

APPENDIX D – GROUND INVESTIGATION EXTRACT



Atri7 2 Limited

Lordship Lane, Wood Green

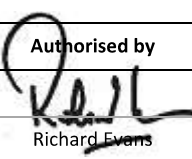
Ground Investigation Report



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Lordship Lane, Wood Green

Ground Investigation Report

ISSUE RECORD					
Report Reference: 2303004.001.02					
Version	Date	Amendments Record	Prepared by	Checked by	Authorised by
-	June 2023	-	 Amy Butler	 Claire Hooley	 Richard Evans
Report Liability Date: June 2023					

TEC is ISO 9001:2015 and ISO 14001:2015 certified by Advanced Certification Limited, a UKAS Accredited Certification Body (number 8872) and ISO 45001:2018 certified by QMS International Ltd for the scope of 'Specialist consultancy services across the UK in contaminated land assessment, ground engineering, waste management and construction phase monitoring'.

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EXECUTIVE SUMMARY

SITE INFORMATION	Client	Atri7 2 Limited
	Site Details	707-725 Lordship Lane, Wood Green, London N22 5JX
	Current Land Use and Description	The site currently comprises an existing Mecca Bingo Hall building with associated hardstanding (car parking and access road).
	Proposed Development	The proposed development is understood to comprise the demolition of the existing structures on site to allow for redevelopment for residential purposes. It is understood that currently two development options are being considered. Option A is understood to comprise the construction of 341No. residential units accommodated within 4No. structures, up to 9 storeys in height. Option B is understood to comprise a combination of residential and student accommodation within 3No. structures, up to 11 storeys in height. It is understood that both options will also include areas of communal soft landscaping and hard infrastructure.
GROUND INVESTIGATION	Ground Investigation Rationale	The exploratory ground investigation was designed to provide general ground engineering recommendations for the proposed development and to investigate the potential pollutant linkages identified as part of the Preliminary Risk Assessment (detailed within report referenced 2303004.001.01 and dated June 2023).
	Scope of Works	3No. cable percussive boreholes were advanced to a maximum depth of 30mbgl to assess deeper ground conditions. 4No. dynamic sample boreholes were advanced to provide coverage of site and to assess the shallow ground conditions. 2No. inspection pits were excavated to assess the existing foundations on site. 4No. DCPs to provide indicative CBR values. 2No percolation tests in accordance with NHBC guidance to determine feasibility of the use of soakaways at the site.
	Ground Conditions	Made ground was encountered across the site to a depth of 1.3mbgl. This was noted to be underlain by materials of the London Clay Formation, which generally comprised firm high strength slightly silty sandy clay (maximum depth 4.0mbgl), underlain by stiff high strength slightly silty sandy clay (maximum 26.8mbgl). Selenite crystals were observed throughout the London Clay Formation. This was noted to be underlain by materials associated with the Lambeth Group, comprising stiff, high to very high strength sandy clay to depths of between 27.7mbgl and 29.0mbgl. This was noted to be underlain by sandy gravelly clay (with gravel of chalk) to the base of the excavations (maximum 30.0mbgl). Minor groundwater ingress was recorded at a depth of 5.0mbgl and 23.0mbgl.
LAND CONTAMINATION	Contamination Characterisation	No visual or olfactory evidence of significant contamination was noted during the ground investigation. Laboratory analytical results of the encountered near surface materials reported both organic and inorganic contaminants to be generally below the relevant GAC for a residential site end use without homegrown produce. However, localised exceedances of the GAC were reported for heavy metals (lead and beryllium) and PAHs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and dibenz(a,h)anthracene) Based on the conceptual site model the site can be considered as Characteristic Situation 1. In addition, the site is not situated within a Radon affected area.
	Identified Pollutant Linkages	Based upon our current conceptual understanding of the site and the proposed end use, the main Significant Pollutant Linkages identified is considered to be as follows: Human Health (future site users and construction workers) – exposure to COPCs (PAHs and heavy metals) encountered within the shallow made ground through the ingestion, inhalation and dermal contact pathways
	Remediation Appraisal / Likely Remedial Approach	Given the assessment to date, it is considered that where soft landscaping is proposed in areas and where made ground remains after finished site levels have been achieved, localised exposure to potential contaminants and asbestos cannot be discounted and a suitable cover system may be required within areas of soft landscaping. Alternatively, given the limited and localised nature of these exceedances further testing may be undertaken once final site levels are achieved, and final proposed development designs are in place, to determine the requirement for any such remedial measures. Given the presence of general made ground and CoPC, good brownfield site working practices, in accordance with current guidance, should be adopted by construction workers to mitigate against potential risks.

GROUND ENGINEERING	Foundations	Based on the assumed column loads for the proposed structures, indicative pile capacities based on the requirements of BS8004 are presented for budgetary purposes, It is estimated that a 600mm bored pile constructed to 20m would provide a resistance of around 985kN, while a 750mm diameter pile to this depth would provide 1285kN. Extending the piles to 25m , capacities in the region of 1285kN and 1775kN may be assumed for 600mm and 750mm diameter piles, respectively. The proximity of adjacent structures and the environmental sensitivity of the site will need to be carefully considered when choosing the most appropriate pile type and methodology and it is suggested that a specialist piling contractor should be consulted regarding the piling options and detailed design of most appropriate option.
	Ground Floor Slabs	Given the presence of shrinkable soils, the use of suspended floor slabs may be appropriate for the scheme, which should incorporate the minimum void dimensions as outlined in the NHBC Standards.
	Preliminary Pavement Design	A CBR value of 4% is considered appropriate for preliminary design purposes. Notwithstanding this, given the thickness of made ground across the site, a CBR value of <2.5% would be recommended where formation is within this material.
	Buried Concrete	The results of the testing indicate that the underlying natural ground materials yield an ACEC of between AC-3 and AC-5. However the results indicate the presence of pyrite within the underlying ground materials and therefore, where concrete is not exposed to disturbed ground, i.e. where bored piled foundations are utilised, a Class DS-3 concrete may be used.

Accordingly, a careful watch should be maintained during any future groundworks and the recommendations presented in this report may be subject to amendment should additional information becoming available.

- 7.7.4 It is recommended that appropriate shoring/temporary works are used in accordance with current Health and Safety requirements where access for personnel is required into excavations.

7.8 Drainage

- 7.8.1 Borehole percolation testing was undertaken at 2No. locations in accordance with the general methodology outlined within the NHBC guidance to provide a preliminary assessment of the drainage potential of the underlying deposits. The results of the testing is presented in Appendix G.

- 7.8.2 The tests failed to drain during the test period with no change in water level recorded over a period of one hour.

- 7.8.3 Based on the observed ground conditions and initial percolation test results, the underlying ground deposits are unlikely to provide a suitable drainage medium due to their observed cohesive nature and low permeability.

7.9 Protection of Buried Concrete

- 7.9.1 The desk study and observations of the encountered ground materials during the intrusive works indicate the site would be categorised as 'Natural ground locations' that contain pyrite. However, at this stage, there is insufficient data to confirm the mobility of groundwater at the site (and potential changes that may result during construction) and therefore a mobile groundwater has been assumed.

- 7.9.2 It should be noted that groundwater samples have not been collected as part of this scope of work.

- 7.9.3 The results of the testing of the soil samples, together with the resulting Aggressive Chemical Environment for Concrete (ACEC) Class and Design Sulphate (DS) Class, as derived in accordance with BRE Special Digest 1, are presented in Table 7.5. The full laboratory results are presented in Appendix E.

Table 7.5: Summary of ACEC

Stratum	No. of tests	pH	Water Soluble Sulphate (mg/l)	Oxidisable Sulphides (%)	Total Potential Sulphates (%)	ACEC ⁽¹⁾	DS Class ⁽¹⁾
London Clay Formation	6	8.3 – 9.1	140 – 2440	0 – 1.68	0.93 – 1.44	AC-4 ⁽¹⁾	DS-4 ⁽¹⁾
Lambeth Group	2	8.5 – 9.9	55 – 465	0.05 – 2.28	0.09 – 2.43	AC-5 ⁽²⁾	DS-5 ⁽²⁾
Lambeth Group (Lower Boundary)	2	9.4 – 10.1	31 – 295	0.05 – 1.04	0.21 – 1.2	AC-3 ⁽²⁾	DS-3 ⁽²⁾

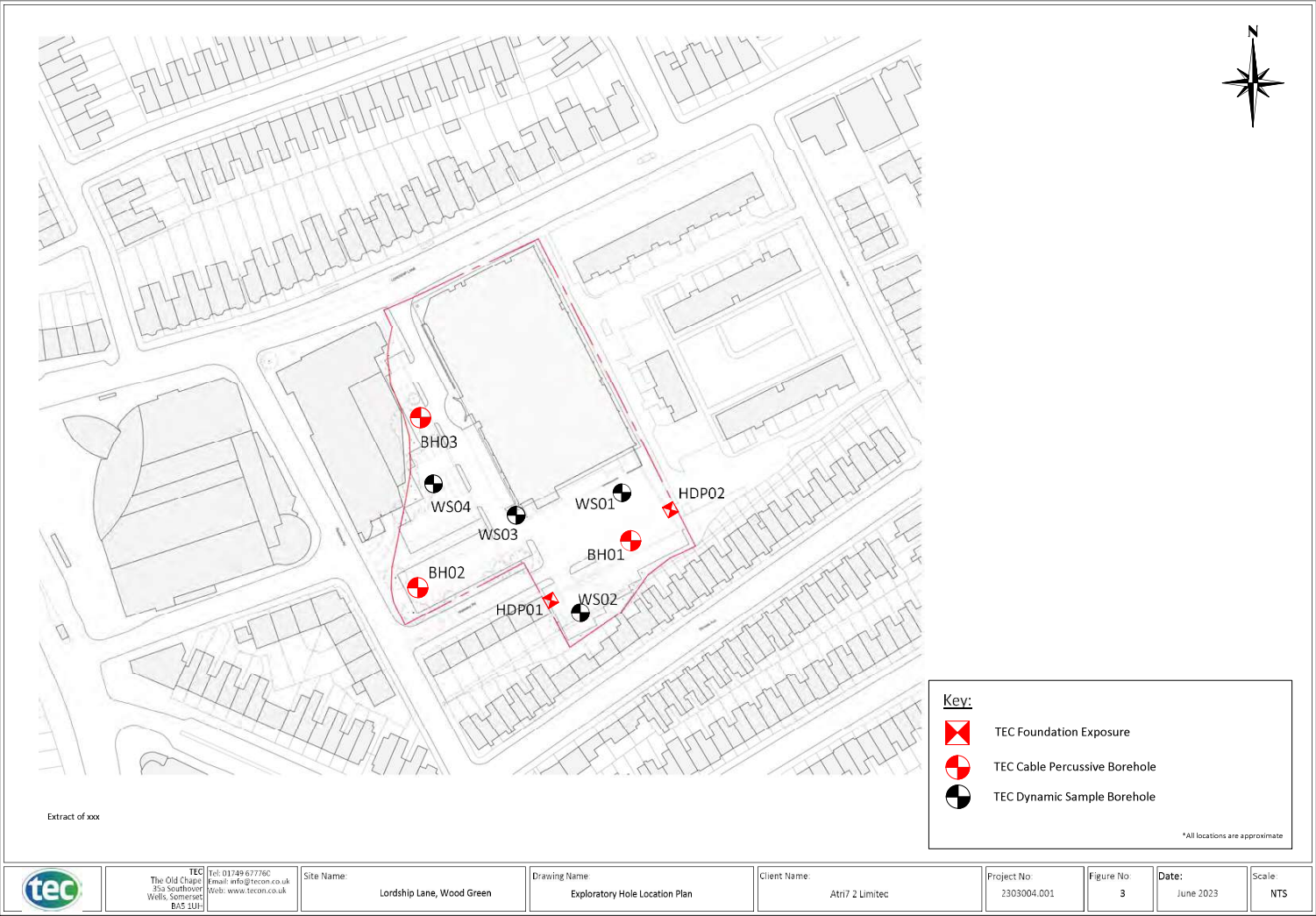
Note 1: Based on a characteristic value derived for a data set of 5-9 samples per stratum (mean of the two highest sulphate test results and two lowest pH tests) as per BRE SD1

Note 2: Based on a characteristic value derived for a data set of <5 samples per stratum (maximum water soluble sulphate concentration/ lowest pH) as per BRE SD1

- 7.9.4 The results of the testing indicate that the London Clay Formation and the lower boundary of the Lambeth Group yield an ACEC of AC-4 and AC-3 respectively, while the Lambeth Group soils to yield an ACEC of AC-5.

- 7.9.5 Notwithstanding this, while a number of samples collected returned oxidisable sulphate and total potential sulphate concentrations that may be indicative of the presence of pyrite within the underlying ground materials, the guidance indicates that where concrete is not exposed to disturbed ground, i.e. where piled foundations are utilised, the test results show that a DS Class of DS-3 would be appropriate for the proposed development.

TEC



Appendix C

Exploratory Hole Logs



Borehole Log

Borehole No.

BH01

Sheet 1 of 3

Project Name: Lordship Lane, Wood Green	Client: Atri7 2 Limited	Date: 09/05/2023-16/05/2023
Location: Wood Green	Contractor: DJ Drilling	
Project No. 2303004.001	Drilling Equipment: Dando 2000	Level:
Hole Type: CP	Logged By: AB	Scale: 1:60

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10			Tarmacadam. (MADE GROUND)	
								Dark brown clayey gravelly sand with gravel of brick concrete tarmac and flint. (MADE GROUND)	1
		1.20	SPT	N=7 (1,0/1,0,3,3)	1.30			Firm high strength greyish brown mottled orangish brown slightly sandy silty CLAY with frequent fine to medium selenite crystals. Sand is fine to coarse. (LONDON CLAY FORMATION)	
		1.50	D						
		2.00	SPT	N=8 (2,1/1,2,2,3)					2
		2.0	HV	117 kPa					
		3.00 - 3.50	U						3
		4.00	D						
		4.00	SPT	N=19 (3,3/3,4,6,6)					4
		5.00	SPT	N=17 (2,2/3,4,5,5)					5
		6.50	SPT	N=20 (3,3/4,4,6,6)	7.20				6
		6.5	HV	133 kPa					7
		7.50	D						
		8.00	SPT	N=21 (3,3/4,5,6,6)				Stiff high strength grey mottled orangish brown slightly sandy silty CLAY with frequent fine to medium selenite crystals. Sand is fine to medium. (LONDON CLAY FORMATION)	8
		9.50	SPT	N=23 (3,4/5,6,6,6)					9
		11.00 - 11.45	U						10
									11

Hole Diameter		Casing Diameter		Chiselling			Inclination & Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation
Remarks: Borehole terminated at depth Groundwater Seepages recorded at 5.5mbgl and 23.0mbgl										



Borehole Log

Borehole No.

BH01

Sheet 2 of 3

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 09/05/2023-16/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

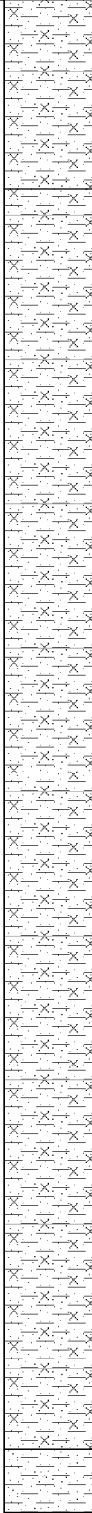
Drilling Equipment: Dando 2000

Level:

Hole Type: CP

Logged By: AB

Scale: 1:60

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		12.50	SPT	N=28 (3,4/6,7,7,8)	13.50			Stiff high strength grey mottled orangish brown slightly sandy silty CLAY with frequent fine to medium selenite crystals. Sand is fine to medium. (LONDON CLAY FORMATION)	13	
		13.50	D					Stiff high strength grey sandy silty CLAY with frequent fine selenite crystals. Sand is fine. (LONDON CLAY FORMATION)	14	
		14.00	SPT	N=30 (4,6/7,7,8,8)						
		15.0	HV	158 kPa				15		
		15.50	SPT	N=31 (4,6/7,8,8,8)				16		
		17.00	SPT	N=31 (4,5/6,7,8,10)				17		
		17.50	D	162 kPa				18		
		17.5	HV							
		18.50	SPT	N=29 (4,5/6,7,7,9)				19		
		20.00 - 20.45	U	154 kPa				20		
		20.0	HV							
		21.50	SPT	N=33 (4,5/7,7,9,10)				22		
		23.00	D	50 (6,9/50 for 200mm) 158 kPa	23.50		Stiff high strength bluish grey slightly sandy CLAY. Sand is fine to medium. (LAMBETH GROUP?)	23		
		23.00	SPT							
		23.0	HV							
Hole Diameter		Casing Diameter		Chiselling			Inclination & Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation
Remarks: Borehole terminated at depth Groundwater Seepages recorded at 5.5mbgl and 23.0mbgl										



Borehole Log

Borehole No.

BH01

Sheet 3 of 3

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 09/05/2023-16/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

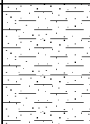
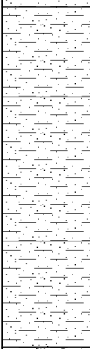
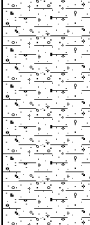
Drilling Equipment: Dando 2000

Level:

Hole Type: CP

Logged By: AB

Scale: 1:60

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		24.50	SPT	N=35 (5,6/8,9,9,9)	25.00			Stiff high strength bluish grey slightly sandy CLAY. Sand is fine to medium. (LAMBETH GROUP?)	25	
		25.00	D					Very stiff high strength multicoloured sandy CLAY. Sand is fine to medium. (LAMBETH GROUP)		
		26.00	SPT	N=34 (5,6/6,9,9,10)					26	
		27.0	HV	167 kPa	27.70				27	
		27.50	SPT	50 (25 for 110mm/50 for 90mm)						
		28.00	D					Very stiff light grey mottled yellowish brown and white sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular fine to medium chalk.	28	
		29.50	SPT	50 (25 for 115mm/50 for 100mm)	29.50			End of Borehole at 29.50m	29	
									30	
										31
									32	
									33	
									34	
									35	
Hole Diameter		Casing Diameter		Chiselling			Inclination & Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation
Remarks: Borehole terminated at depth Groundwater Seepages recorded at 5.5mbgl and 23.0mbgl										



Borehole Log

Borehole No.

BH02

Sheet 1 of 3

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 17/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

Drilling Equipment: Dando 2000

Level:

Hole Type: CP

Logged By: AB

Scale: 1:60

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description																															
		Depth (m)	Type	Results																																			
		1.20	SPT	N=10 (1,2/2,2,3,3)	0.10			Tarmacadam. (MADE GROUND)	1																														
					0.60			Brown clayey gravelly sand with gravel of concrete brick and tarmac. (MADE GROUND)		2																													
					0.80			Dark brown sandy gravelly clay with gravel of brick and concrete. (MADE GROUND)			3																												
		2.00	SPT	N=11 (1,2/2,3,3,3)				Firm high strength orangish brown slightly sandy silty CLAY with frequent fine selenite crystals. (LONDON CLAY FORMATION)				4																											
								3.00					SPT	N=14 (2,2/2,4,4,4)			5																						
																		4.00	SPT	N=17 (3,3/4,4,4,5)			6																
		4.5	HV	104 kPa																						7													
								5.00					SPT	N=18 (2,2/4,4,5,5)															8										
																		6.0	HV	112 kPa												9							
		8.00	SPT	N=22 (3,4/5,5,6,6)																															10				
								9.50					SPT	N=25 (3,4/5,6,6,8)																								11	
10.5	HV					125 kPa																																	
		11.00	SPT	N=27 (4,4/5,6,7,9)																																			
Hole Diameter					Casing Diameter		Chiselling				Inclination & Orientation																												
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Depth Top (m)	Depth Base (m)			Inclination	Orientation																											
Remarks: Borehole terminated at depth No groundwater encountered																																							



Borehole Log

Borehole No.

BH02

Sheet 2 of 3

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 17/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

Drilling Equipment: Dando 2000

Level:

Hole Type: CP

Logged By: AB

Scale: 1:60

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		12.50 12.5	SPT HV	N=34 (4,5/7,8,9,10) 133 kPa				Stiff high strength grey mottled orangish brown slightly sandy silty CLAY with frequent selenite crystals. (LONDON CLAY FORMATION)	13	
		14.00	SPT	N=35 (4,6/7,8,10,10)					14	
		15.0	HV	162 kPa					15	
		17.00	SPT	N=36 (6,8/9,9,9,9)					17	
		18.0	HV	162 kPa					18	
		18.50	SPT	N=39 (5,7/9,10,10,10)					19	
		20.00	SPT	N=39 (4,6/9,10,10,10)					20	
		21.50	SPT	N=41 (5,7/9,10,11,11)					22	
		22.5	HV	154 kPa					23	
		23.00	SPT	N=43 (5,7/10,10,11,12)				23.20		Very stiff high strength multicoloured sandy CLAY. Sand is fine to medium. (LAMBETH GROUP)
Hole Diameter		Casing Diameter		Chiselling			Inclination & Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation
Remarks: Borehole terminated at depth No groundwater encountered										



Borehole Log

Borehole No.

BH02

Sheet 3 of 3

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 17/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

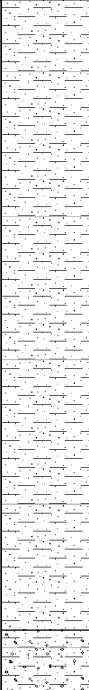
Drilling Equipment: Dando 2000

Level:

Hole Type: CP

Logged By: AB

Scale: 1:60

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
								Very stiff high strength multicoloured sandy CLAY. Sand is fine to medium. (LAMBETH GROUP)	25	
		26.00	SPT	N=38 (5,6/7,10,10,11)					26	
		26.0	HV	167 kPa						27
										28
		27.50	SPT	N=50 (6,8/50 for 290mm)						29
		28.0	HV	171 kPa						30
										31
		29.00	SPT	50 (25 for 125mm/50 for 130mm)	29.00					32
					29.50					33
										34
							Very stiff light grey mottled yellowish brown and white sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular fine to medium chalk.	29		
							End of Borehole at 29.50m	30		
								31		
								32		
								33		
								34		
								35		
Hole Diameter		Casing Diameter		Chiselling			Inclination & Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation
Remarks: Borehole terminated at depth No groundwater encountered										



Borehole Log

Borehole No.

BH03

Sheet 1 of 3

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 18/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

Drilling Equipment: Dando 2000

Level:

Hole Type: CP

Logged By: AB

Scale: 1:60

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
					0.10			Tarmacadam. (MADE GROUND)		
					0.30			Brown gravelly sand with gravel of brick tarmac and concrete. (MADE GROUND)		
								Brown sandy gravelly clay with gravel of brick and concrete. (MADE GROUND)	1	
		1.20	SPT	N=7 (1,6/2,1,2,2)	1.30					
					1.80			Firm high strength greyish brown mottled orangish brown slightly sandy silty CLAY with frequent fine to medium selenite crystals. Sand is fine to coarse. (LONDON CLAY FORMATION)	2	
		2.10	SPT	N=11 (1,2/2,3,3,3)						
		2.5	HV	100 kPa				Stiff high strength grey mottled orangish brown slightly sandy silty CLAY with frequent fine to medium selenite crystals. Sand is fine to medium. (LONDON CLAY FORMATION)	3	
		3.00	SPT	N=14 (2,3/3,3,4,4)						
		4.00	SPT	N=16 (3,3/3,4,4,5)					4	
		5.00	SPT	N=19 (3,4/4,5,5,5)					5	
		6.0	HV	104 kPa					6	
		6.50	SPT	N=18 (3,3/4,4,5,5)					7	
					7.20			Stiff high strength grey sandy silty CLAY with frequent fine selenite crystals. Sand is fine. (LONDON CLAY FORMATION)	8	
									9	
									10	
									11	
				9.50	SPT	N=21 (3,3/5,6,5,5)				
				11.00 11.0	SPT HV	N=22 (3,4/5,5,6,6) 146 kPa				
		Hole Diameter		Casing Diameter		Chiselling			Inclination & Orientation	
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation
Remarks: Borehole terminated at depth Groundwater seepage at 23.0mbgl										



Borehole Log

Borehole No.

BH03

Sheet 2 of 3

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 18/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

Drilling Equipment: Dando 2000

Level:

Hole Type: CP

Logged By: AB

Scale: 1:60

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		12.50	SPT	N=29 (3,5/7,7,7,8)	23.80			Stiff high strength grey sandy silty CLAY with frequent fine selenite crystals. Sand is fine. (LONDON CLAY FORMATION)	13	
		14.00	SPT	N=29 (4,5/6,7,8,8)					14	
		15.0	HV	146 kPa					15	
		15.50	SPT	N=31 (4,5/7,7,8,9)					16	
		17.00	SPT	N=38 (5,5/8,10,10,10)					17	
		18.5	HV	162 kPa					19	
		20.00	SPT	N=37 (4,6/8,8,9,12)					20	
		21.50	SPT	N=43 (5,8/10,10,11,12)					22	
		23.00	SPT	N=50 (6,10/50 for 290mm)					23	
		23.0	HV	167 kPa						
Stiff high strength bluish grey slightly sandy CLAY. Sand is fine to medium. (LAMBETH GROUP?)										
Hole Diameter		Casing Diameter		Chiselling			Inclination & Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation
Remarks: Borehole terminated at depth Groundwater seepage at 23.0mbgl										



Borehole Log

Borehole No.

BH03

Sheet 3 of 3

Project Name: Lordship Lane, Wood Green	Client: Atri7 2 Limited	Date: 18/05/2023
Location: Wood Green	Contractor: DJ Drilling	
Project No. 2303004.001	Drilling Equipment: Dando 2000	Level:
Hole Type: CP	Logged By: AB	Scale: 1:60

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		24.50	SPT	N=40 (5,6/8,8,10,14)	25.50			Stiff high strength bluish grey slightly sandy CLAY. Sand is fine to medium. (LAMBETH GROUP?)	25
								Very stiff high strength multicoloured sandy CLAY. Sand is fine to medium. (LAMBETH GROUP)	26
		27.0	HV	162 kPa					27
		27.50	SPT	N=50 (5,6/50 for 270mm)	27.80				
								Very stiff light grey mottled yellowish brown and white sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular fine to medium chalk.	28
									29
		29.50	SPT	50 (25 for 120mm/50 for 100mm)	29.50			End of Borehole at 29.50m	30
									31
									32
									33
									34
									35

Hole Diameter		Casing Diameter		Chiselling			Inclination & Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation

Remarks: Borehole terminated at depth Groundwater seepage at 23.0mbgl	
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Borehole Log

Borehole No.

WS01

Sheet 1 of 1

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 18/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

Drilling Equipment: Hand Tools

Level:

Hole Type: WS

Logged By: AB

Scale: 1:33

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20 - 0.40	ES		0.20			Concrete. (MADE GROUND)	
								Brown slightly clayey gravelly sand with gravel of concrete brick and flint. (MADE GROUND)	
					1.00			End of Borehole at 1.00m	1
									2
									3
									4
									5
									6

Remarks:

Borehole terminated at 1.0mbgl due to suspected pipe
No groundwater encountered





Borehole Log

Borehole No.

WS02

Sheet 1 of 1

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 18/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

Drilling Equipment: Archway Heaveyweight

Level:

Hole Type: WS

Logged By: AB

Scale: 1:33

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.30	ES		0.10			Tarmacadam. MADE GROUND)	
								Dark brown clayey gravelly sand with occasional brick cobbles and gravel of brick concrete tarmacadam and flint. (MADE GROUND)	
		1.00	D		0.80			Firm becoming stiff high strength brown mottled orangish brown and grey slightly sandy silty CLAY with frequent fine selenite crystals. (LONDON CLAY FORMATION)	1
		1.00	SPT	N=8 (1,1/2,2,2,2)				PP at 1.2mbgl = 1.3 kg/cm2	
		1.5	HV	121 kPa					
								PP at 1.8mbgl = 1.75kg/cm2	2
		2.00	SPT	N=10 (2,2/2,3,2,3)					
		2.2	HV	142 kPa					
								PP at 2.5mbgl = 2.35kg/cm2	
		2.8	HV	154 kPa					
		3.00	SPT	N=13 (2,3/3,3,3,4)					3
								PP at 3.2mbgl = 2.4kg/cm2	
		3.5	HV	162 kPa					
								PP at 3.8mbgl = 2.8kg/cm2	4
		4.00	D						
		4.00	SPT	N=18 (3,4/4,4,5,5)					
		4.2	HV	154 kPa					
								PP at 4.5mbgl = 2.8kg/cm2	
		4.8	HV	158 kPa					
		5.00	SPT	N=23 (4,4/5,6,6,6)	5.00			End of Borehole at 5.00m	5
									6

Remarks:

Borehole terminated at depth
No groundwater encountered





Borehole Log

Borehole No.

WS03

Sheet 1 of 1

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 18/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

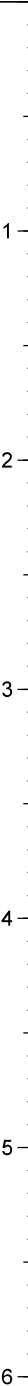
Drilling Equipment: Hand Tools

Level:

Hole Type: WS

Logged By: AB

Scale: 1:33

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.40 - 0.60	ES		0.10			Paving. (MADE GROUND)	
					0.30			Pale yellow fine to coarse sand. (MADE GROUND)	
					0.70			Brown slightly clayey gravelly sand with gravel of brick tarmac and concrete. (MADE GROUND)	
								End of Borehole at 0.70m	

Remarks:

Borehole terminated due to suspected pipe
No groundwater encountered



Borehole Log

Borehole No.

WS04

Sheet 1 of 1

Project Name: Lordship Lane, Wood Green

Client: Atri7 2 Limited

Date: 18/05/2023

Location: Wood Green

Contractor: DJ Drilling

Project No. 2303004.001

Drilling Equipment: Archway Heavyweight

Level:

Hole Type: WS

Logged By: AB

Scale: 1:33

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10			Tarmacadam. (MADE GROUND)	
		0.30 - 0.50	ES		0.40			Brown slightly clayey gravelly sand with gravel of brick tarmac and concrete. (MADE GROUND)	
		0.60	D					Firm becoming stiff high strength slightly sandy silty CLAY with pockets of orangish brown fine to medium sand. (LONDON CLAY FORMATION)	
		0.6	HV	117 kPa				PP at 0.8mbgl = 3.8kg/cm2	1
		1.00	SPT	N=21 (2,3/4,4,6,7)					
		1.2	HV	179 kPa				PP at 1.5mbgl = >4.0kg/cm2	
					1.70			Stiff brown mottled grey and orangish brown sandy CLAY. Sand is fine to medium. (LONDON CLAY FORMATION)	2
		1.8	HV	179 kPa				PP at 2.2mbgl = 2.95kg/cm2	
		2.00	SPT	N=13 (2,3/3,2,4,4)					
		2.5	HV	125 kPa				PP at 2.8mbgl = 3.3 kg/cm2	3
		3.00	D					PP at 3.5mbgl = 3.0kg/cm2	
		3.00	SPT	N=17 (3,3/3,4,5,5)					
		3.2	HV	142 kPa				PP at 4.5mbgl = 2.3kg/cm2	4
		3.8	HV	150 kPa					
		4.00	SPT	N=21 (3,4/5,5,6,5)					
		4.2	HV	150 kPa					
		4.8	HV	129 kPa					
		5.00	SPT	N=23 (4,4/5,6,6,6)	5.00			End of Borehole at 5.00m	5
									6

Remarks:

Borehole terminated at depth
No groundwater encountered





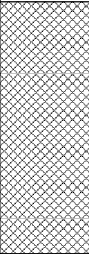
Trial Pit Log

Trial Pit No.

HDP01

Sheet 1 of 1

Project Name: Lordship Lane, Wood Green	Client: Atri7 2 Limited	Date: 19/05/2023
Location: Wood Green	Contractor: DJ Drilling	
Project No. 2303004.001	Drilling Equipment:	Level:
Hole Type: IP	Logged By:	Scale: 1:15

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth (m)	Type	Results					
				0.50			Brown clayey gravelly sand with gravel of brick concrete and flint. (MADE GROUND)	
							End of Trial Pit at 0.50m	
								1
								2

Dimensions		Trial Pit Support		Soakage Testing				Remarks
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Test No.	Date Test	Duration (hh:mm)	Soil Infiltration Rate (m/s)	

Remarks:

Inspection pit terminated at 0.5mbgl on refusal on concrete
No groundwater encountered





Trial Pit Log

Trial Pit No.

HDP02

Sheet 1 of 1

Project Name: Lordship Lane, Wood Green	Client: Atri7 2 Limited	Date: 19/05/2023
Location: Wood Green	Contractor: DJ Drilling	
Project No. 2303004.001	Drilling Equipment:	Level:
Hole Type: IP	Logged By:	Scale: 1:15

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth (m)	Type	Results					
				0.10			Tarmacadam. (MADE GROUND)	
							Brown clayey gravelly sand with gravel of brick tarmac and concrete. (MADE GROUND)	
				0.60			Brown sandy gravelly clay with gravel of brick and concrete. (MADE GROUND)	
				0.80			End of Trial Pit at 0.80m	
								1
								2

Dimensions		Trial Pit Support		Soakage Testing				Remarks
Pit Length (m)	Pit Width (m)	Pit Stability	Shoring Used	Test No.	Date Test	Duration (hh:mm)	Soil Infiltration Rate (m/s)	

Remarks:
Inspection pit terminated at 0.8mbgl on refusal on concrete
No groundwater encountered



Appendix G

Borehole Percolation Test Results

Project:	Lordship Lane, Wood Green
Project Number:	2303004.001
Client:	Atri7 2 Limited
Operator:	AB
Test Date:	18 May 2023
Soil type:	Clay

Borehole reference:	WS01
Test depth (m):	1.00
Depth to standing water (m):	Dry

Test 1	6.3
Test 2	

[illegible][illegible]

Test Time (m)
N/A

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#DIV/0!

Estimated effective diameter and depth:



Project:	Lordship Lane, Wood Green
Project Number:	2303004.001
Client:	Atrif 2 Limited
Operator:	AB
Test Date:	18 May 2023
Soil type:	Clay

Borehole reference:	WS02
Test depth (m):	1.00
Depth to standing water (m):	Dry

Test 1	6
Test 2	

[illegible][illegible]

Test Time (m)
N/A

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#DIV/0!

Estimated effective diameter and depth:

