



FENIX HERITAGE

**Land at
6 Loom Street, Manchester, M4 6AN
(125037/FO/2019)**

**Monitoring and Recording of Geotechnical
Investigations prepared on behalf of
The Forshaw Group**

Document Ref: 1028.R01a
July 2024

**Land at 6 Loom Street, Manchester, M4 6AN
(125037/FO/2019)**

Monitoring and Recording of Geotechnical Investigations

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FENIX HERITAGE

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**6 Loom Street, Manchester
1028.R01a**

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Note on Transcriptions of Historic Maps

Historical mapping, both Ordnance Survey (OS) and individual cartographer's work relies on the accuracy of the data input into it and the projection used to produce a two dimensional image from three dimensional data. Techniques of survey have evolved and improved over the centuries but pre-OS maps are of widely varying quality and their accuracy is limited by the technology used to create them.

Creating an overlay of historic mapping (including 1st and 2nd edition OS Maps) and modern OS data can never be completely accurate. Creating a good approximation relies on using digital technologies to estimate and extrapolate the projection, orientation and scale of original maps by correlating known points on the modern OS grid with the historic mapping. This georeferencing 'distorts' the historic mapping to fit the modern grid using a set of known points chosen by the cartographer/illustrator.

Modern digitally produced OS mapping has a stated accuracy tolerance. The most detailed mapping at 1:1,250 (urban) will have a relative error of $< \pm 0.5\text{m}$ up to 60m. On the ground that equates to an error between two points which are 60m apart on the ground. 95% of the time the scaled measurement would be between 59.1m and 60.9m (paraphrased from <https://www.gov.uk/government/publications/land-registry-plans-the-basis-of-land-registryapplications/land-registry-plans-the-basis-of-land-registry-plans-practice-guide-40-supplement-1>.)

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Appendix B Borehole Logs (courtesy of E3P)

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1. PRECIS

The Forshaw Group secured full planning permission (ref. 125037/FO/2019) from Manchester City Council (hereafter the Council) for:

Erection five storey building to form two duplex apartments including roof terrace and associated car parking.

at Land at 6 Loom Street, Manchester, M4 6AN (hereafter the Site).

On the advice of the Greater Manchester Archaeological Advisory Service (hereafter GMAAS) a condition (7) was applied to the permission requiring the implementation of a programme of archaeological works.

No development shall commence until a Written Scheme of Investigation (WSI) is submitted to and agreed in writing by the City Council as Local Planning Authority. For the avoidance of doubt The WSI shall cover the following:

1. A phased programme and methodology of site investigation and recording to include:

i) Active presence, monitoring and recording of geotechnical investigations

ii) An archaeological watching brief on development groundworks

2. A programme for post investigation assessment to include production of a final report on the significance of the below-ground archaeological interest.

3. Deposition of the final report with the Greater Manchester Historic Environment Record.

4. Dissemination of the results of the archaeological investigations commensurate with their significance.

5. Provision for archive deposition of the report and records of the site investigation.

6. Nomination of a competent person or persons/organisation to undertake the works set out within the approved WSI.

The Forshaw Group commissioned Nexus Heritage to act as the competent organisation and prepare a Written Scheme of Investigation (hereafter WSI) sufficient in scope to address item 1.(i) and 1.(ii) of condition no. 7 and to undertake 2, 3, 4 and 5.

A WSI was duly prepared for archaeological monitoring and recording of geotechnical investigations and a follow-up archaeological watching brief on development groundworks at the site (Nexus Heritage document 3534.R01b). the WSI was approved (email from B. Dyson of GMAAS to A. Martin of Nexus Heritage 15th June 2021).

The watching brief on the geotechnical investigations took place on the 23 Nov. 2021 and the intent was to roll the post field-work tasks arising from the observations of the geotechnical investigations into the tasks arising from the archaeological observations/recording on the groundworks.

Regrettably, Nexus Heritage was not informed of the timetable for the groundworks and the watching brief on this element of the development did not take place.

Nexus Heritage ceased trading in March 2023 and was dissolved.

GMAAS was informed of the situation on 25th August 2023 and noted that whilst the second phase of on-site attendances (archaeological watching brief on development groundworks) was a requirement of condition 7, the necessity for such attendances was to be qualified by the results of the monitoring and recording of geotechnical investigations. In the event, the results of the monitoring and recording of geotechnical investigations did not indicate the presence, of archaeologically significant material; and there was no evidence of infilled features, cellars or fragments of floor surfaces.

GMAAS concluded that no significant archaeological remains were damaged, but the results of the monitoring and recording of geotechnical investigations should be formally reported to fulfil the remaining stages (2-5) of the condition.

The Forshaw Group commissioned Fenix Heritage to undertake the post investigation assessment, reporting, archive compilation and dissemination stages (2-5) of the condition.

2. INTRODUCTION

Definitions, Aims and Objectives

The monitoring and recording of geotechnical investigations can be understood to be a programme of archaeological attendance commensurate in spirit and intent with an archaeological watching brief

The CIfA maintains a standard for archaeological watching brief which states that:

An archaeological watching brief will record the archaeological resource during development within a specified area using appropriate methods and practices. These will satisfy the stated aims of the project, and comply with the Code of conduct and other relevant by-laws of CIfA.

An archaeological watching brief is defined by the CIfA as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons (CIfA 2020). The watching brief should take place within a specified area or site where there is a possibility that archaeological deposits may be disturbed or destroyed.

The CIfA further identifies the purpose of a watching brief as allowing, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established in advance of development or other potentially disruptive works. It is also important to note that a watching brief

provides an opportunity, if needed, for a signal to be made to all interested parties, before the destruction of the archaeological materials, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard.

A watching brief is, therefore, not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

The purposes of the watching brief are:

- to allow, within the resources available, the opportunity to gain information about and record the presence/absence, nature and date of any archaeological remains on the site affected by excavations and groundworks for the development, the presence and nature of which could not be established with sufficient confidence in advance of works which may disturb them.
- to provide the facility to signal to the relevant authorities, before irreversible impact to remains that an archaeological and/or historic find has been made for which the resources allocated to the watching brief itself are inadequate to support their treatment to an adequate and satisfactory standard.

3. LOCATION, TOPOGRAPHIC, GEOLOGICAL AND PEDOLOGICAL BACKGROUND

Location

The Site is located in Manchester (Fig.1) at national grid reference SJ 84853 98675 and fronts onto Loom Street. The Site comprises an existing 52.1m² single storey vacant unit understood to have been utilised as a garage during the late 20th century and early 21st century. It is bounded on three sides by existing buildings ranging from three to five storeys in height.

Geology

The underlying bedrock is characterised by the British Geological Survey as Chester Formation Sandstone a sedimentary deposit formed approximately 247 to 250 million years ago in the Triassic Period in a local environment previously dominated by rivers.

The superficial geological deposits at the Site are characterised by the British Geological Survey as Devensian Till- Diamicton, deposits formed up to 2 million years ago in the Quaternary Period in a local environment previously dominated by ice age conditions.

4. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The planning application was supported by an archaeological desk-based assessment (Nexus Heritage 2020).

In summary, at the time of the desk-based assessment, the Greater Manchester Historic Environment Record (GMHER) had no entry for the Site. However, whilst the Site was within the countryside surrounding Manchester up until the late 18th century, the Laurent map of 1793 the Site is depicted as containing a building. There is no information on the Laurent map to identify the industrial or residential nature of that building. A Rate Book entry from 1795 Rate Book under the name James Dewhurst indicates 6 Loom Street was in use as a dwelling. There is a potential, therefore for the Site to contain archaeological evince of late 18th century domestic occupation, which has a significance in that such housing as was present on the Site pre-dates the publication of the Manchester Board of Health's 1796 report. And, of course, pre-dates by some considerable time the broad sanitary improvements undertaken after the 1848 British Public Health Act.

The Adshed Map of 1851 gives more information on the nature of usage of the buildings on the Site and it confirms that 6 Loom Street remained in use as a residential building.

There was a change of use at 6 Loom Street after 1881. On the 1893 Ordnance Survey map an alleyway not shown on any earlier map is shown running along the eastern boundary of the Site. A

wall/boundary on the southern side of the Site also appears to have been moved. In Slater's Manchester & Salford Directory, 1895 [Part 2: Trades, Institutions, Streets, etc.] Number 6 Loom Street is listed as being occupied/owned by the Northern Rubber Co. Waterproof garment makers. This change of use throws up interesting questions regarding the fact of and extent of whether the dwelling was repurposed to incorporate a manufactory or was it demolished wholesale and a new building erected on the Site?

On 23rd November 1899 Messrs. Hugh Spence and Co. waterproof manufactory on Loom Street was destroyed by fire along with the adjoining premises of Messrs Humphreys, Stothart and Co. The Ordnance Survey 1922 map shows the Site as vacant, without a standing structure. The next map in the cartographic sequence is Goad's Insurance Mapping of 1926, which shows the redevelopment of the Site into an industrial building with a roof light. It is annotated as an "ice cream factory" of one storey with no cellar (Fig. 13). This structure is the building still visible today, including the roof light.

5. RESULTS

A total of five boreholes was sunk on site by E3P on 23rd November 2021.

Photographs of the boreholes being sunk and the arisings are provided at appendix A.

The borehole logs are provided at Appendix B and indicate that the subsurface characteristics of the Site included a layer of made ground, of variable thickness (between 300mm – 1,000mm) comprising a clayey sandy gravel with inclusions of angular of brick, metal, ceramic and clinker. This Made Gound overlay a gravelly clay which was a geologically lain material consistent in composition with the broad geological definition of Devensian Till (a heterogenous mixture of clay, sand, gravel).

Although there was no archaeological watching brief maintained during development groundworks a series of photographs of the excavated foundation reception pits have been provided by the groundworks contractor (Appendix A). These show a consistent deposit of geologically lain and undisturbed gravelly clay overlain by Made Ground.

6. ARCHIVE

The complete project archive is encapsulated within this report, a copy of which will be deposited with the Greater Manchester Historic Environment record (hereafter GMHER).

An OASIS form (OASIS ID: Fenixher1 - 527048) has been created and copy of the final, approved version of this report will be uploaded to the Archaeology Data Service via the OASIS form.

OASIS Summary for fenixher1-527048

OASIS ID (UID)	fenixher1-527048
Project Name	Watching Brief at Land at 6 Loom Street, Manchester, M4 6AN
Sitename	Land at 6 Loom Street, Manchester
Sitecode	
Project Identifier(s)	Fenix 1028
Activity type	Watching Brief
Planning Id	
Reason For Investigation	Planning: Post determination
Organisation Responsible for work	Fenix Heritage
Project Dates	23-Nov-2021 - 23-Nov-2021
Location	Land at 6 Loom Street, Manchester NGR : SJ 84858 98673 LL : 53.484555, -2.229646 12 Fig : 384858,398673
Administrative Areas	Country : England County/Local Authority : Manchester Local Authority District : Manchester Parish : Manchester, unparished area
Project Methodology	An archaeological watching brief on geotechnical investigations.
Project Results	<p>The archaeological monitoring and recording of the geotechnical investigations at the Site observed the sinking of a total of five boreholes.</p> <p>The results of these boreholes demonstrated that the Site preserved a depth of made Ground, containing evidence of anthropogenic activity of no particular archaeological significance. The presence of fragments brick, metal, ceramic and clinker in this Made Ground is entirely consistent with near-surface urban deposits and none of these fragments is specifically relatable to the previous purposes to which the Site was put - an 18th century dwelling, a waterproof garment manufactory and ice-cream factory. There was also no evidence of a fire horizon relating to the conflagration that destroyed the Messrs. Hugh Spence and Co. waterproof manufactory on 23rd November 1899. However, the items in the Made Ground may be the traces of structural debris and portable items present in the Hugh Spence and Co. at the time of the fire in 1899. These may have been introduced into the archaeological record during the time spanning the period between the fire in 1899 and the redevelopment of the Site as an ice cream factory – which is known to have been completed by 1926. The Made Ground contained no hard obstructions or floor surfaces or any in situ structural remains, indicating that no evidence for subterranean accommodation was present. It is likely therefore that none of the structures on Site ever included a basement or cellar level.</p>
Keywords	
Funder	Private or public corporation Private company
HER	Greater Manchester HER - noRev - LITE
Person Responsible for work	Anthony Martin
HER Identifiers	
Archives	

7. CONCLUSION

The archaeological monitoring and recording of the geotechnical investigations at the Site observed the sinking of a total of five boreholes.

The results of these boreholes demonstrated that the Site preserved a depth of made Ground, containing evidence of anthropogenic activity of no particular archaeological significance. The presence of fragments brick, metal, ceramic and clinker in this Made Ground is entirely consistent with near-surface urban deposits and none of these fragments is specifically relatable to the previous purposes to which the Site was put - an 18th century dwelling, a waterproof garment manufactory and ice-cream factory. There was also no evidence of a fire horizon relating to the conflagration that destroyed the Messrs. Hugh Spence and Co. waterproof manufactory on 23rd November 1899. However, the items in the Made Ground may be the traces of structural debris and portable items present in the Hugh Spence and Co. at the time of the fire in 1899. These may have been introduced into the archaeological record during the time spanning the period between the fire in 1899 and the redevelopment of the Site as an ice cream factory – which is known to have been completed by 1926

The Made Ground contained no hard obstructions or floor surfaces or any *in situ* structural remains, indicating that no evidence for subterranean accommodation was present. It is likely therefore that none of the structures on Site ever included a basement or cellar level.

8. SOURCES

ADS (1) *Data Management and sharing Plans*
<https://archaeologydataservice.ac.uk/advice/DataManagementPlans10>

ADS (2) *Guides to good practice*
<http://guides.archaeologydataservice.ac.uk/g2gp/Main>

ADS (3) *Guidelines for Depositors*
<https://www.archaeologydataservice.ac.uk/advice/guidelinesForDepositors>

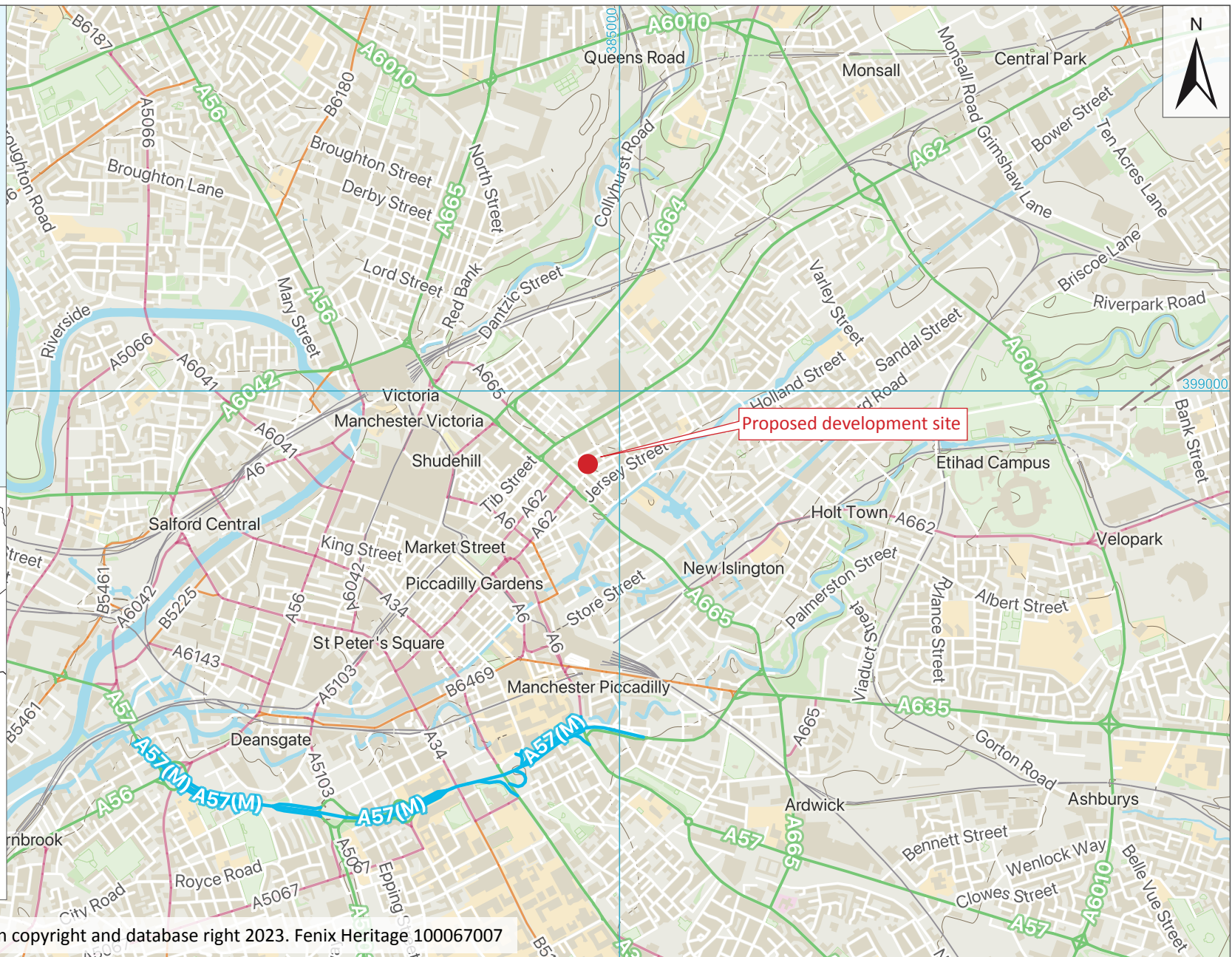
ADS (4) *Guidance for the selection of material for deposit and archive*
<https://www.archaeologydataservice.ac.uk/advice/selectionGuidance.xhtml>

Nexus Heritage, 2020, *No. 6 Loom Street, Manchester – Archaeological Desk-Based Assessment*. Unpublished document, ref. 3472.R01

Nexus Heritage, 2021, *Land at 6 Loom Street, Manchester, M4 6AN (125037/FO/2019) - Written Scheme of Investigation for Monitoring and Recording of Geotechnical Investigations and Archaeological Watching Brief*. Unpublished document, ref. 3534.R01b



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Figure 01: Location of proposed development site at 6 Loom Street, Manchester

0 1.5km

Scale 1:25,000 at A4.



Drawing provided by the client © DLA Designs

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Figure 02: Site Plan (original scale: 1:500 @A4)

 Site Boundary

APPENDICES

APPENDIX A

Photographs of Geotechnical Investigations



Plate 1: Borehole rig in action



Plate 2: Arisings from Borehole 1



Plate 3: Arisings from Borehole 2

APPENDIX B

Borehole Logs (courtesy of E3P)

				<h1>Borehole Log</h1>				Borehole No. WS101 Sheet 1 of 1	
Project Name: Loom Street				Project No. 15018		Co-ords:		Hole Type WS	
Location: Manchester				Level:		Scale 1:50			
Client: Forshaw Group				Dates: 23/11/2021		Logged By G. Haigh			
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10	ES				MADE GROUND: Dark brown slightly clayey sandy gravel. Gravel is medium to coarse angular of brick, metal, ceramic and clinker.		
					0.70				
		1.00	SPT	N=9 (1,2/2,2,2,3)	1.20		Firm light grey mottled orange brown slightly gravelly CLAY. Gravel is fine sub-angular of mudstone and sandstone.	1	
		1.50	U				Stiff medium strength to very stiff high strength brown slightly gravelly CLAY. Gravel is fine to coarse angular to sub-angular of sandstone and mudstone.		
		2.00	SPT	N=18 (2,3/4,4,4,6)				2	
		3.00	ES		2.80		Stiff medium strength to very stiff high strength brown CLAY with occasional gravel. Gravel is sub-angular to sub-rounded of sandstone and mudstone.	3	
		3.00	SPT	N=19 (2,3/3,5,5,6)					
		4.00	SPT	N=15 (2,3/3,3,4,5)				4	
		5.00	SPT	N=19 (2,3/4,5,5,5)				5	
					5.45		End of Borehole at 5.45m	6	
								7	
								8	
								9	
								10	
Remarks 1. Complete. 2. Monitoring well installed.									

Borehole Log

Borehole No.

WS102

Sheet 1 of 1

Project Name: Loom Street

Project No.
15018

Co-ords:

Hole Type
WS

Location: Manchester

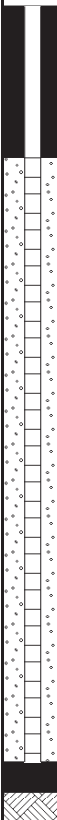
Level:

Scale
1:50

Client: Forshaw Group

Dates: 23/11/2021

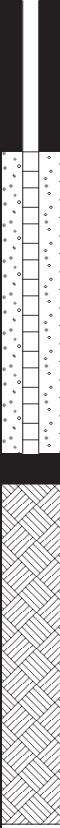
Logged By
G. Haigh

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30	ES		0.30			MADE GROUND: Dark brown slightly clayey sandy gravel. Gravel is medium to coarse angular of brick, metal, ceramic and clinker.	1
		0.70	ES					Stiff medium strength light grey mottled orange brown slightly gravelly CLAY. Gravel is fine sub-angular of mudstone and sandstone.	
		1.00	SPT	N=10 (1,1/2,2,3,3)					
		1.50	U		1.50			Very stiff high strength brown slightly gravelly CLAY. Gravel is fine to coarse angular to sub-angular of sandstone and mudstone.	2
		2.00	SPT	N=17 (2,3/3,4,4,6)					
					2.60				3
		3.00	SPT	N=17 (2,3/3,4,5,5)				Stiff medium strength to very stiff high strength brown CLAY with occasional gravel. Gravel is rounded of sandstone and mudstone.	
									
		4.00	SPT	N=14 (2,2/3,3,3,5)					4
									
									5
		5.00	SPT	N=19 (3,3/4,5,5,5)					
					5.45			End of Borehole at 5.45m	6
									7
									8
									9
									10

Remarks

1. Complete. 2. Monitoring well installed.

				<h1>Borehole Log</h1>				Borehole No. WS103 Sheet 1 of 1	
Project Name: Loom Street				Project No. 15018		Co-ords:		Hole Type WS	
Location: Manchester				Level:		Scale 1:50			
Client: Forshaw Group				Dates: 23/11/2021		Logged By G. Haigh			

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	ES		0.50		MADE GROUND: Dark brown slightly clayey sandy gravel. Gravel is medium to coarse angular of brick, metal, ceramic and clinker.		
		1.00	SPT	N=12 (1,2/2,3,3,4)	1.00		Stiff medium strength brown mottled grey slightly gravelly CLAY. Gravel is fine to coarse sub-angular to rounded of sandstone and mudstone.	1	
		1.50	U				Very stiff high strength brown slightly gravelly CLAY. Gravel is fine to coarse angular to sub-angular of sandstone and mudstone.		
		2.00	SPT	N=18 (2,3/4,4,4,6)	2.00			2	
		3.00	SPT	N=19 (2,3/3,4,5,7)				3	
		4.00 4.00	ES SPT	N=17 (2,3/4,4,4,5)				4	
		5.00	SPT	N=20 (3,3/4,5,5,6)				5	
					5.45				
							End of Borehole at 5.45m	6	
								7	
							8		
							9		
							10		

Remarks 1. Complete. 2. Monitoring well installed.									
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Project Name: Loom Street

Project No.
15018

Co-ords:

Hole Type
WS

Location: Manchester

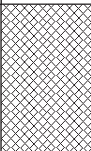
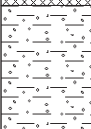
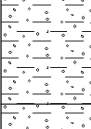
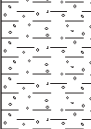
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Scale
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Client: Forshaw Group

Dates: 23/11/2021

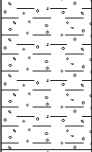
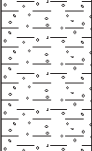
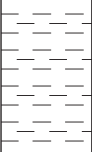
Logged By
G. Haigh

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30	ES					MADE GROUND: Dark brown slightly clayey sandy gravel. Gravel is medium to coarse angular of brick, metal, ceramic and clinker.	
		1.00	SPT	N=14 (2,2/3,3,4,4)	1.00			Stiff medium strength to very stiff high strength brown mottled grey slightly gravelly CLAY. Gravel is fine to coarse sub-angular to rounded of sandstone and mudstone.	1
		1.50	U						
		2.00	SPT	N=21 (3,3/4,5,5,7)					2
		2.50	ES		2.50			Very stiff high strength brown slightly gravelly CLAY. Gravel is fine to coarse angular to sub-angular of sandstone and mudstone.	
		3.00	SPT	N=18 (3,3/4,4,4,6)					3
		4.00	SPT	N=14 (2,3/3,3,3,5)	3.80			Stiff medium strength to very stiff high strength brown CLAY.	4
		5.00	SPT	N=21 (3,3/4,5,6,6)					5
					5.45			End of Borehole at 5.45m	
									6
									7
									8
									9
									10

Remarks

1. Complete. 2. Monitoring well installed.

					<h1>Borehole Log</h1>			Borehole No. WS105 Sheet 1 of 1	
Project Name: Loom Street					Project No. 15018		Co-ords:		Hole Type WS
Location: Manchester					Level:		Scale 1:50		Logged By G. Haigh
Client: Forshaw Group					Dates: 23/11/2021				

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.40	ES				MADE GROUND: Brown slightly gravelly clay. Gravel is fine to coarse angular of brick and clinker.		
		1.00	SPT	N=12 (1,2/3,3,3,3)	1.00			1	
		1.50	U						
		2.00	SPT	N=26 (3,4/5,7,6,8)	2.00			2	
		3.00	SPT	N=23 (3,3/5,5,6,7)					
		3.50	ES					3	
		4.00	SPT	N=19 (2,3/3,5,5,6)	4.00			4	
		5.00	SPT	N=23 (3,4/5,6,6,6)					
				5.45			End of Borehole at 5.45m	5	
								6	
								7	
								8	
								9	
								10	

Remarks Complete.									
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APPENDIX C

Photographs of Development Groundworks



Plate 4: Foundation reception pit sections showing gravelly clay which was a geologically lain material consistent in composition with the broad geological definition of Devensian Till



Plate 5: Foundation reception pit sections showing gravelly clay, a geologically lain material consistent in composition with the broad geological definition of Devensian Till



Plate 6: Foundation reception pit sections showing gravelly clay, a geologically lain material consistent in composition with the broad geological definition of Devensian Till



Plate 7: Foundation reception pit sections showing gravelly clay, a geologically lain material consistent in composition with the broad geological definition of Devensian Till



Plate 8: Foundation reception pit sections showing Made Ground surmounting gravelly clay.