

ARC Oxford – Plot 4200

Cowley, Oxfordshire

Land Quality Assessment

Project Ref: **13520**

Report Ref: **R102**

Revision 1.2

February 2024

Client

**Advanced Research
Clusters GP Limited
(ARC)**

REPORT STATUS

Client	Advanced Research Clusters GP Limited (ARC)
Project Title	ARC Oxford – Plot 4200
Report Type	Land Quality Assessment
Report Number	R102



Revision	Revised by	Approved by	Date
1.0	Marcel Richards – Assistant Engineer	Narinder Bangar - Director	06/11/2023
1.1	Marcel Richards – Assistant Engineer	Narinder Bangar - Director	18/01/2024
1.2	Marcel Richards – Assistant Engineer	Narinder Bangar - Director	01/02/2024

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2 Introduction

Baynham Meikle Partnership Limited has been commissioned on behalf of Advanced Research Clusters GP Limited (ARC) to prepare a Land Quality Assessment and Contamination Remediation Strategy submitted to Oxford City Council, to support a detailed planning application for the development of a new laboratory space with an associated car parking area to the rear of the building.

The site is located at ARC Oxford and accessed off John Smith Drive. The development area is approximately 1.283 hectares in total and the Ordnance Survey Grid reference is E454750, N203802. Site location plan is included in Appendices.

The existing site is currently developed and consists of 7 office units with associated infrastructure, which are to be demolished.

A full site investigation report is being prepared at the moment by the RSK, however, at the time of writing this report, RSK have provided preliminary geotechnical data which has been used to prepare this report. Extracts have been appended to this report.

3 Site History

Having reviewed Groundsure report (provided by the RSK), it appears that the site has been undeveloped and remained as greenfield / agriculture land since 1878 until 1960 when the first historical map was published. Extracts have been appended to this report.

1987 map suggests a gravel path running along the western site boundary as well as crossing the site at southern end.

1911-1914 map indicates stone path / road running along western site boundary.

1937 map indicates that the land to the west of the site had fully been developed with new buildings and infrastructure.

1954 records show soft landscaping feature developed within the site area with a path running in the south – north direction in the middle of the development area.

1957 – 1965 map shows the site to be fully developed with a large unit (called WORKS) covering the most of proposed site development area.

1993 - 1994 map suggests that existing large unit had been demolished

2003 - new 7no. units / offices with associated infrastructure constructed. Also, main infrastructure / roundabout had also been developed to the north-east of the proposed site.

2010 map indicates that further units / offices had been constructed to the north, east and south of the proposed development area which seem to remain until today.

4 Topography

The topography of the existing site is such that it falls from north to south with existing levels in the north circa 72.000 AOD and in the south circa 71.000 AOD.

The existing site consists of several buildings with associated access roads, footpath, car parking and soft landscaping areas.

A Topographical survey can be found in appendices.

5 Geo environmental settings and findings

A full phase 2 intrusive ground investigation has been undertaken across the site by RSK . This was completed in Dec 2023, Report Reference: 252995 – R02 (00).

The geographic information map provided by Natural England indicates that the site is located on a superficial drift aquifer that is classified as unproductive. These are generally unable to provide useable water supplies and are unlikely to have surface water and wetland ecosystems dependant on them.

The sites soilscape is described as a freely draining slightly acid loamy soils. BGS Maps identifies the bedrock geology as Beckley Sand member – Sandstone (Secondary A bedrock).

Soakaway Infiltration testing was undertaken at the site as part of the investigation and given that the proposed site is located within the presence of a Beckley Sand and Sandstone strata the investigation work has concluded that some infiltration into the Beckley Sand Member will be possible.

A summary of the general ground investigation findings is included below:

Made Ground	0.05m to 2.50m (typically comprised of tarmacadam, concrete blocks, sandy gravel and/or clayey sand with glass, clinker and plastic)
Sand	0.70m to 5.50m (typically comprised of Orangish brown and brown mottled grey clayey fine to medium SAND)
Sandstone	4.50m to 15.00m (typically comprised of Medium strong orangish brown mottled grey and brown distinctly weathered to partially unweathered fine to medium grained SANDSTONE with fossils)

The site has been confirmed as not being in a Radon affected area (less than 1% of homes are estimated to be at or above the Action Level). Therefore, no radon protective measures are deemed to be necessary in the construction.

This site is not indicated to be in an area of historic underground coal or other mining.

Key maps have been appended to this report.

6 Hydrogeology and Groundwater Vulnerability

Groundwater Vulnerability Map produced by the Environment Agency indicates that the site is in a High Aquifer Zone. Magic maps identifies the Superficial Drift as an unproductive Aquifer.

Groundwater and surface water sampling was undertaken at the site as part of the investigation works.

Ground water was noted as being encountered within the boreholes. The investigation has concluded that the risk that the limited ground water contamination at the site does not pose as a risk to the underlying groundwater aquifer.

The available data collected by RSK through their intrusive investigations suggest that the site is underlain by varying depths of made ground and dark brown clayey material. Depths of the various strata's are depicted within the table included in the appendices.

According to Groundsure report (ref. no. GS-CBI-3EI-6YT-7WQ, carried out in Oct 2023) there has been no record of surface water abstraction licenses within 2000m of the site.

Historic records of the site show that the proposed area is not within groundwater source protection zone, please see BMP Flood Risk Assessment (REF: FRA / 13520) which gives a full breakdown of hydrogeology and groundwater vulnerability of the development.

Project: ARC Oxford – Plot 4200

The provided borehole logs (RSK data) have confirmed that the groundwater strikes were encountered during drilling / excavation within exploratory locations, depths varied between 7.20 - 8.30m bgl.

7 Flood Risk and Flood Mapping

According to the Envirocheck Report and Environment Agency flood map information, the site is not at risk from flooding from rivers and sea, therefore is categorized as being in flood zone 1.

Also, the site is not at risk of flooding from reservoirs or surface water.

Sea (Tidal) - The site is not located in the vicinity of the coast and is therefore not at risk of sea (tidal) flooding.

Surface Water Flooding (Pluvial Flooding) - the site is in a very low to medium flood risk area meaning that each year, this area has a chance of flooding of 0.1% to 3.3%. This takes into account the effect of any flood defences in the area.

8 Site Sensitivity and Soil Chemistry

The new development site does not appear to be within impact zone for a site of Special Scientific Interest (SSSI).

The site investigation soil sampling works confirm that none of the samples displayed hazardous properties when analysed. As such any waste material from the site ground works operation should be classified as non-hazardous.

The sampling test results did conclude that linkages to organic contamination are likely to exist and therefore water supply pipes should be upgraded to PVC pipes. Therefore, at this stage we should make allowances for barrier water supply pipes.

Asbestos fibres were encountered within two isolated sample locations. This was deemed to not present a risk to future users of the site and a recommendation of suitable protective measure to be adopted for future operations.

No visual olfactory contamination at the site was observed.

Groundwater monitoring was undertaken at the site. The results conclude that two GAC exceedances for nickel, zinc and fluoranthene in one location were noted.

The concentration of the metal contaminations within the soils are considered to be at low levels such that contamination linkages to the underlying aquifer in the dissolved phase are confirmed as incomplete.

The fluoranthene exceedance was noted as not being significant.

Ground gas monitoring has been undertaken at the site. The site has been classified as CS1 with no gas protection measure considered necessary.

Groundsure report confirmed that the site area had previously been used for industrial purposes, there are records of historical tanks, garages and petrol stations being present in close vicinity of the site development area – 0 – 500m. as well as therefore, further contamination testing is yet to be provided.

The Grounsure report has established the following potential for ground stability hazards on site.

- | | |
|---|------------|
| • Collapsible Ground Stability Hazards | Very Low |
| • Compressible Ground Stability Hazards | Negligible |
| • Ground Dissolution of Soluble Rocks | Negligible |
| • Landslides | Very Low |
| • Running Sand | Very Low |
| • Shrink/ swell Clay | Very Low |

The Envirocheck report has also identified that there might be a risk of elevated concentrations of sulphates to be present in the natural London Clay Soil and that this could present a risk to new buried concrete structures, the confirmed concentration listed below:

- Estimated Soil Chemistry Arsenic – 15mg/kg
- Estimated Soil Chemistry Cadmium – <1.8mg/kg
- Estimated Soil Chemistry Chromium – 60-90mg/kg
- Estimated Soil Chemistry Lead – <100mg/kg
- Estimated Soil Chemistry Nickel – 15-30mg/kg

Envirocheck Report extracts have been appended to this report.

9 Remediation of Potential Contamination

Given the current use of the site it is unlikely that any significant contamination will be found over the site.

The recent investigation works has confirmed that no evidence of significant contamination has been discovered on site that is likely to present a risk to the future site user (including the build /demo stage).

As such no remediation measures are deemed necessary for the new development.

10 Recommendations / Conclusions

The site has previously been developed and consists of 7no. units / offices which are to be demolished to allow construction of a new unit – laboratory space with associated access road, car parking and soft landscaping areas.

The proposed site development is predominantly flat with approx. fall from north to south at approx. 1 in 200.

The site is not at risk of flooding from rivers or the sea.

The site is not located in a Radon affected area.

This site is not indicated to be in an area of historic underground coal or other mining.

Groundwater depth has been confirmed to be min 7.20m bgl.

Groundsure report have identified the proposed site development being a potential risk to the groundwater vulnerability area - areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.

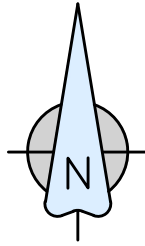
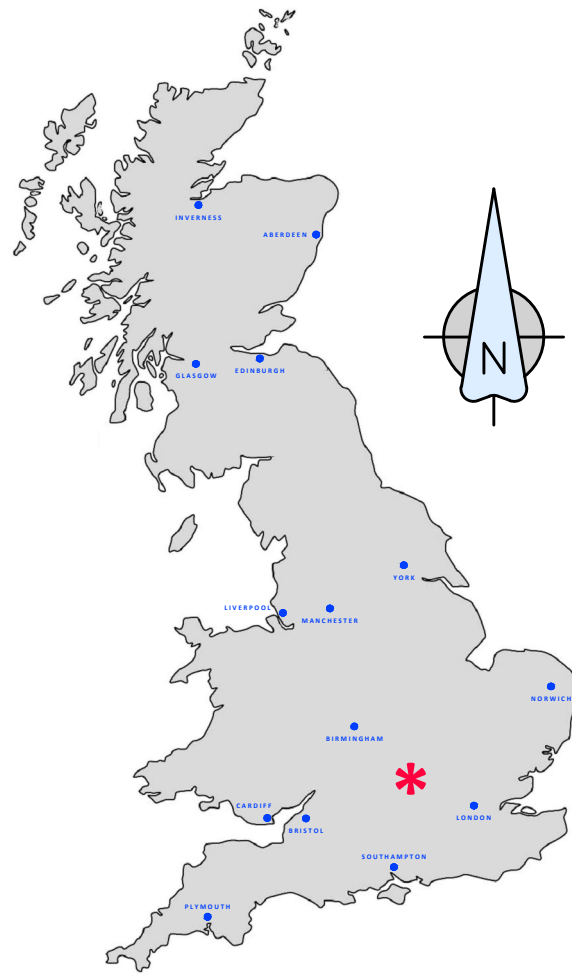
Therefore, if discharge of surface water is confirmed to be via infiltration techniques then protection measures are to be considered such as introduction of clean stone capping, with geotextile marker layers to the porous sub-base, etc, in order to allow discharge of treated surface water into the ground.

Unidentified localised areas of contamination may exist at the Site and an appropriate 'hotspot' protocol should be in place for ground workers to act upon should such contamination be identified during the construction process.

Due to site history and previous site uses it is likely that there will be underground obstructions / foundations present on site. Therefore, trial trenches may be required to further investigate the area of a former factory works building.

Any obstructions noted are to be removed to facilitate the ground works operation.

Appendices



SITE DETAILS		
Address:	NASH COURT, OXFORD BUSINESS PARK, COWLEY, OXFORD	
Nearest Postcode:	OX4 2RU	
Grid Co-Ordinates:	E: 454748	N: 203779

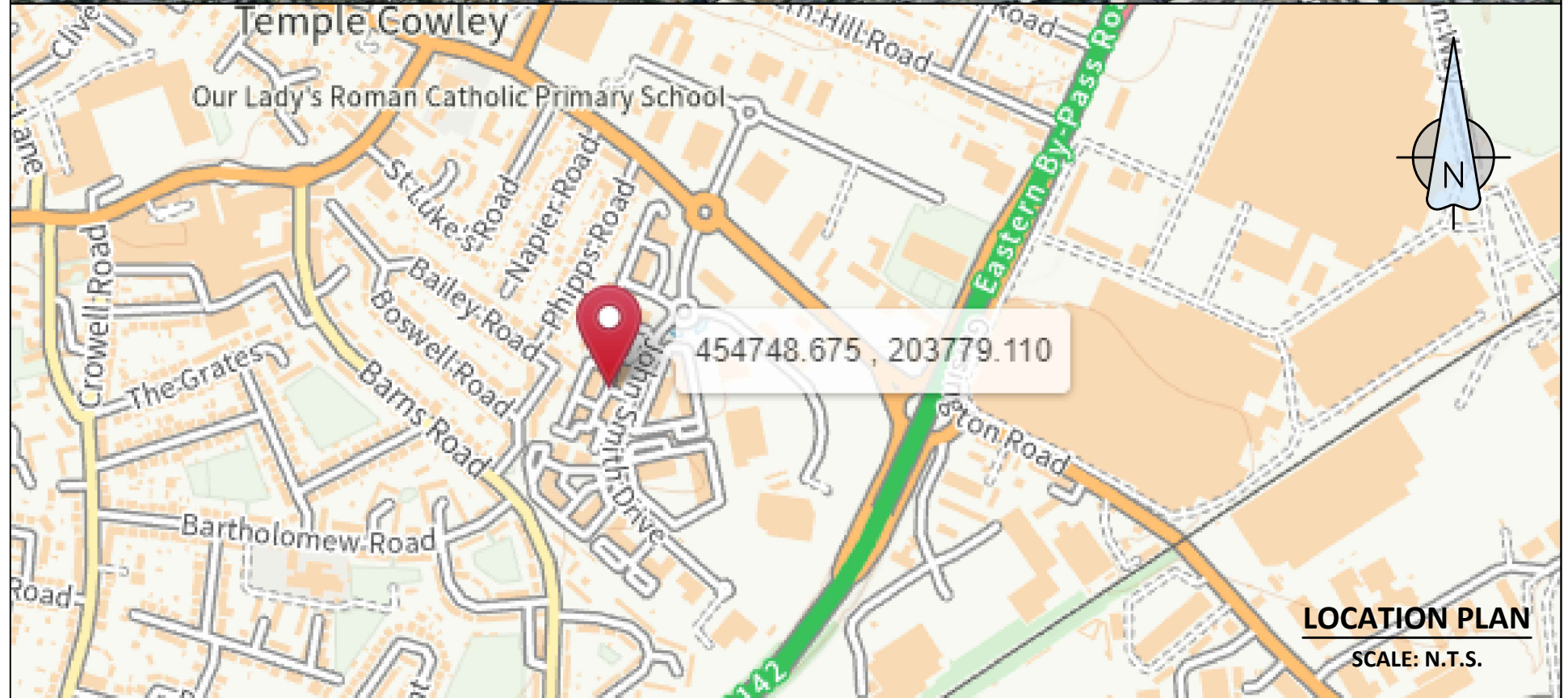


Notes

A3



SITE PLAN
SCALE: N.T.S.



LOCATION PLAN
SCALE: N.T.S.



CHECK: For the plan to be in scale, the above scale bar must measure correct, i.e. 100mm when printed.

Project Title
NASH COURT REDEVELOPMENT

Drawing Title
SITE LOCATION PLAN

Drawing Status
For Information

BM Ref: 13520
Scale @ A3: 1 : —
Drawn by: M.R.
Checked by: J.H.
Project Eng: J.H.

Drawing Number: 13520_100
Revision: —

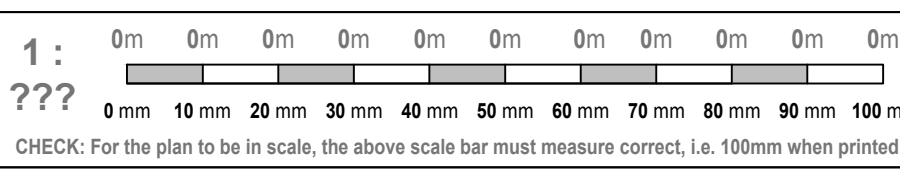
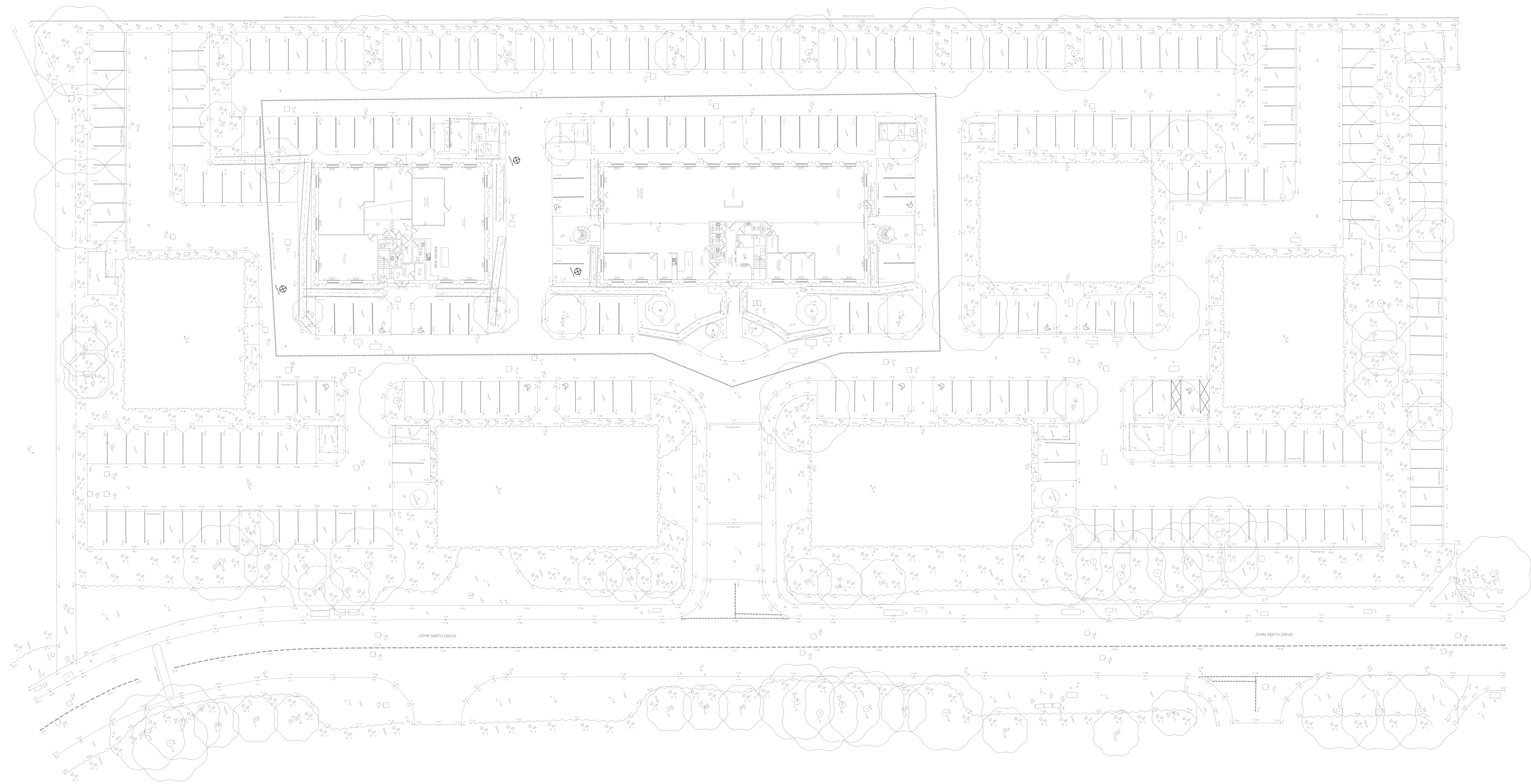
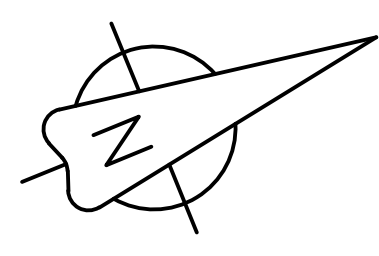
BAYNHAM MEIKLE
Consulting Civil & Structural Engineers

0121 434 4100
admin@baynhammeikle.co.uk
www.baynhammeikle.co.uk

Rev	Date	Description	By	Chkd
A	01/08/2023	First Issue.	M.R.	J.H.

Revision Schedule

DRAFT DRAWING



- Notes**
1. Topographical Survey carried out by Macgregor Smith. Drawing No. 05879 4200 - Topographical Survey Plan (Dated 19/05/2023).
 2. Do not scale from this drawing. All dimensions must be checked & verified on-site. If in doubt ask.
 3. The Contractor is to check & verify all dimensions & levels before any work is started on-site.
 4. Existing site survey works have been carried out by others & no guarantee can be given by Bayham Meikle for their accuracy.
 5. Any discrepancies noted on-site are to be reported to Bayham Meikle immediately.
 6. This drawing is to be read in conjunction with all relevant Architects', Engineers' and other Specialists' drawings & specifications.
 7. For existing ground conditions, refer to Site Investigation reports.

Rev	Date	Description	By	Check

For Information

Project Title
NASH COURT REDEVELOPMENT

Drawing Title
TOPOGRAPHICAL SURVEY PLAN

Drawing Number	Revision
13520_101	A

BM Ref	Scale @ A0	Drawn by	Checked by	Project Eng
13520	1:200	M.R.	J.H.	N.S.B.

020 434 4000
admin@bayhammeikle.co.uk
www.bayhammeikle.co.uk

454700

454800

203800

203700



- Legend:**
- Site Boundary
 - BOREHOLE
 - CBR TESTING
 - TRIAL PIT
 - TRIAL TRENCH
 - WINDOW SAMPLING BOREHOLE
 - Exploratory positions unable to be completed
 - Exploratory positions unable to be completed

Coordinate System: British National Grid
 Projection: Transverse Mercator
 Datum: OSGB 1936
 Units: Meter

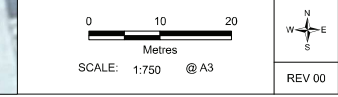


Rev	Date	Description	Drn	Chk	App
00	14/11/2023	First Draft	DR	RM	RM

252995 - Nash Court



TITLE: Exploratory Hole Location Plan



BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: BH01	
Contract Ref: 252995		Start: 18.10.23	Ground Level: 71.73	National Grid Co-ordinate: E:454724.2 N:203747.9	Sheet: 1 of 2
End: 18.10.23					

Depth (m)	Samples & Testing			Mechanical Log		Backfill & Instrumentation	Water	Description of Strata	Depth (m) (thickness)	Legend
	No	Type	Results	TCR SCR RSD (%)	IF (mm)					
0.70-0.70	1	ES PID	0.0ppm					Asphalt (MADE GROUND) Grey and brown very sandy angular to sub-rounded fine to coarse GRAVEL of limestone, concrete, and brick. (MADE GROUND)	0.15	
1.20-1.65	1	SPT	N=14					Orangish brown and grey mottled brown and dark grey clayey fine to coarse SAND with glass, clinker and plastic. Gravel is angular to sub-rounded fine to coarse brick, concrete, sandstone, and limestone. (MADE GROUND)	0.60	
1.50-1.50	2	ES PID	0.0ppm						(1.60)	
2.00-2.45	2	SPT	N=9						2.20	
2.40-2.40	3	ES PID	0.0ppm					Orangish brown and brown mottled grey clayey fine to medium SAND. (WEATHERED BECKLEY SAND MEMBER)		
3.00-3.45	3	SPT B	N=16						(1.80)	
3.00-4.00	4	SPT	N=50 for 90mm					Assumed Zone of Core Loss (AZCL) ... Fracture set 1 NI	4.00	
4.00-5.50	4	SPT	N=50 for 90mm						(1.50)	AZCL
4.00-4.24	4	SPT	N=50 for 90mm						5.50	
5.50-7.00	5	SPT	N=50 for 200mm					Medium strong orangish brown mottled grey and brown distinctly weathered to partially unweathered fine to medium grained SANDSTONE with bivalve fossils. (BECKLEY SAND MEMBER) ... Fracture set 2 Fractures are closely spaced planar rough dipping 0 to 10 degrees with tight to open clean rarely infilled with orangish brown mottled grey sand and gravel apertures.	(1.20)	
5.50-5.85	5	SPT	N=50 for 200mm						6.70	
7.00-8.50	6	SPT	N=50 for 115mm					Medium strong dark blueish grey distinctly weathered to partially unweathered fine to medium grained SANDSTONE with bivalve fossils. (BECKLEY SAND MEMBER) ... Fracture set 3 Fractures are very closely to closely spaced planar rough dipping 0 to 5 degrees with tight to partly open clean rarely infilled with dark grey sand and gravel apertures.	(1.45)	
7.00-7.23	6	SPT	N=50 for 115mm						8.15	
8.50-10.00	7	SPT	N=50 for 135mm					Very strong to extremely strong dark grey and grey mottled light grey unweathered fossiliferous LIMESTONE. (WHEATLEY LIMESTONE MEMBER) ... Fracture set 4 Fractures are very closely to closely spaced planar rough dipping 0 to 5 degrees with tight to open clean rarely infilled with dark grey limestone gravel apertures.	8.50	
8.50-8.72	7	SPT	N=50 for 135mm							

Boring Progress and Water Observations						General Remarks					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)						
						1. Location scanned with GPR prior to breaking ground. No services encountered. 2. Groundwater encountered at 8.30m bgl. 3. Gas and groundwater monitoring well. Installed with 9.00m plain pipe and 6.00m slotted.					
All dimensions in metres						Scale: 1:50					
Method Used:	Rotary Cored		Plant Used:	Comacchio GEO 205		Drilled By:	DSUK	Logged By:	RMoore	Checked By:	AGS

GINT_LIBRARY_V10_01.GLB (libVersion: v8_07) | Log BOREHOLE LOG - A4P | 252995-NASH COURT.GPJ - v10_01. RSK Environment Ltd, Abbey Park, Humber Road, Coventry, CV3 4AG, Tel: 02476 505600, Fax: 02476 501417, Web: www.rsk.co.uk. [04/12/23 - 12:35] [RMB]

BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: BH01	
Contract Ref: 252995		Start: 18.10.23	Ground Level: 71.73	National Grid Co-ordinate: E:454724.2 N:203747.9	Sheet: 2 of 2
End: 18.10.23					

Depth (m)	Samples & Testing			Mechanical Log		Backfill & Instrumentation	Water	Description of Strata	Depth (m) (thickness)	Legend
	No	Type	Results	TCR SCR RSD (%)	IF (mm)					
10.00-11.50	8	SPT	N:50 for 135mm					Medium strong rarely strong dark grey distinctly weathered to partially unweathered fine to medium grained SANDSTONE with bivalve fossils. (BECKLEY SAND MEMBER) ... Fracture set 5 Fractures are closely spaced planar rough dipping 0 to 10 degrees with tight to open clean rarely infilled with dark grey sand and gravel apertures, (stratum copied from 8.50m from previous sheet)	(3.90)	
10.00-10.23	8	SPT	N:50 for 135mm							
11.50-13.00	9	SPT	N:45 for 145mm							
11.50-11.73	9	SPT	N:45 for 145mm							
12.50	5	D						Weak to moderately weak dark grey distinctly weathered fine to medium grained SANDSTONE. (BECKLEY SAND MEMBER) ... Fracture set 6 Fractures are closely spaced planar rough dipping 0 to 10 degrees with very tight to tight infilled with dark grey sand apertures.	12.40	
12.50	5	D							(0.60)	
13.00-14.50	10	SPT	N:50 for 200mm					Medium strong rarely strong dark grey distinctly weathered to partially unweathered fine to medium grained SANDSTONE with bivalve fossils. (BECKLEY SAND MEMBER) ... Fracture set 7 Fractures are closely to medium spaced planar rough dipping 0 to 5 degrees with very tight to tight infilled with dark grey sand apertures.	13.00	
13.00-13.35	10	SPT	N:50 for 200mm							
13.64-13.85	6	C						... Moderately weak from 14.00m to 14.50m bgl	(2.44)	
13.64-13.85	6	C								
14.50-15.00	11	SPT	N:50 for 195mm							
14.50-14.85	11	SPT	N:50 for 195mm							
15.00-15.29	12	SPT	N:50 for 140mm					Borehole terminated at 15.44m bgl.	15.44	
15.00-15.29	12	SPT	N:50 for 140mm							

Boring Progress and Water Observations						General Remarks					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)						
All dimensions in metres						Scale: 1:50					
Method Used:	Rotary Cored		Plant Used:	Comacchio GEO 205		Drilled By:	DSUK	Logged By:	RMoore	Checked By:	AGS

GINT_LIBRARY_V10_01.GLB (libVersion: v8_07) | Log BOREHOLE LOG - A4P | 252995-NASH COURT.GPJ - v10_01. RSK Environment Ltd, Abbey Park, Humber Road, Coventry, CV3 4AG, Tel: 02476 505600, Fax: 02476 501417, Web: www.rsk.co.uk. [04/12/23 - 12:36] [RMB]

BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: BH02	
Contract Ref: 252995		Start: 17.10.23	Ground Level: 71.26	National Grid Co-ordinate: E:454740.9 N:203778.3	Sheet: 1 of 2
End: 17.10.23					

Depth (m)	Samples & Testing			Mechanical Log		Backfill & Instrumentation	Water	Description of Strata	Depth (m) (thickness)	Legend
	No	Type	Results	TCR SCR RFD (%)	IF (mm)					
0.00-0.90	1	ES PID	0.0ppm					Turf over dark brown and brown slightly clayey fine to medium SAND with roots. (TOPSOIL)	(0.70)	
1.20-1.65	1	SPT B	N=7					Brown and light brown slightly clayey fine to coarse SAND. (WEATHERED BECKLEY SAND MEMBER)	0.70	
1.20-3.00	2	SPT B								
2.00-2.45	2	SPT	N=11						(3.00)	
3.00-3.45	3	SPT B	N=21							
3.00-3.70	3	SPT B								
3.70-3.74	4	SPT	N:50 for 40mm					AZCL	3.70	
4.50-6.00								Orangish brown and grey mottled light grey medium strong partially unweathered fine to medium grained SANDSTONE with rare bivalve fossils. (BECKLEY SAND MEMBER) ... Fracture set 1 Fractures are closely spaced planar rough dipping 0 to 10 degrees with tight to open clean stained orangish brown apertures.	(0.80) AZCL	
										4.50
5.50	4	D		67 15 15	NI NI 120				(2.70)	
6.00-7.50	5	SPT	N=50							
6.00-6.45				83 46 15	NI NI 100					
7.50-9.00	6	SPT	N:50 for 220mm		NI NI 100			Dark blueish grey mottled brown moderately weak to medium strong partially unweathered fine grained SANDSTONE. (BECKLEY SAND MEMBER) ... Fracture set 2 Fractures are closely spaced planar rough dipping 0 to 10 degrees with tight clean stained dark blueish grey apertures.	7.20	
7.50-7.87				80 52 48	NI NI 200			Grey mottled light grey very strong to extremely strong unweathered LIMESTONE with bands of dark grey medium strong, rarely moderately weak fine grained sandstone. (WHEATLEY LIMESTONE MEMBER) ... Fracture set 3 Fractures are closely to medium spaced planar rough dipping 0 to 10 degrees with tight to partly open clean stained dark blueish grey apertures. ... Sandstone band from 7.90m to 8.00m bgl ... Sandstone band from 8.53m to 8.61m bgl	(0.75)	
8.65-8.90	5	C			NI NI 230				(1.00)	
									8.95	

Boring Progress and Water Observations						General Remarks
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	

1. Location scanned with GPR prior to breaking ground. No services encountered.
2. Groundwater encountered at 7.20m bgl.
3. Gas and groundwater monitoring well. Installed with 5.00m plain pipe and 3.50m slotted.

All dimensions in metres Scale: **1:50**

Method Used: Rotary Cored	Plant Used: Comacchio GEO 205	Drilled By: DSUK	Logged By: RMoore	Checked By: AGS
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BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: BH02	
Contract Ref: 252995		Start: 17.10.23	Ground Level: 71.26	National Grid Co-ordinate: E:454740.9 N:203778.3	Sheet: 2 of 2
End: 17.10.23					

Depth (m)	Samples & Testing			Mechanical Log		Backfill & Instrumentation	Water	Description of Strata	Depth (m) (thickness)	Legend
	No	Type	Results	TCR SCR RFD (%)	IF (mm)					
9.00-10.50	7	SPT	N:50 for 180mm					Dark grey mottled brown moderately weak to medium strong partially unweathered fine grained SANDSTONE. (BECKLEY SAND MEMBER) ... Fracture set 4 Fractures are closely spaced planar rough dipping 0 to 15 degrees with tight to partly open rarely moderately wide clean stained dark grey, occasionally infilled with dark grey sand and fine gravel apertures. (stratum copied from 8.95m from previous sheet) ... Recovered as gravel.		
9.00-9.28				57 23 20						
9.60	6	D								
10.50-12.00	8	SPT	N:50 for 161mm							(4.30)
10.50-10.81				57 13 0	NI NI 180					
11.80	7	D								
12.00-13.50	9	SPT	N:50 for 210mm							
12.00-12.36				77 42 29						
13.25-13.41	8	C						Grey mottled light grey very strong to extremely strong unweathered LIMESTONE. (WHEATLEY LIMESTONE MEMBER) ... Fracture set 5 Fractures are closely spaced planar rough dipping 0 to 5 degrees with tight infilled with dark grey sand and fine gravel apertures.	13.25	
13.50-15.00	10	SPT	N:50 for 295mm					Dark grey mottled brown medium strong partially unweathered fine grained SANDSTONE. (BECKLEY SAND MEMBER) ... Fracture set 6 Fractures are closely spaced planar rough dipping 0 to 10 degrees with tight to partly open infilled with dark grey sand and fine gravel apertures.	13.41	
13.50-13.95				50 7 7	NI NI 110				(2.01)	
14.00	9	D								
15.00-15.35	11	SPT	N:50 for 200mm							
										15.42

Boring Progress and Water Observations						General Remarks
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	

All dimensions in metres Scale: **1:50**

Method Used: Rotary Cored	Plant Used: Comacchio GEO 205	Drilled By: DSUK	Logged By: RMoore	Checked By: AGS
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BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: BH03
Contract Ref: 252995	Start: 16.10.23 End: 16.10.23	Ground Level: 72.90	National Grid Co-ordinate: E:454784.1 N:203826.9	Sheet: 1 of 2

Depth (m)	Samples & Testing		Mechanical Log		Backfill & Instrumentation	Water	Description of Strata	Depth (m) (Thickness)	Legend
	No	Type	Results	TCR SCR RFD (%)					
0.00-0.05							Block paving (MADE GROUND)	0.05	
0.05-0.25							Light brown slightly gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse concrete, brick, limestone and rare sandstone. (MADE GROUND) Concrete and brick (MADE GROUND)	0.25	
2.40-2.95	1	SPT	N=9				Orangish brown and brown mottled grey and light grey slightly clayey fine to medium SAND. (WEATHERED BECKLEY SAND MEMBER)	2.50	
2.50-3.50	1	B							
3.50-3.95	2	SPT	N=12				Medium strong orangish brown and brown mottled grey partially unweathered fine to medium grained SANDSTONE with fossils. (BECKLEY SAND MEMBER) ... Fracture set 1 Fractures are closely to medium spaced planar rough dipping 0 to 10 degrees with partly open to moderately wide clean stained orangish brown, rarely infilled with orangish brown mottled grey gravel apertures. ... Grey from 5.33m to 5.62m bgl.	4.50	
3.50-4.50	2	B							
4.50-6.00	3	SPT	N:50 for 205mm				Strong to very strong grey mottled light grey unweathered LIMESTONE with fossils. (WHEATLEY LIMESTONE MEMBER) ... Fracture set 2 Fractures are closely to medium spaced planar rough rarely stepped dipping 0 to 5 degrees with tight to partly open clean apertures.	8.20	
4.50-4.79	3	C							
6.00-7.50	4	SPT	N:50 for 220mm				Borehole terminated at 15.00m bgl.	15.00	
6.00-6.37	4	B							
7.50-9.00	5	SPT	N:50 for 85mm						
7.50-7.68	5	B							
8.65-8.76	4	C							

Boring Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Location scanned with GPR prior to breaking ground. No services encountered. 2. Groundwater encountered at 7.50m bgl. 3. Gas and groundwater monitoring well. Installed with 5.5m plain pipe and 4.00m slotted.			
All dimensions in metres							Scale: 1:50		
Method Used:	Rotary Cored	Plant Used:	Comacchio GEO 205	Drilled By:	DSUK	Logged By:	RMoore	Checked By:	AGS

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BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: BH03
Contract Ref: 252995	Start: 16.10.23 End: 16.10.23	Ground Level: 72.90	National Grid Co-ordinate: E:454784.1 N:203826.9	Sheet: 2 of 2

Depth (m)	Samples & Testing		Mechanical Log		Backfill & Instrumentation	Water	Description of Strata	Depth (m) (Thickness)	Legend
	No	Type	Results	TCR SCR RFD (%)					
9.00-10.50	6	SPT	N:50 for 70mm				Strong to very strong grey mottled light grey unweathered LIMESTONE with fossils. (WHEATLEY LIMESTONE MEMBER) ... Fracture set 2 Fractures are closely to medium spaced planar rough rarely stepped dipping 0 to 5 degrees with tight to partly open clean apertures. (stratum copied from 8.20m from previous sheet)	9.69	
9.00-9.17	6	B							
9.50-9.69	5	C					Medium strong rarely strong dark grey rarely mottled light grey distinctly weathered to partially unweathered fine to medium grained SANDSTONE. (BECKLEY SAND MEMBER) ... Fracture set 3 Fractures are closely spaced planar rough dipping 0 to 15 degrees with very tight to tight infilled with dark grey sand and gravel apertures.	10.50	
10.50-10.71	5	B							
10.50-12.00	7	SPT	N:50 for 120mm				... Fracture set 4 Fractures are closely to medium spaced planar rough dipping 0 to 5 degrees with very tight to tight infilled with dark grey sand and gravel apertures.	12.00	
10.50-10.71	7	B							
12.00-13.50	8	SPT	N:50 for 145mm				Borehole terminated at 15.00m bgl.	15.00	
12.00-12.23	8	B							
13.36-13.50	6	C							
13.50-15.00	9	SPT	N:50 for 135mm						
13.50-13.79	9	B							

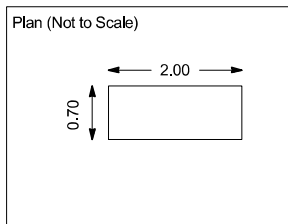
Boring Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Location scanned with GPR prior to breaking ground. No services encountered. 2. Groundwater encountered at 7.50m bgl. 3. Gas and groundwater monitoring well. Installed with 5.5m plain pipe and 4.00m slotted.			
All dimensions in metres							Scale: 1:50		
Method Used:	Rotary Cored	Plant Used:	Comacchio GEO 205	Drilled By:	DSUK	Logged By:	RMoore	Checked By:	AGS

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TRIAL PIT LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Trial Pit: TPSA01	
Contract Ref: 252995	Start: 19.10.23 End: 19.10.23	Ground Level: 71.36	National Grid Co-ordinate: E:454710.4 N:203800.9	Sheet: 1 of 1	

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.30 0.30	1	ES PID	0.0ppm			Asphalt (MADE GROUND) Grey and brown slightly clayey very sandy angular to sub-rounded fine to coarse GRAVEL of limestone with a low to moderate cobble content and rare roots. (MADE GROUND)	0.10 (0.40)	
0.70 0.70	2	ES PID	0.0ppm			Orangish brown and brown mottled grey and rarely light grey slightly clayey fine to medium SAND. (WEATHERED BECKLEY SAND MEMBER)	0.50	
1.00	3	D					(1.50)	
1.50-2.00	4	B					2.00	
Trial pit terminated at 2.00m bgl.								



General Remarks

- Location scanned with GPR prior to breaking ground. No services encountered.
- No groundwater encountered.
- Trial pit backfilled with arisings upon completion.

All dimensions in metres Scale: **1:25**

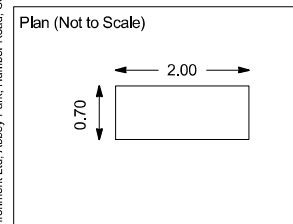
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: RMoore	Checked By: AGS
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GINT_LIBRARY_V10_01.GLB libVersion: v8_07 | Log TRIAL PIT LOG - A4P | 252995- NASH COURT.GPJ - v10_01_ RSK Environment Ltd, Abbey Park, Humber Road, Coventry, CV3 4AC, Tel: 02476 505600, Fax: 02476 504417, Web: www.rsk.co.uk, [04/12/23 - 12:38] [RM6]

TRIAL PIT LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Trial Pit: TPSA02	
Contract Ref: 252995	Start: 19.10.23 End: 19.10.23	Ground Level: 71.31	National Grid Co-ordinate: E:454693.1 N:203759.5	Sheet: 1 of 1	

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.20 0.20	1	ES PID	0.0ppm			Asphalt (MADE GROUND) Grey and brown very sandy angular to sub-rounded fine to coarse GRAVEL of limestone with a low to moderate cobble content. Sand is fine to coarse. (MADE GROUND)	0.10 0.35	
0.50 0.50	2	ES PID	0.0ppm			Orangish brown and brown mottled grey and light grey slightly clayey fine to medium SAND. (WEATHERED BECKLEY SAND MEMBER)		
0.70-1.20	3	B					(1.50)	
1.60	4	D				... Sandstone cobbles from 1.50m bgl.	1.85	
Trial pit terminated at 1.85m bgl.								



General Remarks

- Location scanned with GPR prior to breaking ground. No services encountered.
- No groundwater encountered.
- Trial pit backfilled with arisings upon completion.

All dimensions in metres Scale: **1:25**

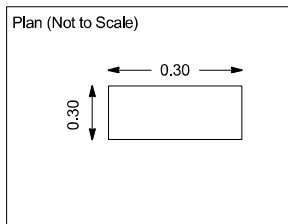
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: RMoore	Checked By: AGS
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GINT_LIBRARY_V10_01.GLB libVersion: v8_07 | Log TRIAL PIT LOG - A4P | 252995- NASH COURT.GPJ - v10_01_ RSK Environment Ltd, Abbey Park, Humber Road, Coventry, CV3 4AC, Tel: 02476 505600, Fax: 02476 504417, Web: www.rsk.co.uk, [04/12/23 - 12:38] [RM6]

TRIAL PIT LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Trial Pit: TT02	
Contract Ref: 252995	Start: 20.10.23 End: 20.10.23	Ground Level: 71.24	National Grid Co-ordinate: E:454748.7 N:203708.3	Sheet: 1 of 1	

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						Brown clayey gravelly fine to coarse SAND with frequent roots. Gravel is angular to sub-rounded fine to coarse quartzite, sandstone, brick, concrete, and limestone. (MADE GROUND)	(0.90)	
						Pit terminated at 0.90mbgl.	0.90	



General Remarks

1. Location scanned with GPR prior to breaking ground.
2. No groundwater encountered.
3. Trial pit backfilled with arisings upon completion.

All dimensions in metres Scale: **1:25**

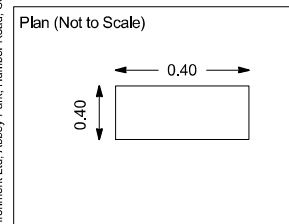
Method Used: Hand dug	Plant Used: Hand tools	Logged By: RMoore	Checked By: AGS
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07 | Log: TRIAL PIT LOG - A4P | 252995- NASH COURT.GPJ - v10_01_ RSK Environment Ltd, Abbey Park, Humber Road, Coventry, CV3 4AC, Tel: 02476 505600, Fax: 02476 504417, Web: www.rsk.co.uk, | 04/12/23 - 12:38 | RMB |

TRIAL PIT LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Trial Pit: TT03	
Contract Ref: 252995	Start: 20.10.23 End: 20.10.23	Ground Level: 72.12	National Grid Co-ordinate: E:454787.5 N:203805.7	Sheet: 1 of 1	

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						Turf over dark brown clayey slightly gravelly fine to coarse SAND. Gravel is sub-angular to rounded fine to coarse sandstone and quartzite.	0.27	
						Black wire at 0.27m bgl. Pit terminated at 0.28m bgl.	0.28	



General Remarks

1. Location scanned with GPR prior to breaking ground. No services encountered.
2. No groundwater encountered.
3. Trial pit backfilled with arisings upon completion.

All dimensions in metres Scale: **1:25**

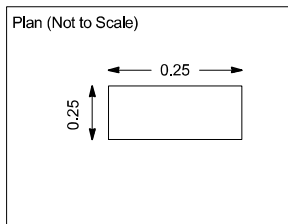
Method Used: Machine dug	Plant Used: Unknown	Logged By: RMoore	Checked By: AGS
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07 | Log: TRIAL PIT LOG - A4P | 252995- NASH COURT.GPJ - v10_01_ RSK Environment Ltd, Abbey Park, Humber Road, Coventry, CV3 4AC, Tel: 02476 505600, Fax: 02476 504417, Web: www.rsk.co.uk, | 04/12/23 - 12:38 | RMB |

TRIAL PIT LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Trial Pit: TT03A	
Contract Ref: 252995	Start: 20.10.23	Ground Level: 72.12	National Grid Co-ordinate: E:454787.5 N:203805.7	Sheet: 1 of 1	
End: 20.10.23					

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						Turf over brown and dark brown clayey slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium sandstone and quartzite.	(0.48)	
						Black wire at 0.48m bgl. Slightly curving towards the NE. Pit terminated at 0.49m bgl.	0.48 0.49	



General Remarks

1. Location scanned with GPR prior to breaking ground.
2. No groundwater encountered.
3. Trial pit backfilled with arisings upon completion.

All dimensions in metres Scale: **1:25**

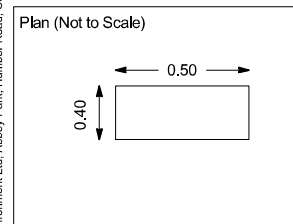
Method Used: Hand dug	Plant Used: Hand tools	Logged By: RMoore	Checked By: AGS
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07 | Log: TRIAL PIT LOG - A4P | 252995- NASH COURT.GPJ - v10_01, RSK Environment Ltd, Abbey Park, Humber Road, Coventry, CV3 4AC, Tel: 02476 505600, Fax: 02476 504417, Web: www.rsk.co.uk, [04/12/23 - 12:38] [RM6]

TRIAL PIT LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Trial Pit: TT04	
Contract Ref: 252995	Start: 20.10.23	Ground Level: 71.36	National Grid Co-ordinate: E:454749.0 N:203869.5	Sheet: 1 of 1	
End: 20.10.23					

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						Turf over brown and dark brown clayey slightly gravelly fine to coarse SAND with frequent clay pockets and abundant roots. Gravel is sub-angular to sub-rounded fine to medium limestone, sandstone, brick, concrete and quartzite. (MADE GROUND)	(1.20)	
						Pit terminated at 1.20m bgl.	1.20	



General Remarks

1. Location scanned with GPR prior to breaking ground. No services encountered.
2. No groundwater encountered.
3. Trial pit backfilled with arisings upon completion.

All dimensions in metres Scale: **1:25**

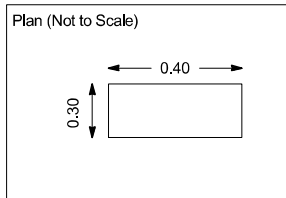
Method Used: Hand dug	Plant Used: Hand tools	Logged By: RMoore	Checked By: AGS
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07 | Log: TRIAL PIT LOG - A4P | 252995- NASH COURT.GPJ - v10_01, RSK Environment Ltd, Abbey Park, Humber Road, Coventry, CV3 4AC, Tel: 02476 505600, Fax: 02476 504417, Web: www.rsk.co.uk, [04/12/23 - 12:38] [RM6]

TRIAL PIT LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Trial Pit: TT04A	
Contract Ref: 252995		Start: 20.10.23	Ground Level: 71.36	National Grid Co-ordinate: E:454749.0 N:203869.5	Sheet: 1 of 1
End: 20.10.23					

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						Turf over brown and dark brown clayey gravelly fine to coarse SAND with abundant roots. Gravel is angular to sub-rounded fine to coarse sandstone, brick, concrete, and limestone. (MADE GROUND)	(0.56)	
						... Black cable present at 0.55m bgl. Pit terminated at 0.56m bgl.	0.56	



General Remarks

- Location scanned with GPR prior to breaking ground.
- No groundwater encountered.
- Trial pit backfilled with arisings upon completion.

All dimensions in metres Scale: **1:25**

Method Used: Hand dug	Plant Used: Hand tools	Logged By: RMoore	Checked By: AGS
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BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: WS01	
Contract Ref: 252995		Start: 17.10.23	Ground Level: 71.33	National Grid Co-ordinate: E:454711.3 N:203798.8	Sheet: 1 of 1
End: 17.10.23					

Depth (m)	Samples & Testing			Window Run Information	Backfill & Instrumentation	Water	Description of Strata	Depth (m) (Thickness)	Legend
	No	Type	Results						
							Asphalt (MADE GROUND)	0.10	
							Grey and brown slightly clayey very sandy angular to sub-rounded fine to coarse GRAVEL of basalt, rare limestone and quartzite. (MADE GROUND)	0.20	
0.60-1.20	1	B					Grey and light grey very sandy angular to sub-rounded fine to coarse GRAVEL of limestone with a low cobble. (MADE GROUND)	0.55	
0.80-0.80	2	ES PID	0.0ppm				Brown slightly clayey fine to coarse SAND. (WEATHERED BECKLEY SAND MEMBER)		
1.20-1.65	1	SPT	N=11	Window run 85mm dia (100% rec)				(2.49)	
2.00-2.45	2	SPT	N=22	Window run 75mm dia (90% rec)					
2.00-3.00	3	B							
3.00-3.04	3	SPT	N:50 for 40mm				Borehole terminated at 3.04m bgl.	3.04	

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

General Remarks

- Location scanned with GPR prior to breaking ground. No services encountered.
- Window sample hole advanced to 3.04m bgl.
- Groundwater not encountered.
- Gas and groundwater monitoring well. Installed with 1.00m plain pipe and 2.00m slotted.

All dimensions in metres Scale: **1:50**

Method Used: Window sampling	Plant Used: Premier Compact 120	Drilled By: DSUK	Logged By: RMoore	Checked By: AGS
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GINT_LIBRARY_V10_01.GLB LIBVersion: v8_07 | Log BOREHOLE LOG - AAP | 252995-NASH COURT.GPJ - v10_01. RSK Environment Ltd, Abbey Park, Humber Road, Coventry, CV3 4AG, Tel: 02476 505600, Fax: 02476 501417, Web: www.rsk.co.uk, [04/12/23 - 12:19] [RM8]

BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: WS02
Contract Ref: 252995	Start: 17.10.23 End: 17.10.23	Ground Level: 72.52	National Grid Co-ordinate: E:454734.1 N:203767.6	Sheet: 1 of 1

Depth (m)	Samples & Testing			Window Run Information	Backfill & Instrumentation	Water	Description of Strata	Depth (m) (thickness)	Legend
	No	Type	Results						
0.30	1	ES PID	0.0ppm				Asphalt (MADE GROUND)	0.10	
0.30-0.60	2	ES PID	0.0ppm				Grey and brown slightly clayey gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse Limestone and rare sandstone. (MADE GROUND)	0.45	
0.80							Brown and light brown slightly clayey fine to medium SAND. (WEATHERED BECKLEY SAND MEMBER)		
1.20-1.65	1	SPT D	N=10	Window run 85mm dia (100% rec)					
2.00-2.45	2	SPT B	N=16	Window run 75mm dia (100% rec)					
2.00-3.50	4							(3.08)	
3.00-3.45	3	SPT	N=20	Window run 65mm dia (90% rec)					
3.50-3.53	4	SPT	N:50 for 30mm				Borehole terminated at 3.53m bgl.	3.53	

Boring Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Location scanned with GPR prior to breaking ground. No services encountered. 2. Window sample hole advanced to 3.53m bgl. 3. Groundwater not encountered. 4. Gas and groundwater monitoring well. Installed with 1.50m plain pipe and 1.50m slotted.			
All dimensions in metres						Scale: 1:50			
Method Used:	Window sampling	Plant Used:	Premier Compact 120	Drilled By:	DSUK	Logged By:	RMoore	Checked By:	AGS

BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: WS03
Contract Ref: 252995	Start: 17.10.23 End: 17.10.23	Ground Level: 71.18	National Grid Co-ordinate: E:454734.8 N:203743.9	Sheet: 1 of 1

Depth (m)	Samples & Testing			Window Run Information	Backfill & Instrumentation	Water	Description of Strata	Depth (m) (thickness)	Legend
	No	Type	Results						
0.55	1	ES PID	0.0ppm				Asphalt (MADE GROUND)	0.10	
0.55-0.95							Grey and brown very sandy angular to sub-rounded fine to coarse GRAVEL of chert, basalt and Limestone. (MADE GROUND)	0.40	
0.95-1.20	2	ES PID	0.0ppm				... Becoming brown, grey and yellowish brown from 0.25m bgl.	0.75	
1.20-1.65	1	SPT	N=10	Window run 85mm dia (100% rec)			Brown and grey mottled light brown slightly clayey gravelly fine to coarse SAND with metal and clinker. Gravel is angular to sub-rounded fine to coarse Limestone, concrete, brick, and chert. (MADE GROUND)	1.15	
1.65-1.80	3	ES PID	0.0ppm				... Becoming brown from 0.80m bgl.		
1.80	4	D					Light brown and brown slightly clayey fine to medium SAND. (WEATHERED BECKLEY SAND MEMBER)		
2.00-2.45	2	SPT B	N=19	Window run 75mm dia (95% rec)					
2.00-3.00	5							(3.05)	
3.00-3.45	3	SPT B	N=26	Window run 65mm dia (100% rec)					
3.00-4.00	6								
4.00-4.20	4	SPT	N:50 for 50mm				Borehole terminated at 4.20m bgl.	4.20	

Boring Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Location scanned with GPR prior to breaking ground. No services encountered. 2. Window sample hole advanced to 4.20m bgl. 3. Groundwater not encountered. 4. Gas and groundwater monitoring well. Installed with 0.50m plain pipe and 2.50m slotted.			
All dimensions in metres						Scale: 1:50			
Method Used:	Window sampling	Plant Used:	Premier Compact 120	Drilled By:	DSUK	Logged By:	RMoore	Checked By:	AGS

BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: WS04
Contract Ref: 252995	Start: 18.10.23 End: 18.10.23	Ground Level: 71.03	National Grid Co-ordinate: E:454736.2 N:203727.9	Sheet: 1 of 1

Depth (m)	Samples & Testing			Window Run Information	Backfill	Water	Description of Strata	Depth (m) (Thickness)	Legend
	No	Type	Results						
0.40 0.40	1	ES PID	0.0ppm				Asphalt (MADE GROUND)	0.15	
0.70 0.70	2	ES PID	0.0ppm				Grey and brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse limestone, brick, and rare concrete, (MADE GROUND)	0.35	
1.10 1.20-1.65	3 1	D SPT	N=12	Window run 85mm dia (100% rec)			Grey brown and brown slightly clayey gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse limestone, concrete and chert, (MADE GROUND)	10.60	
2.00-2.45 2.20	2 4	SPT D	N=15	Window run 75mm dia (80% rec)			Orangish brown and brown clayey fine to medium SAND with rare sub-angular fine to medium gravel of sandstone. (WEATHERED BECKLEY SAND MEMBER) ... Rare reddish brown clay pockets at 1.20m bgl.	(3.59)	
3.00-3.45 3.00-4.00	3 5	SPT B	N=22	Window run 65mm dia (100% rec)					
4.00-4.19	4	SPT	N:50 for 40mm				Borehole terminated at 4.19m bgl.	4.19	

Boring Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Location scanned with GPR prior to breaking ground. No services encountered. 2. Window sample hole advanced to 4.19m bgl. 3. Groundwater not encountered. 4. Hole backfilled with arisings upon completion.			
All dimensions in metres						Scale: 1:50			
Method Used:	Window sampling	Plant Used:	Premier Compact 120	Drilled By:	DSUK	Logged By:	RMoore	Checked By:	AGS

BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: WS05
Contract Ref: 252995	Start: 18.10.23 End: 18.10.23	Ground Level: 71.27	National Grid Co-ordinate: E:454744.4 N:203787.1	Sheet: 1 of 1

Depth (m)	Samples & Testing			Window Run Information	Backfill	Water	Description of Strata	Depth (m) (Thickness)	Legend
	No	Type	Results						
0.70 0.70	1	ES PID	0.0ppm				Turf over brown slightly clayey brown fine to medium SAND with roots. (TOPSOIL)	(0.50)	
1.20-1.65	1	SPT	N=10	Window run 85mm dia (100% rec)			Orangish brown mottled grey and brown slightly clayey gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse sandstone. (WEATHERED BECKLEY SAND MEMBER)	(0.80)	
2.00-2.45 2.00-3.00	2 3	D SPT B	N=20	Window run 75mm dia (95% rec)			Orangish brown mottled grey and brown slightly clayey fine to coarse SAND. (WEATHERED BECKLEY SAND MEMBER)	(2.13)	
3.00-3.43	3	SPT	N:50 for 275mm				Borehole terminated at 3.43m bgl	3.43	

Boring Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Location scanned with GPR prior to breaking ground. No services encountered. 2. Window sample hole advanced to 3.43m bgl. 3. Groundwater not encountered. 4. Hole backfilled with arisings upon completion.			
All dimensions in metres						Scale: 1:50			
Method Used:	Window sampling	Plant Used:	Premier Compact 120	Drilled By:	DSUK	Logged By:	RMoore	Checked By:	AGS

BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: WS06
Contract Ref: 252995	Start: 18.10.23 End: 18.10.23	Ground Level: 71.85	National Grid Co-ordinate: E:454771.2 N:203777.5	Sheet: 1 of 1

Depth (m)	Samples & Testing			Window Run Information	Backfill & Instrumentation	Water	Description of Strata	Depth (m) (Thickness)	Legend
	No	Type	Results						
0.30 0.30	1	ES PID	0.0ppm				Turf over brown clayey fine to coarse SAND. (TOPSOIL)	(0.50)	
0.60 0.80	2	ES PID	0.0ppm				Brown clayey gravelly fine to coarse SAND with a low cobble content. Gravel is angular to sub-angular fine to coarse limestone, concrete and chert. (MADE GROUND) ... Pockets of light orangish brown sand from 0.65m bgl.	0.50 (1.30)	
1.20-1.65 1.40 1.40	1 3	SPT ES PID	N=5 0.0ppm	Window run 85mm dia (100% rec)			... Plastic at 1.55m bgl	(1.30)	
2.00-2.45 2.00 2.00-3.00	2 4 5	SPT D B	N=3	Window run 75mm dia (80% rec)			Orangish brown and brown mottled light brown slightly clayey fine to medium SAND with rare sub-angular fine to medium gravel of sandstone. (WEATHERED BECKLEY SAND MEMBER)	1.80	
3.00-3.45 3.00-4.00	3 6	SPT B	N=20	Window run 65mm dia (85% rec)			... Becoming mottled grey from 3.00m bgl.	(3.22)	
4.00-4.45 4.00-5.00	4 7	SPT B	N=20	Window run 65mm dia (100% rec)					
5.00-5.02	5	SPT	N:50 for 20mm				Borehole terminated at 5.02m bgl.	5.02	

Boring Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Location scanned with GPR prior to breaking ground. No services encountered. 2. Window sample hole advanced to 5.02m bgl. 3. Groundwater not encountered. 4. Gas and groundwater monitoring well. Installed with 0.50m plain pipe and 1.50m slotted.			
All dimensions in metres						Scale: 1:50			
Method Used:	Window sampling	Plant Used:	Premier Compact 120	Drilled By:	DSUK	Logged By:	RMoore	Checked By:	AGS

BOREHOLE LOG

Contract: Nash Court Oxford Business Park		Client: Advanced Research Clusters		Borehole: WS07
Contract Ref: 252995	Start: 18.10.23 End: 18.10.23	Ground Level: 71.45	National Grid Co-ordinate: E:454786.5 N:203851.2	Sheet: 1 of 1

Depth (m)	Samples & Testing			Window Run Information	Backfill & Instrumentation	Water	Description of Strata	Depth (m) (Thickness)	Legend
	No	Type	Results						
0.15 0.15	1	ES PID	0.0ppm				Asphalt (MADE GROUND)	0.10	
0.50 0.50	2	ES PID	0.0ppm				Brown slightly clayey gravelly fine to coarse SAND with rare timber. Gravel is sub-angular to sub-rounded fine to coarse limestone, concrete, and brick. (MADE GROUND)	0.25 0.35	
0.90 0.90	3	ES PID	0.0ppm				Concrete (MADE GROUND)	0.80	
1.20-1.65 1.30 1.30	1 4	SPT D	N=9	Window run 85mm dia (100% rec)			Soft brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to medium concrete, brick, quartzite, and chert. (MADE GROUND)		
2.00-2.45 2.00-3.00	2 5	SPT B	N=15	Window run 75mm dia (90% rec)			Orangish brown and brown mottled grey slightly clayey fine to medium SAND. (WEATHERED BECKLEY SAND MEMBER)	(3.23)	
3.00-3.45 3.00-4.00	3 6	SPT B	N=13	Window run 65mm dia (85% rec)					
4.00-4.03	4	SPT	N:50 for 30mm				Borehole terminated at 4.03m bgl.	4.03	

Boring Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Location scanned with GPR prior to breaking ground. No services encountered. 2. Window sample hole advanced to 4.03m bgl. 3. Groundwater not encountered. 4. Gas and groundwater monitoring well. Installed with 1.00m plain pipe and 3.00m slotted.			
All dimensions in metres						Scale: 1:50			
Method Used:	Window sampling	Plant Used:	Premier Compact 120	Drilled By:	DSUK	Logged By:	RMoore	Checked By:	AGS