mar-15	25-Mar-15	
Determinand	Accred.	SOP	Units	LOD							
Aromatic TPH >C8-C10	M	2675	mg/kg	0.1	< 0.10		< 0.10	< 0.10		< 0.10	< 0.10
Aromatic TPH >C10-C12	M	2675	mg/kg	1	< 1.0		< 1.0	< 1.0		< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2675	mg/kg	1	< 1.0		< 1.0	< 1.0		< 1.0	< 1.0
Aromatic TPH >C16-C21	M	2675	mg/kg	1	< 1.0		< 1.0	< 1.0		< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2675	mg/kg	1	< 1.0		< 1.0	< 1.0		< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2675	mg/kg	1	< 1.0		< 1.0	< 1.0		< 1.0	< 1.0
Total Aromatic Hydrocarbons	M	2675	mg/kg	5	< 5.0		< 5.0	< 5.0		< 5.0	< 5.0
Total Petroleum Hydrocarbons	M	2675	mg/kg	10	< 10		< 10	< 10		< 10	< 10
Naphthalene	M	2700	mg/kg	0.1	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.1	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.16
Acenaphthene	M	2700	mg/kg	0.1	0.16	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11
Fluorene	M	2700	mg/kg	0.1	0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.16
Phenanthrene	M	2700	mg/kg	0.1	0.67	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.4
Anthracene	M	2700	mg/kg	0.1	0.18	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.26
Fluoranthene	M	2700	mg/kg	0.1	1.5	< 0.10	0.44	0.44	< 0.10	0.78	1.5
Pyrene	M	2700	mg/kg	0.1	1.4	< 0.10	0.40	0.30	< 0.10	0.67	1.8
Benzo[a]anthracene	M	2700	mg/kg	0.1	0.55	< 0.10	< 0.10	< 0.10	< 0.10	0.23	0.47
Chrysene	M	2700	mg/kg	0.1	0.89	< 0.10	< 0.10	< 0.10	< 0.10	0.31	0.61
Benzo[b]fluoranthene	M	2700	mg/kg	0.1	1.0	< 0.10	< 0.10	< 0.10	< 0.10	0.46	0.42
Benzo[k]fluoranthene	M	2700	mg/kg	0.1	0.74	< 0.10	< 0.10	< 0.10	< 0.10	0.31	0.16
Benzo[a]pyrene	M	2700	mg/kg	0.1	0.71	< 0.10	< 0.10	< 0.10	< 0.10	0.33	0.45
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.1	0.52	< 0.10	< 0.10	< 0.10	< 0.10	0.23	0.25
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.1	0.68	< 0.10	< 0.10	< 0.10	< 0.10	0.24	0.38
Total Of 16 PAH's	M	2700	mg/kg	2	9.4	< 2.0	< 2.0	< 2.0	< 2.0	3.6	8.1

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
- < "less than"
- > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 15-07806 Issue-1

Initial Date of Issue: 20-Apr-2015

Client: Delta Simons

Client Address: 3 Henley Office Park
Doddington Road
Lincoln
Lincolnshire
LN6 3QR

Contact(s): Cerys Baldwin
Simon Steele

Project: Hillingdon

Quotation No.: **Date Received:** 08-Apr-2015

Order No.: DS24131(T) **Date Instructed:** 14-Apr-2015

No. of Samples: 33

Turnaround: (Wkdays) 5 **Results Due Date:** 20-Apr-2015

Date Approved: 20-Apr-2015

Approved By:

KT Jones

Details: Keith Jones, Technical Manager

Results Summary - Soil

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:		15-07806	15-07806	15-07806	15-07806	15-07806	15-07806	15-07806	15-07806	15-07806	15-07806	15-07806
Quotation No.:	Chemtest Sample ID.:		124768	124770	124774	124776	124779	124781	124782	124786	124790	124792	
Order No.: DS24131(T)	Client Sample Ref.:												
	Client Sample ID.:		CP01	CP01	CP04	CP04	CP07	CP06	CP06	CP06	CP01	CP02	
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Top Depth (m):		4.50	18.00	2.40	5.70	5.50	0.50	1.00	19.50	0.50	0.50	
	Bottom Depth(m):												
	Date Sampled:		30-Mar-15	31-Mar-15	01-Apr-15	01-Apr-15	30-Mar-15	01-Apr-15	01-Apr-15	02-Apr-15	30-Mar-15	31-Mar-15	
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192							-	-		-	-
Asbestos Identification	U	2192	%	0.001					No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.02	13	14	19	19	15	20	17	18	13
Soil Colour	N				brown	brown	brown	brown	brown	brown	brown	grey	brown
Other Material	N				none	none	none	none	none	none	none	stones brick	stones
Soil Texture	N				clay	clay	clay	clay	clay	clay	clay	sand	sand
pH	M	2010			9.2	8.9	8.6	8.9	8.9	8.3	8.4	9.1	10.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4						1.0	1.0		3.4
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.01	0.042	0.015	0.040	0.057	< 0.010		0.074		
Total Sulphur	M	2175	%	0.01	0.030	0.020	0.030	0.21	0.030		0.15		
Cyanide (Total)	M	2300	mg/kg	0.5						< 0.50	< 0.50		< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.01	0.046	< 0.010	0.038	0.020	< 0.010		0.025		
Arsenic	M	2450	mg/kg	1						33	30		22
Cadmium	M	2450	mg/kg	0.1						0.58	0.23		0.45
Chromium	M	2450	mg/kg	1						85	79		51
Copper	M	2450	mg/kg	0.5						39	31		19
Mercury	M	2450	mg/kg	0.1						< 0.10	< 0.10		< 0.10
Nickel	M	2450	mg/kg	0.5						76	51		29
Lead	M	2450	mg/kg	0.5						62	37		580
Selenium	M	2450	mg/kg	0.2						1.0	< 0.20		< 0.20
Zinc	M	2450	mg/kg	0.5						150	100		140
Aliphatic TPH >C5-C6	N	2675	mg/kg	0.1						< 0.10	< 0.10		B < 0.10
Aliphatic TPH >C6-C8	N	2675	mg/kg	0.1						< 0.10	< 0.10		B < 0.10
Aliphatic TPH >C8-C10	M	2675	mg/kg	0.1						< 0.10	< 0.10		B < 0.10
Aliphatic TPH >C10-C12	M	2675	mg/kg	1						< 1.0	< 1.0		B < 1.0
Aliphatic TPH >C12-C16	M	2675	mg/kg	1						< 1.0	< 1.0		B < 1.0
Aliphatic TPH >C16-C21	M	2675	mg/kg	1						< 1.0	< 1.0		B < 1.0
Aliphatic TPH >C21-C35	M	2675	mg/kg	1						< 1.0	< 1.0		B 97
Aliphatic TPH >C35-C44	M	2675	mg/kg	1						< 1.0	< 1.0		B 7.3
Total Aliphatic Hydrocarbons	M	2675	mg/kg	5						< 5.0	< 5.0		B 100
Aromatic TPH >C5-C7	N	2675	mg/kg	0.1						< 0.10	< 0.10		B < 0.10
Aromatic TPH >C7-C8	N	2675	mg/kg	0.1						< 0.10	< 0.10		B < 0.10

Results Summary - Soil

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:		15-07806	15-07806	15-07806	15-07806	15-07806	15-07806	15-07806	15-07806	15-07806	15-07806
Quotation No.:	Chemtest Sample ID.:		124768	124770	124774	124776	124779	124781	124782	124786	124790	124792
Order No.: DS24131(T)	Client Sample Ref.:											
	Client Sample ID.:		CP01	CP01	CP04	CP04	CP07	CP06	CP06	CP06	CP01	CP02
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		4.50	18.00	2.40	5.70	5.50	0.50	1.00	19.50	0.50	0.50
	Bottom Depth(m):											
	Date Sampled:		30-Mar-15	31-Mar-15	01-Apr-15	01-Apr-15	30-Mar-15	01-Apr-15	01-Apr-15	02-Apr-15	30-Mar-15	31-Mar-15
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C8-C10	M	2675	mg/kg	0.1					< 0.10	< 0.10	B < 0.10	< 0.10
Aromatic TPH >C10-C12	M	2675	mg/kg	1					< 1.0	< 1.0	B < 1.0	< 1.0
Aromatic TPH >C12-C16	M	2675	mg/kg	1					< 1.0	< 1.0	B < 1.0	< 1.0
Aromatic TPH >C16-C21	M	2675	mg/kg	1					< 1.0	< 1.0	B 2.9	4.0
Aromatic TPH >C21-C35	M	2675	mg/kg	1					< 1.0	< 1.0	B 15	10
Aromatic TPH >C35-C44	N	2675	mg/kg	1					< 1.0	< 1.0	B < 1.0	< 1.0
Total Aromatic Hydrocarbons	M	2675	mg/kg	5					< 5.0	< 5.0	B 18	15
Total Petroleum Hydrocarbons	M	2675	mg/kg	10					< 10	< 10	B 120	61
Naphthalene	M	2700	mg/kg	0.1					< 0.10	< 0.10	0.36	1.6
Acenaphthylene	M	2700	mg/kg	0.1					< 0.10	< 0.10	< 0.10	0.19
Acenaphthene	M	2700	mg/kg	0.1					< 0.10	< 0.10	< 0.10	0.31
Fluorene	M	2700	mg/kg	0.1					< 0.10	< 0.10	< 0.10	0.53
Phenanthrene	M	2700	mg/kg	0.1					< 0.10	< 0.10	0.94	2.6
Anthracene	M	2700	mg/kg	0.1					< 0.10	< 0.10	0.23	0.67
Fluoranthene	M	2700	mg/kg	0.1					< 0.10	< 0.10	1.8	2.7
Pyrene	M	2700	mg/kg	0.1					< 0.10	< 0.10	1.9	2.6
Benzo[a]anthracene	M	2700	mg/kg	0.1					< 0.10	< 0.10	0.49	1.8
Chrysene	M	2700	mg/kg	0.1					< 0.10	< 0.10	0.26	1.9
Benzo[b]fluoranthene	M	2700	mg/kg	0.1					< 0.10	< 0.10	< 0.10	1.3
Benzo[k]fluoranthene	M	2700	mg/kg	0.1					< 0.10	< 0.10	< 0.10	0.57
Benzo[a]pyrene	M	2700	mg/kg	0.1					< 0.10	< 0.10	< 0.10	1.2
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.1					< 0.10	< 0.10	< 0.10	1.0
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.1					< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.1					< 0.10	< 0.10	< 0.10	0.79
Total Of 16 PAH's	M	2700	mg/kg	2					< 2.0	< 2.0	6.0	20

Results Summary - Soil

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:				15-07806	15-07806	15-07806
Quotation No.:	Chemtest Sample ID.:				124794	124796	124799
Order No.: DS24131(T)	Client Sample Ref.:						
	Client Sample ID.:				CP04	CP07	CP04
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.25	0.20	0.50
	Bottom Depth(m):						
	Date Sampled:				01-Apr-15	31-Mar-15	01-Apr-15
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192					
Asbestos Identification	U	2192	%	0.001			
Moisture	N	2030	%	0.02	21	19	21
Soil Colour	N				brown	brown	brown
Other Material	N				none	none	none
Soil Texture	N				clay	clay	clay
pH	M	2010			8.1	6.0	8.1
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4	0.59	0.53	0.81
Sulphate (2:1 Water Soluble) as SO ₄	M	2120	g/l	0.01			
Total Sulphur	M	2175	%	0.01			
Cyanide (Total)	M	2300	mg/kg	0.5	< 0.50		
Sulphate (Acid Soluble)	M	2430	%	0.01			
Arsenic	M	2450	mg/kg	1	12	11	29
Cadmium	M	2450	mg/kg	0.1	0.22	< 0.10	0.64
Chromium	M	2450	mg/kg	1	51	40	72
Copper	M	2450	mg/kg	0.5	19	14	31
Mercury	M	2450	mg/kg	0.1	< 0.10	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.5	19	14	68
Lead	M	2450	mg/kg	0.5	67	44	58
Selenium	M	2450	mg/kg	0.2	0.67	0.56	1.0
Zinc	M	2450	mg/kg	0.5	110	68	130
Aliphatic TPH >C5-C6	N	2675	mg/kg	0.1		< 0.10	
Aliphatic TPH >C6-C8	N	2675	mg/kg	0.1		< 0.10	
Aliphatic TPH >C8-C10	M	2675	mg/kg	0.1		< 0.10	
Aliphatic TPH >C10-C12	M	2675	mg/kg	1		< 1.0	
Aliphatic TPH >C12-C16	M	2675	mg/kg	1		< 1.0	
Aliphatic TPH >C16-C21	M	2675	mg/kg	1		< 1.0	
Aliphatic TPH >C21-C35	M	2675	mg/kg	1		< 1.0	
Aliphatic TPH >C35-C44	M	2675	mg/kg	1		< 1.0	
Total Aliphatic Hydrocarbons	M	2675	mg/kg	5		< 5.0	
Aromatic TPH >C5-C7	N	2675	mg/kg	0.1		< 0.10	
Aromatic TPH >C7-C8	N	2675	mg/kg	0.1		< 0.10	

Results Summary - Soil

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:				15-07806	15-07806	15-07806
Quotation No.:	Chemtest Sample ID.:				124794	124796	124799
Order No.: DS24131(T)	Client Sample Ref.:						
	Client Sample ID.:				CP04	CP07	CP04
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.25	0.20	0.50
	Bottom Depth(m):						
	Date Sampled:				01-Apr-15	31-Mar-15	01-Apr-15
Determinand	Accred.	SOP	Units	LOD			
Aromatic TPH >C8-C10	M	2675	mg/kg	0.1		< 0.10	
Aromatic TPH >C10-C12	M	2675	mg/kg	1		< 1.0	
Aromatic TPH >C12-C16	M	2675	mg/kg	1		< 1.0	
Aromatic TPH >C16-C21	M	2675	mg/kg	1		< 1.0	
Aromatic TPH >C21-C35	M	2675	mg/kg	1		< 1.0	
Aromatic TPH >C35-C44	N	2675	mg/kg	1		< 1.0	
Total Aromatic Hydrocarbons	M	2675	mg/kg	5		< 5.0	
Total Petroleum Hydrocarbons	M	2675	mg/kg	10		< 10	
Naphthalene	M	2700	mg/kg	0.1	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.1	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.1	< 0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.1	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.1	< 0.10	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.1	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.1	0.55	0.19	< 0.10
Pyrene	M	2700	mg/kg	0.1	0.47	0.13	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.1	0.22	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.1	0.50	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.1	0.38	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.1	0.45	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.1	0.66	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.1	0.19	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.1	0.15	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.1	0.20	< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2	3.8	< 2.0	< 2.0

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Chemtest Sample ID:	Sample Ref:	Sample ID:	Sampled Date:	Containers Received:	Deviation Code(s):
124790		CP01	30-Mar-2015	Amber Glass 250ml	B
124790		CP01	30-Mar-2015	Amber Glass 60ml	B
124790		CP01	30-Mar-2015	Plastic Tub 500g	B

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
- < "less than"
- > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 15-08536 Issue-1

Initial Date of Issue: 21-Apr-2015

Client: Delta Simons

Client Address: 3 Henley Office Park
Doddington Road
Lincoln
Lincolnshire
LN6 3QR

Contact(s): Cerys Baldwin
Simon Steele

Project: Hillingdon

Quotation No.: **Date Received:** 15-Apr-2015

Order No.: DS24131(T) **Date Instructed:** 17-Apr-2015

No. of Samples: 19

Turnaround: (Wkdays) 3 **Results Due Date:** 21-Apr-2015

Date Approved: 21-Apr-2015

Approved By:

KT Jones

Details: Keith Jones, Technical Manager

Results Summary - Soil

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:					15-08536	15-08536	15-08536	15-08536	15-08536	15-08536	15-08536	15-08536	15-08536
Quotation No.:	Chemtest Sample ID.:					128112	128114	128115	128116	128117	128118	128121	128122	128123
Order No.: DS24131(T)	Client Sample Ref.:													
	Client Sample ID.:					CP05	CP05	CP05	CP04	CP05	CP09	CP09	CP09	CP03
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					0.4	4.50	10.00	16.50	17.00	0.30	8.50	19.00	0.30
	Bottom Depth(m):													
	Date Sampled:					07-Apr-15	07-Apr-15	07-Apr-15	07-Apr-15	07-Apr-15	08-Apr-15	08-Apr-15	09-Apr-15	08-Apr-15
Determinand	Accred.	SOP	Units	LOD										
ACM Type	U	2192			-						-			-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected						No Asbestos Detected			No Asbestos Detected
Moisture	N	2030	%	0.02	11	14	16	19	19	18	18	16	14	16
Soil Colour	N				brown	brown	brown	brown	brown	brown	brown	brown	brown	brown
Other Material	N				stones	none	none	none	none	stones	none	none	stones	none
Soil Texture	N				sand	clay	clay	clay	sand	clay	clay	clay	clay	clay
pH	M	2010			11.6	9.0	9.0	8.8	9.0	8.4	8.8	8.6	8.9	8.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4	0.61					1.3			1.5	
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.01		< 0.010	< 0.010	< 0.010	< 0.010		< 0.010	0.067		< 0.010
Total Sulphur	M	2175	%	0.01		0.050	0.11	0.060	0.050		0.050	0.38		0.050
Cyanide (Total)	M	2300	mg/kg	0.5	< 0.50					< 0.50			< 0.50	
Sulphate (Acid Soluble)	M	2430	%	0.01		< 0.010	< 0.010	< 0.010	< 0.010		0.013	0.055		0.031
Arsenic	M	2450	mg/kg	1	25					9.7			16	
Cadmium	M	2450	mg/kg	0.1	2.1					0.20			0.21	
Chromium	M	2450	mg/kg	1	42					33			43	
Copper	M	2450	mg/kg	0.5	41					24			31	
Mercury	M	2450	mg/kg	0.1	0.11					< 0.10			0.22	
Nickel	M	2450	mg/kg	0.5	20					40			34	
Lead	M	2450	mg/kg	0.5	180					78			870	
Selenium	M	2450	mg/kg	0.2	< 0.20					0.49			< 0.20	
Zinc	M	2450	mg/kg	0.5	260					140			170	
Aliphatic TPH >C5-C6	N	2675	mg/kg	0.1	< 0.10					< 0.10				
Aliphatic TPH >C6-C8	N	2675	mg/kg	0.1	< 0.10					< 0.10				
Aliphatic TPH >C8-C10	M	2675	mg/kg	0.1	< 0.10					< 0.10				
Aliphatic TPH >C10-C12	M	2675	mg/kg	1	< 1.0					< 1.0				
Aliphatic TPH >C12-C16	M	2675	mg/kg	1	66					< 1.0				
Aliphatic TPH >C16-C21	M	2675	mg/kg	1	170					< 1.0				
Aliphatic TPH >C21-C35	M	2675	mg/kg	1	70					< 1.0				
Aliphatic TPH >C35-C44	M	2675	mg/kg	1	6.0					< 1.0				
Total Aliphatic Hydrocarbons	M	2675	mg/kg	5	310					< 5.0				
Aromatic TPH >C5-C7	N	2675	mg/kg	0.1	< 0.10					< 0.10				
Aromatic TPH >C7-C8	N	2675	mg/kg	0.1	< 0.10					< 0.10				

Results Summary - Soil

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:				15-08536	15-08536	15-08536	15-08536	15-08536	15-08536	15-08536	15-08536	15-08536	15-08536
Quotation No.:	Chemtest Sample ID.:				128112	128114	128115	128116	128117	128118	128121	128122	128123	128125
Order No.: DS24131(T)	Client Sample Ref.:													
	Client Sample ID.:				CP05	CP05	CP05	CP04	CP05	CP09	CP09	CP09	CP03	CP03
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.4	4.50	10.00	16.50	17.00	0.30	8.50	19.00	0.30	9.00
	Bottom Depth(m):													
	Date Sampled:				07-Apr-15	07-Apr-15	07-Apr-15	07-Apr-15	07-Apr-15	08-Apr-15	08-Apr-15	09-Apr-15	08-Apr-15	09-Apr-15
Determinand	Accred.	SOP	Units	LOD										
Aromatic TPH >C8-C10	M	2675	mg/kg	0.1	< 0.10					< 0.10				
Aromatic TPH >C10-C12	M	2675	mg/kg	1	< 1.0					< 1.0				
Aromatic TPH >C12-C16	M	2675	mg/kg	1	8.7					< 1.0				
Aromatic TPH >C16-C21	M	2675	mg/kg	1	35					10				
Aromatic TPH >C21-C35	M	2675	mg/kg	1	12					7.6				
Aromatic TPH >C35-C44	N	2675	mg/kg	1	< 1.0					< 1.0				
Total Aromatic Hydrocarbons	M	2675	mg/kg	5	56					18				
Total Petroleum Hydrocarbons	M	2675	mg/kg	10	370					18				
Naphthalene	M	2700	mg/kg	0.1	0.11					< 0.10			< 0.10	
Acenaphthylene	M	2700	mg/kg	0.1	0.13					< 0.10			< 0.10	
Acenaphthene	M	2700	mg/kg	0.1	0.17					< 0.10			< 0.10	
Fluorene	M	2700	mg/kg	0.1	0.24					< 0.10			< 0.10	
Phenanthrene	M	2700	mg/kg	0.1	0.80					0.75			1.9	
Anthracene	M	2700	mg/kg	0.1	0.26					0.21			0.52	
Fluoranthene	M	2700	mg/kg	0.1	0.84					1.1			2.2	
Pyrene	M	2700	mg/kg	0.1	0.59					1.0			2.1	
Benzo[a]anthracene	M	2700	mg/kg	0.1	< 0.10					0.40			0.74	
Chrysene	M	2700	mg/kg	0.1	< 0.10					0.78			1.2	
Benzo[b]fluoranthene	M	2700	mg/kg	0.1	< 0.10					0.51			1.0	
Benzo[k]fluoranthene	M	2700	mg/kg	0.1	< 0.10					0.23			0.52	
Benzo[a]pyrene	M	2700	mg/kg	0.1	< 0.10					0.64			0.88	
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.1	< 0.10					0.26			0.58	
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.1	< 0.10					0.18			0.30	
Benzo[g,h,i]perylene	M	2700	mg/kg	0.1	< 0.10					0.52			0.65	
Total Of 16 PAH's	M	2700	mg/kg	2	3.1					6.6			13	

Results Summary - Soil

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:				15-08536	15-08536	15-08536
Quotation No.:	Chemtest Sample ID.:				128126	128128	128129
Order No.: DS24131(T)	Client Sample Ref.:						
	Client Sample ID.:				CP08	CP08	CP08
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.50	4.00	9.00
	Bottom Depth(m):						
	Date Sampled:				09-Apr-15	09-Apr-15	10-Apr-15
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192			-		
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected		
Moisture	N	2030	%	0.02	18	17	15
Soil Colour	N				brown	brown	brown
Other Material	N				none	none	none
Soil Texture	N				clay	clay	clay
pH	M	2010			8.2	8.7	8.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4	0.64		
Sulphate (2:1 Water Soluble) as SO ₄	M	2120	g/l	0.01		< 0.010	< 0.010
Total Sulphur	M	2175	%	0.01		0.050	0.040
Cyanide (Total)	M	2300	mg/kg	0.5	< 0.50		
Sulphate (Acid Soluble)	M	2430	%	0.01		0.010	< 0.010
Arsenic	M	2450	mg/kg	1	14		
Cadmium	M	2450	mg/kg	0.1	0.13		
Chromium	M	2450	mg/kg	1	53		
Copper	M	2450	mg/kg	0.5	21		
Mercury	M	2450	mg/kg	0.1	< 0.10		
Nickel	M	2450	mg/kg	0.5	52		
Lead	M	2450	mg/kg	0.5	70		
Selenium	M	2450	mg/kg	0.2	< 0.20		
Zinc	M	2450	mg/kg	0.5	90		
Aliphatic TPH >C5-C6	N	2675	mg/kg	0.1			
Aliphatic TPH >C6-C8	N	2675	mg/kg	0.1			
Aliphatic TPH >C8-C10	M	2675	mg/kg	0.1			
Aliphatic TPH >C10-C12	M	2675	mg/kg	1			
Aliphatic TPH >C12-C16	M	2675	mg/kg	1			
Aliphatic TPH >C16-C21	M	2675	mg/kg	1			
Aliphatic TPH >C21-C35	M	2675	mg/kg	1			
Aliphatic TPH >C35-C44	M	2675	mg/kg	1			
Total Aliphatic Hydrocarbons	M	2675	mg/kg	5			
Aromatic TPH >C5-C7	N	2675	mg/kg	0.1			
Aromatic TPH >C7-C8	N	2675	mg/kg	0.1			

Results Summary - Soil

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:				15-08536	15-08536	15-08536
Quotation No.:	Chemtest Sample ID.:				128126	128128	128129
Order No.: DS24131(T)	Client Sample Ref.:						
	Client Sample ID.:				CP08	CP08	CP08
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.50	4.00	9.00
	Bottom Depth(m):						
	Date Sampled:				09-Apr-15	09-Apr-15	10-Apr-15
Determinand	Accred.	SOP	Units	LOD			
Aromatic TPH >C8-C10	M	2675	mg/kg	0.1			
Aromatic TPH >C10-C12	M	2675	mg/kg	1			
Aromatic TPH >C12-C16	M	2675	mg/kg	1			
Aromatic TPH >C16-C21	M	2675	mg/kg	1			
Aromatic TPH >C21-C35	M	2675	mg/kg	1			
Aromatic TPH >C35-C44	N	2675	mg/kg	1			
Total Aromatic Hydrocarbons	M	2675	mg/kg	5			
Total Petroleum Hydrocarbons	M	2675	mg/kg	10			
Naphthalene	M	2700	mg/kg	0.1	< 0.10		
Acenaphthylene	M	2700	mg/kg	0.1	< 0.10		
Acenaphthene	M	2700	mg/kg	0.1	< 0.10		
Fluorene	M	2700	mg/kg	0.1	< 0.10		
Phenanthrene	M	2700	mg/kg	0.1	< 0.10		
Anthracene	M	2700	mg/kg	0.1	< 0.10		
Fluoranthene	M	2700	mg/kg	0.1	0.21		
Pyrene	M	2700	mg/kg	0.1	0.24		
Benzo[a]anthracene	M	2700	mg/kg	0.1	< 0.10		
Chrysene	M	2700	mg/kg	0.1	< 0.10		
Benzo[b]fluoranthene	M	2700	mg/kg	0.1	< 0.10		
Benzo[k]fluoranthene	M	2700	mg/kg	0.1	< 0.10		
Benzo[a]pyrene	M	2700	mg/kg	0.1	< 0.10		
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.1	< 0.10		
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.1	< 0.10		
Benzo[g,h,i]perylene	M	2700	mg/kg	0.1	< 0.10		
Total Of 16 PAH's	M	2700	mg/kg	2	< 2.0		

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
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- U/S Unsuitable Sample
- N/E not evaluated
- < "less than"
- > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk





Final Report

Report Number: 15-08511 Issue-1

Initial Date of Issue: 21-Apr-2015

Client: Delta Simons

Client Address: 3 Henley Office Park
Doddington Road
Lincoln
Lincolnshire
LN6 3QR

Contact(s): Cerys Baldwin
Simon Steele

Project: Hillingdon

Quotation No.: **Date Received:** 15-Apr-2015

Order No.: DS24131(T) **Date Instructed:** 15-Apr-2015

No. of Samples: 8

Turnaround: (Wkdays) 5 **Results Due Date:** 21-Apr-2015

Date Approved: 21-Apr-2015

Approved By:

Details: Darrell Hall, Laboratory Director

Results Summary - Water

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:				15-08511	15-08511	15-08511	15-08511	15-08511	15-08511	15-08511	15-08511
Quotation No.:	Chemtest Sample ID.:				127974	127975	127976	127977	127978	127979	127980	127981
Order No.: DS24131(T)	Client Sample Ref.:											
	Client Sample ID.:				CP01	CP02	CP04	CP05	CP06	CP07	CP08	CP09
	Sample Type:				WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
	Top Depth (m):											
	Bottom Depth(m):											
	Date Sampled:				13-Apr-15	13-Apr-15	13-Apr-15	13-Apr-15	13-Apr-15	13-Apr-15	13-Apr-15	13-Apr-15
Determinand	Accred.	SOP	Units	LOD								
pH	U	1010			8.2	8.3	8.3	8.2	8.3	8.2	8.2	8.1
Sulphate	U	1220	mg/l	1	480	1200	450	650	120	86	300	420
Arsenic (Dissolved)	U	1450	µg/l	1	16	4.5	1.6	1.5	1.4	1.1	2.2	4.0
Boron (Dissolved)	U	1450	µg/l	20	650	170	160	380	160	170	350	690
Cadmium (Dissolved)	U	1450	µg/l	0.08	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080
Chromium (Dissolved)	U	1450	µg/l	1	3.2	< 1.0	< 1.0	4.4	< 1.0	4.0	3.8	7.8
Copper (Dissolved)	U	1450	µg/l	1	2.5	2.1	1.2	< 1.0	< 1.0	< 1.0	2.7	6.3
Mercury (Dissolved)	U	1450	µg/l	0.5	0.57	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel (Dissolved)	U	1450	µg/l	1	6.5	4.0	3.6	2.3	2.8	4.4	1.4	6.1
Lead (Dissolved)	U	1450	µg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Selenium (Dissolved)	U	1450	µg/l	1	7.6	5.4	3.0	20	3.1	4.3	8.7	12
Zinc (Dissolved)	U	1450	µg/l	1	19	24	25	24	13	7.1	8.9	16
Aliphatic TPH >C5-C6	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	U	1675	µg/l	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results Summary - Water

Project: Hillingdon

Client: Delta Simons	Chemtest Job No.:					15-08511	15-08511	15-08511	15-08511	15-08511	15-08511	15-08511
Quotation No.:	Chemtest Sample ID.:					127974	127975	127976	127977	127978	127979	127980
Order No.: DS24131(T)	Client Sample Ref.:											
	Client Sample ID.:					CP01	CP02	CP04	CP05	CP06	CP07	CP08
	Sample Type:					WATER	WATER	WATER	WATER	WATER	WATER	WATER
	Top Depth (m):											
	Bottom Depth(m):											
	Date Sampled:					13-Apr-15	13-Apr-15	13-Apr-15	13-Apr-15	13-Apr-15	13-Apr-15	13-Apr-15
Determinand	Accred.	SOP	Units	LOD								
Acenaphthene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1700	µg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	1700	µg/l	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
- < "less than"
- > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Waste Classification Report



G44LT-NY6CV-UNLP7

Job name

Hillingdon V2

Waste Stream

Updated Waste Stream September 2013

Comments**Project****Site****Classified by**

Name:

Huteson, Paul

Date:

04/06/2015 12:03 UTC

Telephone:

01522 823335

Company:

Delta-Simons**3 Chalkhill House****19 Rosary Road****Norwich****NR1 1SZ****Report**

Created by: Huteson, Paul

Created date: 04/06/2015 12:03 UTC

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazardous properties	Page
1	TP03	0.25	Non Hazardous		2
2	TP08	0.2	Non Hazardous		4
3	TP10	0.2	Non Hazardous		6
4	TP12	0.2	Non Hazardous		8
5	CP01	0.5	Non Hazardous		10
6	CP04	0.25	Non Hazardous		12
7	CP07	0.2	Non Hazardous		14
8	CP09	0.3	Non Hazardous		16
9	CP03	0.3	Non Hazardous		19

Appendices

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Appendix A: Classifier defined and non CLP determinands	21
Appendix B: Notes	22
Appendix C: Version	24

Classification of sample: TP03



Non Hazardous Waste
Classified as **17 05 04**
in the European Waste Catalogue

Sample details

Sample Name:	EWC Code:
TP03	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.25 m	
Moisture content: 25% (dry weight correction)	

Hazard properties

None identified

Determinands (Moisture content: 25%, dry weight correction)

Acenaphthene: (Whole conc. entered as: 0.16 mg/kg or 0.0000128%)
 Acenaphthylene: (Whole conc. entered as: 0.1 mg/kg or 0.000008%)
 Anthracene: (Whole conc. entered as: 0.18 mg/kg or 0.0000144%)
 Arsenic trioxide: (Cation conc. entered: 12 mg/kg, converted to compound conc.: 12.675 mg/kg or 0.00127%)
 Benzo[a]anthracene: (Whole conc. entered as: 0.55 mg/kg or 0.000044%)
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.7 mg/kg or 0.000056%)
 Benzo[b]fluoranthene: (Whole conc. entered as: 1 mg/kg or 0.00008%)
 Benzo[ghi]perylene: (Whole conc. entered as: 0.68 mg/kg or 0.0000544%)
 Benzo[k]fluoranthene: (Whole conc. entered as: 0.74 mg/kg or 0.0000592%)
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: 2 mg/kg, converted to compound conc.: 21.488 mg/kg or 0.00215%)
 Cadmium sulphide: (Cation conc. entered: 0.31 mg/kg, converted to compound conc.: 0.319 mg/kg or 0.0000319%, Note 1 conc.: 0.0000248%)
 Chromium(III) oxide: (Cation conc. entered: 43 mg/kg, converted to compound conc.: 50.278 mg/kg or 0.00503%)
 Chrysene: (Whole conc. entered as: 0.89 mg/kg or 0.0000712%)
 Copper (I) oxide: (Cation conc. entered: 26 mg/kg, converted to compound conc.: 23.418 mg/kg or 0.00234%)
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <0.5 mg/kg or <0.00004%) **IGNORED Because: "<LOD"**
 Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.000008%) **IGNORED Because: "<LOD"**
 Fluoranthene: (Whole conc. entered as: 1.5 mg/kg or 0.00012%)
 Fluorene: (Whole conc. entered as: 0.11 mg/kg or 0.0000088%)
 Indeno[123-cd]pyrene: (Whole conc. entered as: 0.52 mg/kg or 0.0000416%)
 Lead chromate: (Cation conc. entered: 97 mg/kg, converted to compound conc.: 121.042 mg/kg or 0.0121%, Note 1 conc.: 0.00776%)
 Mercury dichloride: (Cation conc. entered: 0.44 mg/kg, converted to compound conc.: 0.476 mg/kg or 0.0000476%)
 Naphthalene: (Whole conc. entered as: 0.14 mg/kg or 0.0000112%)
 Nickel dihydroxide: (Cation conc. entered: 18 mg/kg, converted to compound conc.: 22.745 mg/kg or 0.00227%)
 pH: (Whole conc. entered as: 6.5 pH, converted to conc.: 6.5 pH or 6.5 pH)
 Phenanthrene: (Whole conc. entered as: 0.67 mg/kg or 0.0000536%)
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: 0.51 mg/kg, converted to compound conc.: 0.612 mg/kg or 0.0000612%)
 TPH (C6 to C40) Petroleum Group: (Whole conc. entered as: <10 mg/kg or <0.0008%) **IGNORED Because: "<LOD"**
 Zinc chromate: (Cation conc. entered: 91 mg/kg, converted to compound conc.: 201.958 mg/kg or 0.0202%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." , used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Cadmium sulphide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Fluorene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Acenaphthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[a]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Chromium(III) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Lead chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Mercury dichloride"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Naphthalene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Zinc chromate"

Note 1 , used on:

Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "Cadmium sulphide"
Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "Cadmium sulphide"
Test: "HP 6 on Acute Tox. 4; H302" for determinand: "Cadmium sulphide"
Test: "HP 7 on Carc. 1B; H350, Carc. 1A; H350, Carc. 1B; H350i, Carc. 1A; H350i" for determinand: "Cadmium sulphide"
Test: "HP 10 on Repr. 1A; H360, Repr. 1B; H360, Repr. 1B; H360F, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1B; H360D, Repr. 1B; H360FD, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1B; H360Fd, Repr. 1B; H360Df, Repr. 1A; H360Df" for determinand: "Lead chromate"
Test: "HP 10 on Repr. 2; H361, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "Cadmium sulphide"
Test: "HP 11 on Muta. 2; H341" for determinand: "Cadmium sulphide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Cadmium sulphide"

Determinand notes

Note 1 , used on:

determinand: "Cadmium sulphide"
determinand: "Lead chromate"

Note A , used on:

determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"
determinand: "Zinc chromate"

Classification of sample: TP08



Non Hazardous Waste
Classified as **17 05 04**
in the European Waste Catalogue

Sample details

Sample Name:	EWG Code:
TP08	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.2 m	
Moisture content: 23% (dry weight correction)	

Hazard properties

None identified

Determinands (Moisture content: 23%, dry weight correction)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Arsenic trioxide: (Cation conc. entered: 14 mg/kg, converted to compound conc.:15.028 mg/kg or 0.0015%)
 Benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: 0.94 mg/kg, converted to compound conc.:10.264 mg/kg or 0.00103%)
 Cadmium sulphide: (Cation conc. entered: 0.24 mg/kg, converted to compound conc.:0.251 mg/kg or 0.0000251%, Note 1 conc.: 0.0000195%)
 Chromium(III) oxide: (Cation conc. entered: 42 mg/kg, converted to compound conc.:49.907 mg/kg or 0.00499%)
 Chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Copper (I) oxide: (Cation conc. entered: 26 mg/kg, converted to compound conc.:23.799 mg/kg or 0.00238%)
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <0.5 mg/kg or <0.0000407%) **IGNORED Because: "<LOD"**
 Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Fluoranthene: (Whole conc. entered as: 0.44 mg/kg or 0.0000358%)
 Fluorene: (Whole conc. entered as: 0.11 mg/kg or 0.00000894%)
 Indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Lead chromate: (Cation conc. entered: 150 mg/kg, converted to compound conc.:190.221 mg/kg or 0.019%, Note 1 conc.: 0.0122%)
 Mercury dichloride: (Cation conc. entered: 0.21 mg/kg, converted to compound conc.:0.231 mg/kg or 0.0000231%)
 Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Nickel dihydroxide: (Cation conc. entered: 16 mg/kg, converted to compound conc.:20.546 mg/kg or 0.00205%)
 pH: (Whole conc. entered as: 6.5 pH, converted to conc.:6.5 pH or 6.5 pH)
 Phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00000813%) **IGNORED Because: "<LOD"**
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: 0.41 mg/kg, converted to compound conc.:0.5 mg/kg or 0.00005%)
 TPH (C6 to C40) Petroleum Group: (Whole conc. entered as: <10 mg/kg or <0.000813%) **IGNORED Because: "<LOD"**
 Zinc chromate: (Cation conc. entered: 76 mg/kg, converted to compound conc.:171.411 mg/kg or 0.0171%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." , used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Cadmium sulphide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Fluorene"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Arsenic trioxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Chromium(III) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Copper (I) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Fluoranthene"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Lead chromate"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Mercury dichloride"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Nickel dihydroxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Zinc chromate"

Determinand notes

Note 1 , used on:

determinand: "Cadmium sulphide"

determinand: "Lead chromate"

Note A , used on:

determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"

determinand: "Zinc chromate"

Classification of sample: TP10



Non Hazardous Waste
Classified as **17 05 04**
in the European Waste Catalogue

Sample details

Sample Name:	EWG Code:
TP10	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.2 m	
Moisture content: 22% (dry weight correction)	

Hazard properties

None identified

Determinands (Moisture content: 22%, dry weight correction)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Arsenic trioxide: (Cation conc. entered: 19 mg/kg, converted to compound conc.:20.562 mg/kg or 0.00206%)
 Benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: 0.73 mg/kg, converted to compound conc.:8.036 mg/kg or 0.000804%)
 Cadmium sulphide: (Cation conc. entered: 0.41 mg/kg, converted to compound conc.:0.432 mg/kg or 0.0000432%, Note 1 conc.: 0.0000336%)
 Chromium(III) oxide: (Cation conc. entered: 49 mg/kg, converted to compound conc.:58.702 mg/kg or 0.00587%)
 Chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Copper (I) oxide: (Cation conc. entered: 25 mg/kg, converted to compound conc.:23.071 mg/kg or 0.00231%)
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <0.5 mg/kg or <0.000041%) **IGNORED Because: "<LOD"**
 Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Fluoranthene: (Whole conc. entered as: 0.44 mg/kg or 0.0000361%)
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Lead chromate: (Cation conc. entered: 90 mg/kg, converted to compound conc.:115.068 mg/kg or 0.0115%, Note 1 conc.: 0.00738%)
 Mercury dichloride: (Cation conc. entered: 0.45 mg/kg, converted to compound conc.:0.499 mg/kg or 0.0000499%)
 Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Nickel dihydroxide: (Cation conc. entered: 20 mg/kg, converted to compound conc.:25.893 mg/kg or 0.00259%)
 pH: (Whole conc. entered as: 7.6 pH, converted to conc.:7.6 pH or 7.6 pH)
 Phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.0000082%) **IGNORED Because: "<LOD"**
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: 0.33 mg/kg, converted to compound conc.:0.406 mg/kg or 0.0000406%)
 TPH (C6 to C40) Petroleum Group: (Whole conc. entered as: <10 mg/kg or <0.00082%) **IGNORED Because: "<LOD"**
 Zinc chromate: (Cation conc. entered: 95 mg/kg, converted to compound conc.:216.02 mg/kg or 0.0216%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." , used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Chromium(III) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Mercury dichloride"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Cadmium sulphide"

Note 1 , used on:

Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "Cadmium sulphide"

Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "Cadmium sulphide"

Test: "HP 6 on Acute Tox. 4; H302" for determinand: "Cadmium sulphide"

Test: "HP 7 on Carc. 1B; H350, Carc. 1A; H350, Carc. 1B; H350i, Carc. 1A; H350i" for determinand: "Cadmium sulphide"

Test: "HP 10 on Repr. 1A; H360, Repr. 1B; H360, Repr. 1B; H360F, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1B; H360D, Repr. 1B; H360FD, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1B; H360Fd, Repr. 1B; H360Df, Repr. 1A; H360Df" for determinand: "Lead chromate"

Test: "HP 10 on Repr. 2; H361, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "Cadmium sulphide"

Test: "HP 11 on Muta. 2; H341" for determinand: "Cadmium sulphide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"

Determinand notes

Note 1 , used on:

determinand: "Cadmium sulphide"

determinand: "Lead chromate"

Note A , used on:

determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"

determinand: "Zinc chromate"

Classification of sample: TP12



Non Hazardous Waste
Classified as **17 05 04**
in the European Waste Catalogue

Sample details

Sample Name:	EWC Code:
TP12	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.2 m	
Moisture content: 21% (dry weight correction)	

Hazard properties

None identified

Determinands (Moisture content: 21%, dry weight correction)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Arsenic trioxide: (Cation conc. entered: 17 mg/kg, converted to compound conc.:18.55 mg/kg or 0.00186%)
 Benzo[a]anthracene: (Whole conc. entered as: 0.23 mg/kg or 0.000019%)
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.33 mg/kg or 0.0000273%)
 Benzo[b]fluoranthene: (Whole conc. entered as: 0.46 mg/kg or 0.000038%)
 Benzo[ghi]perylene: (Whole conc. entered as: 0.24 mg/kg or 0.0000198%)
 Benzo[k]fluoranthene: (Whole conc. entered as: 0.31 mg/kg or 0.0000256%)
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: 0.96 mg/kg, converted to compound conc.:10.655 mg/kg or 0.00107%)
 Cadmium sulphide: (Cation conc. entered: 0.27 mg/kg, converted to compound conc.:0.287 mg/kg or 0.0000287%, Note 1 conc.: 0.0000223%)
 Chromium(III) oxide: (Cation conc. entered: 52 mg/kg, converted to compound conc.:62.811 mg/kg or 0.00628%)
 Chrysene: (Whole conc. entered as: 0.31 mg/kg or 0.0000256%)
 Copper (I) oxide: (Cation conc. entered: 32 mg/kg, converted to compound conc.:29.776 mg/kg or 0.00298%)
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <0.5 mg/kg or <0.0000413%) **IGNORED Because: "<LOD"**
 Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Fluoranthene: (Whole conc. entered as: 0.78 mg/kg or 0.0000645%)
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Indeno[123-cd]pyrene: (Whole conc. entered as: 0.23 mg/kg or 0.000019%)
 Lead chromate: (Cation conc. entered: 100 mg/kg, converted to compound conc.:128.91 mg/kg or 0.0129%, Note 1 conc.: 0.00826%)
 Mercury dichloride: (Cation conc. entered: 0.23 mg/kg, converted to compound conc.:0.257 mg/kg or 0.0000257%)
 Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Nickel dihydroxide: (Cation conc. entered: 21 mg/kg, converted to compound conc.:27.413 mg/kg or 0.00274%)
 pH: (Whole conc. entered as: 7.6 pH, converted to conc.:7.6 pH or 7.6 pH)
 Phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: 0.59 mg/kg, converted to compound conc.:0.731 mg/kg or 0.0000731%)
 Zinc chromate: (Cation conc. entered: 88 mg/kg, converted to compound conc.:201.756 mg/kg or 0.0202%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." , used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Cadmium sulphide"

Determinand notes

Note 1 , used on:

determinand: "Cadmium sulphide"
determinand: "Lead chromate"

Note A , used on:

determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"
determinand: "Zinc chromate"

Classification of sample: CP01



Non Hazardous Waste
Classified as **17 05 04**
in the European Waste Catalogue

Sample details

Sample Name:	EWC Code:
CP01	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.5 m	
Moisture content: 13% (dry weight correction)	

Hazard properties

None identified

Determinands (Moisture content: 13%, dry weight correction)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00000885%) **IGNORED Because: "<LOD"**
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00000885%) **IGNORED Because: "<LOD"**
 Anthracene: (Whole conc. entered as: 0.23 mg/kg or 0.0000204%)
 Arsenic trioxide: (Cation conc. entered: 22 mg/kg, converted to compound conc.:25.705 mg/kg or 0.00257%)
 Benzo[a]anthracene: (Whole conc. entered as: 0.49 mg/kg or 0.0000434%)
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00000885%) **IGNORED Because: "<LOD"**
 Benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00000885%) **IGNORED Because: "<LOD"**
 Benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00000885%) **IGNORED Because: "<LOD"**
 Benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00000885%) **IGNORED Because: "<LOD"**
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: 3.4 mg/kg, converted to compound conc.:40.409 mg/kg or 0.00404%)
 Cadmium sulphide: (Cation conc. entered: 0.45 mg/kg, converted to compound conc.:0.512 mg/kg or 0.0000512%, Note 1 conc.: 0.0000398%)
 Chromium(III) oxide: (Cation conc. entered: 51 mg/kg, converted to compound conc.:65.964 mg/kg or 0.0066%)
 Chrysene: (Whole conc. entered as: 0.26 mg/kg or 0.000023%)
 Copper (I) oxide: (Cation conc. entered: 19 mg/kg, converted to compound conc.:18.931 mg/kg or 0.00189%)
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <0.5 mg/kg or <0.0000442%) **IGNORED Because: "<LOD"**
 Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00000885%) **IGNORED Because: "<LOD"**
 Fluoranthene: (Whole conc. entered as: 1.8 mg/kg or 0.000159%)
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00000885%) **IGNORED Because: "<LOD"**
 Indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00000885%) **IGNORED Because: "<LOD"**
 Lead chromate: (Cation conc. entered: 580 mg/kg, converted to compound conc.:800.613 mg/kg or 0.0801%, Note 1 conc.: 0.0513%)
 Mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.12 mg/kg or <0.000012%) **IGNORED Because: "<LOD"**
 Naphthalene: (Whole conc. entered as: 0.36 mg/kg or 0.0000319%)
 Nickel dihydroxide: (Cation conc. entered: 29 mg/kg, converted to compound conc.:40.536 mg/kg or 0.00405%)
 pH: (Whole conc. entered as: 10 pH, converted to conc.:10 pH or 10 pH)
 Phenanthrene: (Whole conc. entered as: 0.94 mg/kg or 0.0000832%)
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.265 mg/kg or <0.0000265%) **IGNORED Because: "<LOD"**
 TPH (C6 to C40) Petroleum Group: (Whole conc. entered as: 120 mg/kg or 0.0106%)
 Zinc chromate: (Cation conc. entered: 140 mg/kg, converted to compound conc.:343.7 mg/kg or 0.0344%)

Test Settings

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: **Force this test to non hazardous because: "Significant contamination not identified. Free product not noted during sampling. Unlikley to be flammable."**

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." , used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Cadmium sulphide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[a]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Chromium(III) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Lead chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Naphthalene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Zinc chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "TPH (C6 to C40) Petroleum Group"

Note 1 , used on:

Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "Cadmium sulphide"
Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "Cadmium sulphide"
Test: "HP 6 on Acute Tox. 4; H302" for determinand: "Cadmium sulphide"
Test: "HP 7 on Carc. 1B; H350, Carc. 1A; H350, Carc. 1B; H350i, Carc. 1A; H350i" for determinand: "Cadmium sulphide"
Test: "HP 10 on Repr. 1A; H360, Repr. 1B; H360, Repr. 1B; H360F, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1B; H360D, Repr. 1B; H360FD, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1B; H360Fd, Repr. 1B; H360Df, Repr. 1A; H360Df" for determinand: "Lead chromate"
Test: "HP 10 on Repr. 2; H361, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "Cadmium sulphide"
Test: "HP 11 on Muta. 2; H341" for determinand: "Cadmium sulphide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Cadmium sulphide"

Determinand notes

3.4.2 , used on:

determinand: "TPH (C6 to C40) Petroleum Group"

Note 1 , used on:

determinand: "Cadmium sulphide"
determinand: "Lead chromate"

Note A , used on:

determinand: "Zinc chromate"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) Petroleum Group"

Classification of sample: CP04



Non Hazardous Waste
Classified as **17 05 04**
in the European Waste Catalogue

Sample details

Sample Name:	EWC Code:
CP04	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.25 m	
Moisture content: 21% (dry weight correction)	

Hazard properties

None identified

Determinands (Moisture content: 21%, dry weight correction)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Arsenic trioxide: (Cation conc. entered: 12 mg/kg, converted to compound conc.:13.094 mg/kg or 0.00131%)
 Benzo[a]anthracene: (Whole conc. entered as: 0.22 mg/kg or 0.0000182%)
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.66 mg/kg or 0.0000545%)
 Benzo[b]fluoranthene: (Whole conc. entered as: 0.38 mg/kg or 0.0000314%)
 Benzo[ghi]perylene: (Whole conc. entered as: 0.2 mg/kg or 0.0000165%)
 Benzo[k]fluoranthene: (Whole conc. entered as: 0.45 mg/kg or 0.0000372%)
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: 0.59 mg/kg, converted to compound conc.:6.549 mg/kg or 0.000655%)
 Cadmium sulphide: (Cation conc. entered: 0.22 mg/kg, converted to compound conc.:0.234 mg/kg or 0.0000234%, Note 1 conc.: 0.0000182%)
 Chromium(III) oxide: (Cation conc. entered: 51 mg/kg, converted to compound conc.:61.603 mg/kg or 0.00616%)
 Chrysene: (Whole conc. entered as: 0.5 mg/kg or 0.0000413%)
 Copper (I) oxide: (Cation conc. entered: 19 mg/kg, converted to compound conc.:17.679 mg/kg or 0.00177%)
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <0.5 mg/kg or <0.0000413%) **IGNORED Because: "<LOD"**
 Dibenz[a,h]anthracene: (Whole conc. entered as: 0.15 mg/kg or 0.0000124%)
 Fluoranthene: (Whole conc. entered as: 0.55 mg/kg or 0.0000455%)
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Indeno[123-cd]pyrene: (Whole conc. entered as: 0.19 mg/kg or 0.0000157%)
 Lead chromate: (Cation conc. entered: 67 mg/kg, converted to compound conc.:86.37 mg/kg or 0.00864%, Note 1 conc.: 0.00554%)
 Mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.112 mg/kg or <0.0000112%) **IGNORED Because: "<LOD"**
 Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Nickel dihydroxide: (Cation conc. entered: 19 mg/kg, converted to compound conc.:24.802 mg/kg or 0.00248%)
 pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH)
 Phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00000826%) **IGNORED Because: "<LOD"**
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: 0.67 mg/kg, converted to compound conc.:0.831 mg/kg or 0.0000831%)
 Zinc chromate: (Cation conc. entered: 110 mg/kg, converted to compound conc.:252.195 mg/kg or 0.0252%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." , used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Selenium compounds (with the exception of cadmium sulposelenide and sodium selenite)"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Cadmium sulphide"

Determinand notes

Note 1 , used on:

determinand: "Cadmium sulphide"
determinand: "Lead chromate"

Note A , used on:

determinand: "Selenium compounds (with the exception of cadmium sulposelenide and sodium selenite)"
determinand: "Zinc chromate"

Classification of sample: CP07



Non Hazardous Waste
Classified as **17 05 04**
in the European Waste Catalogue

Sample details

Sample Name:	EWC Code:
CP07	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.2 m	
Moisture content: 19% (dry weight correction)	

Hazard properties

None identified

Determinands (Moisture content: 19%, dry weight correction)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Arsenic trioxide: (Cation conc. entered: 11 mg/kg, converted to compound conc.:12.205 mg/kg or 0.00122%)
 Benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: 0.53 mg/kg, converted to compound conc.:5.981 mg/kg or 0.000598%)
 Cadmium sulphide: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.108 mg/kg or <0.0000108%, Note 1 conc.: <0.0000084%) **IGNORED Because: "<LOD"**
 Chromium(III) oxide: (Cation conc. entered: 40 mg/kg, converted to compound conc.:49.128 mg/kg or 0.00491%)
 Chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Copper (I) oxide: (Cation conc. entered: 14 mg/kg, converted to compound conc.:13.246 mg/kg or 0.00132%)
 Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Fluoranthene: (Whole conc. entered as: 0.19 mg/kg or 0.000016%)
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Lead chromate: (Cation conc. entered: 44 mg/kg, converted to compound conc.:57.674 mg/kg or 0.00577%, Note 1 conc.: 0.0037%)
 Mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.114 mg/kg or <0.0000114%) **IGNORED Because: "<LOD"**
 Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Nickel dihydroxide: (Cation conc. entered: 14 mg/kg, converted to compound conc.:18.582 mg/kg or 0.00186%)
 pH: (Whole conc. entered as: 6 pH, converted to conc.:6 pH or 6 pH)
 Phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.0000084%) **IGNORED Because: "<LOD"**
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: 0.56 mg/kg, converted to compound conc.:0.706 mg/kg or 0.0000706%)
 TPH (C6 to C40) Petroleum Group: (Whole conc. entered as: <10 mg/kg or <0.00084%) **IGNORED Because: "<LOD"**
 Zinc chromate: (Cation conc. entered: 68 mg/kg, converted to compound conc.:158.523 mg/kg or 0.0159%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." , used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Chromium(III) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"

Note 1 , used on:

Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "Lead chromate"

Test: "HP 7 on Carc. 1B; H350, Carc. 1A; H350, Carc. 1B; H350i, Carc. 1A; H350i" for determinand: "Lead chromate"

Test: "HP 10 on Repr. 1A; H360, Repr. 1B; H360, Repr. 1B; H360F, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1B; H360D, Repr. 1B; H360FD, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1B; H360Fd, Repr. 1B; H360Df, Repr. 1A; H360Df" for determinand: "Lead chromate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"

Determinand notes

Note 1 , used on:

determinand: "Lead chromate"

Note A , used on:

determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"

determinand: "Zinc chromate"

Classification of sample: CP09



Non Hazardous Waste
Classified as **17 05 04**
in the European Waste Catalogue

Sample details

Sample Name:	EWC Code:
CP09	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.3 m	
Moisture content: 18% (dry weight correction)	

Hazard properties

None identified

Determinands (Moisture content: 18%, dry weight correction)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00000847%) **IGNORED Because: "<LOD"**
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00000847%) **IGNORED Because: "<LOD"**
 Anthracene: (Whole conc. entered as: 0.21 mg/kg or 0.0000178%)
 Arsenic trioxide: (Cation conc. entered: 9.7 mg/kg, converted to compound conc.:10.854 mg/kg or 0.00109%)
 Benzo[a]anthracene: (Whole conc. entered as: 0.4 mg/kg or 0.0000339%)
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.64 mg/kg or 0.0000542%)
 Benzo[b]fluoranthene: (Whole conc. entered as: 0.51 mg/kg or 0.0000432%)
 Benzo[ghi]perylene: (Whole conc. entered as: 0.52 mg/kg or 0.0000441%)
 Benzo[k]fluoranthene: (Whole conc. entered as: 0.23 mg/kg or 0.0000195%)
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: 1.3 mg/kg, converted to compound conc.:14.796 mg/kg or 0.00148%)
 Cadmium sulphide: (Cation conc. entered: 0.2 mg/kg, converted to compound conc.:0.218 mg/kg or 0.0000218%, Note 1 conc.: 0.0000169%)
 Chromium(III) oxide: (Cation conc. entered: 33 mg/kg, converted to compound conc.:40.874 mg/kg or 0.00409%)
 Chrysene: (Whole conc. entered as: 0.78 mg/kg or 0.0000661%)
 Copper (I) oxide: (Cation conc. entered: 24 mg/kg, converted to compound conc.:22.899 mg/kg or 0.00229%)
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <0.5 mg/kg or <0.0000424%) **IGNORED Because: "<LOD"**
 Dibenz[a,h]anthracene: (Whole conc. entered as: 0.18 mg/kg or 0.0000153%)
 Fluoranthene: (Whole conc. entered as: 1.1 mg/kg or 0.0000932%)
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00000847%) **IGNORED Because: "<LOD"**
 Indeno[123-cd]pyrene: (Whole conc. entered as: 0.26 mg/kg or 0.000022%)
 Lead chromate: (Cation conc. entered: 78 mg/kg, converted to compound conc.:103.106 mg/kg or 0.0103%, Note 1 conc.: 0.00661%)
 Mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.115 mg/kg or <0.0000115%) **IGNORED Because: "<LOD"**
 Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00000847%) **IGNORED Because: "<LOD"**
 Nickel dihydroxide: (Cation conc. entered: 40 mg/kg, converted to compound conc.:53.542 mg/kg or 0.00535%)
 pH: (Whole conc. entered as: 8.4 pH, converted to conc.:8.4 pH or 8.4 pH)
 Phenanthrene: (Whole conc. entered as: 0.75 mg/kg or 0.0000636%)
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: 1 mg/kg, converted to compound conc.:1.271 mg/kg or 0.000127%)
 TPH (C6 to C40) Petroleum Group: (Whole conc. entered as: 18 mg/kg or 0.00153%)
 Zinc chromate: (Cation conc. entered: 140 mg/kg, converted to compound conc.:329.136 mg/kg or 0.0329%)

Test Settings

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: **Force this test to non hazardous because: "Significant contamination not identified. Free product not noted during sampling. Unlikley to be flammable."**

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." , used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Cadmium sulphide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[a]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Chromium(III) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Lead chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Zinc chromate"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "TPH (C6 to C40) Petroleum Group"

Note 1 , used on:

Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "Cadmium sulphide"
Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "Cadmium sulphide"
Test: "HP 6 on Acute Tox. 4; H302" for determinand: "Cadmium sulphide"
Test: "HP 7 on Carc. 1B; H350, Carc. 1A; H350, Carc. 1B; H350i, Carc. 1A; H350i" for determinand: "Cadmium sulphide"
Test: "HP 10 on Repr. 1A; H360, Repr. 1B; H360, Repr. 1B; H360F, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1B; H360D, Repr. 1B; H360FD, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1B; H360Fd, Repr. 1B; H360Df, Repr. 1A; H360Df" for determinand: "Lead chromate"
Test: "HP 10 on Repr. 2; H361, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "Cadmium sulphide"
Test: "HP 11 on Muta. 2; H341" for determinand: "Cadmium sulphide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "Cadmium sulphide"

Determinand notes

3.4.2 , used on:

determinand: "TPH (C6 to C40) Petroleum Group"

Note 1 , used on:

determinand: "Cadmium sulphide"
determinand: "Lead chromate"

Note A , used on:

determinand: "Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite)"
determinand: "Zinc chromate"

WM3: Unknown oil , used on:

determinand: "TPH (C6 to C40) Petroleum Group"

Classification of sample: CP03



Non Hazardous Waste
Classified as **17 05 04**
in the European Waste Catalogue

Sample details

Sample Name:	EWC Code:
CP03	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.3 m	
Moisture content: 14% (dry weight correction)	

Hazard properties

None identified

Determinands (Moisture content: 14%, dry weight correction)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00000877%) **IGNORED Because: "<LOD"**
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00000877%) **IGNORED Because: "<LOD"**
 Anthracene: (Whole conc. entered as: 0.52 mg/kg or 0.0000456%)
 Arsenic trioxide: (Cation conc. entered: 16 mg/kg, converted to compound conc.:18.531 mg/kg or 0.00185%)
 Benzo[a]anthracene: (Whole conc. entered as: 0.74 mg/kg or 0.0000649%)
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.88 mg/kg or 0.0000772%)
 Benzo[b]fluoranthene: (Whole conc. entered as: 1 mg/kg or 0.0000877%)
 Benzo[ghi]perylene: (Whole conc. entered as: 0.65 mg/kg or 0.000057%)
 Benzo[k]fluoranthene: (Whole conc. entered as: 0.52 mg/kg or 0.0000456%)
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: 1.5 mg/kg, converted to compound conc.:17.671 mg/kg or 0.00177%)
 Cadmium sulphide: (Cation conc. entered: 0.21 mg/kg, converted to compound conc.:0.237 mg/kg or 0.0000237%, Note 1 conc.: 0.0000184%)
 Chromium(III) oxide: (Cation conc. entered: 43 mg/kg, converted to compound conc.:55.129 mg/kg or 0.00551%)
 Chrysene: (Whole conc. entered as: 1.2 mg/kg or 0.000105%)
 Copper (I) oxide: (Cation conc. entered: 31 mg/kg, converted to compound conc.:30.616 mg/kg or 0.00306%)
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <0.5 mg/kg or <0.0000439%) **IGNORED Because: "<LOD"**
 Dibenz[a,h]anthracene: (Whole conc. entered as: 0.3 mg/kg or 0.0000263%)
 Fluoranthene: (Whole conc. entered as: 2.2 mg/kg or 0.000193%)
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00000877%) **IGNORED Because: "<LOD"**
 Indeno[123-cd]pyrene: (Whole conc. entered as: 0.58 mg/kg or 0.0000509%)
 Lead chromate: (Cation conc. entered: 870 mg/kg, converted to compound conc.:1190.385 mg/kg or 0.119%, Note 1 conc.: 0.0763%)
 Mercury dichloride: (Cation conc. entered: 0.22 mg/kg, converted to compound conc.:0.261 mg/kg or 0.0000261%)
 Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00000877%) **IGNORED Because: "<LOD"**
 Nickel dihydroxide: (Cation conc. entered: 34 mg/kg, converted to compound conc.:47.108 mg/kg or 0.00471%)
 pH: (Whole conc. entered as: 8.9 pH, converted to conc.:8.9 pH or 8.9 pH)
 Phenanthrene: (Whole conc. entered as: 1.9 mg/kg or 0.000167%)
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.263 mg/kg or <0.0000263%) **IGNORED Because: "<LOD"**
 Zinc chromate: (Cation conc. entered: 170 mg/kg, converted to compound conc.:413.689 mg/kg or 0.0414%)

Notes utilised in assessment

C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." , used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Anthracene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[a]anthracene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[a]pyrene; benzo[def]chrysene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[b]fluoranthene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[ghi]perylene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[k]fluoranthene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Chromium(III) oxide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Chrysene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Dibenz[a,h]anthracene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Fluoranthene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Mercury dichloride"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Phenanthrene"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Cadmium sulphide"

Note 1 , used on:

Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "Cadmium sulphide"
 Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "Cadmium sulphide"
 Test: "HP 6 on Acute Tox. 4; H302" for determinand: "Cadmium sulphide"
 Test: "HP 7 on Carc. 1B; H350, Carc. 1A; H350, Carc. 1B; H350i, Carc. 1A; H350i" for determinand: "Cadmium sulphide"
 Test: "HP 10 on Repr. 1A; H360, Repr. 1B; H360, Repr. 1B; H360F, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1B; H360D, Repr. 1B; H360FD, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1B; H360Fd, Repr. 1B; H360Df, Repr. 1A; H360Df" for determinand: "Lead chromate"
 Test: "HP 10 on Repr. 2; H361, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "Cadmium sulphide"
 Test: "HP 11 on Muta. 2; H341" for determinand: "Cadmium sulphide"
 Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"

Determinand notes

Note 1 , used on:

determinand: "Cadmium sulphide"
 determinand: "Lead chromate"

Note A , used on:

determinand: "Zinc chromate"

Appendix A: Classifier defined and non CLP determinands

Acenaphthene (CAS Number: 83-32-9)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=133563&HarmOnly=no>

Data source date: 16/07/2012

Risk Phrases: R36, R37, R38, N; R50/53, N; R51/53

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Aquatic Chronic 2; H411

Acenaphthylene (CAS Number: 208-96-8)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=59285&HarmOnly=no>

Data source date: 16/07/2012

Risk Phrases: R22, R26, R27, R36, R37, R38

Hazard Statements: Acute Tox. 4; H302, Acute Tox. 1; H330, Acute Tox. 1; H310, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315

Anthracene (CAS Number: 120-12-7)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=101102&HarmOnly=no>

Data source date: 08/03/2013

Risk Phrases: R36, R37, R38, R43, N; R50/53

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

Benzo[ghi]perylene (CAS Number: 191-24-2)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=15793&HarmOnly=no>

Data source date: 16/07/2012

Risk Phrases: N; R50/53

Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410

Boron tribromide/trichloride/trifluoride (combined risk phrases)

Comments: Combines the risk phrases and the average of the conversion factors for Boron tribromide, Boron trichloride and Boron trifluoride

Data source: N/A

Data source date: 10/01/2011

Risk Phrases: T+; R26/28, C; R34, C; R35, R14

Hazard Statements: EUH014, Acute Tox. 2; H300, Acute Tox. 2; H330, Skin Corr. 1A; H314, Skin Corr. 1B; H314

Chromium(III) oxide (CAS Number: 1308-38-9)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

[http://clp-](http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=33806&HarmOnly=no?fc=true&lang=en)

[inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=33806&HarmOnly=no?fc=true&lang=en](http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=33806&HarmOnly=no?fc=true&lang=en)

Data source date: 26/11/2012

Risk Phrases: R20, R22, R36, R37, R38, R42, R43, R60, R61, R50/53

Hazard Statements: Acute Tox. 4; H302, Acute Tox. 4; H332, Skin Irrit. 2; H315, Eye Irrit. 2; H319, Resp. Sens. 1; H334, Skin Sens. 1; H317, Repr. 1B; H360FD, STOT SE 3; H335, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

Fluoranthene (CAS Number: 206-44-0)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=56375&HarmOnly=no>

Data source date: 16/07/2012

Risk Phrases: R20, R22, R36, N; R50/53

Hazard Statements: Acute Tox. 4; H302, Acute Tox. 4; H332, Eye Irrit. 2; H319, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

Fluorene (CAS Number: 86-73-7)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=81845&HarmOnly=no>

Data source date: 16/07/2012

Risk Phrases: N; R50/53, R53

Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Aquatic Chronic 4; H413

Indeno[123-cd]pyrene (CAS Number: 193-39-5)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=128806&HarmOnly=no>

Data source date: 08/03/2013

Risk Phrases: R40

Hazard Statements: Carc. 2; H351

pH

Comments: Appendix C, C4.5

Data source: WM2 - Interpretation of the definition and classification of hazardous waste (Second Edition, version2.2), Environment Agency

Data source date: 30/05/2008

Risk Phrases: None.

Hazard Statements: None.

Phenanthrene (CAS Number: 85-01-8)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=109754&HarmOnly=no>

Data source date: 16/07/2012

Risk Phrases: R22, R36, R37, R38, R40, R43, N; R50/53

Hazard Statements: Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Carc. 2; H351, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Skin Irrit. 2; H315

TPH (C6 to C40) Petroleum Group

Comments: Risk phrase data given on page A41

Data source: WM2 3rd edition, 2013

Data source date: 01/08/2013

Risk Phrases: R10, R45, R46, R51/53, R63, R65

Hazard Statements: Flam. Liq. 3; H226, Asp. Tox. 1; H304, STOT RE 2; H373, Muta. 1B; H340, Carc. 1B; H350, Repr. 2; H361d, Aquatic Chronic 2; H411

Appendix B: Notes

3.4.2

from section: 3.4.2 in the document: "[WM2 - Hazardous Waste Technical Guidance](#)"

"If the identity of the oil is unknown, and the petroleum group cannot be established, then the oil contaminating the waste can be classified as non-carcinogenic due to the presence of oil if all three of the following criteria are met:

- the waste contains benzo[a]pyrene (BaP) at a concentration of less than 0.01% (1/10,000th) of the TPH concentration (This is the carcinogenic limit specified in table 3.2 of the CLP for BaP)
- this has been determined by an appropriate and representative sampling approach in accordance with the principles set out in Appendix D, and
- the analysis clearly demonstrates, for example by carbon bands or chromatograph, and the laboratory has reasonably concluded that the hydrocarbons present have not arisen from petrol or diesel

"

C14: Step 5

from section: WM3: C14 in the document: "[WM3 - Waste Classification](#)"

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..."

Note 1

from section: 1.1.3.2, Annex VI in the document: "[CLP Regulations](#)"

"The concentration stated or, in the absence of such concentrations, the generic concentrations of this Regulation (Table 3.1) or the generic concentrations of Directive 1999/45/EC (Table 3.2), are the percentages by weight of the metallic element calculated with reference to the total weight of the mixture."

Note A

from section: 1.1.3.1, Annex VI in the document: "[CLP Regulations](#)"

"Without prejudice to Article 17(2), the name of the substance must appear on the label in the form of one of the designations given in Part 3. In Part 3, use is sometimes made of a general description such as '... compounds' or '... salts'. In this case, the supplier is required to state on the label the correct name, due account being taken of section 1.1.1.4."

WM3: Unknown oil

from section: Chapter 3: 4. Waste oils and other wastes containing or contaminated with oil in the document: "[WM3 - Waste Classification](#)"

"If the identity of the oil is unknown, and the petroleum group cannot be established, then the oil contaminating the waste can be classified as non-carcinogenic due to the presence of oil if all three of the following criteria are met:

- the waste contains **benzo[a]pyrene (BaP)** at a concentration of less than 0.01% (1/10,000th) of the TPH concentration (This is the carcinogenic limit specified in table 3.2 of the CLP for BaP)
- this has been determined by an appropriate and representative sampling approach in accordance with the principles set out in Appendix D, and
- the analysis clearly demonstrates, for example by carbon bands or chromatograph, and the laboratory has reasonably concluded that the hydrocarbons present have not arisen from petrol or diesel

"

Appendix C: Version

Classification utilises the following:

- **CLP Regulations - Regulation (EC) No 1272/2008 of 16 December 2008**
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- **1st ATP - Regulation (EC) No 790/2009 of 10 August 2009**
COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **2nd ATP - Regulation (EC) No 286/2011 of 10 March 2011**
COMMISSION REGULATION (EU) No 286/2011 of 10 March 2011 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **3rd ATP - Regulation (EU) No 618/2012 of 10 July 2012**
COMMISSION REGULATION (EU) No 618/2012 of 10 July 2012 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **4th ATP - Regulation (EU) No 487/2013 of 8 May 2013**
COMMISSION REGULATION (EU) No 487/2013 of 8 May 2013 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **Correction to 1st ATP - Regulation (EU) No 758/2013 of 7 August 2013**
COMMISSION REGULATION (EU) No 758/2013 of 7 August 2013 correcting Annex VI to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **5th ATP - Regulation (EU) No 944/2013 of 2 October 2013**
COMMISSION REGULATION (EU) No 944/2013 of 2 October 2013 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **6th ATP - Regulation (EU) No 605/2014 of 5 June 2014**
COMMISSION REGULATION (EU) No 605/2014 of 5 June 2014 amending, for the purposes of introducing hazard and precautionary statements in the Croatian language and its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **WFD Annex III replacement - Regulation (EU) No 1357/2014 of 18 December 2014**
COMMISSION REGULATION (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives
- **Revised List of Wastes 2014 - Decision (EU) No 955/2014 of 18 December 2014**
COMMISSION DECISION of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council (2014/955/EU)
- **WM3 - Waste Classification - May 2015**
Technical Guidance WM3 - Guidance on the classification and assessment of waste (1st edition 2015)
- **POPs Regulation 2004 - Regulation (EC) No 850/2004 of 29 April 2004**
REGULATION (EC) No 850/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC
- **1st ATP to POPs Regulation - Regulation (EU) No 756/2010 of 24 August 2010**
COMMISSION REGULATION (EU) No 756/2010 of 24 August 2010 amending Regulation (EC) No 850/2004 of the European Parliament and of the Council on persistent organic pollutants as regards Annexes IV and V
- **2nd ATP to POPs Regulation - Regulation (EU) No 757/2010 of 24 August 2010**
COMMISSION REGULATION (EU) No 757/2010 of 24 August 2010 amending Regulation (EC) No 850/2004 of the European Parliament and of the Council on persistent organic pollutants as regards Annexes I and III

HazWasteOnline Engine: WM3 1st Edition, May 2015

HazWasteOnline Engine Version: 2015.149.2815.5763 (29 May 2015)

HazWasteOnline Database: 2015.149.2815.5763 (29 May 2015)

Preliminary Risk Assessment, Former Master Brewer,
Hillingdon, dated August 2017, by Delta-Simons
Environmental Consultants Limited (Reference: 17-0420.01
V2)



Preliminary Risk Assessment

Former Master Brewer, Hillingdon

For Meyer Homes

Delta-Simons Project No. 17-0420.01 V2

Issued: August 2017

PRELIMINARY RISK ASSESSMENT SUMMARY TABLE
FORMER MASTER BREWER, HILLINGDON
DELTA-SIMONS PROJECT NO. 17-0420.01 V2

Context and Purpose	The purpose of this Report is to provide a desk based environmental review in advance of a proposed planning application for the Site.
Current Site Use	The Site is currently vacant with previous buildings having been demolished. There are two main stockpiles of surplus demolition rubble in the central portion of the Site and security bunds near the entrance.
Proposed Redevelopment	The proposed development will comprise construction of a residential-led, mixed-use development comprising buildings between 4 and 9 storeys to provide 377 residential units (Use Class C3); employment floor space (Use Classes B1(a-c)); flexible commercial floor space (Use Classes A1/A3); associated car and cycle parking, hard and soft landscaping, plant and other associated ancillary development.
Environmental Setting	The Site is located within a mixed commercial/residential area. The superficial London Clay Formation is classified as Unproductive Strata. The Woolwich and Reading Beds are classified as a Secondary A Aquifer and the Seaford Chalk and Newhaven Chalk Formation are classified as a Principle Aquifer. The closest groundwater abstraction license is approximately 960 m north-west of the Site relating to make-up or top-up water. The overall environmental sensitivity of the Site setting is considered to be low to moderate.
Flood Risk	EA mapping indicates that the Site is not situated in an area associated with flood risk from fluvial or tidal sources, however, the Site may be at risk from surface water flooding.
Historical Information	<p>The earliest available map of 1866 shows the whole Site to be undeveloped and, except for a public house being built in the south-western corner of the Site circa 1938, the Site remains undeveloped until circa 1975 when a motel is built across the Site. By circa 1979, a small covered reservoir and tank are shown adjacent to the southern boundary of the Site. The Site remained unchanged until the demolition of the motel in 2009. It is unclear whether the covered reservoir remains present after this.</p> <p>Limited potential off-Site sources of contamination include a railway line and sidings, coal yard, unspecified works, garage, depot, warehouse and dry cleaners.</p>
Groundsure[®] Report Summary	From regulatory information listed in the Groundsure [®] Report, one entry relates to a tank (generic) on-Site, assumed to be associated with the covered reservoir in the west of the Site. Nearby entries include a dry cleaner, electricity sub-stations, car sales and construction plant.
Previous Investigation Data	<p>A previous intrusive investigation undertaken by Delta-Simons in 2015 concluded that;</p> <ul style="list-style-type: none"> Δ Elevated concentrations of contaminants have not been identified in soil and groundwater collected from across the Site; Δ Elevated concentration of sulphur has been identified in groundwater, likely to be associated with pyritic ground conditions; and Δ The Site is classified as Characterisation Situation 1, as such ground gas protection measures would not be required.
Conceptual Site Model	<p>Delta-Simons has completed a source-pathway-receptor risk assessment based upon available information. Potential sources of contamination have been identified, primarily associated with the presence of Made Ground on-Site.</p> <p>Previous Delta-Simons investigation information has indicated that significant widespread contamination is not present across the Site. Limited potential historical off-Site sources of contamination have been identified; however, these are not considered to represent a significant risk to the Site, given the distance from Site and absence of detectable significant contamination.</p> <p>Considering the proposed residential-led use of the Site, the historic commercial/industrial use of the Site and the presence of existing contamination, the overall risks posed to Human Health or controlled waters are considered to be low.</p>

	Any potential risks can be addressed by appropriate mitigation measures through the development process.
Conclusions and Recommendations	<p>Measures to mitigate against the identified potential pollutant linkages include:</p> <ul style="list-style-type: none"> Δ A clean cover soil system should be installed in any soft landscaped areas, to a minimum depth of 450 mm thickness; Δ Consultation should be sought with the relevant local Water Authority as to whether they will require upgraded pipework to be installed for new service installations; Δ Suitable dust suppression techniques will need to be implemented by groundworkers during construction and demolition works; Δ Additional, unidentified localised areas of contamination may exist at the Site and an appropriate 'hotspot' protocol should be in place for groundworkers to act upon should such contamination be identified during the construction process; and Δ Groundworkers should be made aware of the potential for encountering contamination across the Site, and appropriate personal protective equipment (PPE), appropriate standards of personal hygiene and safe methods of working should be adopted to mitigate the potential risks.
<i>This sheet is intended as a summary only. Further detail and limitations of the assessment is provided within the main body of the Report.</i>	

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Appendix IV	Previous Report: Delta Simons Phase I Environmental Assessment, March 2015
Appendix V	Previous Report: Delta Simons Combined Phase I/II Environmental Assessment, June 2015

**PRELIMINARY RISK ASSESSMENT
FORMER MASTER BREWER, HILLINGDON
FOR MEYER HOMES LIMITED
DELTA-SIMONS PROJECT NO. 17-0420.01 V2**

1.0 INTRODUCTION

1.1 Authorisation

Delta-Simons Environmental Consultants Limited ("Delta-Simons") was instructed by Meyer Homes (the "Client") to carry out a Preliminary Risk Assessment of land at the former Master Brewer, Hillingdon (hereafter referred to as the "Site").

1.2 Context & Purpose

The purpose of this Report is to provide a desk based environmental review in advance of a proposed planning application for the Site.

The principal aims of a Preliminary Risk Assessment, as stated in British Standard BS10175:2011+A1:2013 are to obtain information in order to:

- Δ Evaluate the environmental setting of the Site and to identify sensitive receptors;
- Δ Provide information from which possible contaminant-pathway-receptor relationships can be identified; and
- Δ Formulate a Conceptual Site Model (CSM) to consider the significance of the contaminant-pathway-receptor relationships and identify whether further investigation is required.

This Report adheres to these principal aims and has been undertaken in accordance with current relevant guidance and best practice as set out within Contaminated Land Report (CLR) 11.

1.3 Scope of Works

The scope of works for the Environmental Review is presented in Table 1.

Table 1 - Scope of Works

Data Collection	<ol style="list-style-type: none"> 1. Review of Environmental Setting: <ol style="list-style-type: none"> a. Review current use/status of Site; and b. Review geology, hydrogeology, hydrology and environmental sensitivity of Site; 2. Review Site history from historical ordnance survey (OS) maps obtained from Landmark Information Group®; 3. Review regulatory information relating to the Site obtained from a Groundsure® Report; 4. Review previous reports for the Site; 5. Review information obtained from the Contaminated Land Officer (CLO); 6. Review planning information for the proposed development of the Site, if available;
Interpretation & Reporting	<ol style="list-style-type: none"> 7. Formulate an initial CSM by identifying potential contamination sources, pathways and receptors, in the context of the proposed residential use of the Site; 8. Undertake a qualitative risk assessment; and 9. Prepare final Report.

1.4 Data Sources & Third Party Information

In completing this Assessment, Delta-Simons has utilised the following information:

- △ Online British Geological Survey (BGS) and Environment Agency (EA) data;
- △ OS maps obtained from the Landmark Information Group, dated November 2014;
- △ Ground Sure® Report, dated November 2014;
- △ Phase I Initial Environmental Review, Master Brewer, Hillingdon, dated November 2014, by Delta Simons Environmental Consultants Limited (Reference: 14-0724.01);
- △ Phase I Environmental Assessment, Master Brewer Site, Hillingdon, dated March 2015, by Delta Simons Environmental Consultants Limited (Reference: 14-0724.02);
- △ Combined Phase I/II Environmental Assessment, Former Master Brewer, Hillingdon, dated June 2015, by Delta-Simons Environmental Consultants Limited (Reference: 14-0724.01_E); and
- △ Information provided by the Client.

1.5 Limitations

This Report provides an assessment of the potential contamination status, ground conditions and a preliminary flood risk assessment of the Site based upon the available information. Although produced in accordance with the principles of BS10175:2011+A1:2013 in relation to a *Preliminary Investigation*, the Report does not constitute an archaeological or ecological assessment, nor does it constitute an asbestos inspection.

Delta-Simons obtained, reviewed and evaluated information in preparing this Report from the Client, Landmark Information Group, and others. Delta-Simons' conclusions, opinions and recommendations have been determined using this information. Delta-Simons does not warrant the accuracy of the information provided to it and will not be responsible for any opinions that Delta-Simons has expressed, or conclusions which it has reached in reliance upon information which is subsequently proven to be inaccurate.

2.0 SITE DESCRIPTION AND ENVIRONMENTAL SETTING

2.1 Site Details

Table 2 - Site Details

National Grid Reference (NGR)	The Site is centred on the approximate NGR 507770, 184905.
General Site Location	<p>The Site is located on Freezeland Way in Uxbridge, London, approximately 2.1 km east-north-east of Uxbridge town centre and the A40 is located to the north of the Site. The Site occupies an area of approximately 2.48 ha.</p> <p>A Site location map is provided as Figure 1.</p>
Site Description	<p>The Site is vacant following the demolition of a motel, which formerly comprised a main accommodation building, a reception building, and a staff accommodation building, with surrounding hardstanding and landscaping. There are two main stockpiles of surplus demolition rubble in the central portion of the Site and security bunds made of the demolition rubble near the entrance.</p> <p>A Site Layout Plan is provided in Figure 2.</p>
Surrounding Land Uses	The Site is located within a mixed commercial/residential area. Immediately adjacent to the south is Freezeland Way and Western Avenue, with mixed retail and residential properties. To the north of the Site is the A40, and to the west is Long Lane, beyond which is Hillingdon Rail Station. To the east and north of the Site is undeveloped land.
Proposed Development	<p>The proposed development will comprise construction of a residential-led, mixed-use development comprising buildings between 4 and 9 storeys to provide 377 residential units (Use Class C3); employment floor space (Use Classes B1(a-c)); flexible commercial floor space (Use Classes A1/A3); associated car and cycle parking, hard and soft landscaping, plant and other associated ancillary development.</p> <p>A proposed development layout plan is presented in Figure 3.</p>
Geology	<p>From British Geological Survey (BGS) online data, it is understood that the Site is directly underlain by the London Clay Formation, which is underlain by the Woolwich and Reading Beds of the Lambeth Group, followed by the Seaford Chalk and Newhaven Chalk Formation (undifferentiated).</p> <p>Site investigation reports identified Made Ground in two forms – Topsoil and/ or sandy gravel extending to a maximum depth of 0.90 m bgl. London Clay was encountered to a maximum depth range of 1.70 – 3.50 m bgl. The Upper Mottled Beds of the Woolwich and Reading Beds were encountered to a depth of between 9.50 and 16.20 m bgl. The Laminated Beds of the Woolwich and Reading Beds were proven to a maximum depth of 20.0 m bgl at six locations.</p> <p>Observations recorded during the Delta Simons 2015 investigations showed no significant evidence of contamination during the intrusive works.</p>
Hydrogeology	<p>The Site is within an area classified as Unproductive Strata with respect to the London Clay Formation. The Woolwich and Reading Beds are classified as a Secondary A Aquifer and the Seaford Chalk and Newhaven Chalk Formation is classified as a Principal Aquifer.</p> <p>From information provided within the Groundsure® Report, there is one groundwater abstraction within 1 km of the Site relating to make-up or top-up water, located approximately 960 m north-west of the Site.</p>

	<p>Resting groundwater levels recorded during the Delta-Simons 2015 investigation were between 0.32 m bgl and 2.36 m bgl.</p> <p>The Site is not located within or close to a Groundwater Source Protection Zone (SPZ).</p>
Surface Water Features	<p>The nearest surface water feature is a pond, located approximately 320 m to the east of the Site. Beyond this, the nearest flowing surface water features are the Yeading Brook “west arm” located approximately 530 m to the east and the River Pinn, located approximately 720 m to the west of the Site.</p> <p>There are no surface water abstractions located within 1 km of the Site.</p>
Flood Risk	EA mapping indicates that the Site is not situated in an area associated with flood risk from fluvial or tidal sources, however, the Site may be at risk from surface water flooding.
Coal	The Site is not located within an area that is likely to be affected by coal mining activity.
Radon	The Site lies within an area where less than 1% of homes are above the National Radiological Protection Boars (NRPB) recommended “action level” for radon. The Site is not located within an area where radon protection measures are necessary in the construction of new buildings.
Environmental Sensitivity	Based on the above, the environmental sensitivity of the Site’s setting is considered to be low to moderate.
Historical Map Review	The historical development of the Site has been assessed through a review of available historical Ordnance Survey maps dating from 1868 to 2014. A summary of the key historical Site uses and developments in the surrounding area is presented below and a copy of the historical maps is included as Appendix I.
Site	The earliest available map of 1866 shows the whole Site to be undeveloped and, except for a public house being built in the south-western corner of the Site circa 1938, the Site remains undeveloped until circa 1975 when a motel is built across the Site. By circa 1979, a small covered reservoir and tank are shown adjacent to the southern boundary of the Site. The Site remained unchanged until the demolition of the motel in 2009. It is unclear whether the covered reservoir remains present after this.
Surrounding Area	<p>The Site is shown to be in an agricultural setting from the earliest available map of 1866 until circa 1935. Key historical developments and potential sources of contamination in the close vicinity (250 m) of the Site include:</p> <ul style="list-style-type: none"> Δ A railway is present, approximately 100 m north-west, from circa 1896 until present day; Δ Railway sidings are present, approximately 150 m north-west from circa 1935 until circa 1970; Δ A coal yard is present, approximately 150 m north-west, associated with the railway sidings, from circa 1962 until circa 1970; Δ A works is present, approximately 75 m west of the Site, from circa 1962 until circa 2002; Δ A garage is present, located approximately 80 m to the southwest, from circa 1962 until present day; Δ A builders yard is present, located approximately 120 m southwest, from circa 1962 until 1992; Δ A depot is present from circa 1962 until present day, located approximately 200 m to the south-west; and

	<p>Δ A warehouse is present from circa 1962 until 1979, located approximately 200 m to the south-west, adjacent to the depot.</p>
GroundSure® Report	<p>The Groundsure® Report provides a database of environmental information held by various statutory bodies including the EA, Local Authority (LA), Health & Safety Executive (HSE), Health Protection Agency (HPA) and the Coal Authority. A copy of the Groundsure Report, provided by the Client, dated November 2014 is included as Appendix II.</p> <p>Pertinent records of the Site and the immediate surrounding area are included below:</p> <p><u>Waste Activities</u></p> <p>Δ <i>Historical Landfill Sites</i>: One record is located approximately 370 m east (ref. HIL062 DL413) relating to a historical landfill site, for inert materials. The license was issued in 1992 and surrendered in 1994. Given the distance from the Site the risk from this record to the Site is considered low.</p> <p><u>Industrial Land Use</u></p> <p>Δ <i>Discharge Consents</i>: There are two permitted discharge consents located 75 m south-west of the Site, both of which relate to sewage discharges – pumping. One consent was revoked in 2010 and the other has no revocation date. These are considered to represent off-Site sources of contamination;</p> <p>Δ <i>Part A(2) and Part B Activities and Enforcements</i>: One record is listed relating to a dry cleaners, located approximately 90 m south-west of the Site. This record is considered to represent a potential risk of contamination to the Site, however, the risk is considered low; and</p> <p>Δ <i>Current Land Use</i>: One entry relates to a tank (generic) on-Site, assumed to be associated with the covered reservoir in the south-west of the Site. A number of active entries are located in close proximity to the Site include: car sales, construction plant, electricity sub-stations and printing related machinery.</p> <p>Given these records are all listed within 250 m of the Site these are considered to represent potential off-Site sources of contamination, however, the risk is considered low.</p>
Previous Reports	<p>Delta-Simons has reviewed the following reports previously completed relating to the Site:</p> <p><u>Phase I Initial Environmental Review, Master Brewer, Hillingdon, dated November 2014, by Delta Simons Environmental Consultants Limited (Reference: 14-0724.01).</u></p> <p>Within this review, the following historical Phase I Assessments were reviewed:</p> <p>Δ Phase I Contamination Audit, Master Brewers Hotel, Ref: JAS3363, RPS Group Plc, September 2004 and;</p> <p>Δ Environmental Statement (Volume 1), Master Brewer, Hillingdon, London, Cushman & Wakefield Inc, October 2005.</p> <p>The report recommended that a limited environmental assessment be completed in conjunction with geotechnical investigation works, to include ground gas assessment be carried out.</p>

Phase I Environmental Assessment, Master Brewer Site, Hillingdon, dated March 2015, by Delta Simons Environmental Consultants Limited (Reference: 14-0724.02);

The Phase I Environmental Assessment concluded that (for a residential development);

- Δ No current or historical land use associated with potentially significant contamination sources have been identified at the Site;
- Δ Limited potential historical off-Site sources of contamination have been identified, however, due to the distance to these sources, these are not considered to represent a significant risk to the Site; and
- Δ Given the current use of the Site which is predominantly covered by the hardstanding, the potential risks to Human Health or controlled waters are considered to be low, however, the potential risks based for the proposed use are considered to be low to moderate.

The Assessment further concluded that;

- Δ There is a Low risk of enforcement action at the Site, for its proposed use (residential);
- Δ Potential for legal action by surrounding landowners based on the potential for contamination to migrate off-Site is considered to be Low;
- Δ Delta-Simons considers there to be a Low to Moderate risk of impact on the value of the Site from significant contamination issues; and
- Δ On the basis of available information, Delta-Simons considers that with regard to potential soil and groundwater contamination issues and associated environmental liabilities, for its proposed use, the Site represents an investment opportunity with a Low to Moderate overall risk status.

Combined Phase I/II Environmental Assessment, Former Master Brewer, Hillingdon, dated June 2015, by Delta-Simons Environmental Consultants Limited (Reference: 14-0724.01 E)

The Combined Phase I/II Environmental Assessment proposed the following recommendations and development abnormalities (for a mixed-use residential led development);

- Δ Additional, unidentified localised areas of contamination may exist at the Site and an appropriate 'hotspot' protocol should be in place for groundworkers to act upon should such contamination be identified during the construction process;
- Δ From the recorded ground gas monitoring results, the Site was determined to be a Characteristic Situation 1 (CS1). As such no ground gas protection measures would be required for the proposed development;
- Δ Groundworkers who are required to perform sub-surface work at the Site should be made aware of the known contaminants in soil and groundwater and the possibility of encountering additional localised low levels of contamination. Therefore, good standards of personal hygiene should be observed and appropriate levels of

	<p>PPE utilised where necessary;</p> <ul style="list-style-type: none">Δ Suitable dust suppression techniques will need to be implemented by groundworkers during construction and demolition works;Δ Confirmation should be sought from the Local Water Authority as to whether they will require upgraded pipework to be installed for new service installations;Δ It is recommended that a minimum 600 mm of certified suitable for use top soil and subsoil overlying should be incorporated into all new landscaped areas; andΔ Elevated costs above standard inert rates (non-hazardous) should be anticipated for disposal of engineering arisings from the Made Ground to include landfill tax, currently at a rate of £82.60/tonne. Additional waste classification testing (including WAC testing) is likely to be required to facilitate off-Site disposal of Made Ground materials. <p>The relevant environmental reports completed by Delta-Simons have been included as Appendices III-V respectively.</p>
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3.0 CONCEPTUAL SITE MODEL

3.1 Introduction

A CSM represents the relationships between contaminant sources, pathways and receptors, to support the identification and assessment of Potential Pollutant Linkages (PPLs) - and an assessment of known pollutant linkages, where identified from existing information.

Where PPLs are identified, a preliminary risk assessment is carried out to assess the likelihood that each possible linkage exists and to decide whether these pose potentially unacceptable risks to identified receptors and require further assessment. Where this linkage is of a form that subsequently leads to land being identified as 'contaminated land' under the terms of Part 2A of the Environmental Protection Act (EPA) 1990, the linkage is termed a significant pollutant linkage.

At the preliminary risk assessment stage, which is usually based upon desk top information, the decision on whether a PPL poses a potentially unacceptable risk is based upon professional judgement. The significance of the PPL will also be determined dependant on the context of the land use and the purpose of the assessment.

Assessing risks from land contamination underpins the "suitable for use" approach adopted for Part 2A of the EPA 1990 regulatory regime and National Planning Policy Framework (NPPF).

3.2 Conceptual Model

3.2.1 Summary of Site Description & Environmental Setting

The Site is located within a mixed commercial and residential setting and comprises a vacant Site with rubble stockpiles on the Site following demolition. The Site was formerly primarily developed as a motel from circa 1975 to 2010.

The Site is directly underlain by Made Ground and the London Clay Formation, which is underlain by the Woolwich and Reading Beds of the Lambeth Group, followed by the Seaford Chalk and Newhaven Chalk Formation.

The Site is within an area classified as Unproductive Strata with respect to the London Clay Formation. The Woolwich and Reading Beds are classified as a

Secondary A Aquifer and the Seaford Chalk and Newhaven Chalk Formation is classified as a Principal Aquifer.

The overall environmental sensitivity of the Site setting is considered to be low to moderate.

3.2.2 Contaminant Sources

A CSM has been developed for the Site. Tables 3 and 4 show the identified on-Site and off-Site potential sources of contamination.

Table 3 – Identified On-Site Contamination Sources

Potential Source Area	Key Potential Contaminants/Comments
Made Ground located at the Site.	Lead, Selenium and Sulphate have been identified at concentrations exceeding screening values during previous investigation works and Heavy metals, TPH and PAHs have been identified above detection levels.

Table 4 – Identified Off-Site Contamination Sources

Potential Source Area	Key Potential Contaminants/Comments
Surrounding historical localised commercial/ light industrial land use.	Heavy metals, hydrocarbons, PAHs, VOCs, asbestos and ground gas.

3.2.3 Potential Receptors

Potential receptors to any contamination which may be present in the Site area are identified as follows:

- Δ Future Site residents, workers and visitors;
- Δ Construction workers during the redevelopment of the Site;
- Δ Groundwater located beneath the Site within the Woolwich and Reading Beds (Secondary A Aquifer) and the undifferentiated Seaford and Newhaven Chalk Formation (Principal Aquifer);
- Δ Service conduits, especially potable water supply pipes;
- Δ Vegetation in any new landscaped areas;
- Δ The future buildings on-Site;
- Δ Neighbouring properties and users; and
- Δ The Site from any contamination from off-Site sources.

3.2.4 Potential Pathways

The main pathways that can be considered at the Site include:

- Δ Exposure via direct contact and ingestion during any proposed Site alterations involving groundworks;
- Δ Exposure via inhalation of volatile vapours and asbestos fibres;
- Δ Leaching of contamination from soils through infiltration of rainfall and migration into underlying groundwater;
- Δ Migration of contamination through drains and service runs;
- Δ Direct filtration into water supply pipes following degradation of plastic pipes by direct contact with hydrocarbon contaminated soils; and
- Δ Indoor exposure/explosive hazard via enclosed space accumulation of ground gas.

3.2.5 Potential Pollutant Linkages

Based on the information reviewed within this Report, the following preliminary risk assessment table has been formulated, which identifies all Potential Pollutant Linkages (PPL) in the context of the proposed residential and commercial end-use, with limited areas of public landscaped open use areas.

CONCEPTUAL SITE MODEL				
Source(s)	Receptor(s)	Pathway(s)	Matrix Assessment	Comments/Linkage Significance/Mitigation
<p>Known heavy metal and PAH contamination in soils.</p> <p>Potentially contaminated soils and/or groundwater underlying the Site associated with the Site's development history.</p>	Future Site residents, workers and visitors.	Direct contact, ingestion and inhalation of dust and vapours.	Low to Moderate	Previous investigations at the Site have not identified significantly elevated contamination in the shallow soils. The proposed development will have a mix of hardstanding and landscaped areas, with the hardstanding breaking the PPLs associated with potential contaminants in the ground. However, it is recommended that, where landscaping or garden areas are proposed, a clean soil capping system is introduced.
	Construction workers.	Direct contact, ingestion and inhalation of dust and vapours.	Low	Site workers may become exposed to contaminated soils and shallow groundwater during any groundworks undertaken during development at the Site. Safe working practices and use of appropriate personal protective equipment (PPE) should be maintained.
	Controlled waters – Secondary A and deeper Principle Aquifer	Leaching of contaminants and migration through permeable deposits.	Low	No significantly elevated concentrations of contaminants in groundwater were identified at the Site. Furthermore, the significant thickness of cohesive clay soils are considered protective of the underlying aquifers.
	Water supply pipes.	Permeation of hydrocarbons through plastic pipe work.	Low	Hydrocarbons, especially aromatics and chlorinated solvents, are known to permeate plastic pipes. Assessment of the risk to water pipes for any new supply will have to be undertaken as a requirement of the statutory undertakers who should be provided with a copy of the Delta Simons Combined Phase I/II Environmental Assessment Report and provide recommendations for upgrading of potable water supply pipes, if considered necessary.
	Off Site receptors	Windblown contaminated dust	Low	The soils at the Site are not significantly contaminated and there are limited sensitive off-Site receptors. However, in accordance with general good practice, the groundworks contractor will need to implement dust suppression techniques at the Site to limit the potential for the generation of dust.
Ground gas.	Site residents, workers and visitors; buildings on-Site.	Vertical and lateral migration of ground gases.	Low	Any Made Ground present beneath the Site may represent a potential source of ground gas. Previous investigation works have not identified elevated concentrations or flow of ground gas, resulting in a CS1 at the Site, as such, no ground gas protection measures are required on Site.

CONCEPTUAL SITE MODEL				
Source(s)	Receptor(s)	Pathway(s)	Matrix Assessment	Comments/Linkage Significance/Mitigation
Potentially contaminated soil and groundwater from off-Site sources.	Groundwater beneath the Site and future Site users.	Lateral migration and subsequent indoor inhalation of volatile vapours.	Low	Potential and current off-Site sources of contamination are considered to be limited. In addition, given the Site is situated in a predominantly built-up area with large amounts of hardstanding, resulting in restricted infiltration of rainwater and limited leaching of contaminants, if present, the risk from any significant off-Site sources is considered to be low.
Asbestos Containing Materials (ACMs).	Construction workers.	Inhalation of asbestos fibres.	Low	<p>Due to historical development of the Site, the Made Ground beneath the Site may represent a source of asbestos fibre in soils, however, previous investigation works have not identified asbestos in any of the soils tested.</p> <p>Groundworkers should be made aware of the possibility of encountering potential Asbestos Containing Materials (ACM) within the Made Ground across the Site and an appropriate protocol should be in place. Safe working procedures should be implemented, including damping down of excavations and stockpiles in line with general dust generation mitigation and appropriate levels of PPE provided and utilised. This recommendation should be captured in Site health and safety documentation and in maintenance plans.</p>

4.0 CONCLUSIONS & RECOMMENDATIONS

4.1 Conclusions

The Site is currently vacant, following demolition of the former buildings on-Site. Compacted demolition rubble covers the ground surface, and there are two stockpiles of demolition on the Site. The Site was formerly primarily developed as a motel from circa 1975 to 2010.

The Site is directly underlain by Made Ground and the London Clay Formation, classified as Unproductive strata, underlain by the Woolwich and Reading Beds of the Lambeth Group, classified as a Secondary A Aquifer, followed by the Seaford Chalk and Newhaven Chalk Formation, classified as a Principle Aquifer.

Previous investigation works have not identified elevated levels of contamination in soils or groundwater at the Site.

Delta-Simons has completed a source-pathway-receptor risk assessment based upon available information. Limited sources of contamination have been identified within the Made Ground at the Site and are considered to relate to the Site's historical development and pyritic ground conditions. In the context of the proposed residential end-use of the Site, potential pollution linkages (PPLs) have been identified and are considered to be of low risk, assuming standard forms of mitigation are implemented as part of the design (e.g. suitable capping / cover for landscaped areas).

4.2 Recommendations

Comprehensive redevelopment of the Site will be residential led with six residential units of between 4 to 7 storeys, together with commercial space around the perimeter of the Site. The development will include associated car parking, cycle parking, pedestrian routes, landscaped areas, and service space.

Measures to mitigate against the identified potential pollutant linkages include:

- △ A clean cover soil system should be installed in any soft landscaped areas, to a minimum recommended depth of 450 mm thickness;

- Δ Consultation should be sought with the relevant local Water Authority as to whether they will require upgraded pipework to be installed for new service installations;
- Δ Suitable dust suppression techniques will need to be implemented by groundworkers during construction and demolition works
- Δ Additional, unidentified localised areas of contamination may exist at the Site and an appropriate 'hotspot' protocol should be in place for groundworkers to act upon should such contamination be identified during the construction process; and
- Δ Groundworkers should be made aware of the potential for encountering contamination across the Site, and appropriate personal protective equipment (PPE), appropriate standards of personal hygiene and safe methods of working should be adopted to mitigate the potential risks.

5.0 LIMITATIONS TO ENVIRONMENTAL ASSESSMENTS

The recommendations contained in this Assessment represent Delta-Simons' professional opinions, based upon the information referred to in Section 1.5 of this Assessment, exercising the duty of care required of an experienced Environmental Consultant. Delta-Simons does not warrant or guarantee that the Site is free of hazardous or potentially hazardous materials or conditions.

This Assessment was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed as defined in Section 1.0 of this Assessment. Nothing contained in this Assessment shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this Assessment to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the Assessment by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this Assessment, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.

This Report was prepared by:



Susana Pereira
Consultant

Date 31st August 2017

This Report was reviewed by:



Aaron Hollingsworth
Graduate

Date 31st August 2017

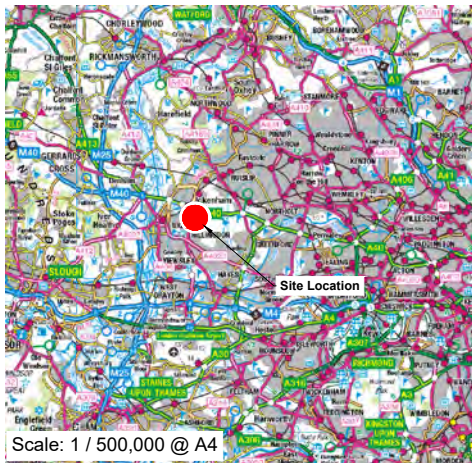
This Report was authorised by:



Simon Steele
Principal

Date 31st August 2017

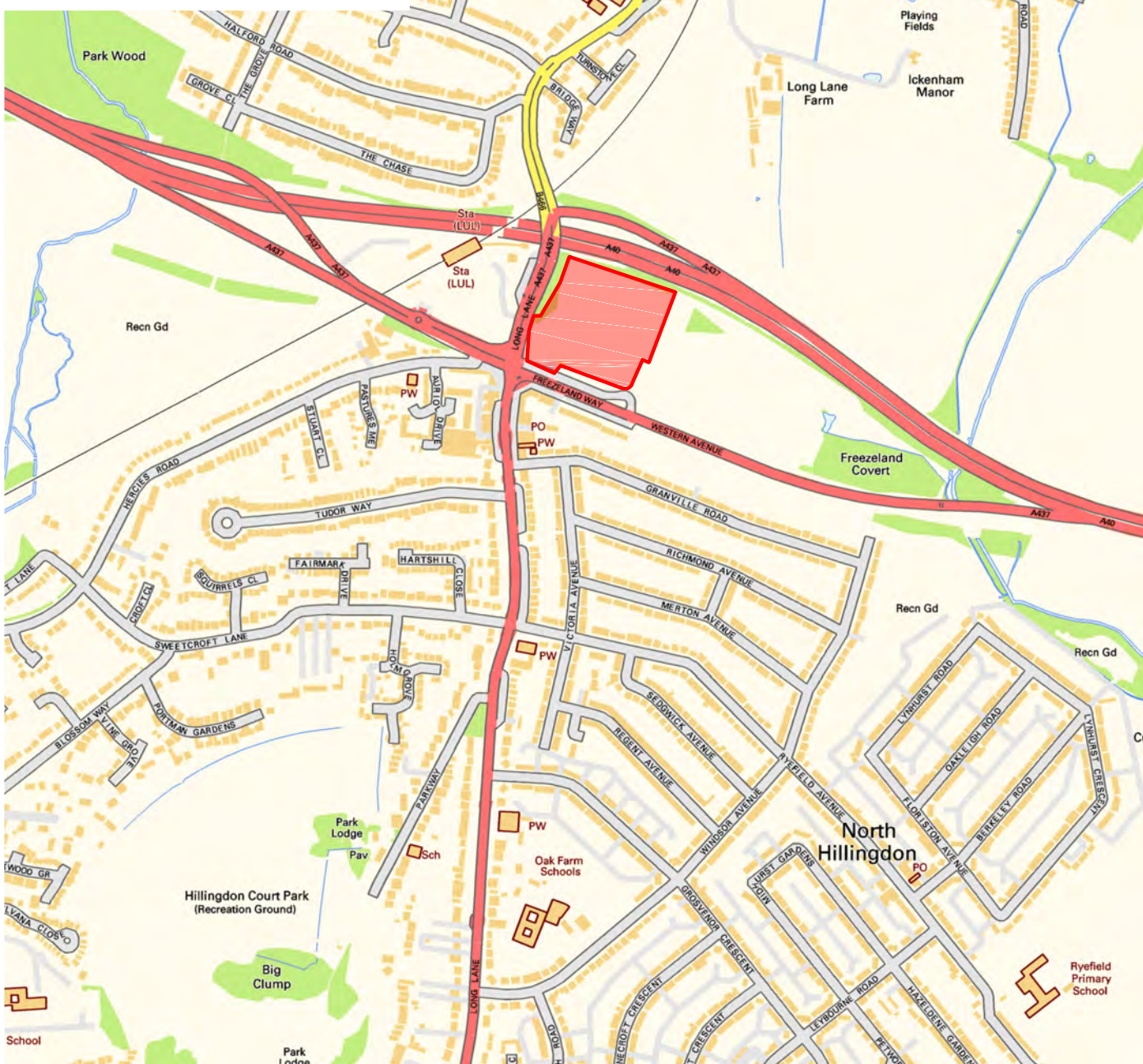




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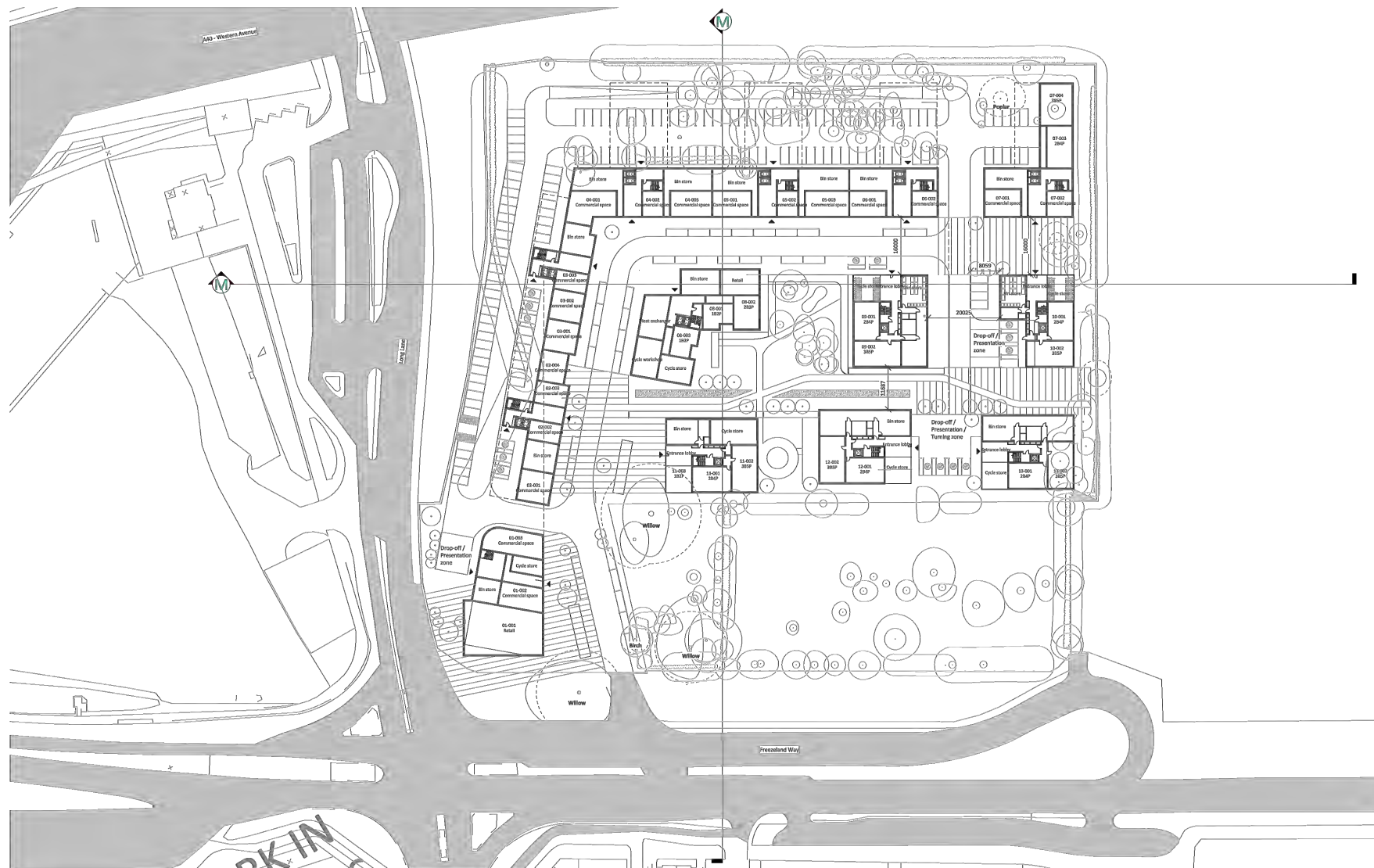
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Bing maps



NOTES

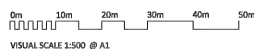
CONSULTANTS

- Refer to Highways consultant's drawings for details
- Refer to landscape consultant's drawings for details
- Landscaping layout is illustrative only

ANGLAS

- Refer to area schedule

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F 020 7580 2917	Scale @ A1:	1:500
info@collafoodtms.com	Scale @ A0:	

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Checked by: JBC
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Scale @ A2:

Meyer Homes
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Ground Floor Plan

PRE-APPLICATION

Site Plan Provided by Client

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SP

DATE:

10 May 2017

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PROJECT NO:

PROJECT NO.
17-0420.01

FIGURE NO:

3



TITLE:
Proposed Development Plan
Master Brewer
Hillingdon



Site Details:

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SITEFREEZELAND
WAYUXBRIDGE, UB10 9QE

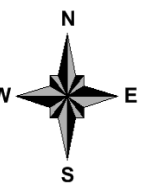
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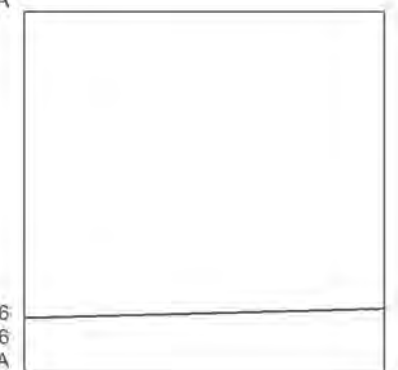
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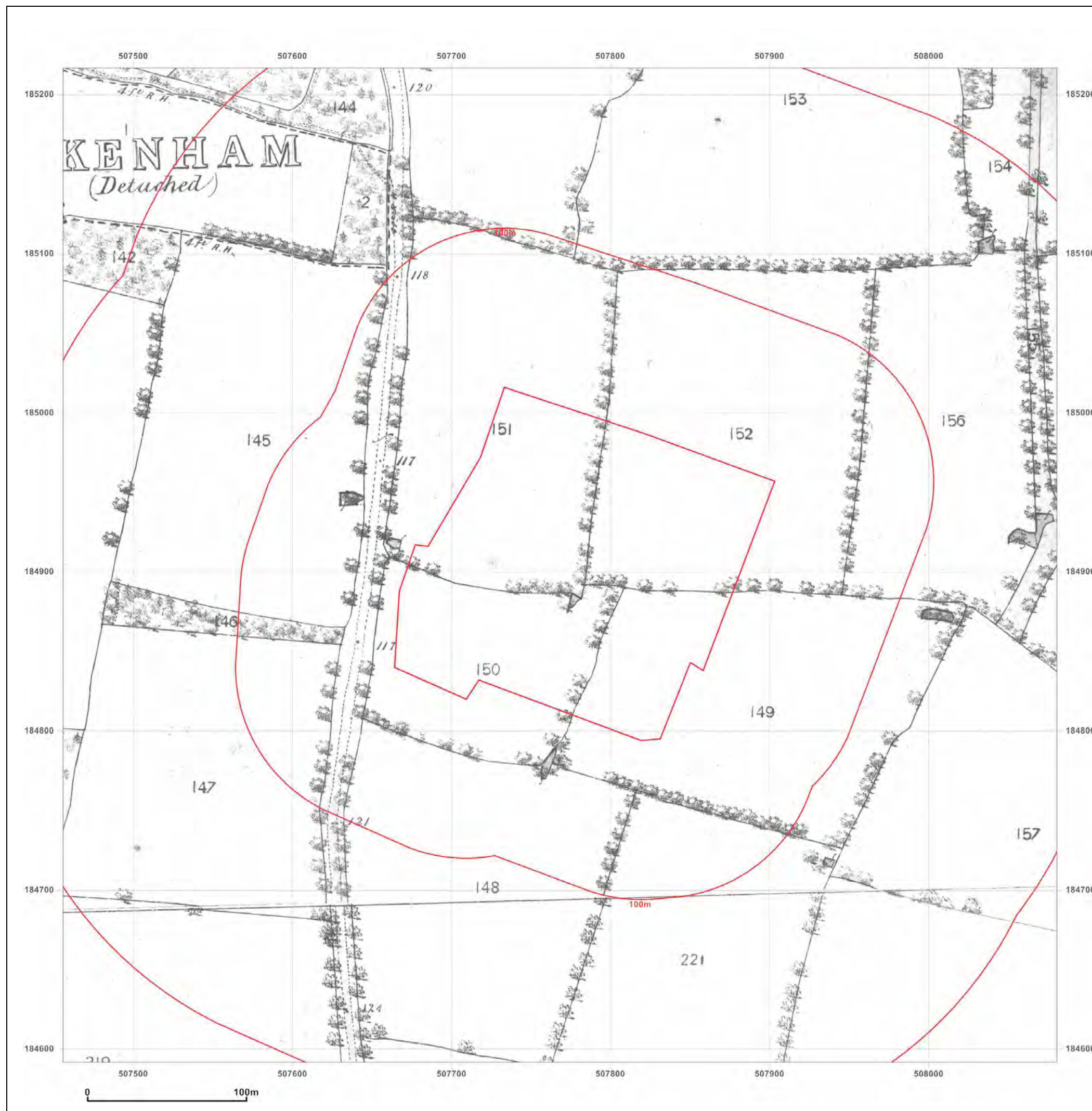


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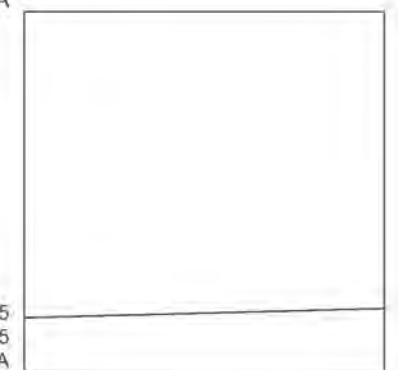
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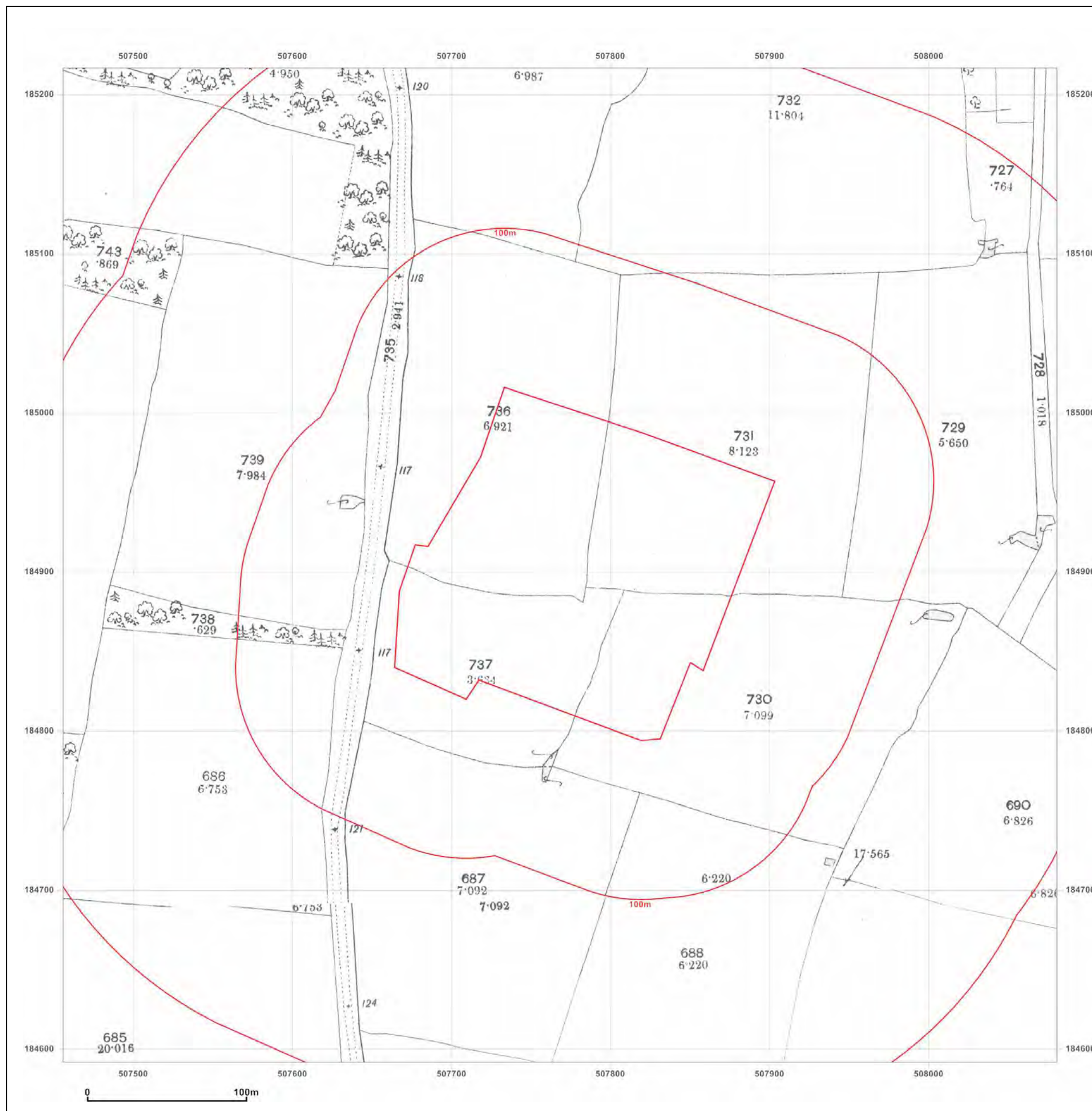


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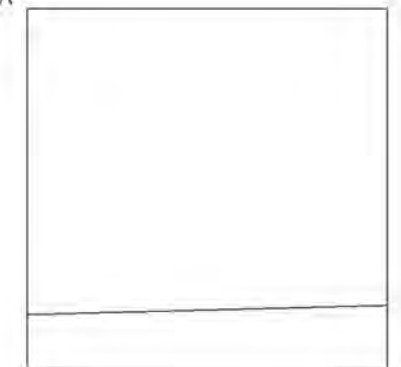
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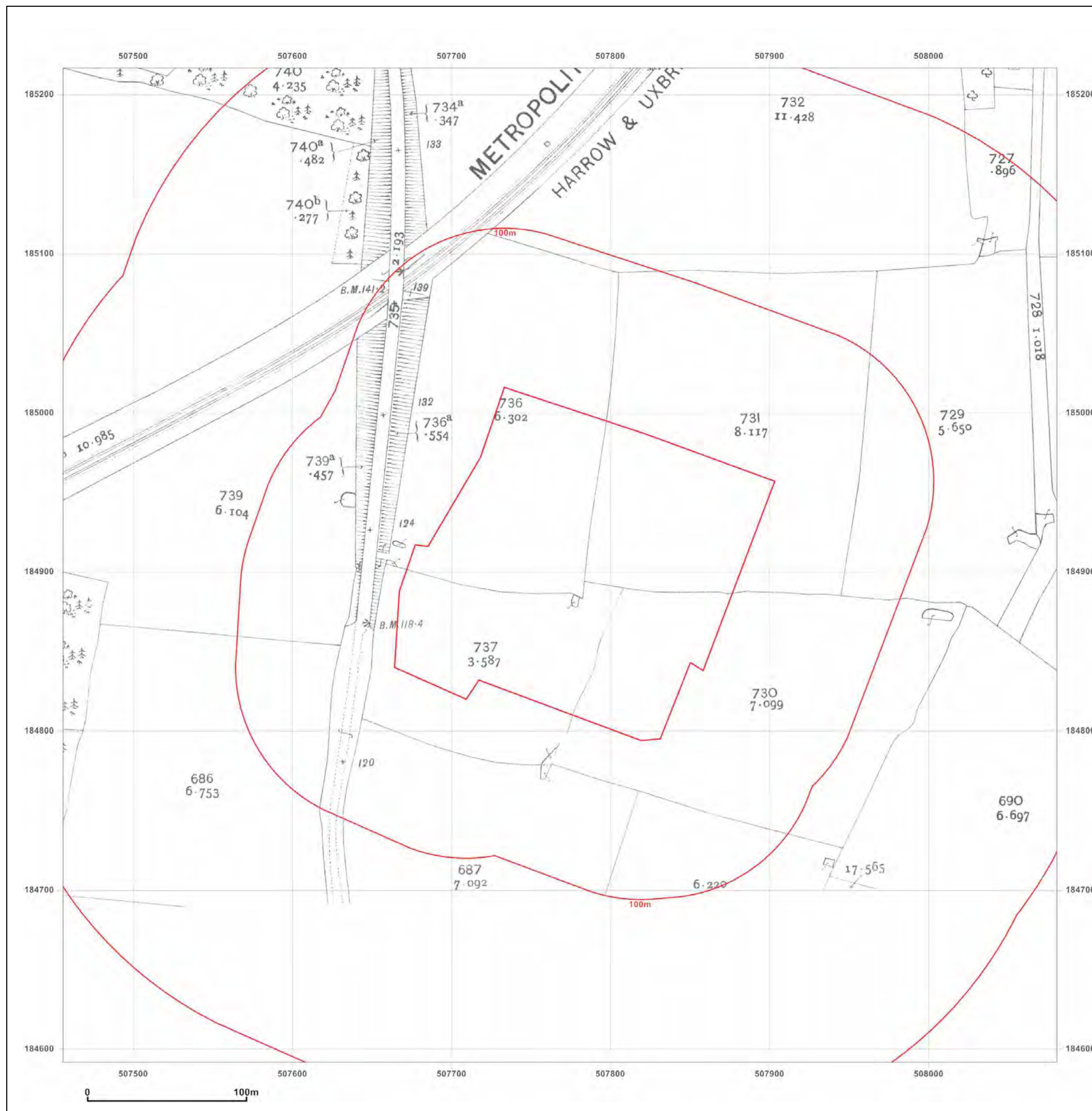


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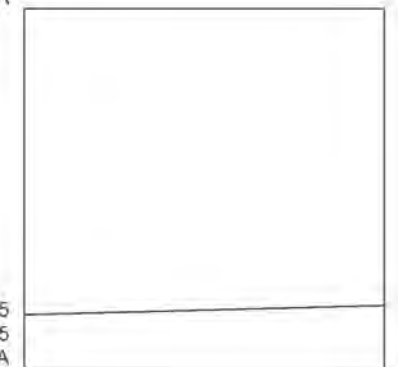
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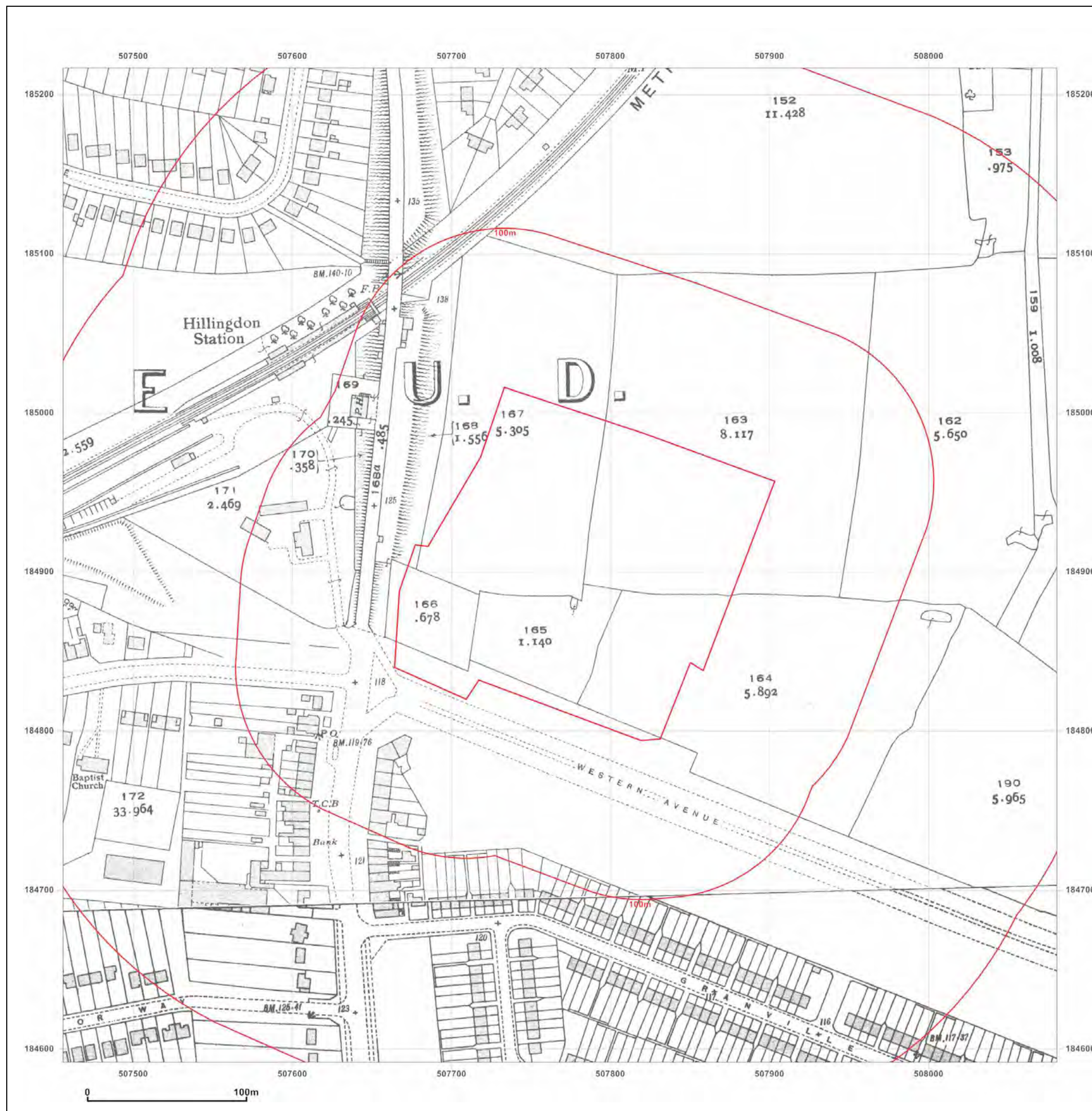


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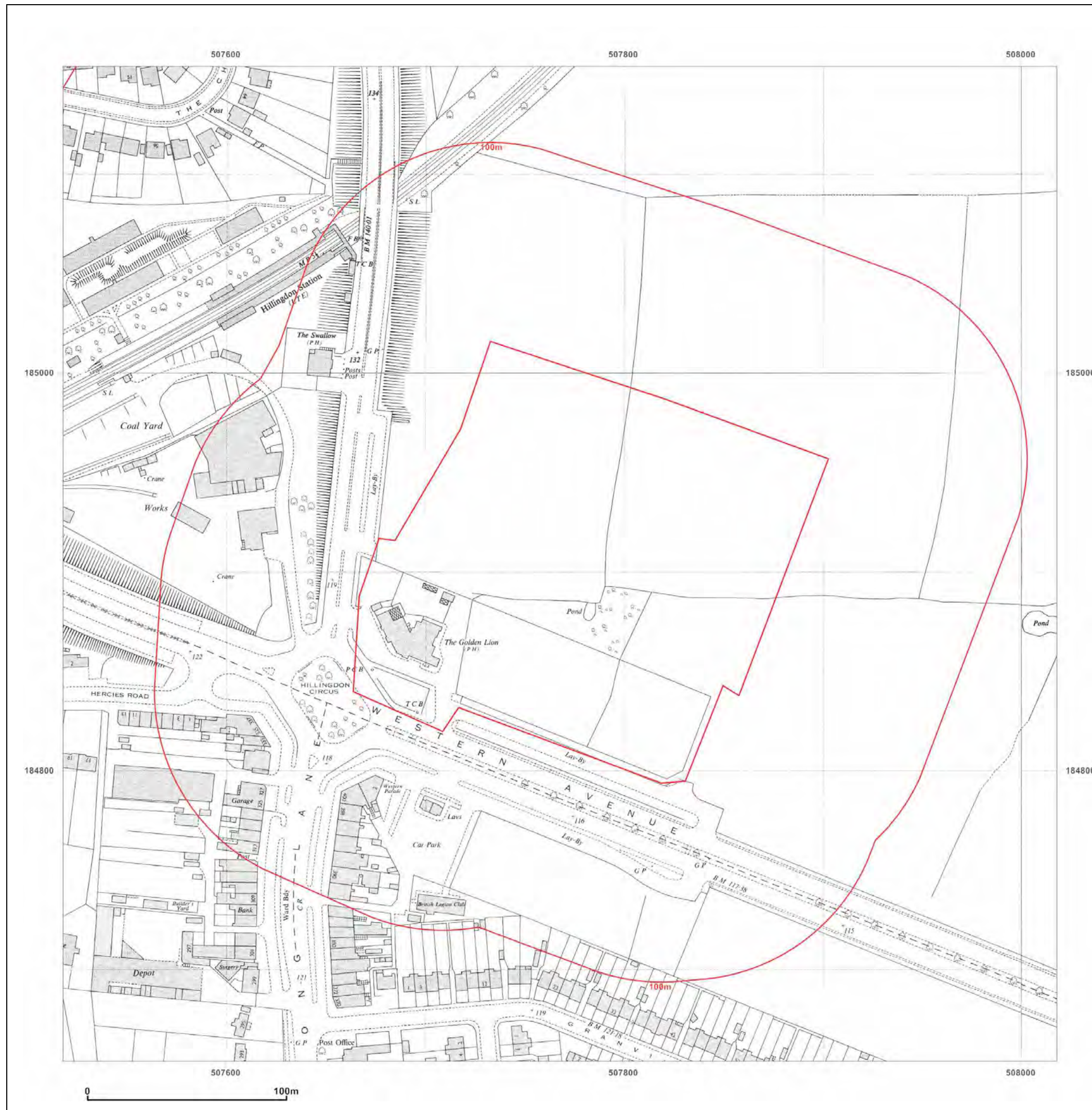


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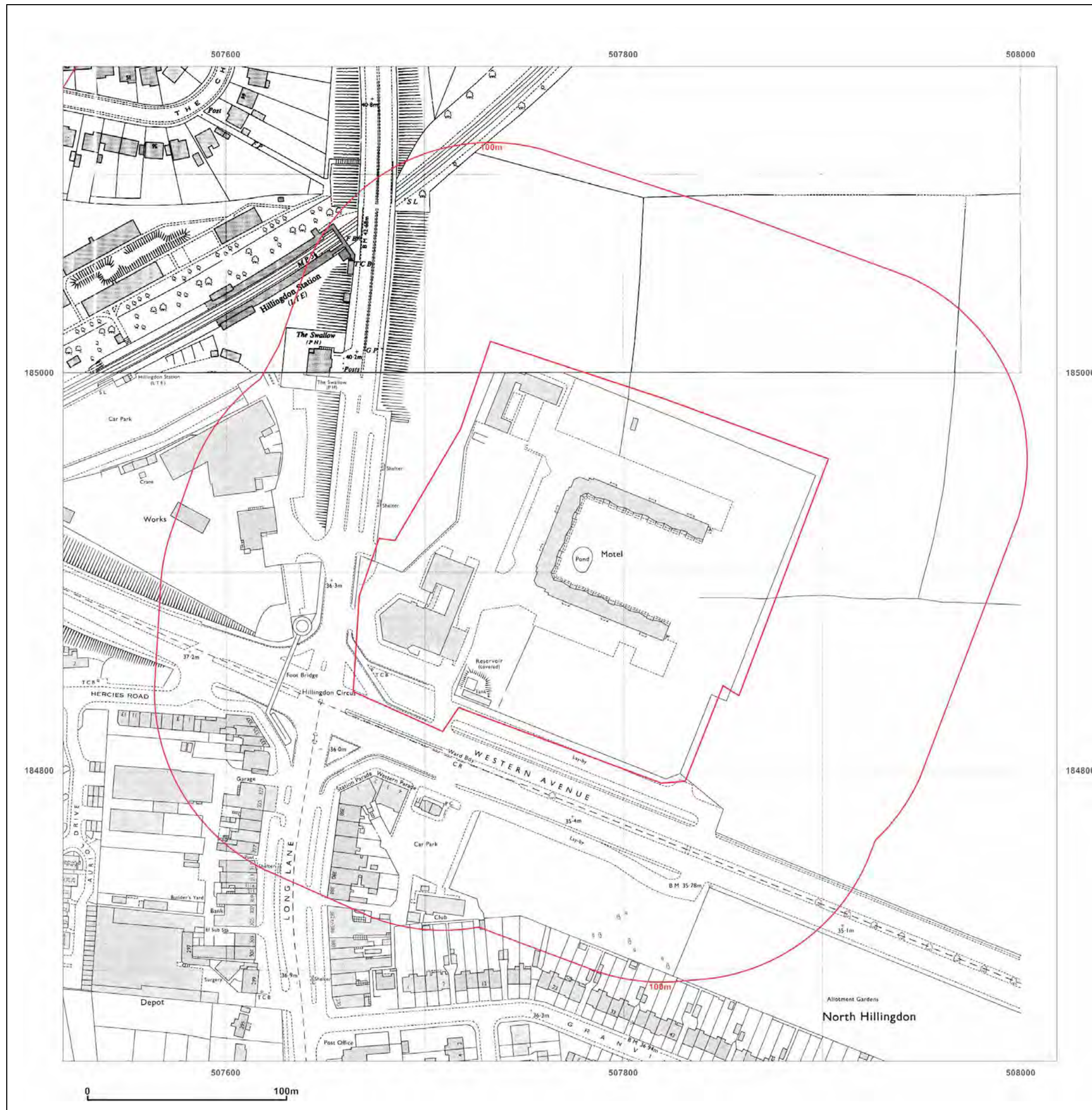


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Site Details:

FORMER MASTER BREWER
SITEFREEZELAND
WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: National Grid

Map date: 1994

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
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Site Details:

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SITEFREEZELAND
WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: County Series

Map date: 1864-1868

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1864
Revised 1864
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1866
Edition N/A
Copyright N/A
Levelled N/A

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

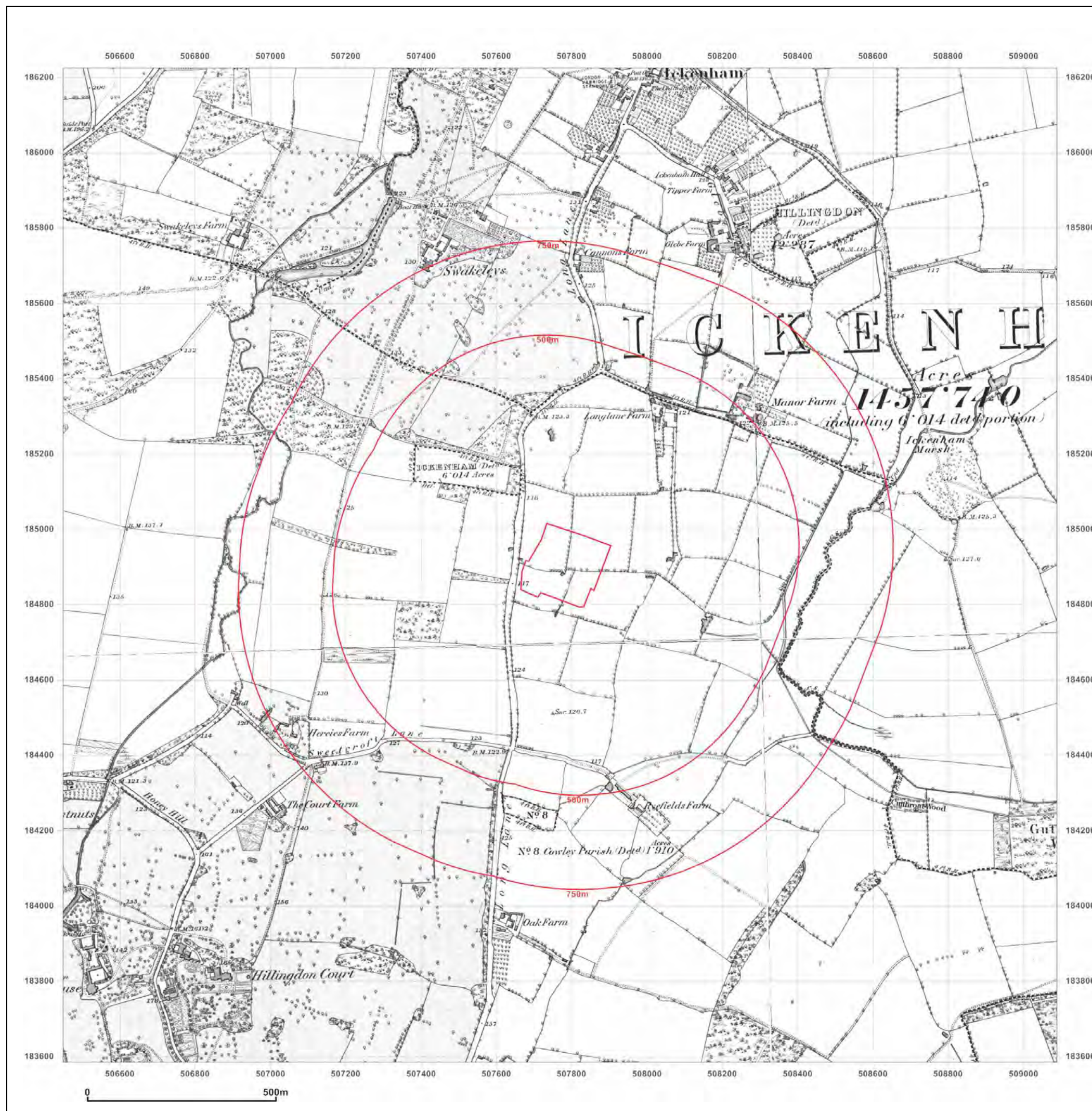


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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: County Series

Map date: 1882

Scale: 1:10,560

Printed at: 1:10,560



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

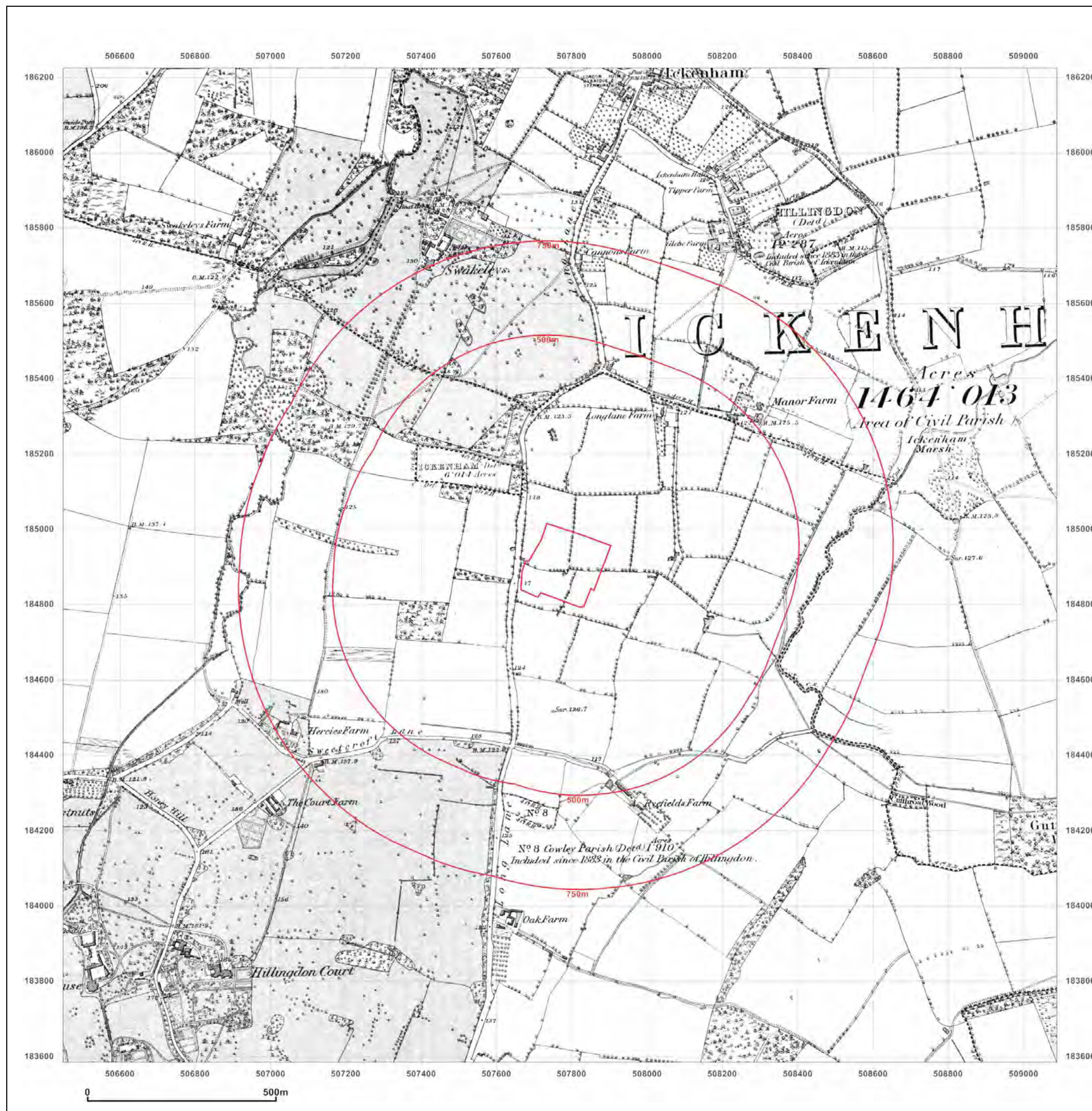


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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: County Series

Map date: 1894-1897

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1894
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1894
Edition N/A
Copyright N/A
Levelled N/A

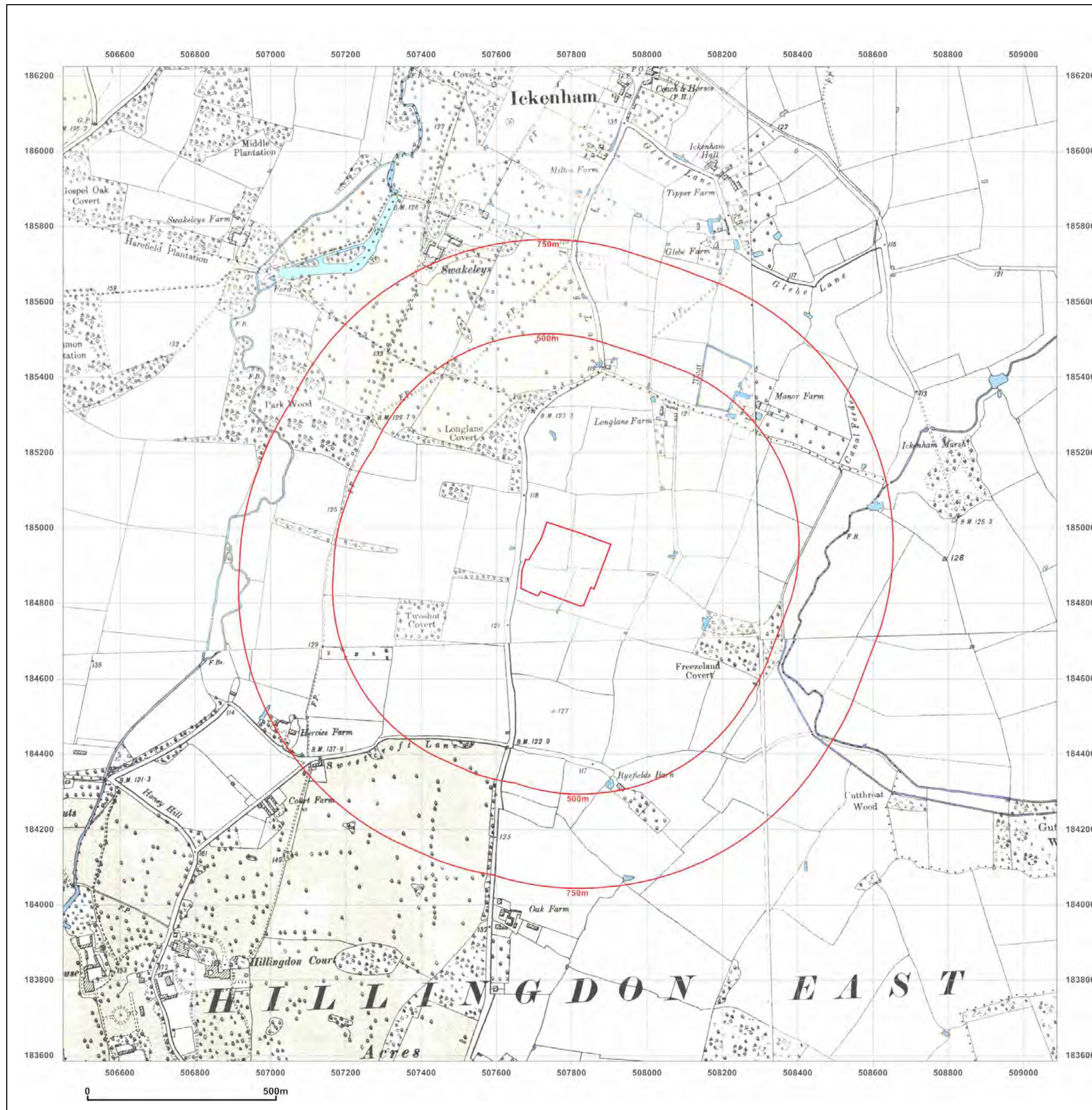


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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: County Series

Map date: 1897-1900

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1900
Edition N/A
Copyright N/A
Levelled N/A

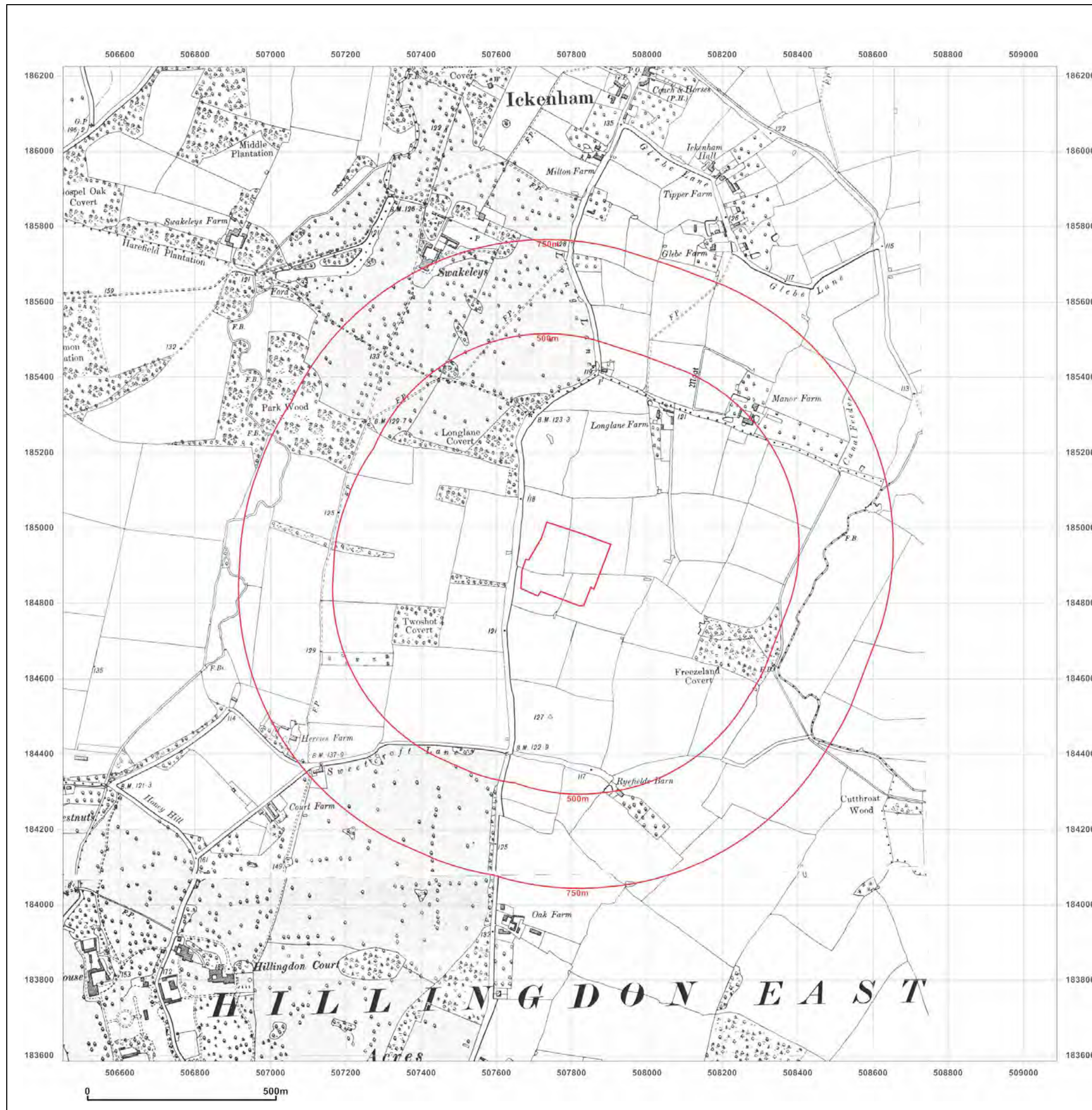


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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: County Series

Map date: 1912-1913

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1864
Revised 1912
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1912
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1913
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1913
Edition N/A
Copyright N/A
Levelled N/A

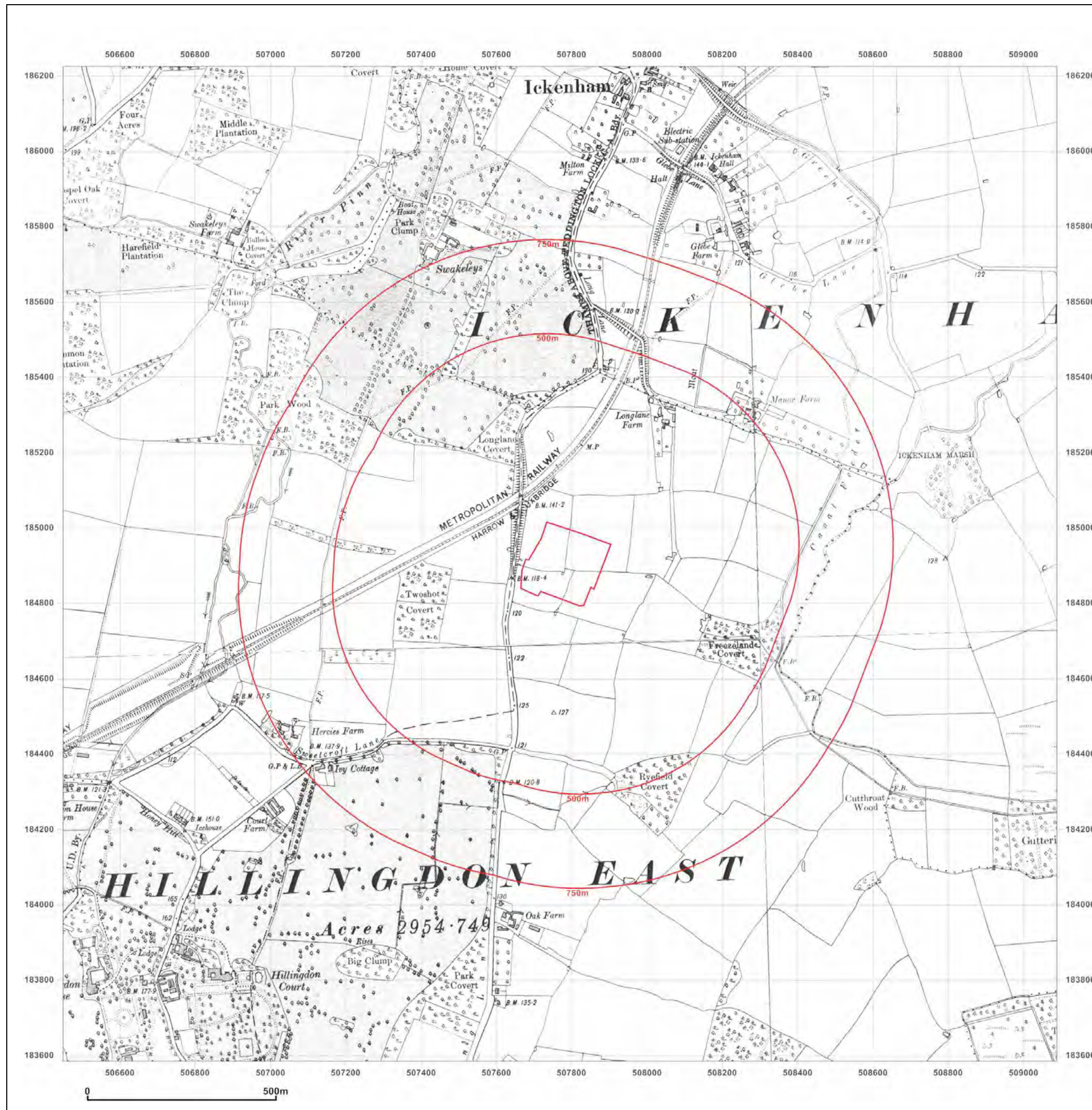


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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: County Series

Map date: 1932

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1874
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

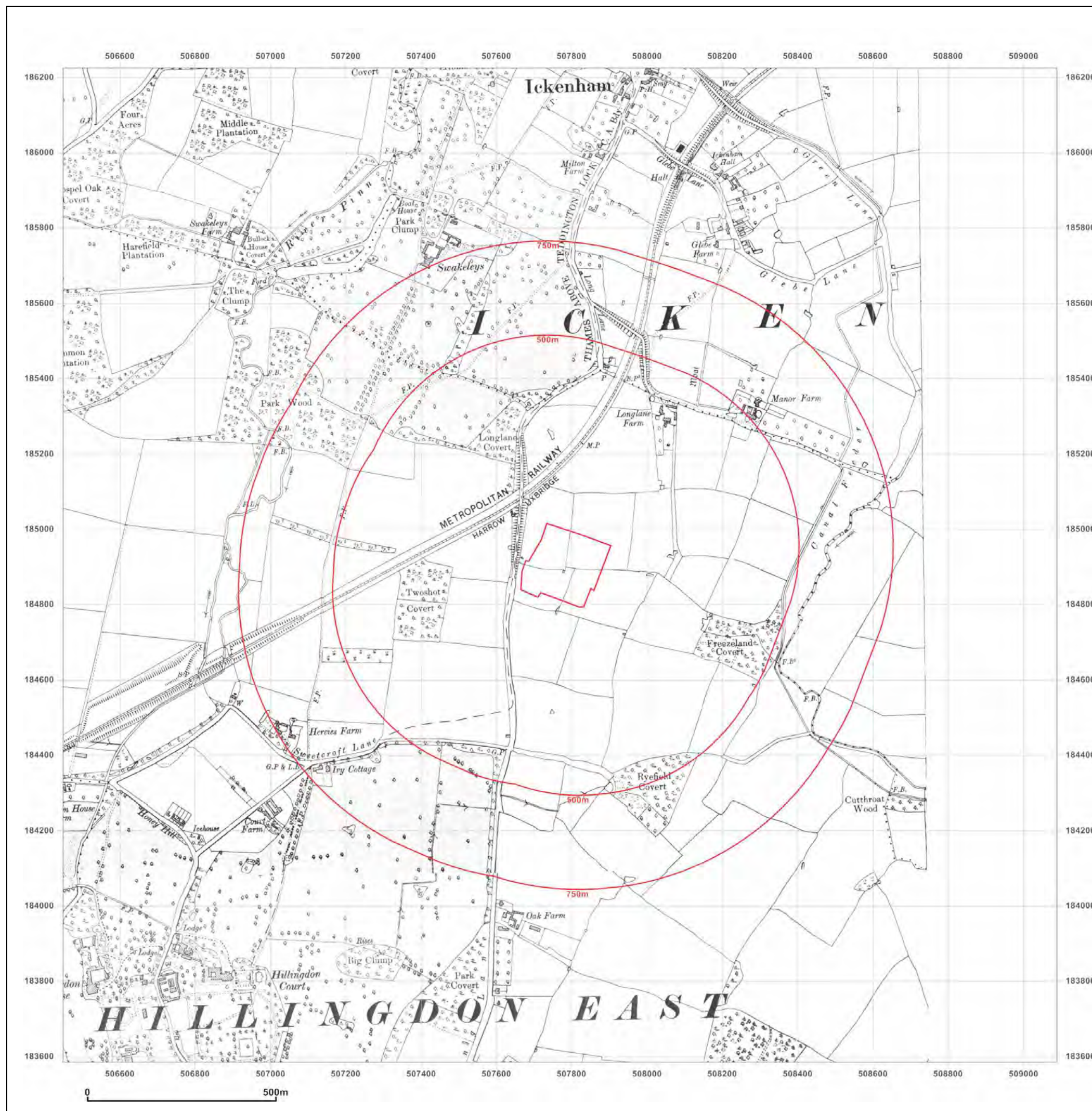


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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: County Series

Map date: 1935

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1864
Revised 1935
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1935
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1935
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1935
Edition N/A
Copyright N/A
Levelled N/A

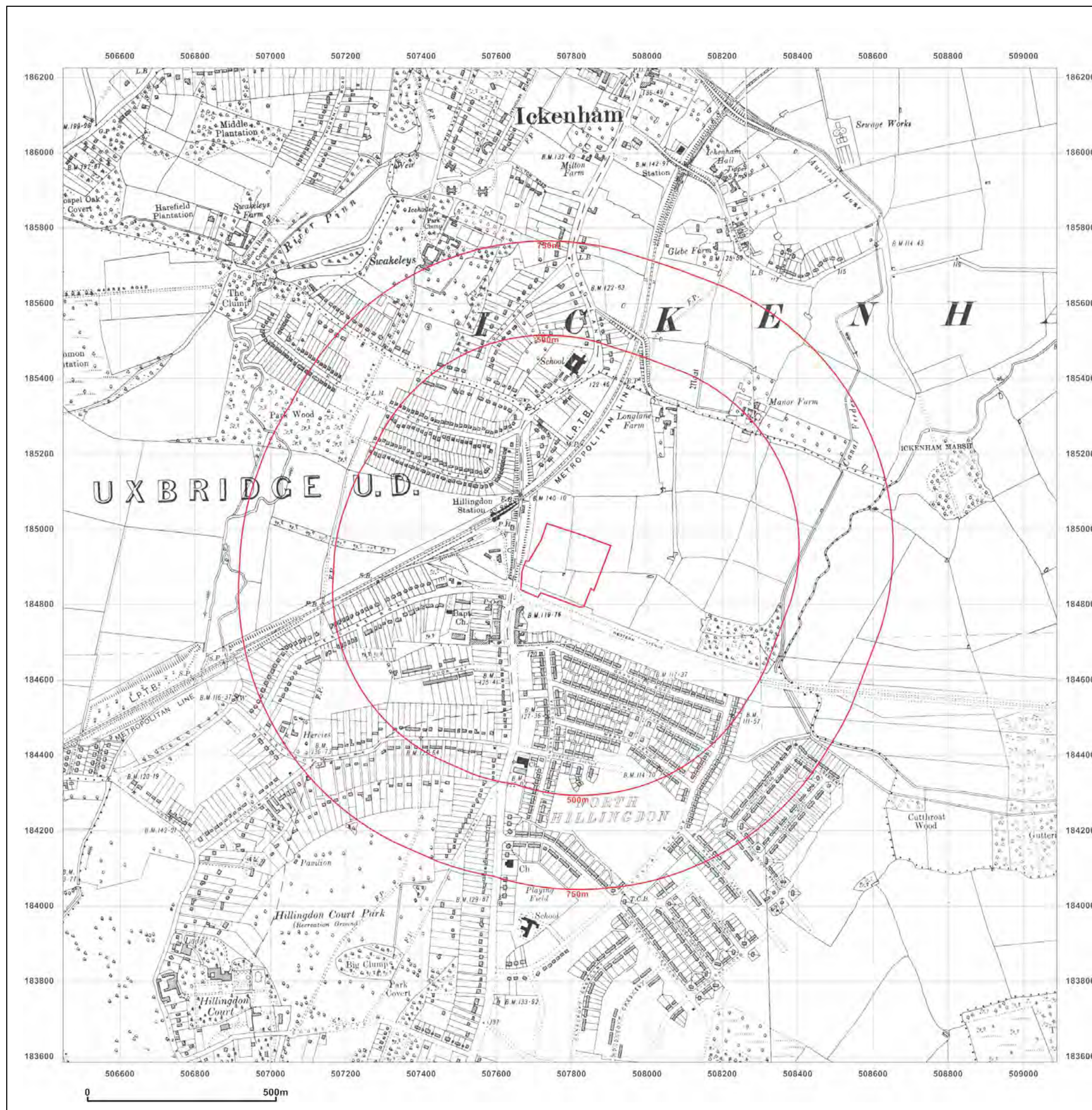


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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1864
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1935
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

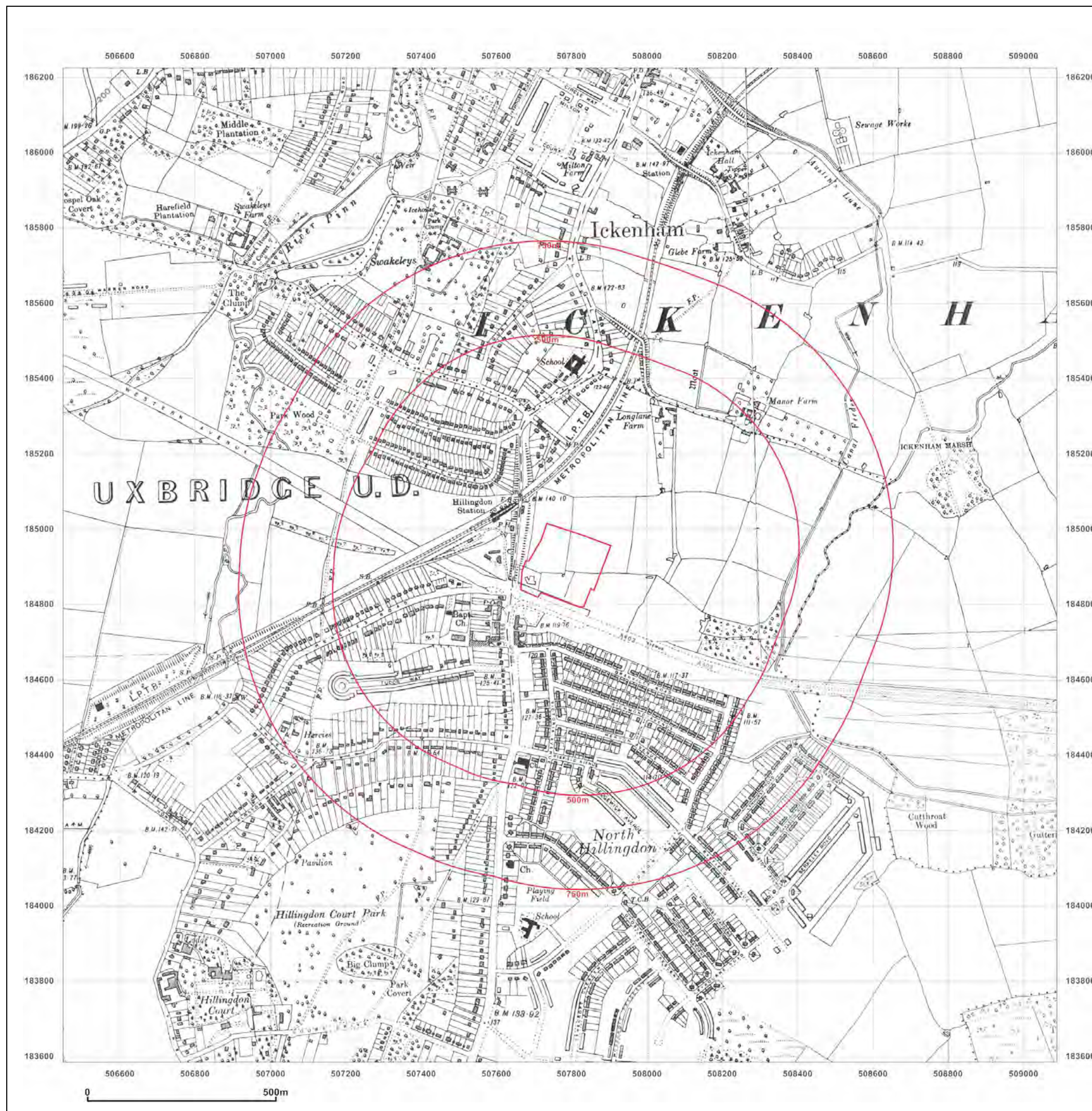


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Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: Provisional

Map date: 1959

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1955
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1955
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

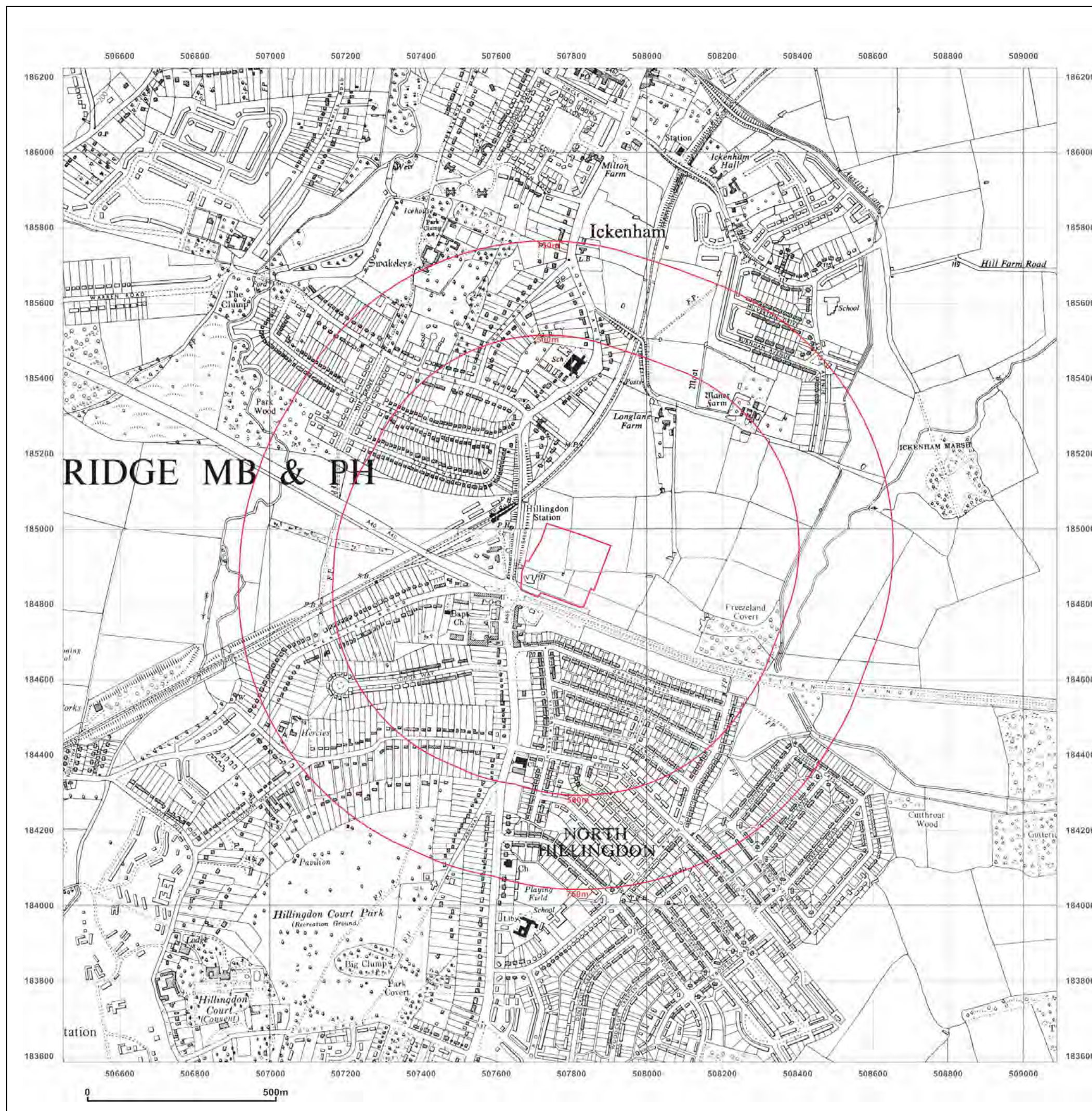


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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: Provisional

Map date: 1969-1970

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1955
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1970
Revised 1970
Edition N/A
Copyright N/A
Levelled N/A

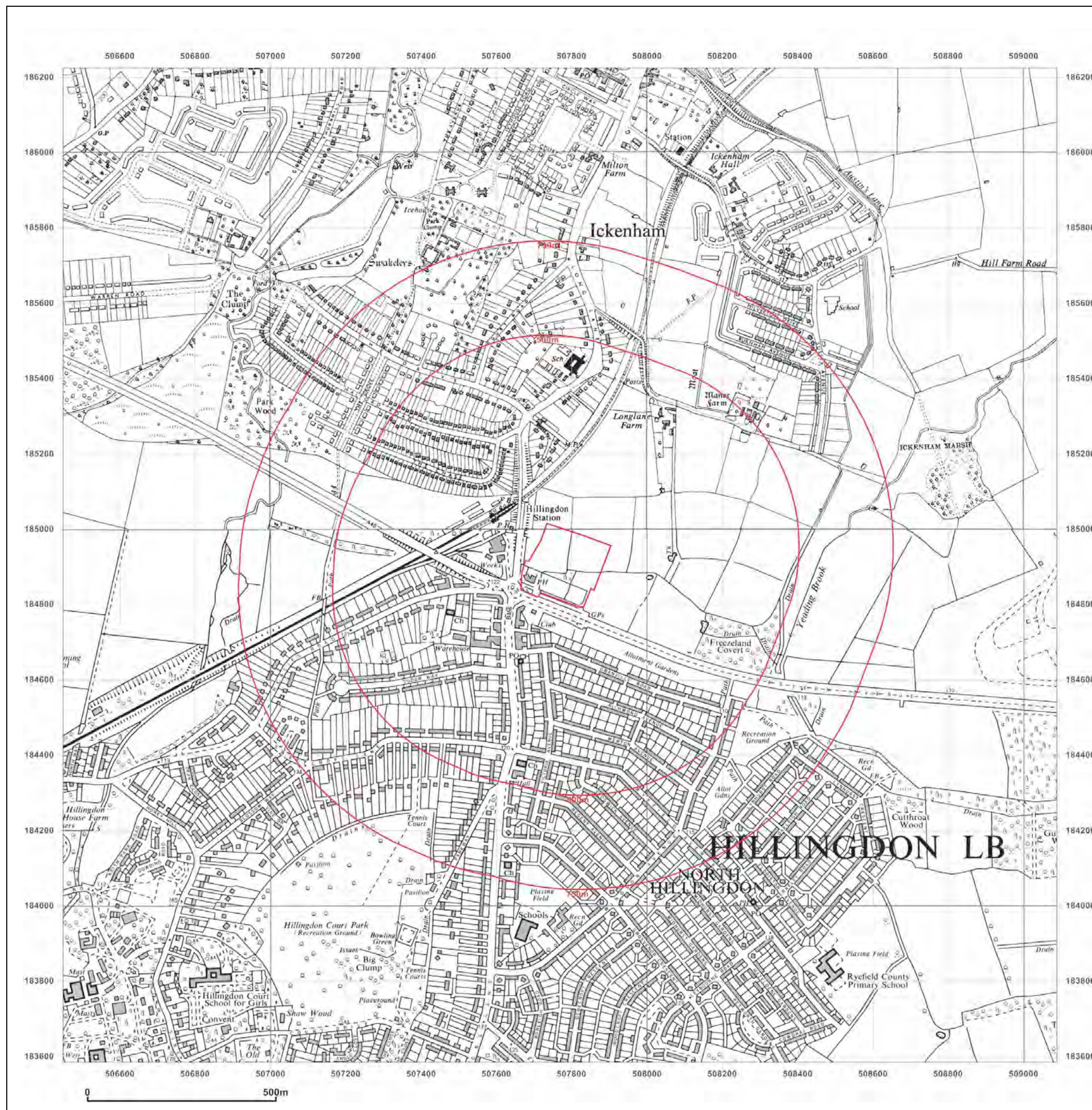


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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: National Grid

Map date: 1973-1975

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1972
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1975
Revised 1975
Edition N/A
Copyright N/A
Levelled N/A

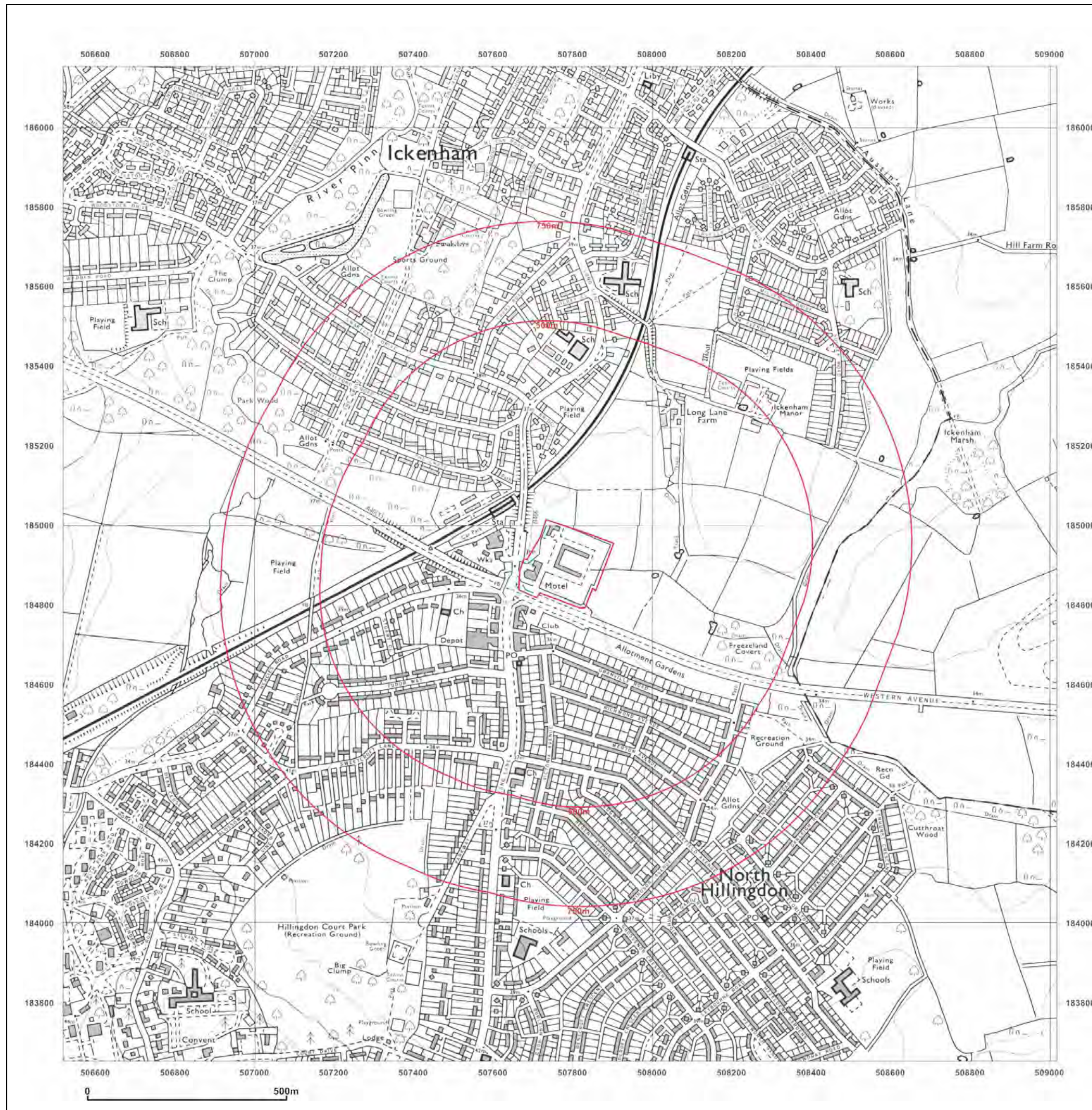


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Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: National Grid

Map date: 1987-1989

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1985
Revised 1987
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1988
Revised 1989
Edition N/A
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Site Details:

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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



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WAYUXBRIDGE, UB10 9QE

Client Ref: 14-0724.01
Report Ref: GS-1745867
Grid Ref: 507768, 184904

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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