GEA	Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH8**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 23/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30) 0.30	Concrete		
					(0.20) 0.50	Made Ground (brown sandy clay with gravel and brick and ash fragments)		
0.60	D1				(0.60) 1.10	Made Ground (dark brown silty sandy clay with occasional gravel and ash and brick fragments)		
					(0.20) 1.30	Made Ground (brown silty slightly sandy clay with rare chalk and ash fragments)		
					(0.50) 1.80	Soft brown sandy CLAY with fine to coarse sub-angular to sub-rounded gravel		
2.00-2.19	SPT(C) 25*/80 50/110	DRY	21,4/33,17		1.90 2.00	Dense orange-brown clayey SAND and fine to coarse angular to sub-rounded GRAVEL. Clay content reduces with depth.		
						Dense orange-brown sandy fine to coarser angular to sub-rounded GRAVEL		
						Terminated at 2.00m		

Remarks
Borehole terminated due to density of the soil at a depth of 2.00 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH9**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 18/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.25)	Concrete		
					0.25			
					0.30	Made Ground (crushed brick and concrete fragments)		
0.40	D1				(0.50)	Made Ground (dark brown silty sandy clay with occasional gravel and ash and brick fragments)		
					0.80			
					(0.15)	Made Ground (brown silty slightly sandy clay with rare chalk and ash fragments)		
					0.95			
1.00-1.44	SPT(C) 50/290	DRY	2,2/8,11,15,16		(0.15)			
1.00	D2				1.10			
					(0.40)	Soft brown sandy CLAY with fine to coarse sub-angular to sub-rounded gravel		
					1.50			
1.60	D3				(0.25)	Dense orange-brown clayey SAND and fine to coarse angular to sub-rounded GRAVEL. Clay content reduces with depth.		
1.75-1.92	SPT(C) 25*/80 50/85	DRY	22,3/40,10		1.75			
						Dense orange-brown sandy fine to coarser angular to sub-rounded GRAVEL		
						Complete at 1.75m		

Remarks
Borehole terminated due to density of the soil at a depth of 1.75 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH10**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 17/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	Made Ground (dark brown clayey silty and with gravel and rootlets)		
0.30	D1				0.20			
					(0.40)	Made Ground (dark brown and brown clayey sand with occasional gravel and brick and ash fragments)		
					0.60			
					(0.35)	Made Ground (brown slightly sandy clay with occasional gravel, chalk, brick and ash fragments)		
1.00-1.39	SPT(C) 50/235	DRY	6,7/10,15,20,5		0.95			
						Dense Orange-brown fine to coarse SAND and fine to coarse sub-angular to rounded GRAVEL		
1.50	D2				(1.05)			
					2.00			
2.00-2.33	SPT(C) 25*/125 52/200	DRY	12,13/18,18,16			Terminated at 2.45m		

Remarks
Borehole terminated due to density of the soil at a depth of 2.00 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH11**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 18/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.15) 0.15	Concrete		
					0.25	Made Ground (crushed brick fragments)		
0.50	D1				(0.65)	Made Ground (brown sandy clay with occasional gravel and ash and brick fragments)		
1.00-1.44	SPT(C) 50/290	DRY	8,13/13,14,17,6		0.90 1.00	Dense orange-brown very clayey sandy fine to coarse angular to sub-rounded GRAVEL		
						Terminated at 1.00m		

Remarks
Borehole terminated due to density of the soil at a depth of 1.00 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH12**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 18/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.25)	Concrete		
					0.25			
0.40	D1				0.30	Made Ground (crushed brick and concrete fragments)		
					(0.50)	Made Ground (dark brown silty sandy clay with occasional gravel and ash and brick fragments)		
					0.80			
					(0.15)	Made Ground (brown silty slightly sandy clay with rare chalk and ash fragments)		
					0.95			
1.00-1.44 1.00	SPT(C) 50/290 D2	DRY	2,2/8,11,15,16		(0.15) 1.10			
					(0.40)	Soft brown sandy CLAY with fine to coarse sub-angular to sub-rounded gravel		
					1.50			
1.60	D3				(0.25)	Dense orange-brown clayey SAND and fine to coarse angular to sub-rounded GRAVEL. Clay content reduces with depth.		
1.75-1.92	SPT(C) 25*/80 50/85	DRY	22,3/40,10		1.75			
						Dense orange-brown sandy fine to coarser angular to sub-rounded GRAVEL		
						Complete at 1.75m		

Remarks
Borehole terminated due to density of the soil at a depth of 1.75 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA	Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	**Site** 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	**Number** **BH13**
Excavation Method Opendrive Percussive Sampler (Terrier rig)	**Dimensions**	**Ground Level (mOD)**	**Client** Buccleuch Property	**Job Number** J19090
	Location	**Dates** 17/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.25) 0.25	Concrete		
0.40	D1				0.30 (0.50)	Made Ground (crushed brick and concrete fragments)		
					0.80 (0.15)	Made Ground (dark brown silty sandy clay with occasional gravel and ash and brick fragments)		
1.00-1.44 1.00	SPT(C) 50/290 D2	DRY	2,2/8,11,15,16		0.95 (0.15) 1.10	Made Ground (brown silty slightly sandy clay with rare chalk and ash fragments)		
					(0.40)	Soft brown sandy CLAY with fine to coarse sub-angular to sub-rounded gravel		
1.60 1.75-1.92	D3 SPT(C) 25*/80 50/85	DRY	22,3/40,10		1.50 (0.25) 1.75	Dense orange-brown clayey SAND and fine to coarse angular to sub-rounded GRAVEL. Clay content reduces with depth.		
						Dense orange-brown sandy fine to coarser angular to sub-rounded GRAVEL		
						Terminated at 1.75m		

Remarks
Borehole terminated due to density of the soil at a depth of 1.75 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH14**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 18/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.18) 0.18	Concrete		
0.30	D1				(0.17) 0.35	Made Ground (brown sandy clay with gravel and occasional brick fragments)		
					(0.35) 0.70	Made Ground (dark brown sandy clay with gravel and brick and ash fragments)		
					(0.20) 0.90			
1.00-1.33	SPT(C) 50/175	DRY	4,10/18,22,10		1.00	Firm brown slightly sandy CLAY with fine sub-angular to sub-rounded gravel		
						Dense orange-brown sandy fine to coarser angular to sub-rounded GRAVEL		
						Complete at 1.00m		

Remarks
Borehole terminated due to density of the soil at a depth of 1.00 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH15**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 23/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.17) 0.17	Concrete		
					0.25	Made Ground (crushed brick and concrete fragments)		
0.40	D1				(0.40)	Made Ground (brown sandy clay with gravel and chalk, brick and ash fragments)		
					0.65 (0.25)			
					0.90	Orange-brown sandy slightly clayey fine to coarse angular to sub-rounded GRAVEL		
1.00-1.26	SPT(C) 25*/110 50/145	DRY	13,12/27,23		1.00	Dense orange-brown SAND		
						Complete at 1.00m		

Remarks
Borehole terminated due to density of the stratum at a depth of 1.00 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH15

GEA	Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	**Site** 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	**Number** **BH16**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 18/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.22)	Concrete		
0.30	D1				0.22 (0.13)	Madew Ground (dark blackish grey sand)		
					0.35 (0.60)	Made Ground (brown sandy clay with gravel and brick, ash and concrete fragments)		
1.00-1.31	SPT(C) 50/155	DRY	10,13/18,28,4		0.95 1.00	Dense brown very clayey fine to coarse angular to sub-rounded GRAVEL		
						Terminated at 1.00m		

Remarks
Borehole terminated due to density of the soil at a depth of 2.00 m.
Groundwater not encountered.

Scale (approx)	**Logged By**
1:50	AT

Figure No.
J19090.BH13

GEA Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH17**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 18/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.23) 0.23	Concrete		
0.30	D1				(0.47) 0.70	Made Ground (brown very sandy clay with gravel and brick and ash fragments)		
					(0.20) 0.90	Made Ground (brown sandy clay with ash fragments)		
1.00-1.32	SPT(C) 50/170	DRY	10,14/17,26,7		1.00	Dense orange-brown sandy clayey fine to coarse angular to sub-rounded GRAVEL		
						Terminated at 1.00m		

Remarks
Borehole terminated due to density of the soil at a depth of 1.00 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA	Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH18**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 18/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.21)	Concrete		
					0.21			
					0.29	Made Ground (brown sandy clay with occasional gravel)		
0.40	D1				(0.36)			
					0.65	Made Ground (dark brown sandy clay with gravel and ash and brick fragments)		
0.80	D2				(0.35)			
1.00-1.24	SPT(C) 25*/105 50/135	DRY	14,11/28,22		1.00	Dense orange-brown clayey fine to coarse SAND and fine to coarse angular to sub-rounded GRAVEL		
						Terminated at 1.00m		

Remarks
Borehole terminated due to density of the soil at a depth of 1.00 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH19**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 18/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20) 0.20	Concrete		
					0.30 (0.40)	Made Ground (brown sandy clay with gravel and brick fragments)		
0.50	D1				0.70 (0.15)	Made Ground (dark brown sandy clay with gravel and brick and ash fragments)		
0.80	D2				0.85 (0.15)	Firm brown sandy CLAY		
1.00-1.33	SPT(C) 25*/145 50/180	DRY	11,14/21,21,8		1.00	Dense orange-brown sandy clayey fine to coarse angular to sub-rounded GRAVEL		
						Terminated at 1.00m		

Remarks
Borehole terminated due to density of the soil at a depth of 1.00 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	Site 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	Number **BH20**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 18/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.16) 0.16	Concrete		
0.20	D1				(0.19) 0.35	Made Ground (brown sandy clay with occasional gravel and chalk fragments)		
					(0.20) 0.55			
0.70	D2				(0.45)	Made Ground (dark brown sandy clay with gravel and occasional brick fragments)		
1.00-1.20	SPT(C) 25*/105 50/95	DRY	17,8/34,16		1.00	Dense brown clayey sandy fine to coarse angular to sub-rounded GRAVEL		
						Terminated at 1.00m		

Remarks
Borehole terminated due to density of the soil at a depth of 1.00 m.
Groundwater not encountered.

Scale (approx)	Logged By
1:50	AT

Figure No.
J19090.BH13

GEA	Geotechnical & Environmental Associates Widbury Barn | Widbury Hill | Ware | SG12 7QE	**Site** 233-236 Nestles Avenue, Hayes & Harlington, London UB3 4SH	**Number** **BH21**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Opendrive Percussive Sampler (Terrier rig)			Buccleuch Property	J19090
	Location	**Dates** 18/04/2019	**Agent** Gardiner and Theobald	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.17) 0.17	Concrete		
0.40	D1				(0.53)	Made Ground (brown sandy clay with gravel and occasional brick and ash fragments)		
					0.70 (0.30)	Dense brown clayey sandy fine to coarse angular to sub-rounded GRAVEL		
1.00-1.26	SPT(C) 25*/105 50/155	DRY	10,15/23,24,3		1.00	Terminated at 1.00m		

Remarks
Borehole terminated due to density of the soil at a depth of 1.00 m.
Groundwater not encountered.

Scale (approx)	**Logged By**
1:50	AT

Figure No.
J19090.BH13

Appendix C: RPS Factual Report

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Document status

Version	Revision	Authored by	Issue	Reviewed Approved by	Review date
1	0	Matthew Hemus	Draft Issue	Jim Lightbown	9 November 2021

Approval or issue

Jim Lightbown	Technical Director	9 November 2021

File ame

211028 R JER9132 MH Nestles Avenue Factual GI Report V1 R0

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DML Group

Contents

ables

Figures

Appendices

I ROD C IO

Background

1.1.1 RPS Consulting Services Ltd (RPS) was commissioned by DML Group to undertake a programme of ground investigation works at 233-236 Nestles Avenue, Hayes, UB3 4SH. A site location plan is provided as *Figure 1*.

1.1.2 At the time of the ground investigation works the site was vacant and comprised a number of warehouse type units with associated areas of external hardstanding. The warehouse in the west of the site had formerly been a motor museum whilst the remaining warehouses had been used as garages and storage for car parts. The site occupied an area of approximately 1.56ha and was rectangular in shape. The site boundary is indicated on *Figure 2*.

1.1.3 The south of the site was bound by Nestles Avenue with Hayes & Harlington train station and National Rail infrastructure to the north. Small industrial units were located to the east and west.

1.1.4 It is proposed to redevelop the site to include four residential buildings up to 11 storeys in height with two to three storey podium structures for car parking and plant storage.

1.1.5 The scope for the ground investigation works was based upon the A-squared Studio (A-squared) Specification for Site Investigation (ref: 1412-A2S-XX-XX-SP-Y-0001-01, issued April 2021) and subsequent correspondence with A-squared, acting as the Site Investigation Supervisor.

1.1.6 This factual report provides an account of the ground investigation undertaken by RPS in July and September 2021 and the subsequent groundwater monitoring programme between September and November 2021.

2 Investigation Standards

1.2.1 The investigation was set in the context of relevant UK legislation and associated regulatory guidance. This includes:

- BS10175:2011+A2:2017 Investigation of Potentially Contaminated Sites a Code of Practice (BSI, 2017);
- BS5930:2015+A1:2020 Code of Practice for Ground Investigations (BSI, 2020);
- UK Specification for Ground Investigation, Second Edition (ICE, 2012);
- BS EN ISO 22475-1:2006, Geotechnical Investigation and Testing – Sampling Methods and Groundwater Measurements;
- EN1997-2 Geotechnical Investigation and Testing;
- CIRIA document C583: Engineering in the Lambeth Group;
- P5-066TR Secondary Model Procedure for the Development of Appropriate Soil Sampling Strategies;
- EN 1997-1 (2004)+A1:2013: Eurocode 7: Geotechnical design - Part 1: General rules; and
- EN 1997-2 (2007): Eurocode 7: Geotechnical design - Part 2: Ground investigation and testing; and
- The Association of Geotechnical and Geoenvironmental Specialists (AGS) Code of Conduct.

2 GRO D I V S IGA IO WOR S

2 Description o Works

2.1.1 The ground investigation works were undertaken in two phases. The first phase on Monday 7th July and Tuesday 8th July 2021 and the second phase on Monday 13th September and Tuesday 14th September 2021. The investigation comprised a cable percussive borehole, window sample boreholes and foundation inspection pits. The scope included the following.

- Provision of a detailed Health and Safety Construction Phase Plan including risk assessments and method statements;
- Completion of TSA Level 4 Specification survey to clear exploratory hole locations of buried services;
- Coring and breaking out of hardstanding prior to drilling cable percussion and window sample boreholes;
- Drilling of one cable percussive boreholes to a depth of 30.00 metres below ground level (m bgl) (BH101);
- Drilling of five window samples boreholes to depths of between 1.00m and 1.50m bgl (WS102 to WS106);
- Installation of a gas and groundwater monitoring well standpipe within the cable percussive borehole;
- Installation of gas and groundwater monitoring well standpipes to various depths within three of the window sample boreholes;
- Breaking out of hardstanding at five hand dug foundation inspection pit locations prior to excavating;
- Excavation of five hand dug foundation inspection pits to a maximum depth of 1.20m bgl;
- On site screening analysis of soil samples for ionisable Volatile Organic Compounds (iVOCs) using a Photo-ionisation Detector (PID);
- Sampling of soil samples from boreholes and trial pits for analysis by a UKAS/MCERTS accredited laboratory for contaminants of concern;
- Sampling of groundwater (where present) from monitoring wells on one occasion for analysis by a UKAS/MCERTS accredited laboratory for contaminants of concern;
- Logging of soil and groundwater conditions;
- Full time site attendance by Geo-environmental Consultants from RPS;
- Groundwater level measurement and ground gas monitoring from monitoring wells on six occasions;
- Global positioning system (GPS) surveying of all new exploratory hole locations to within 5mm and to above Ordnance Datum (AOD) using a TOPCON GRS-1 GPS unit. Ground levels for WS102 and WS105 were unable to be determined due to their internal locations; and
- Locating of pre-existing cable percussion monitoring well locations installed as part of a previous ground investigation carried out by GEA in 2019 (BH01 to BH06), where identifiable.

2.1.2 The works were undertaken in two phases due to restricted access to the warehouse in the west of the site during the first phase and the possible presence of asbestos.

2.1.3 The locations of the exploratory holes are shown on *Figure 2* and the exploratory hole logs are provided in *Appendix A*.

2 2 Cable Percussive Borehole

2.2.1 During the ground investigation one borehole (BH101) was drilled using cable percussive drilling techniques to its design depth of 30.00m bgl.

2.2.2 A Geo-environmental Consultant from RPS was in attendance during the drilling works to log the soil arisings and collect representative soil samples.

2.2.3 Upon completion, a 50 mm HDPE combined gas and groundwater monitoring well was installed in the cable percussive borehole. The final depth of the installation details were selected based on the ground conditions identified during the works and instructions from the Site Investigation Supervisor. A summary of the depths and installations is outlined below in *Table 3-1*.

2.2.4 The monitoring well installation and depth is also shown on the cable percussive borehole log in *Appendix A*.

able 2 Summary o Cable Percussive Boreholes Depths and Installations

Borehole	Monitoring Well Diameter (mm)	Borehole Final Depth m bgl (mAOD)	Response one op m bgl (mAOD)	Response one Base m bgl (mAOD)	Geological Strata o one Response
BH101	50	30.00 (1.60)	1.00 (30.60)	6.00 (25.60)	Lynch Hill Gravel Member

2 Window Sample Boreholes

2.3.1 During the ground investigation a total of five boreholes were drilled using window sample drilling techniques to a maximum depth of 1.50m bgl. Concrete coring was attempted for WS101 to penetrate the concrete slab. However, due slow coring and an obstruction within the concrete at approximately 0.20m bgl this was unable to penetrate the concrete.

2.3.2 All the window samples refused within the Lynch Hill Gravel Member at shallower depths than designed. A summary of final depths is provided in *Table 2-2.*

2.3.3 A Geo-environmental Consultant from RPS was in attendance during the drilling works to log the soil arisings and collect representative soil samples.

2.3.4 Upon completion, 50 mm HDPE combined gas and groundwater monitoring wells were installed in three window sample boreholes. The final depths of the boreholes and installation details were selected based on the ground conditions identified during drilling and instruction from the client's consultant. The final depths and installations are summarised in *Table 2-2*.

2.3.5 The monitoring well installation and depths are also shown on the window sample borehole logs in *Appendix A*.

able 2 2 Summary o Window Sample Boreholes Depths and Installations

Borehole	Monitoring Well Diameter (mm)	Borehole Final Depth m bgl (mAOD)	Response one op m bgl (mAOD)	Response one Base m bgl (mAOD)	Geological Strata o one Response
WS102	50	1.00	0.50	1.00	Lynch Hill Gravel Member
WS103	50	1.30 (30.30)	1.00 (30.60)	1.30 (30.30)	Lynch Hill Gravel Member
WS104	No install	1.30 (30.30)	No Install	No install	No install

Borehole	Monitoring Well Diameter (mm)	Borehole Final Depth m bgl (mAOD)	Response one op m bgl (mAOD)	Response one Base m bgl (mAOD)	Geological Strata o Response one
WS105	No install	1.20	No install	No install	No install
WS106	50	1.50 (30.01)	1.00 (30.51)	1.50 (30.01)	Lynch Hill Gravel Member

*Unable to determine ground level for WS102 and WS105.

2 4 Hand Dug Foundation Inspection Pits

2.4.1 During the ground investigation a total of five hand dug foundation inspection pits were excavated to maximum depths of up to 1.20m bgl. These were undertaken in order to identify any foundations located within these areas.

2.4.2 Foundations were encountered within all trial pits.

2.4.3 A Geo-environmental Consultant from RPS logged the arisings and took samples for chemical analysis at appropriate depths based upon field observations and the ground investigation requirements. Foundations were logged and pictures taken.

2.4.4 Copies of the hand dug foundation inspection pit logs are provided in *Appendix A.*

2 nvironmental Soil Sampling

2.5.1 A PID fitted with a 10.6 eV lamp was used to conduct headspace tests on soil samples during intrusive works to detect the presence of VOCs. Selected soil samples taken from the boreholes and trial pits were analysed for volatiles and the highest reading recorded for each. The PID readings are included in the exploratory hole logs within *Appendix A.*

2.5.2 During the ground investigation, soil samples considered to be representative of soil conditions were collected from the exploratory hole locations. An outline of the sampling strategy is as follows:

- Environmental samples were generally taken within the top 0.50m in the Made Ground with a second sample within the top 1.00m where Made Ground was still present. One sample from the Lynch Hill Gravel Member was taken from the cable percussion borehole at 1.10m bgl.
- Environmental soil samples were collected in appropriate containers including glass amber jars supplied by the laboratory with minimal headspace; and
- Each disturbed environmental soil sample was labelled with a unique reference number together with the project details. All samples were stored in cool boxes and maintained at a temperature of +4ºC ± 2ºC together with the chain of custody records until collected and couriered to a MCERTS / UKAS accredited laboratory for testing.

2.5.3 The sample types and depths are presented in the exploratory hole logs in *Appendix A* and the sample codes used on the exploratory logs are provided in *Table 2-3*.

able 2 Summary o Soil Samples ypes

Sample ype Code	Sample ype
ES	Disturbed soil sample including glass amber jars and plastic tubs for chemical analysis.
PID	Soil sample ionisable VOC monitoring using a PID.

2 Geotechnical Soil Sampling and esting

2.6.1 Geotechnical sampling was undertaken throughout the depth of the cable percussive and window sample boreholes.

2.6.2 Bulk or small disturbed samples were taken at each change of strata and every 1.00m thereafter depending on the nature of the material.

2.6.3 Undisturbed samples (UT100) were taken in cohesive strata every 3.00m within the cable percussive boreholes.

2.6.4 In-situ Standard Penetration Tests (SPT) were undertaken at approximately 1.00m intervals in the first 5.00m and approximately 1.50m intervals thereafter in all boreholes, except in cohesive strata were alternating SPT and UT100 samples were taken.

2 Groundwater Sampling

2.7.1 Groundwater samples were taken from one monitoring standpipe installed during the ground investigation and four serviceable pre-existing wells installed as part of the 2019 GEA ground investigation using dedicated bailers on 7th October 2021. In addition, a groundwater sample was taken from pre-existing monitoring well BH06 on 13th October 2021, using a dedicated bailer.

2.7.2 The bailer sampling method involved lowering a PVC bailer slowly into the water column and allowing the water to fill from the base through a non-return ball valve. The bailer was then removed from the well and water collected. Once the well had been developed a sample was taken directly from the bailer.

2.7.3 Samples were placed in laboratory supplied and prepared bottles, labelled at the time of sampling using indelible marker pens and then packed into cool boxes and dispatched to the laboratories. Sample bottles were filled to the top in order to form an inverse meniscus preventing air bubbles forming, thus minimising the potential loss of any volatile gases dissolved in the water sample.

2.7.4 Pre-existing monitoring well BH04 location could not be sampled during these visits as it couldn't be located.

2 Groundwater Level Measurement and Ground Gas Monitoring

2.8.1 Six rounds of groundwater level measurement and ground gas monitoring were undertaken at approximately weekly intervals upon completion of the drilling works. In addition to the monitoring standpipes installed during the ground investigation, five serviceable pre-existing monitoring wells from the 2019 GEA ground investigation were also monitored as part of the scope (BH01 to BH03, BH05 & BH06). The location of the sampling points is shown on *Figure 2*. Due to damaged head works monitoring of BH06 could not be undertaken during the first two visits.

2.8.2 Monitoring well installations were initially monitored using a GFM430 hand held landfill gas analyser for concentrations of methane, carbon dioxide, carbon monoxide, hydrogen sulphide and oxygen. In addition, the flow rate and barometric pressure were recorded. A PID was also used to take measurements for iVOCs at each installation.

2.8.3 Following ground gas monitoring, the following measurements were recorded at all of the monitoring wells;

- The groundwater level (from ground level);
- The depth to the base of the monitoring well (from ground level); and
- Thickness of hydrocarbon free product (if present).

2.8.4 The results of the ground gas and groundwater level monitoring are provided in *Appendix B*.

2 Laboratory Analysis

Soil Chemical Analysis

2.9.1 Soil samples taken from boreholes and hand dug trial pits during the ground investigation works were submitted to a UKAS/MCERTS accredited laboratory for chemical analysis. The Site Investigation Supervisor subsequently selected the samples and analyses to be scheduled.

2.9.2 A total of 15 no. soil samples were submitted to the laboratory. Testing was undertaken on 7 no. samples for heavy metals, free cyanide, total cyanide, pH, Ammoniacal nitrogen, nitrate, nitrite, chlorate, sulphur, total sulphate, water soluble sulphate, speciated total petroleum hydrocarbons (TPH-CWG incl. BTEX), speciated polycyclic aromatic hydrocarbons (PAH), heavy metals leachate and speciated PAH leachate.

2.9.3 In addition, 5 no. soil samples were analysed for total phenols, semi volatile organic compounds (SVOCs) and polychlorinated biphenyls (PCBs).

2.9.4 Total Organic Carbon (TOC), organic content and Fraction Organic Carbon (FOC) analysis was undertaken on 9 no. soil samples.

2.9.5 A total of 7 no. soil samples were screened for asbestos

2.9.6 The results of the chemical analysis for soil samples are provided in *Appendix C*.

Water Chemical Analysis

2.9.7 A total of 6 no. groundwater samples were taken during subsequent monitoring and submitted to a UKAS/MCERTS accredited laboratory for chemical analysis. The Site Investigation Supervisor subsequently selected the samples and analyses to be scheduled.

2.9.8 All 6 no. groundwater samples were analysed for free cyanide, heavy metals, TPH CWG (incl. BTEX) and speciated PAH.

2.9.9 A total of 5 no. groundwater samples were analysed for VOCs.

2.9.10 One groundwater sample was analysed for PCBs.

2.9.11 The results of the chemical analysis for groundwater samples are included in *Appendix D*.

Geotechnical Analysis

2.9.12 A total of 68 no. samples were submitted to a UKAS accredited geotechnical laboratory for analysis. These included samples from the Made Ground, Lynch Hill Gravel Member and the London Clay Formation.

2.9.13 6 no. samples had single stage triaxial tests performed, 8 no. samples underwent Atterberg limit testing using the 4 point method. 6 no. samples were tested for particle size distribution with 4 no. samples undergoing further sedimentation testing. 17 no. samples were tested for natural water content. BRE SD1 Suite analysis was carried out on 9 no. samples.

2.9.14 Geotechnical laboratory analysis results for soils are provided in *Appendix E*.

S MMAR OF GRO D CO DI IO S

3.1.1 The strata encountered during the intrusive investigations are summarised in the table below and described in the following section.

able Summary o Ground Conditions

Strata	Depth to top o strata (m AOD)	hickness (m)
Concrete	Ground level (31.60)	0.15 to 0.20
Tarmacadam	Ground level (31.51)	0.05
Made Ground	0.05 to 0.20 (31.46 to 31.40)	0.15 to 1.00
Lynch Hill Gravel Member	0.30 to 1.20 (30.40 to 30.71)	4.70
London Clay Formation	5.70 (25.90)	Not proven

3.1.2 The above summary of ground conditions only takes into account encountered strata identified during the works detailed within this report and does not take into account additional information from previous site ground investigations.

2 Field vidence o Contamination

Visual vidence o Contamination

3.2.1 Visual Evidence of Contamination encountered during the intrusive investigations are summarised in the table below.

able 2 Visual vidence o Contamination

Monitoring Well ID	Depth m bgl (m AOD)	Strata	Observation	Location on site
BH101	0.30 to 1.00 (31.30 to 30.60)	Made Ground	Coal fragments	Central
WS104	0.20 to 0.40 (31.40 to 31.20)	Made Ground	Occasional ash	South East
WS104	0.40 to 1.20 (31.20 to 30.40)	Made Ground	Coal fragments	South East
WS106	0.05 to 0.80 (31.46 to 30.71)	Made Ground	Frequent ash and slag fragments	South

FIG R S

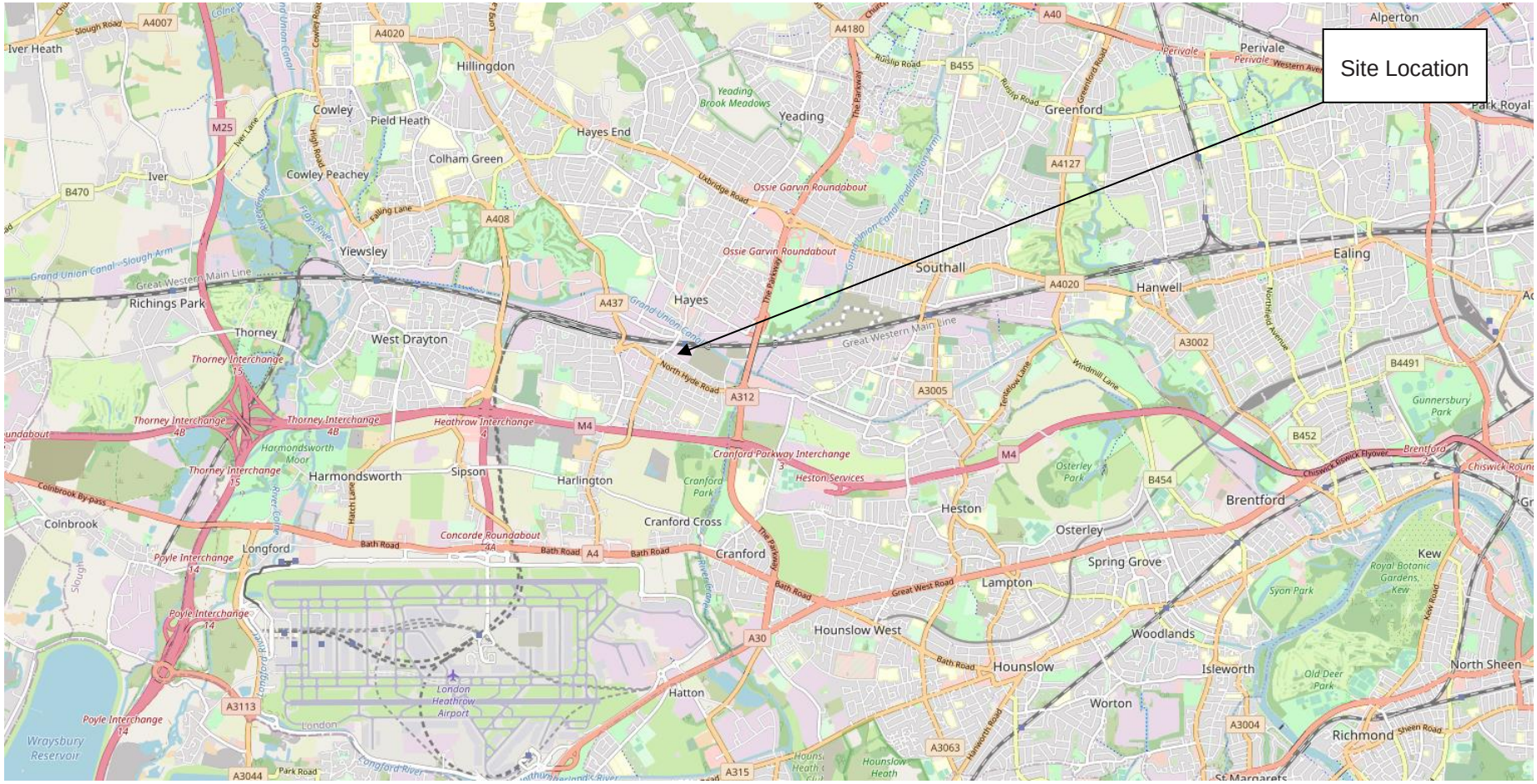

Figure Site Location Plan.

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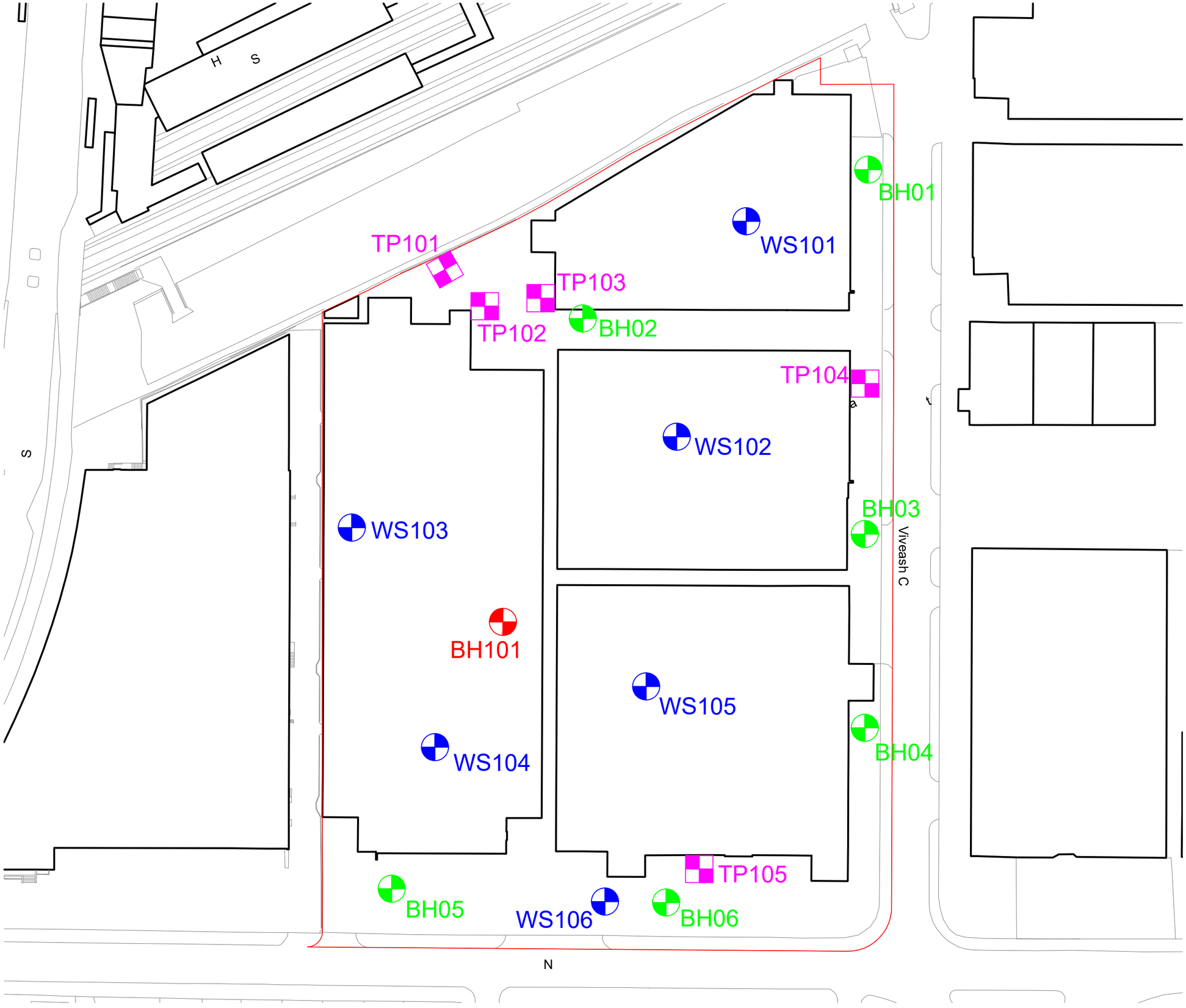
Client	DML Group		
Pro ect	233 – 236 Nestles Avenue		
Checked By	JL		
ob Re	JER9132	**Date**	November 2021



Notes

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Key

- RPS Cable Percussion Borehole Locations
- RPS Window Sample Borehole Locations
- RPS Foundation Inspection Pit Locations
- GEA Cable Percussion Borehole Locations

Rev	Description	By	CB	Date

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T: 01454 853 000 **E:** rpssw@rpsgroup.com

Client: A-Squared

Project: 233-236 Nestles Avenue

Title: Exploratory Hole Location Plan

Status	Drawn By	PM/Checked by
DRAFT	MH	MH

Job Ref	Scale @ A3	Date Created
JER9132	NTS	Sept 21

RPS Drawing / Figure Number: JER9132-002D

Rev: 00

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APP DIC S

Appendix A

xploratory Hole Logs

	Contract Name: 233- 236 Nestles Avenue		Client: A- Squared Studio		Borehole ID: BH101
	Contract Number: JER9132	Start Date: 13/09/2021	End Date: 14/09/2021	Checked By: KD	Status: DRAFT
					Sheet 1 of 4
Cable Percussion Borehole Log	Easting: 509742.0	Northing: 179317.0	Ground Level: 31.60mOD	Plant Used: Dando 2000	Logged By: MH
					Scale: 1:50
Weather: Cloudy		Termination: At design depth.		SPT Hammer: SEDS7 Energy Ratio: 62/6%	

Samples & In Situ Testing				Strata Details				Groundwater	
Depths	Type/ Ref	SPT	Testing	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
				31.40	0.20		Concrete		
0.30 - 0.50	B			31.30	0.30		CONCRETE		
0.35	ES		PID 0.35m, 0.0ppm				Yellow brown gravelly clay. Gravel is angular fine to coarse concrete and flint.		
0.60 - 1.00	B				(0.70)		MADE GROUND		
0.80	ES		PID 0.80m, 0.0ppm				Brown sandy gravelly clay with low cobble content of brick. Gravel is angular to subangular fine to coarse of flint, brick, concrete and coal. Sand is fine to coarse.		
1.10	ES		PID 1.10m, 0.0ppm	30.60	1.00		MADE GROUND		
1.20 - 1.70	B	SPT(C) 1.20m, N=51 (6,6/6,6,15,24)					Dense to very dense orange yellowish sandy subangular to rounded fine to coarse flint GRAVEL. LYNCH HILL GRAVEL MEMBER		
2.00 - 2.50	B	SPT(C) 2.00m, 50 (5,5/50 for 190mm)	PID 2.00m, 0.0ppm						
3.00 - 3.50	B	SPT(C) 3.00m, 50 (5,8/50 for 210mm)	PID 3.00m, 0.0ppm		(4.70)				
4.00 - 4.50	B	SPT(C) 4.00m, N=30 (3,5/7,8,7,8)	PID 4.00m, 0.0ppm						
5.00 - 5.50	B	SPT(C) 5.00m, N=43 (4,5/9,9,10,15)	PID 5.00m, 0.0ppm						
				25.90	5.70		Stiff brown CLAY.		
5.90 - 5.95	D				(0.30)		LONDON CLAY FORMATION		
6.00	D		PID 6.00m, 0.0ppm	25.60	6.00		Stiff blueish grey CLAY. LONDON CLAY FORMATION		
6.50 - 6.95	D	SPT(S) 6.50m, N=16 (2,2/2,4,4,6)							
6.50 - 7.00	B								
8.00	D		Ublow=90, 100% Recovery						
8.00 - 8.45	UT								
8.50	D								
9.00	D								
		SPT(S) 9.50m, N=22 (2,3/4,5,6,7)							
10.00	D								

Start & End of Shift Observations				
Date	Time	Depth (m)	Casing (m)	Water (m)

Installation				
Ref	Top (m)	Base (m)	Type	Dia (mm)
1	0.00	1.00	PLAIN	50
1	1.00	6.00	SLOTTED	50

Remarks:

1. Water added to aid drilling in granular strata.
2. Easting and Northing approximate values taken from mapping due to internal location.
3. Groundwater and gas monitoring standpipe installed within response zone between 1.00m and 6.00m bgl.

Chiselling			
From (m)	To (m)	Duration	Remarks

Borehole Diameter	
Depth (m)	Dia (mm)
30.00	150

Casing Diameter	
Depth (m)	Dia (mm)

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

Contract Name: 233- 236 Nestles Avenue			Client: A- Squared Studio	Borehole ID: BH101
Contract Number: JER9132	Start Date: 13/09/2021	End Date: 14/09/2021	Checked By: KD	Status: DRAFT
Cable Percussion Borehole Log	Easting: 509742.0	Northing: 179317.0	Ground Level: 31.60mOD	Plant Used: Dando 2000
Logged By: MH	Scale: 1:50			Sheet 2 of 4
Weather: Cloudy	Termination: At design depth.		SPT Hammer: SEDS7 Energy Ratio: 62/6%	

Samples & In Situ Testing				Strata Details				Groundwater	
Depths	Type/ Ref	SPT	Testing	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
			PID 10.00m, 0.0ppm						
11.00	D		Ublow=100, 100%						
11.00 - 11.45	UT		Recovery						
11.45	D								
12.00	D								
12.50 - 12.95	D	SPT(S) 12.50m, N=23 (2,4/4,6,6,7)							
13.00	D								
14.00	D		Ublow=100, 100%						
14.00 - 14.45	UT		Recovery						
15.00	D		PID 15.00m, 0.0ppm		(24.00)				
15.50 - 15.95	D	SPT(S) 15.50m, N=31 (2,4/6,7,8,10)							
16.00	D								
17.00	D		Ublow=100, 78%						
17.00 - 17.35	UT		Recovery						
17.40	D								
18.00	D								
18.50 - 18.95	D	SPT(S) 18.50m, N=33 (3,4/6,7,8,12)							
19.00	D								
20.00 - 20.45	UT								

Start & End of Shift Observations

Date	Time	Depth (m)	Casing (m)	Water (m)

Installation

Ref	Top (m)	Base (m)	Type	Dia (mm)
1	0.00	1.00	PLAIN	50
1	1.00	6.00	SLOTTED	50

Remarks:

1. Water added to aid drilling in granular strata.
2. Easting and Northing approximate values taken from mapping due to internal location.
3. Groundwater and gas monitoring standpipe installed within response zone between 1.00m and 6.00m bgl.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

Chiselling

From (m)	To (m)	Duration	Remarks

Borehole Diameter

Depth (m)	Dia (mm)
30.00	150

Casing Diameter

Depth (m)	Dia (mm)

Contract Name:		Client:			Borehole ID:
233- 236 Nestles Avenue		A- Squared Studio			BH101
Contract Number:	Start Date:	End Date:	Checked By:	Status:	Sheet 3 of 4
JER9132	13/09/2021	14/09/2021	KD	DRAFT	
Cable Percussion Borehole Log	Easting: 509742.0	Northing: 179317.0	Ground Level: 31.60mOD	Plant Used: Dando 2000	Logged By: MH	Scale: 1:50

Weather: Cloudy | Termination: At design depth. | SPT Hammer: SEDS7 Energy Ratio: 62/6%

Samples & In Situ Testing				Strata Details				Groundwater	
Depths	Type/ Ref	SPT	Testing	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
			Ublow=100, 100% Recovery						
20.50	D								
21.00	D						Claystone band.		
22.00	D	SPT(S)							
22.00 - 22.50	B	22.00m, N=32 (3,4/6,8,9,9)							
23.00	D		Ublow=100, 100% Recovery						
23.00 - 23.45	UT								
23.50	D						Claystone band,		
24.00	D								
24.50 - 24.95	D	SPT(S) 24.50m, N=32 (3,4/6,8,9,9)							
25.00	D								
26.00	D		Ublow=100, 100% Recovery						
26.00 - 26.45	UT								
26.50	D								
27.00	D								
27.50 - 27.95	D	SPT(S) 27.50m, 50 (50 for 20mm/50 for 5mm)					Claystone.		
28.00	D								
29.00	D		Ublow=100, 100% Recovery						
29.00 - 29.45	UT								
29.50	D								
30.00 - 30.45	D			1.60	30.00				

Start & End of Shift Observations				
Date	Time	Depth (m)	Casing (m)	Water (m)

Installation				
Ref	Top (m)	Base (m)	Type	Dia (mm)
1	0.00	1.00	PLAIN	50
1	1.00	6.00	SLOTTED	50

Remarks:
1. Water added to aid drilling in granular strata.
2. Easting and Northing approximate values taken from mapping due to internal location.
3. Groundwater and gas monitoring standpipe installed within response zone between 1.00m and 6.00m bgl.

Chiselling			
From (m)	To (m)	Duration	Remarks

Borehole Diameter		Casing Diameter	
Depth (m)	Dia (mm)	Depth (m)	Dia (mm)
30.00	150		

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

	Contract Name: 233- 236 Nestles Avenue		Client: A- Squared Studio		Borehole ID: BH101
	Contract Number: JER9132	Start Date: 13/09/2021	End Date: 14/09/2021	Checked By: KD	Status: DRAFT	Sheet 4 of 4
Cable Percussion Borehole Log	Easting: 509742.0	Northing: 179317.0	Ground Level: 31.60mOD	Plant Used: Dando 2000	Logged By: MH	Scale: 1:50
Weather: Cloudy		Termination: At design depth.		SPT Hammer: SEDS7 Energy Ratio: 62/6%	

Samples & In Situ Testing				Strata Details				Groundwater	
Depths	Type/ Ref	SPT	Testing	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
		SPT(S) 30.00m, N=36 (4,6/7,9,9,11)					End of Borehole at 30.00m		

31 32 33 34 35 36 37 38 39 40

Start & End of Shift Observations

Date	Time	Depth (m)	Casing (m)	Water (m)

Installation

Ref	Top (m)	Base (m)	Type	Dia (mm)
1	0.00	1.00	PLAIN	50
1	1.00	6.00	SLOTTED	50

Remarks:

1. Water added to aid drilling in granular strata.
2. Easting and Northing approximate values taken from mapping due to internal location.
3. Groundwater and gas monitoring standpipe installed within response zone between 1.00m and 6.00m bgl.

Chiselling

From (m)	To (m)	Duration	Remarks

Borehole Diameter

Depth (m)	Dia (mm)
30.00	150

Casing Diameter

Depth (m)	Dia (mm)

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

	Contract Name: 233- 236 Nestles Avenue		Client: A- Squared Studio		Borehole ID: WS101
	Contract Number: JER9132	Start Date: 08/07/2021	End Date: 08/07/2021	Checked By: KD	Status: DRAFT
					Sheet 1 of 1
Windowless Borehole Log	Easting: 509805.0	Northing: 179348.0	Ground Level:	Plant Used: Dart Competeitor Drilling Rig	Logged By: JG
					Scale: 1:25
Weather: Clear		Termination: Refusal in concrete.			

Samples & In Situ Testing				Strata Details				Groundwater	
Depths	Type/ Ref	SPT	Testing	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
					0.20		Concrete CONCRETE		
							End of Borehole at 0.20m		

1 2 3 4 5

Start & End of Shift Observations				
Date	Time	Depth (m)	Casing (m)	Water (m)

Installation				
Ref	Top (m)	Base (m)	Type	Diameter (mm)

Remarks:

1. Easting and Northing approximate values taken from mapping due to internal location.

Windowless Sample Run Details				
Test Number	Diameter (mm)	Depth Top (m)	Depth Base (m)	Recovery (%)

Casing	
Depth (m)	Diameter (mm)

Water Strikes					
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

Contract Name: 233- 236 Nestles Avenue		Client: A- Squared Studio		Borehole ID: WS102
Contract Number: JER9132	Start Date: 08/07/2021	End Date: 08/07/2021	Checked By: KD	Status: DRAFT
Windowless Borehole Log	Easting: 509780.0	Northing: 179330.0	Ground Level:	Plant Used: Dart Competitor Drilling Rig
Logged By: JG	Scale: 1:25	Sheet 1 of 1		
Weather: Fine	Termination: Refusal in the Lynch Hill Gravel Member.	SPT Hammer: VC01 Energy Ratio: 60%		

Samples & In Situ Testing				Strata Details				Groundwater	
Depths	Type/ Ref	SPT	Testing	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
0.20	ES		PID 0.20m, 0.0ppm		0.15		Concrete (reinforced) CONCRETE		
					0.30		Soft dark brown slightly gravelly clayey silt. Gravel is angular to subangular fine to medium of brick, concrete and chalk. MADE GROUND		
0.50	D						Soft orange brown slightly gravelly sandy SILT. Gravel is subangular to subrounded fine to medium of flint. LYNCH HILL GRAVEL MEMBER		
0.50	ES		PID 0.50m, 0.0ppm		(0.70)				
1.00	D	SPT(C) 1.00m, 50 (5,5/50 for 220mm)			1.00		End of Borehole at 1.00m		

1
2
3
4
5

Start & End of Shift Observations				
Date	Time	Depth (m)	Casing (m)	Water (m)

Installation				
Ref	Top (m)	Base (m)	Type	Diameter (mm)
1	0.00	0.50	PLAIN	50
1	0.50	1.00	SLOTTED	50

Remarks:

1. No groundwater encountered.
2. Easting and Northing approximate values taken from mapping due to internal location.
3. Groundwater and gas monitoring standpipe installed within response zone between 0.50m and 1.00m bgl.

Windowless Sample Run Details				
Test Number	Diameter (mm)	Depth Top (m)	Depth Base (m)	Recovery (%)
1		0.00	1.00	100

Casing	
Depth (m)	Diameter (mm)

Water Strikes					
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

Contract Name: 233- 236 Nestles Avenue		Client: A- Squared Studio		Borehole ID: WS103
Contract Number: JER9132	Start Date: 14/09/2021	End Date: 14/09/2021	Checked By: KD	Status: DRAFT
Windowless Borehole Log	Easting: 509732.0	Northing: 179356.0	Ground Level: 31.60mOD	Plant Used: Dart WS Rig
Logged By: MH	Scale: 1:25			Sheet 1 of 1

Weather: Raining

Termination: Refusal in the Lynch Hill Gravel Member.

SPT Hammer: DART399 Energy Ratio: 63%

Samples & In Situ Testing				Strata Details				Groundwater	
Depths	Type/ Ref	SPT	Testing	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
				31.40	0.20		Concrete. CONCRETE		
0.25	ES		PID 0.25m, 5.1ppm	31.30	0.30		Brown gravelly clay. Gravel is angular to subangular fine to coarse of brick, flint and concrete. MADE GROUND		
				31.25	0.35		Yellow angular brick cobble. MADE GROUND		
0.50	D								
0.70	ES		PID 0.70m, 0.0ppm		(0.65)		Brown gravelly clay. Gravel is angular to subangular fine to coarse of brick, flint and concrete. MADE GROUND		
1.10	D	SPT(C) 1.00m, 50 (7,9/50 for 225mm)		30.60	1.00		Brownish orange clayey sandy subangular to rounded fine to coarse flint GRAVEL. Sand is fine to coarse. LYNCH HILL GRAVEL MEMBER		
				30.40	1.20		Yellowish sandy subangular to rounded fine to coarse flint GRAVEL. Sand is fine to medium. LYNCH HILL GRAVEL MEMBER		
				30.30	1.30		End of Borehole at 1.30m		

1 2 3 4 5

Start & End of Shift Observations

Date	Time	Depth (m)	Casing (m)	Water (m)

Installation

Ref	Top (m)	Base (m)	Type	Diameter (mm)
1	0.00	1.00	PLAIN	50
1	1.00	1.30	SLOTTED	50

Remarks:

1. No groundwater encountered.
2. Easting and Northing approximate values taken from mapping due to internal location.
3. Groundwater and gas monitoring standpipe installed within response zone between 1.00m and 1.30m bgl.

Windowless Sample Run Details

Test Number	Diameter (mm)	Depth Top (m)	Depth Base (m)	Recovery (%)
1		0.00	1.00	100
2		1.00	1.30	100

Casing

Depth (m)	Diameter (mm)

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

Contract Name: 233- 236 Nestles Avenue			Client: A- Squared Studio		Borehole ID: WS104
Contract Number: JER9132	Start Date: 14/09/2021	End Date: 14/09/2021	Checked By: KD	Status: DRAFT	Sheet 1 of 1
Windowless Borehole Log	Easting: 509715.0	Northing: 179296.0	Ground Level: 31.60mOD	Plant Used: Dart WS Rig	Logged By:	Scale: 1:25
Weather: Raining	Termination: Refusal in the Lynch Hill Gravel Member.		SPT Hammer: DART399 Energy Ratio: 63%		

Samples & In Situ Testing				Strata Details				Groundwater	
Depths	Type/ Ref	SPT	Testing	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
				31.40	0.20		Concrete. CONCRETE		
0.30	ES		PID 0.30m, 0.0ppm	31.20	0.40		Dark brown clayey fine to coarse sand with occasional ash. MADE GROUND		
0.50	D						Brown gravelly clay. Gravel is angular to subangular fine to coarse flint, brick, concrete and coal. MADE GROUND		
0.80	ES		PID 0.80m, 0.0ppm		(0.80)				
1.00	D	SPT(C) 1.00m, 50 (1,0/50 for 255mm)							
				30.40	1.20		Yellowish sandy subangular to rounded fine to coarse flint GRAVEL. LYNCH HILL GRAVEL MEMBER		
				30.30	1.30		End of Borehole at 1.30m		

1 2 3 4 5

Start & End of Shift Observations				
Date	Time	Depth (m)	Casing (m)	Water (m)

Installation				
Ref	Top (m)	Base (m)	Type	Diameter (mm)

Remarks:

1. No groundwater encountered.
2. Easting and Northing approximate values taken from mapping due to internal location.
3. Backfilled with arisings and finished with concrete.

Windowless Sample Run Details				
Test Number	Diameter (mm)	Depth Top (m)	Depth Base (m)	Recovery (%)
1		0.00	1.00	100
2		1.00	1.30	100

Casing	
Depth (m)	Diameter (mm)

Water Strikes					
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

	Contract Name: 233- 236 Nestles Avenue		Client: A- Squared Studio		Borehole ID: WS105
	Contract Number: JER9132	Start Date: 08/07/2021	End Date: 08/07/2021	Checked By: KD	Status: DRAFT	Sheet 1 of 1
Windowless Borehole Log	Easting: 509749.0	Northing: 179285.0	Ground Level:	Plant Used: Dart Competeitor Drilling Rig	Logged By: JG	Scale: 1:25
Weather: Fine.		Termination: Refusal in the Lynch Hill Gravel Member.		SPT Hammer: VC01 Energy Ratio: 60%	

Samples & In Situ Testing				Strata Details				Groundwater	
Depths	Type/ Ref	SPT	Testing	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
					0.17		Concrete CONCRETE		
0.50 0.60	ES D		PID 0.50m, 0.0ppm		(0.83)		Light brown grey gravelly clay with high cobble content of angular concrete. Gravel is angular to subangular fine to coarse of flint and concrete. MADE GROUND		
		SPT(C) 1.00m, 50 (3,9/50 for 275mm)			1.00				
					1.20		Orange brown slightly silty sandy fine to coarse angular to subangular flint GRAVEL. LYNCH HILL GRAVEL MEMBER End of Borehole at 1.20m		

1 2 3 4 5

Start & End of Shift Observations				
Date	Time	Depth (m)	Casing (m)	Water (m)

Installation				
Ref	Top (m)	Base (m)	Type	Diameter (mm)

Remarks:

1. No groundwater encountered.
2. Easting and Northing approximate values taken from mapping due to internal location.
3. Backfilled with arisings and finished with concrete.

Windowless Sample Run Details				
Test Number	Diameter (mm)	Depth Top (m)	Depth Base (m)	Recovery (%)
1		0.00	1.00	100
2		1.00	2.00	20

Casing	
Depth (m)	Diameter (mm)

Water Strikes					
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

	Contract Name: 233- 236 Nestles Avenue		Client: A- Squared Studio		Borehole ID: WS106
	Contract Number: JER9132	Start Date: 08/07/2021	End Date: 08/07/2021	Checked By: KD	Status: DRAFT	Sheet 1 of 1
Windowless Borehole Log	Easting: 509727.9	Northing: 179252.0	Ground Level: 31.51mOD	Plant Used: Dart Competitor Drilling Rig	Logged By: JG	Scale: 1:25
Weather: Fine	Termination: Refusal in the Lynch Hill Gravel Member.		SPT Hammer: VC01 Energy Ratio: 60%		

Samples & In Situ Testing				Strata Details				Groundwater	
Depths	Type/ Ref	SPT	Testing	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
				31.46	0.05		Tarmacadam TARMACADAM		
0.40	ES		PID 0.40m, 0.0ppm		(0.75)		Soft brown slightly gravelly clayey silt with frequent ash pockets (5cm x 3cm). Gravel is angular to subangular fine to medium of brick, concrete and slag. MADE GROUND		
0.50	D								
				30.71	0.80		Orange brown slightly silty sandy fine to coarse angular to subangular flint GRAVEL. LYNCH HILL GRAVEL MEMBER		
1.00	D	SPT(C) 1.00m, 50 (5,6/50 for 290mm)			(0.70)				
1.50	D			30.01	1.50		End of Borehole at 1.50m		

1
2
3
4
5

Start & End of Shift Observations				
Date	Time	Depth (m)	Casing (m)	Water (m)

Installation				
Ref	Top (m)	Base (m)	Type	Diameter (mm)
1	0.00	0.50	PLAIN	50
1	0.50	1.00	SLOTTED	50

Remarks:

1. No groundwater encountered.
2. Easting and Northing approximate values taken from mapping due to internal location.
3. Groundwater and gas monitoring standpipe installed within response zone between 0.50m and 1.00m bgl.

Windowless Sample Run Details				
Test Number	Diameter (mm)	Depth Top (m)	Depth Base (m)	Recovery (%)
1		0.00	1.00	100
2		1.00	2.00	50

Casing	
Depth (m)	Diameter (mm)

Water Strikes					
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

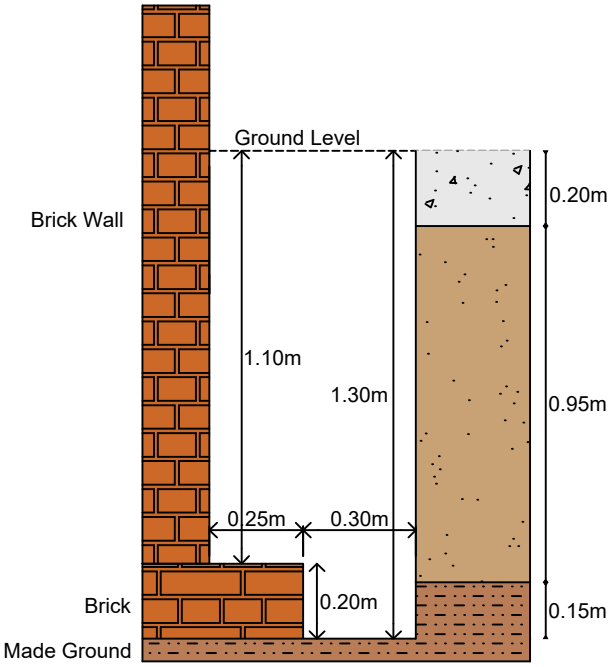
20 Farringdon Street
London, EC4A 4AB
T: 020 3691 0500 E: rpslon@rpsgroup.com

Client	A-Squared Studio
Project	233 - 236 Nestles Avenue
Hand Pit No.	TP101
Job Ref	JER9132
Date Pit Dug	07/07/2021
Status	DRAFT
Pit Logged by	JG
Drawn By	MH
PM/Checked by	KD

Notes
1. Trial pit terminated at 1.30m bgl.
2. Trial pit was stable upon completion.
3. Trial pit was dry.
4. Trial pit was backfilled with arisings.
5. Environmental Sample taken at 0.40m bgl.
6. Eastings: 509765, Northings: 179372.
7. Ground Level: 32.151m AOD.

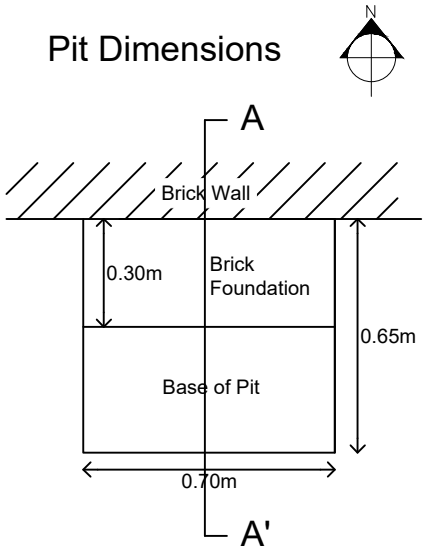
TP101

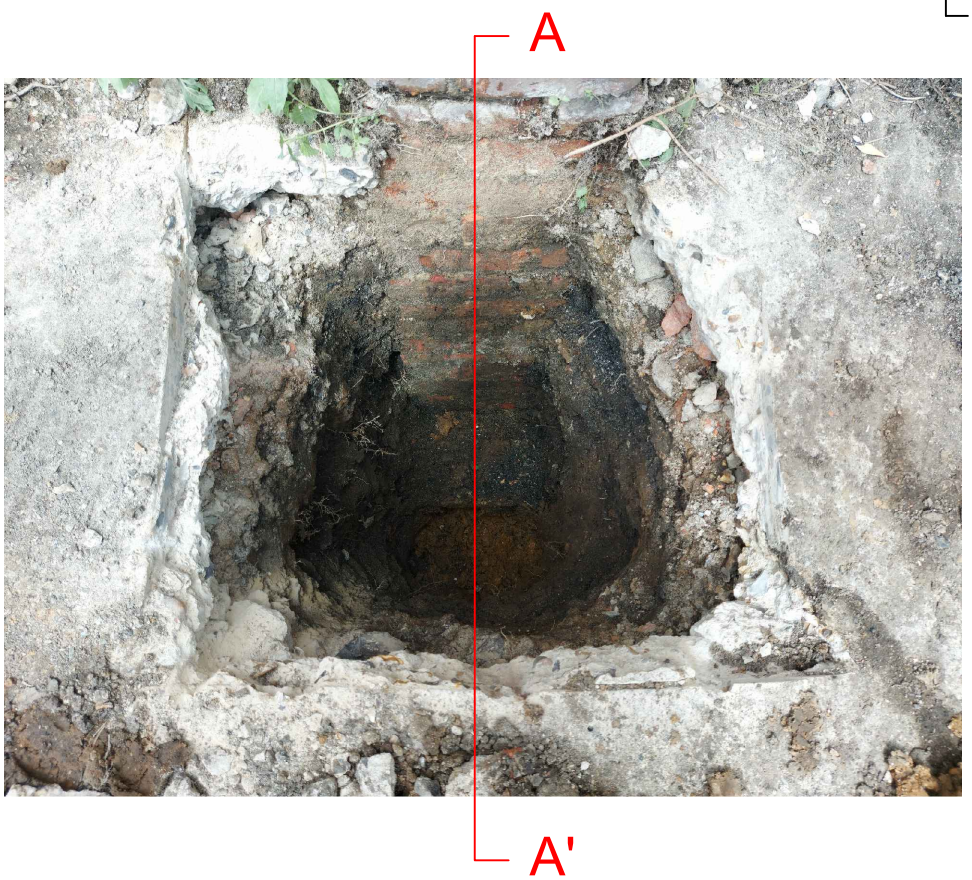
Section AA'



Depth (m bgl)	Description
0.00 - 0.20	Concrete.
0.05 - 0.40	Brown slightly silty sandy gravel with medium cobble content of brick and concrete. Gravel is angular to subangular fine to coarse of concrete, brick, clinker and coal fragments. Sand is fine to coarse. (Made Ground)
0.40 - 1.20	Soft to firm orange brown slightly gravelly clay with occasional black ash pockets (2cm x 2cm). Gravel is angular to subangular fine to coarse of brick. (Made Ground)

Pit Dimensions





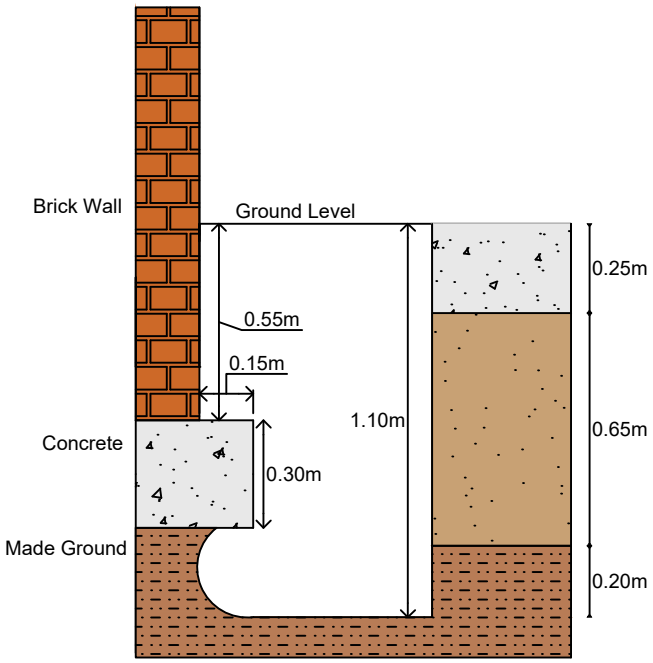
20 Farringdon Street
London, EC4A 4AB
T: 020 3691 0500 **E:** rpslon@rpsgroup.com

Client	A-Squared Studio
Project	233 - 236 Nestles Avenue
Hand Pit No.	TP102
Job Ref	JER9132
Date Pit Dug	07/07/2021
Status	DRAFT
Pit Logged by	JG
Drawn By	MH
PM/Checked by	KD

Notes

1. Trial pit terminated at 1.10m bgl.
2. Trial pit was stable upon completion.
3. Trial pit was dry.
4. Trial pit was backfilled with arisings.
5. Environmental Sample taken at 0.40m bgl.
6. Eastings: 509758, Northings: 179362.
7. Ground Level: 31.524m AOD.

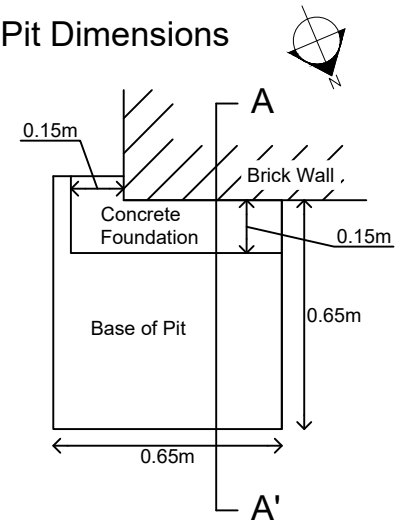
Section AA'

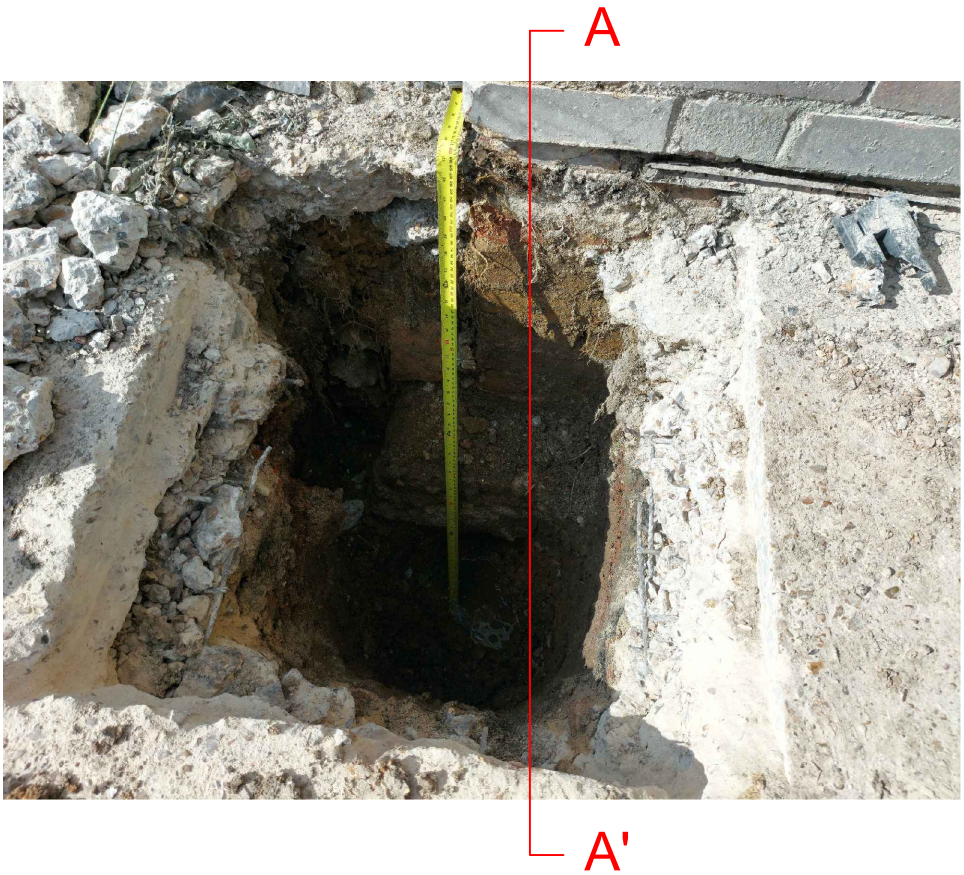


Soil Profile

Depth (m bgl)	Description
0.00 - 0.25	Reinforced Concrete
0.05 - 0.40	Brown slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to coarse of flint, brick, coal, concrete and occasional oyster shells. Sand is medium to coarse. (Made Ground)
0.40 - 1.20	Soft orange brown slightly gravelly clay. Gravel is angular to subangular fine to coarse of brick. (Made Ground)

Pit Dimensions





20 Farringdon Street
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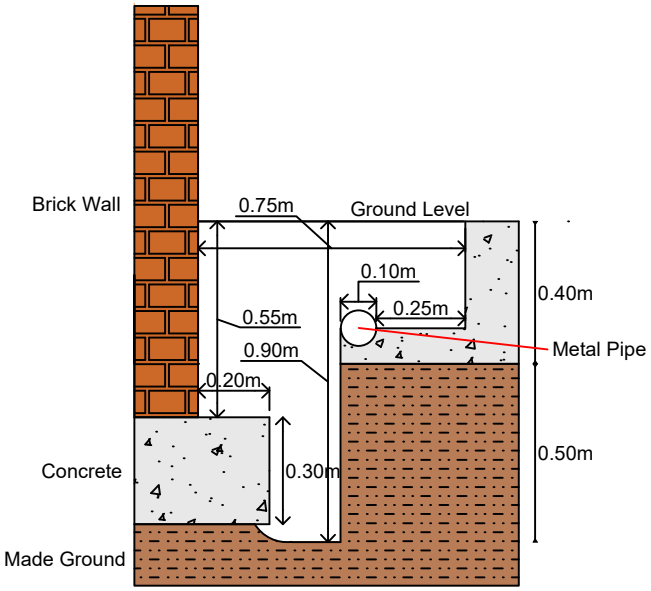
Client	A-Squared Studio
Project	233 - 236 Nestles Avenue
Hand Pit No.	TP103
Job Ref	JER9132
Status	DRAFT
Drawn By	MH
PM/Checked by	KD
Date Pit Dug	08/07/2021
Pit Logged by	JG

Notes
1. Trial pit terminated at 0.90m bgl.
2. Trial pit was stable upon completion.
3. Trial pit was dry.
4. Trial pit was backfilled with arisings.
5. Environmental Sample taken at 0.50m bgl.
6. Eastings: 509771, Northings: 179356.
7. Ground Level: 31.57m AOD.

TP103

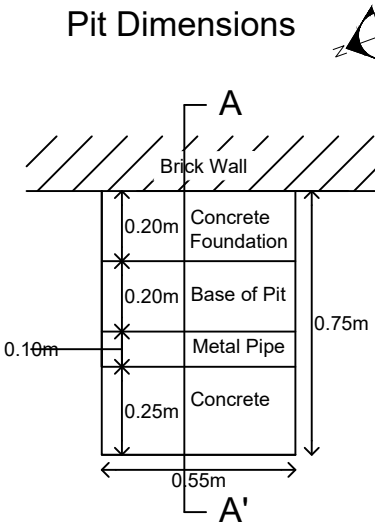
Section AA'



Soil Profile

Depth (m bgl)	Description
0.00 - 0.40	Concrete
0.40 - 0.90	Orange brown slightly silty sandy clayey gravel. Gravel is angular to subangular fine to coarse of flint, concrete. brick, coal, clinker and oyster shells. Sand is fine to coarse. (Made Ground)

Pit Dimensions



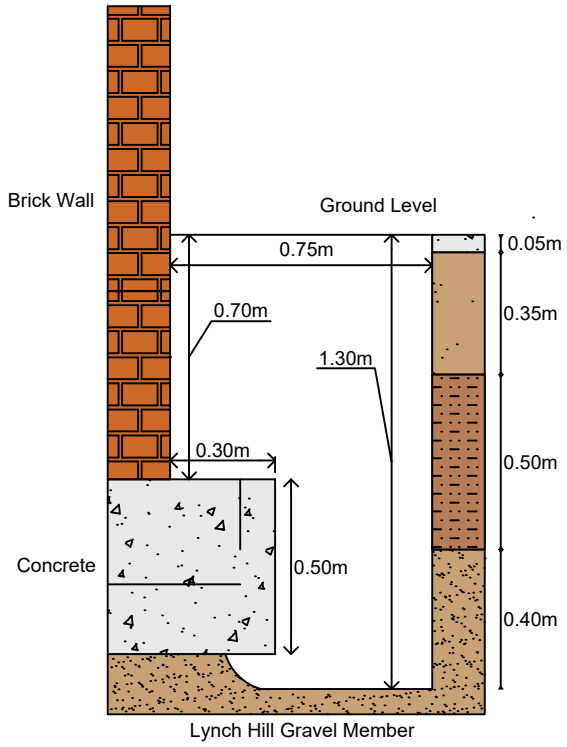
20 Farringdon Street
London, EC4A 4AB
T: 020 3691 0500 E: rpslon@rpsgroup.com

Client	A-Squared Studio
Project	233 - 236 Nestles Avenue
Hand Pit No.	TP104
Job Ref	JER9132
Status	DRAFT
Drawn By	MH
PM/Checked by	KD
Date Pit Dug	08/07/2021
Pit Logged by	JG

Notes
1. Trial pit terminated at 1.30m bgl.
2. Trial pit was stable upon completion.
3. Groundwater seepage encounterred at 1.30m bgl.
4. Trial pit was backfilled with arisings.
5. Environmental Samples taken at 0.50m and 1.10m bgl.
6. Eastings: 509815, Northings: 179315.
7. Ground Level: 31.647m AOD.

TP104

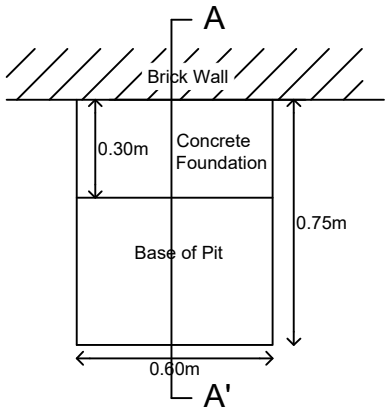
Section AA'

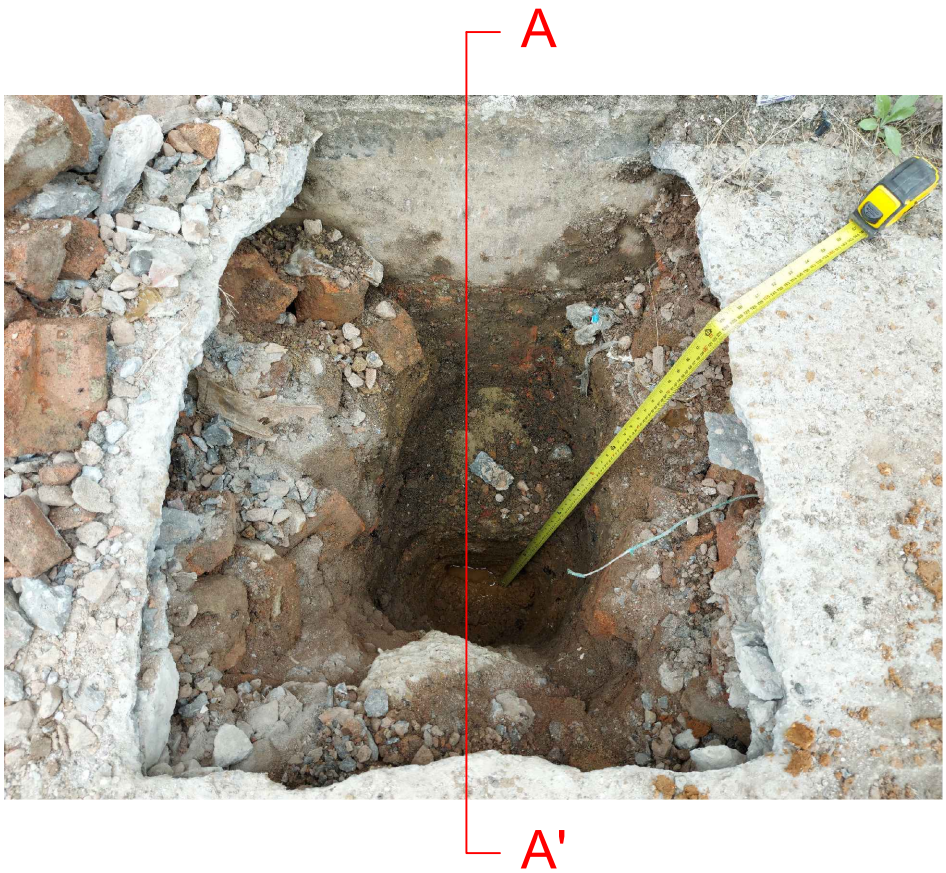


Soil Profile

Depth (m bgl)	Description
0.00 - 0.05	Concrete
0.05 - 0.40	Grey angular coarse gravel of brick and concrete with high cobble content of brick and concrete.
0.40 - 0.90	Brown slightly gravelly sandy clay with low cobble content of concrete and brick. Gravel is angular to subangular fine to coarse of flint, concrete, brick and coal. Sand is fine to coarse. (Made Ground)
0.90 - 1.30	Orange brown sandy angular to subrounded fine to coarse flint gravel

Pit Dimensions





20 Farringdon Street
London, EC4A 4AB
T: 020 3691 0500 **E:** rpslon@rpsgroup.com

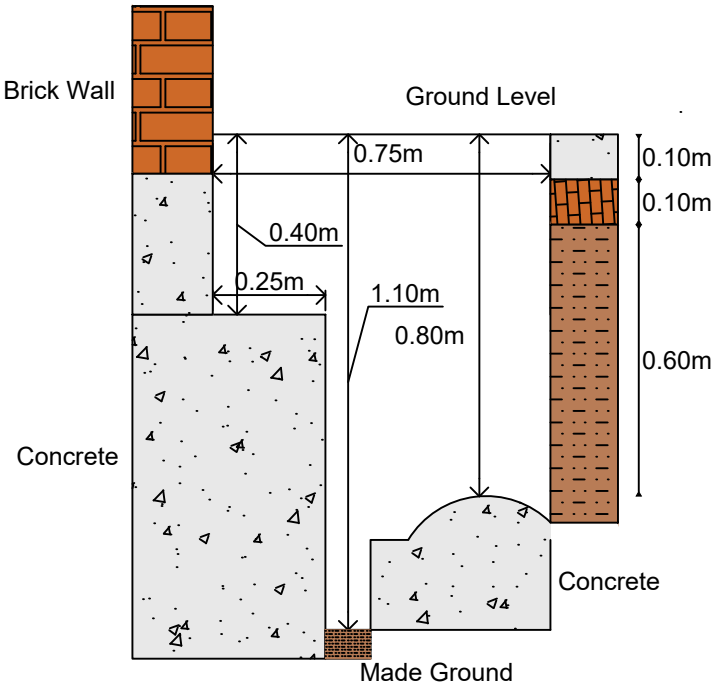
Client	A-Squared Studio
Project	233 - 236 Nestles Avenue
Hand Pit No.	TP105
Job Ref	JER9132
Date Pit Dug	08/07/2021
Status	DRAFT
Pit Logged by	JG
Drawn By	MH
PM/Checked by	KD

Notes

1. Trial pit terminated at 1.10m bgl.
2. Trial pit was stable upon completion.
3. Trial Pit was dry.
4. Trial pit was backfilled with arisings.
5. Environmental Sample taken at 0.50m bgl.
6. Eastings: 509748, Northings: 179247.
7. Ground Level: 31.583m AOD.

TP105

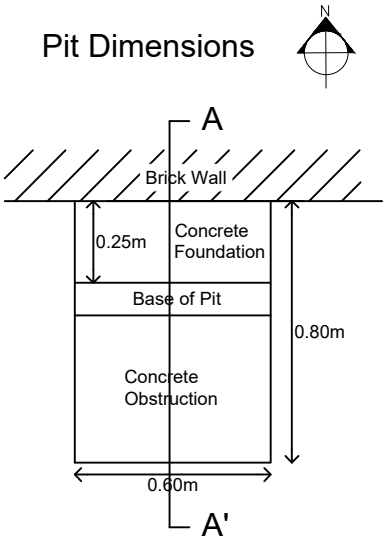
Section AA'

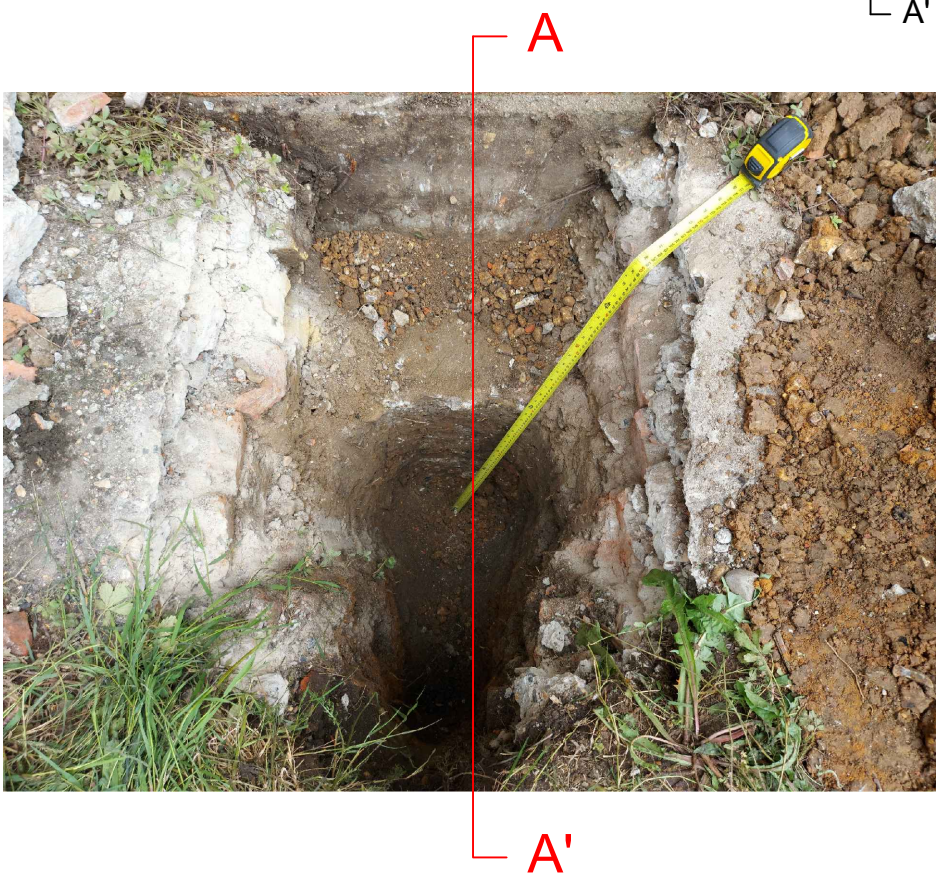


Soil Profile

Depth (m bgl)	Description
0.00 - 0.10	Concrete
0.10 - 0.20	Brick Paving
0.20 - 1.00	Grey brown sandy gravelly clay. Gravel is angular to subrounded fine to medium, flint, brick, concrete and tile. (Made Ground)
1.00 - 1.10	Yellow brown sandy subrounded to rounded flint to medium flint gravel. Sand is fine to medium. (Lynch Hill Gravel Member)

Pit Dimensions





Appendix B

Gas and Groundwater Monitoring Results

Project: 233 - 236 Nestles Avenue
Job ref.: JER9132

BH	Date	Response zone (m)	Depth m		Atmospheric Pressure (mbar)	Flow Rate (q l/h)		Methane CH_4 (% v/v)		Carbon dioxide CO_2 (% v/v)		Oxygen % v/v (Low)	PID ppm	Carbon monoxide CO ppm (Peak)	Hydrogen sulphide H_2S ppm (Peak)	Gas Screening Values				Comments
			Water	Base		Initial	Steady	Peak	Steady	Peak	Steady					CH_4 Peak	CH_4 Steady	CO_2 Peak	CO_2 Steady	
BH01	21/09/2021	Installed to 6.00	3.57	6.06	1028	0.0	0.0	0.0	0.0	0.1	0.1	20.5	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	07/10/2021		3.41	6.06	1022	0.0	0.0	0.0	0.0	1.6	1.6	18.3	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	Groundwater sample taken
	14/10/2021		3.44	6.05	1020	0.0	0.0	0.0	0.0	2.2	2.2	16.6	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	21/10/2021		3.37	6.05	1009	0.0	0.0	0.0	0.0	1.6	1.4	17.8	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	26/10/2021		3.36	6.06	1015	0.0	0.0	0.0	0.0	0.5	0.5	19.6	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	05/11/2021		3.21	6.09	1024	0.0	0.0	0.0	0.0	0.4	0.4	19.2	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
BH02	21/09/2021	Installed to 6.00	3.09	5.62	1028	0.0	0.0	0.0	0.0	2.0	2.0	15.2	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	07/10/2021		2.95	5.66	1022	0.0	0.0	0.0	0.0	0.7	0.7	19.3	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	Groundwater sample taken
	14/10/2021		3.10	5.65	1020	0.0	0.0	0.0	0.0	4.0	0.1	20.3	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	21/10/2021		3.06	5.65	1008	0.0	0.0	0.0	0.0	2.0	2.0	14.6	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	26/10/2021		2.99	5.65	1015	0.0	0.0	0.0	0.0	0.2	0.1	20.2	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	05/11/2021		3.17	561.00	1024	0.0	0.0	0.0	0.0	0.5	0.5	19.6	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
BH03	21/09/2021	Installed to 6.00	3.31	5.94	1028	0.0	0.0	0.0	0.0	0.7	0.7	19.9	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	07/10/2021		3.06	5.98	1023	0.0	0.0	0.0	0.0	0.7	0.7	18.7	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	Groundwater sample taken
	14/10/2021		3.09	5.98	1020	0.0	0.0	0.0	0.0	2.0	2.6	14.8	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	21/10/2021		3.13	6.02	1007	0.0	0.0	0.0	0.0	1.0	1.0	18.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	26/10/2021		3.09	5.99	1016	0.0	0.0	0.0	0.0	0.2	0.2	20.2	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	05/11/2021		3.16	5.96	1024	0.0	0.0	0.0	0.0	0.1	0.1	20.1	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
BH05	21/09/2021	Installed to 5.70	3.39	5.63	1028	0.0	0.0	0.0	0.0	0.8	0.8	20.5	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	07/10/2021		3.28	5.62	1024	0.0	0.0	0.0	0.0	1.0	1.0	19.4	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	Groundwater sample taken
	14/10/2021		3.35	5.60	1021	0.0	0.0	0.0	0.0	0.8	0.8	19.9	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	21/10/2021		3.39	5.29	1007	0.0	0.0	0.0	0.0	0.4	0.4	19.8	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	26/10/2021		Unable to locate borehole													0.0000	0.0000	0.0000	0.0000	
	05/11/2021		Unable to locate borehole													0.0000	0.0000	0.0000	0.0000	
BH06	21/09/2021	Installed to 5.80	Unable to locate borehole													0.0000	0.0000	0.0000	0.0000	
	07/10/2021		Borehole located, headworks damaged, fixed to enable gas monitoring to be undertaken													0.0000	0.0000	0.0000	0.0000	
	14/10/2021		3.15	5.29	1020	0.0	0.0	0.0	0.0	2.00	2.00	17.40	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	21/10/2021		3.10	5.29	1007	-1.0	0.0	0.0	0.0	5.60	5.00	10.6	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	26/10/2021		2.72	5.29	1015	0.0	0.0	0.0	0.0	0.4	0.4	19.5	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	05/11/2021		3.11	5.27	1025	0.0	0.0	0.0	0.0	0.2	0.2	19.8	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
BH101	21/09/2021	1.00 to 6.00	3.23	6.04	1029	0.0	0.0	0.0	0.0	6.2	6.2	8.6	0.4	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	07/10/2021		3.14	6.04	1023	0.0	0.0	0.0	0.0	6.3	6.3	8.8	0.8	0.0	0.0	0.0000	0.0000	0.0000	0.0000	Groundwater sample taken
	14/10/2021		3.28	6.05	1021	0.0	0.0	0.0	0.0	5.5	5.5	9.0	3.2	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	21/10/2021		3.09	6.02	1007	0.0	0.0	0.0	0.0	3.7	3.7	13.1	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	26/10/2021		5.25	6.05	1015	0.0	0.0	0.0	0.0	5.4	5.4	9.3	0.5	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	05/11/2021		3.31	6.06	1024	0.0	0.0	0.0	0.0	2.9	2.9	15.7	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
WS102	21/09/2021	0.50 to 1.00	Dry	1.27	1028	0.0	0.0	0.0	0.0	5.3	5.3	11.3	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	07/10/2021		Dry	1.07	1023	0.0	0.0	0.0	0.0	4.1	4.1	13.6	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	14/10/2021		Dry	1.28	1020	0.0	0.0	0.0	0.0	4.0	4.0	13.9	1.1	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	21/10/2021		Dry	1.07	1008	0.0	0.0	0.0	0.0	4.9	4.9	17.7	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	26/10/2021		Dry	1.07	1015	0.0	0.0	0.0	0.0	4.0	4.0	13.6	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	05/11/2021		Dry	1.07	1024	0.0	0.0	0.0	0.0	3.4	3.4	14.8	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
WS103	21/09/2021	1.00 to 1.30	Dry	1.27	1028	0.0	0.0	0.0	0.0	6.1	6.1	10.3	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	07/10/2021		Dry	1.26	1023	0.0	0.0	0.0	0.0	4.4	4.4	12.9	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	14/10/2021		Unable to access location													0.0000	0.0000	0.0000	0.0000	
	21/10/2021		Dry	1.26	1008	0.1	0.0	0.0	0.0	2.8	2.8	16.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	26/10/2021		Dry	1.28	1015	0.0	0.0	0.0	0.0	4.2	4.2	13.6	0.1	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	05/11/2021		Dry	1.27	1024	0.0	0.0	0.0	0.0	2.9	2.9	15.7	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
WS106	21/09/2021	1.00 to 1.50	Dry	1.43	1028	0.7	0.0	0.0	0.0	4.2	4.2	15.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	07/10/2021		Dry	1.43	1.22	0.0	0.0	0.0	0.0	3.3	3.3	16.5	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	14/10/2021		Dry	1.45	1020	0.0	0.0	0.0	0.0	3.2	3.2	15.9	0.6	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	21/10/2021		Dry	1.44	1007	1.0	0.0	0.0	0.0	5.3	5.3	12.3	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	26/10/2021		Dry	1.44	1016	0.0	0.0	0.0	0.0	3.3	3.3	16.5	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	
	05/11/2021		Dry	1.43	1024	0.0	0.0	0.0	0.0	1.8	1.8	18.3	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	

Negative flow rates converted to positive for GSV assessment
0.1 less that machine detection limit

Appendix C

nvironmental esting Laboratory Results

Element Materials Technology
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20 Farringdon Street
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EC4A 4AB

Attention	Matthew Hemus
Date	28th July, 2021
our re erence	JER9132
Our re erence	Test Report 21/10418 Batch 1
Location	233-236 Nestles Avenue
Date samples received	9th July, 2021
Status	Final report
Issue	2

Fifteen samples were received for analysis on 9th July, 2021 of which eleven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By

Bruce Leslie
Pro ect Manager

Client ame RPS
Re erence JER9132
Location 233-236 Nestles Avenue
Contact Matthew Hemus
M ob o 21/10418

Report Solid

Solids V=60g VOC jar, J=250g glass jar, T=plastic tub

M Sample o	6-9	10-13	14-17	22-25	26-29	38-41					LOD/LOR	Units	Method No.
Sample ID	TP102	TP103	TP104	TP105	WS106	WS105							
Depth	0.40	0.50	0.50	0.50	0.20	0.50							
COC o / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	07/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021							
Sample ype	Soil	Soil	Soil	Soil	Soil	Soil							
Batch umber	1	1	1	1	1	1							
Date o Receipt	09/07/2021	09/07/2021	09/07/2021	09/07/2021	09/07/2021	09/07/2021							
Arsenic	-	7.0	10.3	-	11.3	10.8					<0.5	mg/kg	TM30/PM15
Barium	-	72	194	-	224	114					<1	mg/kg	TM30/PM15
Beryllium	-	0.7	1.2	-	2.0	1.2					<0.5	mg/kg	TM30/PM15
Cadmium	-	<0.1	0.3	-	1.6	<0.1					<0.1	mg/kg	TM30/PM15
Chromium	-	51.0	69.1	-	57.7	62.4					<0.5	mg/kg	TM30/PM15
Copper	-	15	83	-	80	26					<1	mg/kg	TM30/PM15
Lead	-	88	129	-	229	74					<5	mg/kg	TM30/PM15
Mercury	-	0.2	0.3	-	5.9	0.3					<0.1	mg/kg	TM30/PM15
Molybdenum	-	4.3	5.6	-	5.4	4.3					<0.1	mg/kg	TM30/PM15
Nickel	-	15.8	20.3	-	35.2	25.2					<0.7	mg/kg	TM30/PM15
Selenium	-	<1	<1	-	<1	<1					<1	mg/kg	TM30/PM15
Silver	-	<1	<1	-	<1	8					<1	mg/kg	TM30/PM15
Sulphur as S	-	0.09	0.04	-	0.05	0.03					<0.01	%	TM30/PM15
Total Sulphate as SO4	-	1454	810	-	801	549					<50	mg/kg	TM50/PM29
Vanadium	-	40	36	-	68	39					<1	mg/kg	TM30/PM15
Zinc	-	73	138	-	1560	74					<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene	-	0.05	0.07	-	0.33	<0.04					<0.04	mg/kg	TM4/PM8
Acenaphthylene	-	0.06	0.11	-	0.13	0.04					<0.03	mg/kg	TM4/PM8
Acenaphthene	-	<0.05	<0.05	-	0.13	<0.05					<0.05	mg/kg	TM4/PM8
Fluorene	-	<0.04	<0.04	-	0.09	<0.04					<0.04	mg/kg	TM4/PM8
Phenanthrene	-	0.64	1.02	-	1.13	0.25					<0.03	mg/kg	TM4/PM8
Anthracene	-	0.20	0.34	-	0.27	0.10					<0.04	mg/kg	TM4/PM8
Fluoranthene	-	1.22	4.86	-	2.28	0.82					<0.03	mg/kg	TM4/PM8
Pyrene	-	1.01	4.17	-	1.99	0.72					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene	-	0.60	2.26	-	1.12	0.47					<0.06	mg/kg	TM4/PM8
Chrysene	-	0.67	2.00	-	1.38	0.43					<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene	-	1.31	3.75	-	2.75	0.84					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene	-	0.71	1.94	-	1.46	0.43					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	-	0.48	1.19	-	0.99	0.29					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene	-	0.11	0.23	-	0.18	0.06					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene	-	0.46	1.14	-	1.03	0.28					<0.04	mg/kg	TM4/PM8
PAH 16 Total	-	7.5	23.1	-	15.3	4.7					<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	-	0.94	2.70	-	1.98	0.60					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	-	0.37	1.05	-	0.77	0.24					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	-	95	95	-	92	96					<0	%	TM4/PM8

Please see attached notes for all abbreviations and acronyms