DS1

DS2

DS3

DS4

DS5

DS6

DS7

C86354
Green Lane, Chesterton
Photographs of Site Works / Samples

RB1

RB2

RB3

RB4

APPENDIX D: EXPLORATORY HOLE RECORDS

Borehole Log

JNP GROUP
CONSULTING ENGINEERS

Borehole No.
DS1
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 456110.00 - 220846.00	Hole Type WLS
Location: Chesterton		Level: 71.80	Scale 1:20
Client: Wates Developments		Dates: 17/02/2022 - 17/02/2022	Logged By CAW

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10	ES					Dark brown clayey gravelly TOPSOIL with roots. Gravel is limestone. TOPSOIL
					0.40	71.40		Firm orange brown sandy gravelly clay. Gravel is angular and sub-angular fine and medium limestone. SUPERFICIAL DEPOSITS
		1.00	D		0.90	70.90		Stiff brown grey CLAY. KELLAWAYS CLAY MEMBER
		1.00		N=18 (1,2/4,4,4,6)				
		1.30	D					
		1.80	D		1.75	70.05		Stiff to very stiff dark grey CLAY. KELLAWAYS CLAY MEMBER
		2.00	D					
		2.00		N=50 (1,1/50 for 255mm)	2.10	69.70		Dark grey MUDSTONE. KELLAWAYS CLAY MEMBER
					2.45	69.35		End of borehole at 2.45 m

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4

Remarks
Terminated on refusal on bedrock. Damp at base on drilling. Water level at 2.05 m after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 0.50 m to 2.10m.

JNP GROUP
CONSULTING ENGINEERS

Borehole Log

JNP GROUP
CONSULTING ENGINEERS

Borehole No.
DS2
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 456010.00 - 220940.00	Hole Type WLS
Location: Chesterton		Level: 72.70	Scale 1:20
Client: Wates Developments		Dates: 17/02/2022 - 17/02/2022	Logged By CAW

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.40	ES					Dark grey brown sandy gravelly CLAY. Gravel is angular fine and medium limestone with some brick and rare coal. MADE GROUND
		0.90	D		0.70	72.00		Firm orange brown sandy gravelly CLAY. Gravel is angular and sub-angular fine and medium limestone. WEATHERED CORNBRASH
		1.00		N=14 (4,3/2,4,4,4)				
					1.50	71.20		Firm to stiff pale brown very gravelly sandy CLAY. Gravel is angular and sub-angular fine to coarse limestone. WEATHERED CORNBRASH
		2.00	D		1.95	70.75		Pale brown LIMESTONE. CORNBRASH FORMATION
		2.00		50 (5,20/50 for 75mm)	2.00	70.70		End of borehole at 2.00 m

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4

Remarks
Terminated on refusal on bedrock. Damp at base on drilling. Water level at 0.60 m after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 0.50 m to 2.00m.

JNP GROUP
CONSULTING ENGINEERS

Borehole Log

JNP GROUP
CONSULTING ENGINEERS

Borehole No. **DS3**
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 455900.00 - 220990.00	Hole Type WLS
Location: Chesterton		Level: 73.20	Scale 1:20
Client: Wates Developments		Dates: 17/02/2022 - 17/02/2022	Logged By CAW

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES					Dark brown clayey gravelly TOPSOIL with roots. Gravel is limestone. TOPSOIL
					0.35	72.85		
		0.60	D					Firm orange brown sandy gravelly CLAY. Gravel is angular and sub-angular fine and medium limestone. WEATHERED CORNBRASH
		1.00	D					
		1.00		N=23 (7,7/6,6,5)				
					1.50	71.70		
		1.60	D					Firm to stiff pale brown very gravelly sandy CLAY. Gravel is angular and sub-angular fine to coarse limestone. WEATHERED CORNBRASH
		1.90		50 (25 for 75mm/50 for 50mm)	1.90	71.30		Pale brown LIMESTONE. CORNBRASH FORMATION
					1.92	71.28		End of borehole at 1.92 m

Remarks
Terminated on refusal on bedrock. Damp at base on drilling. Water level at 0.97 m after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 0.50 m to 1.90m.

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Borehole Log

JNP GROUP
CONSULTING ENGINEERS

Borehole No.
DS4
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 455845.00 - 220910.00	Hole Type WLS
Location: Chesterton		Level: 73.00	Scale 1:20
Client: Wates Developments		Dates: 17/02/2022 - 17/02/2022	Logged By CAW

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10	ES		0.20	72.80		Dark brown clayey gravelly TOPSOIL with roots. Gravel is limestone. TOPSOIL
		0.60	D					Firm orange brown sandy gravelly CLAY. Gravel is angular and sub-angular fine and medium limestone. WEATHERED CORNBRASH
		1.00 1.00	D	N=20 (5,4/8,4,4,4)	1.00	72.00		Firm to stiff pale brown very gravelly sandy CLAY. Gravel is angular and sub-angular fine to coarse limestone. WEATHERED CORNBRASH
		1.60	D					
		1.75		50 (25 for 75mm/50 for 30mm)	1.75	71.25		End of borehole at 1.75 m

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4

Remarks
Terminated on refusal on bedrock. Damp at base on drilling. Water level at 0.68 m after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 0.50 m to 1.75m.

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Borehole Log

JNP GROUP
CONSULTING ENGINEERS

Borehole No.
DS5
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 455746.00 - 220959.00	Hole Type WLS
Location: Chesterton		Level: 73.25	Scale 1:20
Client: Wates Developments		Dates: 17/02/2022 - 17/02/2022	Logged By CAW

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10	ES		0.20	73.05		Dark brown clayey gravelly TOPSOIL with roots. Gravel is limestone. TOPSOIL
		0.30	D		0.50	72.75		Firm orange brown sandy gravelly CLAY. Gravel is angular and sub-angular fine and medium limestone. WEATHERED CORNBRASH
		1.00 1.00 - 1.50	B	N=39 (8,8/7,10,11,11)	1.00	72.25		Firm brown orange very gravelly sandy CLAY. Gravel is angular and sub-angular fine to coarse limestone. WEATHERED CORNBRASH
		1.50		50 (25 for 60mm/50 for 30mm)	1.50	71.75		Pale brown clayey sandy limestone GRAVEL and COBBLES. CORNBRASH FORMATION
								End of borehole at 1.50 m

1
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4

Remarks
Terminated on refusal on bedrock. Damp at base on drilling. Water level at 1.16 m after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 0.50 m to 1.50m.

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Borehole Log

JNP GROUP
CONSULTING ENGINEERS

Borehole No.
DS6
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 455717.00 - 220830.00	Hole Type WLS
Location: Chesterton		Level: 72.30	Scale 1:20
Client: Wates Developments		Dates: 17/02/2022 - 17/02/2022	Logged By CAW

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10	ES					Dark brown clayey gravelly TOPSOIL with roots. Gravel is limestone. Rare tile fragments. MADE GROUND
					0.25	72.05		
					0.35	71.95		Firm orange brown sandy gravelly CLAY. Gravel is angular and sub-angular fine and medium limestone. WEATHERED CORNBRASH
		0.60	D					Firm to stiff pale brown very gravelly sandy CLAY. Gravel is angular and sub-angular fine to coarse limestone. WEATHERED CORNBRASH
					0.90	71.40		
		1.00	D	N=50 (2,4/50 for 230mm)				Pale brown clayey sandy limestone GRAVEL and COBBLES. CORNBRASH FORMATION
		1.00						
					1.35	70.95		End of borehole at 1.35 m

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4

Remarks
Terminated on refusal on bedrock. Damp at base on drilling. Water level at 0.90 m after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 0.50 m to 1.35m.

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Borehole Log

JNP GROUP
CONSULTING ENGINEERS

Borehole No.
DS7
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 455620.00 - 220894.00	Hole Type WLS
Location: Chesterton		Level: 72.65	Scale 1:20
Client: Wates Developments		Dates: 17/02/2022 - 17/02/2022	Logged By CAW

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10	ES					Dark brown clayey gravelly TOPSOIL with roots. Gravel is limestone. TOPSOIL
					0.25	72.40		
					0.35	72.30		Firm orange brown sandy gravelly CLAY. Gravel is angular and sub-angular fine and medium limestone. WEATHERED CORNBRASH
					0.70	71.95		Firm to stiff pale brown very gravelly sandy CLAY. Gravel is angular and sub-angular fine to coarse limestone. WEATHERED CORNBRASH
					0.80	71.85		Orange sandy angular and sub-angular fine and medium limestone GRAVEL. WEATHERED CORNBRASH
					0.90	71.75		
		1.00		50 (4,12/50 for 60mm)	1.00	71.65		Firm to stiff pale brown very gravelly sandy CLAY. Gravel is angular and sub-angular fine to coarse limestone. WEATHERED CORNBRASH
								Pale brown clayey sandy limestone GRAVEL and COBBLES. CORNBRASH FORMATION
								End of borehole at 1.00 m

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4

Remarks
Terminated on refusal on bedrock. Damp at base on drilling. Water level at 0.85 m after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 0.50 m to 1.00m.

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Borehole Log

JNP GROUP
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Borehole No.
RB1
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 456156.00 - 220990.00	Hole Type RO
Location: Chesterton		Level: 73.10	Scale 1:25
Client: Wates Developments		Dates: 15/03/2022 - 15/03/2022	Logged By GL

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.45	72.65		Dark brown silty clayey TOPSOIL with rootlets. TOPSOIL
					2.20	70.90		Soft orange brown clayey gravelly SAND. Gravel is angular to sub-rounded fine to coarse limestone fragments. SUPERFICIAL DEPOSITS
					3.00	70.10		Firm brownish blueish grey gravelly SILT. Gravel is angular fine to medium limestone fragments. WEATHERED CORNBRASH
					5.00	68.10		Blueish grey LIMESTONE. CORNBRASH FORMATION
								End of borehole at 5.00 m

1 2 3 4 5

Remarks
Water encountered during drilling at 1.00 m bgl rising to 0.95 m bgl after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 2.00 m to 4.80 m.

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Borehole Log

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Borehole No.
RB2
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 455810.00 - 221100.00	Hole Type RO
Location: Chesterton		Level: 73.80	Scale 1:25
Client: Wates Developments		Dates: 15/03/2022 - 15/03/2022	Logged By GL

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Dark brown silty clayey TOPSOIL with rootlets. TOPSOIL
					0.40	73.40		Greyish brown silty gravelly CLAY. Gravel is angular fine to coarse limestone fragments. WEATHERED CORNBRASH
					1.00	72.80		Firm brownish blueish grey silty gravelly CLAY. Gravel is angular fine to medium limestone fragments. WEATHERED CORNBRASH
					2.00	71.80		Blueish grey LIMESTONE. CORNBRASH FORMATION
					5.00	68.80		End of borehole at 5.00 m

1
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4
5

Remarks
Water encountered during drilling at 1.00 m bgl rising to 0.80m bgl after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 2.00m to 5.00m.

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Borehole Log

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Borehole No.
RB3
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 455600.00 - 221150.00	Hole Type RO
Location: Chesterton		Level: 74.30	Scale 1:25
Client: Wates Developments		Dates: 14/03/2022 - 15/03/2022	Logged By GL

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.30	74.00		Dark brown silty clayey TOPSOIL with rootlets. TOPSOIL
								Brownish grey silty clayey GRAVEL. Gravel is angular to sub-angular fine to coarse limestone fragments. WEATHERED CORNBRASH
					2.30	72.00		Blueish grey LIMESTONE. CORNBRASH FORMATION
					5.00	69.30		End of borehole at 5.00 m

1 2 3 4 5

Remarks
Water encountered during drilling at 0.90 m bgl rising to 0.75 m bgl after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 2.00 m to 5.00 m.

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Borehole Log

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Borehole No.
RB4
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 455615.00 - 221000.00	Hole Type RO
Location: Chesterton		Level: 73.10	Scale 1:25
Client: Wates Developments		Dates: 14/03/2022 - 14/03/2022	Logged By GL

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.40	72.70		Dark brown gravelly silty clayey TOPSOIL with rootlets. Gravel is limestone. TOPSOIL
					2.00	71.10		Firm greyish brown gravelly SILT. Gravel is angular to sub-angular fine to coarse limestone fragments. WEATHERED CORNBRASH
					4.50	68.60		Blueish grey LIMESTONE. CORNBRASH FORMATION
								End of borehole at 4.50 m

1 2 3 4 5

Remarks
Water encountered during drilling at 1.20 m bgl rising to 0.95 m bgl after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 1.50 m to 4.50 m.

JNP GROUP
CONSULTING ENGINEERS

Borehole Log

JNP GROUP
CONSULTING ENGINEERS

Borehole No.
RB5
Sheet 1 of 1

Project Name: Green Lane, Chesterton	Project No. C86354	Co-ords: 455630.00 - 226720.00	Hole Type RO
Location: Chesterton		Level: 71.20	Scale 1:25
Client: Wates Developments		Dates: 14/03/2022 - 14/03/2022	Logged By GL

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.40	70.80		Dark brown silty clayey TOPSOIL with rootlets. TOPSOIL
					1.40	69.80		Firm greyish brown gravelly silty CLAY. Gravel is angular to sub-angular fine to coarse limestone fragments. WEATHERED CORNBRASH
								End of borehole at 1.40 m

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Remarks
Water encountered during drilling at 0.90 m bgl rising to 0.75 m bgl after one hour. 50mm gas and groundwater level monitoring standpipe installed. Response zone 0.40 m to 1.40 m.

JNP GROUP
CONSULTING ENGINEERS

APPENDIX E: MONITORING RESULTS

GAS MONITORING DATA

Site:	**Green Lane Chesterton**		
Project:	**C86354**	**Date:**	03/03/2022

Operator:	**CAW**
Weather:	Cold, overcast

JNP GROUP
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Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl)	Water Level (m bgl)	Atmos. Pressure (mb)	Initial Flow Rate (litres/hr)	Average Flow Rate (litres/hr)	Temp (°C)	Reading Duration (s)	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	Notes
DS01	50	2.45	0.47	1004	0.0	0.0	8	15	0.0	0.3	20.1	
								30	0.0	0.4	20.0	
								60	0.0	0.3	20.1	
								90	0.0	0.2	20.3	
								120	0.0	0.1	20.5	
								180				Terminated early due to
								240				shallow groundwater
								300				
DS02	50	2.00	0.59	1004	0.0	0.0	8	15	0.0	0.1	2.6	
								30	0.0	0.1	20.6	
								60	0.0	0.1	20.6	
								30	0.0	0.0	20.6	
								120	0.0	0.0	20.6	
								180	0.0	0.0	20.6	Terminated early due to
								240				shallow groundwater
								300				
DS03	50	1.92	0.97	1004	0.0	0.0	8	15	0.0	0.4	20.1	
								30	0.0	0.5	19.9	
								60	0.0	0.6	19.8	
								90	0.0	0.6	19.7	
								120	0.0	0.6	19.7	
								180	0.0	0.6	19.7	
								240	0.0	0.6	19.7	
								300	0.0	0.6	19.7	
DS04	50	1.75	0.58	1004	0.0	0.0	8	15	0.0	0.7	17.7	
								30	0.0	0.8	16.9	
								60	0.0	0.9	16.1	
								90	0.0	1.0	15.6	
								120	0.0	1.3	15.0	
								180	0.0	1.6	14.2	
								240	0.0	1.7	13.5	
								300	0.0	1.8	12.8	
DS05	50	1.50	1.06	1004	0.0	0.0	8	15	0.0	0.5	19.2	
								30	0.0	0.5	18.5	
								60	0.0	0.6	18.5	
								90	0.0	0.6	18.5	
								120	0.0	0.6	18.5	
								180	0.0	0.6	18.5	
								240	0.0	0.6	18.5	
								300	0.0	0.6	18.5	
DS06	50	1.35	0.86	1004	0.0	0.0	8	15	0.0	0.2	20.1	
								30	0.0	0.4	19.7	
								60	0.0	0.5	19.5	
								90	0.0	0.5	19.5	
								120	0.0	0.5	19.5	
								180	0.0	0.5	19.5	
								240	0.0	0.5	19.5	
								300	0.0	0.5	19.5	
DS07	50	1.00	0.78	1004	0.0	0.0	8	12	0.0	0.6	19.4	
								30	0.0	0.8	18.5	
								60	0.0	0.9	18.0	
								90	0.0	0.9	17.5	
								120	0.0	0.9	17.5	
								180	0.0	0.9	17.5	
								240	0.0	0.9	17.5	
								300	0.0	0.9	17.5	

GAS MONITORING DATA

Site:	**Green Lane Chesterton**		
Project:	**C86354**	**Date:**	15/03/2022

Operator:	**GL**
Weather:	Sunny

JNP GROUP
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Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl)	Water Level (m bgl)	Atmos. Pressure (mb)	Initial Flow Rate (litres/hr)	Average Flow Rate (litres/hr)	Temp (°C)	Reading Duration (s)	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	Notes
DS01	50	2.45	0.54	1013	0.0	0.0	12	15	0.2	0.3	21.1	
								30	0.2	0.3	21.1	
								60	0.2	0.3	21.1	
								90	0.2	0.3	21.1	
								120	0.2	0.3	21.1	
								180	0.2	0.3	21.1	
								240	0.2	0.3	21.1	
								300	0.2	0.3	21.1	
DS02	50	2.00	0.79	1013	0.0	0.0	12	15	0.2	0.1	21.2	
								30	0.2	0.1	21.2	
								60	0.2	0.1	21.2	
								30	0.2	0.1	21.2	
								120	0.2	0.1	21.2	
								180	0.2	0.1	21.2	
								240	0.2	0.1	21.2	
								300	0.2	0.1	21.2	
DS03	50	1.92	1.18	1013	0.0	0.0	12	15	0.2	1.0	19.7	
								30	0.2	1.0	19.7	
								60	0.2	1.0	19.7	
								90	0.2	1.0	19.7	
								120	0.2	1.0	19.7	
								180	0.2	1.0	19.7	
								240	0.2	1.0	19.7	
								300	0.2	1.0	19.7	
DS04	50	1.75	0.77	1013	0.0	0.0	12	15	0.1	1.9	12.0	
								30	0.1	1.9	12.0	
								60	0.1	2.0	11.9	
								90	0.1	2.0	11.9	
								120	0.1	2.0	11.9	
								180	0.1	2.0	11.9	
								240	0.1	2.0	11.9	
								300	0.1	2.0	11.9	
DS05	50	1.50	1.26	1013	0.0	0.0	12	15	0.2	0.7	18.4	
								30	0.2	0.7	18.4	
								60	0.2	0.7	18.6	
								90	0.2	0.7	18.6	
								120	0.2	0.7	18.6	
								180	0.2	0.7	18.6	
								240	0.2	0.7	18.6	
								300	0.2	0.7	18.6	
DS06	50	1.35	0.95	1013	0.0	0.0	12	15	0.2	0.6	19.0	
								30	0.2	0.6	19.0	
								60	0.2	0.6	19.0	
								90	0.2	0.6	19.0	
								120	0.2	0.6	19.0	
								180	0.2	0.6	19.0	
								240	0.2	0.6	19.0	
								300	0.2	0.6	19.0	
DS07	50	1.00	0.92	1013	0.0	0.0	12	12	0.2	0.8	19.5	
								30	0.2	1.1	18.6	
								60	0.2	1.3	18.2	
								90	0.2	1.4	18.1	
								120	0.2	1.4	18.1	
								180	0.2	1.4	18.1	
								240	0.2	1.4	18.1	
								300	0.2	1.4	18.1	

GAS MONITORING DATA

Site:	**Green Lane Chesterton**		
Project:	**C86354**	**Date:**	31/03/2022

Operator:	**GL**
Weather:	Overcast

JNP GROUP
CONSULTING ENGINEERS

Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl)	Water Level (m bgl)	Atmos. Pressure (mb)	Initial Flow Rate (litres/hr)	Average Flow Rate (litres/hr)	Temp (°C)	Reading Duration (s)	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	Notes
DS01	50	2.45	0.63	1002	-5.6	0.0	4	15	0.1	0.3	21.1	
								30	0.1	0.3	21.1	
								60	0.1	0.3	21.1	
								90	0.1	0.3	21.1	
								120	0.1	0.3	21.1	
								180	0.1	0.3	21.1	
								240	0.1	0.3	21.1	
								300	0.1	0.3	21.1	
DS02	50	2.00	0.79	1002	0.0	0.0	4	15	0.3	0.3	20.2	
								30	0.2	0.2	21.0	
								60	0.1	0.2	21.1	
								30	0.1	0.2	21.1	
								120	0.1	0.2	21.1	
								180	0.1	0.2	21.1	
								240	0.1	0.2	21.2	
								300	0.1	0.2	21.2	
DS03	50	1.92	1.23	1002	0.0	0.0	4	15	0.1	2.3	18.1	
								30	0.1	2.3	18.1	
								60	0.1	2.3	18.2	
								90	0.1	2.3	18.2	
								120	0.1	2.3	18.2	
								180	0.1	2.3	18.2	
								240	0.1	2.3	18.2	
								300	0.1	2.3	18.2	
DS04	50	1.75	0.93	1002	0.0	0.0	4	15	0.1	3.2	17.3	
								30	0.1	3.2	16.1	
								60	0.1	3.2	16.1	
								90	0.1	3.2	16.1	
								120	0.1	3.2	16.1	
								180	0.1	3.2	16.0	
								240	0.1	3.2	16.0	
								300	0.1	3.2	16.0	
DS05	50	1.50	1.31	1002	0.0	0.0	4	15	0.1	0.9	20.5	
								30	0.1	1.4	19.6	
								60	0.1	1.5	19.1	
								90	0.1	1.5	19.1	
								120	0.1	1.5	19.1	
								180	0.1	1.5	19.1	
								240	0.1	1.5	19.1	
								300	0.1	1.5	19.1	
DS06	50	1.35	0.99	1002	0.0	0.0	4	15	0.1	1.3	19.6	
								30	0.1	1.3	19.5	
								60	0.1	1.4	19.5	
								90	0.1	1.4	19.5	
								120	0.1	1.4	19.5	
								180	0.1	1.4	19.5	
								240	0.1	1.4	19.5	
								300	0.1	1.4	19.5	
DS07	50	1.00	DRY	1002	0.0	0.0	4	12	0.1	2.0	19.2	
								30	0.1	2.0	18.8	
								60	0.1	2.1	18.7	
								90	0.1	2.1	18.7	
								120	0.1	2.1	18.7	
								180	0.1	2.1	18.7	
								240	0.1	2.1	18.7	
								300	0.1	2.1	18.7	

GAS MONITORING DATA

Site:	**Green Lane Chesterton**		
Project:	**C86354**	**Date:**	31/03/2022

Operator:	**GL**
Weather:	Overcast

JNP GROUP
CONSULTING ENGINEERS

Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl)	Water Level (m bgl)	Atmos. Pressure (mb)	Initial Flow Rate (litres/hr)	Average Flow Rate (litres/hr)	Temp (°C)	Reading Duration (s)	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	Notes
RB01	50	5.00	1.18	1002	-0.1	0.0	4	15	0.1	0.6	21.1	
								30	0.1	0.7	21.0	
								60	0.1	0.8	21.0	
								90	0.1	0.8	21.0	
								120	0.1	0.8	21.0	
								180	0.1	0.8	21.0	
								240	0.1	0.8	21.0	
								300	0.1	0.8	21.0	
RB02	50	5.00	0.82	1002	-15.9	0.0	4	15	0.1	0.2	21.2	
								30	0.1	0.2	21.2	
								60	0.1	0.2	21.2	
								30	0.1	0.2	21.2	
								120	0.1	0.2	21.2	
								180	0.1	0.2	21.2	
								240	0.1	0.2	21.2	
								300	0.1	0.2	21.2	
RB03	50	5.00	0.54	1002	0.0	0.0	4	15	0.1	0.7	19.8	1 PPM CO
								30	0.1	0.7	19.8	
								60	0.1	0.7	19.7	
								90	0.1	0.7	19.6	
								120	0.1	0.7	19.6	
								180	0.1	0.7	19.6	
								240	0.1	0.7	19.6	
								300	0.1	0.7	19.6	
RB04	50	4.50	0.94	1002	0.0	0.0	4	15	0.0	0.1	19.9	
								30	0.0	0.1	20.0	
								60	0.1	0.1	20.1	
								90	0.1	0.1	20.1	
								120	0.1	0.1	20.1	
								180	0.1	0.1	20.1	
								240	0.1	0.1	20.1	
								300	0.1	0.1	20.1	
RB05	50	1.40	0.68	1002	0.0	0.0	4	15	0.1	1.5	19.3	
								30	0.1	1.4	19.4	
								60	0.1	1.3	19.5	
								90	0.1	1.3	19.5	
								120	0.1	1.3	19.5	
								180	0.1	1.3	19.5	
								240	0.1	1.3	19.5	
								300	0.1	1.3	19.5	

GAS MONITORING DATA

Site:	**Green Lane Chesterton**		
Project:	**C86354**	**Date:**	21/04/2022

Operator:	**GL**
Weather:	Clear skies

JNP GROUP
CONSULTING ENGINEERS

Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl)	Water Level (m bgl)	Atmos. Pressure (mb)	Initial Flow Rate (litres/hr)	Average Flow Rate (litres/hr)	Temp (°C)	Reading Duration (s)	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	Notes
DS01	50	2.45	0.63	1005	0.0	0.0	10	15	0.1	2.0	19.1	
								30	0.1	2.1	19.0	
								60	0.1	2.1	19.0	
								90	0.1	2.1	19.0	
								120	0.1	2.1	19.0	
								180	0.1	2.1	18.9	
								240	0.1	2.2	18.9	
								300	0.1	2.2	18.9	
DS02	50	2.00	1.00	1005	0.0	0.0	10	15	0.1	2.2	20.0	
								30	0.1	2.2	20.0	
								60	0.1	2.1	19.9	
								30	0.1	2.1	19.9	
								120	0.1	2.1	19.9	
								180	0.1	2.1	19.9	
								240	0.1	2.1	19.9	
								300	0.1	2.1	19.9	
DS03	50	1.92	1.43	1005	0.0	0.0	10	15	0.1	2.9	18.4	
								30	0.1	2.9	18.4	
								60	0.1	2.9	18.3	
								90	0.1	2.9	18.3	
								120	0.1	2.9	18.2	
								180	0.1	2.9	18.2	
								240	0.1	2.9	18.2	
								300	0.1	2.9	18.2	
DS04	50	1.75	1.18	1005	0.0	0.0	10	15	0.1	3.2	18.8	
								30	0.1	3.2	18.8	
								60	0.1	3.2	18.7	
								90	0.1	3.2	18.7	
								120	0.1	3.2	18.7	
								180	0.1	3.2	18.7	
								240	0.1	3.2	18.7	
								300	0.1	3.2	18.7	
DS05	50	1.50	1.50	1005	0.0	0.0	10	15	0.1	1.5	19.5	
								30	0.1	1.7	18.8	
								60	0.1	1.8	18.7	
								90	0.1	1.8	18.7	
								120	0.1	1.8	18.7	
								180	0.1	1.8	18.7	
								240	0.1	1.8	18.7	
								300	0.1	1.8	18.7	
DS06	50	1.35	DRY	1005	0.0	0.0	10	15	0.1	1.6	20.0	
								30	0.1	1.6	20.0	
								60	0.1	1.6	20.0	
								90	0.1	1.6	20.0	
								120	0.1	1.6	20.0	
								180	0.1	1.6	20.0	
								240	0.1	1.6	20.0	
								300	0.1	1.6	20.0	
DS07	50	1.00	DRY	1005	0.0	0.0	10	12	0.1	1.9	19.8	
								30	0.1	1.9	19.7	
								60	0.1	1.9	19.6	
								90	0.1	1.9	19.6	
								120	0.1	1.9	19.6	
								180	0.1	1.9	19.6	
								240	0.1	1.9	19.6	
								300	0.1	1.9	19.6	

GAS MONITORING DATA

Site:	**Green Lane Chesterton**		
Project:	**C86354**	**Date:**	21/04/2022

Operator:	**GL**
Weather:	Clear skies

JNP GROUP
CONSULTING ENGINEERS

Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl)	Water Level (m bgl)	Atmos. Pressure (mb)	Initial Flow Rate (litres/hr)	Average Flow Rate (litres/hr)	Temp (°C)	Reading Duration (s)	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	Notes
RB01	50	5.00	1.18	1005	-0.1	0.0	10	15	0.0	0.9	20.8	
								30	0.0	0.9	20.8	
								60	0.1	0.9	20.8	
								90	0.1	0.8	20.8	
								120	0.1	0.8	20.8	
								180	0.1	0.8	20.8	
								240	0.1	0.8	20.8	
								300	0.1	0.8	20.8	
RB02	50	5.00	1.23	1005	-8.6	0.0	10	15	0.1	0.8	20.4	
								30	0.1	0.8	20.4	
								60	0.1	0.7	20.5	
								30	0.1	0.7	20.5	
								120	0.1	0.6	20.6	
								180	0.1	0.6	20.6	
								240	0.1	0.5	20.6	
								300	0.1	0.5	20.6	
RB03	50	5.00	0.75	1005	0.0	0.0	10	15	0.2	0.5	20.7	
								30	0.2	0.5	20.6	
								60	0.2	0.5	20.6	
								90	0.2	0.5	20.6	
								120	0.2	0.5	20.6	
								180	0.2	0.5	20.6	
								240	0.2	0.5	20.6	
								300	0.2	0.5	20.6	
RB04	50	4.50	1.13	1005	0.0	0.0	10	15	0.1	0.3	20.7	
								30	0.1	0.3	20.6	
								60	0.1	0.3	20.5	
								90	0.1	0.3	20.5	
								120	0.1	0.3	20.5	
								180	0.1	0.3	20.5	
								240	0.1	0.3	20.5	
								300	0.1	0.3	20.5	
RB05	50	1.40	0.70	1005	0.0	0.0	10	15	0.1	1.3	19.9	
								30	0.1	1.3	19.9	
								60	0.1	1.3	19.9	
								90	0.1	1.3	19.9	
								120	0.1	1.3	19.9	
								180	0.1	1.3	19.9	
								240	0.1	1.3	19.9	
								300	0.1	1.3	19.9	

GAS MONITORING DATA

Site:	**Green Lane Chesterton**		
Project:	**C86354**	**Date:**	06/05/2022

Operator:	**GL**
Weather:	Clear skies

JNP GROUP
CONSULTING ENGINEERS

Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl)	Water Level (m bgl)	Atmos. Pressure (mb)	Initial Flow Rate (litres/hr)	Average Flow Rate (litres/hr)	Temp (°C)	Reading Duration (s)	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	Notes
DS01	50	2.45	1.07	1017	0.0	0.0	15	15	0.1	1.5	20.0	
								30	0.1	1.5	20.0	
								60	0.1	1.5	20.0	
								90	0.1	1.5	20.0	
								120	0.1	1.4	20.0	
								180	0.1	1.4	20.0	
								240	0.1	1.4	20.0	
								300	0.1	1.4	20.0	
DS02	50	2.00	1.11	1017	0.0	0.0	15	15	0.0	1.5	20.0	
								30	0.0	1.5	20.0	
								60	0.0	1.5	19.9	
								30	0.0	1.5	19.9	
								120	0.1	1.5	19.9	
								180	0.1	1.5	19.9	
								240	0.1	1.5	19.9	
								300	0.1	1.5	19.9	
DS03	50	1.92	1.57	1017	0.0	0.0	15	15	0.1	2.1	19.4	
								30	0.1	2.1	19.4	
								60	0.1	2.1	19.4	
								90	0.1	2.1	19.4	
								120	0.1	2.1	19.4	
								180	0.1	2.1	19.4	
								240	0.1	2.1	19.4	
								300	0.1	2.1	19.4	
DS04	50	1.75	1.35	1017	0.0	0.0	15	15	0.0	1.3	20.1	
								30	0.0	1.4	20.0	
								60	0.0	1.5	20.0	
								90	0.0	1.5	20.0	
								120	0.1	1.5	20.0	
								180	0.1	1.5	20.0	
								240	0.1	1.5	20.0	
								300	0.1	1.5	20.0	
DS05	50	1.50	1.51	1017	0.0	0.0	15	15	0.0	1.3	20.6	
								30	0.0	1.3	20.6	
								60	0.0	1.3	20.6	
								90	0.1	1.3	20.6	
								120	0.1	1.3	20.6	
								180	0.1	1.3	20.6	
								240	0.1	1.3	20.6	
								300	0.1	1.3	20.6	
DS06	50	1.35	DRY	1017	0.0	0.0	15	15	0.1	0.9	20.8	
								30	0.1	0.9	20.8	
								60	0.1	0.9	20.8	
								90	0.1	0.9	20.8	
								120	0.1	0.9	20.8	
								180	0.1	0.9	20.8	
								240	0.1	0.9	20.8	
								300	0.1	0.9	20.8	
DS07	50	1.00	DRY	1017	0.0	0.0	15	12	0.1	1.0	20.1	
								30	0.1	1.0	20.1	
								60	0.1	1.0	20.1	
								90	0.1	1.0	20.1	
								120	0.1	1.0	20.1	
								180	0.1	1.0	20.1	
								240	0.1	1.0	20.1	
								300	0.1	1.0	20.1	

GAS MONITORING DATA

Site:	**Green Lane Chesterton**		
Project:	**C86354**	**Date:**	06/05/2022

Operator:	**GL**
Weather:	Clear skies

JNP GROUP
CONSULTING ENGINEERS

Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl)	Water Level (m bgl)	Atmos. Pressure (mb)	Initial Flow Rate (litres/hr)	Average Flow Rate (litres/hr)	Temp (°C)	Reading Duration (s)	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	Notes
RB01	50	5.00	1.68	1017	0.0	0.0	15	15	0.0	0.5	20.8	
								30	0.0	0.5	20.8	
								60	0.1	0.5	20.8	
								90	0.1	0.5	20.8	
								120	0.1	0.5	20.8	
								180	0.1	0.5	20.8	
								240	0.1	0.5	20.8	
								300	0.1	0.5	20.8	
RB02	50	5.00	1.23	1017	0.0	0.0	15	15	0.1	0.3	21.0	
								30	0.1	0.3	21.0	
								60	0.1	0.3	21.0	
								30	0.1	0.3	21.0	
								120	0.1	0.3	21.0	
								180	0.1	0.3	21.0	
								240	0.1	0.3	21.0	
								300	0.1	0.3	21.0	
RB03	50	5.00	0.90	1017	0.0	0.0	15	15	0.1	0.4	20.8	
								30	0.1	0.4	20.8	
								60	0.1	0.3	20.7	
								90	0.1	0.3	20.7	
								120	0.1	0.3	20.7	
								180	0.1	0.3	20.7	
								240	0.1	0.3	20.7	
								300	0.1	0.3	20.7	
RB04	50	4.50	1.13	1017	0.0	0.0	15	15	0.1	0.2	20.4	
								30	0.1	0.2	20.4	
								60	0.1	0.2	20.4	
								90	0.1	0.2	20.4	
								120	0.1	0.2	20.4	
								180	0.1	0.2	20.4	
								240	0.1	0.2	20.4	
								300	0.1	0.2	20.4	
RB05	50	1.40	0.73	1017	0.0	0.0	15	15	0.0	1.1	20.0	
								30	0.0	1.1	20.0	
								60	0.0	1.2	20.0	
								90	0.0	1.2	19.9	
								120	0.1	1.2	19.9	
								180	0.1	1.2	19.9	
								240	0.1	1.2	19.9	
								300	0.1	1.2	19.9	

GAS MONITORING DATA

Site:	**Green Lane Chesterton**		
Project:	**C86354**	**Date:**	18/05/2022

Operator:	**GL**
Weather:	Clear skies

JNP GROUP
CONSULTING ENGINEERS

Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl)	Water Level (m bgl)	Atmos. Pressure (mb)	Initial Flow Rate (litres/hr)	Average Flow Rate (litres/hr)	Temp (°C)	Reading Duration (s)	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	Notes
DS01	50	2.45	1.32	1013	0.0	0.0	15	15	0.0	1.7	19.7	
								30	0.0	1.7	19.7	
								60	0.0	1.7	19.7	
								90	0.0	1.7	19.7	
								120	0.0	1.7	19.7	
								180	0.0	1.7	19.7	
								240	0.0	1.7	19.7	
								300	0.0	1.7	19.7	
DS02	50	2.00	1.21	1013	0.0	0.0	15	15	0.0	1.7	19.6	
								30	0.0	1.7	19.6	
								60	0.0	1.7	19.6	
								30	0.0	1.7	19.6	
								120	0.0	1.7	19.6	
								180	0.0	1.7	19.6	
								240	0.0	1.7	19.6	
								300	0.0	1.7	19.6	
DS03	50	1.92	1.68	1013	0.0	0.0	15	15	0.0	2.3	19.0	
								30	0.0	2.3	19.0	
								60	0.0	2.3	19.0	
								90	0.0	2.3	19.0	
								120	0.0	2.3	19.0	
								180	0.0	2.3	19.0	
								240	0.0	2.3	19.0	
								300	0.0	2.3	19.0	
DS04	50	1.75	DRY	1013	0.0	0.0	15	15	0.0	1.8	19.5	
								30	0.0	1.8	19.5	
								60	0.0	1.8	19.5	
								90	0.0	1.8	19.4	
								120	0.0	1.8	19.4	
								180	0.0	1.8	19.4	
								240	0.0	1.8	19.4	
								300	0.0	1.8	19.4	
DS05	50	1.50	DRY	1013	0.0	0.0	15	15	0.0	1.5	19.6	
								30	0.0	1.5	19.6	
								60	0.0	1.5	19.6	
								90	0.0	1.5	19.6	
								120	0.0	1.5	19.6	
								180	0.0	1.5	19.6	
								240	0.0	1.5	19.6	
								300	0.0	1.5	19.6	
DS06	50	1.35		1013			15	15				Hole inaccessible due
								30				to screw siezing up
								60				
								90				
								120				
								180				
								240				
								300				
DS07	50	1.00	DRY	1013	0.0	0.0	15	12	0.0	0.9	20.0	
								30	0.0	0.9	20.0	
								60	0.0	0.9	20.0	
								90	0.0	1.0	19.9	
								120	0.0	1.0	19.9	
								180	0.0	1.0	19.9	
								240	0.0	1.0	19.9	
								300	0.0	1.0	19.9	

GAS MONITORING DATA

Site:	**Green Lane Chesterton**		
Project:	**C86354**	**Date:**	18/05/2022

Operator:	**GL**
Weather:	Clear skies

JNP GROUP
CONSULTING ENGINEERS

Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl)	Water Level (m bgl)	Atmos. Pressure (mb)	Initial Flow Rate (litres/hr)	Average Flow Rate (litres/hr)	Temp (°C)	Reading Duration (s)	CH_4 (% v/v)	CO_2 (% v/v)	O_2 (% v/v)	Notes
RB01	50	5.00	1.93	1013	0.0	0.0	15	15	0.0	0.7	20.5	
								30	0.0	0.7	20.5	
								60	0.0	0.7	20.5	
								90	0.0	0.7	20.5	
								120	0.0	0.7	20.5	
								180	0.0	0.7	20.5	
								240	0.0	0.7	20.5	
								300	0.0	0.7	20.5	
RB02	50	5.00	1.80	1013	0.0	0.0	15	15	0.0	0.4	20.0	
								30	0.0	0.4	20.0	
								60	0.0	0.4	20.0	
								30	0.0	0.4	19.9	
								120	0.0	0.4	19.9	
								180	0.0	0.4	19.9	
								240	0.0	0.4	19.9	
								300	0.0	0.4	19.9	
RB03	50	5.00	1.08	1013	0.0	0.0	15	15	0.0	0.5	20.6	
								30	0.0	0.6	20.1	
								60	0.0	0.6	20.1	
								90	0.0	0.6	20.0	
								120	0.0	0.6	20.0	
								180	0.0	0.6	20.0	
								240	0.0	0.6	20.0	
								300	0.0	0.6	20	
RB04	50	4.50	1.11	1013	0.0	0.0	15	15	0.0	1.5	20.0	
								30	0.0	1.5	20.0	
								60	0.0	1.5	19.9	
								90	0.0	1.5	19.9	
								120	0.0	1.5	19.9	
								180	0.0	1.5	19.9	
								240	0.0	1.5	19.9	
								300	0.0	1.5	19.9	
RB05	50	1.40	0.83	1013	0.0	0.0	15	15	0.0	1.6	19.2	
								30	0.0	1.7	19.0	
								60	0.0	1.8	18.9	
								90	0.0	1.8	18.9	
								120	0.0	1.8	18.9	
								180	0.0	1.8	18.9	
								240	0.0	1.8	18.9	
								300	0.0	1.8	18.9	

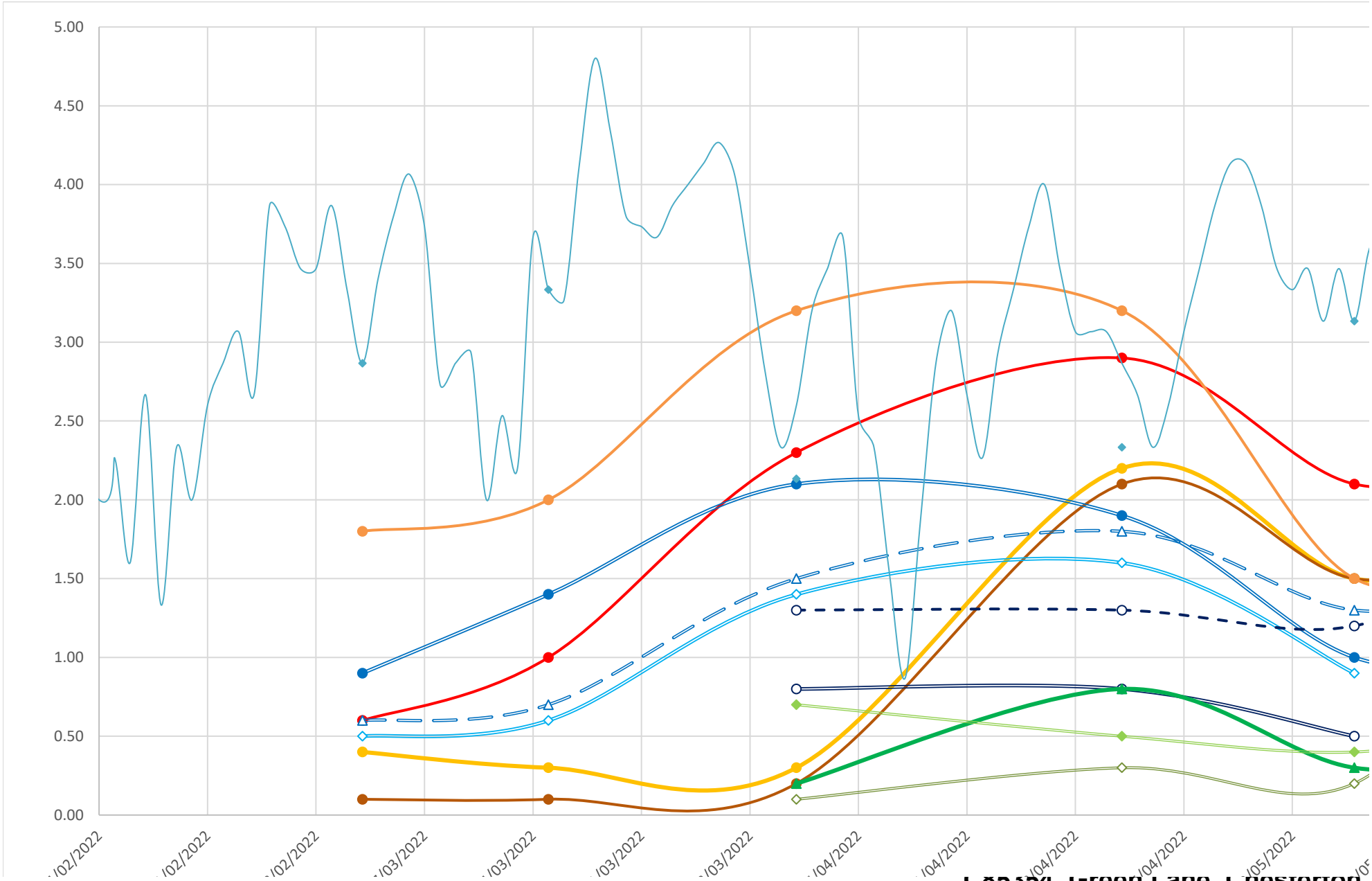
GROUNDWATER MONITORING DATA

Site: Green Lane, Chesteron

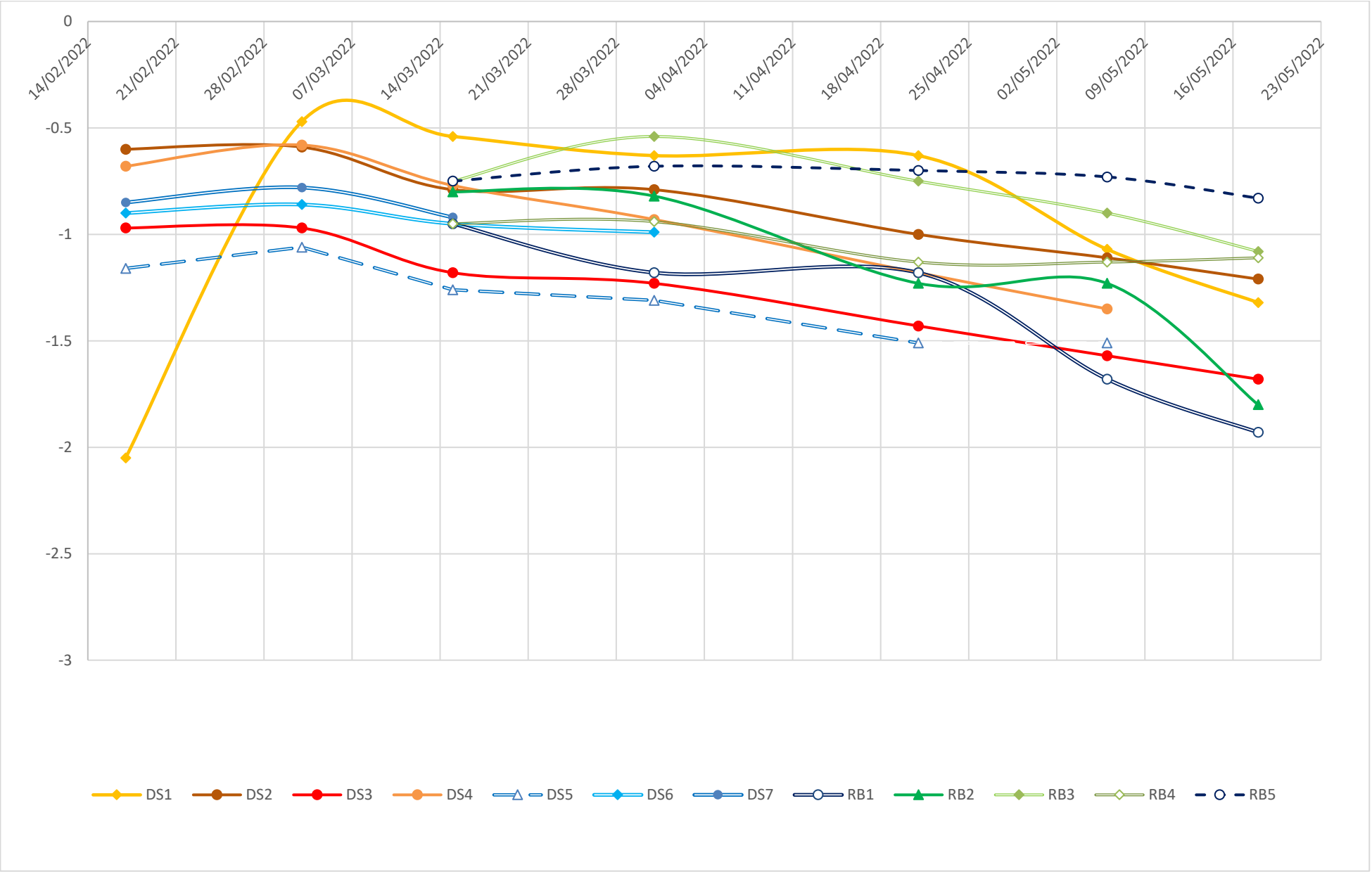
Project: C86354

Date: As detailed

			17/02/2022	03/03/2022	15/03/2022	31/03/2022	21/04/2022	06/05/2022	18/05/2022		
Monitoring Location	Standpipe diameter (mm)	Standpipe Depth (m bgl) (m AOD)	Water Level (m bgl) (m AOD)	Water Level (m bgl) (m AOD)	Water Level (m bgl) (m AOD)	Water Level (m bgl) (m AOD)	Water Level (m bgl) (m AOD)	Water Level (m bgl) (m AOD)	Water Level (m bgl) (m AOD)	Water Level (m bgl) (m AOD)	Water Level (m bgl) (m AOD)
DS1	50	2.10	2.05	0.47	0.54	0.63	0.63	1.07	1.32		
		71.80	69.75	71.33	71.26	71.17	71.17	70.73	70.48		
DS2	50	2.00	0.60	0.59	0.79	0.79	1.00	1.11	1.21		
		72.70	72.10	72.11	71.91	71.91	71.70	71.59	71.49		
DS3	50	1.90	0.97	0.97	1.18	1.23	1.43	1.57	1.68		
		73.20	72.23	72.23	72.02	71.97	71.77	71.63	71.52		
DS4	50	1.75	0.68	0.58	0.77	0.93	1.18	1.35	DRY		
		73.00	72.32	72.42	72.23	72.07	71.82	71.65	DRY		
DS5	50	1.50	1.16	1.06	1.26	1.31	1.51	1.51	DRY		
		73.25	72.09	72.19	71.99	71.94	71.74	71.74	DRY		
DS6	50	1.00	0.90	0.86	0.95	0.99	DRY	DRY	N/A		
		72.30	71.40	71.44	71.35	71.31	DRY	DRY	N/A		
DS7	50	1.00	0.85	0.78	0.92	DRY	DRY	DRY	DRY		
		72.65	71.80	71.87	71.33	DRY	DRY	DRY	DRY		
RB1	50	5.00	~	~	0.95	1.18	1.18	1.68	1.93		
		73.10	~	~	72.15	71.92	71.92	71.42	71.17		
RB2	50	5.00	~	~	0.80	0.82	1.23	1.23	1.80		
		73.80	~	~	73.00	72.98	72.57	72.57	72.00		
RB3	50	5.00	~	~	0.75	0.54	0.75	0.90	1.08		
		74.30	~	~	73.55	73.76	73.55	73.40	73.22		
RB4	50	4.50	~	~	0.95	0.94	1.13	1.13	1.11		
		73.10	~	~	72.15	72.16	71.97	71.97	71.95		
RB5	50	1.40	~	~	0.75	0.68	0.70	0.73	0.83		
		71.20	~	~	70.45	70.52	70.50	70.47	70.37		



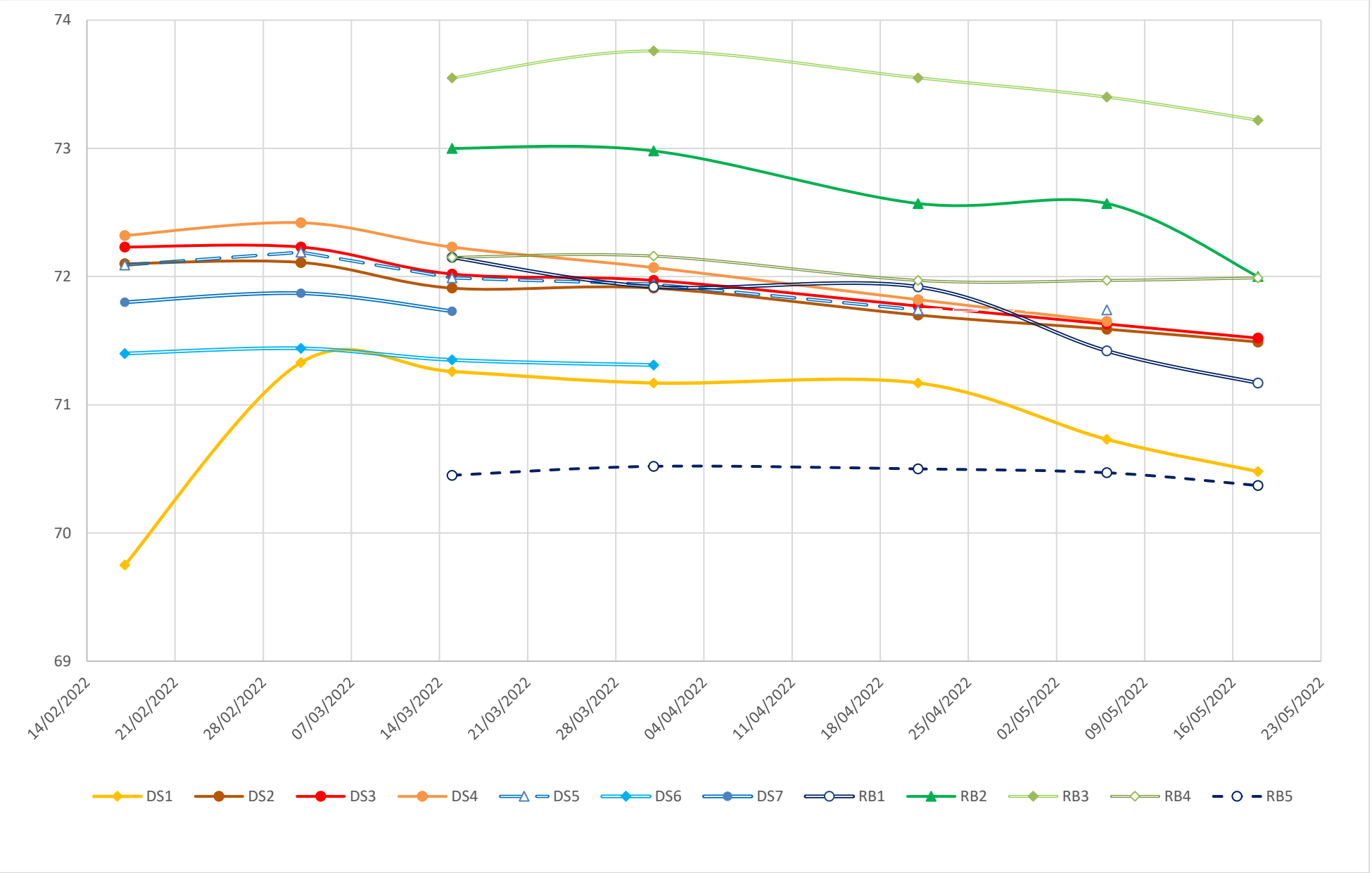
C65354, Green Lane, Chesterton, Maximum Carbon Dioxide Concentrations, Atmospheric Pressure



C86354

Green Lane, Chesteron

Groundwater Monitoring Records 2022, below ground level



C86354

Green Lane, Chesterton

2022 Groundwater Level Monitoring Data , Above Ordnance Datum

APPENDIX F: GEOTECHNICAL RESULTS

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

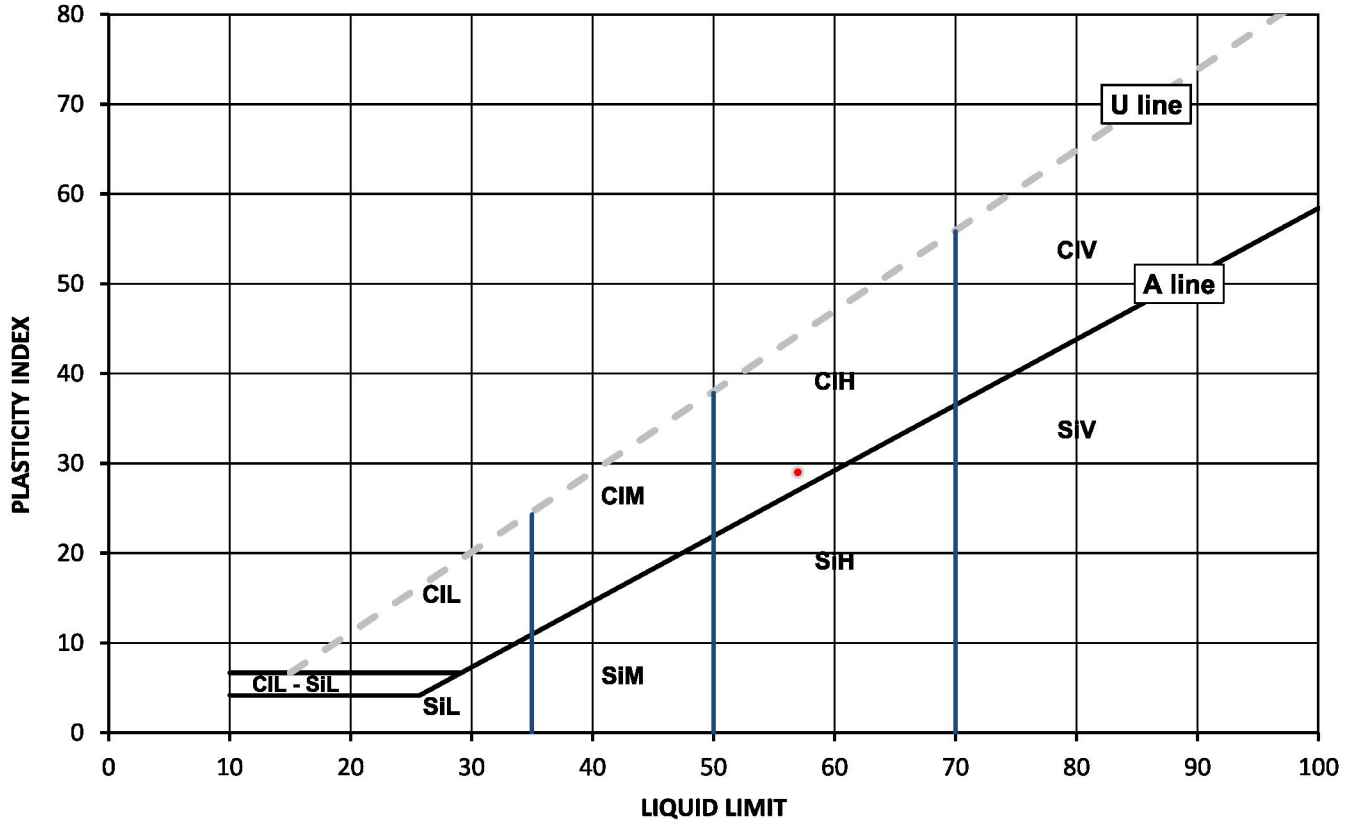
Client:	JNP Midlands LLP	Client Reference:	C86354
Client Address:	3rd Floor, Marlborough House, 48 Holly Walk, Leamington Spa, CV32 4XP	Job Number:	22-41970
		Date Sampled:	18/02/2022
		Date Received:	24/02/2022
Contact:	Charles Wake	Date Tested:	11/03/2022
Site Address:	Green Lane, Chesterton	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2185723	Depth Top [m]:	0.90
Hole No.:	DS2	Depth Base [m]:	Not Given
Sample Reference:	1	Sample Type:	D
Sample Description:	Yellowish brown slightly gravelly slightly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
27	57	28	29	77



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Anna Dudzinska
Deputy Head of Geo Office Section
for and on behalf of i2 Analytical Ltd

Date Reported: 17/03/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

Client:	JNP Midlands LLP	Client Reference:	C86354
Client Address:	3rd Floor, Marlborough House, 48 Holly Walk, Leamington Spa, CV32 4XP	Job Number:	22-41970
		Date Sampled:	18/02/2022
		Date Received:	24/02/2022
Contact:	Charles Wake	Date Tested:	11/03/2022
Site Address:	Green Lane, Chesterton	Sampled By:	Not Given

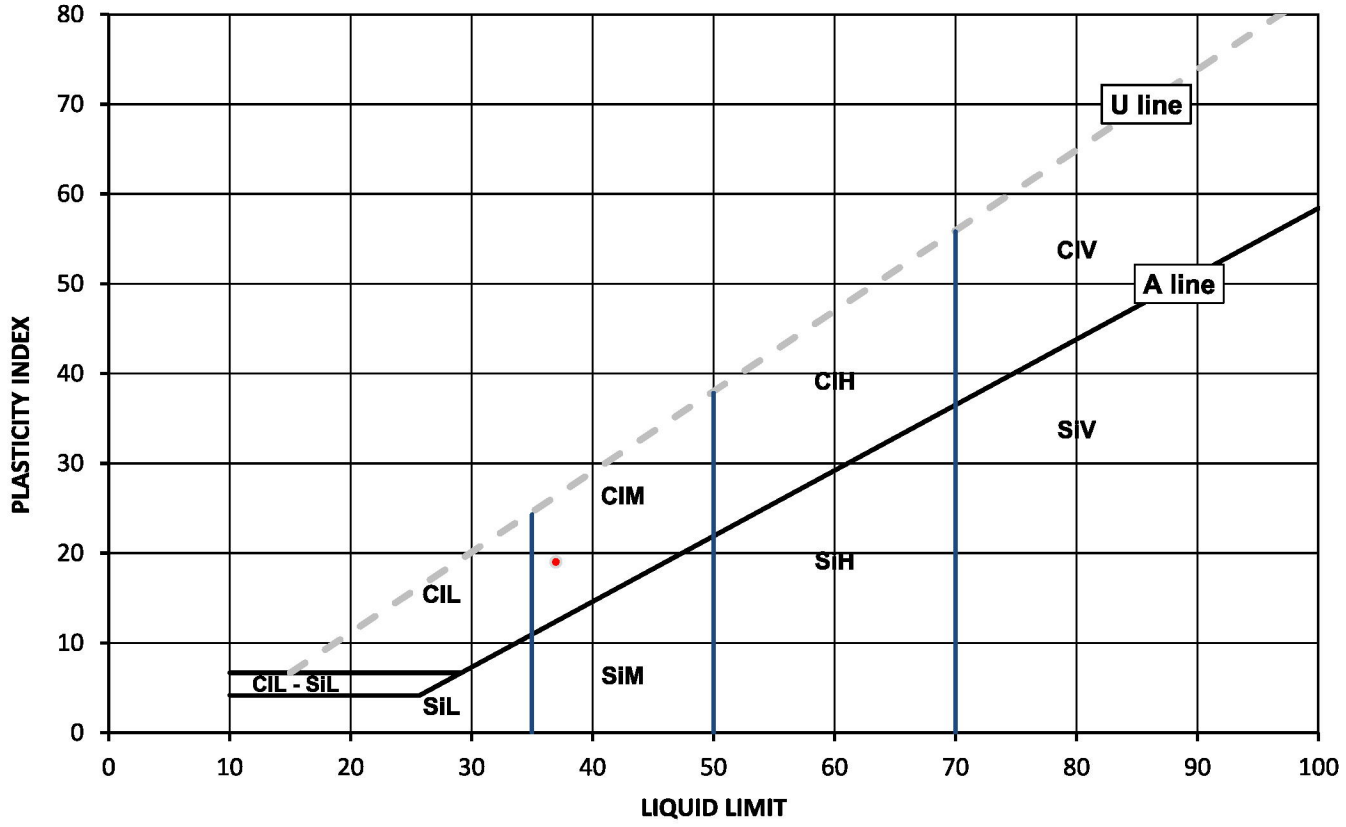
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2185724	Depth Top [m]:	1.60
Hole No.:	DS4	Depth Base [m]:	Not Given
Sample Reference:	3	Sample Type:	D
Sample Description:	Light brown gravelly sandy CLAY		

Sample Preparation: Tested after washing to remove >425um

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
16	37	18	19	48



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Anna Dudzinska
Deputy Head of Geo Office Section
for and on behalf of i2 Analytical Ltd

Date Reported: 17/03/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

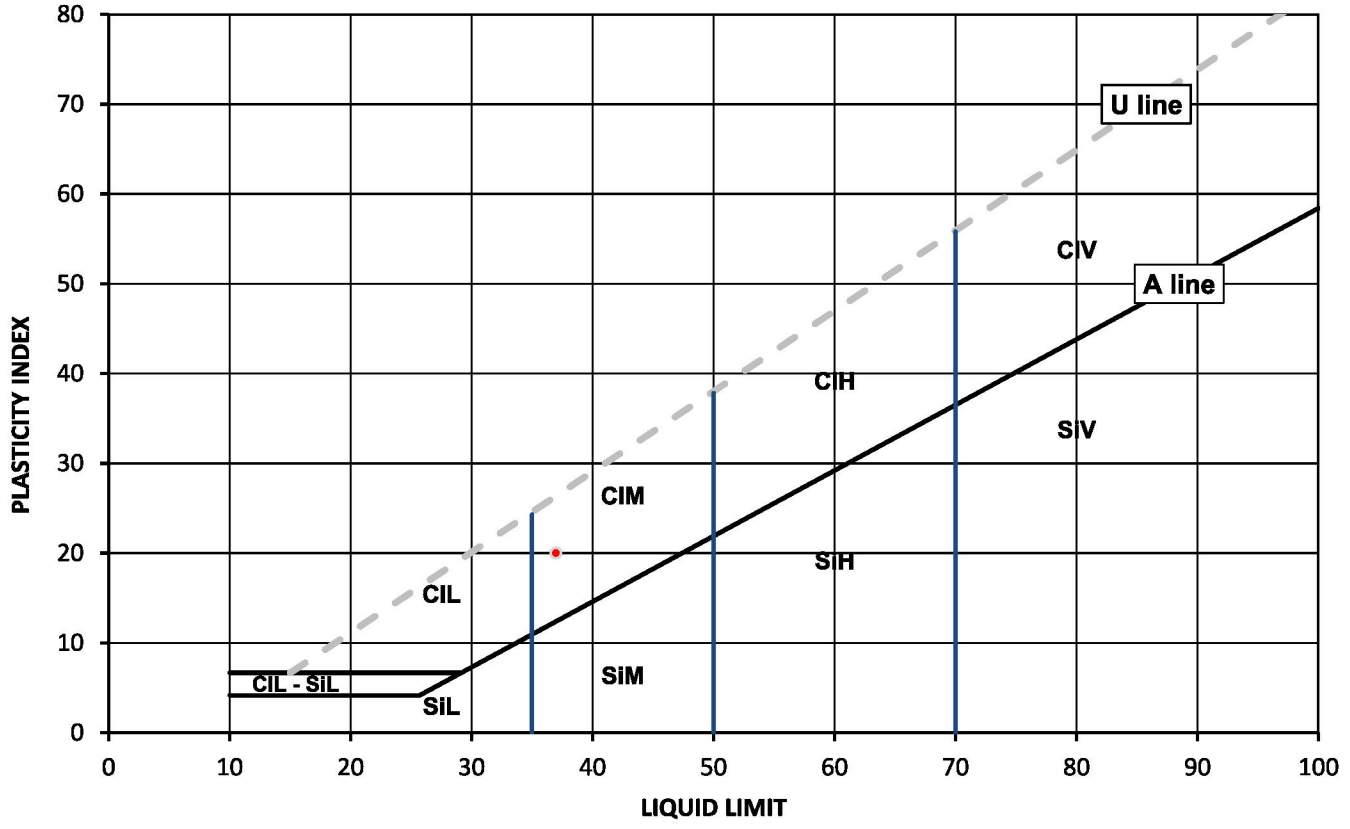
Client:	JNP Midlands LLP	Client Reference:	C86354
Client Address:	3rd Floor, Marlborough House, 48 Holly Walk, Leamington Spa, CV32 4XP	Job Number:	22-41970
		Date Sampled:	18/02/2022
		Date Received:	24/02/2022
Contact:	Charles Wake	Date Tested:	11/03/2022
Site Address:	Green Lane, Chesterton	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2185726	Depth Top [m]:	0.80
Hole No.:	DS7	Depth Base [m]:	Not Given
Sample Reference:	1	Sample Type:	D
Sample Description:	Yellowish brown gravelly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
16	37	17	20	48



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Anna Dudzinska
Deputy Head of Geo Office Section
for and on behalf of i2 Analytical Ltd

Date Reported: 17/03/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

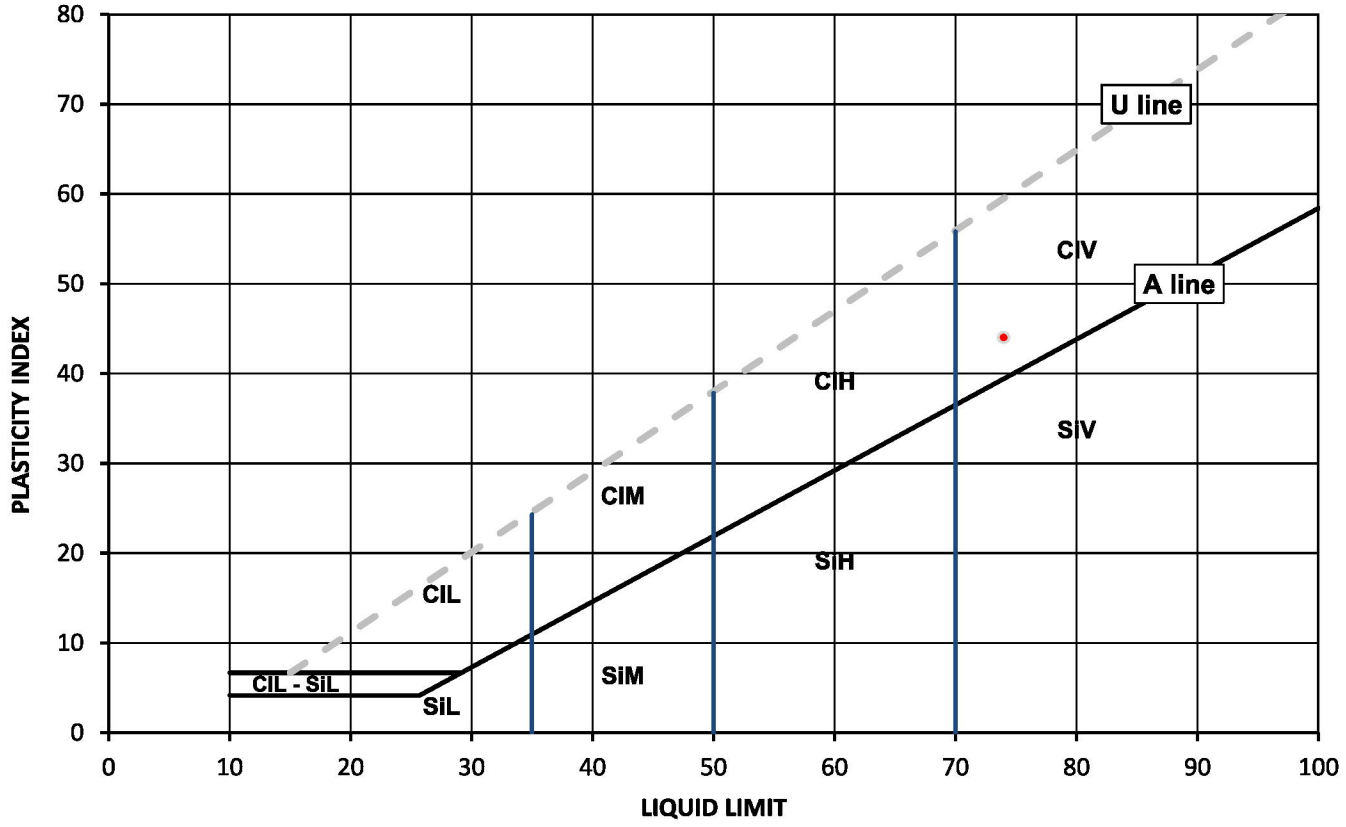
Client:	JNP Midlands LLP	Client Reference:	C86354
Client Address:	3rd Floor, Marlborough House, 48 Holly Walk, Leamington Spa, CV32 4XP	Job Number:	22-41970
		Date Sampled:	18/02/2022
		Date Received:	24/02/2022
Contact:	Charles Wake	Date Tested:	11/03/2022
Site Address:	Green Lane, Chesterton	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2185727	Depth Top [m]:	1.80
Hole No.:	DS1	Depth Base [m]:	Not Given
Sample Reference:	3	Sample Type:	D
Sample Description:	Grey mottled yellowish brown gravelly CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
25	74	30	44	41



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Anna Dudzinska
Deputy Head of Geo Office Section
for and on behalf of i2 Analytical Ltd

Date Reported: 17/03/2022

GF 236.12

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with:BS 1377-2:1990:Clause 4.3 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

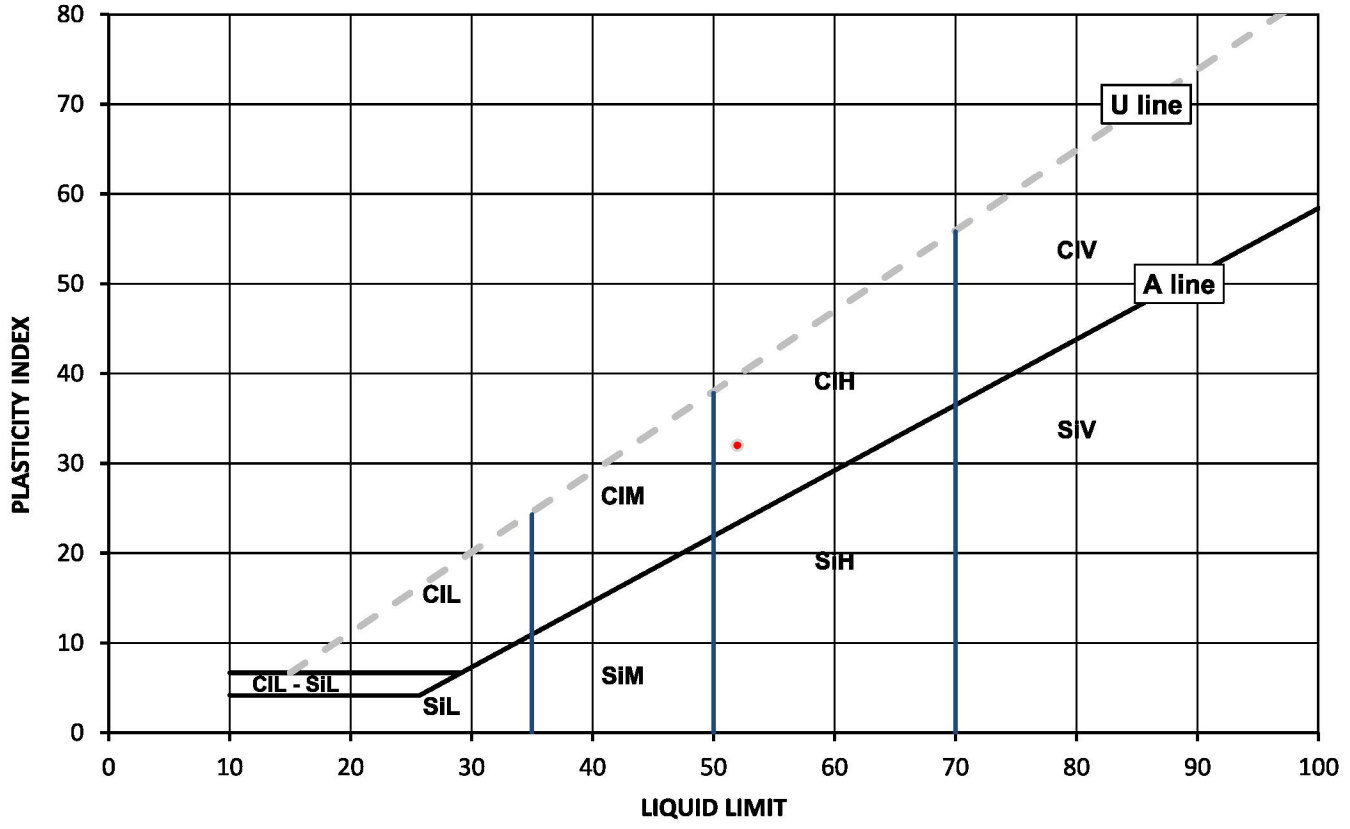
Client:	JNP Midlands LLP	Client Reference:	C86354
Client Address:	3rd Floor, Marlborough House, 48 Holly Walk, Leamington Spa, CV32 4XP	Job Number:	22-41970
		Date Sampled:	Not Given
		Date Received:	24/02/2022
Contact:	Charles Wake	Date Tested:	11/03/2022
Site Address:	Green Lane, Chesterton	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2190964	Depth Top [m]:	0.60
Hole No.:	DS4	Depth Base [m]:	Not Given
Sample Reference:	3	Sample Type:	D
Sample Description:	Yellowish brown slightly gravelly slightly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
20	52	20	32	88



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: [redacted]

Anna Dudzinska
Deputy Head of Geo Office Section
for and on behalf of i2 Analytical Ltd

Date Reported: 17/03/2022

GF 236.12

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: JNP Midlands LLP

Client Address: 3rd Floor, Marlborough House, 48 Holly Walk, Leamington Spa, CV32 4XP

Contact: Charles Wake

Site Address: Green Lane, Chesterton

Water Content by BS 1377-2:1990: Clause 3.2; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

Client Reference: C86354
Job Number: 22-41970
Date Sampled: 18/02/2022
Date Received: 24/02/2022
Date Tested: 11/03/2022
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Water Content BS 1377-2 [W]	Water Content BS EN ISO 17892-1 [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%		
2185727	DS1	3	1.80	Not Given	D	Grey mottled yellowish brown gravelly CLAY	Atterberg 4 Point	25		41	74	30	44						
2185723	DS2	1	0.90	Not Given	D	Yellowish brown slightly gravelly slightly sandy CLAY	Atterberg 4 Point	27		77	57	28	29						
2190964	DS4	3	0.60	Not Given	D	Yellowish brown slightly gravelly slightly sandy CLAY	Atterberg 4 Point	20		88	52	20	32						
2185724	DS4	3	1.60	Not Given	D	Light brown gravelly sandy CLAY	Atterberg 4 Point	16		48	37	18	19						
2185726	DS7	1	0.80	Not Given	D	Yellowish brown gravelly sandy CLAY	Atterberg 4 Point	16		48	37	17	20						

Note: # Non accredited; NP - Non plastic

Comments:

Signed: [redacted]

Anna Dudzinska
Deputy Head of Geo Office Section
for and on behalf of i2 Analytical Ltd

Date Reported: 17/03/2022

GF 234.14

SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: JNP Midlands LLP

Client Address: 3rd Floor, Marlborough House,
48 Holly Walk, Leamington Spa,
CV32 4XP

Contact: Charles Wake

Site Address: Green Lane, Chesterton

Client Reference: C86354
Job Number: 22-41970
Date Sampled: 18/02/2022
Date Received: 24/02/2022
Date Tested: 11/03/2022
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type			%				
2185727	DS1	3	1.80	Not Given	D	Grey mottled yellowish brown gravelly CLAY		25	Sample was quartered, oven dried at 109 °C			
2185723	DS2	1	0.90	Not Given	D	Yellowish brown slightly gravelly slightly sandy CLAY		27	Sample was quartered, oven dried at 109 °C			
2190964	DS4	3	0.60	Not Given	D	Yellowish brown slightly gravelly slightly sandy CLAY		20	Sample was quartered, oven dried at 109 °C			
2185724	DS4	3	1.60	Not Given	D	Light brown gravelly sandy CLAY		16	Sample was quartered, oven dried at 109 °C			
2185726	DS7	1	0.80	Not Given	D	Yellowish brown gravelly sandy CLAY		16	Sample was quartered, oven dried at 109 °C			

Comments:

Signed: [redacted]

Anna Dudzinska
Deputy Head of Geo Office Section
for and on behalf of i2 Analytical Ltd

Date Reported: 17/03/2022

GF 099.16

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

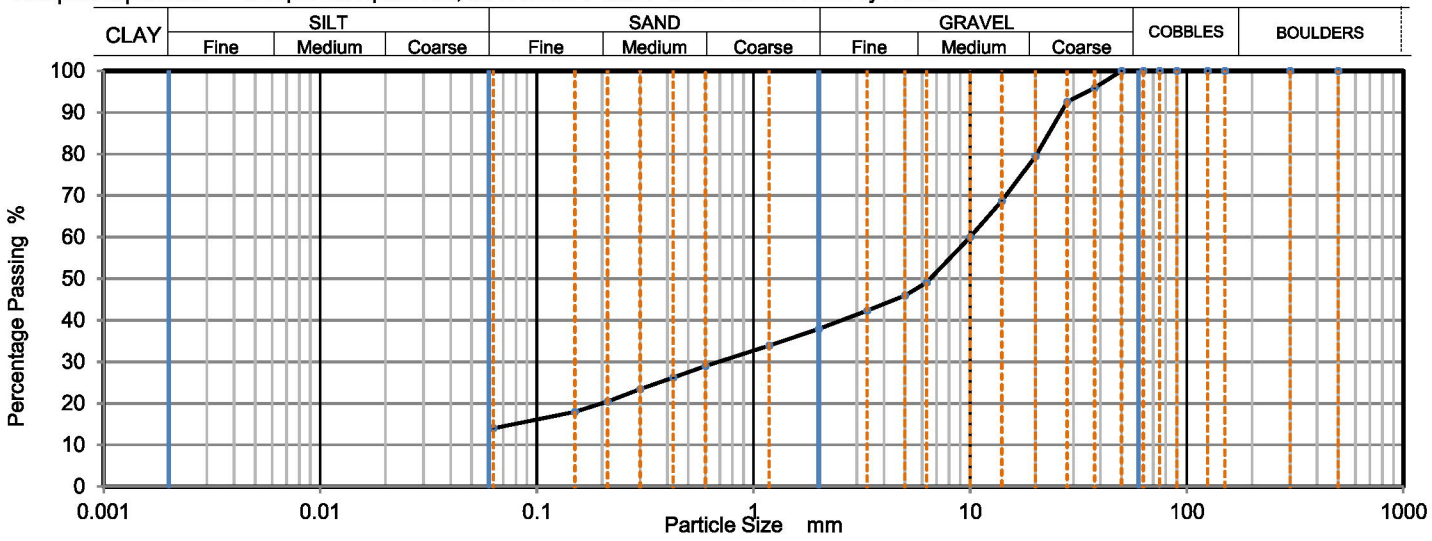
4041

Client:	JNP Midlands LLP	Client Reference:	C86354
Client Address:	3rd Floor, Marlborough House, 48 Holly Walk, Leamington Spa, CV32 4XP	Job Number:	22-41970
		Date Sampled:	18/02/2022
		Date Received:	24/02/2022
Contact:	Charles Wake	Date Tested:	04/03/2022
Site Address:	Green Lane, Chesterton	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	2185725	Depth Top [m]:	1.00
Hole No.:	DS5	Depth Base [m]:	Not Given
Sample Reference:	1	Sample Type:	B
Sample Description:	Light brown sandy clayey GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 109.0 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	96		
28	93		
20	79		
14	69		
10	60		
6.3	49		
5	46		
3.35	42		
2	38		
1.18	34		
0.6	29		
0.425	26		
0.3	23		
0.212	20		
0.15	18		
0.063	15		

Sample Proportions	% dry mass
Very coarse	0
Gravel	62
Sand	23
Fines <0.063mm	15

Grading Analysis		
D100	mm	50
D60	mm	9.98
D30	mm	0.686
D10	mm	
Uniformity Coefficient		> 160
Curvature Coefficient		

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed: [redacted]

Anna Dudzinska
Deputy Head of Geo Office Section
for and on behalf of i2 Analytical Ltd

Date Reported: 17/03/2022

GF 100.21

Charles Wake
JNP Midlands LLP
3rd Floor
Marlborough House
48 Holly Walk
Leamington Spa
CV32 4XP

e: charles.wake@jnpgroup.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 22-41969

Project / Site name:	Green Lane, Chesterton	**Samples received on:**	24/02/2022
Your job number:	C86354	**Samples instructed on/ Analysis started on:**	25/02/2022
Your order number:	G1451	**Analysis completed by:**	08/03/2022
Report Issue Number:	1	**Report issued on:**	10/03/2022
Samples Analysed:	5 soil samples		

Signed [redacted]

Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-41969
Project / Site name: Green Lane, Chesterton
Your Order No: G1451

Lab Sample Number				2185718	2185719	2185720	2185721	2185722
Sample Reference				DS3	DS4	DS6	DS1	DS1
Sample Number				2	2	2	1	4
Depth (m)				1.00	1.00	1.00	1.00	2.00
Date Sampled				18/02/2022	18/02/2022	18/02/2022	18/02/2022	18/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	5.1	5.4	7.3	13	18
Total mass of sample received	kg	0.001	NONE	0.60	0.60	0.60	0.70	0.70

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.5	8.3	8.3	7.3	7.5
Total Sulphate as SO4	%	0.005	MCERTS	0.086	0.089	0.087	0.710	0.115
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.032	0.015	0.032	1.3	0.59
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	2.3	2.3	6.7	16	12
Total Sulphur	%	0.005	MCERTS	0.050	0.047	0.043	0.293	1.91
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	< 5.0	< 5.0	5.4	16	13
Magnesium (leachate equivalent)	mg/l	2.5	NONE	< 2.5	< 2.5	2.7	7.8	6.4

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-41969
Project / Site name: Green Lane, Chesterton

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2185718	DS3	2	1	Brown clay and sand.
2185719	DS4	2	1	Brown clay and sand with gravel and vegetation.
2185720	DS6	2	1	Brown clay and sand.
2185721	DS1	1	1	Brown clay.
2185722	DS1	4	2	Grey clay.

Analytical Report Number : 22-41969
Project / Site name: Green Lane, Chesterton

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

APPENDIX G: CHEMICAL TEST RESULTS

Charles Wake
JNP Midlands LLP
3rd Floor
Marlborough House
48 Holly Walk
Leamington Spa
CV32 4XP

e: charles.wake@jnpgroup.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 22-41932

Project / Site name:	Green Lane Chesterton	**Samples received on:**	25/02/2022
Your job number:	C86354	**Samples instructed on/ Analysis started on:**	25/02/2022
Your order number:	G1451	**Analysis completed by:**	07/03/2022
Report Issue Number:	1	**Report issued on:**	07/03/2022
Samples Analysed:	11 soil samples		

[redacted]
Signed:

Anna Goc
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-41932
Project / Site name: Green Lane Chesterton
Your Order No: G1451

Lab Sample Number				2185486	2185487	2185488	2185489	2185490
Sample Reference				HD1	HD2	HD3	HD4	DS1
Sample Number				1	1	1	1	1
Depth (m)				0.10	0.10	0.10	0.10	0.10
Date Sampled				18/02/2022	18/02/2022	18/02/2022	18/02/2022	18/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	18	44	< 0.1
Moisture Content	%	0.01	NONE	20	18	17	15	20
Total mass of sample received	kg	0.001	NONE	0.30	0.40	0.40	0.40	0.40
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	JMA	JMA	JMA	JMA	

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	-	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-	-
Organic Matter (automated)	%	0.1	MCERTS	6.5	-	4.2	-	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	-	-	-	-	-

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80	-

Analytical Report Number: 22-41932
Project / Site name: Green Lane Chesterton
Your Order No: G1451

Lab Sample Number				2185486	2185487	2185488	2185489	2185490
Sample Reference				HD1	HD2	HD3	HD4	DS1
Sample Number				1	1	1	1	1
Depth (m)				0.10	0.10	0.10	0.10	0.10
Date Sampled				18/02/2022	18/02/2022	18/02/2022	18/02/2022	18/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	21	21	17	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	45	59	57	43	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.77	1.0	0.96	0.72	-
Boron (water soluble)	mg/kg	0.2	MCERTS	1.9	2.0	1.4	0.7	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	28	27	20	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	18	21	20	17	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	56	26	25	24	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	25	24	16	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	39	50	49	36	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	73	79	75	58	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-	-
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) HS_1D_TOTAL	mg/kg	0.1	MCERTS	< 0.1	-	< 0.1	-	-
TPH (C10 - C25) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	-	< 10	-	-
TPH (C25 - C40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	-	< 10	-	-
Pesticide and Herbicide Screen								
GCMS Pesticide Screen		N/A	NONE	-	None Detected	-	-	None Detected

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-41932
Project / Site name: Green Lane Chesterton
Your Order No: G1451

Lab Sample Number				2185491	2185492	2185493	2185494	2185495
Sample Reference				DS2	DS3	DS4	DS5	DS6
Sample Number				1	1	1	1	1
Depth (m)				0.40	0.20	0.40	0.10	0.10
Date Sampled				18/02/2022	18/02/2022	18/02/2022	18/02/2022	18/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	6.1	10	< 0.1	9.4	< 0.1
Moisture Content	%	0.01	NONE	16	16	15	13	15
Total mass of sample received	kg	0.001	NONE	0.30	0.40	0.40	0.40	0.40
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	-	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	JMA	JMA		JMA	JMA

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.0	-	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	0.102	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.028	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	27.8	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	2.3	-	-	-	-
Total Sulphur	%	0.005	MCERTS	0.058	-	-	-	-
Organic Matter (automated)	%	0.1	MCERTS	2.7	-	-	2.3	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	3.5	-	-	-	-

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	-	< 0.80	< 0.80	< 0.80

Analytical Report Number: 22-41932
Project / Site name: Green Lane Chesterton
Your Order No: G1451

Lab Sample Number				2185491	2185492	2185493	2185494	2185495
Sample Reference				DS2	DS3	DS4	DS5	DS6
Sample Number				1	1	1	1	1
Depth (m)				0.40	0.20	0.40	0.10	0.10
Date Sampled				18/02/2022	18/02/2022	18/02/2022	18/02/2022	18/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	18	24	-	23	37
Barium (aqua regia extractable)	mg/kg	1	MCERTS	52	58	-	52	60
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.90	0.95	-	0.93	1.1
Boron (water soluble)	mg/kg	0.2	MCERTS	1.5	0.9	-	1.0	1.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	< 0.2	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	25	-	25	31
Copper (aqua regia extractable)	mg/kg	1	MCERTS	18	19	-	19	21
Lead (aqua regia extractable)	mg/kg	1	MCERTS	23	26	-	24	31
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	21	24	-	25	34
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	43	48	-	47	60
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	69	77	-	76	87
Magnesium (water soluble)	mg/kg	5	NONE	25	-	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	4.9	-	-	-	-
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) HS_1D_TOTAL	mg/kg	0.1	MCERTS	< 0.1	-	< 0.1	-	-
TPH (C10 - C25) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	-	< 10	-	-
TPH (C25 - C40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	-	< 10	-	-
Pesticide and Herbicide Screen								
GCMS Pesticide Screen		N/A	NONE	-	-	None Detected	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-41932
Project / Site name: Green Lane Chesterton
Your Order No: G1451

Lab Sample Number				2185496
Sample Reference				DS7
Sample Number				1
Depth (m)				0.10
Date Sampled				18/02/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Stone Content	%	0.1	NONE	25
Moisture Content	%	0.01	NONE	12
Total mass of sample received	kg	0.001	NONE	0.40

Asbestos in Soil	Type	N/A	ISO 17025	-
Asbestos Analyst ID	N/A	N/A	N/A	

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-
Total Sulphate as SO4	%	0.005	MCERTS	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-
Total Sulphur	%	0.005	MCERTS	-
Organic Matter (automated)	%	0.1	MCERTS	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	-

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-
Acenaphthylene	mg/kg	0.05	MCERTS	-
Acenaphthene	mg/kg	0.05	MCERTS	-
Fluorene	mg/kg	0.05	MCERTS	-
Phenanthrene	mg/kg	0.05	MCERTS	-
Anthracene	mg/kg	0.05	MCERTS	-
Fluoranthene	mg/kg	0.05	MCERTS	-
Pyrene	mg/kg	0.05	MCERTS	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-
Chrysene	mg/kg	0.05	MCERTS	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-

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Your Order No: G1451

Lab Sample Number				2185496
Sample Reference				DS7
Sample Number				1
Depth (m)				0.10
Date Sampled				18/02/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Heavy Metals / Metalloids				
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-
Magnesium (water soluble)	mg/kg	5	NONE	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-
Petroleum Hydrocarbons				
Petroleum Range Organics (C6 - C10) HS_1D_TOTAL	mg/kg	0.1	MCERTS	-
TPH (C10 - C25) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-
TPH (C25 - C40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-
Pesticide and Herbicide Screen				
GCMS Pesticide Screen		N/A	NONE	None Detected

U/S = Unsuitable Sample I/S = Insufficient Sample

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* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2185486	HD1	1	0.1	Brown clay and loam with vegetation and gravel
2185487	HD2	1	0.1	Brown clay and loam with vegetation.
2185488	HD3	1	0.1	Brown clay and loam with stones and vegetation.
2185489	HD4	1	0.1	Brown clay and loam with stones.
2185490	DS1	1	0.1	Brown clay and loam with vegetation.
2185491	DS2	1	0.4	Brown clay and sand with stones.
2185492	DS3	1	0.2	Brown clay and loam with stones.
2185493	DS4	1	0.4	Brown clay and sand with vegetation.
2185494	DS5	1	0.1	Brown clay and sand with stones and gravel
2185495	DS6	1	0.1	Brown clay and sand with gravel.
2185496	DS7	1	0.1	Brown clay and sand with stones and gravel

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Project / Site name: Green Lane Chesterton

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
PRO (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
TPH Oils (Soils)	Determination of extractable hydrocarbons in soil by GC-MS/FID.	In-house method with silica gel split/clean up.	L076-PL	D	MCERTS
DRO (Soil)	Determination of extractable hydrocarbons in soil by GC-MS/FID.	In-house method with silica gel split/clean up.	L076-PL	D	MCERTS
GC Pesticide Screen (TIC)	Analysis of unknown pesticides by GCMS	GC Pesticide Screen (TIC)	L064B	D	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE

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Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

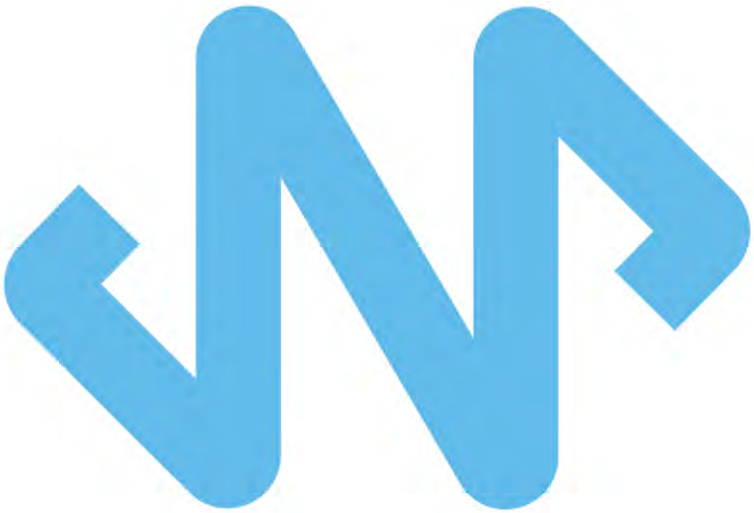
For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total



JNP GROUP

CONSULTING ENGINEERS

Brighouse
Woodvale House
Woodvale Road
Brighouse
West Yorkshire
HD6 4AB

telephone
01484 400691

email
brighouse@jnpgroup.co.uk

Chesham (HQ)
Link House
St Mary's Way
Chesham
Buckinghamshire
HP5 1HR

telephone
01494 771221

email
chesham@jnpgroup.co.uk

Glasgow
Orient Building
16 McPhater Street
Glasgow
G4 0HW

telephone
0141 378 0808

email
glasgow@jnpgroup.co.uk

Hartlepool
The Innovation Centre
Venture Court
Queens Meadow Business Park
Hartlepool
TS25 5TG

telephone
01429 239539

email
hartlepool@jnpgroup.co.uk

Leamington Spa
Marlborough House
48 Holly Walk
Leamington Spa
Warwickshire
CV32 4XP

telephone
01926 889955

email
leamingtonspa@jnpgroup.co.uk

Sheffield
MBP2 Meadowhall Business Park
Carbrook Hall Road
Sheffield
South Yorkshire
S9 2EQ

telephone
0114 244 3500

email
sheffield@jnpgroup.co.uk