

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WGR	Worked Ground (Undivided)	Void	Holocene - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Present Day - Present Day
	MGR	Made Ground (Undivided)	Artificial Deposit	Holocene - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Flandrian
	LASI	Langley Silt Member	Clay and Silt	Devensian - Devensian
	LHGR	Lynch Hill Gravel Member	Sand and Gravel	Wolstonian - Wolstonian
	TPGR	Taplow Gravel Formation	Sand and Gravel	Wolstonian - Wolstonian
	BHT	Boyn Hill Gravel Member	Sand and Gravel	Wolstonian - Hoxnian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	LC	London Clay Formation	Clay, Silt and Sand	Eocene - Eocene
	LC	London Clay Formation	Clay and Silt	Eocene - Eocene



Geology 1:50,000 Maps

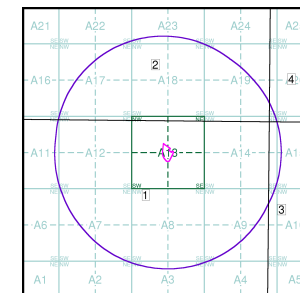
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	2	Map ID:	4
Map Sheet No:	255	Map Sheet No:	256
Map Name:	Beaconsfield	Map Name:	North London
Map Date:	2005	Map Date:	2006
Bedrock Geology:	Available	Bedrock Geology:	Available
Superficial Geology:	Available	Superficial Geology:	Available
Artificial Geology:	Available	Artificial Geology:	Available
Faults:	Available	Faults:	Not Available
Landslip:	Available	Landslip:	Available
Rock Segments:	Not Available	Rock Segments:	Not Available
Map ID:	1	Map ID:	3
Map Sheet No:	269	Map Sheet No:	270
Map Name:	Windsor	Map Name:	South London
Map Date:	1999	Map Date:	1998
Bedrock Geology:	Available	Bedrock Geology:	Available
Superficial Geology:	Available	Superficial Geology:	Available
Artificial Geology:	Available	Artificial Geology:	Available
Faults:	Available	Faults:	Available
Landslip:	Available	Landslip:	Available
Rock Segments:	Not Available	Rock Segments:	Not Available

Geology 1:50,000 Maps - Slice A



Order Details:

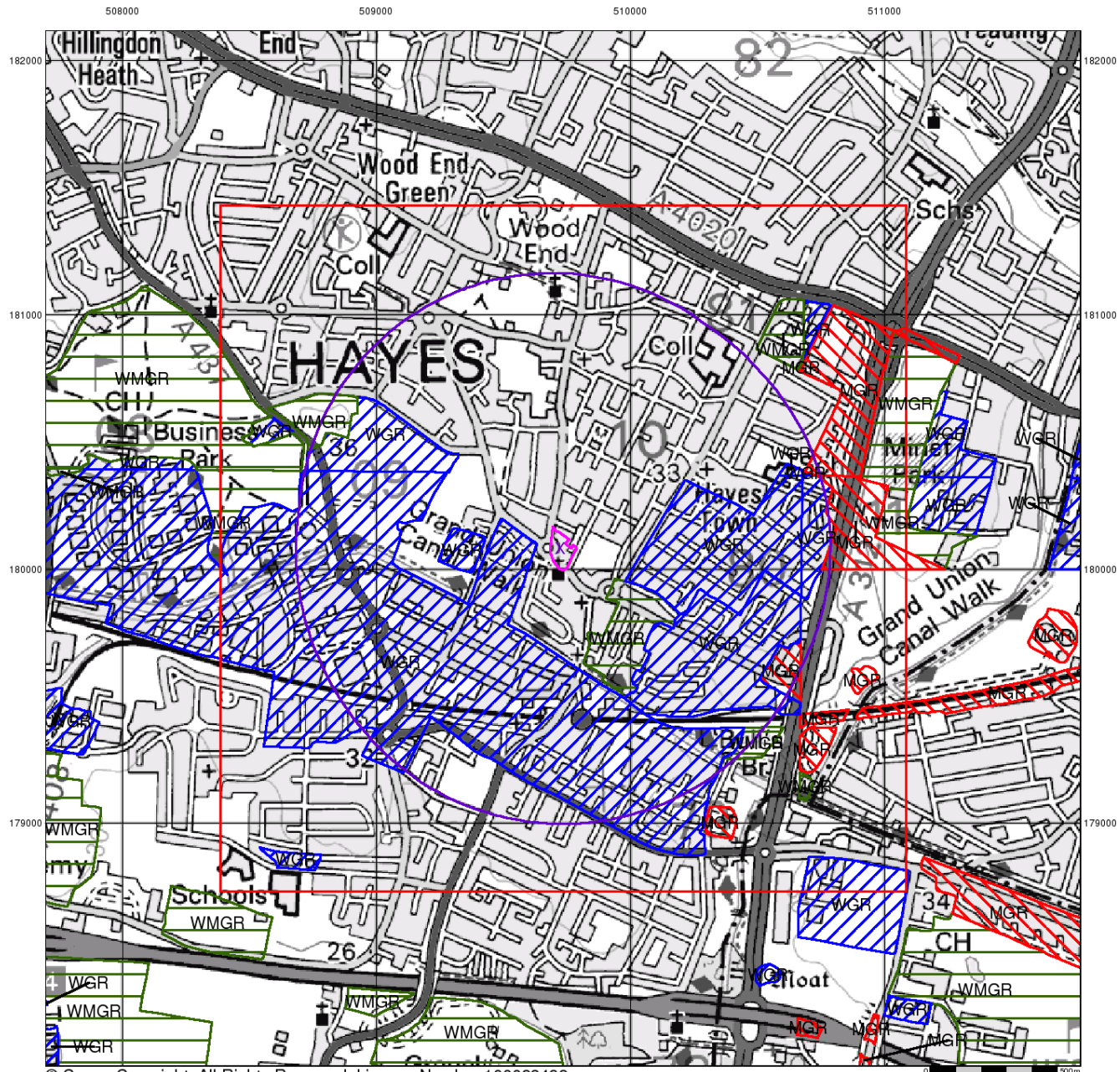
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 Customer Reference: J-M0167.00/MK001
 National Grid Reference: 509730, 180080
 Slice: A
 Site Area (Ha): 1.01
 Search Buffer (m): 1000

Site Details:

Hayes Swimming Pool, Botwell Lane, HAYES, Middlesex, UB3 2BG



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



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Artificial Ground and Landslip

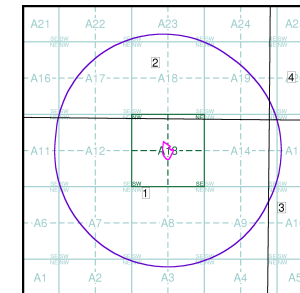
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



Order Details:

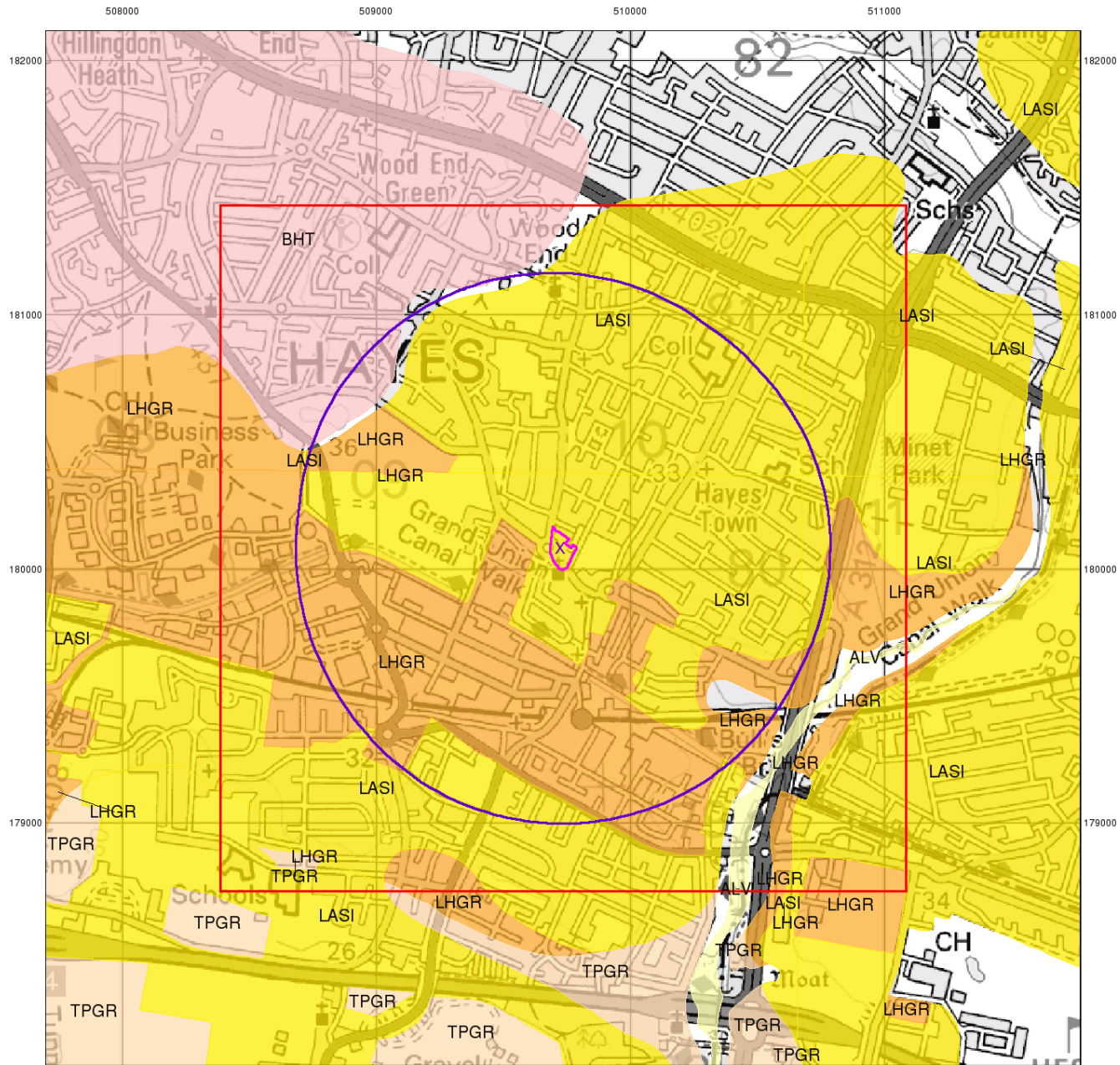
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 Slice: A
 Site Area (Ha): 1.01
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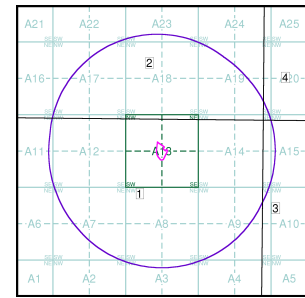
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details:

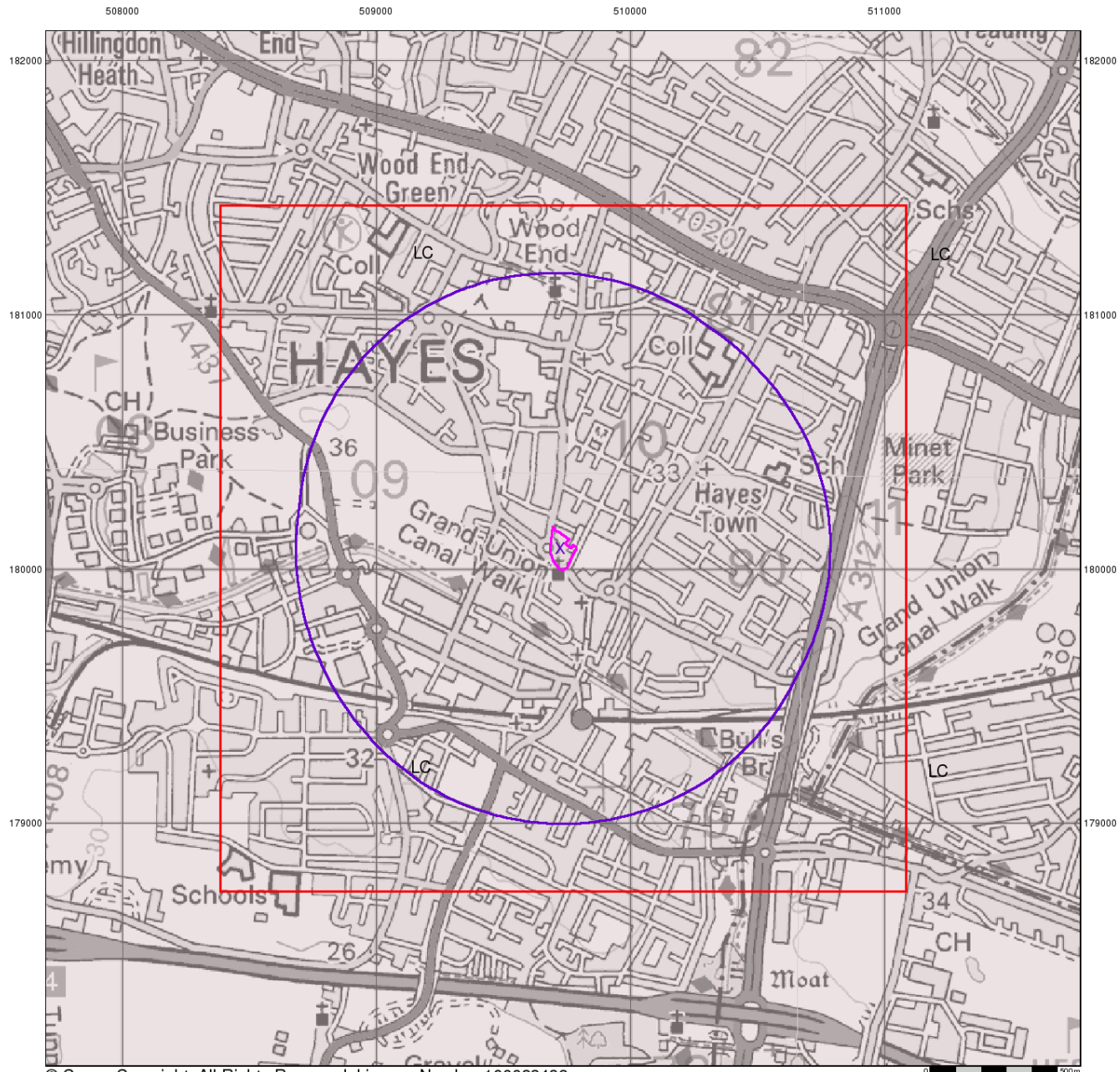
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 Slice: A
 Site Area (Ha): 1.01
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Bedrock and Faults

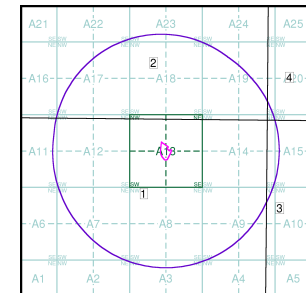
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



Order Details:

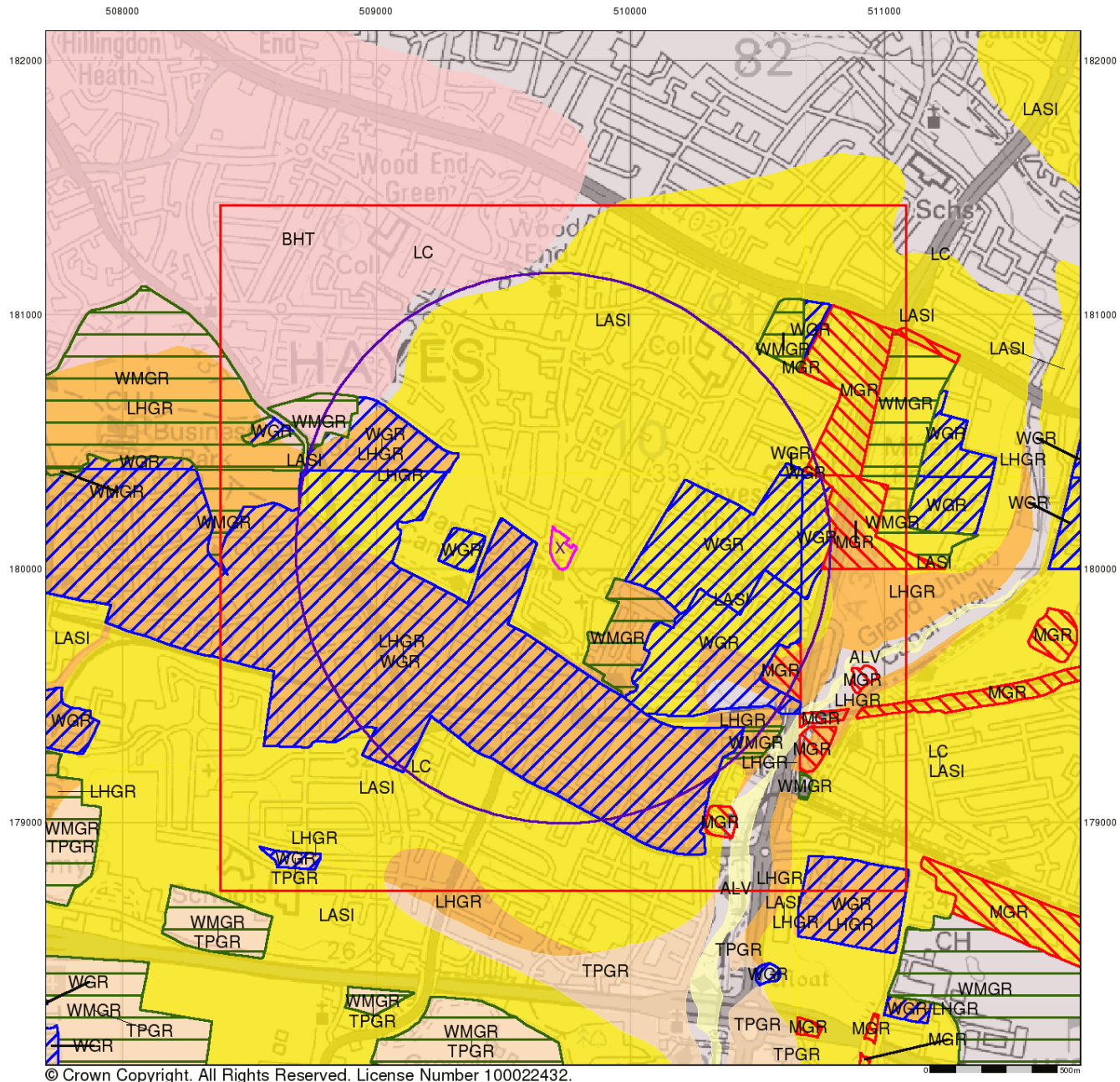
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 Customer Reference: J-M0167.00/MK001
 National Grid Reference: 509730, 180080
 Slice: A
 Site Area (Ha): 1.01
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Site Details:

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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

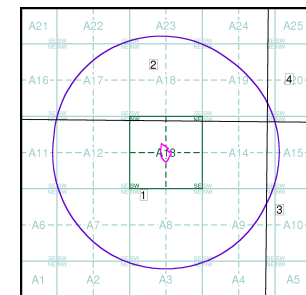
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
 Kingsley Dunham Centre
 Keyworth
 Nottingham
 NG12 5GG
 Telephone: 0115 936 3143
 Fax: 0115 936 3276
 email: enquiries@bgs.ac.uk
 website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details:

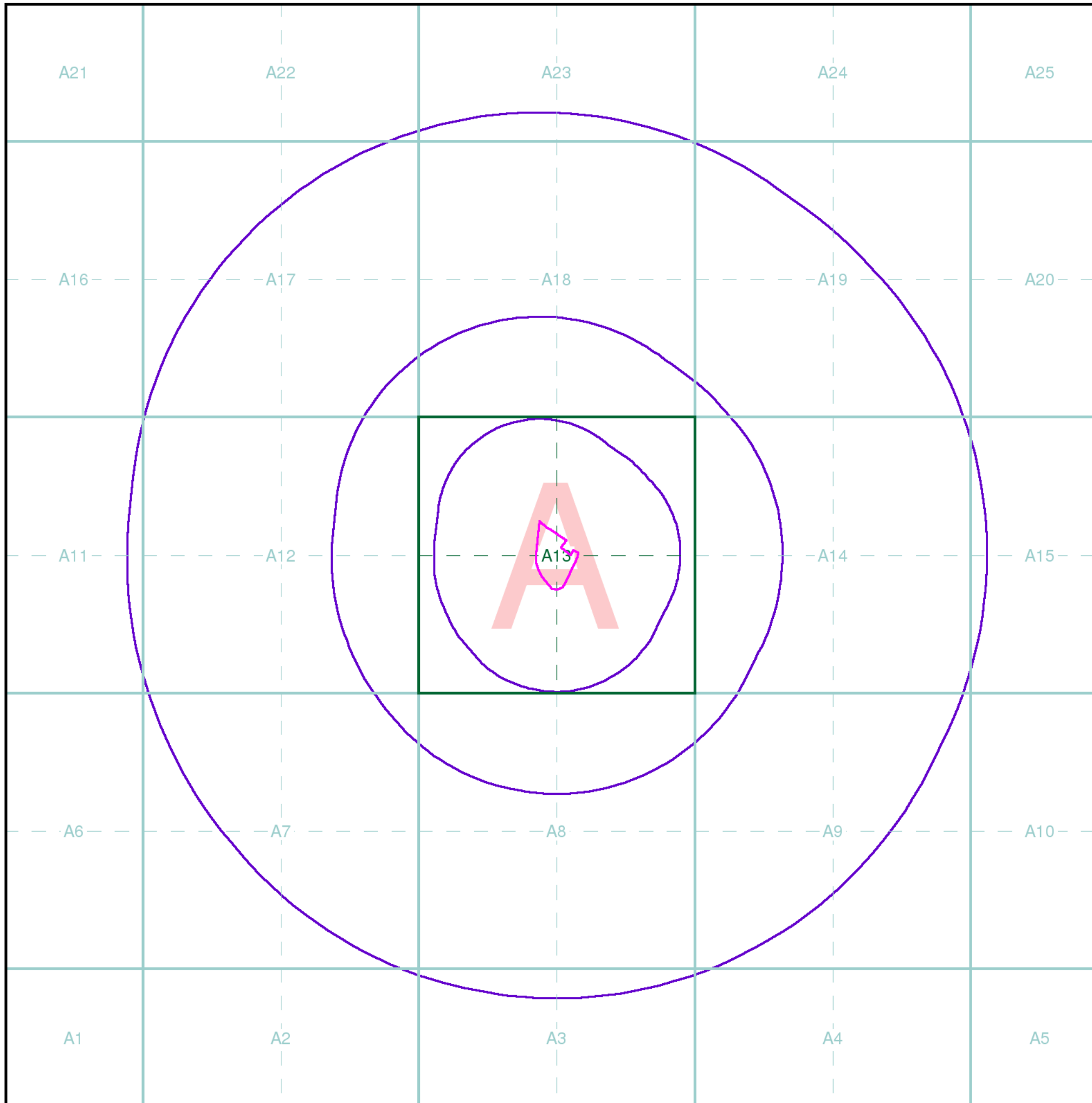
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 National Grid Reference: 509730, 180080
 Slice: A
 Site Area (Ha): 1.01
 Search Buffer (m): 1000

Site Details:

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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 M Grant, Opus International Consultants (UK) Ltd,
Modulus House, Salterns Lane, Fareham, Hampshire,
PO16 0QS

Order Details

Order Number: 46303056_1_1
Customer Ref: J-M0167.00/MK001
National Grid Reference: 509730, 180070
Site Area (Ha): 1.01
Search Buffer (m): 1000

Site Details

Hayes Swimming Pool, Botwell Lane, HAYES, Middlesex, UB3 2BG













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<http://www.landmarkinfo.co.uk/Terms/Show/430>















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
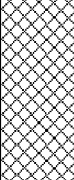



APPENDIX C


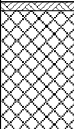


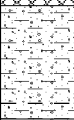
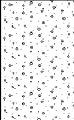
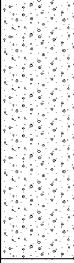
Exploratory Hole Records






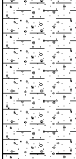



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Job No: J-M0167		Site: Botwell Lane, Hayes						Start Date: 24/05/2013
Drilling Equipment/ Excavation Method: JCB 3CX			Co-ords:		Backfill Date: 24/05/2013		Field Records: ES.FB.TP.03	
			Ground Level (mAOD):		Logged: ES		Chkd: Appr:	
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising brown clayey sand with frequent rootlets.	0.10			D1	0.05			
MADE GROUND comprising brown clayey, sandy gravel. Gravel is fine to coarse, angular to rounded brick, flint and concrete.	0.60			D2	0.30			
MADE GROUND comprising light brown sandy gravel. Gravel is fine to coarse, angular concrete, brick, flint, wood, metal, plastic, slate. Frequent concrete cobbles.				D3	1.00			
Concrete boulder at 2.5m. 0.75m x 0.3m x 0.4m				D4	2.20			
End of Exploratory Hole at 3.20 m	3.20						3.00 	
Remarks:					Sample Type Key		Test Type Key	
1. Groundwater encountered at 3.00m bgl, inflow rate fast. Groundwater level on completion 3.00m bgl.					D - Disturbed Representative		(C) - Cone SPT	
2. Slight sidewall collapse from ground level to the base of the trial pit.					B - Bulk Representative		(S) - Spoon SPT	
					S - Spot Non-Representative		P - Pocket Pentrometer Reading	
					W - Water		PID - PID Reading	
					U - Undisturbed Representative		V - Hand Shear Vane Reading	
					J - Jar Sample			
					Sheet: Sheet 1 of 1			












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Job No: J-M0167		Start Date: 24/05/2013	End Date: 24/05/2013						
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:	Backfill Date: 24/05/2013	Field Records: ES.FB.TP.03						
	Ground Level (mAOD):	Logged: ES	Chkd: Appr:						
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details	
<p>TOPSOIL comprising dark brown clayey sand with frequent rootlets.</p> <p>MADE GROUND comprising light brown and grey sandy gravel. Gravel is fine to coarse, angular concrete, brick, metal and plactis. Occasional cobbles and boulders, becoming more frequent with depth.</p>	0.15			D1	0.10				
<p>Orange brown and grey slightly clayey SAND and GRAVEL. Gravel is fine to coarse angular to rounded flint. (Lynch Hill Gravel)</p>	2.10			D2 D3 D4	1.50 2.20 2.60				
<p>End of Exploratory Hole at 3.00 m</p>	3.00								
Remarks: 1. Trial pit dry during and on completion of excavation. 2. Sidewall collapse.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet: <div style="text-align: center;">Sheet 1 of 1</div>			










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	Site: Botwell Lane, Hayes								
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Drilling Equipment/ Excavation Method: JCB 3CX	Ground Level (mAOD):		Backfill Date: 24/05/2013	Field Records: ES.FB.TP.03					
			Logged: ES	Chkd: 					
		Appr: 							
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details	
TOPSOIL comprising brown clayey sand with frequent rootlets.	0.15			D1	0.10	V= 77 kPa			
MADE GROUND comprising light brown and grey sandy gravel. Gravel is fine to coarse, angular concrete, brick, metal, plastic and wood. Frequent cobbles and boulders of brick and concrete.	0.90			D2	0.80				
Firm consistency, high strength light grey and orange brown mottled slightly gravelly CLAY. Gravel is fine to coarse, angular flint. (Lynch Hill Gravel)	1.30			D3	1.00				
Brown, orange brown and grey sandy GRAVEL. Gravel is fine to coarse, angular to rounded flint. (Lynch Hill Gravel)	2.00			D4	1.60				
End of Exploratory Hole at 2.00 m									
Remarks: 1. Trial pit dry during and on completion of excavation. 2. Trial pit unstable from ground level to 0.90m bgl.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet: Sheet 1 of 1			







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Job No: J-M0167		Start Date: 25/05/2013	End Date: 25/05/2013					
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:	Backfill Date: 25/05/2013	Field Records: ES.FB.TP.03					
	Ground Level (mAOD):	Logged: ES	Chkd: Appr:					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising brown slightly clayey sand with frequent rootlets.	0.20							
MADE GROUND comprising light brown and grey sandy gravel. Gravel is fine to coarse, angular concrete, brick, tile, flint, plastic and metal.								
MADE GROUND comprising light brown and grey clayey sandy gravel with occasional pockets of firm grey clay. Gravel is fine to coarse, angular brick, concrete, tile, flint, plastic and metal.	1.20 1.50 1.60							
Orange brown and brown sandy GRAVEL. Gravel is fine to coarse, angular to rounded flint. (Lynch Hill Gravel)								
----- End of Exploratory Hole at 1.60 m								
Remarks: 1. Trial pit dry during and on completion of excavation. 2. Slight sidewall collapse from ground level to 1.2m bgl.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet: Sheet 1 of 1		


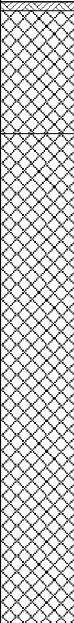

Exploratory Hole ID: TP5		Client: Lidl UK GmbH		 www.opusinternational.co.uk				
Job No: J-M0167		Site: Botwell Lane, Hayes						Start Date: 25/05/2013
Drilling Equipment/ Excavation Method: JCB 3CX			Co-ords:		Backfill Date: 25/05/2013		Field Records: ES.FB.TP.03	
			Ground Level (mAOD):		Logged: ES		Chkd: Appr:	
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising brown sandy clay with frequent rootlets.	0.05			D1	0.30	V= 81 kPa	2.50 	
MADE GROUND comprising brown and orange brown sandy gravel. Gravel is fine to coarse, angular brick, concrete, tile, plastic and metal. Frequent cobbles and boulders of concrete. Occasional pockets of firm consistency grey clay.	0.70			D2	1.00			
Firm consistency, high strength brown and greymottled slightly gravelly, slightly sandy CLAY. Gravel is fine to coarse, angular flint. (Lynch Hill Gravel)	1.30			D3	1.50			
Orange brown sandy GRAVEL. Gravel is fine to coarse angular to rounded flint. (Lynch Hill Gravel)				D4	3.00			
End of Exploratory Hole at 3.30 m	3.30							
Remarks:					Sample Type Key		Test Type Key	
1. Groundwater encountered at 2.50m bgl, fast inflow rate. Groundwater level on completion 3.0m bgl. 2. Sidewall collapsing from ground level to 0.7m bgl. 3. Continuous collapse from 2.5m to base of trial pit, running sand and gravel conditions encountered.					D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		(C) - Cone SPT (S) - Spoon SPT P - Pocket Penetrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
					Sheet: Sheet 1 of 1			




Exploratory Hole ID: TP6	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 www.opusinternational.co.uk						
Job No: J-M0167		Start Date: 25/05/2013	End Date: 25/05/2013					
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:	Backfill Date: 25/05/2013	Field Records: ES.FB.TP.03					
	Ground Level (mAOD):	Logged: ES	Chkd: Appr:					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising brown clayey sand with frequent rootlets.	0.15			D1	0.10			
MADE GROUND comprising light brown and grey sandy gravel. Gravel is fine to coarse angular concrete, brick, metal, flint. Occasional cobbles of concrete.	0.80			D2	0.50			
Firm consistency, high strength grey and orange brown mottled slightly gravelly, slightly sandy CLAY. Gravel is fine to coarse, angular to rounded flint. (Lynch Hill Gravel)	1.70			D3	1.00	V= 80 kPa		
Orange brown and grey mottled sandy GRAVEL. Gravel is fine to coarse, angular to rounded flint. (Lynch Hill Gravel)	1.90					V= 89 kPa		
----- End of Exploratory Hole at 1.90 m								
Remarks: 1. Trial pit dry during and on completion of excavation. 2. Trial pit unstable from ground level to 0.80m bgl.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet: Sheet 1 of 1		




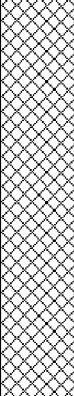



Exploratory Hole ID: TP7	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 OPUS www.opusinternational.co.uk						
Job No: J-M0167		Start Date: 24/05/2013	End Date: 24/05/2013					
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:	Backfill Date: 24/05/2013	Field Records: ES.FB.TP.03					
	Ground Level (mAOD):	Logged: ES	Chkd: Appr:					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising brown clayey sand with frequent rootlets.	0.10							
MADE GROUND comprising light brown and grey sandy gravel. Gravel is fine to coarse angular concrete, brick, flint, plastic and metal. Frequent concrete cobbles and boulders. Becomes clayey with depth.	1.00							
MADE GROUND comprising firm consistency brown sandy very gravelly clay. Gravel is fine to coarse, angular concrete, brick, metal, plastic, tile and pipe. Frequent concrete cobbles and boulders.	1.70							
Firm consistency orange brown and grey mottled slightly sandy, slightly gravelly CLAY. Gravel is fine to coarse, angular flint. (Lynch Hill Gravel)	1.90					V= 67 kPa		
Orange brown and grey slightly clayey sandy GRAVEL. Gravel is fine to coarse, angular to rounded flint. (Lynch Hill Gravel)	2.00							
End of Exploratory Hole at 2.00 m								
Remarks: 1. Groundwater strike at 1.80m bgl, groundwater level on completion at 1.80m bgl. 2. Sidewall collapse.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet:	Sheet 1 of 1	


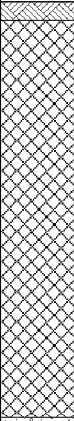

Exploratory Hole ID: TP8	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 OPUS www.opusinternational.co.uk						
Job No: J-M0167		Start Date: 24/05/2013	End Date: 24/05/2013					
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:	Backfill Date: 24/05/2013	Field Records: ES.FB.TP.03					
	Ground Level (mAOD):	Logged: ES	Chkd: Appr:					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising brown slightly clayey sand with frequent rootlets.	0.10			D1	0.05	V= 65 kPa		
MADE GROUND comprising firm consistency, medium strength grey and light brown sandy gravelly clay. Gravel is fine to coarse, angular concrete and brick.	0.70			D2	0.30			
Firm consistency grey, orange brown and brown mottled slightly sandy slightly gravelly CLAY. Gravel is fine to coarse, angular flint. (Lynch Hill Gravel)	1.10			D3	0.80			
Orange brown and brown sandy GRAVEL. Gravel is fine to coarse, angular flint. (Lynch Hill Gravel)	1.30							
End of Exploratory Hole at 1.30 m								
Remarks: 1. Ceramic pipe broken at 0.50m bgl, contained water. Sealed off using clay. 2. No groundwater encountered during and on completion of excavation. 3. Trial pit unstable from ground level to 0.7m bgl.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet:	Sheet 1 of 1	




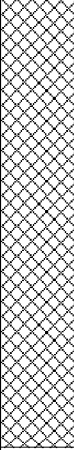

Exploratory Hole ID: TP9	Client: Lidl UK GmbH	 www.opusinternational.co.uk									
	Site: Botwell Lane, Hayes										
Job No: J-M0167		Start Date: 24/05/2013	End Date: 24/05/2013								
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:	Backfill Date: 24/05/2013	Field Records: ES.FB.TP.03								
	Ground Level (mAOD):	Logged: ES	Chkd: Appr:								
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details			
TOPSOIL comprising brown clayey sand with frequent rootlets.	0.15			D1	0.30	V= 76 kPa					
MADE GROUND comprising firm consistency brown sandy, very gravelly clay. Gravel is fine to coarse angular brick and concrete. Roots to 0.50m bgl. Asphalt layer at 0.65m bgl.											
Firm consistency, high strength orange brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse, angular flint. (Lynch Hill Gravel)	0.90										
Orange brown clayey sandy GRAVEL. Gravel is fine to coarse, angular to rounded flint. (Lynch Hill Gravel)	1.30 1.40										
End of Exploratory Hole at 1.40 m											
Remarks:						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading			
<ol style="list-style-type: none"> 1. Trial pit dry druing and on completion of excavation. 2. Trial pit stable during and on completion of excavation. 3. 6 inch yellow plastic gas pipe encountered at 1.2m bgl. No damage. Not on service plans provided. 						Sheet:			Sheet 1 of 1		





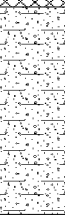
Exploratory Hole ID: TP10	Client: Lidl UK GmbH		 www.opusinternational.co.uk					
	Site: Botwell Lane, Hayes							
Job No: J-M0167	Start Date: 24/05/2013		End Date: 24/05/2013					
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:		Backfill Date: 24/05/2013	Field Records: ES.FB.TP.03				
	Ground Level (mAOD):		Logged: ES	Chkd: 	Appr: 			
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising brown clayey sand with frequent rootlets.	0.05			D1	0.30			
MADE GROUND comprising brown clayey, slightly gravelly sand. Gravel is fine to coarse, angular brick and concrete.	0.70			D2	2.30			
MADE GROUND comprising light grey and brown sandy gravel. Gravel is fine to coarse, angular concrete, brick, metal and plastic. Frequent cobbles and boulders of concrete.								
----- End of Exploratory Hole at 3.30 m	3.30							
Remarks:					Sample Type Key		Test Type Key	
<ol style="list-style-type: none"> Groundwater encountered at 2.80m bgl, fast inflow rate. Groundwater level on completion 2.80m bgl. Trial pit collapsing from ground level to base of pit. Trial pit abandoned at 3.30m bgl due to sidewall collapse preventing further progress. 					D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		(C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
					Sheet: Sheet 1 of 1			








Exploratory Hole ID: TP11	Client: Lidl UK GmbH		 www.opusinternational.co.uk					
	Site: Botwell Lane, Hayes							
Job No: J-M0167	Start Date: 24/05/2013		End Date: 24/05/2013					
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:		Backfill Date: 24/05/2013	Field Records: ES.FB.TP.03				
	Ground Level (mAOD):		Logged: ES	Chkd: 	Appr: 			
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
MADE GROUND comprising light brown, orange brown, grey and brown clayey sandy gravel with frequent rootlets to 0.15m bgl. Gravel is fine to coarse, angular concrete, brick and metal. Frequent concrete cobbles and boulders.	1.00							
MADE GROUND comprising light grey and brown slightly sandy gravel. Gravel is fine to coarse, angular concrete, metal, bricks and wood. Occasional concrete cobbles.								
----- End of Exploratory Hole at 2.50 m	2.50							
Remarks: 1. Trial pit dry during and on completion of excavation. 2. Trial pit collapsing from ground level to the base of the pit.					Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
					Sheet: Sheet 1 of 1			








Exploratory Hole ID: TP12	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 OPUS www.opusinternational.co.uk						
Job No: J-M0167		Start Date: 24/05/2013	End Date: 24/05/2013					
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:	Backfill Date: 24/05/2013	Field Records: ES.FB.TP.03					
	Ground Level (mAOD):	Logged: ES	Chkd: Appr:					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising brown clayey sand with frequent rootlets.	0.15			D1	0.10			
MADE GROUND comprising light grey and brown sandy gravel. Gravel is fine to coarse angular concrete, brick, wood and metal. Occasional concrete cobbles.				D2	1.20			
Orange brown sandy GRAVEL. Gravel is fine to coarse, angular to rounded flint. (Lynch Hill Gravel)	2.40 2.50							
End of Exploratory Hole at 2.50 m								
Remarks: 1. Groundwater strike at 2.30m bgl, groundwater level on completion 2.30m bgl. 2. Continuous sidewall collapse.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet:	Sheet 1 of 1	










Exploratory Hole ID: TP13	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 OPUS www.opusinternational.co.uk							
Job No: J-M0167		Start Date: 24/05/2013	End Date: 24/05/2013						
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:	Backfill Date: 24/05/2013	Field Records: ES.FB.TP.03						
	Ground Level (mAOD):	Logged: ES	Chkd: Appr:						
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details	
<p>TOPSOIL comprising brown clayey sand with frequent rootlets.</p> <p>MADE GROUND comprising light brown and grey sandy gravel. Gravel is fine to coarse angular concrete, brick, metal, wood and flint. Occasional concrete cobbles and boulders.</p>	0.10								
<p>Orange brown and brown sandy GRAVEL. Gravel is fine to coarse, angular to rounded flint. (Lynch Hill Gravel)</p> <p>----- End of Exploratory Hole at 2.30 m</p>	2.20 2.30								
Remarks: 1. Groundwater struck at 1.50m bgl, groundwater level on completion 2.10m bgl. 2. Continuous sidewall collapse.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet: Sheet 1 of 1			







Exploratory Hole ID: TP14	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 www.opusinternational.co.uk							
Job No: J-M0167		Start Date: 24/05/2013	End Date: 24/05/2013						
Drilling Equipment/ Excavation Method: JCB 3CX	Co-ords:	Backfill Date: 24/05/2013	Field Records: ES.FB.TP.03						
	Ground Level (mAOD):	Logged: ES	Chkd: Appr:						
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details	
<p>TOPSOIL comprising brown clayey sand with frequent rootlets.</p> <p>MADE GROUND comprising light brown and grey sandy gravel. Gravel is fine to coarse angular concrete, brick, metal, wood and plastic. Occasional concrete cobbles and boulders.</p>	0.15			D1	0.10				
<p>End of Exploratory Hole at 2.60 m</p>	2.60			D2	1.50				
Remarks: 1. Groundwater strike at 2.30m bgl, groundwater level on completion 2.30m bgl. 2. Sidewall collapse.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet: Sheet 1 of 1			







Exploratory Hole ID: WS1	Client: Lidl UK GmbH		 www.opusinternational.co.uk						
	Site: Botwell Lane, Hayes								
Job No: J-M0167	Co-ords:		Start Date: 23/05/2013	End Date: 23/05/2013					
Drilling Equipment/ Excavation Method: Tracked window sampling rig.	Ground Level (mAOD):		Backfill Date: 23/05/2013	Field Records: LJP.FB					
			Logged: LJP	Chkd: 					
			Aprr: 						
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details	
TOPSOIL comprising dark brown, clayey, sandy, slightly gravelly silt with frequent roots and rootlets. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint.	0.60 1.30 2.40			ES1	0.80-1.00	N=22(C)			
MADE GROUND comprising sandy subangular to subrounded, fine to coarse concrete gravel and cobble sized fragments of concrete. Sand is fine to coarse grained.									
Medium dense becoming very dense dark orange slightly clayey, fine to coarse grained SAND with occasional subangular, fine to coarse flint gravel. (Lynch Hill Gravel)									
End of Exploratory Hole at 2.40 m									
Remarks:						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
1. Groundwater not encountered. 2. Hole terminated at 2.4m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.						Sheet: <p style="text-align: center;">Sheet 1 of 1</p>			




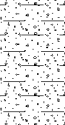
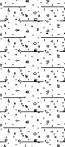
Exploratory Hole ID: WS2	Client: Lidl UK GmbH		 www.opusinternational.co.uk						
	Site: Botwell Lane, Hayes								
Job No: J-M0167	Co-ords:		Start Date: 23/05/2013	End Date: 23/05/2013					
Drilling Equipment/ Excavation Method: Tracked window sampling rig.	Ground Level (mAOD):		Backfill Date: 23/05/2013	Field Records: LJP.FB					
			Logged: LJP	Chkd: 					
			Appr: 						
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details	
TOPSOIL comprising dark brown, clayey, sandy, slightly gravelly silt with frequent roots and rootlets. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint.	0.18			ES1	0.40-0.50	N=17(C)			
MADE GROUND comprising light brown grey, slightly clayey, gravelly, fine to coarse sand with boulders of concrete conglomerate. Gravel is subangular to subrounded, fine to coarse of concrete, red brick, flint and chalk.	1.00								
Firm to stiff consistency, light blue and orange brown, sandy CLAY. Sand is fine to coarse grained. (Lynch Hill Gravel)	1.42			D2	1.60-1.80	N=46(C)			
Soft to firm consistency, light orange brown, black and grey, very sandy, gravelly CLAY. Sand is fine to coarse grained. Gravel is subangular, fine to coarse of flint and chalk. (Lynch Hill Gravel)	2.36								
End of Exploratory Hole at 2.36 m									
Remarks:						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
1. Groundwater not encountered. 2. Hole terminated at 2.36m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.						Sheet: <p style="text-align: center;">Sheet 1 of 1</p>			








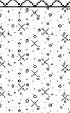

Exploratory Hole ID: WS3	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 www.opusinternational.co.uk						
Job No: J-M0167		Start Date: 23/05/2013	End Date: 23/05/2013					
Drilling Equipment/ Excavation Method: Tracked window sampling rig.		Co-ords:	Backfill Date: 23/05/2013					
		Ground Level (mAOD):	Field Records: LJP.FB					
		Logged: LJP	Chkd: Appr: 					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising dark brown, clayey, sandy, slightly gravelly silt with frequent roots and rootlets. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint.	0.15			ES1	0.30-0.40			
MADE GROUND comprising light brown grey, slightly clayey, gravelly, fine to coarse sand with boulders of concrete conglomerate. Gravel is subangular to subrounded, fine to coarse of concrete, red brick, flint and chalk.	1.00					N=19(C)		
Soft to firm consistency, yellow brown grey, sandy CLAY. Sand is fine to coarse grained. (Lynch Hill Gravel)	1.20							
Medium dense becoming very dense orange brown slightly clayey, very gravelly, fine coarse grained SAND. Gravel is subangular to subrounded, fine to coarse flint. (Lynch Hill Gravel)	2.18					N=68(C)		
End of Exploratory Hole at 2.18 m								
Remarks: 1. Groundwater not encountered. 2. Hole terminated at 2.18m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet: Sheet 1 of 1		














Exploratory Hole ID: WS4		Client: Lidl UK GmbH			 www.opusinternational.co.uk				
Job No: J-M0167		Site: Botwell Lane, Hayes							Start Date: 23/05/2013
Drilling Equipment/ Excavation Method: Tracked window sampling rig.				Co-ords:		Backfill Date: 23/05/2013		Field Records: LJP.FB	
				Ground Level (mAOD):		Logged: LJP	Chkd:	Appr:	
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details	
TOPSOIL comprising dark brown, clayey, sandy, slightly gravelly silt with frequent roots and rootlets. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint.	0.15			ES1	0.30-0.40				
MADE GROUND comprising light brown grey, slightly clayey, gravelly, fine to coarse sand with boulders of concrete conglomerate. Gravel is subangular to subrounded, fine to coarse of concrete, red brick, flint and chalk.	0.80			ES2	1.10-1.20	N=18(C)			
Soft to firm consistency orange brown and black grey, slightly sandy CLAY with rare subangular to subrounded, fine to coarse flint gravel. (Lynch Hill Gravel)	1.30								
Medium dense becoming very dense orange brown slightly clayey, very gravelly, fine to coarse grained SAND. Gravel is subangular to subrounded, fine to coarse flint. (Lynch Hill Gravel)	2.22					N=68(C)			
End of Exploratory Hole at 2.22 m									
Remarks:						Sample Type Key		Test Type Key	
1. Groundwater not encountered.						D - Disturbed Representative		(C) - Cone SPT	
2. Hole terminated at 2.22m bgl due to refusal of equipment.						B - Bulk Representative		(S) - Spoon SPT	
3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.						S - Spot Non-Representative		P - Pocket Pentrometer Reading	
						W - Water		PID - PID Reading	
						U - Undisturbed Representative		V - Hand Shear Vane Reading	
						J - Jar Sample			
						Sheet: Sheet 1 of 1			












Exploratory Hole ID: WS5	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 www.opusinternational.co.uk						
Job No: J-M0167		Start Date: 23/05/2013	End Date: 23/05/2013					
Drilling Equipment/ Excavation Method: Tracked window sampling rig.	Co-ords:	Backfill Date: 23/05/2013	Field Records: LJP.FB					
	Ground Level (mAOD):	Logged: LJP	Chkd: Appr: 					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising light brown, clayey, sandy, slightly gravelly silt with frequent roots and rootlets. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint.	0.05			ES1	0.10-0.40			
MADE GROUND comprising light grey brown, slightly sandy, gravelly silt with occasional roots. Sand is fine to coarse grained. Gravel is subangular, fine to coarse of clinker.	0.60					N=25(C)		
Soft to firm consistency, light brown silty, sandy CLAY with occasional subangular to subrounded, flint gravel. Sand is fine to coarse grained. (Lynch Hill Gravel)	1.10			ES2	1.50-1.70	N=68(C)		
Medium dense becoming very dense buff and orange brown, sandy, angular to subrounded, fine to coarse flint GRAVEL with pockets of black sand. Sand is fine to coarse grained. (Lynch Hill Gravel)	1.90							
End of Exploratory Hole at 1.90 m								
Remarks: 1. Groundwater not encountered. 2. Hole terminated at 1.9m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet: Sheet 1 of 1		














Exploratory Hole ID: WS6	Client: Lidl UK GmbH		 www.opusinternational.co.uk								
	Site: Botwell Lane, Hayes										
Job No: J-M0167	Start Date: 23/05/2013		End Date: 23/05/2013								
Drilling Equipment/ Excavation Method: Tracked window sampling rig.	Co-ords:		Backfill Date: 23/05/2013								
	Ground Level (mAOD):		Field Records: LJP.FB								
		Logged: LJP		Chkd:							
		Aprr:									
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details			
MADE GROUND comprising light grey brown, sandy, silt with frequent roots and rootlets and occasional gravel. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint, rare brick and clinker.	0.20			ES1	0.20-0.50	N=22(C)					
MADE GROUND comprising soft to firm consistency, orange brown and sandy, silty clay with occasional subangular to subrounded, fine to coarse gravel of flint, red brick and rare clinker. Sand is fine to coarse grained.	0.80										
Soft to firm consistency, light yellow brown mottled orange, slightly silty, slightly sandy CLAY. Sand is fine to coarse grained. (Lynch Hill Gravel)	1.40										
Very dense buff and orange brown, sandy angular to subrounded, fine to coarse flint GRAVEL with pockets of black fine to coarse sand. (Lynch Hill Gravel)	2.31										
End of Exploratory Hole at 2.31 m											
Remarks:						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading			
<ol style="list-style-type: none"> Groundwater not encountered. Hole terminated at 2.31m bgl due to refusal of equipment. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3. 						Sheet:			Sheet 1 of 1		








Exploratory Hole ID: WS7	Client: Lidl UK GmbH		 www.opusinternational.co.uk						
	Site: Botwell Lane, Hayes								
Job No: J-M0167	Co-ords:		Start Date: 23/05/2013	End Date: 23/05/2013					
Drilling Equipment/ Excavation Method: Tracked window sampling rig.	Ground Level (mAOD):		Backfill Date: 23/05/2013	Field Records: LJP.FB					
			Logged: LJP	Chkd: 					
			Aprr: 						
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details	
TOPSOIL comprising dark brown, slightly clayey, sandy silt with frequent roots and rootlets and occasional gravel. Sand is fine to coarse grained. Gravel is rounded, fine to medium of flint and chalk.	0.10			ES1	0.10-0.40				
MADE GROUND comprising buff sandy, subangular to subrounded, fine to coarse concrete and red brick gravel.	0.90					N=31(C)			
Dense becoming very dense red orange and light orange brown, grey, slightly clayey, gravelly, fine to coarse grained SAND. Gravel is subangular to subrounded, fine to coarse of flint. (Lynch Hill Gravel)				ES2	1.60-1.80	N=68(C)			
----- End of Exploratory Hole at 2.42 m	2.42								
Remarks:						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
1. Groundwater not encountered. 2. Hole terminated at 2420m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.						Sheet: <p style="text-align: center;">Sheet 1 of 1</p>			












Exploratory Hole ID: WS8	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 OPUS www.opusinternational.co.uk						
Job No: J-M0167		Start Date: 23/05/2013	End Date: 23/05/2013					
Drilling Equipment/ Excavation Method: Tracked window sampling rig.	Co-ords:	Backfill Date: 23/05/2013	Field Records: LJP.FB					
	Ground Level (mAOD):	Logged: LJP	Chkd: Appr: 					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising dark brown, clayey, sandy, slightly gravelly silt with frequent roots and rootlets. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint.	0.05 0.40							
MADE GROUND comprising dark brown firm to stiff consistency, very gravelly, sandy clay. Sand is fine to coarse grained. Gravel is subangular to rounded, fine to coarse of brick, concrete and flint.						N=25(C)		
MADE GROUND comprising concrete and brick backfill including pockets of clinker.						N=22(C) N=17(C)		
Very dense buff yellow, very sandy, slightly silty, angular to subangular, fine to coarse flint GRAVEL. Sand is fine to coarse grained. (Lynch Hill Gravel)	3.80					N=50(C)		
----- End of Exploratory Hole at 4.40 m	4.40							
Remarks: 1. Groundwater not encountered. 2. Hole terminated at 4.4m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet:	Sheet 1 of 1	










Exploratory Hole ID: WS9	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 www.opusinternational.co.uk						
Job No: J-M0167		Start Date: 24/05/2013	End Date: 24/05/2013					
Drilling Equipment/ Excavation Method: Tracked window sampling rig.	Co-ords:	Backfill Date: 24/05/2013	Field Records: LJP.FB					
	Ground Level (mAOD):	Logged: LJP	Chkd: Appr: 					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
MADE GROUND comprising black asphalt and black asphalt gravel.	0.20							
MADE GROUND comprising concrete gravel.	0.40							
Firm to stiff consistency, dark brown orange, sandy, very gravelly CLAY. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint. (Lynch Hill Gravel)	0.50			ES1 ES2	0.40-0.50 0.50-0.90	N=48(C)		
Stiff to firm consistency, medium brown, sandy CLAY with rare subangular to subrounded, fine to coarse flint gravel. Sand is fine to coarse grained. (Lynch Hill Gravel)	1.10							
Very dense dark grey and yellow brown, silty, fine to coarse grained SAND. (Lynch Hill Gravel)	1.40							
Very dense dark orange brown, gravelly, fine to coarse grained SAND. Gravel is subangular to subrounded, fine to coarse flint. (Lynch Hill Gravel)	2.40					N=68(C)		
End of Exploratory Hole at 2.40 m								
Remarks: 1. Groundwater not encountered. 2. Hole terminated at 2.4m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Penetrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet: Sheet 1 of 1		


Exploratory Hole ID: WS10		Client: Lidl UK GmbH		 www.opusinternational.co.uk				
Job No: J-M0167		Site: Botwell Lane, Hayes						Start Date: 24/05/2013
Drilling Equipment/ Excavation Method: Tracked window sampling rig.			Co-ords:		Backfill Date: 24/05/2013		Field Records: LJP.FB	
			Ground Level (mAOD):		Logged: LJP		Chkd: Appr:	
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
MADE GROUND comprising black asphalt and black asphalt gravel.	0.10							
MADE GROUND comprising concrete gravel.	0.40							
Firm to stiff consistency, dark brown orange, sandy, very gravelly CLAY. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint. (Lynch Hill Gravel)	0.60			ES1	0.50-0.60			
				ES2	0.80-1.00	N=5(C)		
Soft to firm consistency, silty, sandy CLAY with red orange veining throughout and partings of black organic matter. Sand is fine to coarse grained. (Lynch Hill Gravel)	1.10							
Firm to stiff consistency, orange brown and blue grey, sandy, silty CLAY with layers of soft to firm grey brown, silty, sandy CLAY with red orange veining and black organic matter. Sand is fine to coarse grained. (Lynch Hill Gravel)	2.10					N=23(C)		
Medium dense buff and light brown, silty, slightly gravelly, fine to coarse grained SAND. Gravel is subangular to subrounded, fine to coarse flint. (Lynch Hill Gravel)	2.80							
Soft to firm consistency, red orange brown, sandy CLAY. Sand is fine to coarse grained. (Lynch Hill Gravel)	3.00					N=13(C)		
Medium dense buff and light brown, silty, slightly gravelly, fine to coarse SAND. Gravel is subangular to subrounded, fine to coarse flint. (Lynch Hill Gravel)	3.50							
Soft consistency, light yellow orange brown, very sandy CLAY. Sand is fine to coarse grained. (Lynch Hill Gravel) Arising becoming light yellow grey from 3.8m bgl.	4.44					N=46(C)		
End of Exploratory Hole at 4.44 m								
Remarks: 1. Groundwater not encountered. 2. Hole terminated at 4.44m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.					Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Penetrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
					Sheet: Sheet 1 of 1			









Exploratory Hole ID: WS11		Client: Lidl UK GmbH		 www.opusinternational.co.uk					
Job No: J-M0167		Site: Botwell Lane, Hayes						Start Date: 24/05/2013	
Drilling Equipment/ Excavation Method: Tracked window sampling rig.				Co-ords:		Backfill Date: 24/05/2013		Field Records: LJP.FB	
Ground Level (mAOD):				Logged: LJP		Chkd:		Appr:	
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details	
MADE GROUND comprising black asphalt and black asphalt gravel.	0.10			ES1	0.50-0.60	N=8(C)			
MADE GROUND comprising buff sandy, angular to subangular, fine to coarse concrete gravel. Sand is fine to coarse grained.	0.35								
MADE GROUND comprising dark brown orange sandy, silty, very clayey subangular to subrounded, fine to coarse gravel of flint and rare red brick, clinker and cobble sized fragments of flint. Sand is fine to coarse grained.	0.75								
Soft to firm consistency, yellow brown, silty, sandy CLAY. Sand is fine to coarse grained. (Lynch Hill Gravel)	1.00								
Loose dark grey brown, sandy, subangular to subrounded, fine to coarse GRAVEL with pockets of firm to stiff, sandy clay. (Lynch Hill Gravel)	1.40								
Firm to stiff consistency, orange brown mottled light grey, sandy CLAY with black organic partings. (Lynch Hill Gravel)	2.50								
Orange brown, clayey, gravelly, fine to coarse grained SAND with cobble sized flint fragments. Gravel is subangular to subrounded, fine to coarse flint. (Lynch Hill Gravel)	2.90 3.00 3.05								
Firm to stiff dark orange brown, sandy CLAY. Sand is fine to coarse grained. (London Clay Formation)									
Very soft consistency brown yellow sandy CLAY. Sand is fine to coarse grained.									
Firm to stiff consistency brown yellow sandy CLAY. Sand is fine to coarse grained. (London Clay Formation)	3.95								
Firm to stiff consistency dark purple brown slightly sandy CLAY. Sand is fine to coarse grained. (London Clay Formation)									
End of Exploratory Hole at 5.45 m	5.45								
Remarks: 1. Groundwater not encountered. 2. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.					Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading		
					Sheet: Sheet 1 of 1				

Exploratory Hole ID: WS12		Client: Lidl UK GmbH		 www.opusinternational.co.uk				
Job No: J-M0167		Site: Botwell Lane, Hayes						Start Date: 24/05/2013
Drilling Equipment/ Excavation Method: Tracked window sampling rig.			Co-ords:		Backfill Date: 24/05/2013		Field Records: LJP.FB	
			Ground Level (mAOD):		Logged: LJP		Chkd: Appr:	
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising dark brown, clayey, sandy, slightly gravelly silt with frequent roots and rootlets. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint.	0.15			ES1	0.40-0.50	N=13(C)		
MADE GROUND comprising dark brown and orange, silty, sandy, clayey, subangular to subrounded, fine to coarse gravel of flint, occasional clinker and rare red brick. Sand is fine to coarse grained.	0.70							
Soft to firm consistency, yellow brown mottled orange, silty, sandy CLAY with pockets and partings of black organic matter and rare subangular to rounded, fine to coarse flint gravel. Sand is fine to coarse grained. (Lynch Hill Gravel)	1.20							
Firm to stiff light grey blue mottled orange brown, sandy CLAY with rare subangular to subrounded, fine to coarse flint gravel. Sand is fine to coarse grained. (Lynch Hill Gravel)	1.70							
Firm to stiff consistency, light grey blue mottled orange brown, sandy, very gravelly CLAY. Gravel is subangular to subrounded, fine to coarse of flint. (Lynch Hill Gravel)	2.39							
End of Exploratory Hole at 2.39 m								
Remarks: 1. Groundwater not encountered. 2. Hole terminated at 2.39m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.					Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
					Sheet: Sheet 1 of 1			

Exploratory Hole ID: WS13	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 OPUS www.opusinternational.co.uk						
Job No: J-M0167		Start Date: 24/05/2013	End Date: 24/05/2013					
Drilling Equipment/ Excavation Method: Tracked window sampling rig.	Co-ords:	Backfill Date: 24/05/2013	Field Records: LJP.FB					
	Ground Level (mAOD):	Logged: LJP	Chkd: Appr:					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising dark brown, clayey, sandy, slightly gravelly silt with frequent roots and rootlets. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint.	0.15			ES1	0.40-0.50			
MADE GROUND comprising sandy, gravelly concrete fill.	0.45							
MADE GROUND comprising dark grey black asphalt gravel.	1.20					N=34(C)		
Firm to stiff consistency dark orange brown mottled pale yellow brown silty, sandy CLAY with occasional subangular to subrounded, fine to coarse flint gravel. Sand is fine to coarse grained. (Lynch Hill Gravel)	2.30					N=7(C)		
Very dense orange brown silty, gravelly fine to coarse grained SAND. Gravel is angular to subrounded, fine to coarse flint. (Lynch Hill Gravel)	3.42					N=58(C)		
----- End of Exploratory Hole at 3.42 m	3.42							
Remarks: 1. Groundwater not encountered. 2. Hole terminated at 3.42m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet:	Sheet 1 of 1	

Exploratory Hole ID: WS14		Client: Lidl UK GmbH		 www.opusinternational.co.uk				
Job No: J-M0167		Site: Botwell Lane, Hayes						Start Date: 24/05/2013
Drilling Equipment/ Excavation Method: Tracked window sampling rig.			Co-ords:		Backfill Date: 24/05/2013		Field Records: LJP.FB	
			Ground Level (mAOD):		Logged: LJP		Chkd: Appr:	
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
MADE GROUND comprising black asphalt and black asphalt gravel.	0.10							
Light yellow buff, sandy, subangular to subrounded, fine to coarse flint GRAVEL with occasional flint cobbles. (Lynch Hill Gravel)	0.40							
Orange brown, clayey, sandy flint GRAVEL and COBBLES. (Lynch Hill Gravel)	0.70			ES1	0.70-0.80			
Firm to stiff consistency, blue grey and orange brown sandy, slightly gravelly CLAY. (Lynch Hill Gravel)	1.00			ES2	1.00-1.10	N=5(C)		
Black staining and possible slight weathered hydrocarbon odour.	1.60			D3	1.50-1.90			
Firm to stiff consistency light blue grey sandy, gravelly CLAY. (Lynch Hill Gravel)	1.90					N=68(C)		
Soft consistency orange brown, slightly sandy, very gravelly CLAY. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint. (Lynch Hill Gravel)	2.24							
End of Exploratory Hole at 2.24 m								
Remarks:					Sample Type Key		Test Type Key	
1. Groundwater not encountered.					D - Disturbed Representative		(C) - Cone SPT	
2. Hole terminated at 2.24m bgl due to refusal of equipment.					B - Bulk Representative		(S) - Spoon SPT	
3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.					S - Spot Non-Representative		P - Pocket Pentrometer Reading	
					W - Water		PID - PID Reading	
					U - Undisturbed Representative		V - Hand Shear Vane Reading	
					J - Jar Sample			
					Sheet: Sheet 1 of 1			

Exploratory Hole ID: WS15	Client: Lidl UK GmbH		 www.opusinternational.co.uk					
	Site: Botwell Lane, Hayes							
Job No: J-M0167	Start Date: 24/05/2013		End Date: 24/05/2013					
Drilling Equipment/ Excavation Method: Tracked window sampling rig.		Co-ords:		Backfill Date: 24/05/2013	Field Records: LJP.FB			
Ground Level (mAOD):		Logged: LJP		Chkd:	Appr:			
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising dark brown, clayey, sandy, slightly gravelly silt with frequent roots and rootlets. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint.	0.10							
MADE GROUND comprising dark brown silty, sandy, clayey, subangular to subrounded, fine to coarse flint gravel. Sand is fine to coarse grained.	0.40			ES1	0.40-0.60			
MADE GROUND comprising firm to stiff consistency dark brown sandy, silty, gravelly clay. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint and brick and rare piece of rusted metal.	1.00					N=30(C)		
Dense becoming very dense orange brown black, sandy, subangular to subrounded, fine to coarse flint GRAVEL. Sand is fine to coarse grained. (Lynch Hill Gravel)	2.35					N=68(C)		
----- End of Exploratory Hole at 2.35 m								
Remarks: 1. Groundwater not encountered. 2. Hole terminated at 2.35m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.					Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample		Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
					Sheet: Sheet 1 of 1			

Exploratory Hole ID: WS16	Client: Lidl UK GmbH Site: Botwell Lane, Hayes	 OPUS www.opusinternational.co.uk						
Job No: J-M0167		Start Date: 24/05/2013	End Date: 24/05/2013					
Drilling Equipment/ Excavation Method: Tracked window sampling rig.		Co-ords:	Backfill Date: 24/05/2013					
		Ground Level (mAOD):	Field Records: LJP.FB					
		Logged: LJP	Chkd: Appr: 					
Strata Description	Depth (m)	Level (m)	Legend	Sample Type	Sample Depth (m)	Tests	Groundwater Records	Backfill Details
TOPSOIL comprising dark brown, clayey, sandy, slightly gravelly silt with frequent roots and rootlets. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint.	0.20			ES1	0.30-0.40	N=34(C)		
MADE GROUND comprising friable brown and black sandy, silty, gravelly clay. Sand is fine to coarse grained. Gravel is subangular to subrounded, fine to coarse of flint, clinker, ash and red brick.	0.70			ES2	0.80-0.90			
Soft to firm consistency, light yellow brown, silty, sandy CLAY with pockets and partings of black silt. (Lynch Hill Gravel)	1.00							
Dense becoming very dense orange brown black, sandy, subangular to subrounded, fine to coarse flint GRAVEL. Sand is fine to coarse grained. (Lynch Hill Gravel)	2.37						N=68(C)	
----- End of Exploratory Hole at 2.37 m								
Remarks: 1. Groundwater not encountered. 2. Hole terminated at 2.37m bgl due to refusal of equipment. 3. Correct SPT N values N60 shown in accordance with BS EN 22476 Part 3.						Sample Type Key D - Disturbed Representative B - Bulk Representative S - Spot Non-Representative W - Water U - Undisturbed Representative J - Jar Sample	Test Type Key (C) - Cone SPT (S) - Spoon SPT P - Pocket Pentrometer Reading PID - PID Reading V - Hand Shear Vane Reading	
						Sheet: Sheet 1 of 1		