



Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

187139669_1_1

Customer Reference:

1920378

National Grid Reference:

519060, 227400

Slice:

A

Site Area (Ha):

0.01

Search Buffer (m):

1000

Site Details:

1 Mill Lane, Astwick

Stotfold

HITCHIN

SG5 4BJ

Client Details:

MR D Anchor

RSK Environment Ltd

18 Frogmore Road

Hemel Hempstead

Hertfordshire

HP3 9RT

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Agency & Hydrological	1
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Introduction

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

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2			11	2
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 5				2
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 6			Yes	
Pollution Incidents to Controlled Waters	pg 6			4	7
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 8			1	
Water Abstractions	pg 8				1 (*33)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 16	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 16	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 16	Yes	n/a	n/a	n/a
Source Protection Zones	pg 16	1	1		1
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 17			19	16

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 21			1	4
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 22	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 22				4
Potentially Infilled Land (Non-Water)	pg 22		1		4
Potentially Infilled Land (Water)					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 23	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 23	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 27		1		18
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities	pg 30				1
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 30	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 31	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 31		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 31	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 31	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 31		Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 32			4	12
Fuel Station Entries	pg 33				2
Points of Interest - Commercial Services	pg 33				5
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 34				7
Points of Interest - Public Infrastructure	pg 34			1	7
Points of Interest - Recreational and Environmental	pg 35			2	
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt	pg 36	1			
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 36	2			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	0	1	519058 227404
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	4	1	519058 227400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	47	1	519058 227450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	54	1	519058 227350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	59	1	519000 227400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	93	1	519150 227404
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	139	1	519150 227300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	150	1	519200 227450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	154	1	519058 227250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	158	1	518900 227404
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (W)	159	1	518900 227400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	160	1	519100 227250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	165	1	518900 227450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	204	1	519058 227200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	209	1	519100 227200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	214	1	518850 227450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	216	1	518900 227550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	221	1	518900 227250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (E)	261	1	519300 227500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	276	1	518800 227500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	329	1	519200 227700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	341	1	518750 227550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	376	1	519400 227250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (E)	393	1	519450 227400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	393	1	519450 227404
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	395	1	518750 227650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12NE (NW)	409	1	518700 227600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	419	1	518950 227000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	435	1	518700 227650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	439	1	519450 227600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (E)	446	1	519500 227350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	453	1	519500 227500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (SE)	458	1	519400 227100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	467	1	518950 226950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	470	1	518700 227100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SW)	480	1	518800 227000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	495	1	519550 227450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	497	1	519058 227900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (SE)	499	1	519350 227000
1	Discharge Consents Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Pound Farm Pumping Station, St Ippollitts, Hertfordshire, England Authority: Environment Agency, Anglian Region Catchment Area: River Hiz (Hitchin) Reference: Awcnf11497 Permit Version: 1 Effective Date: 26th November 1999 Issued Date: 13th October 2000 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Ippollitts Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A14NW (E)	393	2	519430 227530

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: Anglian Water Services Ltd. Property Type: Sewerage Network - Pumping Station - Water Company Location: Pound Farm Pumping Station, St Ippollitts, Hertfordshire, England Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Awcnf353611497 Permit Version: 1 Effective Date: 26th November 1999 Issued Date: 1st December 1999 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Ippollitts Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A14NW (E)	393	2	519430 227530
1	Discharge Consents Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Pound Farm Pumping Station, St Ippollitts, Hertfordshire, England Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Awcnf353611497 Permit Version: 1 Effective Date: 26th November 1999 Issued Date: 1st December 1999 Revocation Date: 1st December 1999 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Ippollitts Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A14NW (E)	393	2	519430 227530
1	Discharge Consents Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Pound Farm Pumping Station, St Ippollitts, Hertfordshire, England Authority: Environment Agency, Anglian Region Catchment Area: River Hiz (Hitchin) Reference: Aw1nf631 Permit Version: 1 Effective Date: 11th February 1966 Issued Date: 11th February 1966 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Not Supplied Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 10m	A14NW (E)	393	2	519430 227530
2	Discharge Consents Operator: Wimpey Homes Holdings Ltd Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Land Off London Road Ps, Hitchin, Hertfordshire, Sg4 7sw Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Prcnf02264 Permit Version: 1 Effective Date: 26th April 1990 Issued Date: 26th April 1990 Revocation Date: 10th February 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Onto Land Environment: Receiving Water: Land Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	497	2	519370 227790

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	Discharge Consents Operator: Wimpey Homes Holdings Ltd Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Land Off London Road Ps, Hitchin, Hertfordshire, Sg4 7sw Authority: Environment Agency, Anglian Region Catchment Area: River Hiz (Hitchin) Reference: Prcnf02265 Permit Version: 2 Effective Date: 25th September 1999 Issued Date: 26th April 1990 Revocation Date: 13th January 2000 Discharge Type: Storm sewage overflow discharge Discharge: Freshwater Stream/River Environment: Receiving Water: Ippollitt'S Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	497	2	519370 227790
2	Discharge Consents Operator: Wimpey Homes Holdings Ltd Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Land Off London Road Ps, Hitchin, Hertfordshire, Sg4 7sw Authority: Environment Agency, Anglian Region Catchment Area: River Hiz (Hitchin) Reference: Prcnf02265 Permit Version: 3 Effective Date: 14th January 2000 Issued Date: 26th April 1990 Revocation Date: 19th January 2000 Discharge Type: Storm sewage overflow discharge Discharge: Freshwater Stream/River Environment: Receiving Water: Ippollitt'S Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	497	2	519370 227790
2	Discharge Consents Operator: Wimpey Homes Holdings Ltd Property Type: Sewerage Network - Pumping Station - Water Company Location: Land Off London Road Ps, Hitchin, Hertfordshire, Sg4 7sw Authority: Environment Agency, Anglian Region Catchment Area: River Hiz (Hitchin) Reference: Prcnf02265 Permit Version: 4 Effective Date: 20th January 2000 Issued Date: 26th April 1990 Revocation Date: 19th January 2000 Discharge Type: Storm sewage overflow discharge Discharge: Freshwater Stream/River Environment: Receiving Water: Ippollitt'S Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	497	2	519370 227790
2	Discharge Consents Operator: Wimpey Homes Holdings Ltd Property Type: Undefined Or Other Location: Land Off London Road, Hitchin, Hertfordshire Authority: Environment Agency, Anglian Region Catchment Area: River Hiz (Hitchin) Reference: Prcnf02265 Permit Version: 5 Effective Date: 20th January 2000 Issued Date: 26th April 1990 Revocation Date: Not Supplied Discharge Type: Storm sewage overflow discharge Discharge: Freshwater Stream/River Environment: Receiving Water: Ippollitt'S Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	497	2	519370 227790

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	Discharge Consents Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Land Off London Road Ps, Hitchin, Hertfordshire, Sg4 7sw Authority: Environment Agency, Anglian Region Catchment Area: River Hiz (Hitchin) Reference: Prcnf02265 Permit Version: 5 Effective Date: 20th January 2000 Issued Date: 26th April 1990 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Ippollitt'S Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	497	2	519370 227790
2	Discharge Consents Operator: Wimpey Homes Holdings Ltd Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Land Off London Road Ps, Hitchin, Hertfordshire, Sg4 7sw Authority: Environment Agency, Anglian Region Catchment Area: River Hiz (Hitchin) Reference: Prcnf02265 Permit Version: 1 Effective Date: 26th April 1990 Issued Date: 26th April 1990 Revocation Date: 24th September 1999 Discharge Type: Storm sewage overflow discharge Discharge: Freshwater Stream/River Environment: Receiving Water: Ippollitt'S Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A18SE (NE)	497	2	519370 227790
3	Discharge Consents Operator: Mr Francis Osborne Property Type: Domestic Property (Single) Location: Brookend Barn, St Ippolyts, Hitchin, Hertfordshire, Sg4 7nu Authority: Environment Agency, Anglian Region Catchment Area: River Hiz (Hitchin) Reference: Npswqd009460 Permit Version: 1 Effective Date: 24th November 2009 Issued Date: 24th November 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Ippollitts Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	612	2	519623 227169
4	Discharge Consents Operator: Anglian Water Services Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Stevenage Road, Hitchin Authority: Environment Agency, Anglian Region Catchment Area: River Hiz (Hitchin) Reference: AwInf1370 Permit Version: 1 Effective Date: 8th September 1983 Issued Date: 8th September 1983 Revocation Date: 27th October 2016 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Ippollitts Brook Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	911	2	519500 228200
5	Local Authority Pollution Prevention and Controls Name: Henry Isaacs Location: The Foundry, St Ippolyts, HITCHIN, Hertfordshire, SG4 7NX Authority: North Hertfordshire District Council, Environmental Health Department Permit Reference: Not Given Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG2/4 Iron, steel and non-ferrous metal foundry processes Status: Authorised Positional Accuracy: Automatically positioned to the address	A9NW (SE)	624	3	519574 227055

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Local Authority Pollution Prevention and Controls Name: Oakfield Sf Connect Location: Stevenage Road, HITCHIN, Hertfordshire, SG5 9DT Authority: North Hertfordshire District Council, Environmental Health Department Permit Reference: EPA/10963/05/P2 Dated: 21st March 2001 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station Status: Permitted Positional Accuracy: Manually positioned to the address or location	A18NW (N)	916	3	519046 228319
	Nearest Surface Water Feature	A13NE (E)	310	-	519363 227457
7	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Combined Sewer Overflow Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: Ippollitts Brook Incident Date: 13th February 1993 Incident Reference: 1805 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Poor/Inadequate Maintenance Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NW (E)	356	2	519400 227500
8	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: Ippollitts Brook Incident Date: 3rd November 1995 Incident Reference: 2962 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Mechanical Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	443	2	519500 227400
9	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: St Ippollitts Brook Incident Date: 6th May 1995 Incident Reference: 2699 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Poor/Inadequate Maintenance Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NW (NE)	453	2	519400 227700
10	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: St Ippollitts Brook Incident Date: 1st June 1995 Incident Reference: 2736 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Electrical Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SE (NE)	465	2	519300 227800
11	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: Ippollitts Bk Incident Date: 2nd August 1997 Incident Reference: 3814 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Poor/Inadequate Maintenance Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	520	2	519400 227795

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	Pollution Incidents to Controlled Waters Property Type: Construction Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Inert Suspended Solids Note: Stippollitts Brook Incident Date: 24th June 1994 Incident Reference: 2329 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Other Cause Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	524	2	519400 227800
12	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: St Ippollitts Brook Incident Date: 3rd October 1998 Incident Reference: 4317 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Electrical Failure Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	594	2	519500 227800
13	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: St Ippollitts Brook Incident Date: 28th October 1992 Incident Reference: 1710 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	867	2	519400 228200
14	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Natural Note: St Ippollitts Brook Incident Date: 2nd May 1994 Incident Reference: 2244 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Algal Bloom Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	953	2	519700 226700
15	Pollution Incidents to Controlled Waters Property Type: Domestic/Residential Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: Ippollitts Brook Incident Date: 12th November 1997 Incident Reference: 3943 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (N)	960	2	519400 228300
16	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: Ippollitts Brook/River Purwell Incident Date: 16th January 1992 Incident Reference: 1374 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	964	2	519600 228200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	Substantiated Pollution Incident Register Authority: Environment Agency - Thames Region, North East Area Incident Date: 9th December 2001 Incident Reference: 47360 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	A13NE (E)	342	2	519387 227494
18	Water Abstractions Operator: Mr D Pearson Licence Number: 6/33/13/*g/063 Permit Version: Not Supplied Location: IPPOLLITTS Authority: Environment Agency, Anglian Region Abstraction: Domestic & Agriculture Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 2 Yearly Rate (m3): 4550 Details: C Chalk 2; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	819	2	518640 226700
	Water Abstractions Operator: Letchworth Garden City Licence Number: 6/33/13/**/034 Permit Version: Not Supplied Location: Watercourse North Of, GREAT WYMONDLEY Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 2 Yearly Rate (m3): 727000 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A20SW (E)	1192	2	520200 227745
	Water Abstractions Operator: Letchworth Garden City Licence Number: 6/33/13/**/034 Permit Version: Not Supplied Location: Watercourse , North Of Great Wymondley Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 2 Yearly Rate (m3): 727270 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A20SW (E)	1197	2	520205 227745
	Water Abstractions Operator: Letchworth Garden City Licence Number: 6/33/13/*s/034 Permit Version: Not Supplied Location: Watercourse Southwest Of Great Wymondley, WYMONDLEY, Hertfordshire Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 2 Yearly Rate (m3): 727270 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A20SW (E)	1199	2	520205 227750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Environment Agency Licence Number: 6/33/13/*G/0096/R02 Permit Version: 1 Location: Bath Spring Well Authority: Environment Agency, Anglian Region Abstraction: Environmental: Remedial River/Wetland Support: Transfer Between Sources Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2018 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NE (NW)	1312	2	517941 228092
	Water Abstractions Operator: Environment Agency Licence Number: 6/33/13/*G/0096/R01 Permit Version: 1 Location: Bath Spring Well Authority: Environment Agency, Anglian Region Abstraction: Environmental: Remedial River/Wetland Support: Transfer Between Sources Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 11th July 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NE (NW)	1312	2	517940 228090
	Water Abstractions Operator: Environment Agency Licence Number: 6/33/13/*G/0096 Permit Version: 1 Location: Bath Spring Well Authority: Environment Agency, Anglian Region Abstraction: Environmental: Remedial River/Wetland Support: Transfer Between Sources Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th July 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NE (NW)	1312	2	517940 228090
	Water Abstractions Operator: Affinity Water Limited Licence Number: 6/33/13/*G/0010 Permit Version: 102 Location: Well Head Charlton Authority: Environment Agency, Anglian Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 14th November 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A16SE (W)	1319	2	517800 227800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Veolia Water Central Limited Licence Number: 6/33/13/*G/0010 Permit Version: 101 Location: Well Head Charlton Authority: Environment Agency, Anglian Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 20th July 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A16SE (W)	1319	2	517800 227800
	Water Abstractions Operator: Three Valleys Water Plc Licence Number: 6/33/13/*G/0010 Permit Version: 100 Location: Well Head Charlton Authority: Environment Agency, Anglian Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: C Chalk 2; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st March 1994 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16SE (W)	1319	2	517800 227800
	Water Abstractions Operator: William Ransom & Son Plc Licence Number: 6/33/13/*S/0055 Permit Version: 100 Location: River Hiz At Hitchin Centre Authority: Environment Agency, Anglian Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st July 1991 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A22NE (NW)	1544	2	518400 228800
	Water Abstractions Operator: William Ransom & Son Plc Licence Number: 6/33/13/*s/055 Permit Version: Not Supplied Location: River Hiz, HITCHIN CENTRE Authority: Environment Agency, Anglian Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 48 Yearly Rate (m3): 200000 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NE (N)	1592	2	518500 228895

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Hertfordshire & Bedfordshire Petroleum Licence Number: 6/33/13/*G/0086 Permit Version: 100 Location: Borehole W Of Little Wymondley Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: C Chalk 2; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1988 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15SE (E)	1625	2	520680 227315
	Water Abstractions Operator: Herts & Beds Petroleum Licence Number: 6/33/13/*g/086 Permit Version: Not Supplied Location: Borehole , West Of Little Wymondley Authority: Environment Agency, Anglian Region Abstraction: Private Water Undertaking Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 8 Yearly Rate (m3): 27300 Details: C Chalk 2; Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15SE (E)	1625	2	520680 227320
	Water Abstractions Operator: Stutley Bros Limited Licence Number: 6/33/13/*g/022 Permit Version: Not Supplied Location: Borehole West Of, LITTLE WYMONDLEY Authority: Environment Agency, Anglian Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 0 Yearly Rate (m3): Not Supplied Details: C Chalk 2; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A15SE (E)	1629	2	520685 227325
	Water Abstractions Operator: Hertfordshire & Bedfordshire Petroleum Licence Number: 6/33/13/*G/0086 Permit Version: 100 Location: Borehole W Of Little Wymondley Authority: Environment Agency, Anglian Region Abstraction: Commercial Private Water Undertaking: Drinking; Cooking; Sanitary; Washing; (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: C Chalk 2; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1988 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15SE (E)	1630	2	520685 227315

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Stutley Bros Limited Licence Number: 6/33/13/*g/022 Permit Version: Not Supplied Location: Borehole West Of, LITTLE WYMONDLEY Authority: Environment Agency, Anglian Region Abstraction: Agriculture (General) Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 0 Yearly Rate (m3): Not Supplied Details: C Chalk 2; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A15SE (E)	1630	2	520685 227320
	Water Abstractions Operator: G C Worbey Licence Number: 6/33/13/*s/017 Permit Version: Not Supplied Location: Watercourse At, HITCHIN Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 1 Yearly Rate (m3): 90920 Details: Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A25SW (NE)	1654	2	520200 228600
	Water Abstractions Operator: Kuwait Petroleum (GB) Ltd Licence Number: 6/33/13/*g/099 Permit Version: Not Supplied Location: Borehole At, LITTLE WYMONDLEY Authority: Environment Agency, Anglian Region Abstraction: Unspecified Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 2 Yearly Rate (m3): 5000 Details: C Chalk 2; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15SE (E)	1664	2	520720 227330
	Water Abstractions Operator: D G Scott Licence Number: 6/33/13/*g/057 Permit Version: Not Supplied Location: Well At, Little Almshoe Authority: Environment Agency, Anglian Region Abstraction: Agriculture (General) Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 0 Yearly Rate (m3): 22730 Details: C Chalk 2; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A4SE (SE)	1678	2	519800 225900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: D G Scott Licence Number: 6/33/13/*g/057 Permit Version: Not Supplied Location: Well At, Little Almshoe Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 1 Yearly Rate (m3): 22730 Details: C Chalk 2; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A4SE (SE)	1682	2	519800 225895
	Water Abstractions Operator: D G Scott Licence Number: 6/33/13/*g/057 Permit Version: Not Supplied Location: Well At, Little Almshoe Authority: Environment Agency, Anglian Region Abstraction: Unspecified Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 1 Yearly Rate (m3): 22730 Details: C Chalk 2; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A4SE (SE)	1684	2	519805 225895
	Water Abstractions Operator: Dermal Laboratories Ltd Licence Number: 6/33/13/*G/0046 Permit Version: 100 Location: Borehole At Tatmore Place Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: C Chalk 2; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st February 1972 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2SW (SW)	1700	2	518100 226000
	Water Abstractions Operator: Letchworth Garden City Licence Number: 6/33/13/**/034 Permit Version: Not Supplied Location: Watercourse , North Of Great Wymondley Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 2 Yearly Rate (m3): 727270 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1745	2	520800 227495

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Letchworth Garden City Licence Number: 6/33/13/**/034 Permit Version: Not Supplied Location: Watercourse East Of, GREAT WYMONDLEY Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 2 Yearly Rate (m3): 727000 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1745	2	520800 227500
	Water Abstractions Operator: Letchworth Garden City Licence Number: 6/33/13/*s/034 Permit Version: Not Supplied Location: Watercourse Southwest Of Great Wymondley, WYMONDLEY, Hertfordshire Authority: Environment Agency, Anglian Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 2 Yearly Rate (m3): 727270 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(E)	1750	2	520805 227495
	Water Abstractions Operator: William Ransom & Son Plc Licence Number: 6/33/13/*s/055 Permit Version: Not Supplied Location: River Hiz, HITCHIN CENTRE Authority: Environment Agency, Anglian Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 48 Yearly Rate (m3): 200000 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(N)	1786	2	518500 229100
	Water Abstractions Operator: William Ransom & Son Plc Licence Number: 6/33/13/*s/055 Permit Version: Not Supplied Location: River Hiz, HITCHIN CENTRE Authority: Environment Agency, Anglian Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 48 Yearly Rate (m3): 200000 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(N)	1849	2	518600 229195

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Affinity Water Limited Licence Number: 6/33/13/*G/0008 Permit Version: 102 Location: Bore At Temple End,Hitchin Authority: Environment Agency, Anglian Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 14th November 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1869	2	517200 227600
	Water Abstractions Operator: Veolia Water Central Limited Licence Number: 6/33/13/*G/0008 Permit Version: 101 Location: Bore At Temple End,Hitchin Authority: Environment Agency, Anglian Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 20th July 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1869	2	517200 227600
	Water Abstractions Operator: Three Valleys Water Plc Licence Number: 6/33/13/*G/0008 Permit Version: 100 Location: Bore At Temple End,Hitchin Authority: Environment Agency, Anglian Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: C Chalk 2; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st March 1994 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1869	2	517200 227600
	Water Abstractions Operator: William Ransom & Son Plc Licence Number: 6/33/13/*s/055 Permit Version: Not Supplied Location: River Hiz, HITCHIN CENTRE Authority: Environment Agency, Anglian Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 48 Yearly Rate (m3): 200000 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(N)	1925	2	518700 229295

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: William Ransom & Son Plc Licence Number: 6/33/13/*s/055 Permit Version: Not Supplied Location: River Hiz At, Hitchin Centre Authority: Environment Agency, Anglian Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 48 Yearly Rate (m3): 200000 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(N)	1930	2	518700 229300
	Water Abstractions Operator: William Ransom & Son Plc Licence Number: 6/33/13/*s/055 Permit Version: Not Supplied Location: River Hiz, HITCHIN CENTRE Authority: Environment Agency, Anglian Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Stream Daily Rate (m3): 48 Yearly Rate (m3): 200000 Details: Status: Perpetuity Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(N)	1945	2	518605 229295
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 31 Bedfordshire Scale: 1:100,000	A13NE (NE)	0	2	519058 227404
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A13NE (NE)	0	4	519058 227404
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NE (NE)	0	4	519058 227404
19	Source Protection Zones Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A13NE (NE)	0	2	519058 227404
20	Source Protection Zones Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	A13SW (W)	55	2	519004 227395
21	Source Protection Zones Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	A12NE (W)	691	2	518390 227580
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flood Water Storage Areas None				
	Flood Defences None				
22	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 194.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13NE (E)	310	5	519363 227457
23	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 160.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13NE (E)	340	5	519387 227487
24	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 72.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13NE (E)	340	5	519387 227489
25	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 44.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (E)	359	5	519403 227504
26	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 465.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (E)	399	5	519438 227526
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (E)	400	5	519437 227531
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (E)	402	5	519438 227533
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (E)	402	5	519438 227533

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 252.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (E)	403	5	519436 227540
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 22.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (E)	408	5	519445 227533
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (E)	408	5	519444 227534
33	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 54.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (E)	415	5	519446 227551
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 205.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (E)	420	5	519461 227518
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NE)	439	5	519448 227605
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 44.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NE)	445	5	519448 227617
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NE)	469	5	519449 227661
38	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 4.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NE)	492	5	519449 227701

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 95.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NE)	495	5	519451 227705
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 40.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A18SE (NE)	499	5	519385 227781
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 30.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A18SE (NE)	528	5	519381 227821
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A19SW (NE)	529	5	519423 227786
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 45.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A19SW (NE)	530	5	519423 227788
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 216.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12NE (NW)	544	5	518578 227658
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 234.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A19SW (NE)	554	5	519410 227831
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 224.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14SW (SE)	633	5	519624 227121
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 119.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A18SE (N)	695	5	519319 228048

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 53.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A18SE (N)	695	5	519317 228048
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: Underground Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A9NW (SE)	717	5	519576 226908
50	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 261.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A9NW (SE)	721	5	519576 226904
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1074.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A19SW (NE)	753	5	519428 228060
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 103.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14SE (E)	930	5	519986 227345
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A9SW (SE)	938	5	519623 226655
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A9SW (SE)	943	5	519625 226651
55	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 21.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A9SW (SE)	959	5	519635 226639
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ippollitts Brook Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A9SW (SE)	977	5	519654 226630

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
57	Historical Landfill Sites Licence Holder: Not Supplied Location: Gosmore, Hitchin Name: Maydencroft Manor Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD00778 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: 179/PRE-76, HCC/179, 1900/5106	A12NE (W)	444	2	518630 227520
58	Historical Landfill Sites Licence Holder: Not Supplied Location: Gosmore, Hitchin Name: Maydencroft Manor Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD00780 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: HCC/179, 179/PRE-76, 1900/5104	A12NE (NW)	547	2	518619 227729
59	Historical Landfill Sites Licence Holder: Not Supplied Location: Gosmore, Hitchin Name: Maydencroft Manor Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD00777 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: HCC/179, 179/PRE-76, 1900/5107	A12NE (W)	681	2	518416 227631
60	Historical Landfill Sites Licence Holder: Not Supplied Location: Gosmore, Hitchin Name: Maydencroft Manor Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD00779 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: HCC/179, 179/PRE-76, 1900/5105	A17SE (NW)	704	2	518449 227756
61	Historical Landfill Sites Licence Holder: C T Micklem Esquire Location: Gosmore, Hitchin Name: Maydencroft Manor Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD00776 First Input Date: 31st December 1970 Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 1900/0081 BGS Ref: Not Supplied Other Ref: HCC/179, 179/PRE-76, 1900/5108	A12NW (W)	986	2	518073 227430

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Hertfordshire County Council - Has supplied landfill data		0	6	519058 227404
	Local Authority Landfill Coverage Name: North Hertfordshire District Council - Has supplied landfill data		0	3	519058 227404
62	Local Authority Recorded Landfill Sites Location: Maydencroft Manor Reference: 179 Authority: North Hertfordshire District Council, Environmental Health Department Last Reported Closed Status: Types of Waste: Non-Putrescible Date of Closure: 03/09/1980 Positional Accuracy: Located by supplier to within 10m Boundary Quality: Not Applicable	A12NE (W)	566	3	518500 227500
63	Local Authority Recorded Landfill Sites Location: Maydencroft Manor,, South Of Hitchin Reference: 271 Authority: Hertfordshire County Council, Spatial Planning and Economy Unit Last Reported Unknown Status: Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Applicable	A12NE (NW)	632	6	518500 227700
64	Local Authority Recorded Landfill Sites Location: Tittendell, St Ippollitts Reference: 138 Authority: North Hertfordshire District Council, Environmental Health Department Last Reported Unknown Status: Types of Waste: Surplus Soil, Sub-Soil, Chalk And Clay, Builders And Factory, Putrescible Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	A9NE (SE)	835	3	519753 226943
65	Local Authority Recorded Landfill Sites Location: Priory Park Reference: 477 Authority: Hertfordshire County Council, Spatial Planning and Economy Unit Last Reported Not Supplied Status: Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 10m Boundary Quality: Not Applicable	A17NE (NW)	976	6	518444 228162
66	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A13SW (SW)	103	-	518967 227358
67	Potentially Infilled Land (Non-Water) Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A18SE (N)	651	-	519113 228052
68	Potentially Infilled Land (Non-Water) Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A19NW (NE)	853	-	519498 228133
69	Potentially Infilled Land (Non-Water) Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A18NW (N)	940	-	518931 228335
70	Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1992	A12NW (W)	985	-	518073 227430

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Grey Chalk Subgroup	A13NE (NE)	0	1	519058 227404
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NE (NE)	0	1	519058 227404
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (S)	86	1	519080 227321
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (S)	131	1	519101 227281
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NW (W)	136	1	518922 227406
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (SW)	218	1	518905 227250
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NW (W)	319	1	518740 227408

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A13SE (SE)	356	1	519317 227160
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A12NE (W)	363	1	518708 227497
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A14NW (E)	414	1	519441 227562
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A8NW (SW)	445	1	518873 227000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A14NW (E)	452	1	519510 227404
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A8NE (SE)	518	1	519381 227000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A14SW (E)	570	1	519598 227222
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 25 - 35 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A18SE (N)	590	1	519110 227991
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A14NW (E)	618	1	519665 227516
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A9NW (SE)	644	1	519559 227000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SW (SW)	768	1	518361 227082
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A19SW (NE)	775	1	519553 228000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A7NE (SW)	799	1	518426 226915
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A18NE (N)	828	1	519124 228229
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A18NE (N)	841	1	519261 228220
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A14SE (E)	852	1	519890 227225
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: <15 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A19SE (NE)	875	1	519848 227778
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A14NE (E)	875	1	519932 227438

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A8SW (S)	889	1	518770 226563
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A7SE (SW)	963	1	518635 226540
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A17SW (NW)	974	1	518286 227997
71	BGS Recorded Mineral Sites Site Name: Mill Lane Sand Pit Location: Gosmore, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164116 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cromerian - Ipswichian Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	99	1	518971 227358
72	BGS Recorded Mineral Sites Site Name: Maidencroft Pits Location: Gosmore, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164107 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12NE (W)	561	1	518512 227531
73	BGS Recorded Mineral Sites Site Name: Maidencroft Loam Pits Location: Gosmore, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164105 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	607	1	518538 227716

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	BGS Recorded Mineral Sites Site Name: Maidencroft Loam Pits Location: Gosmore, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164106 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	616	1	518568 227776
75	BGS Recorded Mineral Sites Site Name: Maidencroft Pits Location: Gosmore, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164109 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12NE (W)	695	1	518401 227630
76	BGS Recorded Mineral Sites Site Name: Blackhorse Lane Gravel Pit Location: Sunnyside, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164103 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cromerian - Ipswichian Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A18NE (N)	698	1	519227 228081
77	BGS Recorded Mineral Sites Site Name: Maidencroft Pits Location: Gosmore, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164108 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12NW (W)	717	1	518344 227469
78	BGS Recorded Mineral Sites Site Name: Jeeves Brick Pit Location: Sunnyside, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164095 Type: Opencast Status: Ceased Operator: Individual'S Name Withheld Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A18NE (N)	762	1	519181 228156
79	BGS Recorded Mineral Sites Site Name: Jeeves Brick Works Location: Sunnyside, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164096 Type: Opencast Status: Ceased Operator: Individual'S Name Withheld Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A18NE (N)	763	1	519104 228165

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	BGS Recorded Mineral Sites Site Name: Maidencroft Pits Location: Gosmore, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164111 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	763	1	518401 227791
81	BGS Recorded Mineral Sites Site Name: Maidencroft Pits Location: Gosmore, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164110 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	802	1	518337 227755
82	BGS Recorded Mineral Sites Site Name: Sunnyside Gravel Pit Location: Sunnyside, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164098 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cretaceous Geology: White Chalk Subgroup Commodity: Chalk Positional Accuracy: Located by supplier to within 10m	A18NE (N)	861	1	519290 228233
82	BGS Recorded Mineral Sites Site Name: Sunnyside Gravel Pit Location: Sunnyside, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164098 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cromerian - Ipswichian Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A18NE (N)	861	1	519290 228233
83	BGS Recorded Mineral Sites Site Name: Ippollits Brook Gravel Pit Location: St Ippollits, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164268 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Anglian Geology: Lowestoft Formation Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	888	1	519607 228101
84	BGS Recorded Mineral Sites Site Name: Sunnyside Gravel Pit Location: Sunnyside, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164099 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Cromerian - Ipswichian Geology: Glaciofluvial Deposits, Mid Pleistocene Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A18NE (N)	901	1	519230 228288

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
85	BGS Recorded Mineral Sites Site Name: Hitchin Hill Brickearth Pit Location: Sunnyside, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164104 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A18NW (N)	901	1	519038 228304
86	BGS Recorded Mineral Sites Site Name: Maidencroft Pits Location: Gosmore, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164112 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	905	1	518244 227798
87	BGS Recorded Mineral Sites Site Name: Maidencroft Pits Location: Gosmore, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164113 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	954	1	518267 227937
88	BGS Recorded Mineral Sites Site Name: Hitchin Hill Brick Fields Location: Sunnyside, Hitchin, Hertfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 164091 Type: Opencast Status: Ceased Operator: Individual's Name Withheld Operator Location: Not Supplied Periodic Type: Quaternary Geology: Head Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A18NW (N)	997	1	518914 228390
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Man-Made Mining Cavities Easting: 519100 Northing: 228200 Distance: 798 Quadrant Reference: A18 Quadrant Reference: NE Bearing Ref: N Cavity Type: Historical Brick Field-Potential Chalk Mining Commodity: Chalk Solid Geology Detail: Middle Chalk Formation Superficial Geology: Worked Ground, Brickearth Detail:	A18NE (N)	798	7	519100 228200
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	519058 227404

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	519058 227404
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	519058 227404
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	67	1	519121 227381
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	519058 227404
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	519058 227404
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	519058 227404
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	519058 227404
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	86	1	519080 227321
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	519058 227404
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	519058 227404

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
89	Contemporary Trade Directory Entries Name: Domestic Den Location: 39, Mill Road, St. Ippolyts, Hitchin, Hertfordshire, SG4 7RG Classification: Washing Machines - Servicing & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SE (S)	280	-	519066 227125
90	Contemporary Trade Directory Entries Name: S G Gemmell Ltd Location: 14, Waterdell Lane, St. Ippolyts, Hitchin, Hertfordshire, SG4 7RB Classification: Catering Equipment - Servicing & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NE (SE)	445	-	519287 227023
91	Contemporary Trade Directory Entries Name: S Nicholl Location: Oakwood, Newlands Close East, Hitchin, Hertfordshire, SG4 9AZ Classification: Cabinet Makers Status: Active Positional Accuracy: Automatically positioned to the address	A18SW (N)	457	-	518913 227837
92	Contemporary Trade Directory Entries Name: The Car Agents Ltd Location: Vine Cottage, Maydencroft Lane, Gosmore, Hitchin, SG4 7QB Classification: Car Dealers - Used Status: Active Positional Accuracy: Automatically positioned to the address	A12SE (SW)	487	-	518667 227114
93	Contemporary Trade Directory Entries Name: The Complete Restoration Co Location: The Foundry, St. Ippolyts, Hitchin, Hertfordshire, SG4 7NX Classification: Paint & Varnish Stripping Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (SE)	609	-	519584 227098
93	Contemporary Trade Directory Entries Name: A B D Services Location: The Foundry, St. Ippolyts, Hitchin, Hertfordshire, SG4 7NX Classification: Industrial Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	623	-	519574 227055
93	Contemporary Trade Directory Entries Name: Henry Isaac Fireplaces Ltd Location: The Foundry, St. Ippolyts, Hitchin, Hertfordshire, SG4 7NX Classification: Fireplaces & Mantelpieces Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	624	-	519574 227055
93	Contemporary Trade Directory Entries Name: Watstones Location: The Foundry, St. Ippolyts, Hitchin, Hertfordshire, SG4 7NX Classification: Metal Finishing Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	624	-	519574 227055
94	Contemporary Trade Directory Entries Name: P V Interiors Location: 55, London Road, Hitchin, SG4 9EW Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Automatically positioned to the address	A18SW (N)	623	-	518922 228012
95	Contemporary Trade Directory Entries Name: Willows Star Service Station Location: Stevenage Road, Hitchin, Hertfordshire, SG4 9ED Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Automatically positioned to the address	A19NW (NE)	834	-	519409 228160
96	Contemporary Trade Directory Entries Name: B P Service Station Location: Stevenage Road, Hitchin, SG4 9DT Classification: Petrol Filling Stations Status: Active Positional Accuracy: Automatically positioned to the address	A18NW (N)	898	-	519051 228302
96	Contemporary Trade Directory Entries Name: Bp Service Stations Location: Stevenage Road, Hitchin, Hertfordshire, SG4 9DT Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Manually positioned to the address or location	A18NW (N)	916	-	519046 228319

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	Contemporary Trade Directory Entries Name: Charlie Browns Autocentres Location: 18, Stevenage Road, Hitchin, Hertfordshire, SG4 9DL Classification: Tyre Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NW (N)	920	-	518855 228301
97	Contemporary Trade Directory Entries Name: Charlie Brown Location: 18, Stevenage Road, Hitchin, Hertfordshire, SG4 9DL Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NW (N)	920	-	518855 228301
98	Contemporary Trade Directory Entries Name: J N Thomson & Sons (Hitchin) Ltd Location: Preston Road, Gosmore, Hitchin, Hertfordshire, SG4 7QP Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A7SE (SW)	940	-	518611 226578
99	Contemporary Trade Directory Entries Name: Sureclean Cleaning Services Location: 45, Sunnyside Road, Hitchin, Hertfordshire, SG4 9JQ Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A18NE (N)	949	-	519221 228338
100	Fuel Station Entries Name: Willows Service Station Location: Stevenage Road , , Hitchin, Hertfordshire, SG4 9EA Brand: Obsolete Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address	A19NW (NE)	834	-	519408 228160
101	Fuel Station Entries Name: Oakfield Sf Connect Location: Stevenage Road , , Hitchin, Hertfordshire, SG4 9DT Brand: BP Premises Type: Petrol Station Status: Open Positional Accuracy: Manually positioned to the address or location	A18NE (N)	884	-	519072 228287
102	Points of Interest - Commercial Services Name: Asbestos Surveys Location: 22 Stevenage Road, Hitchin, SG4 9DL Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A18NW (N)	910	8	518873 228294
103	Points of Interest - Commercial Services Name: Car Wash Location: Stevenage Road, Hitchin, Hertfordshire, SG4 9DT Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18NW (N)	916	8	519046 228319
103	Points of Interest - Commercial Services Name: Oakfield Sf Connect Location: Stevenage, Road, Hitchin, SG4 9DT Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18NW (N)	918	8	519047 228321
103	Points of Interest - Commercial Services Name: B P Car Wash Location: Stevenage Road, Hitchin, SG4 9DT Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18NW (N)	918	8	519047 228321
104	Points of Interest - Commercial Services Name: J N Thomson & Sons (Hitchin) Ltd Location: Preston Road, Gosmore, Hitchin, SG4 7QP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (SW)	940	8	518611 226578

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
105	Points of Interest - Manufacturing and Production Name: A J Pigott & Partners Location: The Gables, Gosmore Road, Hitchin, SG4 9AT Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A12NE (NW)	520	8	518654 227731
105	Points of Interest - Manufacturing and Production Name: A J Pigott & Partners Location: The Gables, Gosmore Road, Hitchin, SG4 9AT Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A12NE (NW)	520	8	518654 227731
106	Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	611	8	519582 227091
106	Points of Interest - Manufacturing and Production Name: Tank Location: SG4 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A9NW (SE)	627	8	519571 227045
106	Points of Interest - Manufacturing and Production Name: Tank Location: SG4 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A9NW (SE)	638	8	519589 227052
107	Points of Interest - Manufacturing and Production Name: A J Smith Location: Thistley Lane, Gosmore, Hitchin, SG4 7QT Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A8SW (S)	855	8	518807 226587
107	Points of Interest - Manufacturing and Production Name: A J Smith Location: Thistley Farm, Thistley Lane, Gosmore, Hitchin, SG4 7QT Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A8SW (S)	892	8	518777 226558
108	Points of Interest - Public Infrastructure Name: Sewage Works Location: SG4 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	366	8	519422 227433
109	Points of Interest - Public Infrastructure Name: BP Service Station Location: Stevenage Road, Hitchin, SG4 9DT Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18NE (N)	884	8	519072 228287
109	Points of Interest - Public Infrastructure Name: Oakfield Sf Connect Location: Stevenage Road, Hitchin, SG4 9DT Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18NE (N)	884	8	519073 228287
109	Points of Interest - Public Infrastructure Name: Oakfield Sf Connect Location: Stevenage, Road, Hitchin, SG4 9DT Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18NE (N)	884	8	519072 228287
109	Points of Interest - Public Infrastructure Name: BP Service Station Location: Stevenage Road, Hitchin, SG4 9DT Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18NE (N)	887	8	519070 228290

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	Points of Interest - Public Infrastructure Name: BP Services Oakfield Sf Connect Location: Stevenage Road, Hitchin, Hertfordshire, SG4 9DT Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18NW (N)	916	8	519046 228319
110	Points of Interest - Public Infrastructure Name: Cemetery Location: SG4 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	902	8	519818 226919
110	Points of Interest - Public Infrastructure Name: Cemetery Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	903	8	519818 226918
111	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	429	8	519081 226976
111	Points of Interest - Recreational and Environmental Name: Playground Location: Townsend Close, SG4 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	429	8	519096 226977

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	Areas of Adopted Green Belt Authority: North Hertfordshire District Council Plan Name: North Hertfordshire District Local Plan Status: Adopted Plan Date: 30th April 1996	A13NE (NE)	0	10	519058 227404
113	Nitrate Vulnerable Zones Name: Anglian Chalk Description: Groundwater Source: Environment Agency, Head Office	A13NE (NE)	0	4	519058 227404
114	Nitrate Vulnerable Zones Name: Great Ouse Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NE (NE)	0	4	519058 227404

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Stevenage Borough Council - Environmental Health Department Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department North Hertfordshire District Council - Environmental Health Department Central Bedfordshire Council - Environmental Health Department	January 2015 July 2008 October 2014 October 2017	Annual Rolling Update Not Applicable Annual Rolling Update Annually
Discharge Consents Environment Agency - Anglian Region Environment Agency - Thames Region	October 2018 October 2018	Quarterly Quarterly
Enforcement and Prohibition Notices Environment Agency - Anglian Region Environment Agency - Thames Region	March 2013 March 2013	Annual Rolling Update Annual Rolling Update
Integrated Pollution Controls Environment Agency - Anglian Region Environment Agency - Thames Region	October 2008 October 2008	Variable Variable
Integrated Pollution Prevention And Control Environment Agency - Anglian Region Environment Agency - South East Region - North East Thames Area Environment Agency - Thames Region	October 2018 October 2018 October 2018	Quarterly Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Stevenage Borough Council - Environmental Health Department Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department Central Bedfordshire Council - Environmental Health Department North Hertfordshire District Council - Environmental Health Department	April 2015 December 2008 November 2014 September 2014	Variable Not Applicable Variable Variable
Local Authority Pollution Prevention and Controls Stevenage Borough Council - Environmental Health Department Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department Central Bedfordshire Council - Environmental Health Department North Hertfordshire District Council - Environmental Health Department	April 2015 December 2008 November 2014 September 2014	Annual Rolling Update Not Applicable Annually Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Stevenage Borough Council - Environmental Health Department Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department Central Bedfordshire Council - Environmental Health Department North Hertfordshire District Council - Environmental Health Department	April 2015 December 2008 November 2014 September 2014	Variable Not Applicable Variable Variable
Nearest Surface Water Feature Ordnance Survey	September 2017	
Pollution Incidents to Controlled Waters Environment Agency - Anglian Region Environment Agency - Thames Region	September 1999 September 1999	Not Applicable Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Anglian Region Environment Agency - Thames Region	March 2013 March 2013	Annual Rolling Update Annual Rolling Update
Prosecutions Relating to Controlled Waters Environment Agency - Anglian Region Environment Agency - Thames Region	March 2013 March 2013	Annual Rolling Update Annual Rolling Update
Registered Radioactive Substances Environment Agency - Anglian Region Environment Agency - Thames Region	January 2015 January 2015	
River Quality Environment Agency - Head Office	November 2001	Not Applicable

Agency & Hydrological	Version	Update Cycle
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - Anglian Region - Central Area Environment Agency - South East Region - North East Thames Area Environment Agency - Thames Region - North East Area	October 2018 October 2018 October 2018	Quarterly Quarterly Quarterly
Water Abstractions Environment Agency - Anglian Region Environment Agency - Thames Region	October 2018 October 2018	Quarterly Quarterly
Water Industry Act Referrals Environment Agency - Anglian Region Environment Agency - Thames Region	October 2017 October 2017	Quarterly Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	January 2018	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2018	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2018	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2018	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2018	Quarterly
Flood Defences Environment Agency - Head Office	August 2018	Quarterly
OS Water Network Lines Ordnance Survey	October 2018	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water Suitability Environment Agency - Head Office	October 2013	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	July 2018	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Anglian Region Environment Agency - Thames Region	October 2008 October 2008	Not Applicable Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Anglian Region - Central Area Environment Agency - South East Region - North East Thames Area Environment Agency - Thames Region - North East Area	July 2018 July 2018 July 2018	Quarterly Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - Anglian Region - Central Area Environment Agency - South East Region - North East Thames Area Environment Agency - Thames Region - North East Area	October 2018 October 2018 October 2018	Quarterly Quarterly Quarterly
Local Authority Landfill Coverage Bedfordshire County Council (now part of Central Bedfordshire Council) Hertfordshire County Council - Spatial Planning and Economy Unit Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department North Hertfordshire District Council - Environmental Health Department Stevenage Borough Council - Environmental Health Department	May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Bedfordshire County Council (now part of Central Bedfordshire Council) Hertfordshire County Council - Spatial Planning and Economy Unit Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department North Hertfordshire District Council - Environmental Health Department Stevenage Borough Council - Environmental Health Department	May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency - Anglian Region - Central Area Environment Agency - Thames Region - North East Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - Anglian Region - Central Area Environment Agency - Thames Region - North East Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - Thames Region - North East Area Environment Agency - Anglian Region - Central Area	June 2015 March 2003	Not Applicable Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Variable
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Central Bedfordshire Council - Planning Department Hertfordshire County Council - Spatial Planning and Economy Unit North Hertfordshire District Council Stevenage Borough Council Bedfordshire County Council (now part of Central Bedfordshire Council) Mid Bedfordshire District Council (now part of Central Bedfordshire Council)	February 2016 February 2016 February 2016 February 2016 July 2008 May 2008	Variable Variable Variable Variable Annual Rolling Update Not Applicable
Planning Hazardous Substance Consents Central Bedfordshire Council - Planning Department Hertfordshire County Council - Spatial Planning and Economy Unit North Hertfordshire District Council Stevenage Borough Council Bedfordshire County Council (now part of Central Bedfordshire Council) Mid Bedfordshire District Council (now part of Central Bedfordshire Council)	February 2016 February 2016 February 2016 February 2016 July 2008 May 2008	Variable Variable Variable Variable Annual Rolling Update Not Applicable
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2018	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	November 2018	Quarterly
Fuel Station Entries Experian Catalist	August 2018	Quarterly
Gas Pipelines National Grid	July 2014	
Points of Interest - Commercial Services PointX	September 2018	Quarterly
Points of Interest - Education and Health PointX	September 2018	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2018	Quarterly
Points of Interest - Public Infrastructure PointX	September 2018	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2018	Quarterly
Underground Electrical Cables National Grid	December 2015	

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	August 2018	Bi-Annually
Areas of Adopted Green Belt Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department North Hertfordshire District Council Stevenage Borough Council Central Bedfordshire Council - Planning Department	August 2018 August 2018 August 2018 May 2011	As notified As notified As notified As notified
Areas of Unadopted Green Belt Mid Bedfordshire District Council (now part of Central Bedfordshire Council) - Environmental Health Department North Hertfordshire District Council Stevenage Borough Council Central Bedfordshire Council - Planning Department	August 2018 August 2018 August 2018 May 2011	As notified As notified As notified As notified
Areas of Outstanding Natural Beauty Natural England	August 2018	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	August 2018	Bi-Annually
Marine Nature Reserves Natural England	January 2018	Bi-Annually
National Nature Reserves Natural England	August 2018	Bi-Annually
National Parks Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones Environment Agency - Head Office Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2017 October 2015	Bi-Annually
Ramsar Sites Natural England	August 2018	Bi-Annually
Sites of Special Scientific Interest Natural England	October 2018	Bi-Annually
Special Areas of Conservation Natural England	August 2018	Bi-Annually
Special Protection Areas Natural England	August 2018	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	North Hertfordshire District Council - Environmental Health Department Council Offices, Gernon Road, Letchworth, Hertfordshire, SG6 3JF	Telephone: 01462 474000 Fax: 01462 474559 Website: www.north-herts.gov.uk
4	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	Hertfordshire County Council - Spatial Planning and Economy Unit County Hall, Hertford, Hertfordshire, SG13 8DN	Telephone: 01992 556266 Fax: 01992 556015 Email: spatialplanning@hertfordshire.gov.uk Website: www.hertsdirect.org
7	Peter Brett Associates Caversham Bridge House, Waterman Place, Reading, Berkshire, RG1 8DN	Telephone: 0118 950 0761 Fax: 0118 959 7498 Email: reading@pba.co.uk Website: www.pba.co.uk
8	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
9	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
10	North Hertfordshire District Council Council Offices, Gernon Road, Letchworth, Hertfordshire, SG6 3JF	Telephone: 01462 474000 Fax: 01462 474558 Website: www.north-herts.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Types at Location
- Pylon
- Overhead Transmission Line

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral
- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

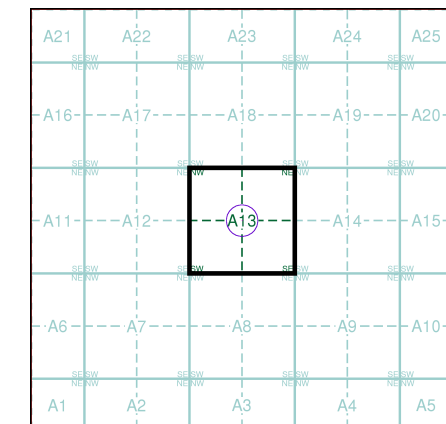
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Geological

- BGS Recorded Mineral Site

Site Sensitivity Map - Segment A13



Order Details

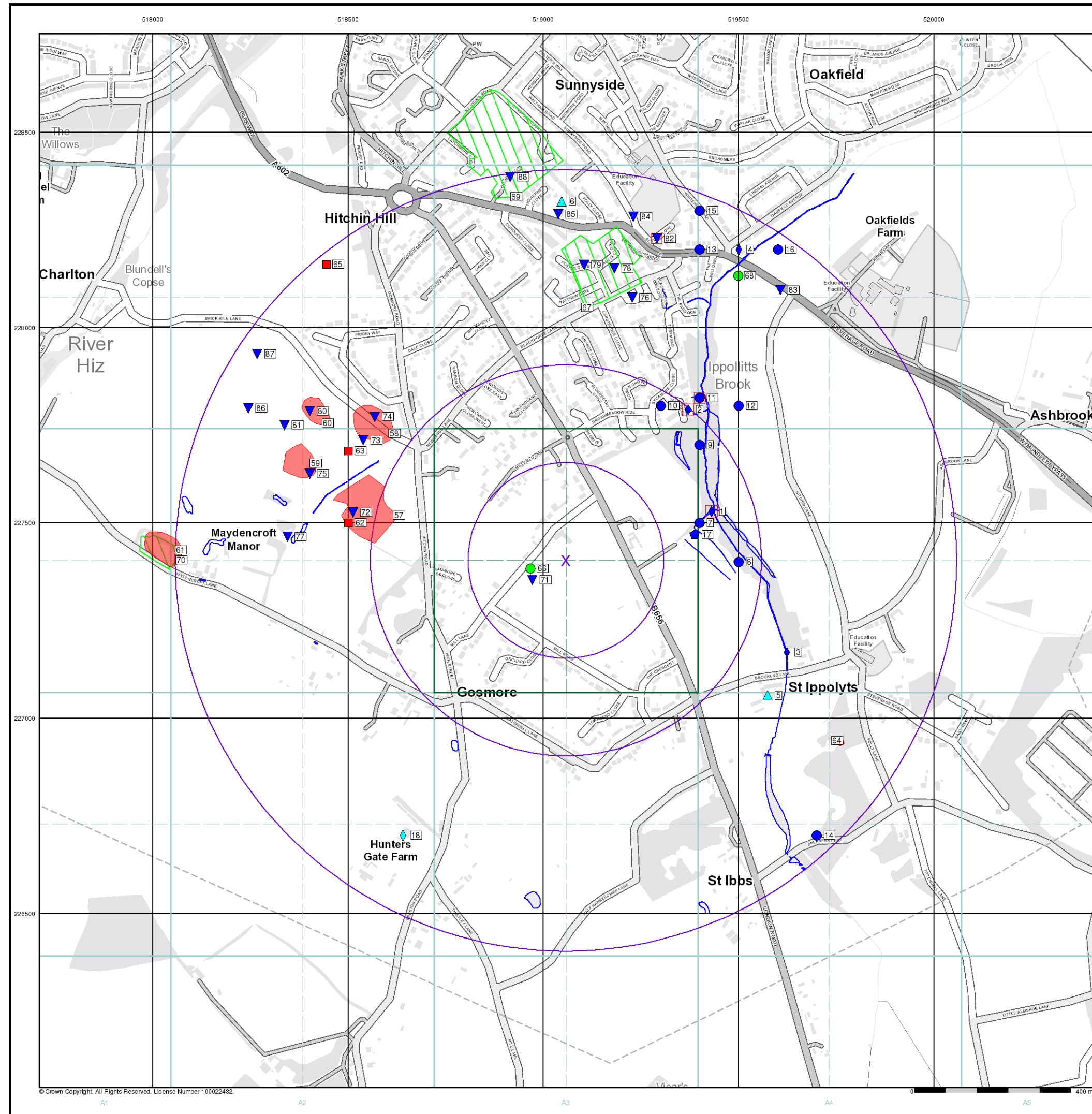
Order Number: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Plot Buffer (m): 100

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ

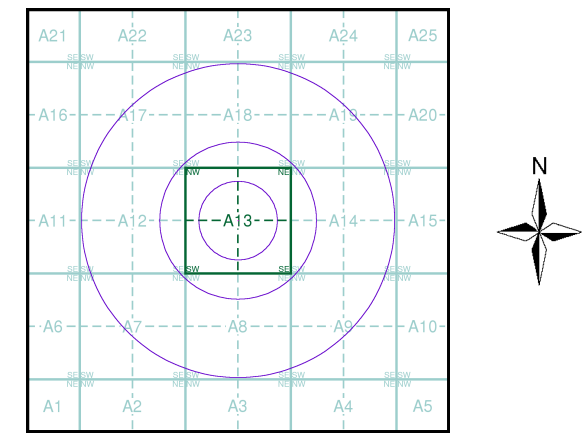
Landmark
INFORMATION GROUP

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



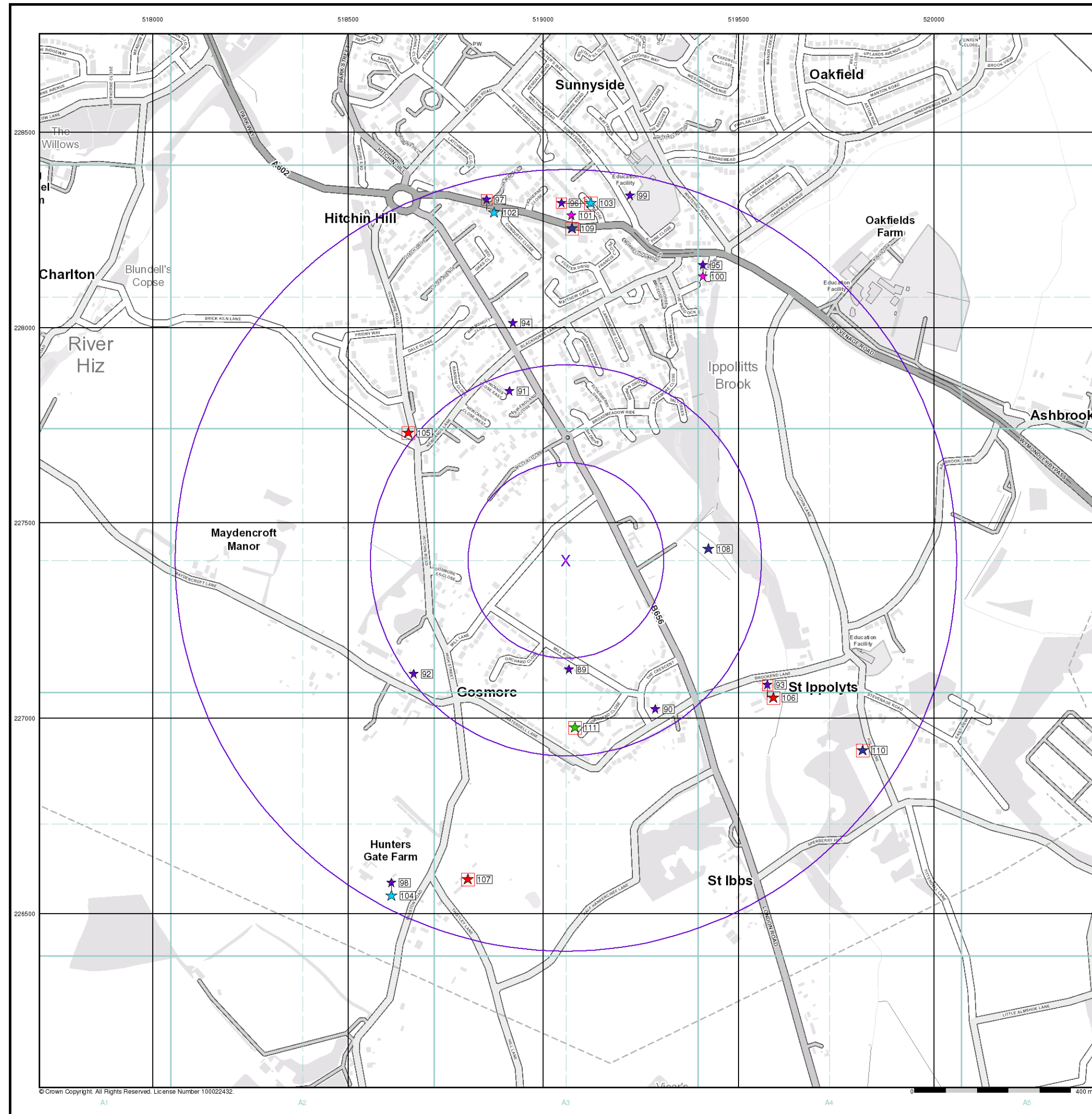
- General**
 - Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
- Agency and Hydrological**
 - Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- Waste**
 - BGS Recorded Landfill Site (Location)
 - BGS Recorded Landfill Site
 - EA Historic Landfill (Buffered Point)
 - EA Historic Landfill (Polygon)
 - Integrated Pollution Control Registered Waste Site
 - Licensed Waste Management Facility (Landfill Boundary)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
 - COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
 - BGS Recorded Mineral Site
- Geological**
 - BGS Recorded Mineral Site

Site Sensitivity Map - Slice A



Order Details
Order Number: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details
1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ



Industrial Land Use Map

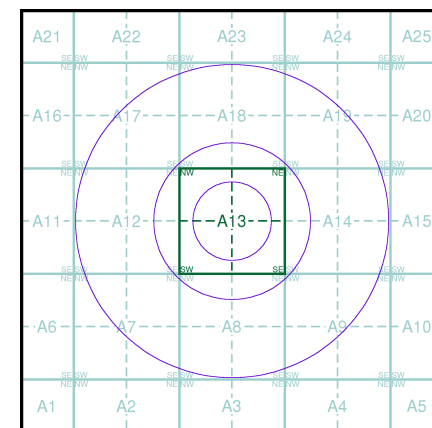
General

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

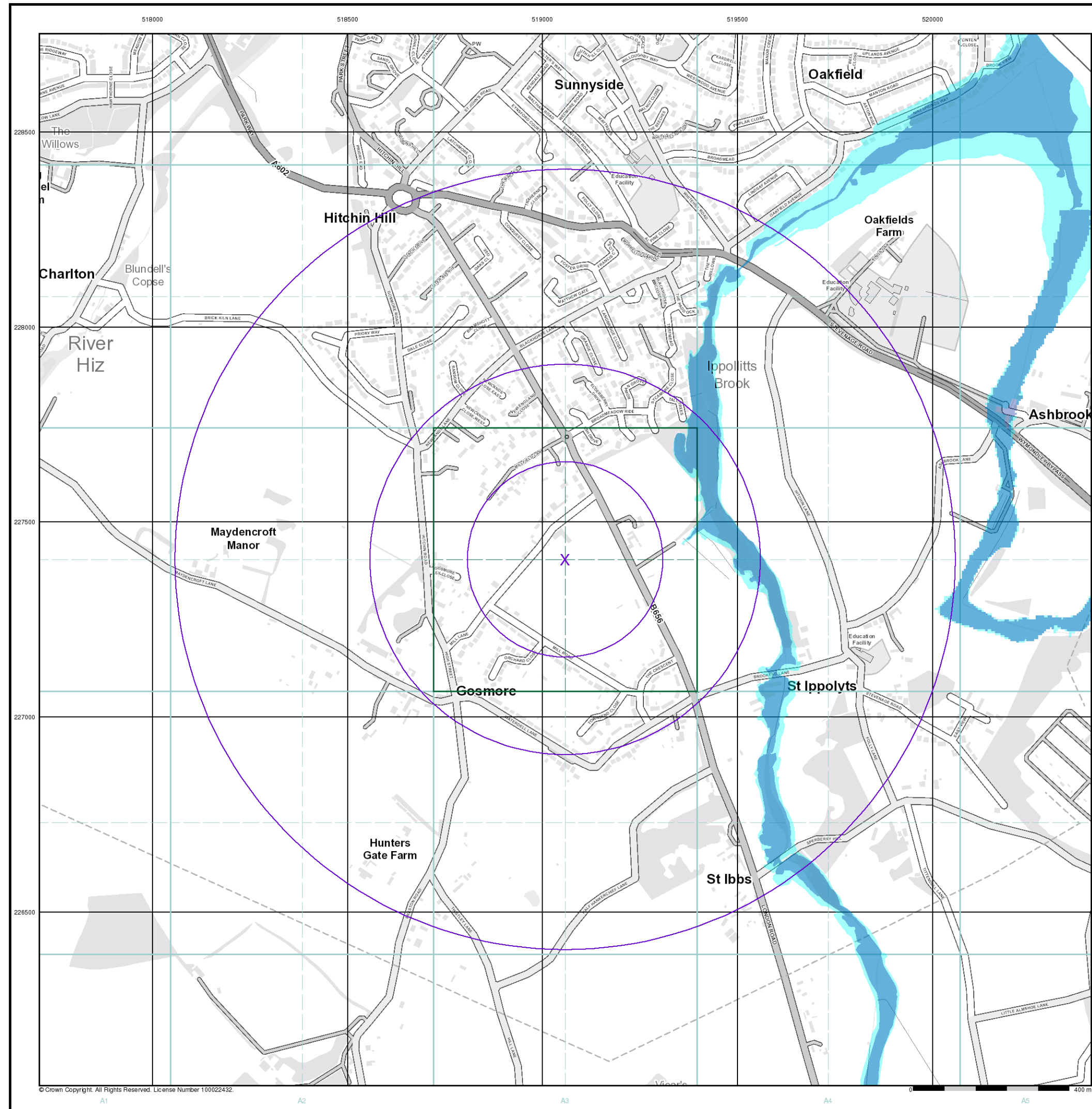
Order Number: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ

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INFORMATION GROUP

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



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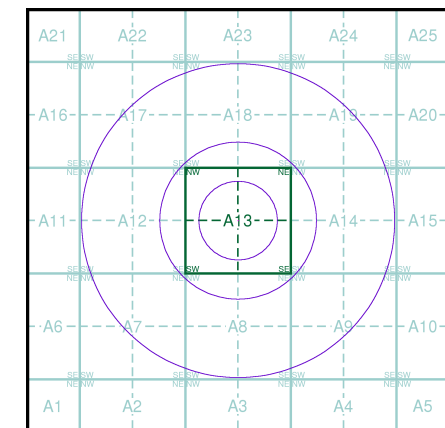
General

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

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

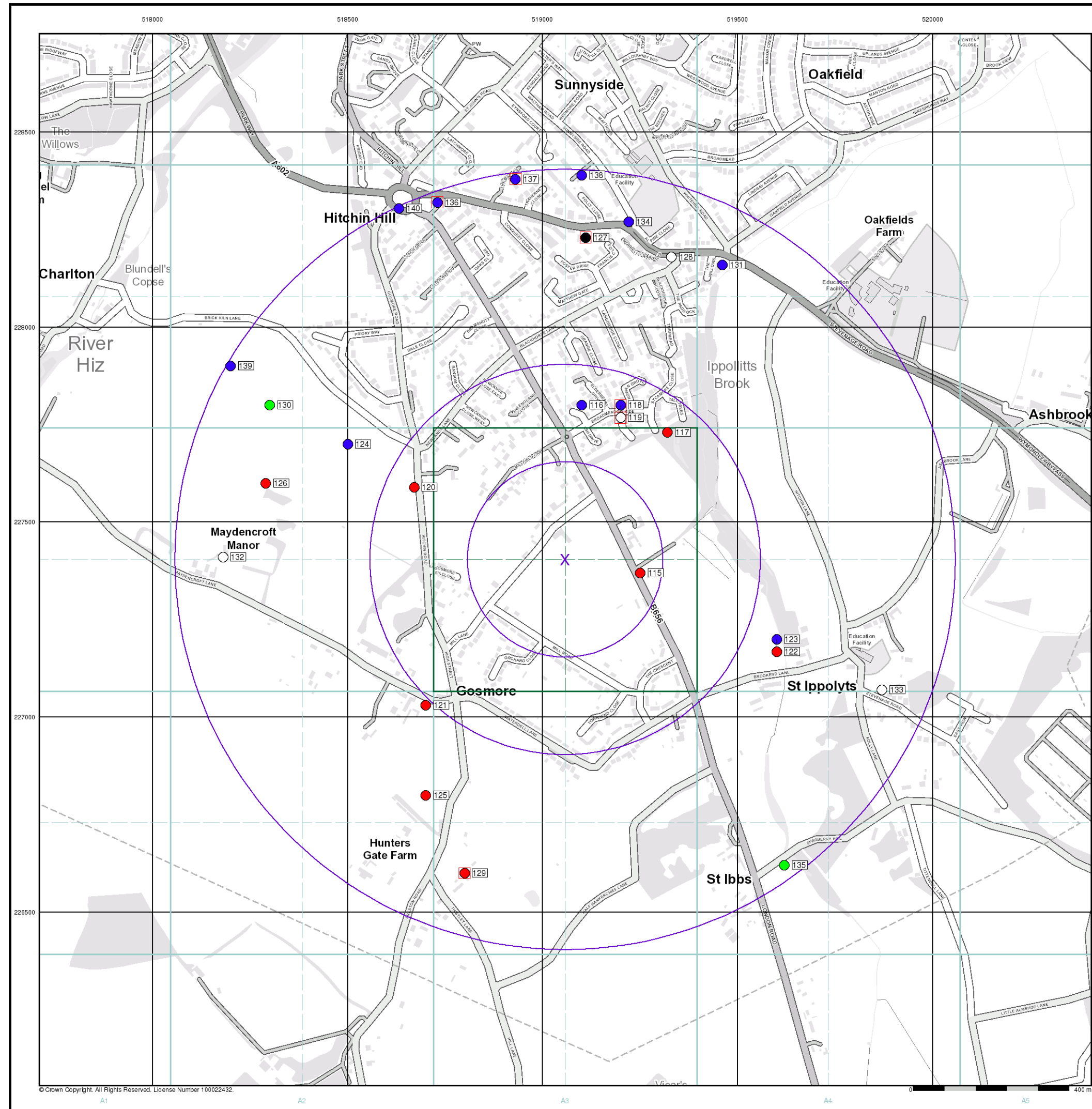
Order Number: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ



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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

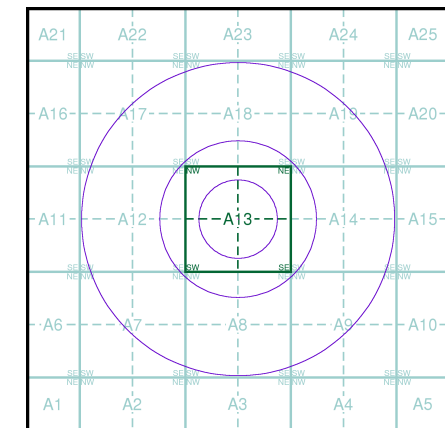
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

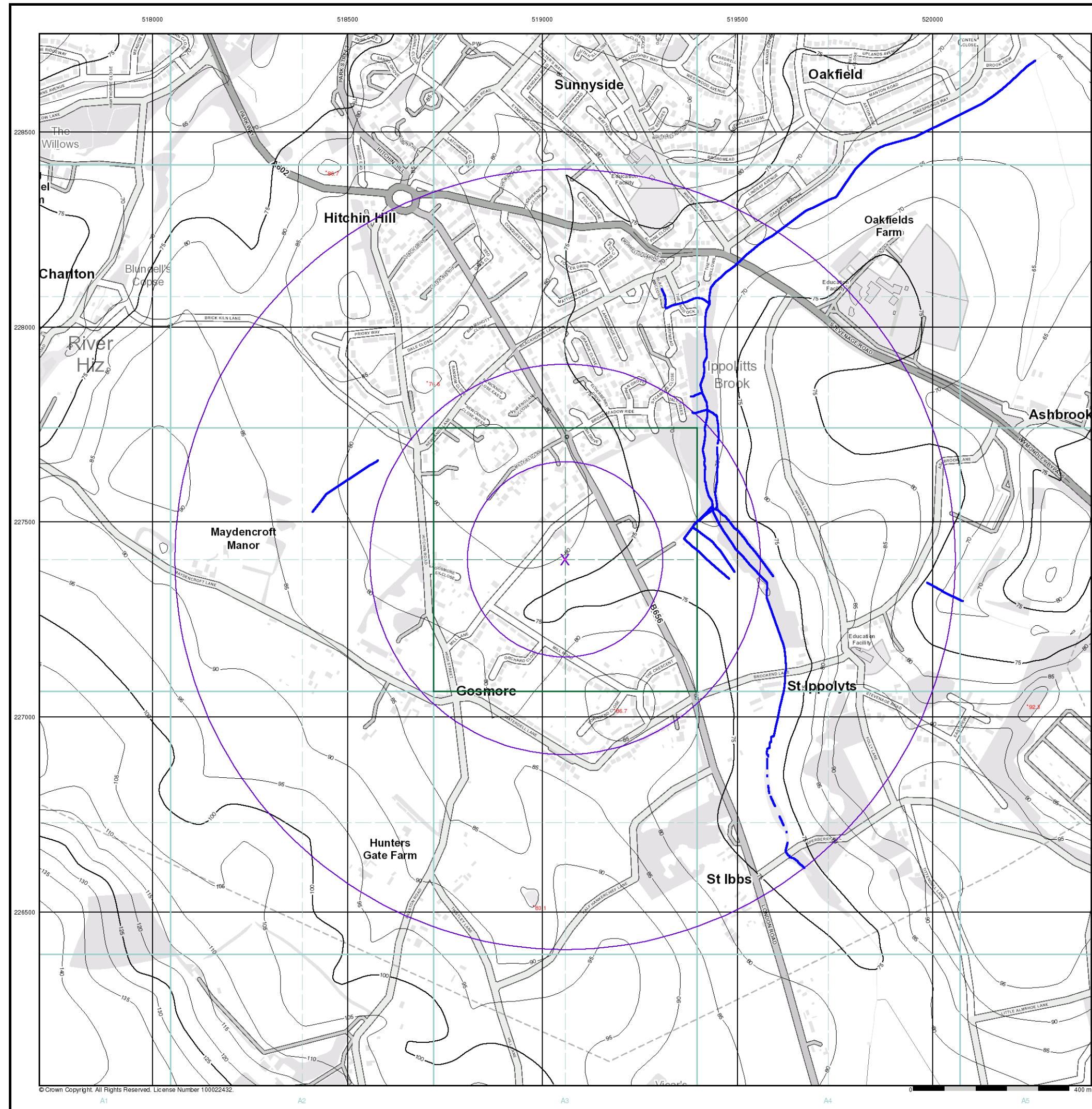
Order Number: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ



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



General

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

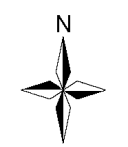
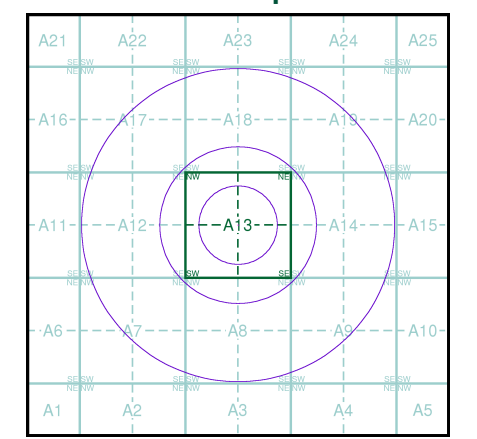
OS Water Network Data

- | | |
|--------------|-------------------------|
| Canal | Drain |
| Reservoir | Other |
| Foreshore | Lake |
| Marsh | Transfer |
| Tidal River | Lock Or Flight Of Locks |
| Inland River | Sea |

Contours (height in meters)

- Standard Contour: 105, 100, 95
- Master Contour: 105, 100, 95
- Spot Height: 167.3
- MLW: Mean Low Water
- MHW: Mean High Water

OS Water Network Map - Slice A



Order Details

Order Number: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ



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General

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

Risk of Flooding from Surface Water

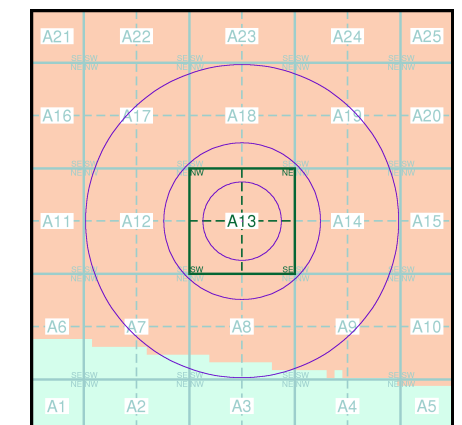
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

E/NRW Suitability Map - Slice A



Order Details

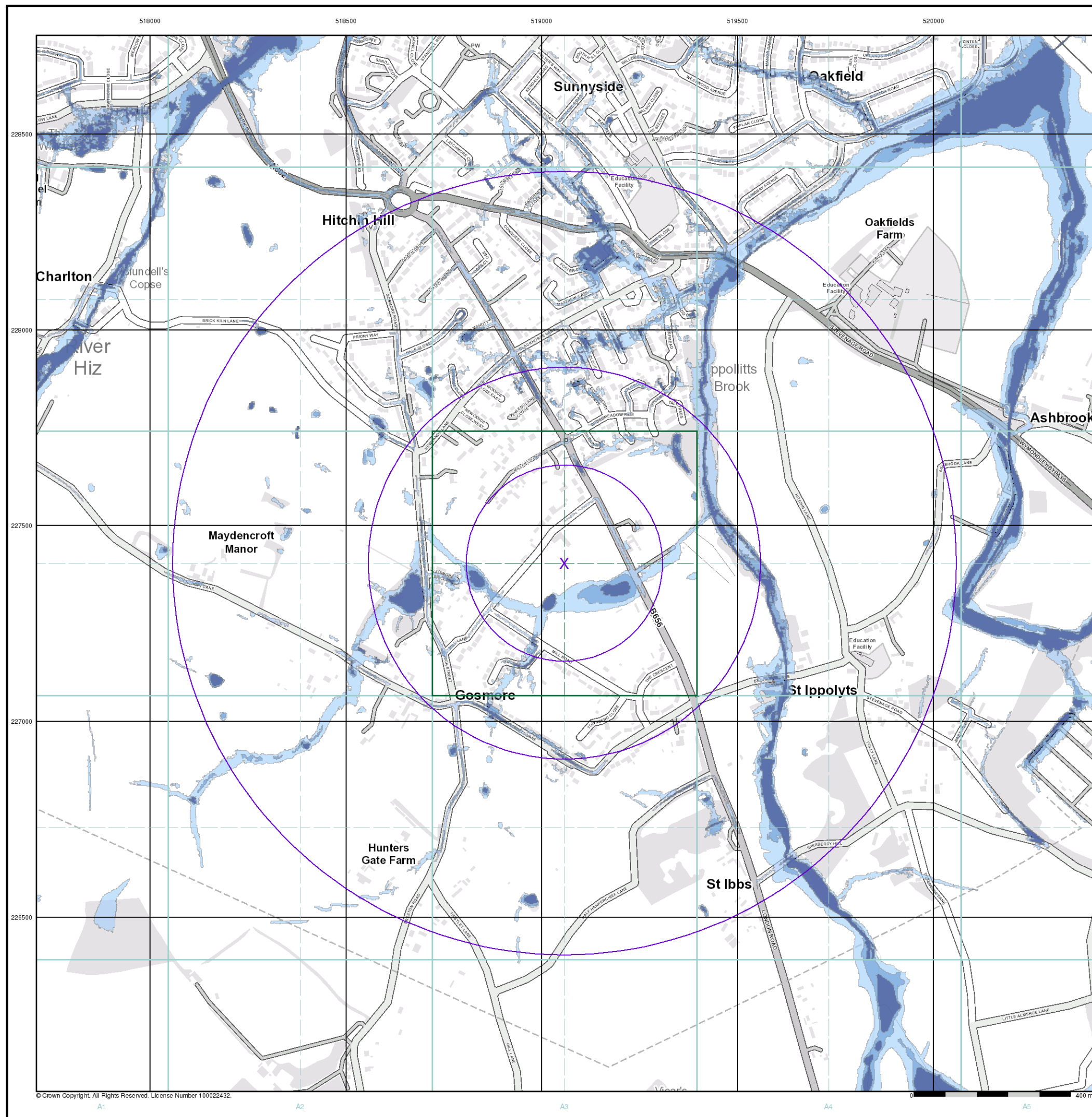
Order Number: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

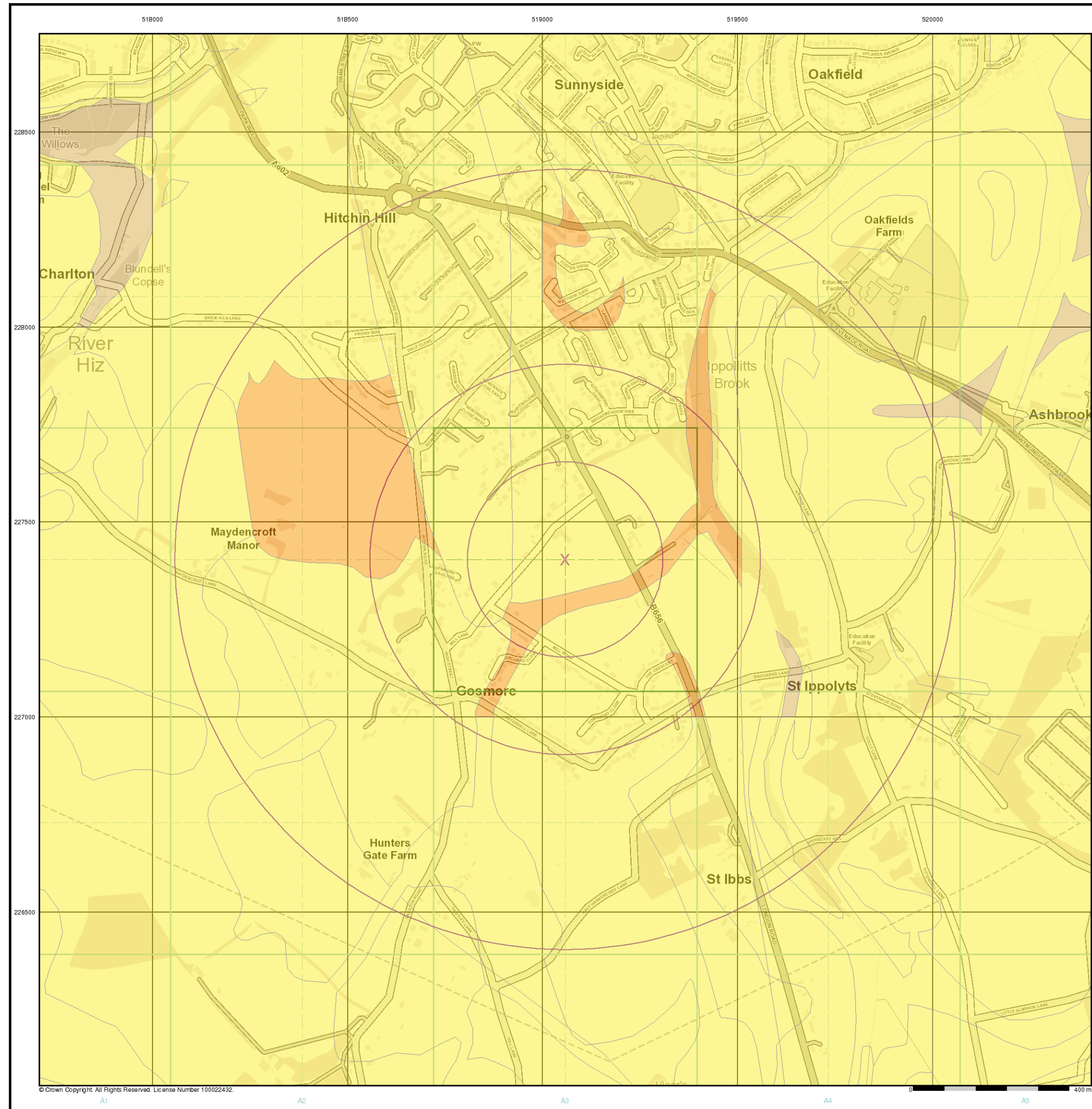
Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ

Landmark
INFORMATION GROUP

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



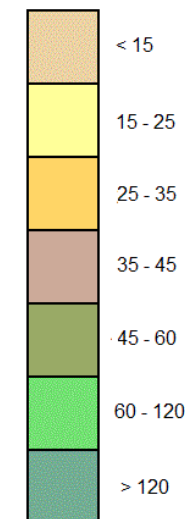


General

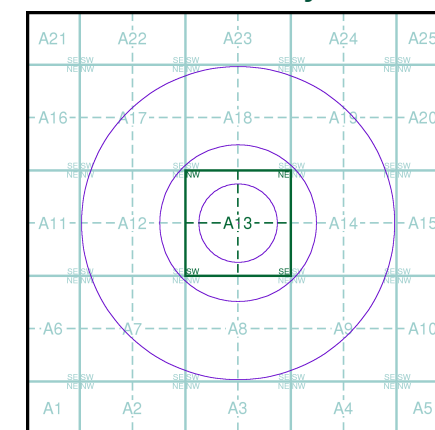
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A



Order Details

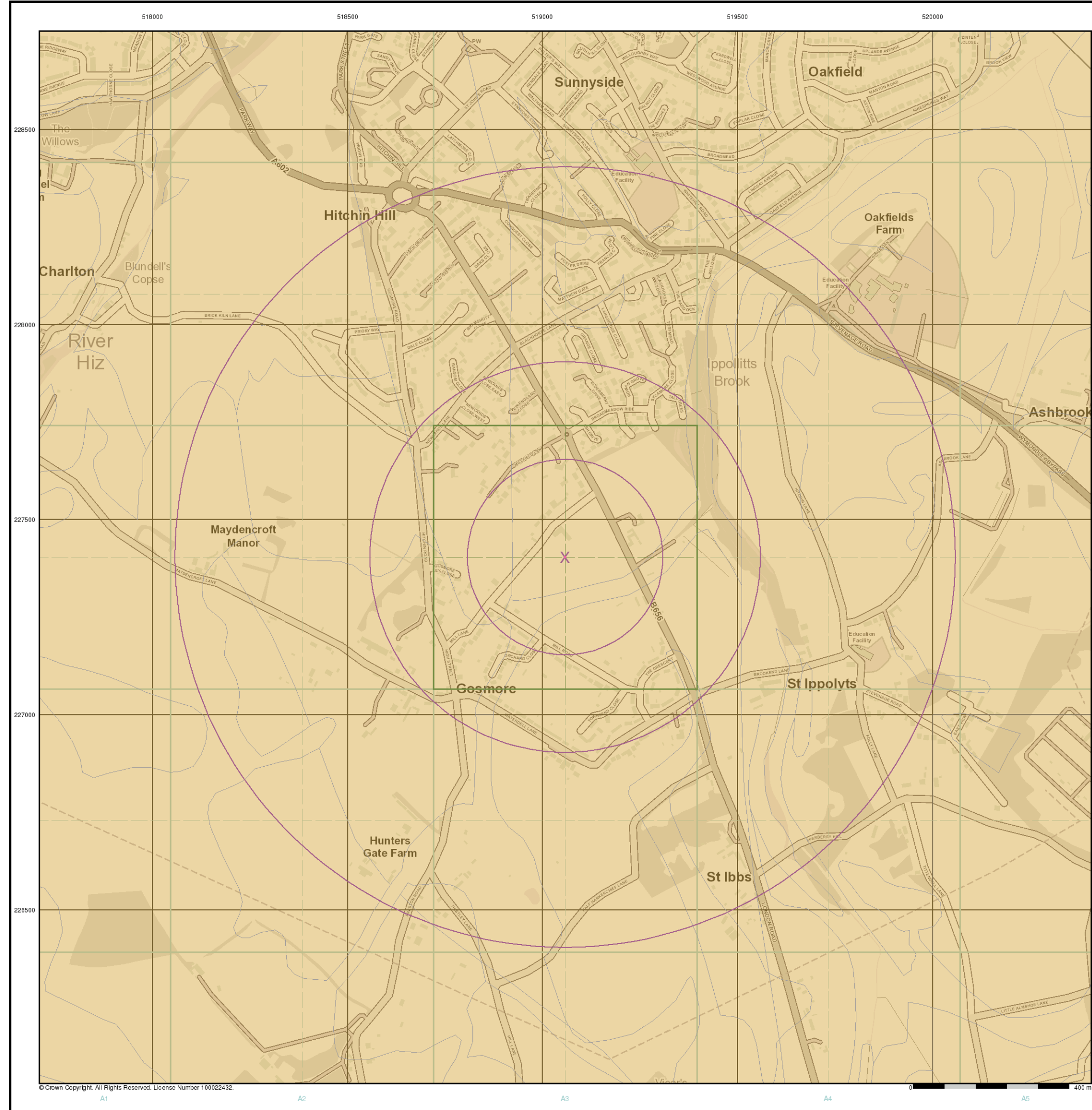
Order Details: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ



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Web: www.envirocheck.co.uk

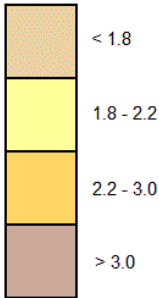


General

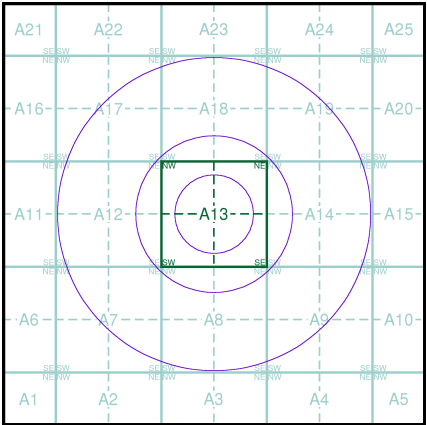
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A



Order Details

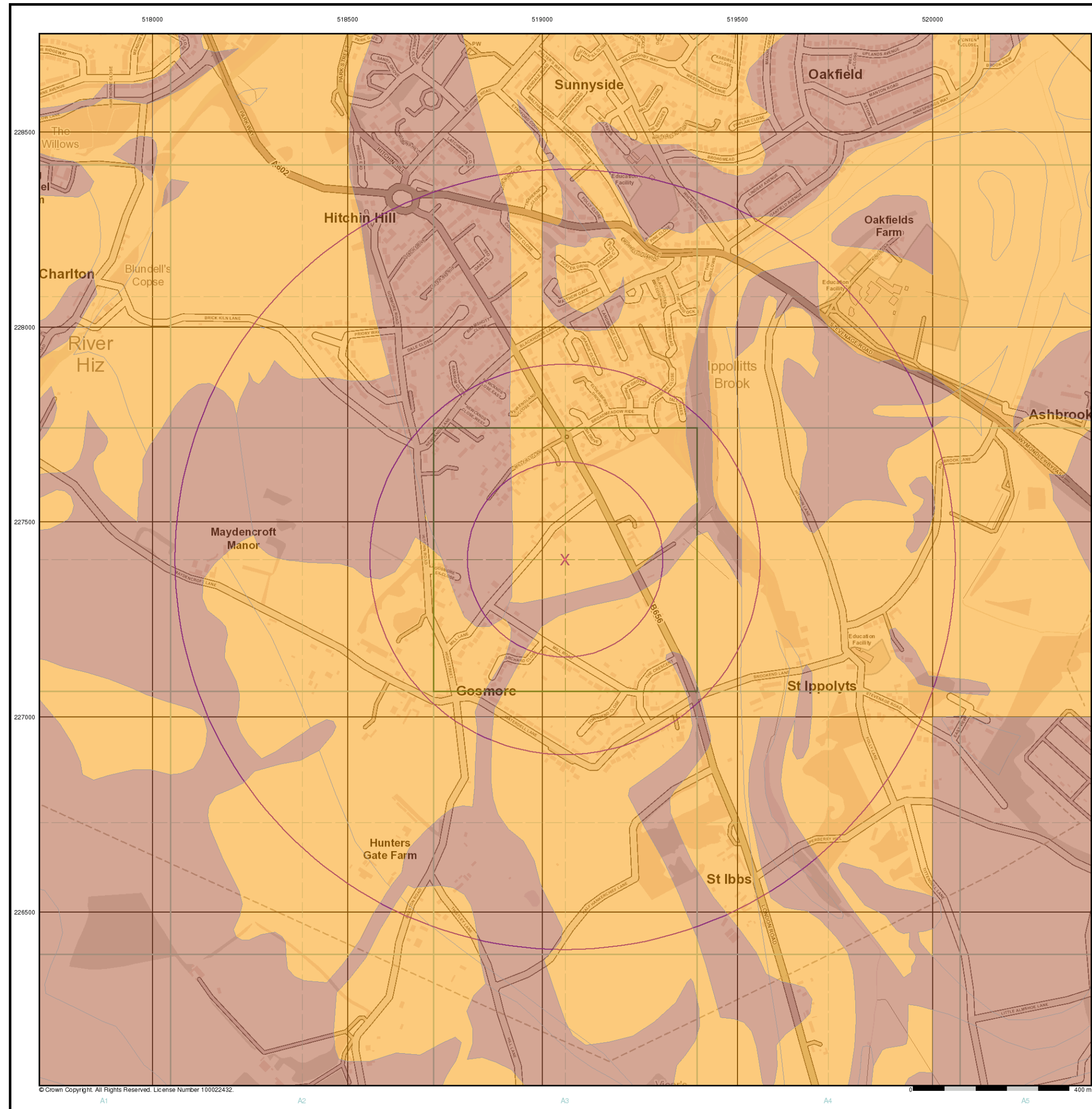
Order Details: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ



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

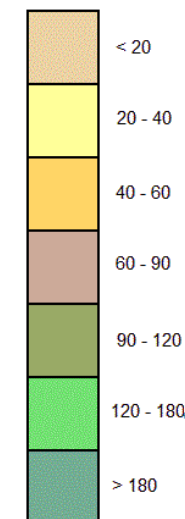


General

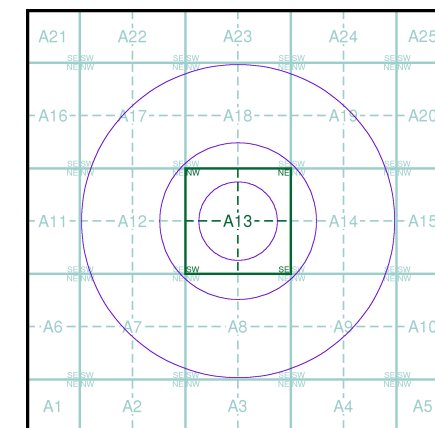
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A



Order Details

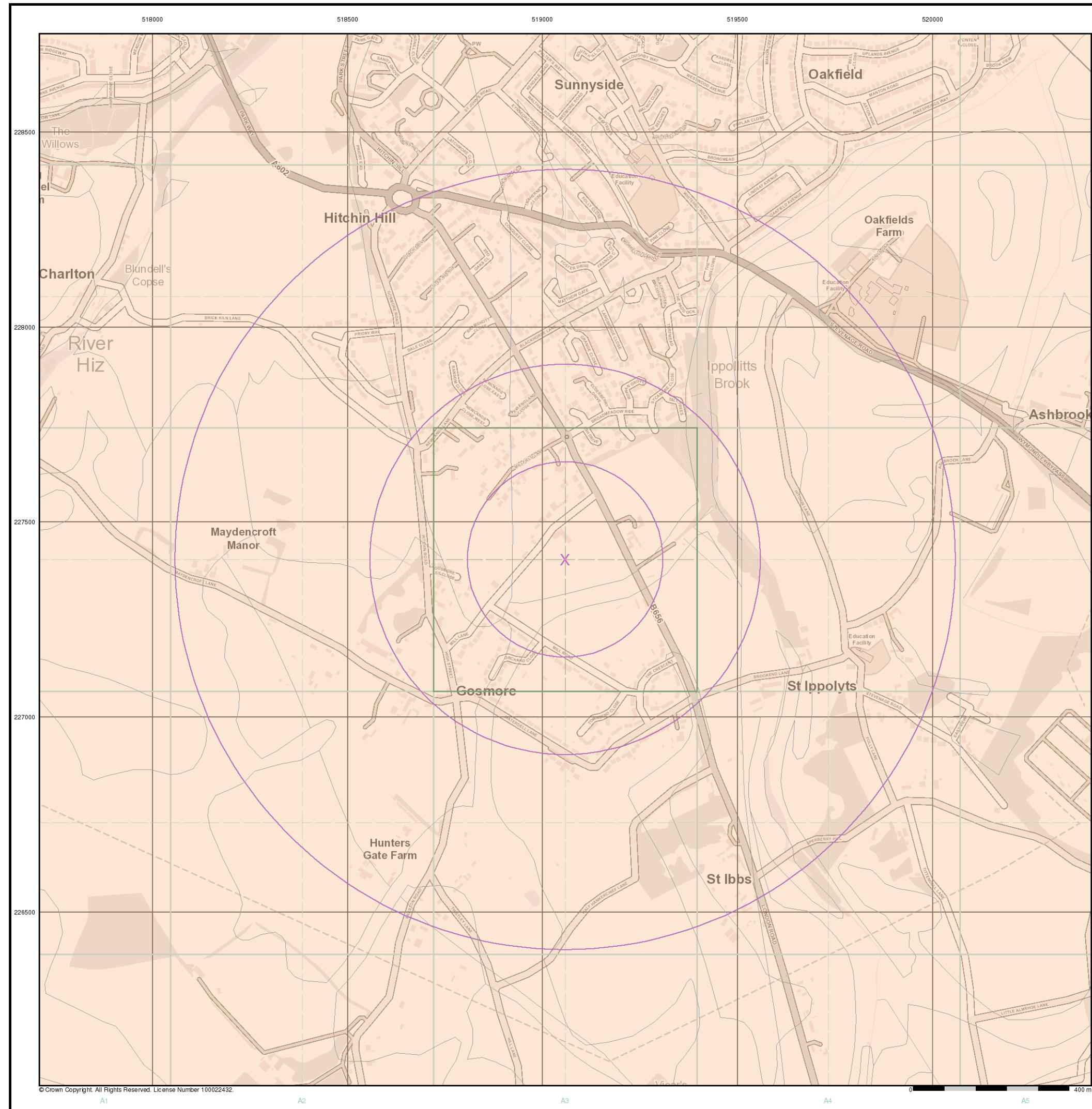
Order Details: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ



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

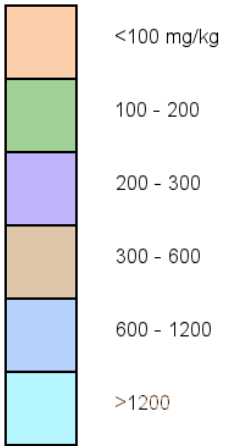


General

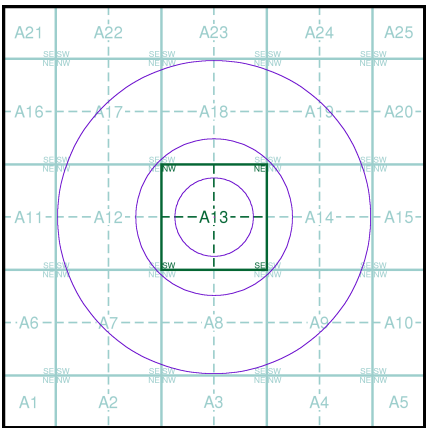
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A



Order Details

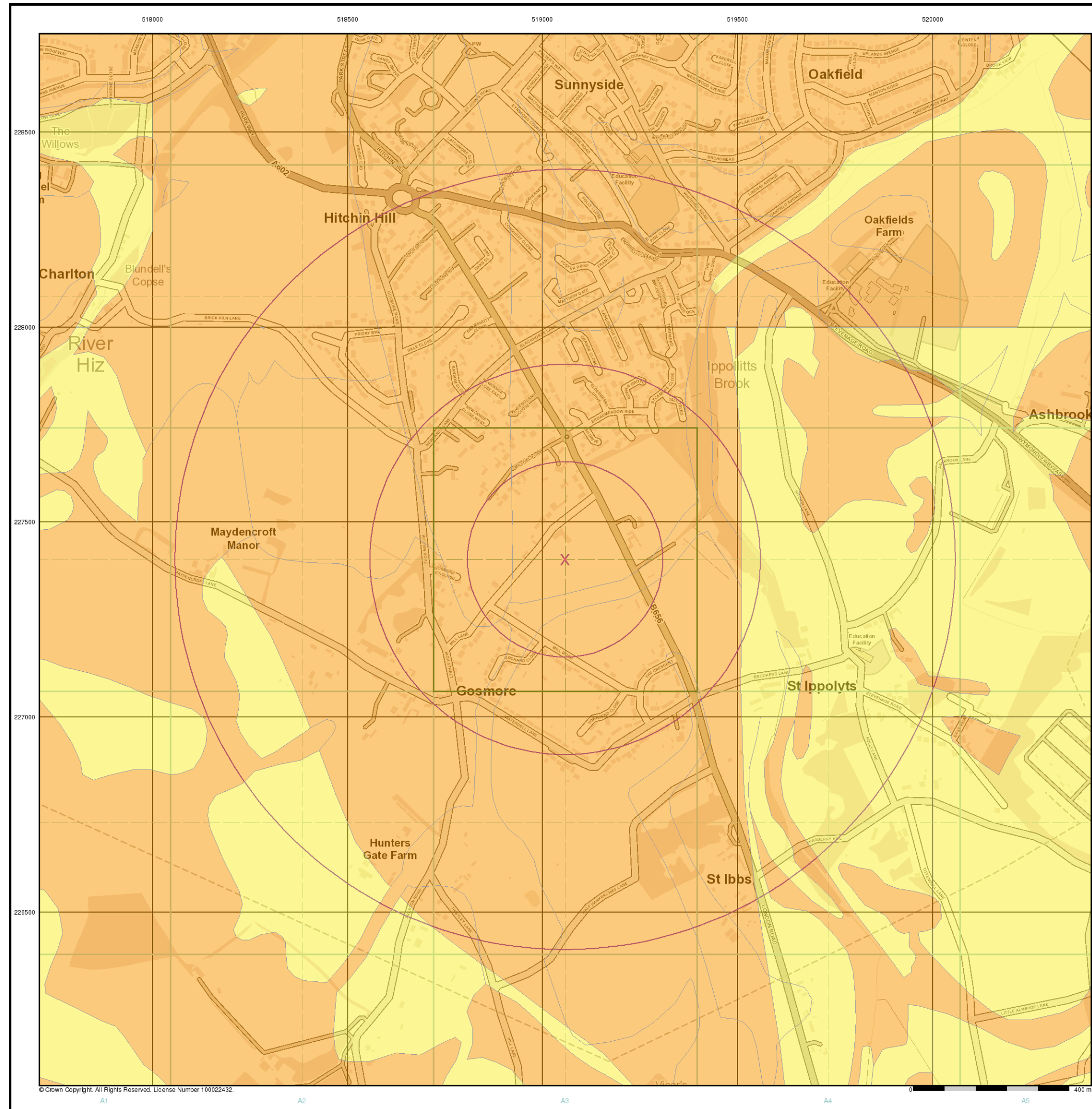
Order Details: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ



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

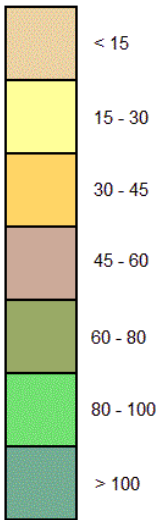


General

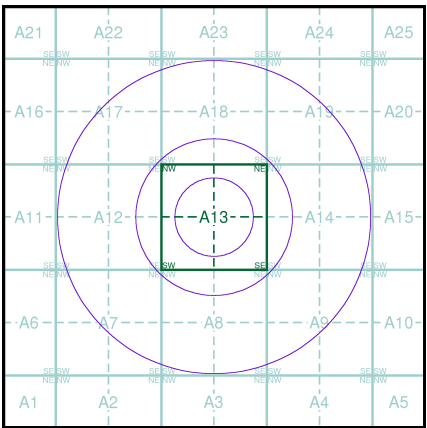
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A



Order Details

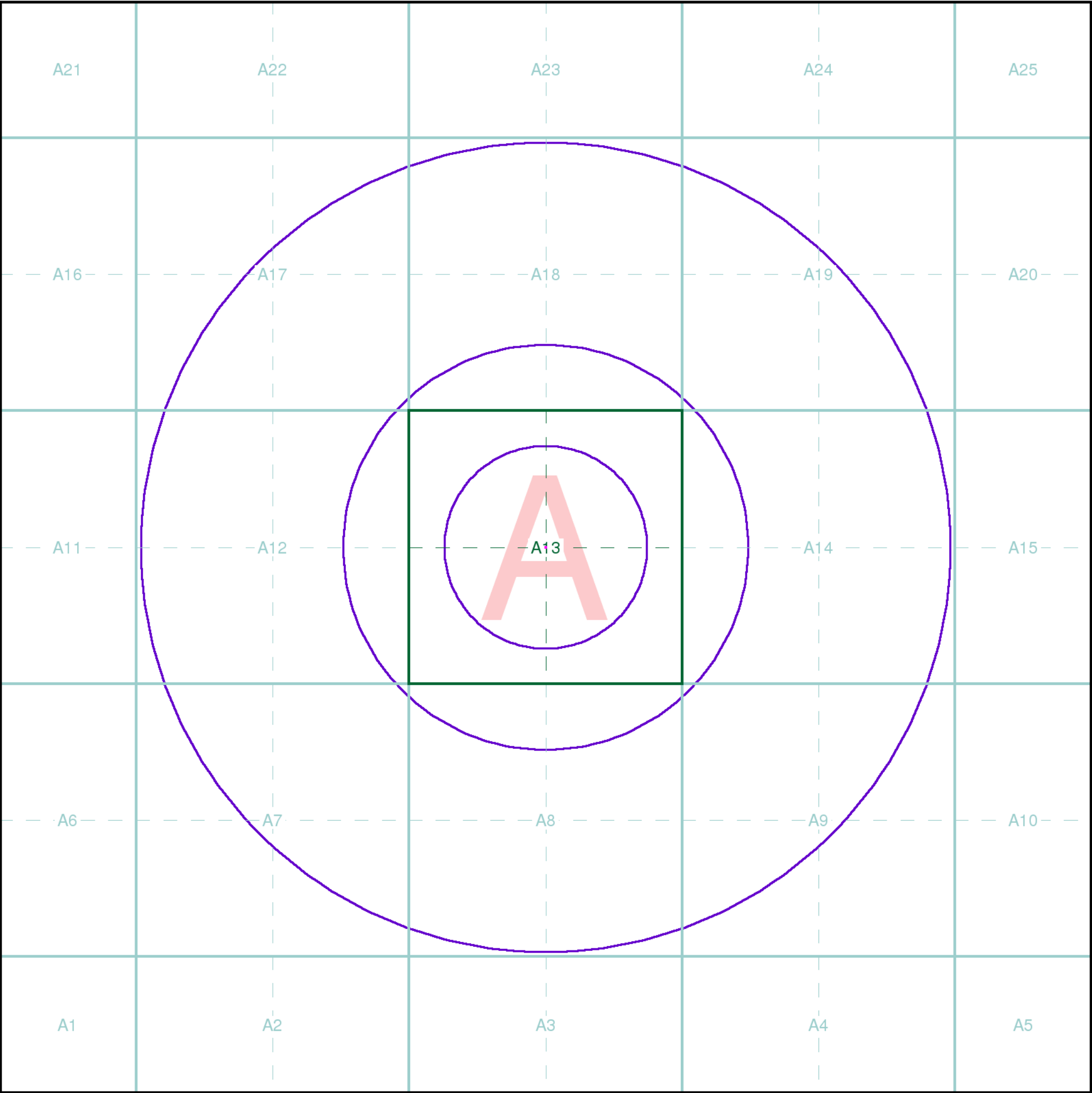
Order Details: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ



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



Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

MR D Anchor, RSK Environment Ltd, 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT

Order Details

Order Number: 187139669_1_1
Customer Ref: 1920378
National Grid Reference: 519060, 227400
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

1 Mill Lane, Astwick, Stotfold, HITCHIN, SG5 4BJ

Full Terms and Conditions can be found on the following link:
<http://www.landmarkinfo.co.uk/Terms/Show/515>



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

APPENDIX C

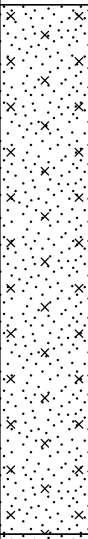
UTILITY SERVICE PLANS

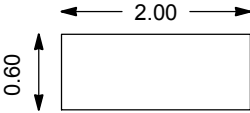
APPENDIX D

EXPLORATORY HOLE RECORDS

TRIAL PIT LOG

Contract: Hitchin, London Rd			Client: Martin Grant Homes		Trial Pit: TP1
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 77.84	National Grid Co-ordinate: E:519040.1 N:227372.9		Sheet: 1 of 1

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.20	1	ES				Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. (TOPSOIL)	(0.30) 0.30	
0.50	2	ES				Soft orangish brown sandy CLAY. Sand is fine to medium. (GLACIOFLUVIAL DEPOSITS)	(0.35) 0.65	
1.50	3	D				Medium dense yellowish brown silty SAND. Sand is fine to medium. (GLACIOFLUVIAL DEPOSITS)	(1.75) 2.40	
						Medium dense slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to rounded. Very gravelly in places. (GLACIOFLUVIAL DEPOSITS)	(1.10) 3.50	
						Trial pit terminated at 3.5m depth		

Plan (Not to Scale)		General Remarks			
		1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion			
		All dimensions in metres		Scale:	1:25
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: ???	Checked By:		

TRIAL PIT LOG

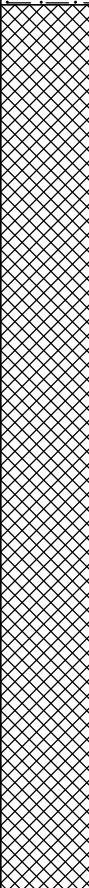
Contract: Hitchin, London Rd		Client: Martin Grant Homes		Trial Pit: TP2
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 78.87	National Grid Co-ordinate: E:518983.6 N:227355.6	Sheet: 1 of 1

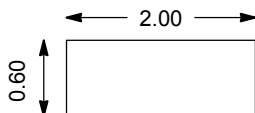
Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.20	1	ES				Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. With rare cobbles of fragmented bricks (TOPSOIL)	(0.35)	
0.50	2	ES				Reddish brown silty SAND. Sand is fine to coarse. With variable content of gravel. Gravel is angular to rounded fine to coarse flints with occasional cobbles of gravel (GLACIOFLUVIAL DEPOSITS)	(0.30)	
						Yellow silty SAND. Sand is fine to medium. With rootlets. (GLACIOFLUVIAL DEPOSITS)	(2.05)	
						at 2.1m with partings of sandy silt. Sand is fine.	2.70	
						Trial pit terminated at 2.7m depth.		

Plan (Not to Scale) 	General Remarks 1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion		
Method Used: Machine dug		Plant Used: JCB-3CX	
Logged By: ???		Checked By: ???	
All dimensions in metres		Scale: 1:25	

TRIAL PIT LOG

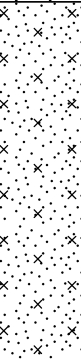
Contract: Hitchin, London Rd			Client: Martin Grant Homes		Trial Pit: TP3
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 79.08	National Grid Co-ordinate: E:518971.8 N:227360.3		Sheet: 1 of 1

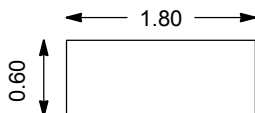
Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.50 0.50	1	ES PID	<0.1ppm			Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. (TOPSOIL) Orangish brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flints with a significant proportion of anthropogenic material: fragments of bricks, concrete, bituminous material, charcoal, ceramic, structured chalk with rare glass. with cobbles of concrete, bricks and bituminous material. With clayey very sandy gravel in places (MADE GROUND)	0.25	
1.50	2	ES				at 1.3m with partings of ash	(2.95)	
						Trial pit terminated at 3.2m depth	3.20	

Plan (Not to Scale)		General Remarks			
		1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion			
		All dimensions in metres		Scale:	1:25
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: ???	Checked By:		

TRIAL PIT LOG

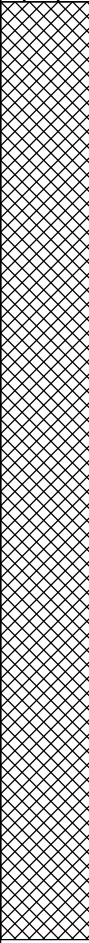
Contract: Hitchin, London Rd		Client: Martin Grant Homes		Trial Pit: TP4
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 77.89	National Grid Co-ordinate: E:518957.7 N:227344.2	Sheet: 1 of 1

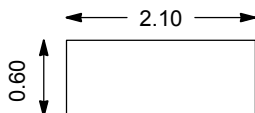
Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.20	1	ES				Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. (TOPSOIL)	(0.30)	
						Reddish brown becoming yellowish brown silty SAND. Sand is fine (GLACIOFLUVIAL DEPOSITS)	0.30	
							(1.20)	
						Trial pit terminated at 1.5m depth	1.50	

Plan (Not to Scale)		General Remarks		
		1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion		
		All dimensions in metres	Scale:	1:25
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: ???	Checked By:	

TRIAL PIT LOG

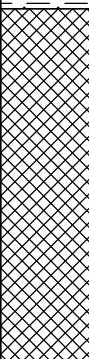
Contract: Hitchin, London Rd		Client: Martin Grant Homes		Trial Pit: TP5
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 78.46	National Grid Co-ordinate: E:518952.3 N:227355.9	Sheet: 1 of 1

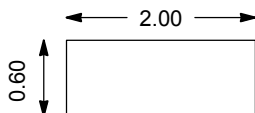
Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.50 0.50	1	ES PID	<0.1ppm			Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. (TOPSOIL)	(0.30) 0.30	
						Orangish brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flints with a significant proportion of anthropogenic material: fragments of bricks, concrete, bituminous material, charcoal, ceramic, structured chalk. with rare glass, slate, fragmented wood. with cobbles of concrete, bricks and bituminous material. With clayey very sandy gravel in places. (MADE GROUND)	(3.10) 3.40	
						Trial pit terminated at 3.4m depth		

Plan (Not to Scale)		General Remarks		
		1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion		
		All dimensions in metres	Scale:	1:25
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: ???	Checked By:	

TRIAL PIT LOG

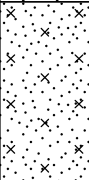
Contract: Hitchin, London Rd		Client: Martin Grant Homes		Trial Pit: TP6
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 78.07	National Grid Co-ordinate: E:518936.4 N:227352.0	Sheet: 1 of 1

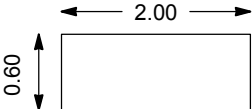
Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.50 0.50	1	ES PID	<0.1ppm			Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. (TOPSOIL)	(0.30) 0.30	
						Orangish brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flints with a significant proportion of anthropogenic material: fragments of bricks, concrete, bituminous material, charcoal, ceramic, structured chalk. with rare glass. with cobbles of concrete, bricks and bituminous material. (MADE GROUND)	(1.20) 1.50	
						Medium dense to very dense yellowish brown silty SAND. Sand is fine to medium. (GLACIOFLUVIAL DEPOSITS) Trial pit terminated at 1.7m depth	1.70	

Plan (Not to Scale)		General Remarks		
		1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion		
All dimensions in metres		Scale: 1:25		
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: ???	Checked By:	

TRIAL PIT LOG

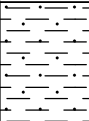
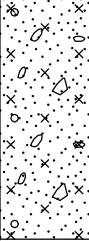
Contract: Hitchin, London Rd		Client: Martin Grant Homes		Trial Pit: TP7
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 77.83	National Grid Co-ordinate: E:518970.9 N:227343.6	Sheet: 1 of 1

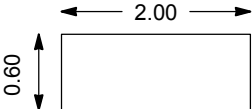
Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.20	1	ES				Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. (TOPSOIL)	(0.30)	
						Dark yellow silty SAND. Sand is fine to medium. (GLACIOFLUVIAL DEPOSITS)	(0.60)	
						Trial pit terminated at 0.9m depth	0.90	

Plan (Not to Scale) 		General Remarks 1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion		
		All dimensions in metres		Scale: 1:25
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: ???	Checked By:	

TRIAL PIT LOG

Contract: Hitchin, London Rd			Client: Martin Grant Homes		Trial Pit: TP8
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 80.21	National Grid Co-ordinate: E:518987.4 N:227375.9		Sheet: 1 of 1

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.20	1	ES				Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. (TOPSOIL)	(0.40) 0.40	
						Dark yellow/reddish brown silty slightly gravelly SAND. Sand is fine to medium. Gravel is angular to rounded fine flints. (GLACIOFLUVIAL DEPOSITS)	(0.80) 1.20	
						Trial pit terminated at 1.2m depth		

Plan (Not to Scale)		General Remarks			
		1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion			
		All dimensions in metres		Scale:	1:25
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: ???	Checked By:		

TRIAL PIT LOG

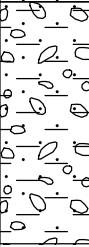
Contract:		Client:		Trial Pit:	
Hitchin, London Rd		Martin Grant Homes		TP9	
Contract Ref:	Start: 03.12.18	Ground Level:	National Grid Co-ordinate:	Sheet:	
1920378	End: 03.12.18	80.32	E:518972.4 N:227379.3	1 of 1	

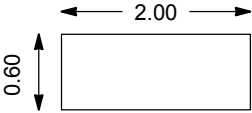
[illegible]

Plan (Not to Scale)		General Remarks	
A diagram showing a rectangular trial pit. The width is labeled as 2.00 and the depth is labeled as 0.60.		1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion	
		All dimensions in metres	Scale: 1:25
Method Used:	Machine dug	Plant Used:	JCB-3CX
		Logged By:	???
		Checked By:	AGS

TRIAL PIT LOG

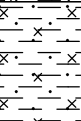
Contract: Hitchin, London Rd			Client: Martin Grant Homes		Trial Pit: TP10
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 80.87	National Grid Co-ordinate: E:518978.8 N:227394.8		Sheet: 1 of 1

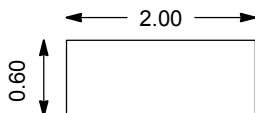
Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.20	1	ES				Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. (TOPSOIL)	(0.30) 0.30	
0.50 0.50	2	ES PID	<0.1ppm			Orangish brown sandy clayey GRAVEL. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flint (GLACIOFLUVIAL DEPOSITS)	(0.80) 1.10	
						Trial pit terminated at 1.1m depth		

Plan (Not to Scale)		General Remarks			
		1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion			
		All dimensions in metres		Scale:	1:25
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: ???	Checked By:		

TRIAL PIT LOG

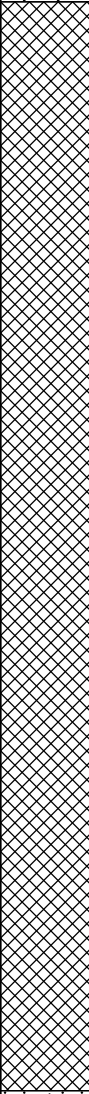
Contract: Hitchin, London Rd			Client: Martin Grant Homes		Trial Pit: TP11
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 78.31	National Grid Co-ordinate: E:519008.4 N:227355.4		Sheet: 1 of 1

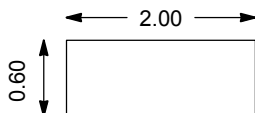
Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.20	1	ES				Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. (TOPSOIL)	(0.30) 0.30	
						Medium dense orangish brown clayey very gravelly SAND. Gravel is angular to rounded fine to coarse flints. Sand is fine to coarse (GLACIOFLUVIAL DEPOSITS)	(1.10) 1.40	
						Firm orangish brown slightly sandy silty CLAY becoming stiff at 1.6m (GLACIOFLUVIAL DEPOSITS)	(0.40) 1.80	
						Trial pit terminated at 1.8m depth		

Plan (Not to Scale)		General Remarks			
		1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion			
		All dimensions in metres		Scale:	1:25
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: ???	Checked By:		

TRIAL PIT LOG

Contract: Hitchin, London Rd		Client: Martin Grant Homes		Trial Pit: TP12
Contract Ref: 1920378	Start: 03.12.18 End: 03.12.18	Ground Level: 78.28	National Grid Co-ordinate: E:518962.4 N:227357.4	Sheet: 1 of 1

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.50 0.50	0.5	ES PID	<0.1ppm			Soft dark brown very sandy CLAY. Sand is fine to coarse. With rootlets. (TOPSOIL)	(0.30) 0.30	
0.50 2.00	0.5 2	ES ES	<0.1ppm			Orangish brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flints with a significant proportion of anthropogenic material: fragments of bricks, concrete, bituminous material, charcoal, ceramic, structured chalk. with rare glass. with cobbles of concrete, bricks and bituminous material. With clayey very sandy gravel in places (MADE GROUND)	(3.60)	
						Medium dense yellowish brown silty SAND. Sand is fine to medium. (GLACIOFLUVIAL DEPOSITS)	3.90 4.00	
						Trial pit terminated at 4.0m depth		

Plan (Not to Scale)		General Remarks		
		1. Permit to dig approved 2. No groundwater was encountered 3. Trial pit remained stable during excavation 4. Trial pit was backfilled with arisings on completion		
All dimensions in metres		Scale: 1:25		
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: ???	Checked By:	

APPENDIX E

LABORATORY CERTIFICATES FOR SOIL ANALYSIS

FINAL ANALYTICAL TEST REPORT

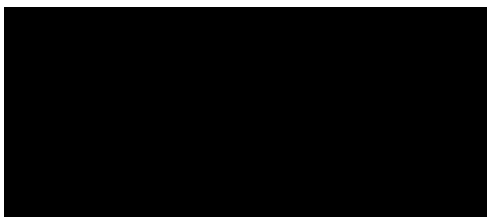
Envirolab Job Number: 18/10279
Issue Number: 1

Date: 19 December, 2018

Client: RSK Environment Ltd Hemel
18 Frogmore Road
Hemel Hempstead
Hertfordshire
UK
HP3 9RT

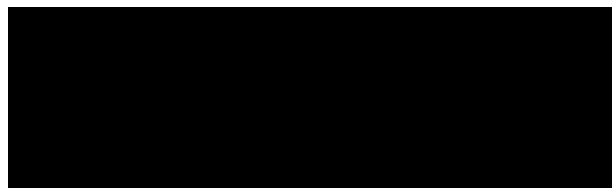
Project Manager: Dave Anchor/Sylwia Mianowska
Project Name: Hitchin, London Rd
Project Ref: 1920378
Order No: N/A
Date Samples Received: 06/12/18
Date Instructions Received: 06/12/18
Date Analysis Completed: 18/12/18

Prepared by:



Elisha Hartley
Admin Assistant

Approved by:



Danielle Brierley
Client Manager

Envirolab Job Number: 18/10279

Client Project Name: Hitchin, London Rd

Client Project Ref: 1920378

Lab Sample ID	18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6			Units	Method ref
Client Sample No										
Client Sample ID	TP3	TP5	TP6	TP9	TP10	TP12				
Depth to Top	0.50	0.50	0.50	0.50	0.50	0.50				
Depth To Bottom										
Date Sampled	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4A	4AE	4A	5A	4AE	4AE				
% Stones >10mm _A	15.5	18.8	3.1	14.2	44.3	4.3			% w/w	A-T-044
pH _D ^{M#}	8.39	8.19	8.22	8.17	7.82	7.86			pH	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			g/l	A-T-026s
Sulphate (acid soluble) _D ^{M#}	<200	240	380	430	<200	270			mg/kg	A-T-028s
Arsenic _D ^{M#}	7	9	9	8	43	11			mg/kg	A-T-024s
Cadmium _D ^{M#}	0.8	0.6	0.7	0.7	1.2	0.7			mg/kg	A-T-024s
Copper _D ^{M#}	15	14	16	20	12	14			mg/kg	A-T-024s
Chromium _D ^{M#}	33	23	31	21	16	33			mg/kg	A-T-024s
Lead _D ^{M#}	28	38	51	53	17	29			mg/kg	A-T-024s
Mercury _D	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17			mg/kg	A-T-024s
Nickel _D ^{M#}	33	28	29	22	53	33			mg/kg	A-T-024s
Selenium _D [#]	<1	<1	<1	<1	1	<1			mg/kg	A-T-024s
Zinc _D ^{M#}	78	87	86	113	135	71			mg/kg	A-T-024s

Envirolab Job Number: 18/10279

Client Project Name: Hitchin, London Rd

Client Project Ref: 1920378

Lab Sample ID	18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6			Units	Method ref
Client Sample No										
Client Sample ID	TP3	TP5	TP6	TP9	TP10	TP12				
Depth to Top	0.50	0.50	0.50	0.50	0.50	0.50				
Depth To Bottom										
Date Sampled	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4A	4AE	4A	5A	4AE	4AE				
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	-	NAD				A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A	N/A	N/A	N/A	-	N/A				

Envirolab Job Number: 18/10279

Client Project Name: Hitchin, London Rd

Client Project Ref: 1920378

Lab Sample ID	18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6			Units	Method ref
Client Sample No										
Client Sample ID	TP3	TP5	TP6	TP9	TP10	TP12				
Depth to Top	0.50	0.50	0.50	0.50	0.50	0.50				
Depth To Bottom										
Date Sampled	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4A	4AE	4A	5A	4AE	4AE				
PAH-16MS										
Acenaphthene _A ^{M#}	0.38	0.02	0.11	0.12	<0.01	<0.01			mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.06	0.03	<0.01	0.15	<0.01	<0.01			mg/kg	A-T-019s
Anthracene _A ^{M#}	1.09	0.12	0.13	0.86	<0.02	<0.02			mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	2.91	0.77	0.18	2.52	<0.04	0.04			mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	1.99	0.64	0.13	1.62	<0.04	<0.04			mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	2.56	0.83	0.16	2.16	<0.05	<0.05			mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.82	0.31	0.06	0.69	<0.05	<0.05			mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.88	0.28	<0.07	0.75	<0.07	<0.07			mg/kg	A-T-019s
Chrysene _A ^{M#}	2.65	0.85	0.19	2.40	<0.06	<0.06			mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.18	0.07	<0.04	0.17	<0.04	<0.04			mg/kg	A-T-019s
Fluoranthene _A ^{M#}	7.29	1.50	0.47	6.59	<0.08	<0.08			mg/kg	A-T-019s
Fluorene _A ^{M#}	0.21	0.02	0.07	0.29	<0.01	<0.01			mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	1.17	0.43	0.09	0.97	<0.03	<0.03			mg/kg	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03			mg/kg	A-T-019s
Phenanthrene _A ^{M#}	4.37	0.35	0.51	3.65	<0.03	<0.03			mg/kg	A-T-019s
Pyrene _A ^{M#}	5.98	1.35	0.39	5.23	<0.07	<0.07			mg/kg	A-T-019s
Total PAH-16MS _A ^{M#}	32.5	7.57	2.49	28.2	<0.08	<0.08			mg/kg	A-T-019s

Envirolab Job Number: 18/10279

Client Project Name: Hitchin, London Rd

Client Project Ref: 1920378

Lab Sample ID	18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6			Units	Method ref
Client Sample No										
Client Sample ID	TP3	TP5	TP6	TP9	TP10	TP12				
Depth to Top	0.50	0.50	0.50	0.50	0.50	0.50				
Depth To Bottom										
Date Sampled	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18	03-Dec-18				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4A	4AE	4A	5A	4AE	4AE				
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	A-T-022s
Ali >C8-C10 _A ^{M#}	<1	<1	<1	<1	<1	<1			mg/kg	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1			mg/kg	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1	<1	<1	<1			mg/kg	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	<1	<1	<1	<1			mg/kg	A-T-055s
Ali >C21-C35 _A	2	<1	3	3	<1	1			mg/kg	A-T-055s
Total Aliphatics _A	2	<1	3	3	<1	1			mg/kg	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	A-T-022s
Aro >C8-C10 _A ^{M#}	<1	<1	<1	<1	<1	<1			mg/kg	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1			mg/kg	A-T-055s
Aro >C12-C16 _A	2	<1	12	2	<1	<1			mg/kg	A-T-055s
Aro >C16-C21 _A ^{M#}	16	3	47	34	<1	3			mg/kg	A-T-055s
Aro >C21-C35 _A ^{M#}	47	12	73	128	<1	12			mg/kg	A-T-055s
Total Aromatics _A	66	15	132	164	<1	16			mg/kg	A-T-055s
TPH (Ali & Aro >C5-C35) _A	66	16	135	167	<1	17			mg/kg	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	A-T-022s

REPORT NOTES

General:

This report shall not be reproduced, except in full, without written approval from Envirolab.

All samples contained within this report, and any received with the same delivery, will be disposed of one month after the date of this report.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed.

Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

APPENDIX F

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH

Generic assessment criteria for human health: residential scenario with home-grown produce

Background

RSK's generic assessment criteria (GAC) were initially prepared following the publication by the Environment Agency (EA) of soil guideline value (SGV) and toxicological (TOX) reports, and associated publications in 2009⁽¹⁾. RSK GAC were updated following the publication of GAC by LQM/CIEH in 2009⁽²⁾. RSK GAC are periodically revised when updated information on toxicological, land use or receptor parameters is published.

Updates to the RSK GAC

In 2014, the publication of Category 4 Screening Levels (C4SL)^(3,4), as part of the Defra-funded research project SP1010, included modifications to certain exposure assumptions documented within EA Science Report SC050221/SR3 (herein after referred to as SR3)⁽⁵⁾ used in the generation of SGVs.

C4SL were published for six substances (cadmium, arsenic, benzene, benzo(a)pyrene, chromium VI and lead) for a sandy loam soil type with 6% soil organic matter, based on a low level of toxicological concern (LLTC; see Section 2.3 of research project report SP1010⁽³⁾). Where a C4SL has been published, the RSK GAC duplicates the C4SL published values using all input parameters within the SP1010 final project report⁽³⁾ and associated appendices⁽⁶⁾, and adopts them as GAC for these six substances.

For all other substances the C4SL exposure modifications, with the exception of the “top two” produce type approach taken in the C4SL, have been applied to the current RSK GAC. These include alterations to daily inhalation rates for residential and commercial scenarios, reducing soil adherence factors in children (age classes 1 to 12 only) for residential land use, reducing exposure frequency for dermal contact outdoors for residential land use, and updated produce type consumption rates (90th percentile) based on recent data from the National Diet and Nutrition Survey.

The RSK GAC have also been revised with updated toxicology published by LQM/CIEH in 2015⁽⁷⁾ or by the USEPA⁽¹⁴⁾, where a C4SL has not been published.

RSK GAC derivation for metals and organic compounds

Model selection

Soil assessment criteria (SAC) were calculated using the Contaminated Land Exposure Assessment (CLEA) tool v1.071, supporting EA guidance^(5,8,9) and revised exposure scenarios published for the C4SL⁽³⁾. The SAC are also termed GAC.

Conceptual model

In accordance with SR3⁽⁵⁾, the residential with home-grown produce scenario considers risks to a female child between the ages of 0 and 6 years old as the highest risk scenario. In accordance with Box 3.1 of SR3⁽⁵⁾, the pathways considered for production of the SAC in the residential with home-grown produce scenario are

- direct soil and dust ingestion

- consumption of home-grown produce
- consumption of soil attached to home-grown produce
- dermal contact with soil and indoor dust
- inhalation of indoor and outdoor dust and vapours.

Figure 1 is a conceptual model illustrating these linkages.

In line with guidance in the EA SGV report for cadmium⁽¹⁾, the RSK GAC for cadmium has been derived based on estimates representative of lifetime exposure. Although young children are generally more likely to have higher exposures to soil contaminants, the renal toxicity of cadmium, and the derivation of the TDI_{oral} and TDI_{inh} , are based on considerations of the kidney burden accumulated over 50 years or so. It is therefore reasonable to consider exposure not just in childhood but averaged over a longer period.

With respect to volatilisation, the CLEA model assumes a simple linear partitioning of a chemical in the soil between the sorbed, dissolved and vapour phase⁽⁹⁾. The upper boundaries of this partitioning are represented by the maximum aqueous solubility and pure saturated vapour concentration of the chemical. The CLEA model estimates saturated soil concentrations where these limits are reached⁽⁹⁾. The CLEA software uses a traffic light system to identify when individual and/or combined assessment criteria exceed the lower of either the aqueous- or vapour-based soil saturation limits. Model output cells are flagged red where the saturated soil concentration has been exceeded and the contribution of the indoor and outdoor vapour pathway to total exposure is greater than 10%. In this case, further consideration of the following is required⁽⁹⁾:

- Free phase contamination may be present.
- Exposure from the vapour pathways will be over-predicted by the model, as in reality the vapour phase concentration will not increase at concentrations above saturation limits
- Where the vapour pathway contribution is greater than 90%, it is unlikely the relevant health criteria value (HCV) will be exceeded at soil concentrations at least a factor of ten higher than the relevant HCV.

Where the vapour pathway is the predominant pathway (contributes greater than 90% of exposure) or the only exposure route considered and the cell is highlighted red (SAC exceeds saturation limit), the risk based on the assumed conceptual model is likely to be negligible as the vapour risk is assumed to be tolerable at maximum possible soil concentrations. In such circumstances, the vapour pathway exposure should be considered based on the presence of free phase or non-aqueous phase liquid sources and the measured concentrations of volatile organic compounds (VOC) in the vapour phase. Screening could be considered based on setting the SAC as the modelled soil saturation limits. However, as stated within the CLEA handbook⁽⁹⁾, this is likely to not be practical in many cases because of the very low saturation limits and, in any case, is highly conservative.

It should also be noted that for mixtures of compounds, free phase may be present where soil (or groundwater) concentrations are well below saturation limits for individual compounds.

Where the vapour pathway is only one of the exposure pathways considered, an additional approach can then be utilised as detailed within Section 4.12 of the CLEA model handbook⁽⁹⁾, which explains how to calculate an effective assessment criterion manually.

SR3⁽⁵⁾ states that, as a general rule of thumb, it is recognised that estimating vapour phase concentrations from dissolved and sorbed phase contamination by petroleum hydrocarbons are

at least a factor of ten higher than those likely to be measured on-site. RSK has therefore applied an empirical subsurface to indoor air correction factor of 10 into the CLEA model chemical database for all petroleum hydrocarbon fractions (including BTEX, trimethylbenzenes and the polycyclic aromatic hydrocarbons (PAH) naphthalene, acenaphthene and acenaphthylene) to reduce this conservatism.

Input selection

The most up-to-date published chemical and toxicological data was obtained from EA Report SC050021/SR7⁽¹⁰⁾, the EA TOX⁽¹⁾ reports, the C4SL SP1010 project report and associated appendices^(3,6), the 2015 LQM/CIEH report⁽⁷⁾ or the USEPA IRIS database⁽¹⁴⁾. Where a C4SL has been published, the RSK GAC have duplicated the C4SL published values using all input parameters within the SP1010 final project report⁽³⁾ and associated appendices⁽⁶⁾, and has adopted them as GAC for these six substances. Toxicological and specific chemical parameters for 1,2,4-trimethylbenzene and methyl tertiary-butyl ether (MTBE) were obtained from the CL:AIRE Soil Generic Assessment Criteria report⁽¹¹⁾.

For TPH, aromatic hydrocarbons C₅–C₈ were not modelled, as this range comprises benzene (>EC5-EC7) and toluene (>EC7-EC8), which are modelled separately.

Physical parameters

For the residential with home-grown produce scenario, the CLEA default building is a small, two-storey terrace house with a concrete ground-bearing slab. The house is assumed to have a 100m² private garden consisting of lawn and flowerbeds, incorporating a 20m² plot for growing fruit and vegetables consumed by the residents. SR3⁽⁵⁾ notes this residential building type to be the most conservative in terms of potential for vapour intrusion. The building parameters used in the production of the RSK GACs are the default CLEA v1.06 inputs presented in Table 3.3 of SR3⁽³⁾, with a dust loading factor detailed in Section 9.3 of SR3⁽⁵⁾. The parameters for a sandy loam soil type were used in line with Table 4.4 of SR3⁽⁵⁾. This includes a value of 6% for the percentage of soil organic matter (SOM) within the soil. In RSK's experience, this is rather high for many sites. To avoid undertaking site-specific risk assessments for SOM, RSK has produced an additional set of GAC for SOM of 1% and 2.5% for all substances using the CLEA tool.

Summary of modifications to the default CLEA SR3⁽⁵⁾ input parameters for residential with home-grown produce land-use scenario

In summary, the RSK GAC were produced using the default input parameters for soil properties, the air dispersion model, building properties and the vapour model detailed in SR3⁽⁵⁾. Modifications to the default SR3⁽⁵⁾ exposure scenarios based on the C4SL exposure scenarios⁽³⁾ are presented in Tables 2 and 3 below.

The final selected GAC are presented by pathway in Table 4 and the combined GAC in Table 5.

Figure 1: Conceptual model for residential scenario with home-grown produce

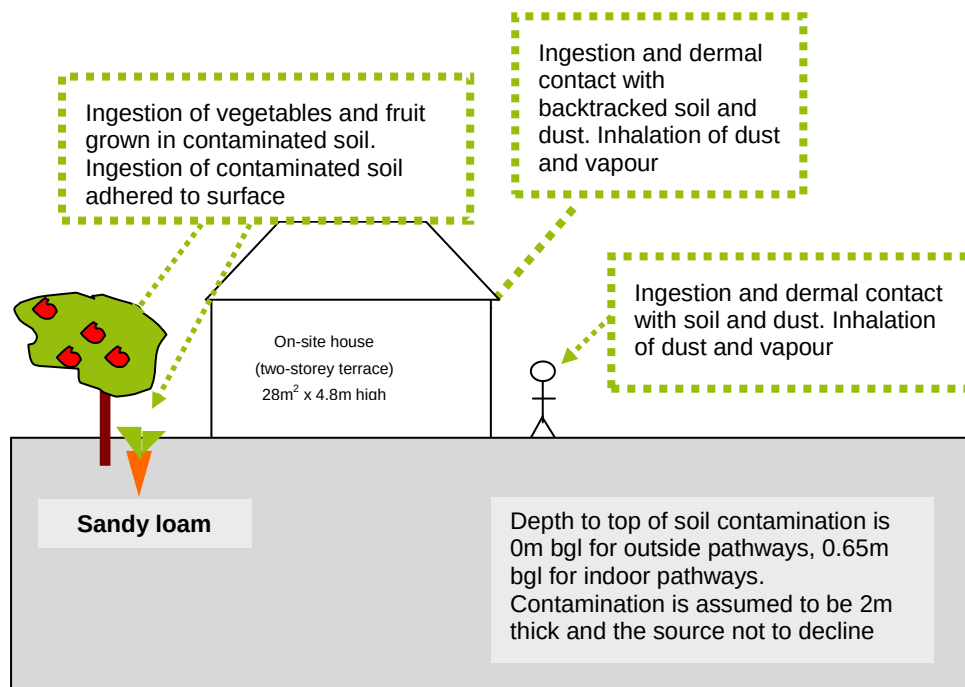


Table 1: Exposure assessment parameters for residential scenario with home-grown produce – inputs for CLEA model

Parameter	Value	Justification
Land use	Residential with homegrown produce	Chosen land use
Receptor	Female child age 1 to 6	Key generic assumption given in Box 3.1, SR3 ⁽⁵⁾
Building	Small terraced house	Key generic assumption given in Box 3.1, SR3. Small, two-storey terraced house chosen, as it is the most conservative residential building type in terms of protection from vapor intrusion (Section 3.4.6, SR3) ⁽⁵⁾
Soil type	Sandy Loam	Most common UK soil type (Section 4.3.1, from Table 3.1, SR3) ⁽⁵⁾
Start AC (age class)	1	Range of age classes corresponding to key generic assumption that the critical receptor is a young female child aged 0–6. From Box 3.1, SR3 ⁽⁵⁾
End AC (age class)	6	
SOM (%)	6	Representative of sandy loamy soil according to EA guidance note dated January 2009 entitled 'Changes We Have Made to the CLEA Framework Documents' ⁽¹³⁾
	1	To provide SAC for sites where SOM <6% as often observed by RSK
	2.5	
pH	7	Model default

Table 2: Residential with home-grown produce – modified home-grown produce data

Name	Consumption rate 90 th percentile (g FW kg ⁻¹ BW day ⁻¹) by age class						Dry weight conversion factor (g DW g ⁻¹ FW)	Home-grown fraction (average)	Home-grown fraction (high end)	Soil loading factor (g g ⁻¹ DW)	Preparation correction factor
	1	2	3	4	5	6					
Green vegetables	7.12	5.87	5.87	5.87	4.53	4.53	0.096	0.05	0.33	1.00E-03	2.00E-01
Root vegetables	10.7	2.83	2.83	2.83	2.14	2.14	0.103	0.06	0.4	1.00E-03	1.00E+00
Tuber vegetables	16	6.6	6.6	6.6	4.95	4.95	0.21	0.02	0.13	1.00E-03	1.00E+00
Herbaceous fruit	1.83	3.39	3.39	3.39	2.24	2.24	0.058	0.06	0.4	1.00E-03	6.00E-01
Shrub fruit	2.23	0.46	0.46	0.46	0.19	0.19	0.166	0.09	0.6	1.00E-03	6.00E-01
Tree fruit	3.82	10.3	10.3	10.3	5.16	5.16	0.157	0.04	0.27	1.00E-03	6.00E-01
Justification	Table 3.4, SP1010 ⁽³⁾						Table 6.3, SR3 ⁽⁵⁾	Table 4.19, SR3 ⁽⁵⁾		Table 6.3, SR3 ⁽⁵⁾	

Table 3: Residential with home-grown produce – modified and use and receptor data

Parameter	Unit	Age class					
		1	2	3	4	5	6
EF (soil and dust ingestion)	day yr ⁻¹	180	365	365	365	365	365
EF (consumption of home-grown produce)	day yr ⁻¹	180	365	365	365	365	365
EF (skin contact, indoor)	day yr ⁻¹	180	365	365	365	365	365
EF (skin contact, outdoor)	day yr ⁻¹	170	170	170	170	170	170
EF (inhalation of dust and vapour, indoor)	day yr ⁻¹	365	365	365	365	365	365
EF (inhalation of dust and vapour, outdoor)	day yr ⁻¹	365	365	365	365	365	365
Justification		Table 3.5, SP1010 ⁽³⁾ ; Table 3.1, SR3 ⁽⁵⁾					
Soil to skin adherence factor (outdoor)	mg cm ⁻² day ⁻¹	0.1	0.1	0.1	0.1	0.1	0.1
Justification		Table 3.5, SP1010 ⁽³⁾					
Inhalation rate	m ³ day ⁻¹	5.4	8.0	8.9/f	10.1	10.1	10.1
Justification		Mean value USEPA, 2011 ⁽¹²⁾ ; Table 3.2, SP1010 ⁽³⁾					
Notes: For cadmium , the exposure assessment for a residential land use is based on estimates representative of lifetime exposure AC1-18. This is because the TDI _{oral} and TDI _{inh} are based on considerations of the kidney burden accumulated over 50 years. It is therefore reasonable to consider exposure not just in childhood but averaged over a longer period. See the Environment Agency Science Report SC05002/ TOX 3 ⁽¹⁾ , Science Report SC050021/Cadmium SGV ⁽¹⁾ and the project report SP1010 ⁽³⁾ for more information.							

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GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE



Table 4

Human Health Generic Assessment Criteria by Pathway for Residential With Home-Grown Produce Scenario

Compound	Media	SAC Appropriate to Pathway SOM 1% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 2.5% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 6% (mg/kg)			Soil Saturation Limit (mg/kg)
		Oral	Inhalation	Combined		Oral	Inhalation	Combined		Oral	Inhalation	Combined	
Metals													
Arsenic	(a,b)	3.71E+01	5.26E+02	NR	NR	3.71E+01	5.26E+02	NR	NR	3.71E+01	5.26E+02	NR	NR
Cadmium	(a)	2.30E+01	4.88E+02	2.21E+01	NR	2.30E+01	4.88E+02	2.21E+01	NR	2.30E+01	4.88E+02	2.21E+01	NR
Chromium (III) - trivalent	(c)	1.84E+04	9.07E+02	NR	NR	1.84E+04	9.07E+02	NR	NR	1.84E+04	9.07E+02	NR	NR
Chromium (VI) - hexavalent	(a,d)	5.85E+01	2.06E+01	NR	NR	5.85E+01	2.06E+01	NR	NR	5.85E+01	2.06E+01	NR	NR
Copper		2.72E+03	1.41E+04	2.47E+03	NR	2.72E+03	1.41E+04	2.47E+03	NR	2.72E+03	1.41E+04	2.47E+03	NR
Lead	(a)	2.01E+02	NR	NR	NR	2.01E+02	NR	NR	NR	2.01E+02	NR	NR	NR
Elemental Mercury (Hg ⁰)	(d)	NR	2.35E-01	NR	4.31E+00	NR	5.60E-01	NR	1.07E+01	NR	1.22E+00	NR	2.58E+01
Inorganic Mercury (Hg ²⁺)		3.95E+01	3.63E+03	3.91E+01	NR	3.95E+01	3.63E+03	3.91E+01	NR	3.95E+01	3.63E+03	3.91E+01	NR
Methyl Mercury (Hg ^{CH3})		1.26E+01	1.87E+01	7.52E+00	7.33E+01	1.26E+01	3.62E+01	9.34E+00	1.42E+02	1.26E+01	7.68E+01	1.08E+01	3.04E+02
Nickel	(d)	1.27E-02	1.81E-02	NR	NR	1.27E-02	1.81E-02	NR	NR	1.27E-02	1.81E-02	NR	NR
Selenium	(b)	2.58E-02	NR	NR	NR	2.58E-02	NR	NR	NR	2.58E-02	NR	NR	NR
Zinc	(b)	3.86E+03	3.63E+07	NR	NR	3.86E+03	3.63E+07	NR	NR	3.86E+03	3.63E+07	NR	NR
Cyanide (free)		1.37E+00	1.37E+04	1.37E+00	NR	1.37E+00	1.37E+04	1.37E+00	NR	1.37E+00	1.37E+04	1.37E+00	NR
Volatile Organic Compounds													
Benzene	(a)	2.62E-01	9.01E-01	2.03E-01	1.22E+03	5.39E-01	1.68E+00	4.08E-01	2.26E+03	1.16E+00	3.48E+00	8.72E-01	4.71E+03
Toluene		1.53E+02	9.08E+02	1.31E+02	8.69E+02	3.49E+02	2.00E+03	2.97E+02	1.92E+03	7.95E+02	4.55E+03	6.77E+02	4.36E+03
Ethylbenzene		1.10E+02	8.34E+01	4.74E+01	5.18E+02	2.61E+02	1.96E+02	1.12E+02	1.22E+03	6.00E+02	4.58E+02	2.60E+02	2.84E+03
Xylene - m		2.10E+02	8.25E+01	5.92E+01	6.25E+02	5.01E+02	1.95E+02	1.40E+02	1.47E+03	1.15E+03	4.56E+02	3.27E+02	3.46E+03
Xylene - o		1.92E+02	8.87E+01	6.07E+01	4.78E+02	4.56E+02	2.08E+02	1.43E+02	1.12E+03	1.05E+03	4.86E+02	3.32E+02	2.62E+03
Xylene - p		1.98E+02	7.93E+01	5.66E+01	5.76E+02	4.70E+02	1.86E+02	1.33E+02	1.35E+03	1.08E+03	4.36E+02	3.10E+02	3.17E+03
Total xylene		1.92E+02	7.93E+01	5.66E+01	6.25E+02	4.56E+02	1.86E+02	1.33E+02	1.47E+03	1.05E+03	4.36E+02	3.10E+02	3.46E+03
Methyl tertiary-Butyl ether (MTBE)		1.54E+02	1.04E+02	6.22E+01	2.04E+04	2.97E+02	1.69E+02	1.08E+02	3.31E+04	6.03E+02	3.21E+02	2.10E+02	6.27E+04
Trichloroethene		2.83E-01	1.72E-02	1.62E-02	1.54E+03	3.59E-02	3.40E-02	3.22E+03	1.41E+00	7.98E-02	7.55E-02	7.14E-03	
Tetrachloroethene		4.49E+00	1.79E-01	1.76E-01	4.24E+02	1.04E+01	4.02E-01	3.94E-01	9.51E+02	2.38E+01	9.21E-01	9.04E-01	2.18E+03
1,1,1-Trichloroethane		3.33E+02	9.01E+00	8.77E+00	1.43E+03	7.26E+02	1.84E+01	1.80E+01	2.92E+03	1.62E+03	4.04E+01	3.94E+01	6.39E+03
1,1,1,2-Tetrachloroethane		5.39E+00	1.54E+00	1.20E+00	2.60E+03	1.27E+01	3.56E+00	2.78E+00	6.02E+03	2.92E+01	8.29E+00	6.46E+00	1.40E+04
1,1,2,2-Tetrachloroethane		2.81E+00	3.92E+00	1.64E+00	2.67E+03	6.10E+00	8.04E+00	3.47E+00	5.46E+03	1.36E+01	1.76E+01	7.67E+00	1.20E+04
Carbon Tetrachloride		3.10E+00	2.58E-02	2.57E-02	1.52E+03	7.11E+00	5.65E-02	5.62E-02	3.32E+03	1.62E+01	1.28E-01	1.27E-01	7.54E+03
1,2-Dichloroethane		3.17E-02	9.20E-03	7.13E-03	3.41E+03	5.73E-02	1.33E-02	1.08E-02	4.91E+03	1.09E-01	2.28E-02	1.88E-02	8.43E+03
Vinyl Chloride		3.82E-03	7.73E-04	6.43E-04	1.36E+03	6.87E-03	1.00E-03	8.73E-04	1.76E+03	1.25E-02	1.53E-03	1.36E-03	2.69E+03
1,2,4-Trimethylbenzene		NR	1.76E+00	NR	4.74E+02	NR	4.26E+00	NR	1.16E+03	NR	9.72E+00	NR	2.76E+03
1,3,5-Trimethylbenzene	(e)	NR	NR	NR	2.30E+02	NR	NR	NR	5.52E+02	NR	NR	NR	1.30E+03
Semi-Volatile Organic Compounds													
Acenaphthene		2.27E+02	4.86E+04	2.26E+02	5.70E+01	5.41E+02	1.18E+05	5.38E+02	1.41E+02	1.18E+03	2.68E+05	1.17E+03	3.36E+02
Acenaphthylene		1.85E+02	4.59E+04	1.84E+02	8.61E+01	4.42E+02	1.11E+05	4.40E+02	2.12E+02	9.78E+02	2.53E+05	9.74E+02	5.06E+02
Anthracene		2.43E+03	1.53E+05	2.39E+03	1.17E+00	5.53E+03	3.77E+05	5.45E+03	2.91E+00	1.10E+04	8.76E+05	1.09E+04	6.96E+00
Benzo(a)anthracene		1.01E+01	2.47E+01	7.18E+00	1.71E+00	1.42E+01	4.37E+01	1.07E+01	4.28E+00	1.69E+01	6.26E+01	1.33E+01	1.03E+01
Benzo(a)pyrene	(a)	4.96E+00	3.51E+01	NR	9.11E-01	4.96E+00	3.77E+01	NR	2.28E+00	4.96E+00	3.89E+01	NR	5.46E+00
Benzo(b)fluoranthene		2.96E+00	1.93E+01	2.56E+00	1.22E+00	3.89E+00	2.13E+01	3.29E+00	3.04E+00	4.43E+00	2.22E+01	3.69E+00	7.29E+00
Benzo(g,h,i)perylene		3.77E+02	1.87E+03	3.14E+02	1.54E-02	4.09E+02	1.94E+03	3.38E+02	3.85E-02	4.23E+02	1.97E+03	3.48E+02	9.23E-02
Benzo(k)fluoranthene		8.92E+01	5.41E+02	7.66E+01	6.87E-01	1.10E+02	5.76E+02	9.22E+01	1.72E+00	1.21E+02	5.91E+02	1.00E+02	4.12E+00
Chrysene		1.66E+01	1.19E+02	1.46E+01	4.40E-01	2.54E+01	1.49E+02	2.17E+01	1.10E+00	3.19E+01	1.66E+02	2.67E+01	2.64E+00
Dibenzo(a,h)anthracene		2.90E-01	1.45E+00	2.41E-01	3.93E-03	3.43E-01	1.64E+00	2.84E-01	9.82E-03	3.69E-01	1.74E+00	3.04E-01	2.36E-02
Fluoranthene		2.87E+02	3.83E+04	2.85E+02	1.89E+01	5.63E+02	8.87E+04	5.60E+02	4.73E+01	9.00E+02	1.83E+05	8.96E+02	1.13E+02
Fluorene		1.77E+02	6.20E+03	1.72E+02	3.09E+01	4.19E+02	1.53E+04	4.07E+02	7.65E+01	8.98E+02	3.62E+04	8.77E+02	1.83E+02
Indeno(1,2,3-cd)pyrene		3.09E+01	2.12E+02	2.70E+01	6.13E-02	4.22E+01	2.38E+02	3.59E+01	1.53E-01	4.92E+01	2.50E+02	4.11E+01	3.68E-01
Naphthalene		2.78E+01	2.33E+01	1.27E+01	7.64E+01	6.66E+01	5.58E+01	3.04E+01	1.83E+02	1.53E+02	1.31E+02	7.06E+01	4.32E+02
Phenanthrene		9.85E+01	7.17E+03	9.72E+01	3.60E+01	2.24E+02	1.76E+04	2.22E+02	8.96E+01	4.48E+02	4.07E+04	4.43E+02	2.14E+02
Pyrene		6.25E+02	8.79E+04	6.20E+02	2.20E+00	1.25E+03	2.04E+05	1.24E+03	5.49E+00	2.05E+03	4.23E+05	2.04E+03	1.32E+01
Phenol		1.60E+02	4.58E+02	1.20E+02	2.42E+04	2.96E+02	6.95E+02	2.09E+02	3.81E+04	5.86E+02	1.19E+03	3.93E+02	7.03E+04
Total Petroleum Hydrocarbons													
Aliphatic hydrocarbons EC ₉ -EC ₈		4.99E+03	4.24E+01	4.23E+01	3.04E+02	1.13E+04	7.79E+01	7.78E+01	5.58E+02	2.50E+04	1.61E+02	1.60E+02	1.15E+03
Aliphatic hydrocarbons >EC ₉ -EC ₈		1.49E+04	1.04E+02	1.03E+02	1.44E+02	3.43E+04	2.31E+02	2.31E+02	3.22E+02	7.11E+04	5.29E+02	5.28E+02	7.36E+02
Aliphatic hydrocarbons >EC ₉ -EC ₁₀		1.61E+03	2.68E+01	2.67E+01	7.77E+01	2.91E+03	6.55E+01	6.51E+01	1.90E+02	4.26E+03	1.56E+02	1.54E+02	4.51E+02
Aliphatic hydrocarbons >EC ₁₀ -EC ₁₂		4.57E+03	1.33E+02	1.32E+02	4.75E+01	5.51E+03	3.31E+02	3.26E+02	1.18E+02	5.98E+03	7.93E+02	7.65E+02	2.83E+02
Aliphatic hydrocarbons >EC ₁₂ -EC ₁₆		6.27E+03	1.11E+03	1.06E+03	2.37E+01	6.34E+03	2.78E+03	2.41E+03	5.91E+01	6.36E+03	6.67E+03	4.34E+03	1.42E+02

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE



Table 4

Human Health Generic Assessment Criteria by Pathway for Residential With Home-Grown Produce Scenario

Compound	Notes	SAC Appropriate to Pathway SOM 1% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 2.5% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 6% (mg/kg)			Soil Saturation Limit (mg/kg)
		Oral	Inhalation	Combined		Oral	Inhalation	Combined		Oral	Inhalation	Combined	
Aliphatic hydrocarbons >EC ₁₀ -EC ₂₀	(b)	6.46E+04	NR	NR	8.48E+00	9.17E+04	NR	NR	2.12E+01	1.10E+05	NR	NR	5.09E+01
Aliphatic hydrocarbons >EC ₂₀ -EC ₂₄	(b)	6.46E+04	NR	NR	8.48E+00	9.17E+04	NR	NR	2.12E+01	1.10E+05	NR	NR	5.09E+01
Aromatic hydrocarbons >EC8-EC ₁₀		5.76E+01	4.74E+01	3.45E+01	6.13E+02	1.38E+02	1.16E+02	8.38E+01	1.50E+03	3.07E+02	2.77E+02	1.94E+02	3.58E+02
Aromatic hydrocarbons >EC ₁₀ -EC ₁₂		8.29E+01	2.58E+02	7.52E+01	3.64E+02	1.96E+02	6.39E+02	1.79E+02	8.99E+02	4.25E+02	1.52E+03	3.91E+02	2.15E+03
Aromatic hydrocarbons >EC ₁₂ -EC ₁₆		1.47E+02	2.85E+03	1.45E+02	1.69E+02	3.36E+02	7.07E+03	3.32E+02	4.19E+02	6.81E+02	1.68E+04	6.74E+02	1.00E+03
Aromatic hydrocarbons >EC ₁₆ -EC ₂₁	(b)	2.63E+02	NR	NR	5.37E+01	5.45E+02	NR	NR	1.34E+02	9.34E+02	NR	NR	3.21E+02
Aromatic hydrocarbons >EC ₂₁ -EC ₂₅	(b)	1.09E+03	NR	NR	4.83E+00	1.47E+03	NR	NR	1.21E+01	1.70E+03	NR	NR	2.90E+01
Aromatic hydrocarbons >EC ₂₅ -EC ₂₄	(b)	1.09E+03	NR	NR	4.83E+00	1.47E+03	NR	NR	1.21E+01	1.70E+03	NR	NR	2.90E+01

Notes:

EC - equivalent carbon. SAC - soil assessment criteria.

The CLEA model output is colour coded depending upon whether the soil saturation limit has been exceeded.

	Calculated SAC exceeds soil saturation limit and may significantly affect the interpretation of any exceedances as the contribution of the indoor and outdoor vapour pathway to total exposure is >10%.
	Calculated SAC exceeds soil saturation limit but the exceedance will not affect the SAC significantly as the contribution of the indoor and outdoor vapour pathway to total exposure is <10%.
	Calculated SAC does not exceed the soil saturation limit.

The SAC for organic compounds are dependant upon soil organic matter (SOM) (%) content. To obtain SOM from total organic carbon (TOC) (%) divide by 0.58. 1% SOM is 0.58% TOC. DL Rowell Soil Science: Methods and Applications, Longmans, 1994.

SAC for TPH fractions, PAHs naphthalene, acenaphthene and acenaphthylene, BTEX and trimethylbenzene compounds were produced using an attenuation factor for the indoor air inhalation pathway of 10 to reduce conservatism associated with the vapour inhalation pathway (Section 10.1.1, SR3)

(a) SAC for arsenic, benzene, benzo(a)pyrene, cadmium, chromium VI and lead are derived using the C4SL toxicology data.

(b) SAC for selenium should not include the inhalation pathway as no expert group HCV has been derived; aliphatic and aromatic hydrocarbons >EC16 should not include inhalation pathway due to their non-volatile nature and inhalation exposure being minimal (oral, dermal and inhalation exposure is compared to the oral HCV); arsenic should only be based on oral contribution (rather than combined) owing to the relative small contribution from inhalation in accordance with the SGV report. The Oral SAC should be adopted for zinc and benzo(a)pyrene.

(c) SAC for CrIII should be based on the lower of the oral and inhalation SAC (see LQM/CIEH 2015 Section 6.8)

(d) SAC for elemental mercury, chromium VI and nickel should be based on the inhalation pathway only.

(e) SAC for 1,3,5-trimethylbenzene is not recorded owing to the lack of toxicological data, SAC for 1,2,4 trimethylbenzene may be used.

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE



Table 5
Human Health Generic Assessment Criteria for Residential with home-grown produce

Compound	SAC for Soil SOM 1% (mg/kg)	SAC for Soil SOM 2.5% (mg/kg)	SAC for Soil SOM 6% (mg/kg)
Metals			
Arsenic	37	37	37
Cadmium	22	22	22
Chromium (III) - trivalent	910	910	910
Chromium (VI) - hexavalent	21	21	21
Copper	2,500	2,500	2,500
Lead	200	200	200
Elemental Mercury (Hg ⁰)	0.2	0.6	1.2
Inorganic Mercury (Hg ²⁺)	39	39	39
Methyl Mercury (Hg ⁴⁺)	10	10	10
Nickel	130	130	130
Selenium	258	258	258
Zinc	3,900	3,900	3,900
Cyanide (free)	1.4	1.4	1.4
Volatile Organic Compounds			
Benzene	0.20	0.41	0.87
Toluene	130	300	680
Ethylbenzene	50	110	260
Xylene - m	59	140	327
Xylene - o	61	143	332
Xylene - p	57	133	310
Total xylene	57	133	310
Methyl tertiary-Butyl ether (MTBE)	60	110	210
Trichloroethene	0.02	0.03	0.08
Tetrachloroethene	0.2	0.4	0.9
1,1,1-Trichloroethane	9	18	39
1,1,1,2-Tetrachloroethane	1.2	2.8	6.5
1,1,2,2-Tetrachloroethane	1.6	3.5	7.7
Carbon Tetrachloride	0.026	0.056	0.127
1,2-Dichloroethane	0.007	0.011	0.019
Vinyl Chloride	0.0006	0.0009	0.0014
1,2,4-Trimethylbenzene	1.8	4.3	9.7
1,3,5-Trimethylbenzene	NR	NR	NR
Semi-Volatile Organic Compounds			
Acenaphthene	230	540	1,170
Acenaphthylene	180	440	970
Anthracene	2,400	5,500	10,900
Benzo(a)anthracene	7	11	13
Benzo(a)pyrene	5	5	5
Benzo(b)fluoranthene	2.6	3.3	3.7
Benzo(g,h,i)perylene	310	340	350
Benzo(k)fluoranthene	77	92	100
Chrysene	15	22	27
Dibenzo(a,h)anthracene	0.24	0.28	0.30
Fluoranthene	290	560	900
Fluorene	170	410	880
Indeno(1,2,3-cd)pyrene	27	36	41
Naphthalene	13	30	71
Phenanthrene	100	220	440
Pyrene	620	1,240	2,040
Phenol	120	210	390
Total Petroleum Hydrocarbons			
Aliphatic hydrocarbons EC ₅ -EC ₆	42	78	160
Aliphatic hydrocarbons >EC ₆ -EC ₈	100	230	530
Aliphatic hydrocarbons >EC ₈ -EC ₁₀	27	65	154
Aliphatic hydrocarbons >EC ₁₀ -EC ₁₂	130 (48)	330 (118)	760 (283)
Aliphatic hydrocarbons >EC ₁₂ -EC ₁₆	1,100 (24)	2,400 (59)	4,300 (142)
Aliphatic hydrocarbons >EC ₁₆ -EC ₃₅	65,000 (8)	92,000 (21)	110,000
Aliphatic hydrocarbons >EC ₃₅ -EC ₄₄	65,000 (8)	92,000 (21)	110,000
Aromatic hydrocarbons >EC ₈ -EC ₁₀	30	80	190
Aromatic hydrocarbons >EC ₁₀ -EC ₁₂	80	180	390
Aromatic hydrocarbons >EC ₁₂ -EC ₁₆	140	330	670
Aromatic hydrocarbons >EC ₁₆ -EC ₂₁	260	540	930
Aromatic hydrocarbons >EC ₂₁ -EC ₃₅	1,100	1,500	1,700
Aromatic hydrocarbons >EC ₃₅ -EC ₄₄	1,100	1,500	1,700
Minerals			
Asbestos	No asbestos detected with ID or <0.001% dry weight ¹		
Notes:			
¹ Generic assessment criteria not calculated owing to low volatility of substance and therefore no pathway, or an absence of toxicological data.			
NR - SAC for 1,3,5-trimethylbenzene is not recorded owing to the lack of toxicological data, SAC for 1,2,4 trimethylbenzene may be used			
EC - equivalent carbon. SAC - soil assessment criteria.			
¹ LOD for weight of asbestos per unit weight of soil calculated on a dry weight basis using PLM, handpicking and gravimetry.			
The SAC for organic compounds are dependent on Soil Organic Matter (SOM) (%) content. To obtain SOM from total organic carbon (TOC) (%) divide by 0.58.			
1% SOM is 0.58% TOC. DL Rowell Soil Science: Methods and Applications, Longmans, 1994.			
SAC for TPH fractions, PAHs naphthalene, acenaphthene and acenaphthylene, BTEX and trimethylbenzene compounds were produced using an attenuation factor for the indoor air inhalation pathway of 10 to reduce conservatism associated with the vapour inhalation pathway, section 10.1.1, SR3.			
(VALUE IN BRACKETS)			
RSK has adopted an approach for petroleum hydrocarbons in accordance with LQM/CIEH whereby the concentration modelled for each petroleum hydrocarbon fraction has been tabulated as the SAC with the corresponding solubility or vapour saturation limits given in brackets.			

APPENDIX G

GQRA DATA SCREENING TABLES

Project name	London Road, Hitchin	Notes	
Project code	1920378		
Client name	Martin Grant Homes		
Address			
NGR			
Land use	Residential with home-grown produce		
SOM	1%		
GAC version	2018_02		

									Lab sample ID	18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6				
									Client sample ID	TP3	TP5	TP6	TP9	TP10	TP12				
									Depth to top	0.5	0.5	0.5	0.5	0.5	0.5				
									Depth to bottom										
									Date sampled	03/12/18	03/12/18	03/12/18	03/12/18	03/12/18	03/12/18				
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects											
Metals and Inorganics																			
Arsenic	mg/kg	37		43	7	6	6	0	7	9	9	8	43	11					
Cadmium	mg/kg	22		1.2	0.6	6	6	0	0.8	0.6	0.7	0.7	1.2	0.7					
Chromium	mg/kg	910	21	33	16	6	6	0	33	23	31	21	16	33					
Copper	mg/kg	2500		20	12	6	6	0	15	14	16	20	12	14					
Lead	mg/kg	200		53	17	6	6	0	28	38	51	53	17	29					
Mercury	mg/kg	39	0.2		<0.17	6	0	6	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17					
Nickel	mg/kg	130		53	22	6	6	0	33	28	29	22	53	33					
Selenium	mg/kg	258		1	<1	6	1	5	<1	<1	<1	<1	1	<1					
Zinc	mg/kg	3900		135	71	6	6	0	78	87	86	113	135	71					
Asbestos																			
Asbestos in soil						5	0	5	NAD	NAD	NAD	NAD		NAD					
Petroleum Hydrocarbons																			
Ali >C5-C6	mg/kg	42			<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Ali >C6-C8	mg/kg	100			<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Ali >C8-C10	mg/kg	27			<1	6	0	6	<1	<1	<1	<1	<1	<1					
Ali >C10-C12	mg/kg	130	48		<1	6	0	6	<1	<1	<1	<1	<1	<1					
Ali >C12-C16	mg/kg	1100	24		<1	6	0	6	<1	<1	<1	<1	<1	<1					
Ali >C16-C21	mg/kg				<1	6	0	6	<1	<1	<1	<1	<1	<1					
Ali >C21-C35	mg/kg			3	<1	6	4	2	2	<1		3	3	<1		1			
Ali >C16-C35 calculated	mg/kg	65000	8	3	<1	6	4	2	2	<1		3	3	<1		1			
Total Aliphatics	mg/kg			3	<1	6	4	2	2	<1		3	3	<1		1			
Aro >C5-C7	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Aro >C7-C8	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Aro >C8-C10	mg/kg	30			<1	6	0	6	<1	<1	<1	<1	<1	<1					
Aro >C10-C12	mg/kg	80			<1	6	0	6	<1	<1	<1	<1	<1	<1					
Aro >C12-C16	mg/kg	140		12	<1	6	3	3	2	<1		12	2	<1		<1			
Aro >C16-C21	mg/kg	260		47	<1	6	5	1	16	3	47	34	<1			3			
Aro >C21-C35	mg/kg	1100		128	<1	6	5	1	47	12	73	128	<1			12			
Total Aromatics	mg/kg			164	<1	6	5	1	66	15	132	164	<1			16			
TPH (Ali & Aro)	mg/kg			167	<1	6	5	1	66	16	135	167	<1			17			
BTEX - Benzene	mg/kg	0.2			<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01			
BTEX - Toluene	mg/kg	130			<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01			
BTEX - Ethyl Benzene	mg/kg	50			<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01			
BTEX - o Xylene	mg/kg	61			<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01			
BTEX - m & p Xylene	mg/kg	57			<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01			
MTBE	mg/kg	60			<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01			
Polycyclic aromatic hydrocarbons																			
Acenaphthene	mg/kg	230		0.38	<0.01	6	4	2	0.38	0.02	0.11	0.12	<0.01	<0.01					
Acenaphthylene	mg/kg	180		0.15	<0.01	6	3	3	0.06	0.03	<0.01	0.15	<0.01	<0.01					
Anthracene	mg/kg	2400		1.09	<0.02	6	4	2	1.09	0.12	0.13	0.86	<0.02	<0.02					
Benzo(a)anthracene	mg/kg	7		2.91	<0.04	6	5	1	2.91	0.77	0.18	2.52	<0.04			0.04			
Benzo(a)pyrene	mg/kg	5		1.99	<0.04	6	4	2	1.99	0.64	0.13	1.62	<0.04	<0.04					
Benzo(b)fluoranthene	mg/kg	2.6		2.56	<0.05	6	4	2	2.56	0.83	0.16	2.16	<0.05	<0.05					

Project name	London Road, Hitchin	Notes	
Project code	1920378		
Client name	Martin Grant Homes		
Address			
NGR			
Land use	Phytotoxic (pH >7.0)		
SOM	1%		
GAC version	2012_01		

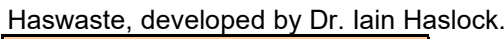
									Lab sample ID	18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6				
									Client sample ID	TP3	TP5	TP6	TP9	TP10	TP12				
									Depth to top	0.5	0.5	0.5	0.5	0.5	0.5				
									Depth to bottom										
									Date sampled	03/12/18	03/12/18	03/12/18	03/12/18	03/12/18	03/12/18				
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects											
Metals and Inorganics																			
Arsenic	mg/kg			43	7	6	6	0	7	9	9	8	43	11					
Cadmium	mg/kg	3		1.2	0.6	6	6	0	0.8	0.6	0.7	0.7	1.2	0.7					
Chromium	mg/kg			33	16	6	6	0	33	23	31	21	16	33					
Copper	mg/kg	200		20	12	6	6	0	15	14	16	20	12	14					
Lead	mg/kg	300		53	17	6	6	0	28	38	51	53	17	29					
Mercury	mg/kg	1			<0.17	6	0	6	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17					
Nickel	mg/kg	110		53	22	6	6	0	33	28	29	22	53	33					
Selenium	mg/kg			1	<1	6	1	5	<1	<1	<1	<1	1	<1					
Zinc	mg/kg	300		135	71	6	6	0	78	87	86	113	135	71					
Asbestos																			
Asbestos in soil						5	0	5	NAD	NAD	NAD	NAD		NAD					
Petroleum Hydrocarbons																			
Ali >C5-C6	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Ali >C6-C8	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Ali >C8-C10	mg/kg				<1	6	0	6	<1	<1	<1	<1	<1	<1					
Ali >C10-C12	mg/kg				<1	6	0	6	<1	<1	<1	<1	<1	<1					
Ali >C12-C16	mg/kg				<1	6	0	6	<1	<1	<1	<1	<1	<1					
Ali >C16-C21	mg/kg				<1	6	0	6	<1	<1	<1	<1	<1	<1					
Ali >C21-C35	mg/kg			3	<1	6	4	2	2	<1	3	3	<1	1					
Ali >C16-C35 calculated	mg/kg			3	<1	6	4	2	2	<1	3	3	<1	1					
Total Aliphatics	mg/kg			3	<1	6	4	2	2	<1	3	3	<1	1					
Aro >C5-C7	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Aro >C7-C8	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Aro >C8-C10	mg/kg				<1	6	0	6	<1	<1	<1	<1	<1	<1					
Aro >C10-C12	mg/kg				<1	6	0	6	<1	<1	<1	<1	<1	<1					
Aro >C12-C16	mg/kg			12	<1	6	3	3	2	<1	12	2	<1	<1					
Aro >C16-C21	mg/kg			47	<1	6	5	1	16	3	47	34	<1	3					
Aro >C21-C35	mg/kg			128	<1	6	5	1	47	12	73	128	<1	12					
Total Aromatics	mg/kg			164	<1	6	5	1	66	15	132	164	<1	16					
TPH (Ali & Aro)	mg/kg			167	<1	6	5	1	66	16	135	167	<1	17					
BTEX - Benzene	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
BTEX - Toluene	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
BTEX - Ethyl Benzene	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
BTEX - o Xylene	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
BTEX - m & p Xylene	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
MTBE	mg/kg				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Polycyclic aromatic hydrocarbons																			
Acenaphthene	mg/kg			0.38	<0.01	6	4	2	0.38	0.02	0.11	0.12	<0.01	<0.01					
Acenaphthylene	mg/kg			0.15	<0.01	6	3	3	0.06	0.03	<0.01	0.15	<0.01	<0.01					
Anthracene	mg/kg			1.09	<0.02	6	4	2	1.09	0.12	0.13	0.86	<0.02	<0.02					
Benzo(a)anthracene	mg/kg			2.91	<0.04	6	5	1	2.91	0.77	0.18	2.52	<0.04	0.04					
Benzo(a)pyrene	mg/kg			1.99	<0.04	6	4	2	1.99	0.64	0.13	1.62	<0.04	<0.04					
Benzo(b)fluoranthene	mg/kg			2.56	<0.05	6	4	2	2.56	0.83	0.16	2.16	<0.05	<0.05					

Lab sample ID										18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6				
Client sample ID										TP3	TP5	TP6	TP9	TP10	TP12				
Depth to top										0.5	0.5	0.5	0.5	0.5	0.5				
Depth to bottom																			
Date sampled										03/12/18	03/12/18	03/12/18	03/12/18	03/12/18	03/12/18				
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects											
Benzo(ghi)perylene	mg/kg			0.82	<0.05	6	4	2	0.82	0.31	0.06	0.69	<0.05	<0.05					
Benzo(k)fluoranthene	mg/kg			0.88	<0.07	6	3	3	0.88	0.28	<0.07	0.75	<0.07	<0.07					
Chrysene	mg/kg			2.65	<0.06	6	4	2	2.65	0.85	0.19	2.4	<0.06	<0.06					
Dibenzo(ah)anthracene	mg/kg			0.18	<0.04	6	3	3	0.18	0.07	<0.04	0.17	<0.04	<0.04					
Fluoranthene	mg/kg			7.29	<0.08	6	4	2	7.29	1.5	0.47	6.59	<0.08	<0.08					
Fluorene	mg/kg			0.29	<0.01	6	4	2	0.21	0.02	0.07	0.29	<0.01	<0.01					
Indeno(123-cd)pyrene	mg/kg			1.17	<0.03	6	4	2	1.17	0.43	0.09	0.97	<0.03	<0.03					
Naphthalene	mg/kg				<0.03	6	0	6	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03					
Phenanthrene	mg/kg			4.37	<0.03	6	4	2	4.37	0.35	0.51	3.65	<0.03	<0.03					
Pyrene	mg/kg			5.98	<0.07	6	4	2	5.98	1.35	0.39	5.23	<0.07	<0.07					
Total PAH-16MS	mg/kg			32.5	<0.08	6	4	2	32.5	7.57	2.49	28.2	<0.08	<0.08					
Other analytes																			
% Stones >10mm	% w/w			44.3	3.1	6	6	0	15.5	18.8	3.1	14.2	44.3	4.3					
pH	pH			8.39	7.82	6	6	0	8.39	8.19	8.22	8.17	7.82	7.86					
Sulphate (acid soluble)	mg/kg			430	<200	6	4	2	<200	240	380	430	<200	270					
Sulphate (water sol 2:1)	g/l				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					

										Lab sample ID	18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6				
										Client sample ID	TP3	TP5	TP6	TP9	TP10	TP12				
										Depth to top	0.5	0.5	0.5	0.5	0.5	0.5				
										Depth to bottom										
										Date sampled	03/12/18	03/12/18	03/12/18	03/12/18	03/12/18	03/12/18				
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects												
Benzo(ghi)perylene	mg/kg	310		0.82	<0.05	6	4	2	0.82	0.31	0.06	0.69	<0.05	<0.05						
Benzo(k)fluoranthene	mg/kg	77		0.88	<0.07	6	3	3	0.88	0.28	<0.07	0.75	<0.07	<0.07						
Chrysene	mg/kg	15		2.65	<0.06	6	4	2	2.65	0.85	0.19	2.4	<0.06	<0.06						
Dibenzo(ah)anthracene	mg/kg	0.24		0.18	<0.04	6	3	3	0.18	0.07	<0.04	0.17	<0.04	<0.04						
Fluoranthene	mg/kg	290		7.29	<0.08	6	4	2	7.29	1.5	0.47	6.59	<0.08	<0.08						
Fluorene	mg/kg	170		0.29	<0.01	6	4	2	0.21	0.02	0.07	0.29	<0.01	<0.01						
Indeno(123-cd)pyrene	mg/kg	27		1.17	<0.03	6	4	2	1.17	0.43	0.09	0.97	<0.03	<0.03						
Naphthalene	mg/kg	13			<0.03	6	0	6	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03						
Phenanthrene	mg/kg	100		4.37	<0.03	6	4	2	4.37	0.35	0.51	3.65	<0.03	<0.03						
Pyrene	mg/kg	620		5.98	<0.07	6	4	2	5.98	1.35	0.39	5.23	<0.07	<0.07						
Total PAH-16MS	mg/kg			32.5	<0.08	6	4	2	32.5	7.57	2.49	28.2	<0.08	<0.08						
Other analytes																				
% Stones >10mm	% w/w			44.3	3.1	6	6	0	15.5	18.8	3.1	14.2	44.3	4.3						
pH	pH			8.39	7.82	6	6	0	8.39	8.19	8.22	8.17	7.82	7.86						
Sulphate (acid soluble)	mg/kg			430	<200	6	4	2	<200	240	380	430	<200	270						
Sulphate (water sol 2:1)	g/l				<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01						

APPENDIX H

WM3 ASSESSMENT



TP/WS/BH
Depth (m)
Envirolab reference

If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

TP3	TP5	TP6	TP9	TP10	TP12			
0.50	0.50	0.50	0.50	0.50	0.50			
18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6			

2,3,7,8-TeCDD
1,2,3,7,8-PeCDD
1,2,3,4,7,8-HxCDD
1,2,3,6,7,8-HxCDD
1,2,3,7,8,9-HxCDD
1,2,3,4,6,7,8-HpCDD
OCDD
2,3,7,8-TeCDF
1,2,3,7,8-PeCDF
2,3,4,7,8-PeCDF
1,2,3,4,7,8-HxCDF
1,2,3,6,7,8-HxCDF
2,3,4,6,7,8-HxCDF
1,2,3,7,8,9-HxCDF
1,2,3,4,6,7,8-HpCDF
1,2,3,4,7,8,9-HpCDF
OCDF
Total Dioxins and Furans

[illegible]

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Aldrin
α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)
β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)
α Cis-Chlordane (alpha) OR Total Chlordane
δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)
Dieldrin
Endrin
γ Hexachlorocyclohexane (gamma-HCH) (lindane) OR Total HCH
Heptachlor
Hexachlorobenzene
o,p'-DDT (leave empty if total DDT results used)
p,p'-DDT OR Total DDT
γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)
Chlordecone (kepone)
Polychlorobenzene
Mirex
Toxaphene (camphechlor)

[illegible][illegible]

Tin (leave empty if Organotin and Tin excl Organotin results used)

mg/kg

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Dibutyltin; DiBT
Tributyltin; TriBT
Triphenyltin; TriPT
Tetrabutyltin; TeBT
Tin excluding Organotin
Tin excl Organotin

mg/kg

mg/kg

mg/kg

mg/kg

mg/kg

--	--	--	--	--	--	--	--	--



Haswaste, developed by Dr. Iain Haslock.

Site Code and Name

TP/WS/BH

Depth (m)

Envirolab reference

Asbestos in Soil

Asbestos detected in Soil (enter Y or N)

Asbestos % Composition in Soil (Matrix Loose Fibres or Microscopic Identifiable Pieces only)

Please be advised, if the calculation cell is "0.00000" DOES NOT MEAN asbestos testing has been undertaken and the result is zero.

see "Carc HP7 % Asbestos in Soil (Fibres)" below

≥0.1%

Asbestos Identifiable Pieces visible with the naked eye detected in the Soil (enter Y or N)

Y

Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

TP3	TP5	TP6	TP9	TP10	TP12			
0.50	0.50	0.50	0.50	0.50	0.50			
18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6			

n

n

n

n

n

n

If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP5 and HP7

0.00000

0.00000

0.00000

0.00000

0.00000

0.00000

0.00000

0.00000

0.00000

If Asbestos in Soil above is "Y", but Asbestos % above is "<0.1%", the soil is Non Hazardous Waste. You can only use Asbestos % results where loose fibres or micro pieces are only present. You cannot use Asbestos % results when visual identifiable pieces are present.

If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05.
Therefore, if Asbestos in Soil above is "Y", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "Y", the soil is Hazardous Waste.

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres.
All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

Hazardous Property	Thresholds	Cut Off Value
Corrosive HP8	≥5%	<1%
Irritant HP4	≥10%	<1%
Irritant HP4	≥20%	<1%
Specifc Target Organ Toxicity HP5	≥1%	
Specifc Target Organ Toxicity HP5	≥20%	
Specifc Target Organ Toxicity HP5	≥1%	
Specifc Target Organ Toxicity HP5	≥10%	
Aspiration Toxicity HP5	≥10%	
Acute Toxicity HP6	≥0.1%	<0.1%
Acute Toxicity HP6	≥0.25%	<0.1%
Acute Toxicity HP6	≥5%	<0.1%
Acute Toxicity HP6	≥25%	<1%
Acute Toxicity HP6	≥0.25%	<0.1%
Acute Toxicity HP6	≥2.5%	<0.1%
Acute Toxicity HP6	≥15%	<0.1%
Acute Toxicity HP6	≥55%	<1%
Acute Toxicity HP6	≥0.1%	<0.1%
Acute Toxicity HP6	≥0.5%	<0.1%
Acute Toxicity HP6	≥3.5%	<0.1%
Acute Toxicity HP6	≥22.5%	<1%
Carcinogenic HP7	≥0.1%	
Carcinogenic HP7	≥0.1%	
Carcinogenic HP7	≥1%	
Carcinogenic HP7 Unknown TPH with ID	≥1,000mg/kg	
Carcinogenic HP7 b(a)p marker test (Unknown TPH with ID only) Cell only applicable if TPH >1,000mg/kg	≥0.01%	
pH Corrosive HP8 pH (soil or leachate)	H8 ≥11.5	
pH Corrosive HP8 pH (soil or leachate)	H8 ≤2	
Toxic for Reproduction HP10	≥0.3%	
Toxic for Reproduction HP10	≥3%	
Mutagenic HP11	≥0.1%	
Mutagenic HP11 Unknown TPH with ID	≥1,000mg/kg	
Mutagenic HP11 b(a)p marker test (Unknown TPH with ID only) Cell only applicable if TPH >1,000mg/kg	≥0.01%	
Mutagenic HP11	≥1%	
Produces Toxic Gases HP12 Sulphide	≥1,400mg/kg	
Produces Toxic Gases HP12 Cyanide	≥1,200mg/kg	
Produces Toxic Gases HP12 Thiocyanate	≥2,600mg/kg	
HP13 Sensitising	≥10%	

If cells below turn yellow and the text turns red, the samples should be classified as Hazardous Waste.								
0.00726	0.00560	0.00714	0.00509	0.00875	0.00779	0.00000	0.00000	0.00000
0.00262	0.00277	0.00300	0.00332	0.00703	0.00303	0.00000	0.00000	0.00000
0.00955	0.00743	0.00778	0.00771	0.01208	0.00827	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00044	0.00004	0.00005	0.00037	0.00000	0.00000	0.00000	0.00000	0.00000
0.00667	0.00566	0.00595	0.00444	0.01071	0.00667	0.00000	0.00000	0.00000
0.00660	0.00380	0.01350	0.01670	0.00170	0.00290	0.00000	0.00000	0.00000
0.00660	0.00160	0.01350	0.01670	0.00010	0.00170	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00094	0.00121	0.00121	0.00107	0.00569	0.00147	0.00000	0.00000	0.00000
0.00648	0.00456	0.00609	0.00417	0.00321	0.00648	0.00000	0.00000	0.00000
0.01242	0.01129	0.01294	0.01312	0.01390	0.01123	0.00000	0.00000	0.00000
0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00000	0.00000	0.00000
0.00634	0.00442	0.00595	0.00403	0.00307	0.00634	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00008	0.00006	0.00007	0.00007	0.00012	0.00007	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00643	0.00449	0.00604	0.00412	0.00321	0.00642	0.00000	0.00000	0.00000
0.00014	0.00014	0.00014	0.00014	0.00014	0.00014	0.00000	0.00000	0.00000
0.01116	0.01104	0.01277	0.01201	0.01376	0.01115	0.00000	0.00000	0.00000
0.00667	0.00566	0.01350	0.01670	0.01071	0.00667	0.00000	0.00000	0.00000
0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
0.00012	0.00004	0.00001	0.00010	0.00000	0.00000	0.00000	0.00000	0.00000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
8.39	8.19	8.22	8.17	7.82	7.86	0.00	0.00	0.00
8.39	8.19	8.22	8.17	7.82	7.86	0.00	0.00	0.00
0.00667	0.00566	0.00586	0.00530	0.01071	0.00667	0.00000	0.00000	0.00000
0.00660	0.00442	0.01350	0.01670	0.00307	0.00634	0.00000	0.00000	0.00000
0.00660	0.00442	0.01350	0.01670	0.00307	0.00634	0.00000	0.00000	0.00000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0.00667	0.00566	0.00586	0.00444	0.01071	0.00667	0.00000	0.00000	0.00000
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.00667	0.00566	0.00595	0.00444	0.01071	0.00667	0.00000	0.00000	0.00000



Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

Haswaste, developed by Dr. Iain Haslock.

Site Code and Name

TP/WS/BH
Depth (m)
Envirolab reference

TP3	TP5	TP6	TP9	TP10	TP12			
0.50	0.50	0.50	0.50	0.50	0.50			
18/10279/1	18/10279/2	18/10279/3	18/10279/4	18/10279/5	18/10279/6			

Ecotoxic HP14 amended v6	≥25%	<0.1%	0.03154	0.02845	0.03114	0.03415	0.03972	0.02810	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, Tl, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Crosote, TPH, TPHCWG, Phenol, Cresols, Xylenols, T-Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEX 1%).	0.03815	0.03005	0.04464	0.05086	0.03983	0.02980	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, Tl, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Crosote, TPH, TPHCWG, Phenol, Cresols, Xylenols, T-Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEX 1%).	3.22030	2.86090	3.24880	3.58230	3.97330	2.82690	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000

If other contaminants need adding to Haswaste, please contact Envirolab.

APPENDIX I

PHOTOGRAPHIC LOG

	Report No: 1920378 L01 (00)	PHOTOGRAPHIC LOG
Client name: Martin Grant Homes	Site Location: London Road, Hitchin	Date: 03.12.2018

No. 1	Direction/Description: South/Overall view of the southern field
	

No. 2	Direction/Description South/A fallen tree identified along the suspected infilled former sand pit
	

No. 3	Direction/Description: South/A pathway bisecting the southern field south to north
	

No. 4	Direction/Description Northeast/View of a car home, located at Mill Lane, between the southern and northern field of the site
	



Report No: 1920378 L01 (00)

PHOTOGRAPHIC LOG

Client name:
Martin Grant Homes

Site Location:
London Road, Hitchin

Date:
03.12.2018

No. 5

Description:
TP1



No. 6

Description
TP2





Report No: 1920378 L01 (00)

PHOTOGRAPHIC LOG

Client name:
Martin Grant Homes

Site Location:
London Road, Hitchin

Date:
03.12.2018

No. 7

Description:
TP3



No. 8

Description
TP4





Report No: 1920378 L01 (00)

PHOTOGRAPHIC LOG

Client name:
Martin Grant Homes

Site Location:
London Road, Hitchin

Date:
03.12.2018

No. 9

Description:
TP5



No. 10

Description
TP6





Report No: 1920378 L01 (00)

PHOTOGRAPHIC LOG

Client name:
Martin Grant Homes

Site Location:
London Road, Hitchin

Date:
03.12.2018

No. 11

Description:
TP7



No. 12

Description
TP8





Report No: 1920378 L01 (00)

PHOTOGRAPHIC LOG

Client name:
Martin Grant Homes

Site Location:
London Road, Hitchin

Date:
03.12.2018

No. 13

Description:
TP9



No. 14

Description
TP10





Report No: 1920378 L01 (00)

PHOTOGRAPHIC LOG

Client name:
Martin Grant Homes

Site Location:
London Road, Hitchin

Date:
03.12.2018

No. 15

Description:
TP11



No. 16

Description
TP12

