



Birmingham Smithfield Development Birmingham West Midlands

Archaeological Watching Brief



for GIP UK Ltd.

CA Project: MK0069 CA Report: MK0069_1

October 2019



Andover Cirencester Exeter Milton Keynes Suffolk

Birmingham Smithfield Development Birmingham West Midlands

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	Document Control Grid												
Revision	Date	Author	Checked by	Status	Reasons for revision	Approved by							
A	18/10/2019	JC	JN	Internal review	QUALITY ASSURANCE	MPH							
В	08/01/2020	JC	JN	Final for Submission	LPA COMMENTS	MPH							

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SUMMARY

Project Name:	Birmingham Smithfield Development
Location:	Birmingham, West Midlands
NGR:	407372 286326
Туре:	Watching Brief
Date:	13-19 June 2019
Location of Archive:	Birmingham Museum and Art Gallery
Site Code:	BSD19

An archaeological watching brief was undertaken by Cotswold Archaeology for GIP UK during pre-application groundworks associated with the potential redevelopment of the site at Birmingham Smithfield Development, Birmingham, West Midlands.

Principle interest in the site derives from the potential for the presence of medieval activity in the form of buried remains of a moated manor and associated structures identified in the northeastern part of the site through rescue excavation in the 1970s.

The groundworks comprised the excavation of 22 hand-dug test pits and boreholes which reached the underlying natural substrate at depths ranging from 0.8m to 5.9m below present ground level.

No features or deposits of archaeological significance were identified during these groundworks, and no artefactual material pre-dating the modern period was recovered, despite two boreholes WS18 and WS19 being located in close proximity to the anticipated location of the former moat and manor platform.

Borehole WS18, revealed natural substrate at 0.8m bpgl, and was located in the putative location of the moat surrounding the former manor. The recorded depth of natural substrate and the evidence of the recorded sample do not, however, suggest infilled moat material. The evidence could, however, suggest that this borehole lay adjacent to the infilled moat, allowing for a margin of error in historical recording. WS19, located inside the putative circuit of the moat, revealed 'made ground' to 2.4m bpgl, again with no evidence of infilled moat material. This could indicate substantial levels of ground reduction or modification in the area, especially where one may anticipate evidence of the former house platform perhaps at less great depth.

1. INTRODUCTION

- 1.1 In June 2019 Cotswold Archaeology (CA) carried out an archaeological watching brief for GIP UK Ltd at Birmingham Smithfield Development, Birmingham, West Midlands (centred at NGR: 407372 286326; Fig. 1). The watching brief was undertaken to accompany a potential planning application to Birmingham City Council (BCC) for the redevelopment of the site.
- 1.2 The scope of the works was agreed during discussions between CA and BCC's Principal Conservation Officer, Chris Patrick (BCCPCO), with a subsequent detailed *Written Scheme of Investigation* (WSI) produced by CA (2019) and approved by the BCC acting on the advice of the BCCPCO.
- 1.3 The fieldwork was carried out in accordance with the National Planning Policy *Framework* (MHCLG 2019) and also followed the Standard and guidance for an archaeological watching brief (ClfA 2014).

The site

- 1.4 The proposed development area measures approximately 16.8ha in extent, and comprises the former Wholesale Markets Precinct, including market buildings, warehouses, associated infrastructure and car parking. The site is bounded to the west by Pershore Street, to the south by Barford Street, to the east by Rea Street and to the north by the B4100 (Moat Lane / Digbeth). The site lies at approximately 112m above Ordnance Datum (aOD), on relatively level ground.
- 1.5 The underlying bedrock geology of the area is mapped as mudstone of the Sidmouth Mudstone Formation, formed approximately 228 to 250 million years ago in the Triassic Period; and sandstone of the Helsby Sandstone Formation, formed approximately 242 to 247 million years ago in the Triassic Period (BGS 2019). No superficial deposits are recorded for the area. The natural substrate revealed within the boreholes comprised a mixture of silty sandy clays.

2. ARCHAEOLOGICAL BACKGROUND

2.1 The archaeological background has been presented in detail as part of a desk-based assessment (DBA) produced by Atkins (2010). The following text is summarised from

the DBA text, and is supplemented by a Heritage Gateway search to cover any more recent discoveries.

Prehistoric period (pre-AD 43)

2.2 The extent of known prehistoric settlement and associated activity within the wider Birmingham area has become better informed in recent years as a result of archaeological investigation, prior to which the picture was largely based on chance finds of flint, stone and bronze artefacts. Systematic fieldwalking programmes east of Sutton Coldfield have resulted in the discovery of Mesolithic and Neolithic artefact scatters (Hodder, 2004; 25). Added to this, there have been excavations of Bronze Age burnt mounds and the discovery through systematic survey of others in the region; excavations along the line of the M6 Toll motorway in Sutton Coldfield have also revealed Bronze Age and Iron Age sites (Hodder, 2004; 45). The identification of these sites suggests it is likely that the less-urbanised parts of the city could retain further surviving buried remains, but conversely the built-up areas of the city centre and its surroundings are far less likely to retain extensive remains and in fact, to date within the study area no substantial prehistoric remains have been recorded.

Roman period (AD 43 – AD 410)

2.3 Very little evidence of activity during the Roman period has been recorded within the city centre, with the exception of finds of Roman coins during the construction of sewers in Dudley Street. Although there was never a Roman town here, several sites are known in the wider city area, which provide evidence for the wider area of military, agricultural/industrial and domestic activity. A fort and associated vicus dating from the 1st century AD and occupied until approximately AD 200 is known at Metchley in Edgbaston, in the grounds of the University and Queen Elizabeth Hospital, several miles from the city centre. Farmsteads have been discovered, at King's Norton, Sutton Coldfield and elsewhere, and kilns, field systems, lengths of at least three roads and other archaeological and palaeoenvironmental remains have been recorded too (Hodder 2004, 49).

Early medieval and medieval periods (AD 410 – 1539)

2.4

Medieval Birmingham developed on a sandstone ridge and much of the present day city centre is situated on the same ridge and has spread along it, and to the west. It is thought that the central part of the settlement, *c*.1km to the north of the site, was the original focus of settlement sometime during the early medieval period. However, despite a number of archaeological investigations in the area, no physical evidence has yet been recovered, nor is there any documentary evidence, with the exception of the form of the place-name which provides the only indication of pre-11th century activity. Birmingham is an Anglo-Saxon name which has been interpreted as "landunit of Beorma's people" (Bassett 2000, 8). It has been suggested tentatively that the shape of the Parsonage moat, situated to the west of the site may reflect the location of a late Saxon manor, of similar shape and size to others in the country, but this is based only on its depiction in much later maps (Hodder 2004, 80).

- 2.5 At the time of the Domesday Survey, Birmingham was one of several small settlements within the boundary of the present city and one of the least important, comprising nine peasant households representing a population of about 50 and having a value of £1. At this time Birmingham was situated on the edge of Arden, an extensively wooded part of Warwickshire, much of which was not colonised until the 11th century. Between the 11th and 14th centuries the population of Warwickshire is thought to have at least doubled, as was the case elsewhere during the period. This stimulated other changes over the same period. For example a network of market centres and towns developed, particularly from the mid-12th century onwards, and included amongst these was Birmingham.
- 2.6 The settlement took its first real step toward becoming an urban centre in 1166 when Peter de Birmingham bought the rights to hold a weekly market, to be held at his castrum (Bassett 2000, 2). This "castle" probably refers to the site of the moated manor house, although there is no firm archaeological evidence for when the site was initially developed and what form it took. This market charter, given by Henry II was the first to be issued in Warwickshire, probably giving the town a significant economic boost (McKenna 2005, 10). The town flourished and over the following centuries grew in size and stature, its heart focused on St Martin's Church, the Manor and the market area. Birmingham achieved regional importance over the next two centuries, becoming one of the three largest towns in Warwickshire. During this period the settlement shared many of the characteristics of a borough, since sometime after obtaining the market charter, by 1275, the burgesses of the town were being summoned to attend Parliament.
- 2.7 As described above very little evidence exists in the archaeological record of occupation in the Birmingham city area prior to the medieval period and it is suggested that the town may have been a new creation around the 12th century (Hodder 2004, 83). The evidence for this is derived from a number of archaeological investigations

and desk-based assessments predominantly associated with modern development in the city and concentrated around the Digbeth and Deritend areas of the city. It has also been suggested elsewhere that the purchase of the market charter in 1166 may have been contiguous with the initial medieval development, or deliberate foundation, of the town (Holt 1985, 4-5) and the distinctive triangular formation of the market place, with St Martin's on its south-west side, is also considered indicative of this theory (Bassett, 2000, 2). Alternatively the moated manor site may represent the focus and impetus for initial development of the manor of Birmingham, during the later 11th and early 12th centuries. As noted at this time Birmingham was situated on the edge of Arden an area in which moated sites are a distinctive feature of the regional settlement pattern, though the majority of these date between the 13th and 14th centuries. The circular shape of the Birmingham moat and also the sub-circular shape of the Parsonage moat are indicative of an earlier phase of moat-building in the region, estimated to be around 1150 (Mould & Litherland 1995).

- 2.8 The origins of the two moats and their possible relationship to each other are not known though they may originally have represented the manorial site and its home farm. Both moated sites are located on the Birmingham Fault, a geological feature which occurs where the Mercia Mudstone deposits on the east and south-east have been let down (Watts 1980, 17). This fault is reflected in the steep slope from the Bull Ring down to Digbeth and the River Rea. This is also associated with a line of natural springs and wells which would have made the area a prime development focus in these early years and obviously influenced the installation of the moats in each case.
- 2.9 If the town was newly established in the 12th century its arrangement comprising the circular moated manor site, parish church, market place and High Street beyond, is very similar to one of the small Medieval planned towns of the Welsh Marches such as Kilpeck or Richards Castle, though there is no evidence that the Birmingham site was defended. The early town also contained housing to the north of the market place and possibly to the west, a deer park to the east, and a wet area to the south as the land dropped away into the River Rea, exploited for water-using industries.
- 2.10 Excavations at Park Street and Moor Street to the north and north-east of the site revealed elements of the probable town boundary ditch, in places 7m wide and 2m deep, which defined the rear of burgage plots, themselves recorded by archaeological investigations, set out early in the medieval period along Digbeth, forming the boundary between the nascent town and the manorial deer park. This might have

extended as far north as the junction of the High Street and New Street and south to the Parsonage moat. The rest of the boundary would have been formed by the watercourse that joined the two moats. This apparently explains its 14th century name, the Hersum (lord's or lordship) ditch (Hodder 2004, 84; Patrick & Ratkai, 2009).

Post-medieval and modern periods (1539 to present)

- 2.11 Evidence for the more recent periods of activity and occupation in the study area and the wider Birmingham area derive far more extensively from documentary, illustrative, cartographic and archaeological evidence. There is documentary evidence for the use of water for domestic and industrial purposes, for example the location of wells and mills such as the Lady Well, Lady Well Mill, the Malt / Moat Mill and the Town Mill. Much of the archaeological evidence relates to industry, including workplaces, power sources, raw materials, products and waste products and the transport network that carried them (Hodder 2004, 133). Excavations in the city centre have revealed evidence of metalworking, leather tanning, milling, glassmaking, bone working, hemp and flax processing, button making and brick, tile and pottery manufacture (at Edgbaston Street, Park Street, Moor Street, Floodgate Street, and elsewhere, at Manzoni Gardens and the Coach Station, Rea Street). They have also shed light on aspects of the domestic lives of the city's people, co-existing alongside and around their industrial enterprises.
- 2.12 As late as 1731 the watercourse running between the Parsonage moat and the Birmingham manor site formed the southern boundary of the city. However, by 1766 Thomas Gooch was given permission by an Act of Parliament to develop much of the area to the south. Rapid growth ensued and by 1778 Birmingham moated manor was surrounded by streets and buildings. In the 17th and 18th centuries small-scale industry and associated housing characterised the area, and by the 18th century the manor and its structures had been given over to wire manufacture (Mould & Litherland 1995, 8). By 1816 the whole manor site had been sold off, demolished and all valuable materials removed. Around the same time the Parsonage moat was infilled and the site levelled. In the late 1820s a turnpike road was constructed though the area to connect Worcester Street with Bromsgrove Street.
- 2.13 Massive growth in the urban population in the 19th century, the construction of Smithfield Market, in part on the former moated manor site, and social changes in part brought about by the industrial revolution -contributed to the general decline of the inner city area. The urban poor lived in insanitary, often old buildings commonly

situated in "courts". Social change for the better began to gather pace late in the 19th century with the instatement of Joseph Chamberlain as leader of the City Council and corresponded with a general improvement in the economy of the city, brought about in part by improving rail links. This re-established the status of the area and in particular the wholesale and livestock markets and surrounding industries. Later, in the 20th century the markets again declined as a result of changing country-wide economic trends and in no small part as a result of the blitz in 1940. Redevelopment in the 1970s levelled the markets area, once again and the present day Wholesale Markets were established (Mould & Litherland 1995, 9).

3. AIMS AND OBJECTIVES

- 3.1 The objectives of the archaeological works were:
 - to monitor 25 hand-dug test pits associated with geotechnical site investigation works, and to identify, investigate and record all significant buried archaeological deposits revealed on the site during the course of these site investigation works; and,
 - at the conclusion of the project, to produce an integrated archive for the project work and a report setting out the results of the project and the archaeological conclusions that can be drawn from the recorded data.
- 3.2 If significant archaeological remains were identified, reference was to be made to *The Archaeology of the West Midlands: A framework for research* (Watt 2011), so that the remains could, if possible, be placed within their local and regional context.

4. METHODOLOGY

- 4.1 The fieldwork followed the methodology set out within the WSI (CA 2019). An archaeologist was present during intrusive groundworks comprising a total of 22 handdug test-pits and boreholes. In total 25 boreholes were undertaken rather than 25; with four of these not monitored under archaeological conditions (Fig. 2). Nonarchaeologically significant deposits were removed by the contractors under archaeological supervision (Fig. 4).
- 4.2 Where archaeological deposits were encountered written, graphic and photographic records were compiled in accordance with CA *Technical Manual 1: Fieldwork Recording Manual.*

4.3 The archive from the watching brief is currently held by CA at its office in Milton Keynes. Subject to the agreement of the legal landowner the site archive will be deposited with the Birmingham Museum and Art Gallery. A summary of information from this project, set out within Appendix B, will be entered onto the OASIS online database of archaeological projects in Britain.

5. RESULTS (FIGS 2-5)

- 5.1 The natural substrate, comprising a mix of silty/sandy clays, was revealed in 13 of the boreholes monitored. WS18, situated within the anticipated footprint of the former medieval moat, revealed the natural substrate at only 0.8m bpgl. Whereas the deposits in WS19 revealed that the natural substrate lay at 2.4m bpgl. The average depth of the natural substrate across the site was c.3.2m bpgl. In borehole WS12 the natural substrate was revealed at 5.8m bpgl, the deepest recorded example.
- 5.2 No features or deposits of archaeological significance were identified during groundworks and, despite visual scanning of spoil, no artefactual material pre-dating the modern period was recovered.

6. DISCUSSION

6.1 Although there is evident archaeological potential within the site it lies at an uncertain depth. The watching brief identified no evidence of archaeological remains within the area of observed groundworks but it was clear from the evidence of the borehole survey that natural substrate lies at depths greater than 3m bpgl toward the south of the site and somewhat less depth moving northwards, with some pockets at less than 1m depth bpgl. This could indicate that surviving remains of the former moated manor may yet survive in pockets in the north-east of the site cutting the less truncated or degraded natural deposits. The 'made ground' deposits, of relatively recent origin, were recorded between 0.8m and up to 6m bpgl, and represent substantial remodelling of the site, mainly in the 20th century. The variation in thickness of 'made ground' across the site is likely a reflection of both quite substantial ground reduction in places as well as raising of former ground levels during phases of construction in the later 20th century.

- 6.2 The three most northerly boreholes (WS18, WS19 and WS23) revealed the natural substrate at depths between 0.8 to 2.4m bpgl, less deep on average than in the southern half of the site, which may indicate a better potential for the presence of archaeological remains in this part of the site. Notably it is this part of the site in which the former moated manor is located.
- 6.3 Borehole WS18, revealed natural substrate at 0.8m bpgl, and was located in the putative location of the moat surrounding the former manor. The recorded depth of natural substrate and the evidence of the recorded sample do not, however, suggest infilled moat material. The evidence could, however, suggest that this borehole lay adjacent to the infilled moat, allowing for a margin of error in historical recording. WS19, located inside the putative circuit of the moat, revealed 'made ground' to 2.4m bpgl, again with no evidence of infilled moat material. This could indicate substantial levels of ground reduction or modification in the area, especially where one may anticipate evidence of the former house platform perhaps at less great depth.

7. CA PROJECT TEAM

7.1 The fieldwork was undertaken, and this report written, by James Coyne. The illustrations were prepared by Amy Wright. The archive has been compiled by Emily Evans, and prepared for deposition by Hazel O'Neill. The project was managed for CA by Mark Hewson.

8. REFERENCES

Atkins Ltd 2010 Archaeological desk-based assessment for the Birmingham Wholesale Markets and surrounding area

Bassett, S. 2000 Anglo-Saxon Birmingham Midland History 24, 1-27.

- BGS (British Geological Survey) 2019 *Geology of Britain Viewer* http://mapapps.bgs.ac.uk/geologyofbritain/home.html Accessed 13 May 2019
- CA (Cotswold Archaeology) 2019 Birmingham Smithfield Development, Birmingham, West Midlands: Written Scheme of Investigation for an Archaeological Watching Brief
- ClfA, 2014, Standard and guidance for an archaeological watching brief. Chartered Institute for Archaeologists (Reading)
- Heritage Gateway 2019 <u>https://www.heritagegateway.org.uk/gateway/default.aspx</u> Accessed 13 May 2019
- Hodder, M. 2004 Birmingham: A Hidden History Gloucestershire: Tempus Publishing Ltd
- Holt, R. 1985 The Early History of the Town of Birmingham 1166-1600 Dugdale Society Occasional Paper 30
- McKenna, J. 2005 *Birmingham: The Building of a City* Gloucestershire: Tempus Publishing Ltd
- MHCLG (Ministry for Housing, Communities and Local Government) 2019 National Planning Policy Framework
- Mould, C. and Litherland, S. 1995 A Preliminary Archaeological Assessment of the Area of Edgbaston Street, Pershore Street, Upper Dean Street and Moat Lane, Birmingham City Centre BUFAU Report No. 354

Patrick, C. and Ratkai, S. 2009 Land to the south of Edgbaston Street: Investigations 1997-1999. In The Bull Ring Uncovered Oxford: Oxbow

- Watts, L. 1980 *Birmingham Moat: its history, topography and destruction* Transactions of the Birmingham and Warwickshire Archaeology Society 89, 1978-1979, 1-77
- Watt, S. (ed) 2011 The Archaeology of the West Midlands: A framework for research Oxford: Oxbow

APPENDIX A: BOREHOLE LOGS

APPENDIX A



	Window	less Sam	pler	Bore	ehole L	_og		Borehole:	WS	S1
GIP	Project Number: 28		•			0		Sheet 1 of 1 Logged By:	SJ	
		nithfield, Digbeth	ı, Birmir	ngham				Checked By:	SJ	
Ettingshall Road		ind Lease						Drilled By:	G	
Wolverhampton	0	kins				N - 41			00005.00	
Tel: 01902 459558		6/06/2019 0mm				Nationa Ground		E: 407368.23 N: 2 +106.98mAOD	86235.99	
Email: info@gipuk.com		00m				Final D		5.00m		
Description of	•	Legend	Depth	Level	Water		es/Tests	SPT 'N' Value [U100	Blows]	Installation
- CONCRETE.		XXXX	(m bgl)	(mAD)	Level (m bgl)	(m bgl)	Туре	Hand Vane		/Backfill
			0.30	106.68		0.30	В			ĽΔ
 MADE GROUND. Dark greyish br Gravel is fine to coarse angular to 						0.30	ES			
ash, concrete, ceramic, wood and						0.70	ES			
PID reading at 0.30m - 0.3ppm. PID reading at 0.70m - 0.3ppm.										
						1.20	в			
PID reading at 1.20m - 2.0ppm.						1.20	ES			
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							_			
 Orange brown gravelly slightly silt 	y SAND. Gravel is fine	e to	2.20	104.78		2.20 2.20	B ES			
 coarse sub-rounded to rounded que Deposits). 	uartzite (Superficial	0 °C								
PID reading at 2.20m - 5.6ppm.		0 %								
 Firm pale brown and reddish brow 	up alightly condy alight		3.00	103.98		3.00	в			
gravelly silty CLAY. Gravel is fine						3.00	ES			
quartzite. (Superficial Deposits). PID reading at 3.00m - 1.4ppm.										
-			4.00	102.98	▼ 4.00	4.00	в			
 Orange brown silty gravelly SAND coarse rounded quartzite. (Superf). Gravel is medium to	0 •	4.00	102.90	- 4.00	4.00	В			
Strata noted as "very wet".)		0								
 PID reading at 4.00m - 2.5ppm. 		0 °								
E		° C 0 °								
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Samples/Tests U Undisturbed	Other Informa		od usi-	0000	oorer					
U Undisturbed D Disturbed	2. Hand-dug se	lstanding penetrat ervice avoidance p	it excava							
B Bulk		r encountered at 4 minated at limit of		200 0000	ler drilling o	quinment				
W Water	5. Borehole col	lapsed up to 2.00r	n.	-	-				6 14	
S/C SPT/CPT		DPE monitoring sta n to 0.30m, with a				slotted fro	om 2.00m	to 1.00m) in a gravel	tilter, bento	nite
ES Environmental Sample										
HV Hand Shear Vane										
NR No Recovery Water Strike										
Water Level Document 4.1	144									

GIP Proje	Windowle ct Number: 28266	8	•		ehole l	_og		Borehole: Sheet 1 of 1 Logged By:		S2
Devonshire House Client		ifield, Digbeth Lease	n, Birmir	ngham				Checked By:	N	
Ettingshall Road Wolverhampton Engin	neer: Atkins	S						Drilled By:	R	S
Tel: 01902 459558		/2019				Nationa		E: 407383.83 N: 2	86242.32	2
Email: info@gipuk.com Diamo www.gipuk.com Denth	eter: 100m n Cased: 2.00n					Ground Final D		+106.96mAOD 6.00m		
Description of Str		Legend	Depth (m bgl)	Level (mAD)	Water Level (m bgl)		Type	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
- CONCRETE.										N .
MADE GROUND. Brown clayey (becom gravelly SAND with occasional clay poc coarse sub-angular to rounded brick, qu PID reading at 0.25m - 0.0ppm. PID reading at 0.50m - 0.0ppm.	kets. Gravel is fine		0.25	106.71		0.25 0.25 0.50 0.50 1.00 1.20	B ES ES D B			🛆
 PID reading at 1.20m - 7.3ppm. 						1.20	ES			
MADE GROUND. Firm friable brown an			1.60	105.36		1.60 1.60	D ES			
 slightly gravelly CLAY. Gravel is fine to c rounded brick, quartzite and coal. 	coarse sub-angular		1.90 2.00	105.06 104.96		1.90 2.00	D B			
PID reading at 1.60m - 6.8ppm. Firm friable brown and pale brown sand CLAY. Gravel is fine to coarse sub-round quartzite. (Superficial Deposits). PID reading at 1.90m - 0.2ppm.	ded to rounded					2.00	ES			
 Pale yellowish brown becoming reddish silty SAND. Gravel is fine to coarse sub- quartzite. (Superficial Deposits). 					▼ 3.00	3.00	В			
 Firm pale brown sandy slightly gravelly to coarse sub-rounded to rounded quart 	CLAY. Gravel is fine	0 0 0	3.50	103.46		3.50 3.50	D ES			
Deposits). Firm reddish brown slightly sandy CLAY	· ·		3.90	103.06		3.90	D			
medium quartzite gravel. (Reworked Me Group).						4.00 4.00	B ES			
-			5.00	101.96		5.00	В			
 Stiff and very stiff reddish brown and blu sandy CLAY with occasional siltstone litl Mercia Mudstone Group - Zone 4a). 		ed <u>1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 </u>	0.00	101.90		3.00	D			
Borehole Complete at 6.0	0m	<u> </u>	6.00	100.96						
Samples/Tests U Undisturbed D Disturbed B Bulk W Water S/C SPT/CPT ES Environmental Sample HV Hand Shear Vane NR No Recovery Water Strike Water Strike Water Level Document 4.144	Other Informatio 1. Surface hardsta 2. Hand-dug servid 3. Strata damp frod 4. 50mm ID HDPE seal from 2.00m to	nding penetrat ce avoidance p m 3.00m i monitoring sta	it excava andpipe i	ated to 1.2 nstalled f	20m. rom 6.00m (slotted fro	om 6.00m	ı to 2.00m) in a gravel	filter, bent	onite

	Windo	wless	Sam	pler	Bore	ehole I	Log		Borehole:	W	53
GIP	Project Number	: 28268					Ŭ		Sheet 1 of 1 Logged By:	CF	
Ground Investigation & Piling Limited	Project Name: Client:	Smithfield, Land Lease	-	ı, Birmir	igham				Checked By:	M	
Ettingshall Road Wolverhampton	Engineer:	Atkins	5						Drilled By:	R	S
W0Vernampton WV2 2JT Tel: 01902 459558	Date Drilled:	17/06/2019)				Nationa	I Grid:	E: 407481.01 N: 2	86210.54	
Email: info@gipuk.com	Diameter:	100mm					Ground		+106.72mAOD		
www.gipuk.com	Depth Cased:	0.00m		D		Water	Final De		0.46m	DI	
Description	n of Strata		Legend	Depth (m bgl)	Level (mAD)	Level (m bgl)	Depth (m bgl)	Туре	SPT 'N' Value [U100 Hand Vane	BIOWS]	Installation /Backfill
– TARMAC.			>>>>								
 MADE GROUND. Grey sandy to coarse angular to sub-angular 			XXX	0.30 0.46	106.42 106.26		0.35 0.35	B ES			
and clinker.		DIICK, ASIT					0.00	20			
PID reading at 0.35m - 0.2ppm. Borehole Com	plete at 0.46m]									
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Samples/Tests	Other Info	ormation:									
U Undisturbed	1. Surface	hardstanding	penetrat	ed using	concrete	corer. 16m - unabl	e to nend	trate conc	rete obstruction - bore	hole termi	nated
D Disturbed B Bulk	3. No grou	ndwater encou	intered.		.00 10 0.4		o to helle				
W Water	4. Borehol	e backfilled up	on comp	netion.							
S/C SPT/CPT											
ES Environmental Sample											
HV Hand Shear Vane NR No Recovery											
Water Strike											
Water Level Document	4.144										

	Windo	wless San	npler	Bore	ehole l	_og		Borehole: Sheet 1 of 1	W	S4
GIL	Project Number:		Logged By:							
Ground Investigation & Piling Limited	Project Name: Client:	Smithfield, Digber Land Lease	n, Birmir	ngnam				Checked By:	М	
Ettingshall Road Wolverhampton	Engineer:	Atkins						Drilled By:	R	S
WV2 2JT Tel: 01902 459558	Date Drilled:	17/06/2019 to 18/	06/2019			Nationa		E: 407474.26 N: 2	86214.46	
Email: info@gipuk.com www.gipuk.com	Diameter: Depth Cased:	100mm 1.60m				Ground Final D		+106.68mAOD 1.60m		
			Depth	Level	Water		es/Tests	SPT 'N' Value [U100	Blows]	Installation
– TARMAC.	otion of Strata	Legend	(m bgl)	(mAD)	Level (m bgl)	(m bgl)	Туре	Hand Vane	-	/Backfill
E			× 0.27	106.41		0.27	В			
MADE GROUND. Purplish	Gravel is medium to coarse	sub-	0.45	106.23		0.30 0.60	ES B			
angular to angular hardco PID reading at 0.30m - 0.3p	pm.	/ 💥 🏹	Ś			0.60	ES			
MADE GROUND. Dark gr very gravelly SAND with a			×			0.90 0.90	D ES			
to coarse angular to sub-r hardcore. Cobbles are sla		nd 💥	X			1.20	D			
PID reading at 0.60m - 0.8p Did reading at 0.90m - 0.4p	pm.		× 1.60	105.08						
Borehole	Complete at 1.60m									
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Samples/Tests		rmatica	1	1	I	1				1
Samples/Tests U Undisturbed	Other Info 1. Surface I	hardstanding penetra	ted usina	concrete	corer.					
D Disturbed	2. Hand-du	g service avoidance liner recovery from 1	pit excava	ated to 1.2	20m.					
B Bulk W Water	4. Obstruct	ion at 1.60m - unable			ehole termin	ated.				
S/C SPT/CPT		backfilled upon com	pletion.							
ES Environmental Sample	e									
HV Hand Shear Vane										
NR No Recovery Water Strike										
	iment 4.144									

Project Number: 22838 Project Number: 22838 Development targe Variation of the second seco	Project Number 22838 Project Number 22838 Descriptions Link Link and Lease Link Engine Link Link Link Link Link Link Link Link		Windo	wless	Sam	pler	Bore	ehole l	_og		Borehole:	WS	5
More Generative Market Criteric Land Lasse Directed by metabolic directed by m	Number Name Project Name Eard Loge Dimension Dimension Dimension Water Strate Date Diffect Land Losse Dimension	GIP				•			0		Sheet 1 of 1		
bingentings and binks and binks in the second level in the second	United states Engineering Lafe Lafe Size PS Musical Laboration Engineering Laboration Engineering Engine Engineering Engine	Ground Investigation & Piling Limited	Project Name:	Smithfield	Digbeth	n, Birmir	ngham						
Water stratum Englisition Allens Description of Strata Description of Strata Grand Level: -100.52m.RCDD Description of Strata Level: notion Strate Strate Strate Strate Strat	Water statute Engineer Engineer Water statute Fill bits				e								
Startpiss/Tests Other Information: Ground Level: +106 820-NOD VW grav.org Description of Strata (and) (inv)	Sterupterson Diameter 100mm Grand Level: 106 32mADD WWW Description of Strata veerd Print Integer Vertice Print Sterupterson Sterupterson Sterupterson Sterupterson	Wolverhampton	-								· · ·	1	
Erind Depch: 0.05m Find Depch: 0.05m Open: 0.05m CONCRETE: OPEN: 0.05m OPEN: 0.05m OPEN: 0.05m CONCRETE: OPEN: 0.05m OPEN: 0.05m OPEN: 0.05m OPEN: 0.05m CONCRETE: OPEN: 0.05m	Numerican Depth Case: 0.00m Final Depth 0.96m Description of Strata Lever Image	Tel: 01902 459558			9							86233.28	
Operation Operation Constraint Team Team<	Surgest Tests Other Information Under the Surgest Tests Other Information Mark Generating at 3.00- 0.5pm Converting at 0.5pm Surgest Tests Other Information Under the Surgest Tests Other Information Surgest Tests Other Information Under the Surgest Tests Other Information Under the Surgest Tests Other Information Surg												
Description of Stated User (max) (Conception Conception Conception The Description			0.0011		Denth	Level	Water	Sample			Blowel In	stallation
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Image: Control and Cont	Deckey Exclusion: Units of the initial control display (basic wild a medium collider) (basic median control display (basic wild a medium collider) (basic median control display (basic wild a medium collider) (basic median control display (basic wild a medium collider) (basic median control display (basic wild a median collider) (basic median control display (basic wild a median collider) (basic median control display (basic wild a median collider) (basic median control display (basic wild a median collider) (basic median control display (basic wild a median collider) (basic median control display (basic wild a median collider) (basic median control display (basic wild a median collider) (basic wild wild colider) (basic wild wild collider) (basic w	CONCRETE.			\times								
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U Undisturbed 1. Surface hardstanding penetrated using concrete corer. D Disturbed 2. Hand-dug service avoidance pit excavated to 0.95m - unable to penetrate obstruction - borehole terminated. B Bulk 3. No groundwater encountered. W Water S/C SPT/CPT	U Undisturbed 1. Surface hardstanding penetrated using concrete corer. D Disturbed 2. Hand-dug service avoidance pit excavated to 0.95m - unable to penetrate obstruction - borehole terminated. B Bulk 3. No groundwater encountered. W Water S/C SPT/CPT ES Environmental Sample HV Hand Shear Vane NR No Recovery Water Strike Vater Strike	-											
U Undisturbed 1. Surface hardstanding penetrated using concrete corer. D Disturbed 2. Hand-dug service avoidance pit excavated to 0.95m - unable to penetrate obstruction - borehole terminated. B Bulk 3. No groundwater encountered. W Water S/C SPT/CPT	U Undisturbed 1. Surface hardstanding penetrated using concrete corer. D Disturbed 2. Hand-dug service avoidance pit excavated to 0.95m - unable to penetrate obstruction - borehole terminated. B Bulk 3. No groundwater encountered. W Water S/C SPT/CPT ES Environmental Sample HV Hand Shear Vane NR No Recovery Water Strike Vater Strike	Samples/Tests	Other	armation:									
D Disturbed 2. Hand-dug service avoidance pit excavated to 0.95m - unable to penetrate obstruction - borehole terminated. B Bulk 3. No groundwater encountered. W Water S/C SPT/CPT	D Disturbed 2. Hand-dug service avoidance pit excavated to 0.95m - unable to penetrate obstruction - borehole terminated. B Bulk 3. No groundwater encountered. W Water S/C SPT/CPT ES Environmental Sample HV Hand Shear Vane NR No Recovery ✓ Water Strike				penetrat	ed using	concrete	corer					
B Bulk 3. No groundwater encountered. W Water 4. Borehole backfilled upon completion. S/C SPT/CPT	B Bulk 3. No groundwater encountered. W Water 4. Borehole backfilled upon completion. S/C SPT/CPT ES Environmental Sample HV Hand Shear Vane NR No Recovery Vater Strike	•	2. Hand-du	ug service avo	oidance p				e to pene	rate obst	ruction - borehole term	inated.	
W Water S/C SPT/CPT	W Water S/C SPT/CPT ES Environmental Sample HV Hand Shear Vane NR No Recovery V Water Strike					letion							
	ES Environmental Sample HV Hand Shear Vane NR No Recovery V Water Strike	W Water		_ 220101100 U									
ES Environmental Sample	HV Hand Shear Vane NR No Recovery V Water Strike												
	NR No Recovery												
	Water Strike												
	Water Level Document 4.144		4.144										

	Windo	wless	Sam	pler	Bore	ehole l	_og		Borehole:	W	S6
GIP	Project Number	: 28268		-			•		Sheet 1 of 1 Logged By:		'SJW
Ground Investigation & Piling Limited	Project Name: Client:	Smithfield Land Leas	-	ı, Birmir	ngham				Checked By:	N	
Ettingshall Road	Engineer:	Atkins	e .						Drilled By:	E	В
Wolverhampton WV2 2JT	Date Drilled:	17/06/201	9 to 18/0	6/2019			Nationa	I Grid:	E: 407516.18 N: 2	86147.56	6
Tel: 01902 459558 Email: info@gipuk.com	Diameter:	100mm					Ground		+106.92mAOD		
www.gipuk.com	Depth Cased:	0.00m				Water	Final D	epth: s/Tests	2.30m		1
Description	of Strata		Legend	Depth (m bgl)	Level (mAD)	Level (m bgl)	Depth (m bgl)	Туре	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
				0.10	106.82		0.15	В			
MADE GROUND. Greyish brown to coarse sub-angular hardcore,	slag and ash.	EL OI IINE		0.35	106.56		0.15 0.35	ES B			
├ PID reading at 0.15m - 0.0ppm. □ MADE GROUND. Orange brown	becoming reddish	brown					0.35	ES			
 silty gravelly SAND with a low co to coarse sub-angular to rounded 	bble content. Grave	el is fine ag					0.50	В			
 sandstone and plastic. Cobbles a 							1.00 1.20	B D			
 PID reading at 0.35m - 0.0ppm. PID reading at 1.20m - 0.0ppm. 							1.20	ES			
							1 75	ES			;;; ;;; ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
 PID reading at 1.75m - 0.0ppm. Possible sandstone boulder at 1.75 	5m-2.00m.						1.75 1.75	E3 D			
-											88
Borehole Comple	ete at 2.30m			2.30	104.62						00_00
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Samples/Tests	Other Info		•								
U Undisturbed		hardstanding									
D Disturbed B Bulk	3. No liner	recovery fror	n 2.00m -	2.30m.			quinmont				
W Water	5. No grou	e terminated	ountered.			-				6 11	
S/C SPT/CPT		D HDPE mon .50m to 0.30					slotted fro	om 2.30m	to 1.50m) in a gravel	tilter, bent	onite
ES Environmental Sample HV Hand Shear Vane											
NR No Recovery											
Water Strike											
Water Level Document 4	.144										

	Windowl	ess Sam	pler	Bore	ehole l	Loa		Borehole:	WS7
GIP	Project Number: 282		•			5		Sheet 1 of 1	
Ground Investigation & Piling Limited		ithfield, Digbeth	n, Birmir	ngham				Logged By:	CJB/SJW
Devonshire House		nd Lease		0				Checked By:	ML
Ettingshall Road Wolverhampton	Engineer: Atk	ins						Drilled By:	EB
WV2 2JT Tel: 01902 459558	Date Drilled: 17/	06/2019 to 18/0	06/2019			Nationa	al Grid:	E: 407534.70 N: 2	86182.08
Email: info@gipuk.com)mm				Ground	Level:	+106.81mAOD	
www.gipuk.com	Depth Cased: 0.0	0m			Water	Final D	epth: es/Tests	3.30m	
Description	of Strata	Legend	Depth (m bgl)	Level (mAD)	Level (m bgl)	Denth	Type	SPT 'N' Value [U100 Hand Vane	Blows] Installation /Backfill
CONCRETE.									
MADE GROUND. Dark grey silt	v sandv GRAVEL with a l	ow 💥	0.35	106.46		0.35	В		
 cobble content. Gravel is fine to 	coarse sub-angular slag	, XXXX				0.35 0.50	ES B		
 brick, quartzite, hardcore, ash a PID reading at 0.35m - 0.0ppm. 	nd coal. Cobbles are slag). XXX				0.50	ES		
PID reading at 0.50m - 0.0ppm.									
MADE GROUND. Firm friable b	rown sandv slightly grave		1.20	105.61		1.20	В		
 (and in parts gravelly) CLAY. Gravelly 	avel is fine to coarse ang					1.20	ES		
 to rounded brick, quartzite, cera PID reading at 1.20m - 0.0ppm. 	mic, ash, coal and slag.								
							_		
PID reading at 2.00m - 0.2ppm.						2.00 2.00	B ES		
 From 2.00m - In parts tending to c 	layey SAND.					2.00			
						3.00	ES		
PID reading at 3.00m - 0.2ppm.						0.00	20		
Borehole Comp	lete at 3.30m	××××	3.30	103.51					
-									
-									
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E									
						1			
F						1			
E									
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						1			
F						1			
E									
-									
Samples/Tests	Other Information	tion:							
U Undisturbed	-	uon: standing penetrat	ed using	concrete	ecorer				
D Disturbed	2. Hand-dug ser	vice avoidance p	it excava	ted to 1.	20m.				
B Bulk		ninated at limit of ter encountered.	windowle	ess samp	oler drilling e	equipment	•		
W Water		kfilled upon comp	letion.						
S/C SPT/CPT									
ES Environmental Sample									
HV Hand Shear Vane									
NR No Recovery									
Water Strike									
Water Level Document	4.144								

AS			Windo	wless	Sam	pler	Bore	ehole l	_og		Borehole:	W	58
	J GI	Proje	ct Number:	28268		•			Ŭ		Sheet 1 of 1 Logged By:	CF	
	Ground Investigation & Pilin		ct Name:	Smithfield	-	ı, Birmir	ngham				Checked By:	M	
	nshire House shall Road	Client		Land Leas	se						Drilled By:	R	
Wolve WV2	erhampton 2JT	Engin Date	eer: Drilled:	Atkins 17/06/201	a				Nationa	l Grid	E: 407554.95 N: 2		
Tel: 0	1902 459558 : info@gipuk.com	Diamo		100mm	5				Ground		+106.71mAOD	00202.11	
	gipuk.com		n Cased:	0.00m					Final D		0.55m		
	De	scription of St			Legend	Depth	Level	Water	Sample	s/Tests	SPT 'N' Value [U100	Blows]	Installation
			ala			(m bgl)	(mAD)	Level (m bgl)	Depth (m bgl)	Туре	Hand Vane		/Backfill
	NCRETE.												
– M/	ADE GROUND. Gr	eyish brown very g	ravelly sligh	tly silty	XXX	0.32	106.39		0.40	В			
		n cobble content. G e, hardcore, concre			XXXX	0.55	106.16		0.40	ES			~~~~~~
t Co	bbles are hardcore	e and concrete.	,		(
<u>ң Рі</u>	D reading at 0.40m · Bo	- 0.1ppm. prehole Complete at 0.5	5m]									
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Sam	oles/Tests		Other Info	rmation	1								
U	Undisturbed		1. Surface	hardstanding									
D	Disturbed		2. Hand-du		oidance p				to penetra	ate concre	ete obstruction - boreh	ole termina	ated.
В	Bulk			e backfilled u		letion.							
W	Water												
	SPT/CPT Environmental Sa	mnle											
HV	Environmental Sa Hand Shear Vane												
	No Recovery	-											
$\mathbf{\nabla}$	Water Strike												
\mathbf{T}	Water Level	Document 4.144											

	Windowless	Sam	pler	Bore	ehole l	_og		Borehole: Sheet 1 of 1	W	S9
Ltd.	roject Number: 28268	d Diabot	Dirmir	aham				Logged By:	CF	M
	roject Name: Smithfiel lient: Land Lea	-	1, Birmir	ignam				Checked By:	M	
Ettingshall Road	ngineer: Atkins							Drilled By:	R	S
WV2 2JT D	ate Drilled: 17/06/20	19				Nationa		E: 407508.66 N: 2	86279.28	3
Email: info@gipuk.com D	iameter: 100mm					Ground		+106.94mAOD		
	epth Cased: 2.00m		Depth	Level	Water	Final D Sample	epin: es/Tests	3.90m SPT 'N' Value [U100	Plowel	Installation
Description of	Strata	Legend	(m bgl)	(mAD)	Level (m bgl)	Depth (m bgl)	Туре	Hand Vane	blowsj	/Backfill
-										
-			0.70	100.10		0.70				
MADE GROUND. Dark brown grave			0.76	106.18		0.76 0.76	B ES			
is angular to sub-rounded brick, cor	crete, hardcore, ceramic,		1.20	105.74		0.80	ES B			
quartzite, clinker and slag. Cobbles PID reading at 0.80m - 0.3ppm.	are concrete and brick.					1.20	ES			
MADE GROUND. Dark brown grave slightly clayey SAND. with a low col										
fine to coarse angular to sub-round	ed clinker, slag, brick,					0.00				
 concrete and mortar. Cobbles are c PID reading at 1.20m - 16.3ppm. 	linker and slag.					2.00 2.00	D ES			
 PID reading at 2.00m - 22.9ppm. 			0.50			0.50				
 MADE GROUND. Orange GRAVEL angular to sub-angular brick. 	and COBBLES of		2.50	104.44		2.50 2.50	D ES			
PID reading at 2.50m - 157.3ppm.			2.90	104.04		2.90	D			
MADE GROUND. Brown, light brow slightly clayey slightly gravelly SAN				100.00		2.90 3.00	ES ES			
 sub-rounded quartzite, brick and ce PID reading at 2.90m - 13.2ppm. 	ramic.		3.25	103.69		3.25	В			
PID reading at 3.00m - 133.9ppm.	and in some business					3.25	ES			
 MADE GROUND. Orange, orange I GRAVEL and COBBLES with occas 	ional silty sand pockets.		3.90	103.04						
 Gravel is fine to coarse sub-angular Cobbles are brick. 	brick and mortar.	Λ								
PID reading at 3.25m - 9.0ppm. Borehole Complete a	at 3 90m									
	at 0.50m									
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O consulta a /Tex. /			1	1	1	1	1			1
Samples/Tests U Undisturbed	Other Information: 1. Surface hardstanding	na penetro	ted using	1 concret	e corer					
D Disturbed	2. Hand-dug service a	voidance p	it excava	ited to 1.2	20m.					
B Bulk	 Borehole terminated No groundwater end 	countered.		ess samp	oier arilling e	quipment	•			
W Water	5. Borehole backfilled		oletion.							
S/C SPT/CPT ES Environmental Sample										
HV Hand Shear Vane										
NR No Recovery										
Water Strike										
Water Level Document 4.14	4									

		owless	Sam	pler	Bore	ehole l	_og		Borehole: Sheet 1 of 1	WS	S10
Ground Investigation & Piling Limited	Project Numb Project Name			n Birmir	naham				Logged By:	S	JW
Devonshire House	Client:	Land Lea	-	I, DIIIII	ignam				Checked By:		1L
Ettingshall Road Wolverhampton	Engineer:	Atkins							Drilled By:		S
WV2 2JT Tel: 01902 459558	Date Drilled:	20/06/201	19				Nationa		E: 407496.92 N: 2	86154.49	•
Email: info@gipuk.com www.gipuk.com	Diameter: Depth Cased:	100mm 0.00m					Ground Final D		+106.90mAOD 5.00m		
	n of Strata	0.0011	Legend	Depth (m bgl)	Level (mAD)	Water Level (m bgl)		eptri. es/Tests Type	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
CONCRETE.				-							
MADE GROUND. Dark brown SAND with a medium cobble c angular to sub-angular brick, a Cobbles are brick.	ontent. Gravel is fir	ne to coarse		0.26	106.64		0.26 0.30 0.60	B ES ES			.· . 🛆
MADE GROUND. Firm friable slightly sandy slightly gravelly pockets. Gravel is fine to coars quartzite, ash, glass and slag.	CLAY with occasior	nal sand		1.00	105.90		1.00 1.00	B ES			
							2.00 2.00	B ES			
ADE GROUND. Dark greyish gravelly slightly clayey SAND. angular brick and ash.	n brown and dark g Gravel is fine to co	rey very arse sub-		2.80	104.10		2.80 2.80	D ES			
– – – MADE GROUND. Greyish bro	wn yong alayses and			3.70	103.20	▼ 3.70	3.70	D			
MADE GROUND. Greyish bro with frequent clay pockets. Gra sub-angular brick, ash and cer MADE GROUND. Dark grey sa SILT, in parts tending to silty gr coarse angular to sub-angular	avel is fine to coars amic. andy slightly gravel ravelly SAND. Grav	e angular to ly clayey		3.90	103.00		3.90 4.00 4.00	D B ES			
- - Borobala Com	nplete at 5.00m			5.00	101.90						
Samples/Tests U Undisturbed D Disturbed B Bulk W Water S/C SPT/CPT ES Environmental Sample HV Hand Shear Vane NR No Recovery Water Strike Water Level Document	1. Surfac 2. Hand- 3. Unabl 4. Boreh 5. Groun 6. Boreh 7. 50mm seal fron	formation: te hardstanding dug service av e to case borel ole terminated dwater encour ole collapsed u ID HDPE mor n 1.00m to 0.30	voidance p hole due t at limit of ntered at 3 up to 4.000 nitoring sta	oit excava o angled windowl 3.70m. m. andpipe i	ited to 1.0 in-situ br ess samp nstalled f	00m - unable ick work with der drilling e rom 4.00m (hin hand quipment	pit.	to 1.00m) in a gravel	filter, bent	onite

Ground Investigation & Piling Limited Project	Windowless et Number: 28268 et Name: Smithfield	, Digbeth	•		ehole l	_og		Borehole: Sheet 1 of 1 Logged By: Checked By:	WS CF	M
Tel: 01902 459558 Email: info@gipuk.com Diame	eer: Atkins Drilled: 18/06/201					Nationa Ground Final De	Level:	Drilled By: E: 407452.08 N: 2 +106.68mAOD 3.90m	R:	
Description of Str		Legend	Depth (m bal)	Level (mAD)	Water Level (m bgl)	Depth	s/Tests Type	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
TARMAC. MADE GROUND. Purplish brown very g medium cobble content. Gravel is fine to sub-angular hardcore. Cobbles are hard PID reading at 0.30m - 0.7pm. MADE GROUND. Brown, light brown, dd occasionally dark grey and orange brow silty gravelly SAND with a low to medium Gravel is fine to coarse angular to round clinker, quartzite, concrete, coal, ceramic Cobbles are brick, concrete and slag. PID reading at 1.00m - 6.2pm. PID reading at 1.00m - 6.2pm. PID reading at 1.00m - 6.2pm. PID reading at 1.00m - 0.34pm. PID reading at 2.00m - 0.7ppm. PID reading at 2.00m - 0.4ppm. Light yellowish brown and orange brown parts very gravelly SAND with a mediur occasional clay pockets. Gravel is fine to to sub-rounded quartzite and sandstone quartzite. (Superficial Deposits). PID reading at 3.00m - 0.3ppm. Borehole Complete at 3.90	ravelly SAND with a coarse angular to core. ark brown and n variably clayey and n cobble content. ed brick, ash, slag, c and sandstone.		(m bgl) 0.26 0.50 2.70 3.00 3.90	(mAD) 106.42 106.18 103.98 103.68 102.78	▼ 3.00	(m bgl) 0.30 0.30 0.55 0.55 1.00 1.10 1.10 1.30 1.90 1.90 2.00 2.40 2.40 2.50	Type B ES B ES D ES D ES D ES D ES ES ES	Hand Vane		
Samples/Tests U Undisturbed D Disturbed B Bulk W Water S/C SPT/CPT ES Environmental Sample HV Hand Shear Vane NR No Recovery Water Strike Water Level Document 4.144	Other Information: 1. Surface hardstanding 2. Hand-dug service avo 3. Groundwater encoun 4. Borehole terminated 5. 50mm ID HDPE mon seal from 3.50m to 0.30	oidance p tered at 3 at limit of itoring sta	it excava .00m. windowle indpipe in	ted to 1.2 ess samp nstalled fi	20m. Ier drilling e rom 3.90m (i			to 3.50m) in a gravel	filter, bento	nite

	Windo	wless	Sam	pler	Bore	ehole l	_og		Borehole:	WS	\$12
Ltd.	Project Number:			-			•		Sheet 1 of 1 Logged By:	S	
	Project Name: Client:	Smithfield, Land Lease	•	ı, Birmir	ngham				Checked By:	N	
Ettingshall Road	Ingineer:	Atkins	e						Drilled By:	E	В
WV2 2JT	ate Drilled:	14/06/2019)				Nationa	I Grid:	E: 407403.55 N: 2	86083.08	3
Endal: Info@gipat.com	Diameter:	100mm					Ground	Level:	+106.95mAOD		
www.gipuk.com	epth Cased:	2.00m			1	Water	Final D	epth: s/Tests	6.00m		
Description o	f Strata		Legend	Depth (m bgl)	Level (mAD)	Level (m bgl)	Depth (m bgl)	Type	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
_ TARMAC.			\times								
MADE GROUND. Dark greyish bro	wn very gravelly	slightly		0.25	106.70		0.25 0.30	B ES			🛆
silty SAND with a medium cobble of coarse angular to sub-rounded brid							0.70	Б			
quartzite. Cobbles are slag. PID reading at 0.30m - 0.0ppm.		*					0.70	B ES			
PID reading at 0.70m - 0.0ppm.							1.00	ES B			<u> </u>
 PID reading at 1.00m - 0.0ppm. 							1.10	D			
-								_			
- MADE GROUND. Firm friable brow				1.70	105.25		1.70	В			
CLAY with a low cobble content. G angular to rounded brick and quart							2.00	B ES			
PID reading at 2.00m - 0.0ppm.							2.00	ES			
				2.80	104.15		2.80	В			°88°
 MADE GROUND. Dark grey very g is fine to coarse angular to sub-angular to sub-angular	jular ash, slag an	d clinker. 🛛 🕹	>>>>>	3.00	103.95		3.00	В			
 MADE GROUND. Greyish brown v parts very gravelly) SAND with free 			\times				3.00	ES			
Gravel is fine to coarse sub-angula	r brick, concrete,	slag,	\times								
 rare wood and rounded quartzite. S noted at 3.80m. 	Slight solvent-type	e odour	\times								88 ⊟ 88
PID reading at 3.00m - 1.4ppm.							4.00	В			
-											
			>>>>								
-		×	\times				5.00	В			88 0 88
		-	\times								
-						▼ 5.50					
			XXX	5.80	101.15		5.80	В			
 Pale brown and greenish grey clay is fine to coarse sub-rounded to rou 	ey gravelly SANL unded quartzite.	. Gravei	ိုင်္ဆိုင်	6.00	100.95		5.80	ES			
(Superficial Deposits).	at 6.00m	/									
-											
-											
-											
-											
-											
-											
-											
 -											
- -											
Complete/Tests					1	I	1				1
Samples/Tests U Undisturbed	Other Info 1. Surface	rmation: hardstanding	penetrat	ed using	concrete	corer					
D Disturbed	2. Hand-du	g service avo	idance p				e to dig fu	rther.			
B Bulk	4. Borehole	amp at 5.50m. collapsed up	to 5.00r	n.							
W Water		HDPE monit .00m to 0.30n					slotted fro	om 5.00m	to 1.00m) in a gravel	filter, bent	onite
S/C SPT/CPT ES Environmental Sample				-							
HV Hand Shear Vane											
NR No Recovery											
Water Strike Water Level Document 4.14											
	1										

	Window	less Sam	pler	Bore	ehole l	_og		Borehole: Sheet 1 of 1	WS	S13
Ltd.	oject Number: 28 oject Name: Sn	268 nithfield, Digbetł	Dirmir	achom				Logged By:		JB
Devonshire House Clie	-	nd Lease	1, DITTII	ignam				Checked By:		1L
Wolvemanpton	5	kins						Drilled By:		B
Tel: 01902 459558		/06/2019 0mm				Nationa Ground		E: 407432.02 N: 2 +106.87mAOD	86070.3	6
)0m				Final D	epth:	5.20m		
Description of S	Strata	Legend	Depth (m bgl)	Level (mAD)	Water Level (m bgl)	Depth	es/Tests Type	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
_ TARMAC.					(3)	(m bgl)				
MADE GROUND. Light grey clayey s medium to coarse sub-angular hardo			8:28	186:53		0.20 0.20	B ES			
PID reading at 0.20m - 0.0ppm. MADE GROUND. Greyish brown and						0.28	B ES			
GRAVEL with a low cobble content.	Gravel is fine to coa	rse 🗙 🗙				0.50 0.50	B ES			
 sub-angular to rounded ash, quartzite occasional slag. Cobbles are slag and 						1.00 1.00	B ES			
 PID reading at 0.28m - 0.0ppm. PID reading at 0.50m - 0.0ppm. 						1.20	D			
 From 0.50m - Becoming clayey. PID reading at 1.00m - 0.2ppm. 										
 MADE GROUND. Firm orange browr 	and reddish brown	, 💥	2.00	104.87		2.00	в			
sandy slightly gravelly CLAY. Gravel i	s fine to coarse sub	⊳- XXXX					_			
angular to sub-rounded brick, ash, qu MADE GROUND. Orange brown silty	sandy GRAVEL of		2.40	104.47		2.40 2.40	D ES			
to coarse sub-angular brick and sub- PID reading at 2.40m - 0.1ppm.	ounded slag.									
 						3.00	В			
- -			3.45	103.42		3.45	в			
 MADE GROUND. Brown and greenis SAND. Gravel is sub-angular to sub-r 			3.45	103.42		3.45	ES			
and quartzite. PID reading at 3.45m - 0.0ppm.	, ,		4.00	102.87	▼ 4.00	4.00	В			
POSSIBLE MADE GROUND. Dark g organic odour noted. (Possible Buried		jht 🔣			- 4.00					
 Digane output noted. (r ossible build Dark grey and greenish grey clayey g fine to coarse sub-rounded quartzite. 	ravelly SAND. Gra	. د د د د د د د د د د د د د د د د د د د	4.30	102.57		4.30 4.30	B ES			
PID reading at 4.30m - 0.0ppm.	(Superiicial Depos	0C								
-		0 + 0 + 0 +								
Borehole Complete at	5.20m		5.20	101.67						<u></u>
-										
<u>-</u> -										
-										
- -										
- -										
-										
- -										
Ę										
-										
Ē										
- 										
Samples/Tests	Other Informa									
U Undisturbed D Disturbed	2. Hand-dug se	standing penetrat rvice avoidance p	it excava							
B Bulk	4. Borehole terr	r encountered at 4 minated at limit of	windowle							
W Water S/C SPT/CPT		PE monitoring stand n to 0.30m, with a				slotted fro	om 5.20m	to 1.00m) in a gravel	filter, bent	onite
ES Environmental Sample										
HV Hand Shear Vane										
NR No Recovery Water Strike										
Water Level Document 4.144										

GIP	Windowless	s Sam	pler	Bore	ehole I	_og		Borehole: Sheet 1 of 1	WS	
Ltd.	•	ld, Digbetł	n, Birmir	ngham				Logged By:	SJW/C	JB
Ettingshall Road	lient: Land Le	ase						Checked By: Drilled By:	ML EB	
Wolverhampton	ngineer: Atkins ate Drilled: 14/06/20)19 to 17/0	06/2010			Nationa	Cride	E: 407411.49 N: 23	06101 20	
Tel: 01902 459558	iameter: 100mm	J1910 17/0	10/2019			Ground		+106.91mAOD	00101.20	
	epth Cased: 0.00m					Final D	epth:	3.00m		
Description of	Strata	Legend	Depth (m bgl)	Level (mAD)	Water Level (m bgl)	Depth	es/Tests Type	SPT 'N' Value [U100 Hand Vane		stallation /Backfill
CONCRETE.			(III bgi)		20101 (29.)	(m bgl)	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
-				100 54		0.40			•	<u>М</u> Д
 MADE GROUND. Soft brown and re- olightly groupely CLAX with frequent 			0.40	106.51		0.40 0.40	B ES			
slightly gravelly CLAY with frequent fine to coarse sub-angular brick and			0.70	106.21		0.70 0.70	B ES			
├ PID reading at 0.40m - 0.0ppm. MADE GROUND. Dark grey gravell	y slightly clayey slightly	-/ 🔆 🔆	0.90 1.10	106.01 105.81		0.90	B		ž	x x
 silty SAND. Gravel is fine to coarse brick, ash, quartzite, slag, clinker and 				100.01		0.90 1.10	В		0,00	
 glass and metal. 						1.10	ES		020	
PID reading at 0.70m - 0.0ppm. MADE GROUND. Brown silty grave			1.70	105.21		1.70	D		0	ŏ õõ
to coarse sub-rounded to rounded of angular brick.	uartz and rare sub-		2.00	104.91		2.00	B ES		0,00	
MADE GROUND. Firm brown and c slightly gravelly CLAY. Gravel is fine	5					2.00	ES		000	s⊟‰
to sub-rounded brick and quartz.									0,00	
PID reading at 1.10m - 0.0ppm. MADE GROUND. Greyish brown ar		- XXX							02	3 - 88
brown clayey sandy GRAVEL of fine sub-rounded quartzite, brick and oc			3.00	103.91		3.00	S		n n	<u>~</u> _~~
MADE GROUND. Dark brown claye to coarse sub-angular to sub-rounde	y sandy GRAVEL of fine									
clinker and slag.	eu qualizite, asii, blick,									
PID reading at 2.00m - 0.0ppm. Borehole Complete a	at 3.00m									
-										
-										
-										
-										
-										
-										
-										
-										
-										
-										
-										
-										
-										
-										
-										
-										
-										
Samples/Tests	Other Information:									
U Undisturbed	1. Surface hardstand									
D Disturbed	 Hand-dug service a Borehole terminate 									
B Bulk W Water	4. No groundwater er	countered.				• •		ı to 1.00m) in a gravel [.]	filter henton	ite
S/C SPT/CPT	seal from 1.00m to 0.						0.001		, bonton	
ES Environmental Sample										
HV Hand Shear Vane										
NR No Recovery Water Strike										
Water Level Document 4.144	4									

	Windowle	ess Sam	pler	Bore	ehole l	Log		Borehole:	WS	15
GIY P	roject Number: 2826		1			3		Sheet 1 of 1	SJ	
	-	hfield, Digbetl	n, Birmir	ngham				Logged By: Checked By:	5J M	
Ettingshall Road		Lease						Drilled By:	R	
wowenhampton	ngineer: Atkir ate Drilled: 19/0	ns 6/2019				Nationa	al Crid	E: 407383.08 N: 2	86283 71	
Tel: 01902 459558	iameter: 100r					Ground		+106.88mAOD	00203.71	
Email: Info@gipuk.com	epth Cased: 2.00					Final D		5.00m		
Description of	Strata	Legend	Depth (m bgl)	Level (mAD)	Water Level (m bgl)	Denth	es/Tests Type	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
 MADE GROUND. Purplish brown s GRAVEL of fine to coarse sub-angu 			0.23	106.65		0.23 0.25	B ES			
PID reading at 0.25m - 0.0ppm.		/XXXX	0.40	100.40		0.45	B ES			
 MADE GROUND. Dark greyish bro SAND. Gravel is fine to coarse sub- 										
A sh, slag, quartzite and concrete. PID reading at 0.50m - 0.0ppm.			1.00	105.88		1.00	D			
MADE GROUND. Brown and orang	e sandy GRAVEL of fir									
to coarse sub-angular brick. _										
_										
				404.00		2.00	D			
 Firm and stiff brown and blueish gre CLAY with some sand pockets. Gra 	ey gravelly slightly sand		2.20	104.68		2.20 2.20	B ES			
angular to rounded quartzite. (Supe										
PID reading at 2.20m - 0.1ppm.										
 Firm reddish brown and blueish gre 	y slightly sandy slightly		3.00	103.88		3.00	D			
gravelly CLAY. Gravel is fine to coa and sub-rounded to rounded quartz	rse sub-angular siltstor		3.25	103.63		3.25	В			
↑ Mudstone Group).						3.25	ES			
 Firm becoming stiff reddish brown a slightly sandy CLAY with frequent n 										
lithorelicts. (Weathered Mercia Muc						4.00	В			
-										
-										
Borehole Complete	at 5.00m		5.00	101.88						
	at 5.00m									
-										
-										
-										
-										
-										
-										
-										
-										
-										
E										
-										
-										
-										
Samples/Tests U Undisturbed	Other Information			oonoroto	ooror					
D Disturbed	2. Hand-dug serv	ice avoidance p	it excava	ated to 1.						
B Bulk	 Minimal recover 4. Borehole termini 				oler drillina e	auipment				
W Water	5. No groundwate	er encountered.		I	5					
S/C SPT/CPT	6. Borehole backf	mea ahou com								
ES Environmental Sample HV Hand Shear Vane										
NR No Recovery										
Water Strike										
Water Level Document 4.14	4									

	Windowles	s Sam	pler	Bore	ehole l	_og		Borehole:	WS	516
Ltd.	ct Number: 28268					•		Sheet 1 of 1 Logged By:		-M
Ground Investigation & Piling Limited Proje Devonshire House Clien		eld, Digbeth	n, Birmir	ngham				Checked By:	N	
Ettingshall Road Engin		ease						Drilled By:	R	S
WV2 2JT Date	Drilled: 17/06/2	019				Nationa	al Grid:	E: 407500.60 N: 2	86313.07	7
Tel: 01902 459558 Email: info@gipuk.com Diam	eter: 100mm	l				Ground	Level:	+106.70mAOD		
www.gipuk.com Dept	n Cased: 2.00m			1	Water	Final D	epth: es/Tests	4.00m		
Description of St	rata	Legend	Depth (m bgl)	Level (mAD)	Level (m bgl)	Denth	Type	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
- CONCRETE.			(3/			(III bgi)				5
			0.35	106.35		0.35	В			\Box
 MADE GROUND. Brown clayey gravely medium cobble content. Gravel is fine to 						0.40	ES			
sub-rounded brick, quartzite, concrete, s From 0.60m - with some clay pockets.	slag and clinker.		0.85	105.85		0.85	в			
 MADE GROUND. Dark brown clayey gr 		- 🗱	0.00	100.00		0.90	ES			000 000
☐ low cobble content. Gravel is angular to quartzite, clinker, slag, concrete and brid			1.20	105.50		1.20	B ES			
 clinker and brick. MADE GROUND. Dark brown and in patheral 	arte grov slightly silty	$- \otimes$				1.20				88 ⊟ 88
clayey gravelly (and in parts very gravel	lly) SAND with a									
 medium cobble content. Gravel is angul slag, clinker, brick and concrete. Cobble 						2.00	В			
 becoming moderate sulphur-type odour PID reading at 1.20m - 7.3ppm. 						2.00	ES			
PID reading at 2.00m - 1.2ppm.										88 B89
			3.00	103.70		3.00	ES			
 MADE GROUND. Grey sandy GRAVEL cobble content. Gravel is fine to coarse 						3.00	В			
 clinker and rare brick. Cobbles are slag Moderate sulphur-type odour noted. 	and clinker.									
PID reading at 3.00m - 9.5ppm.			3.75	102.95		3.75	в			
MADE GROUND. Firm brown, light brown brown gravelly slightly sandy CLAY with	wn and in parts dark a low cobble		4.00	102.70		3.75	ES			
 content. Gravel is fine to coarse sub-an brick, guartzite, clinker, ash and wood. 	gular to sub-rounded	/	1.00	102.10						
PID reading at 3.75m - 0.6ppm.										
Borehole Complete at 4.0	um									
-										
-										
-										
-										
-										
-										
-										
-										
E										
-										
E										
-										
-										
Samples/Tests	Other Information:									
U Undisturbed	1. Surface hardstand		ed using	concrete	corer.					
D Disturbed	2. Hand-dug service 3. Borehole terminat	avoidance p	it excava	ated to 1.2	20m.	quipment				
B Bulk	4. No groundwater e	ncountered.								
W Water S/C SPT/CPT		nonitoring sta	indpipe i			slotted fro	om 2.75m	n to 1.00m) in a gravel	filter, bent	onite
ES Environmental Sample	seal from 1.00m to 0	.30m, with a	lockable	cover at	surface.			-		
HV Hand Shear Vane										
NR No Recovery										
Water Strike Water Level Document 4.144										
	1									

	Windowless	Sam	pler	Bore	ehole l	_og		Borehole:	WS	\$17
Ltd.	ct Number: 28268		•			•		Sheet 1 of 1 Logged By:	SJ	
Ground Investigation & Piling Limited Proje Devonshire House Client	ct Name: Smithfield t: Land Lea	-	n, Birmir	ngham				Checked By:		IL
Ettingshall Road Engin		56						Drilled By:	E	В
WV2 2JT Date	Drilled: 18/06/201	19				Nationa	I Grid:	E: 407477.35 N: 2	86133.10)
Tel: 01902 459558 Email: info@gipuk.com Diam						Ground	Level:	+106.93mAOD		
www.gipuk.com Depth	n Cased: 0.00m	1			Water	Final De	epth: s/Tests	6.00m		
Description of St	rata	Legend	Depth (m bgl)	Level (mAD)	Level (m bgl)	Depth (m bgl)	Туре	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
TARMAC.										
MADE GROUND. Dark grey very grave			0.30 0.45	106.63		0.35	В			
 fine to coarse sub-angular concrete, ash PID reading at 0.35m - 0.0ppm. 	n and brick.		0.40	100.40		0.35 0.45	ES B			
MADE GROUND. Orange brown very si SAND with a low cobble content. Grave						0.50 0.60	ES B			
 sub-angular hardcore, slag, brick, siltsto 			1.10	105.83		0.75 1.00	B D			
Cobbles are slag. PID reading at 0.50m - 0.0ppm.			1.40	105.53		1.10	D			
From 0.60m to 0.75m - slag boulder. MADE GROUND. Dark grey very clayey	gravelly SAND with	1				1.10 1.40	ES B			
frequent clay pockets. Gravel is fine to c sub-angular ash, slag and brick and sub			1.80 2.00	105.13 104.93		1.80 2.00	ES B			
PID reading at 1.10m - 3.3ppm. MADE GROUND. Orange brown very si	•		2.00	104.93		2.00	Ь			
SAND. Gravel is fine to coarse sub-ang										
 brick, siltstone and concrete. MADE GROUND. Firm friable dark grey 	gravelly slightly						_			
sandy CLAY. Gravel is fine to coarse sul	b-angular slag, ash		2.80 3.00	104.13 103.93		2.80 3.00	D B			
MADE GROUND. Dark grey very sandy			0.00	100.30		3.00	ES			
GRAVEL of fine to coarse sub-angular s MADE GROUND. Brown and orange brown	own gravelly slightly	'								so⊟so
 clayey SAND. Gravel is fine to coarse summarized mortar. 	ub-angular brick and									
 MADE GROUND. Brown and reddish br of fine to coarse angular to sub-angular 						4.00	В			
PID reading at 3.00m - 90ppm.	blick, wood and slag.									
	La da da como a l'adatha		4.50	102.43		4.50	в			
 POSSIBLE MADE GROUND. Firm friab sandy silty CLAY with rare fine quartzite 	gravel. Slight		4.75	102.18		4.50 4.75	ES D			
 organic odour noted. (Possible Buried T PID reading at 4.50m - 0.0ppm. 	. ,					5.00	D			
Firm becoming stiff blueish grey and ora sandy slightly gravelly CLAY. Gravel is fi										
rounded to rounded quartzite. (Superfici			5.60	101.33		5.60	В			
 Stiff reddish brown and pale greenish gr slightly gravelly silty CLAY. Gravel is fine 			5.00	101.55		5.00	Б			
angular to sub-rounded siltstone, quartz			6.00	100.93						
Borehole Complete at 6.0	0m									
E										
-										
-										
 -										
-										
-										
-										
- -										
Samples/Tests	Other Information:									
U Undisturbed	1. Surface hardstanding									
D Disturbed	2. Hand-dug service av 3. Unable to case bore						rther.			
B Bulk W Water	4. No groundwater enc 5. Borehole collapsed u	ountered.	Ū							
W Water S/C SPT/CPT	6. 50mm ID HDPE mor	nitoring sta	indpipe ii			slotted fro	om 3.50m	to 2.50m) in a gravel	filter, bent	onite
ES Environmental Sample	seal from 2.50m to 0.30	um, with a	lockable	cover at	surface.					
HV Hand Shear Vane										
NR No Recovery Water Strike										
Water Level Document 4.144										

	indowless	Sam	pler	Bore	hole I	_og		Borehole:	WS	18
	lumber: 28268		•			U		Sheet 1 of 1	SJV	
Ground Investigation & Piling Limited Project N		-	ı, Birmir	ngham				Logged By: Checked By:	ML	
Devonshire House Client: Ettingshall Road	Land Leas	е						Drilled By:	GW	
Wolverhampton Engineer						NI - 4 ²				
Tel: 01902 459558		9				Nationa Ground		E: 407363.16 N: 2 +106.94mAOD	86425.09	
Email: info@gipuk.com Diameter www.gipuk.com Depth Ca						Final De		1.50m		
			Depth	Level	Water	Sample		SPT 'N' Value [U100	Blows1	nstallation
Description of Strata	a	Legend	(m bgl)	(mAD)	Level (m bgl)	Depth (m bgl)	Туре	Hand Vane	,	/Backfill
– CONCRETE.		\times								∇
 MADE GROUND. Purplish brown very sand 	ly slightly silty		8:33	186:54		0.33	D			
GRAVEL of medium to coarse angular to su						0.35 0.40	ES B			
hardcore. MADE GROUND. Reddish and purplish bro	wn very sandy	XXXX	0.80	106.14		0.50 0.80	ES ES			
 variably clayey and silty GRAVEL with a low (from 0.65m). Gravel is fine to coarse mediu 		:₩::::: 	1.00	105.94		1.00	B		2	
hardcore. Cobbles are hardcore.						4.40	ES			
Reddish brown very silty clayey SAND with (Probable Weathered Helsby Sandstone Fo		<u></u>	1.50	105.44		1.40	ES		ć	ŏŏ∐oĭo
Stiff becoming very stiff friable red brown sli	ghtly sandy CLAY									
 with some becoming many mudstone and s lithorelicts. (Probable Weathered Helsby Sa 										
Formation). Borehole Complete at 1.50m										
L Borenole Complete at 1.50m										
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Samples/Tests Ot	her Information:									
	Surface hardstanding	penetrate	ed using	concrete	corer.	ata -l'∵f	rther			
3.	Hand-dug service avo Borehole terminated a									
B Bulk 4.1	No groundwater enco	untered.			-			to 0.50m) in a gravel	filter hentor	nite
	al from 0.50m to 0.20r					อเงแซน ที่ไ		to 0.50m) in a gravel		
ES Environmental Sample										
HV Hand Shear Vane										
NR No Recovery										
Water Strike										
Water Level Document 4.144										

ISSICID		wless	Sam	pler	Bore	ehole L	_og		Borehole: Sheet 1 of 1	WS	S19
Ltd.	oject Number oject Name:	: 28268 Smithfield	Diaboth	Birmir	abam				Logged By:	S	JW
Devonshire House CI	ent:	Land Leas		I, DIITIII	iynan				Checked By:		/L
Ettingshall Road Wolverhampton	gineer:	Atkins							Drilled By:	G	iW
WV2 2JT Da	te Drilled:	13/06/201	9				Nationa		E: 407419.82 N: 2	86402.2	8
Email: info@gipuk.com DI	ameter:	100mm 0.00m					Ground		+106.86mAOD		
	pth Cased:	0.0011		Depth	Level	Water		epin. es/Tests	4.45m SPT 'N' Value [U100	Blowel	Installation
Description of	Strata		Legend	(m bgl)	(mAD)	Level (m bgl)	Depth (m bgl)	Туре	Hand Vane	Diowsj	/Backfill
CONCRETE.				0.25	106.62		0.25	D			∇
 MADE GROUND. Dark greyish brow SAND. Gravel is fine to coarse angu 				0.25	100.02		0.25	ES			
concrete, quartzite, glass and ceram			XXX	0.60	106.26		0.60 0.60	D ES			
 PID reading at 0.25m - 0.0ppm. MADE GROUND. Brown clayey graveling 							1.00	B			
fine to coarse angular to sub-angula ceramic and sandstone.	r concrete, plas	stic,				▼ 130	1.00	ES			
PID reading at 0.60m - 0.0ppm. PID reading at 1.00m - 0.0ppm.						▲ 1.30					
From 1.50m - Becoming very clayey.											စိုးခြစိုး
 MADE GROUND. Dark greenish greenish	v slightly clave	v siltv		1.90	104.96		1.90	ES			
 SAND with frequent wood fragments 							2.00	В			
 noted. (Possible Buried Topsoil). PID reading at 1.90m - 0.0ppm. 				2.40	104.46		2.50	ES			
 Firm reddish brown and light greenis silty CLAY. Gravel is fine to coarse s 							2.00	ES			
quartzite and siltstone. (Reworked M At 2.50m - Dark grey and brown sandy	ercia Mudston	e Group).	<u> </u>	2.85	104.02		3.00	В			
Stiff becoming very stiff (from 4.00m	reddish browr	and light					5.00				
 greenish grey slightly sandy CLAY w lithorelicts. (Weathered Mercia Muds) 											
-											
							4.00	D			
-							4.00				
- - - Barabala Completa a	4.45m			4.45	102.42						
Borehole Complete a	4.45M			_	-						
-											
-											
-											
-											
= = 											
-											
-											
-											
-											
- -											
-											
-											
Samples/Tests	Other Info										
U Undisturbed		hardstanding									
D Disturbed B Bulk	3. Ground	water encoun	tered at 1	.30m.			auinme-'				
W Water	5. Borehol		o 2.00m; 5	50mm ID	HDPE m	onitoring sta	indpipe ir	nstalled fr	om 2.00m (slotted fror	n 2.00m t	o 1.00m)
S/C SPT/CPT	in a gravel	filter, benton	ite seal fro	om 1.00n	n to 0.30ı	m, with a loc	kable cov	/er at sur	ace.		
ES Environmental Sample											
HV Hand Shear Vane NR No Recovery											
Water Strike											
Water Level Document 4.144											

	Windo	wless	Sam	pler	Bore	ehole l	_og		Borehole: Sheet 1 of 1	WS	521
	Project Number:		.	.			_		Logged By:		W
	Project Name: Client:	Smithfield, Land Leas	-	i, Birmir	ngham				Checked By:		IL
Ettingshall Road	Engineer:	Atkins							Drilled By:	R	S
WV2 2JT Tel: 01902 459558	Date Drilled:	20/06/201	9				Nationa		E: 407390.53 N: 2	86380.95	5
Email: info@gipuk.com	Diameter:	100mm					Ground		+106.91mAOD		
	Depth Cased:	1.00m		Depth	Level	Water		epin: s/Tests	2.30m SPT 'N' Value [U100	Blowel	Installation
Description	of Strata		Legend	(m bgl)	(mAD)	Level (m bgl)	Depth (m bgl)	Туре	Hand Vane	blowsj	/Backfill
				0.23	106.68		0.23	В			
 MADE GROUND. Purplish brown GRAVEL of fine to coarse angular 				0.40	106.51		0.25	ES			
PID reading at 0.25m - 0.0ppm. MADE GROUND. Dark grey very	sandy slightly silty]									
GRAVEL of fine to coarse sub-and concrete and ash.	gular brick, hardco	re,	\otimes				1.00	D			
 POSSIBLE MADE GROUND. Date 	k arey and brown	sandy		1.20	105.71		1.20	D			
silty CLAY. (Possible Buried Topso		Sanay					1.20	ES			
PID reading at 1.20m - 0.0ppm. Firm reddish brown slightly sandy	slightly gravelly Cl	_AY.		1.60 1.80	105.31 105.11		1.60 1.60	D ES			
Gravel is fine to coarse sub-angul roots and rootlets. (Superficial De	ar sandstone. Occ posits).	asional	×	1.00	105.11		1.80 2.00	D B			
PID reading at 1.60m - 0.0ppm. Orange brown slightly silty SAND	. ,	stone	×	2.30	104.61		2.00	D			
lithorelicts. (Weathered Helsby Sa	andstone Formation	ואנטוופ ו). /		2.30	104.01						
Borehole Complet	o ai 2.30111										
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-											
Samples/Tests	Other Info	rmation:	1								
U Undisturbed		nardstanding g service avo					e to dia fu	rther			
D Disturbed B Bulk	3. Borehole	terminated a	at limit of								
W Water		dwater enco backfilled u		letion.							
S/C SPT/CPT											
ES Environmental Sample											
HV Hand Shear Vane NR No Recovery											
Water Strike											
Water Level Document 4.1	144										

	Windowles	s Sam	pler	Bore	ehole I	_og		Borehole:	WS2	22
Ltd.	roject Number: 28268					U		Sheet 1 of 1 Logged By:	SJW	
	•	eld, Digbetł	n, Birmir	ngham				Checked By:	ML	·
Ettingshall Road	lient: Land Lo ngineer: Atkins	ease						Drilled By:	EB	
Wolfoniampton	ate Drilled: 14/06/2	019				Nationa	I Grid:	E: 407345.58 N: 2	86220.05	
Tel: 01902 459558	iameter: 100mm					Ground		+106.98mAOD	00220.00	
	epth Cased: 0.00m					Final D		5.70m		
Description of	Strata	Legend	Depth (m bgl)	Level (mAD)	Water Level (m bgl)	Sample Depth (m bgl)	es/Tests Type	SPT 'N' Value [U100 Hand Vane		stallation /Backfill
- CONCRETE.						,			.2	<u>4</u>
MADE GROUND. Brown very grave	elly silty SAND with		0.25 0.35	106.73 106.63		0.25 0.25	B ES			•• 🛆
 occasional soft clay pockets. Grave angular hardcore and sub-rounded 						0.35	В			
PID reading at 0.25m - 0.0ppm.	-		0.90	106.08		0.35 0.50	ES B			
 MADE GROUND. Dark greyish brow with a medium cobble content and compared and compar			0.90	100.00		0.70 0.70	B ES		, in the second s	<u> </u>
 Gravel is fine to coarse sub-angular concrete, ash and quartzite. Cobble 			1.25	105.73		0.90	В		0000	
 PID reading at 0.35m - 0.1ppm. 		0				1.25 1.25	ES B		000	
From 0.70m - With some silty pockets noted.	. Slight organic odour	0 0								š iš
PID reading at 0.70m - 0.1ppm. MADE GROUND. Dark grey very cl	avev gravelly SAND with	° 0 • >			▼ 2.00		В		000	
occasional clay pockets. Gravel is fi	ine to coarse sub-angular	0 0				2.00	ES			й С
 sandstone and rare brick, and sub-r Grey becoming orange brown silty g 	gravelly SAND with rare	°^							000	
 clay pockets. Gravel is fine to coars rounded quartzite. (Superficial Depo 		0 0					_			ĭ ⊟ õ
PID reading at 1.25m - 0.0ppm. PID reading at 2.00m - 0.1ppm.			2.85	104.13		2.85 2.85	B ES		000	
Firm becoming stiff (from 3.00m) lig						3.00	В			
 silty CLAY. Gravel is fine to coarse r (Superficial Deposits). 	ounded quartzite.								000	\sim
										s⊟‰
-						4.00	D		000	
Firm becoming stiff and very stiff red	ddish brown and greenish	<u> </u>	4.20	102.78		4.20	В		000	i Bio Si Bio
grey slightly sandy CLAY with occas mudstone and siltstone lithorelicts.	sional becoming frequent					4.20	ES		0000	
 Mudstone Group - Zone 4a tending 									000	
PID reading at 4.20m - 0.5ppm.						5.00	В			
			-						0,00	$\hat{\mathbf{s}}$
-			-							s⊟‰
Borehole Complete a	at 5.70m		5.70	101.28					No. 10	0000
-										
-										
E E										
-										
-										
- -										
-										
Samples/Tests	Other Information:									
U Undisturbed	1. Surface hardstand									
D Disturbed	2. Hand-dug service 3. Strata damp from	2.00m.								
B Bulk W Water	4. Borehole terminat 5. 50mm ID HDPE m							to 1.00m) in a gravel	filter, bentoni	ite
S/C SPT/CPT	seal from 1.00m to 0							,	,	
ES Environmental Sample										
HV Hand Shear Vane										
NR No Recovery Water Strike										
Water Level Document 4.144	4									

ASS		D	Windo	wless	Sam	pler	Bore	ehole l	Log		Borehole: Sheet 1 of 1	WS	523
		Ltd.	ct Number		Disch ath						Logged By:		JW
Devons	Ground Investigation & Pili	Client	ct Name:	Smithfield	-	n, Birmir	ngnam				Checked By:		1L
	hall Road hampton	Engin		Atkins							Drilled By:	G	W
WV2 23			Drilled:	13/06/201	9				Nationa		E: 407353.66 N: 2	86347.3	3
	nfo@gipuk.com puk.com	Diamo	eter: n Cased:	100mm 0.00m					Ground Final De		+106.64mAOD 2.40m		
	-			0.0011		Depth	Level	Water	Sample		SPT 'N' Value [U100	Blows1	Installation
		scription of Sti	rata		Legend	(m bgl)	(mAD)	Level (m bgl)	Depth (m bgl)	Туре	Hand Vane	,	/Backfill
_	MAC.		an de silte C			0.25	106.39		0.25	D			ЧЬ
← of fir	ne to coarse sub	eddish brown very s -angular hardcore.	andy slity G	RAVEL		0.40	106.24		0.25 0.40	ES B			
_ MAE		eddish brown variab							0.50	ES			
		rare clay pockets. G		to									
R PID	reading at 0.50m			coarse		1.20	105.44		1.20	ES			
- roun	nded quartzite. (S	Superficial Deposits		Coarse		1.45 1.55	105.19 105.09		1.45 1.55	B D			
Firm	reading at 1.20m reddish brown s	slightly sandy slightl	y gravelly C	LAY.	××				1.55	ES			
	vel is fine to coai osits).	se rounded quartzit	e. (Superfic	ial	×				2.00	В			oo_oo
Red (We	dish brown silty athered Helsby S	SAND with rare qua Sandstone Formatic	rtzite grave	Ι.	××	2.40	104.24						
	reading at 1.55m		,		/	2.40	104.24						
-	D	orenoie Complete at 2.4	0111										
F													
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	es/Tests Undisturbed		Other Info	ormation: hardstanding	nonetret	od using	concrete	corer					
-	Disturbed		2. Hand-du	ig service av	oidance p	it excava	ated to 1.2	20m.					
ВЕ	Bulk		4. No grou	e terminated ndwater enco	ountered.		ess samp	oler drilling e	quipment				
	Water		5. Borehole	e collapsed ι	p to 2.00r		nstalled f	rom 2,00m (slotted fro	om 2.00m	to 1.00m) in a gravel	filter. beni	onite
	SPT/CPT Environmental S	ample	seal from 1	.00m to 0.30)m, with a	lockable	cover at	surface.					
	Hand Shear Van	•											
	No Recovery												
	Water Strike Water Level	Document 4 144											
—	vvalei Levei	Document 4.144											

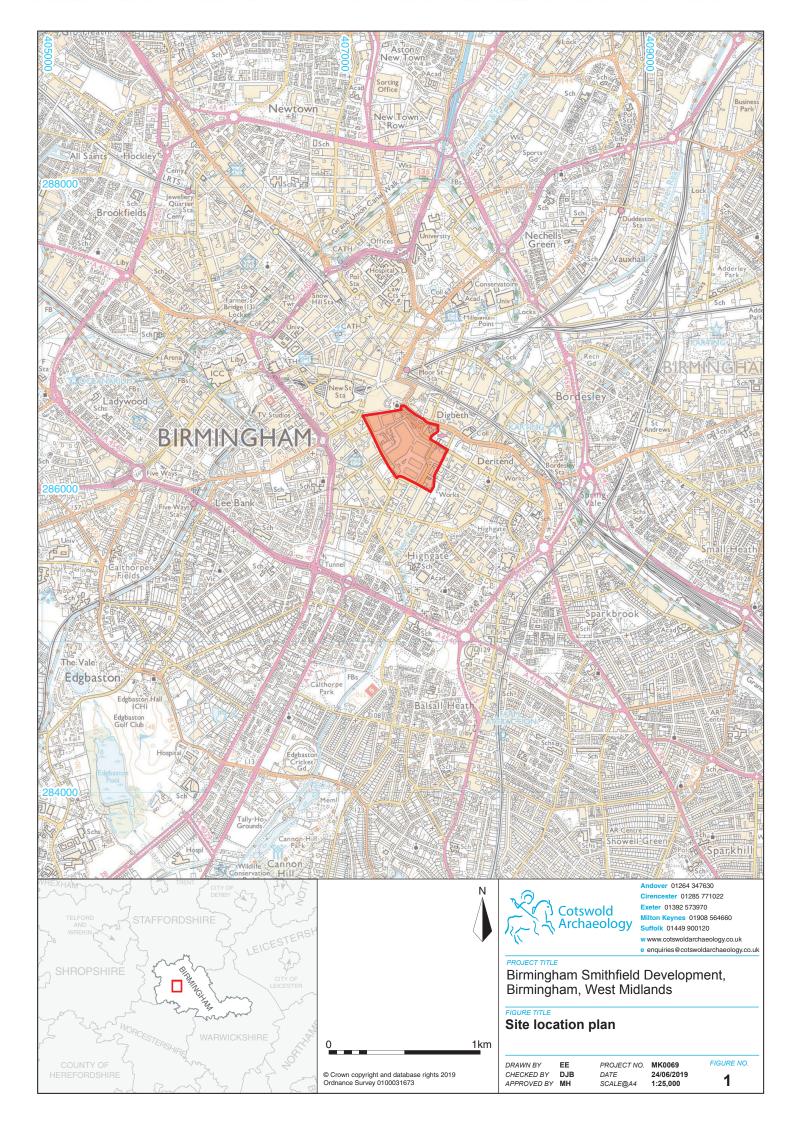
	Window	less San	npler	Bore	ehole l	oa		Borehole:	۱۸/۹	524
	roject Number: 28		ipioi	Dort		-09		Sheet 1 of 1		
Ltd.	•	mithfield, Digbet	h, Birmiı	ngham				Logged By:		SJW
	lient: La	and Lease		•				Checked By: Drilled By:	E N	
wowernampton	0	kins						Diffied by.		D
Tel: 01902 459558		7/06/2019 to 18/	06/2019			Nationa		E: 407480.86 N: 2	86086.3	1
Email: info@gipuk.com)0mm				Ground		+106.86mAOD		
	epth Cased: 0.	00m	1		Water	Final D Sample	eptn: es/Tests	6.00m		
Description of	f Strata	Legend	Depth (m bgl)	Level (mAD)	Level (m bgl)	Depth (m bgl)	Туре	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
- TARMAC.			,			(= 3.)				
MADE GROUND. Greyish brown a		ndy	0.23	106.63		0.25	B ES			
 GRAVEL of fine to coarse sub-angue quartzite, hardcore, slag and clinke 			Ŋ			0.25	B			
PID reading at 0.25m - 0.0ppm.		/XXX	0.65	106.21		0.40 0.65	ES B			
 MADE GROUND. Brown and occase clayey sandy GRAVEL of fine to co 						0.65	ES			
rounded brick, quartzite, concrete,			3			0.80	B ES			
PID reading at 0.25m - 0.0ppm. MADE GROUND. Orange brown si	Ity gravelly SAND. G	Gravel	3			1.20	ES			
is fine to coarse sub-angular to sub	-rounded brick and a	ash.	X			1.20	В			
 PID reading at 0.65m - 0.0ppm. MADE GROUND. Dark grey and or 				104.00		2.00				
clayey sandy GRAVEL with a media occasional clay pockets. Gravel is f			x 2.00	104.86		2.00 2.00	B ES			
to sub-rounded slag, clinker, coal, b			×							
 mudstone. Cobbles are slag. PID reading at 0.80m - 0.0ppm. 			× 2.60	104.26		2.60	D			
PID reading at 1.20m - 0.0ppm.			2.80	104.06		2.80	D			
At 1.50m - Slag cobble. MADE GROUND. Firm friable grey	sandy slightly grave		×			3.00	В			
CLAY. Gravel is fine to coarse anguing glass, brick and slag.			×							
 PID reading at 2.00m - 4.6ppm. 			3.50	103.36		3.50	В			
MADE GROUND. Pale orange brow SAND. Gravel is fine to coarse sub			×			3.50	ES			
MADE GROUND. Dark grey very g	ravelly silty SAND w		4.00	102.86		4.00	в			
frequent clay pockets (from 3.00m- coarse sub-angular ash, wood and										
MADE GROUND. Firm friable brow brown sandy slightly gravelly CLAY	n and pale yellowish		4.45	102.41 102.31		4.45	D			
sub-angular brick and sub-rounded			4.55	102.31		4.55 4.75	ES D			
 PID reading at 3.50m - 0.3ppm. MADE GROUND. Dark grey silty version 	ary gravelly SAND		4.75	102.11	X 5.00					
is fine to coarse sub-angular ash, w	ood and brick.	0-0-0-	Ċ		▲ 5.00	5.00 5.00	B ES			
MADE GROUND. Soft brown slight CLAY. Gravel is fine to coarse roun			C							
ceramic.	•		Ċ							
POSSIBLE MADE GROUND. Dark CLAY with rare fine to medium qua	tzite gravel. Slight		Ċ							
 organic odour noted. (Possible Bur PID reading at 4.55m - 0.0ppm. 	ed Topsoil).	· · · · · · · · · · · · · · · · · · ·	6.00	100.86						
Firm friable blueish grey, greenish g										
 sandy slightly gravelly CLAY tendin SAND. Gravel is fine to coarse sub 										
quartzite. (Superficial Deposits).										
At 5.00m - Slight hydrocarbon odour r PID reading at 5.00m - 1.9ppm.										
Borehole Complete	at 6.00m									
-										
-										
-										
-										
-										
- -										
Samples/Tests	Other Inform	ation:								
U Undisturbed		dstanding penetra				م الم ما ∼ 1	urth c =			
D Disturbed		ervice avoidance r encountered at		ateu to 1.	iuni - unable	ະ ເບ aig fi	u u ief.			
B Bulk W Water		ckfilled upon com								
W Water S/C SPT/CPT										
ES Environmental Sample										
HV Hand Shear Vane										
NR No Recovery										
Water Strike										
Water Level Document 4.14	4									

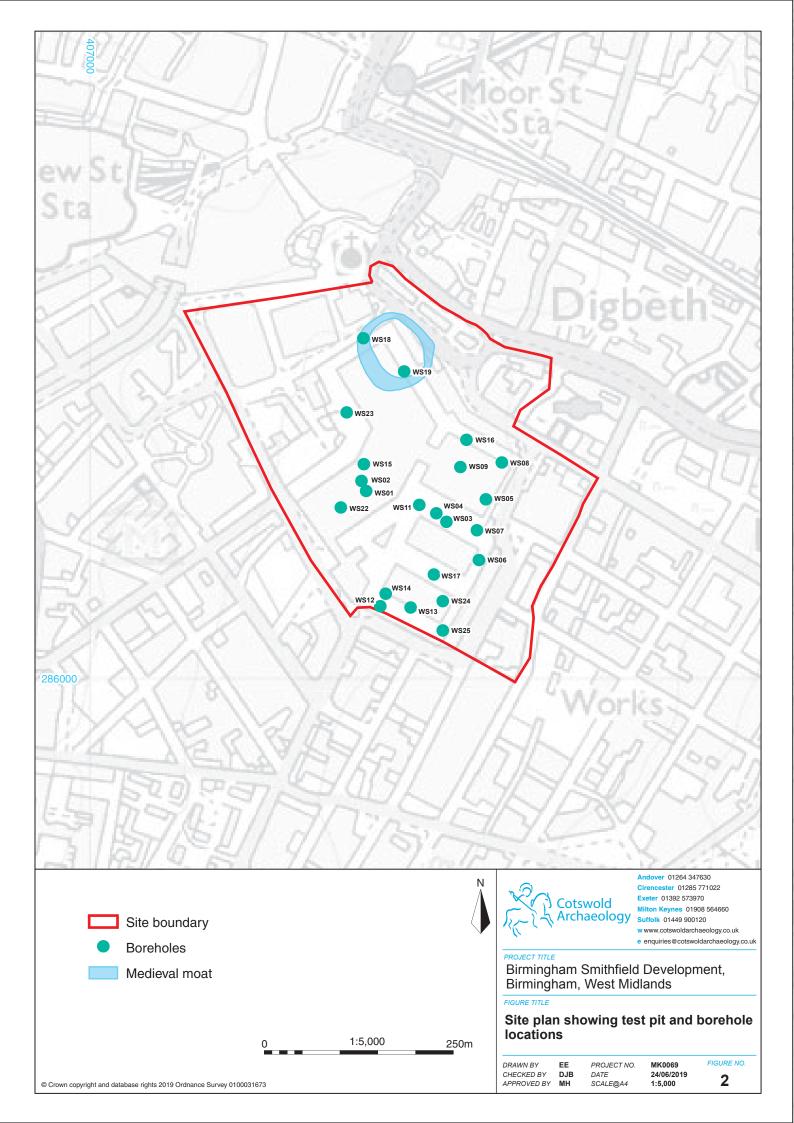
	Windo	wless S	Sam	pler	Bore	ehole l	_oq		Borehole:	WS	\$25
GIP	Project Number:			•			0		Sheet 1 of 1		
Ltd. Ground Investigation & Piling Limited	Project Name:	Smithfield, [Digbeth	n, Birmir	ngham				Logged By: Checked By:	C. M	
Devonshire House Ettingshall Road	Client:	Land Lease	1						Drilled By:	E	
Wolverhampton	Engineer:	Atkins							y		
WV2 2JT Tel: 01902 459558	Date Drilled:	17/06/2019					Nationa		E: 407473.84 N: 2	86052.85	5
Email: info@gipuk.com www.gipuk.com	Diameter:	100mm					Ground		+106.95mAOD		
www.gipuk.com	Depth Cased:	2.00m			1	Water	Final D Sample	epth: es/Tests	5.50m		
Description	of Strata		Legend	Depth (m bgl)	Level (mAD)	Level (m bgl)	Depth (m bgl)	Туре	SPT 'N' Value [U100 Hand Vane	Blows]	Installation /Backfill
– TARMAC.		~~~~	$\times\!\!\times\!\!\times$,			(in bgi)				5
			\times	0.30	106.65		0.29	В			.ĭ ∆
 MADE GROUND. Dark brown s coarse sub-angular to sub-round 			\times	0.50	106.45		0.29	ES B			
concrete and hardcore.		R	\times				0.50	ES			
 PID reading at 0.30m - 0.1ppm. MADE GROUND. Brown and re 	ddish brown clayey	sandy	\times	1.00	105.95		1.00	В			
GRAVEL of fine to coarse sub-a		ed	\times	1.00	100.00		1.20	D			
quartzite, brick, slag, ash and cl PID reading at 0.50m - 0.0ppm.		/\$	\times								
 MADE GROUND. Brown and re GRAVEL. of fine to coarse sub-a 			XXX	1.50	105.45		1.50 1.50	B ES			
duartzite and occasional slag, a	sh and clinker.	/K	\times								
 MADE GROUND. Orange brown yellowish brown and dark brown 			\times				2.00	В			
 with frequent sandy clay pockets 			\times								
 sub-angular to sub-rounded qua clinker. 	rtzite, brick, slag, as	sh and	$\times\!\!\times\!\!\times$								
PID reading at 1.50m - 0.0ppm.		8	\times								
PID reading at 2.00m - 0.2ppm.			$\times\!\!\times\!\!\times$	3.00	103.95		3.00	В			<u>68</u> 80
 MADE GROUND. Brown, orang grevish brown very clayey grave 			$\times\!\!\times\!\!\times$	0.00	100.00		3.00	ES			
gravelly) SAND. Gravel is fine to			\times								
 clinker, ash and sandstone. PID reading at 3.00m - 0.0ppm. 			\times								
		k	\times								
		l l	$\times\!\!\times\!\!\times$				4.00	В			88 8 88
-		E E	\times								
-		E E	\times								
		8	\times								
			$\times\!\!\times\!\!\times$	5.00	101.95	▼ _{5.00}	5.00	в			
 Yellowish brown becoming grey silty gravelly SAND. Gravel is fir 			°° _C	0.00		0.00	5.00	ES			
quartzite. (Superficial Deposits).			o v		101.15						
PID reading at 5.00m - 0.0ppm. Borehole Comp	lete at 5.50m			5.50	101.45						
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E											
Samples/Tests											
Samples/Tests U Undisturbed	Other Info	ormation: hardstanding p	enetrat	ed using	concrete	corer					
D Disturbed	2. Hand-du	ig service avoid	dance p	it excava	ited to 1.2	20m.					
B Bulk		o case beyond vater encounte			bstructior	IS.					
W Water	5. Borehole	e terminated at	limit of	windowle							
S/C SPT/CPT		e seal from 5.5 a gravel filter, b							talled from 5.00m (slot er at surface	ted from 5	.00m to
ES Environmental Sample		a graver niter, D	CINCOINCE			.5 0.00m, W			a at sundos.		
HV Hand Shear Vane											
NR No Recovery											
Water Strike	1 1 4 4										
	r. / 77										

APPENDIX B: OASIS REPORT FORM

PROJECT DETAILS Project Name Birmingham Smithfield Development, Birmingham, West Midlands An archaeological watching brief was undertaken by Cotswold Short description Archaeology for GIP UK during pre-application groundworks associated with the potential redevelopment of the site at Birmingham Smithfield Development, Birmingham, West Midlands. Principle interest in the site derives from the potential for the presence of medieval activity in the form of buried remains of a moated manor and associated structures identified in the northeastern part of the site through rescue excavation in the 1970s. The groundworks comprised the excavation of 22 hand-dug test pits and boreholes which reached the underlying natural substrate at depths ranging from 0.8m to 5.9m below present ground level. No features or deposits of archaeological significance were identified during these groundworks, and no artefactual material pre-dating the modern period was recovered, despite two boreholes being located in close proximity to the anticipated location of the former moat and manor platform. Borehole WS18, revealed natural substrate at 0.8m bpgl, and was located in the putative location of the moat surrounding the former manor. The recorded depth of natural substrate and the evidence of the recorded sample do not, however, suggest infilled moat material. The evidence could, however, suggest that this borehole lay adjacent to the infilled moat, allowing for a margin of error in historical recording, WS19, located inside the putative circuit of the moat, revealed 'made ground' to 2.4m bpgl, again with no evidence of infilled moat material. This could indicate substantial levels of ground reduction or modification in the area, especially where one may anticipate evidence of the former house platform perhaps at less great depth. Project dates 13-19 June 2019 Project type Archaeological watching brief Previous work Not known Future work Unknown **PROJECT LOCATION** Site Location Birmingham Smithfield Development, Birmingham, West Midlands Study area (M²/ha) 16.8ha Site co-ordinates 407372 286326 **PROJECT CREATORS** Name of organisation Cotswold Archaeology Project Brief originator Birmingham City Council Project Design (WSI) originator Cotswold Archaeology **Project Manager** Mark Hewson Project Supervisor James Coyne **MONUMENT TYPE** None SIGNIFICANT FINDS None **PROJECT ARCHIVES** Intended final location of archive Content (e.g. pottery, (museum/Accession no.) animal bone etc)

Physical	Birmingham Museum and Art Gallery	None			
Paper	Birmingham Museum and Art Gallery	WSI, Photographic registers, borehole recording sheets			
Digital	Birmingham Museum and Art Gallery	Database, digital photos			
BIBLIOGRAPHY					
CA (Cotswold Archaeology) 2019 Birmingham Smithfield Development, Birmingham, West Midlands: Archaeological Watching Brief. CA typescript report MK0069_1					







General view of site looking south-east

Andover 01264 347630 Cirencester 01285 771022 Exeter 01392 573970 Milton Keynes 01908 564660 Suffolk 01449 900120 w www.cotswoldarchaeology.co.uk e enquiries@cotswoldarchaeology.co.uk
Birmingham Smithfield Development, Birmingham, West Midlands
FIGURE TITLE Photograph: general view of site looking south-east
DRAWN BY EE PROJECT NO. MK0069 FIGURE NO. CHECKED BY DJB DATE 24/06/2019 APPROVED BY MH SCALE@A4 NA 3



General view of borehole WS02, looking north



General view of borehole WS02, looking south

	Cotsv Archa	wold aeology	Andover 01264 34 Cirencester 01285 Exeter 01392 5735 Milton Keynes 013 Suffolk 01449 900 w www.cotswoldard e enquiries@cotsw	5 771022 970 908 564660 1120					
PROJECT TITLE Birmingham Smithfield Development, Birmingham, West Midlands									
FIGURE TITLE Photographs of Borehole WS02									
DRAWN BY CHECKED BY APPROVED BY	AW AO MH	PROJECT NO DATE SCALE@A4	. MK0069 31/07/2019 NA	FIGURE NO.					



Borehole WS11 Sample 2-3m (0.5m divisioned scale)

Andover 01264 347630 Cirencester 01285 771022 Exeter 01392 573970 Milton Keynes 01908 564660 Sutfolk 0149 900120 w www.cotswoldarchaeology.co.uk e enquiries@cotswoldarchaeology.co.uk
Birmingham Smithfield Development, Birmingham, West Midlands
FIGURE TITLE Borehole WS11 Sample, 2-3m
DRAWN BY AW PROJECT NO. MK0069 FIGURE NO. CHECKED BY AO DATE 31/07/2019 APPROVED BY MH SCALE@A4 NA 5



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