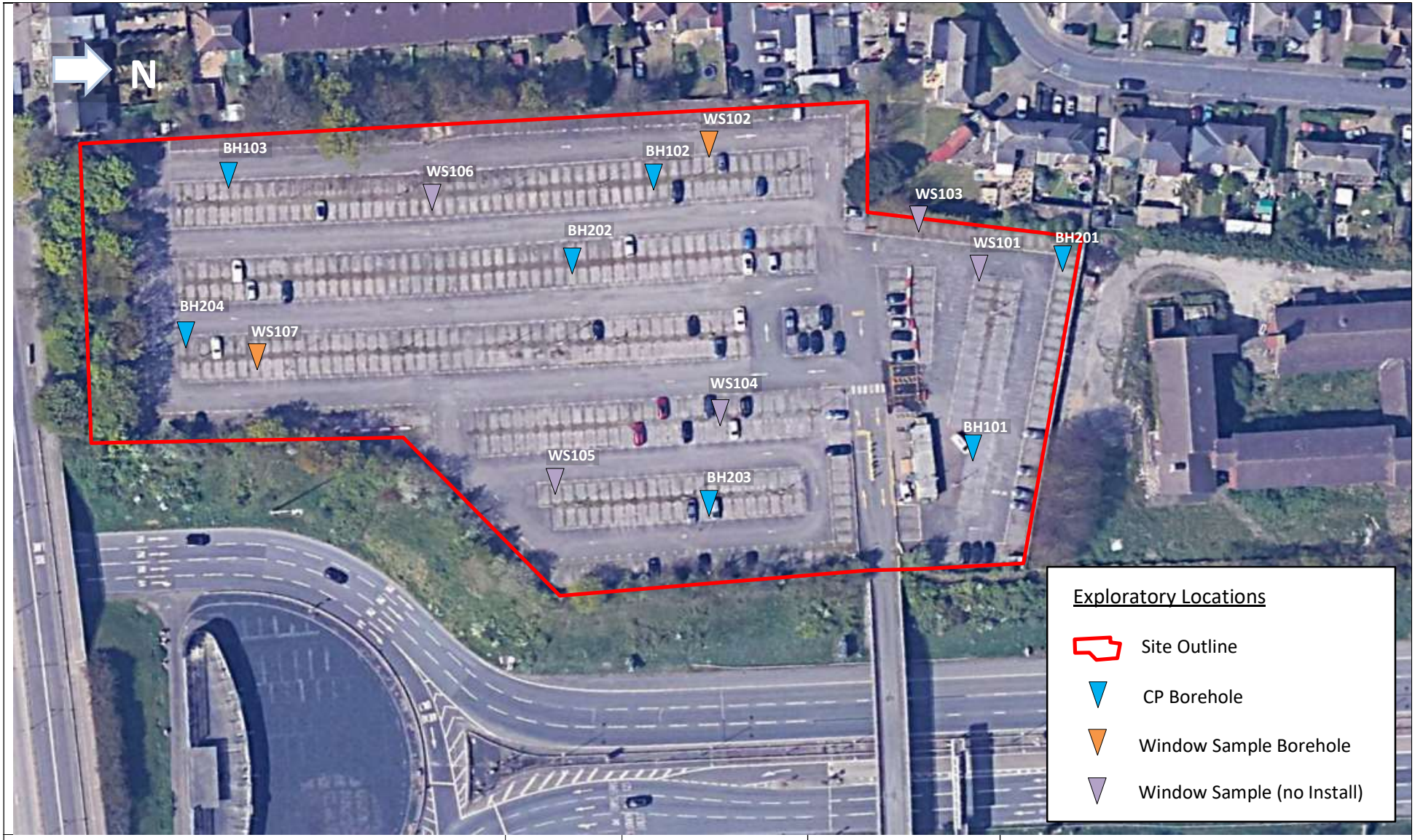


CLIENT:	DRAWN BY:	PROJECT NO.:	DATE:	ADDRESS:
BRIDGE UK PROPERTIES 5, LP	CM	460336.0001.0000	NOVEMBER 2021	NCP HEATHROW, WEST DRAYTON UB7 0DU

TRC
20 Red Lion Street
London, WC1R 4PQ
http://www.trccompanies.com/

FIGURE: 3

Annex B: Site Photographs

Photographic Log

Client Name:	Site Location:	Project No.:
Bridge Industrial	NCP Flightpath, Heathrow	460366.0000.0000

Photo No.	Date
1	28/07/2021

Description:
The Site is currently utilised for Airport parking. A small temporary building was located immediately to the north of the access road, in the northern part of the site.

Photo No.	Date
2	28/07/2021

Description:
The Site is accessed via a bridge over the M4 motorway from the east near the Radisson Hotel.

Photographic Log

Client Name:	Site Location:	Project No.:
Bridge Industrial	NCP Flightpath, Heathrow	460366.0000.0000

Photo No.	Date
3	28/07/2021

Description:
View of the central part of the Site, Looking south east. The Site predominantly comprises hard standing asphalt and is used as airport parking.

Photo No.	Date
4	28/07/2021

Description:
View of the southerm part of the Site, Looking south east.

Photographic Log

Client Name:	Site Location:	Project No.:
Bridge Industrial	NCP Flightpath, Heathrow	460366.0000.0000

Photo No.	Date
5	28/07/2021

Description:
View of the southern part of the Site, Looking north east.

Photo No.	Date
6	28/07/2021

Description:
View of the central part of the Site, Looking south.

Photographic Log

Client Name:	Site Location:	Project No.:
Bridge Industrial	NCP Flightpath, Heathrow	460366.0000.0000

Photo No.	Date
7	28/07/2021

Description:
Window sample 106

Photo No.	Date
8	28/07/2021

Description:
Window sample 105.

Annex C: Exploratory Hole Logs

WINDOW SAMPLE LOG

WINDOW SAMPLE NO. WS101

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
NCP Carpark Heathrow	29/7/21	29/7/21	453101.0000.0000

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
CC Ground Investigations	Window Sampling	---	---	5.0	

Window Sample Location:	Personnel	Drilling Equipment:
N: 51.4831 E: -0.4541	Logged By - Colin Morton Driller - Andrew Leek	Dando Terrier

Civil Town/City/or Village:	County:	Water Level Observations:
West Drayton	UB7 ODU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	COMMENTS
				MADE GROUND: Compacted subbase.			
				MADE GROUND: dark brownish grey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of brick and concrete. Cobbles of brick.			
ENV1							
D				Soft dark grey silty CLAY. Rare gravels of flint. Possibly reworked strata. (LANGLEY SILT MEMBER)			
D			1	Firm light greyish brown slightly silty slightly gravelly CLAY. Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of chert and flint. (LANGLEY SILT MEMBER)			
D		13					
SPT							
ENV2				Very dense light brownish grey clayey sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of chert and flint. (TAPLOW GRAVEL MEMBER)			
			2				
SPT		>50					

WINDOW SAMPLE LOG (METRIC) NCP CARPARK, HEATHROW LOGS.GPJ 453101.0000.0000 3/12/21

Signature:	Firm: TRC COMPANIES 20 Red Lion Street, London WC1R 4PS	Fax

WINDOW SAMPLE LOG

WINDOW SAMPLE NO. WS102

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
NCP Carpark Heathrow	29/7/21	29/7/21	453101.0000.0000

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
CC Ground Investigations	Window Sampling	---	---	5.0	

Window Sample Location:	Personnel	Drilling Equipment:
N: 51.4828 E: -0.4544	Logged By - Colin Morton Driller - Andrew Leek	Dando Terrier

Civil Town/City/or Village:	County:	Water Level Observations:
West Drayton	UB7 ODU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				MADE GROUND: Compacted subbase.				
ENV1				MADE GROUND: dark brownish grey slightly clayey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of brick and concrete.				
Bulk				Soft dark grey silty CLAY. (LANGLEY SILT MEMBER)				
			1	Soft light greyish brown slightly silty CLAY. (LANGLEY SILT MEMBER)				
ENV2		7		Soft light greyish brown silty slightly sandy CLAY. Sand is fine grained. (LANGLEY SILT MEMBER)				
SPT								
D				Very dense greyish brown clayey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of chert and flint. (TAPLOW GRAVEL MEMBER)				
D			2					
SPT		>50						

WINDOW SAMPLE LOG (METRIC) NCP CARPARK, HEATHROW LOGS.GPJ 453101.0000.0000 3/12/21

Signature:	Firm: TRC COMPANIES 20 Red Lion Street, London WC1R 4PS	Fax

WINDOW SAMPLE LOG

WINDOW SAMPLE NO. WS103

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
NCP Carpark Heathrow	29/7/21	29/7/21	453101.0000.0000

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
CC Ground Investigations	Window Sampling	---	---	5.0	

Window Sample Location:	Personnel	Drilling Equipment:
N: 51.4830 E: -0.4542	Logged By - Colin Morton Driller - Andrew Leek	Dando Terrier

Civil Town/City/or Village:	County:	Water Level Observations:
West Drayton	UB7 ODU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	COMMENTS
ENV1				MADE GROUND: dark brownish grey slightly clayey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of brick and concrete.			Very slight seepage of water. Slight Hydrocarbon odour.
D ENV2			1	Soft greyish brown silty CLAY. (LANGLEY SILT MEMBER)			
			2				

WINDOW SAMPLE LOG (METRIC) NCP CARPARK, HEATHROW LOGS.GPJ 453101.0000.0000 3/12/21

Signature:	Firm: TRC COMPANIES 20 Red Lion Street, London WC1R 4PS	Fax

WINDOW SAMPLE LOG

WINDOW SAMPLE NO. WS104

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
NCP Carpark Heathrow	29/7/21	29/7/21	453101.0000.0000

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
CC Ground Investigations	Window Sampling	---	---	5.0	

Window Sample Location:	Personnel	Drilling Equipment:
N: 51.4827 E: -0.4537	Logged By - Colin Morton Driller - Andrew Leek	Dando Terrier

Civil Town/City/or Village:	County:	Water Level Observations:
West Drayton	UB7 ODU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	COMMENTS
				MADE GROUND: Compacted subbase.			
ENV1				MADE GROUND: dark brownish grey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of brick and concrete.			...Perched water encountered at 0.3m
D			1	Soft grey silty CLAY. (LANGLEY SILT MEMBER)			
ENV2							
D		6		Soft greyish brown silty slightly gravelly CLAY. Gravel is sub-angular to sub-rounded, fine grained. Gravel consists of flint. Rare gravels. (LANGLEY SILT MEMBER)			
D							
SPT				Very dense greyish brown clayey sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine grained. Gravel consists of chert and flint. (TAPLOW GRAVEL MEMBER)			
			2				
SPT		>50					

WINDOW SAMPLE LOG (METRIC) NCP CARPARK, HEATHROW LOGS.GPJ 453101.0000.0000 3/12/21

Signature:	Firm: TRC COMPANIES 20 Red Lion Street, London WC1R 4PS	Fax

WINDOW SAMPLE LOG

WINDOW SAMPLE NO. WS105

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
NCP Carpark Heathrow	29/7/21	29/7/21	453101.0000.0000

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
CC Ground Investigations	Window Sampling	---	---	5.0	

Window Sample Location:	Personnel	Drilling Equipment:
N: 51.4825 E: -0.4536	Logged By - Colin Morton Driller - Andrew Leek	Dando Terrier

Civil Town/City/or Village:	County:	Water Level Observations:
West Drayton	UB7 ODU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	COMMENTS
				MADE GROUND: Compacted subbase.			
ENV				MADE GROUND: dark brownish grey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of brick, concrete and flint. Cobbles of brick and concrete			
D				Soft light grey silty CLAY. (LANGLEY SILT MEMBER)			
ENV			1	Very soft light greyish brown slightly silty CLAY. Rare fine gravels of flint. (LANGLEY SILT MEMBER)			
D		5					
SPT							
D			2	Dense, becoming very dense light greyish brown slightly clayey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to medium grained. Gravel consists of chert and flint. (TAPLOW GRAVEL MEMBER)			
SPT		45					
SPT		>50	3				

Signature:

Firm: TRC COMPANIES
20 Red Lion Street, London WC1R 4PS
Fax

WINDOW SAMPLE LOG

WINDOW SAMPLE NO. WS106

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
NCP Carpark Heathrow	29/7/21	29/7/21	453101.0000.0000

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
CC Ground Investigations	Window Sampling	---	---	5.0	

Window Sample Location:	Personnel	Drilling Equipment:
N: 51.4821 E: -0.4545	Logged By - Colin Morton Driller - Andrew Leek	Dando Terrier

Civil Town/City/or Village:	County:	Water Level Observations:
West Drayton	UB7 ODU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	COMMENTS
				MADE GROUND: Compacted subbase.			
				MADE GROUND: dark greyish brown clayey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of brick, clinker and concrete. Occasional glass fragments.			
ENV1							
D			1	Very soft light brown slightly silty slightly sandy slightly gravelly CLAY. Sand is fine, Gravel is sub-angular to sub-rounded, fine grained. Gravel consists of flint. (LANGLEY SILT MEMBER)			
SPT		4					
D							
ENV2							
SPT		>50	2	Very dense light brown very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to medium grained. Gravel consists of chert and flint. (TAPLOW GRAVEL MEMBER)			
Bulk							
SPT		>50	3				

WINDOW SAMPLE LOG (METRIC) NCP CARPARK, HEATHROW LOGS.GPJ 453101.0000.0000 3/12/21

Signature:	Firm: TRC COMPANIES 20 Red Lion Street, London WC1R 4PS	Fax

WINDOW SAMPLE LOG

WINDOW SAMPLE NO. WS107

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
NCP Carpark Heathrow	29/7/21	29/7/21	453101.0000.0000

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
CC Ground Investigations	Window Sampling	---	---	5.0	

Window Sample Location:	Personnel	Drilling Equipment:
N: 51.4819 E: -0.4540	Logged By - Colin Morton Driller - Andrew Leek	Dando Terrier

Civil Town/City/or Village:	County:	Water Level Observations:
West Drayton	UB7 ODU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				MADE GROUND: Compacted subbase.				
				MADE GROUND: dark brownish grey slightly clayey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of brick and concrete.				
ENV1								
				Very soft light greyish brown silty slightly sandy slightly gravelly CLAY. Sand is fine, Gravel is sub-angular to sub-rounded, fine grained. Gravel consists of flint. (LANGLEY SILT MEMBER)				
			1					
ENV2								
D		4						
SPT								
				Very dense, dense in parts, light greyish brown very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to medium grained. Gravel consists of chert and flint. Band of stiff very sandy clay at 3.4m. (TAPLOW GRAVEL MEMBER)				
			2					
SPT		>50						
Bulk								
			3					
SPT		26						
SPT		>50						

Signature:

Firm: TRC COMPANIES
20 Red Lion Street, London WC1R 4PS
Fax

BOREHOLE LOG

BH NO. BH101

Facility/Project Name:	Date Borehole Started:	Date Borehole Completed:	Project Number:
NCP Carpark Heathrow	2/8/21	2/8/21	453101.0000.0000

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
CC Ground Investigations	Cable Percussive	---	---	10.5	

Boring Location Plant Coordinates:	Personnel	Drilling Equipment:
N: 51.483 E: -0.453	Logged By - Colin Morton Driller - Andrew Leek	Dando 4000

Civil Town/City/or Village:	County:	Water Level Observations:
West Drayton	UB7 ODU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				MADE GROUND: Compacted subbase.				
Bulk ENV1				MADE GROUND: Dark brownish grey slightly clayey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of bituminous material, brick and concrete.				
Bulk				Soft grey very silty CLAY. (LANGLEY SILT MEMBER)				
Bulk			1					
U100								
Bulk ENV2				Very dense light greyish brown very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of chert and flint. (TAPLOW GRAVEL MEMBER)				... Driller added water from 1.6m, masking potential groundwater strikes.
			2					
CPT Bulk		62						
			3					
			4					
Bulk CPT		58						

Signature:	Firm: TRC COMPANIES 20 Red Lion Street, London WC1R 4PS	Fax

BOREHOLE LOG

BH NO. BH101

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				Firm greyish brown slightly silty CLAY. (WEATHERED LONDON CLAY FORMATION)				
U100 Bulk				Firm becoming stiff dark grey slightly silty CLAY. Occasional blueish laminations. (LONDON CLAY FORMATION)				
D								
D			6					
SPT		19						
			7					
U100								
D			8					
D			9					
SPT		24						
			10					
U100								
			11					

BOREHOLE LOG

BH NO. BH102

Facility/Project Name:	Date Borehole Started:	Date Borehole Completed:	Project Number:
NCP Carpark Heathrow	29/7/21	29/7/21	453101.0000.0000

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
CC Ground Investigations	Cable Percussive	---	---	10.5	

Boring Location Plant Coordinates:	Personnel	Drilling Equipment:
N: 51.483 E: -0.454	Logged By - Colin Morton Driller - Andrew Leek	Dando 4000

Civil Town/City/or Village:	County:	Water Level Observations:
West Drayton	UB7 ODU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				MADE GROUND: Compacted subbase.				
Bulk ENV1				MADE GROUND: greyish brown slightly clayey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of bituminous material, brick and concrete.				
D Bulk			1	Soft grey very silty CLAY. (LANGLEY SILT MEMBER)				
D D SPT Bulk		6		Soft light greyish brown silty CLAY. (LANGLEY SILT MEMBER)				
CPT Bulk		>50	2	Very dense light greyish brown very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of chert and flint. (TAPLOW GRAVEL MEMBER)				... Driller added water from 1.8m, masking potential groundwater strikes.
CPT Bulk		>50	3					
CPT		11	4					
Bulk				Firm greyish brown slightly silty CLAY. (WEATHERED LONDON CLAY FORMATION)				
Bulk				Firm becoming stiff dark grey slightly silty CLAY. Occasional blueish laminations. (LONDON CLAY FORMATION)				

METRIC BOREHOLE LOG (NON-U.S) NCP CARPARK, HEATHROW LOGS.GPJ 453101.0000.0000 3/12/21

Signature:	Firm: TRC COMPANIES 20 Red Lion Street, London WC1R 4PS	Fax

BOREHOLE LOG

BH NO. BH102

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
D SPT		13	6					
U100								
D			7					
D SPT		22	8					
U100			9					
D								
D SPT		28	10					
			11					

BOREHOLE LOG

BH NO. BH103

Facility/Project Name:	Date Borehole Started:	Date Borehole Completed:	Project Number:
NCP Carpark Heathrow	30/7/21	30/7/21	453101.0000.0000

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
CC Ground Investigations	Cable Percussive	---	---	10.5	

Boring Location Plant Coordinates:	Personnel	Drilling Equipment:
N: 51.482 E: -0.455	Logged By - Colin Morton Driller - Andrew Leek	Dando 4000

Civil Town/City/or Village:	County:	Water Level Observations:
West Drayton	UB7 ODU	While Drilling: Date/Time ▽ Depth (m bgs) 6.1 After Drilling: Date/Time ▼ Depth (m bgs) 3.1

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				MADE GROUND: Compacted subbase.				
Bulk ENV1				MADE GROUND: Dark brownish grey slightly clayey very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of brick and concrete.				
Bulk				Soft grey very silty CLAY. (LANGLEY SILT MEMBER)				
			1					
Bulk ENV2								
D				Soft light greyish brown silty CLAY. (LANGLEY SILT MEMBER)				
SPT/ Bulk		59		Very dense light greyish brown very sandy GRAVEL. Sand is fine to coarse, Gravel is sub-angular to sub-rounded, fine to coarse grained. Gravel consists of chert and flint. (TAPLOW GRAVEL MEMBER)				
			2					
CPT Bulk		86						
			3	▼				... Groundwater level after 30mins.
Bulk								
			4					
Bulk CPT		52						

METRIC BOREHOLE LOG (NON-U.S) NCP CARPARK, HEATHROW LOGS.GPJ 453101.0000.0000 3/12/21

Signature:	Firm: TRC COMPANIES 20 Red Lion Street, London WC1R 4PS	Fax

BOREHOLE LOG

BH NO. BH103

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
			6					
CPT Bulk		18		Firm greyish brown slightly silty CLAY. (WEATHERED LONDON CLAY FORMATION)				... Groundwater encountered at 6.1m
Bulk								
U100			7	Firm becoming stiff dark grey slightly silty CLAY. Occasional blueish laminations. (LONDON CLAY FORMATION)				
D								
D SPT		21						
			8					
			9					
U100								
D								
D SPT		25	10					
			11					

BOREHOLE LOG

BH NO. BH201

Facility/Project Name:	Date Borehole Started:	Date Borehole Completed:	Project Number:
NCP Heathrow Supp GW monitoring	15-11-21	15-11-21	460336.0001

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
Direct Drilling	Cable Percussive	---	---	6.0	

Boring Location Plant Coordinates:	Personnel	Drilling Equipment:
N: 51.483 E: -0.454	Logged By - Nyemh Johnson Driller - Derick Watts	

Civil Town/City/or Village:	County:	Water Level Observations:
Sipson	West Drayton UB7 0DU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
ENV1			0	MADE GROUND: Compacted hardcore. Consists of dark brown brick, flint and Type 1 Gravel.				
SPT		12	1	MADE GROUND: dark brown silty gravelly CLAY. Gravel is angular to rounded, fine to coarse grained. Gravel consists of brick, flint and sandstone. Frequent gravel from 1.4m.				
ENV2			2	Very dense light brownish orange slightly silty very gravelly SAND. Sand is fine to coarse, Gravel is angular to rounded, fine to coarse grained. Gravel consists of flint, mudstone and sandstone. (TAPLOW GRAVEL MEMBER)				
SPT		50						
SPT		50	3					
SPT		18	4	Firm light grey silty CLAY. (LONDON CLAY FORMATION)				
SPT		15	5					
			6					

METRIC BOREHOLE LOG (NON-U.S) NCP CARPARK GW MONITORING.GPJ 460336.0001 2-12-21

Signature:	Firm: TRC Companies
	Fax

BOREHOLE LOG

BH NO. BH202

Facility/Project Name:	Date Borehole Started:	Date Borehole Completed:	Project Number:
NCP Heathrow Supp GW monitoring	15-11-21	15-11-21	460336.0001

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
Direct Drilling	Cable Percussive	---	---	6.0	

Boring Location Plant Coordinates:	Personnel	Drilling Equipment:
N: 51.482 E: -0.454	Logged By - Nyemh Johnson Driller - Derick Watts	

Civil Town/City/or Village:	County:	Water Level Observations:
Sipson	West Drayton UB7 0DU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
ENV1			0	MADE GROUND: Compacted hardcore. Consists of dark brown brick, flint and Type 1 Gravel.				
				Firm dark grey slightly silty CLAY. (LANGLEY SILT MEMBER)				
SPT		13	1	Firm light brownish orange silty CLAY. (LANGLEY SILT MEMBER)				
SPT		50	2	Very dense light brownish orange slightly silty sandy GRAVEL. Sand is fine to coarse, Gravel is angular to rounded, fine to coarse grained. Gravel consists of flint and sandstone. (TAPLOW GRAVEL MEMBER)				
SPT		50	3					
SPT		50	4					
SPT		50	5					
ENV2			6	Firm light brownish orange silty CLAY. (LONDON CLAY FORMATION)				

METRIC BOREHOLE LOG (NON-US) NCP CARPARK GW MONITORING.GPJ 460336.0001 2-12-21

Signature:	Firm: TRC Companies
	Fax

BOREHOLE LOG

BH NO. BH203

Facility/Project Name:	Date Borehole Started:	Date Borehole Completed:	Project Number:
NCP Heathrow Supp GW monitoring	15-11-21	15-11-21	460336.0001

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
Direct Drilling	Cable Percussive	---	---	6.0	

Boring Location Plant Coordinates:	Personnel	Drilling Equipment:
N: 51.483 E: -0.453	Logged By - Nyemh Johnson Driller - Derick Watts	

Civil Town/City/or Village:	County:	Water Level Observations:
Sipson	West Drayton UB7 0DU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
ENV1			0	MADE GROUND: Compacted hardcore. Consists of dark brown brick, flint and Type 1 Gravel.				
				MADE GROUND: dark brown clayey very sandy GRAVEL. Sand is fine to coarse, Gravel is angular to rounded, fine to coarse grained. Gravel consists of brick.				
			1	MADE GROUND: light brownish orange silty slightly gravelly CLAY. Gravel is angular to rounded, fine to coarse grained. Gravel consists of brick and flint.				
			2					
ENV2			3					
			4	Firm light brownish orange silty CLAY. (LONDON CLAY FORMATION)				
SPT		11		Firm light grey silty CLAY. (LONDON CLAY FORMATION)				
			5					
SPT		13						
			6					

METRIC BOREHOLE LOG (NON-U.S) NCP CARPARK GW MONITORING.GPJ 460336.0001 2-12-21

Signature:	Firm: TRC Companies
	Fax

BOREHOLE LOG

BH NO. BH204

Facility/Project Name:	Date Borehole Started:	Date Borehole Completed:	Project Number:
NCP Heathrow Supp GW monitoring	15-11-21	15-11-21	460336.0001

Drilling Firm:	Drilling Method:	Surface Elev. (m)	TOC Elevation (m)	Total Depth (m bgs)	Borehole Dia. (cm)
Direct Drilling	Cable Percussive	---	---	6.0	

Boring Location Plant Coordinates:	Personnel	Drilling Equipment:
N: 51.482 E: -0.454	Logged By - Nyemh Johnson Driller - Derick Watts	

Civil Town/City/or Village:	County:	Water Level Observations:
Sipson	West Drayton UB7 0DU	While Drilling: Date/Time Depth (m bgs) After Drilling: Date/Time Depth (m bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	SPT N VALUE	DEPTH IN METERS	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
ENV1			0	MADE GROUND: Compacted hardcore. Consists of dark brown brick, flint and Type 1 Gravel.				
				MADE GROUND: light brown silty sandy GRAVEL. Sand is fine to coarse, Gravel is angular to rounded, fine to coarse grained. Gravel consists of brick.				
			1	MADE GROUND: light brownish orange silty CLAY.Frequent organic matter				
SPT		1						
			2					
SPT		1						
				Soft dark greyish black silty CLAY. (LANGLEY SILT MEMBER)				
			3	Stiff light greenish orange silty CLAY. (LANGLEY SILT MEMBER)				
SPT		30		Very dense light brownish orange silty sandy GRAVEL. Sand is fine to coarse, Gravel is angular to rounded, fine to coarse grained. Gravel consists of flint and sandstone. (TAPLOW GRAVEL MEMBER)				
ENV2								
			4					
SPT		47						
				Firm light brownish orange silty CLAY. (LONDON CLAY FORMATION)				
			5	Firm light grey silty CLAY. (LONDON CLAY FORMATION)				
SPT		17						
			6					

METRIC BOREHOLE LOG (NON-U.S) NCP CARPARK GW MONITORING.GPJ 460336.0001 2-12-21

Signature:	Firm: TRC Companies
	Fax

Annex D: Field Data

Ground Gas and Groundwater Monitoring Record Sheet

Site: NCP Carpark, Heathrow **Visit No:** 1 **of** 3
Date: 22.09.2021 **Operator:** MD **Project Manager:** CM

Monitoring Point	GAS CONCENTRATIONS												VOLATILES		FLOW DATA				WELL AND WATER DATA		Comments
	Methane (%v/v)		%LEL		Carbon dioxide (%v/v)		Carbon monoxide (ppmv)		Hydrogen sulphide (ppmv)		Oxygen (%v/v)		PID Peak (ppm)	Product thickness (mm)	Flow rate (l/hr)		Differential borehole Pressure (Pa)	Time for flow to equalise (secs)	Water level (mbgl)	Depth of well (m)	
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Min.	Steady			Peak	Steady					
BH101	0.0	0.0	NR	NR	13.0	13.0	2	2	0	0	0.1	0.1	1.2	ND	0.2	0.2	-0.03	60	4.31	10.20	purged 18 liters - bailer
BH102	0.5	0.5	NR	NR	15.6	15.6	2	2	1	1	0.2	0.2	2.3	ND	0.1	0.1	0.02	60	6.45	10.00	purged 18 liters - bailer
BH103	0.0	0.0	NR	NR	7.9	7.9	1	1	0	0	7.2	7.2	1.1	ND	0.2	0.2	0.00	60	5.16	9.80	purged 18 liters - bailer
WS102	0.0	0.0	NR	NR	15.3	15.1	1	1	0	0	2.4	2.4	0.7	ND	0.2	0.2	0.00	60	dry	2.00	
WS107	0.0	0.0	NR	NR	8.9	8.9	1	1	0	0	7.8	7.8	0.2	ND	0.2	0.2	0.02	60	dry	3.50	
Max	**0.5**	**0.5**	**ND**	**ND**	**15.6**	**15.6**	**2**	**2**	**1**	**1**	**7.8**	**7.8**	**NR**	**ND**	**0.2**	**0.2**	**0.0**	**60**	**6.45**	**10.20**	
Min	**0.0**	**0.0**	**0.0**	**0.0**	**7.9**	**7.9**	**1**	**1**	**0**	**0**	**0.1**	**0.1**	**NR**	**ND**	**0.1**	**0.1**	**0.0**	**60**	**DRY**	**2.00**	

ND - Not detected

NR - Not recorded

NA - Non applicable

METEOROLOGICAL AND SITE INFORMATION: (Select correct box with X or enter data, as applicable)

State of ground:		Dry	x	Moist		Wet		Snow		Frozen
Wind:		Calm	x	Light		Moderate		Strong	
Cloud cover:	x	None		Slight		Cloudy		Overcast	
Precipitation:	X	None		Slight		Moderate		Heavy	
Time monitoring performed:			10:00	Start			13:00	End	
Barometric pressure (mbar):			1026	Start			1026	End	
Pressure trend (Daily):				Falling	X	Steady		Rising	
Source:									
Air Temperature (Deg. C):			20	Before			20	After	

INSTRUMENTATION TECHNICAL SPECIFICATIONS:

Ground gas meter: GA5000

Gas Range: **CH_4** 0 - 100% **CO_2** 0 - 100% **O_2** 0 - 25%

Gas Flow range: +100/-50 l/hour

Differential Pressure: (+/-) 1000 Pa

Date of last calibration:

Date of next calibration:

Ambient air check: **CH_4** 0.0 **CO_2** 0.0 **O_2** 20.5

Ground Gas and Groundwater Monitoring Record Sheet

Site: NCP Carpark, Heathrow **Visit No:** 2 **of** 3
Date: 06.10.2021 **Operator:** MD **Project Manager:** CM

Monitoring Point	GAS CONCENTRATIONS												VOLATILES		FLOW DATA				WELL AND WATER DATA		Comments
	Methane (%v/v)		%LEL		Carbon dioxide (%v/v)		Carbon monoxide (ppmv)		Hydrogen sulphide (ppmv)		Oxygen (%v/v)		PID Peak (ppm)	Product thickness (mm)	Flow rate (l/hr)		Differential borehole Pressure (Pa)	Time for flow to equalise (secs)	Water level (mbgl)	Depth of well (m)	
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Min.	Steady			Peak	Steady					
BH101	0.0	0.0	NR	NR	13.1	13.1	1	1	0	0	0.8	0.8	0.0	ND	0.1	0.1	0.00	60	4.09	10.20	
BH102	0.2	0.2	NR	NR	14.5	14.5	1	1	2	2	1.2	1.2	1.2	ND	0.1	0.1	0.15	60	7.85	10.00	
BH103	0.0	0.0	NR	NR	9.1	8.6	1	1	0	0	7.9	8.1	0.3	ND	0.1	0.1	0.03	60	5.00	9.80	
WS102	0.0	0.0	NR	NR	15.7	15.7	1	1	0	0	2.0	2.0	0.1	ND	0.1	0.1	0.00	60	dry	2.00	
WS107	0.0	0.0	NR	NR	8.0	7.9	1	1	0	0	8.2	8.2	0.0	ND	0.1	0.1	0.03	60	dry	3.50	
Max	**0.2**	**0.2**	**ND**	**ND**	**15.7**	**15.7**	**1**	**1**	**2**	**2**	**8.2**	**8.2**	**NR**	**ND**	**0.1**	**0.1**	**0.2**	**60**	**7.85**	**10.20**	
Min	**0.0**	**0.0**	**0.0**	**0.0**	**8.0**	**7.9**	**1**	**1**	**0**	**0**	**0.8**	**0.8**	**NR**	**ND**	**0.1**	**0.1**	**0.0**	**60**	**DRY**	**2.00**	

ND - Not detected

NR - Not recorded

NA - Non applicable

METEOROLOGICAL AND SITE INFORMATION: (Select correct box with X or enter data, as applicable)

State of ground:		Dry	x	Moist		Wet		Snow		Frozen
Wind:		Calm	x	Light		Moderate		Strong	
Cloud cover:	x	None		Slight		Cloudy		Overcast	
Precipitation:	X	None		Slight		Moderate		Heavy	
Time monitoring performed:			13:00	Start			15:00	End	
Barometric pressure (mbar):			1017	Start			1017	End	
Pressure trend (Daily):				Falling	X	Steady		Rising	
Source:									
Air Temperature (Deg. C):			20	Before			20	After	

INSTRUMENTATION TECHNICAL SPECIFICATIONS:

Ground gas meter: GA5000

Gas Range: **CH_4** 0 - 100% **CO_2** 0 - 100% **O_2** 0 - 25%

Gas Flow range: +100/-50 l/hour

Differential Pressure: (+/-) 1000 Pa

Date of last calibration:

Date of next calibration:

Ambient air check: **CH_4** 0.0 **CO_2** 0.0 **O_2** 20.5

Ground Gas and Groundwater Monitoring Record Sheet

Site: NCP Carpark, Heathrow **Visit No:** 3 **of** 3
Date: 13.10.2021 **Operator:** MD **Project Manager:** CM

Monitoring Point	GAS CONCENTRATIONS												VOLATILES		FLOW DATA				WELL AND WATER DATA		Comments
	Methane (%v/v)		%LEL		Carbon dioxide (%v/v)		Carbon monoxide (ppmv)		Hydrogen sulphide (ppmv)		Oxygen (%v/v)		PID Peak (ppm)	Product thickness (mm)	Flow rate (l/hr)		Differential borehole Pressure (Pa)	Time for flow to equalise (secs)	Water level (mbgl)	Depth of well (m)	
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Min.	Steady			Peak	Steady					
BH101	0.0	0.0	NR	NR	13.2	13.2	1	1	0	0	0.5	0.5	0.2	ND	0.1	0.1	-0.03	60	4.10	10.20	
BH102	0.5	0.5	NR	NR	15.3	15.3	1	1	0	0	0.2	0.2	0.8	ND	0.2	0.2	-0.09	60	7.64	10.00	
BH103	0.0	0.0	NR	NR	8.5	8.5	0	0	0	0	7.6	7.6	0.4	ND	0.2	0.2	0.00	60	4.99	9.80	
WS102	0.0	0.0	NR	NR	13.7	13.7	0	0	0	0	1.8	1.8	0.3	ND	0.1	0.1	0.03	60	dry	2.00	
WS107	0.0	0.0	NR	NR	7.6	7.6	0	0	0	0	8.9	8.9	0.3	ND	0.2	0.2	0.03	60	dry	3.50	
Max	**0.5**	**0.5**	**ND**	**ND**	**15.3**	**15.3**	**1**	**1**	**0**	**0**	**8.9**	**8.9**	**NR**	**ND**	**0.2**	**0.2**	**0.0**	**60**	**7.64**	**10.20**	
Min	**0.0**	**0.0**	**0.0**	**0.0**	**7.6**	**7.6**	**0**	**0**	**0**	**0**	**0.2**	**0.2**	**NR**	**ND**	**0.1**	**0.1**	**-0.1**	**60**	**DRY**	**2.00**	

ND - Not detected

NR - Not recorded

NA - Non applicable

METEOROLOGICAL AND SITE INFORMATION: (Select correct box with X or enter data, as applicable)

State of ground:	x	Dry		Moist		Wet		Snow		Frozen
Wind:		Calm	x	Light		Moderate		Strong	
Cloud cover:	x	None		Slight		Cloudy		Overcast	
Precipitation:	X	None		Slight		Moderate		Heavy	
Time monitoring performed:			10:00	Start			12:00	End	
Barometric pressure (mbar):			1025	Start			1025	End	
Pressure trend (Daily):				Falling	X	Steady		Rising	
Source:									
Air Temperature (Deg. C):			18	Before			18	After	

INSTRUMENTATION TECHNICAL SPECIFICATIONS:

Ground gas meter: GA5000

Gas Range: **CH_4** 0 - 100% **CO_2** 0 - 100% **O_2** 0 - 25%

Gas Flow range: +100/-50 l/hour

Differential Pressure: (+/-) 1000 Pa

Date of last calibration:

Date of next calibration:

Ambient air check: **CH_4** 0.0 **CO_2** 0.0 **O_2** 20.5

Project:	NCP Heathrow			Date:	16&17.11.21
Job Number:	460336	Engineer:	NJ	Weather:	

Monitoring Point Reference	Date/ Time	Atmos. Pressure (mbar)	Well Pressure (Pa)	Flow Rate (l/h)	Time (sec)	CH4 (% v/v)	LEL (%)	CO2 (% v/v)	O2 (% v/v)	H2S (ppr	CO (ppm	Hex. (%)	PID cf	VOC (pp	Depth to Water (m)	Depth to base (m)	Comments (all readings from ground level, note datum height if different)
			Peak:993	Peak:-4.9	30	0	0	10.7	4.7	0	0	0.004	1				
					60	0	0	10.8	4.6	0	0	0.004	1				
					120	0	0	10.8	4.5	0	0	0.005	1				
			Steady:992	Steady:-4.9	180	0	0	11	4.3	0	0	0.005	1				
	16.11.21				240	0	0	11.3	4.1	0	0	0.005	1				
WS102	10:38	1020			300	0	0	11.6	3.9	0	0	0.005	1		Dry	2.04	
			Peak:996	Peak:-4.3	30	0	0	6.4	9.7	0	0	0.005	1				
					60	0	0	6.5	9.5	0	0	0.005	1				
					120	0	0	6.5	9.5	0	0	0.005	1				
			Steady:995	Steady:-4.2	180	0	0	6.6	9.4	0	0	0.005	1				
	16.11.21				240	0	0	6.7	9.1	0	0	0.004	1				
WS107	11:18	1019			300	0	0	6.8	8.9	0	0	0.004	1		Dry	3.57	
			Peak:988	Peak:-5.5	30	0	0	4.5	13.7	0	0	0.003	1				
					60	0	0	4.8	13.1	0	0	0.004	1				
					120	0	0	5	12.7	0	0	0.004	1				
			Steady:990	Steady:-5.5	180	0	0	5.5	12.3	0	0	0.005	1				
	16.11.21				240	0	0	6.1	11.6	0	0	0.005	1				
BH101	10:19	1022			300	0	0	6.6	10.9	0	0	0.005	1		4.17	10.52	
			Peak:1000	Peak:-4.3	30	0	0	8.7	5.1	0	0	0.029	1				
					60	0	0	8.7	5	0	0	0.028	1				
					120	0	0	8.9	4.8	0	0	0.029	1				
			Steady:997	Steady:-4.2	180	0	0	9.1	4.6	0	0	0.029	1				
	16.11.21				240	0	0	9.4	4.1	0	0	0.029	1				
BH102	10:49	1020			300	0	0	9.9	3.5	0	0	0.0281			9.39	10.32	

Notes:

Ambient Concentration	
CH4	
CO2	
O2	
H2S	
CO	

Previous weather conditions, Atmosphic pressure trend and rate, flooding, soil moisture, water draw in tube, wind direction/strength, condition of monitoring point, missing/open tap, datum level, vegetation stress, odours, bubbles, etc.

QA Checklist:	
Weather conditions logged for previous 24 hrs	
Gas monitor calibrated	
All filters in place	
Flow reading stable and zeroed	

Instrument Details:	Serial No.	Hyder/other ref.
Landfill Gas Analyser		
PID		
Dip meter/ interface probe		

Project: _____ **Date:** _____

Monitoring Point Reference	Date/ Time	Atmos. Pressure (mbar)	Well Pressure (Pa)	Flow Rate (l/h)	Time (sec)	CH4 (% v/v)	LEL (%)	CO2 (% v/v)	O2 (% v/v)	H2S (ppm)	CO (ppm)	Hex. (%)	PID cf	VOC (ppm)	Depth to water (m)	Depth to base (m)	Comments (all readings from ground level, note datum height if different)
			Peak:996	Peak:-4.4	30	0	0	0.6	19	0	0	0.006	1				
					60	0	0	0.6	19.2	0	0	0.005	1				
					120	0	0	0.7	19	0	0	0.005	1				
			Steady:997	Steady:-4.2	180	0	0	1.2	18.4	0	0	0.005	1				
	16.11.21				240	0	0	2.1	17.4	0	0	0.005	1				
BH103	11:07	1020			300	0	0	3.7	15.8	0	0	0.005	1		5.06	9.48	
			Peak:997	Peak:-3.9	30	0	0	0.9	18.7	0	10	0.004	1				
					60	0	0	0.8	18.8	0	10	0.005	1				
					120	0	0	0.8	18.9	0	0	0.004	1				
			Steady:997	Steady:-3.9	180	0	0	0.8	18.9	0	0	0.005	1				
	16.11.21				240	0	0	0.7	19	0	0	0.004	1				
BH201	11:47	1017			300	0	0	0.7	19.2	0	0	0.004	1		3.84	6.08	
			Peak:988	Peak:-5.5	30	0	0	2.3	9.8	0	10	0.002	1				
					60	0	0	2.5	8.9	0	10	0.002	1				
					120	0	0	2.7	8.1	0	10	0.003	1				
			Steady: 987	Steady: -5.5	180	0	0	2.9	7.6	0	10	0.002	1				
	17.11.21				240	0	0	3	7.3	0	10	0.002	1				
BH202	07:35	1020			300	0	0	3	7	0	10	0.002	1		4.57	6.11	
			Peak:1000	Peak:-3.9	30	0	0	0.5	19.5	0	0	0.005	1				
					60	0	0	0.4	19.5	0	0	0.005	1				
					120	0	0	0.4	19.5	0	0	0.007	1				
			Steady:999	Steady:-3.9	180	0	0	0.4	19.5	0	0	0.005	1				
	16.11.21				240	0	0	0.5	19.5	0	0	0.006	1				
BH203	11:30	1020			300	0	0	0.5	19.5	0	0	0.005	1		Dry	5.12	
			Peak:993	Peak:-5.2	30	0	0	0.4	18.1	0	0	0.005	1				
					60	0	0	0.4	18.2	0	0	0.006	1				
					120	0	0	0.4	18.2	0	0	0.005	1				
			Steady:993	Steady:-4.9	180	0	0	0.4	18.1	0	0	0.006	1				
	17.11.21				240	0	0	0.4	18.1	0	0	0.005	1				
BH204	11:39	1021			300	0	0	0.4	18.1	0	0	0.005	1		4.21	6.22	
			Peak:	Peak:													
			Steady:	Steady:													

Notes:

Previous weather conditions, Atmosphic pressure trend and rate, flooding, soil moisture, water draw in tube, wind direction/strength, condition of monitoring point, missing/open tap, datum level, vegetation stress, odours, bubbles, etc.

Groundwater Sampling Data Form

Project Information	Project Name:	NCP Heathrow		
	Project Number:			
	Sampling Date:	16&17.11.21	Sampled by:	Nyemh
	Weather:			
	Well Notes - e.g. Condition, access, safety:			

Monitoring Information	Water Quality Meter Used:	YSI		
	Water Quality Meter Last Calibrated:			
	Dissolved oxygen probe last calibrated:			
	Water Level Meter Used (tick applicable):			
	Interface probe	X	Dip Meter	

Typical Parameter Stabilisation Criteria for Low-Flow Sampling	
Dissolved Oxygen (D.O.)	0.3 mg/l
Specific Conductivity (Sp.Cond)	3%
p.H	0.1 unit
Oxygen Reduction Potential (ORP)	10mV
* For REDOX correction, see separate guidance	

Well location	BH101									
Measurement datum:	Notes: Tick the measurement datum used below and always include the offset to ground level. If ticked 'Ground Level', the offset to GL will be 0m. See figure above for definitions									
Top of Cover (TOC)		Ground Level (GL)	X	Top of Pipework (TOP) (m)		Offset from TOC to GL (m):				

		Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
Purge Start Time:		14:50	15.1	607.6	7.35	6.61	16.2	4.22		
Well Diameter (mm)		14:53	15.5	614	3.63	6.51	11.5	4.22		
Well Material		14:56	15.4	622	3.69	6.53	8.2	4.22		
Static Water Level (m)	4.22	14:59	15.3	625	4.05	6.55	7.7	4.22		
LNAPL Present?	Y N	15:02	15.3	628	4.22	6.57	10.2	4.22	218.7	
LNAPL Level (m)		15:05	15.3	627	4.07	6.56	11.5	4.22	220	
Well Headspace Reading (PID/FID)		15:08	15.3	630	4.08	6.58	12.5	4.22	221	
Purge Method	Low Flow / Other:									
Sampling Method	Peristaltic / Bladder / Other:									
Pump Intake Depth (m)	6									
Depth to Base (m)	10.55									
DNAPL Present?	Y N									
DNAPL Level (m)										

Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored	No odour
Sample Containers Obtained	
Sample Collection Time	

Groundwater Sampling Data Form

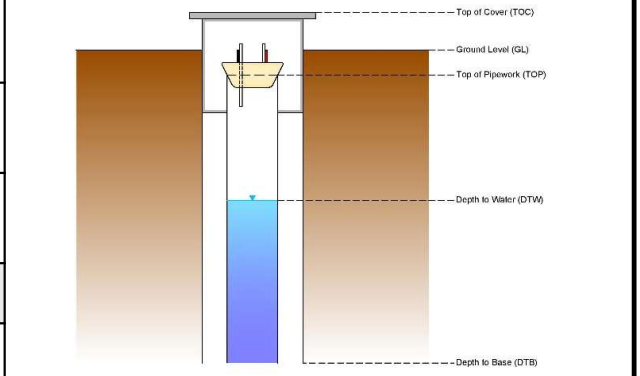
Well location	BH102	Not able to be sampled, <1m groundwater present								
Measurement datum:	Notes: Tick the measurement datum used below and always include the offset to ground level. If ticked 'Ground Level', the offset to GL will be 0m. See figure above for definitions									
Top of Cover (TOC)		Ground Level (GL)		Top of Pipework (TOP) (m)		Offset to GL (m):				
Purge Start Time:		Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
Well Diameter (mm)										
Well Material										
Static Water Level (m)										
LNAPL Present?	Y N									
LNAPL Level (m)										
Well Headspace Reading (PID/FID)										
Purge Method	Low Flow / Other:									
Sampling Method	Peristaltic / Bladder / Other:									
Pump Intake Depth (m)										
Depth to Base (m)		Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored								
DNAPL Present?	Y N	Sample Containers Obtained								
DNAPL Level (m)		Sample Collection Time								

Well location	BH103									
Measurement datum:	Notes: Tick the measurement datum used below and always include the offset to ground level. If ticked 'Ground Level', the offset to GL will be 0m. See figure above for definitions									
Top of Cover (TOC)		Ground Level (GL)		Top of Pipework (TOP) (m)		Offset to GL (m):				
Purge Start Time:		Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
Well Diameter (mm)										
Well Material		13:58	14	703	7.51	6.67	52.3	5.06		
Static Water Level (m)	5.06	14:01	14.3	713	2.3	6.6	-20.8	5.06		
		14:04	14.5	666	2.11	6.46	-16.9	5.06		
LNAPL Present?	Y N	14:07	14.6	658	1.92	6.44	-19.5	5.06	194.5	
LNAPL Level (m)		14:10	14.6	660	1.9	6.45	-20.8	5.06	193.2	
Well Headspace Reading (PID/FID)		14:13	12	662	1.86	6.45	-18.5	5.06	195.5	
Purge Method	Low Flow / Other:									
Sampling Method	Peristaltic / Bladder / Other:									
Pump Intake Depth (m)	7									
Depth to Base (m)	9.65	Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored				No odour				
DNAPL Present?	Y N	Sample Containers Obtained								
DNAPL Level (m)		Sample Collection Time								

Groundwater Sampling Data Form

Project Information	Project Name:	NCP Heathrow		
	Project Number:	460336.0001		
	Sampling Date:	17/11/2021	Sampled by:	NJ
	Weather:			
	Well Notes - e.g. Condition, access, safety:			

Monitoring Information	Water Quality Meter Used:			
	Water Quality Meter Last Calibrated:			
	Dissolved oxygen probe last calibrated:			
	Water Level Meter Used (tick applicable):			
	Interface probe		Dip Meter	



Typical Parameter Stabilisation Criteria for Low-Flow Sampling	
Dissolved Oxygen (D.O.)	0.3 mg/l
Specific Conductivity (Sp.Cond)	3%
p.H	0.1 unit
Oxygen Reduction Potential (ORP)	10mV
* For REDOX correction, see separate guidance	

Well location	BH201									
Measurement datum:	Notes: Tick the measurement datum used below and always include the offset to ground level. If ticked 'Ground Level', the offset to GL will be 0m. See figure above for definitions									
Top of Cover (TOC)		Ground Level (GL)		Top of Pipework (TOP) (m)		Offset from TOC to GL (m):				

Purge Start Time:		Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
Well Diameter (mm)										
Well Material		09:49	13.5	789	32.42	7.02	128.1	3.78		
Static Water Level (m)	3.78	09:52	14	759	3.8	6.97	22.2	3.78		
		09:55	14.1	742	4.1	6.85	8.1	3.78		
LNAPL Present?	Y N	09:58	14	743	4.9	6.89	9.1	3.78		
LNAPL Level (m)		10:01	13.9	741	6.02	6.98	9.7	3.78		
Well Headspace Reading (PID/FID)		10:04	13.9	740	6.41	7	9.3	3.78		
		10:07	13.9	740	6.48	7.01	7.8	3.78		
Purge Method	Low Flow	10:10	13.9	739	6.88	7.02	6.8	3.78	220.8	
	Other:	10:13	13.9	739	6.97	7.02	5	3.78	219	
Sampling Method	Peristaltic / Other:	10:16	13.8	739	7.11	7.02	2	3.78	216	
	Bladder									
Pump Intake Depth (m)	5									
Depth to Base (m)	6.04	Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored			No odour, slight brown colour					
DNAPL Present?	Y N	Sample Containers Obtained								
DNAPL Level (m)		Sample Collection Time								

Groundwater Sampling Data Form

Well location	BH202									
Measurement datum:	Notes: Tick the measurement datum used below and always include the offset to ground level. If ticked 'Ground Level', the offset to GL will be 0m. See figure above for definitions									
Top of Cover (TOC)		Ground Level (GL)		Top of Pipework (TOP) (m)		Offset to GL (m):				
Purge Start Time:		Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
Well Diameter (mm)										
Well Material		08:27	13.5	719	5.72	6.55	164	4.57		
Static Water Level (m)	4.57	08:30	14.5	750	2	6.53	87.7	4.57		
		08:33	14.1	746	3.7	6.62	51.8	4.57		
LNAPL Present?	Y N	08:36	14.1	746	3.99	6.65	32.2	4.57		
LNAPL Level (m)		08:39	14.2	747	3.57	6.62	22.2	4.57	236.2	
Well Headspace Reading (PID/FID)		08:42	14.3	748	3.62	6.63	17.6	4.57	231.6	
		08:45	14.4	747	3.67	6.65	14.8	4.57	228.8	
Purge Method	Low Flow									
	Other:									
Sampling Method	Peristaltic Other:									
	Bladder									
Pump Intake Depth (m)	5									
Depth to Base (m)	6.05	Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored				No odour				
DNAPL Present?	Y N	Sample Containers Obtained								
DNAPL Level (m)		Sample Collection Time								

Well location	BH203	Dry								
Measurement datum:	Notes: Tick the measurement datum used below and always include the offset to ground level. If ticked 'Ground Level', the offset to GL will be 0m. See figure above for definitions									
Top of Cover (TOC)		Ground Level (GL)		Top of Pipework (TOP) (m)		Offset to GL (m):				
Purge Start Time:		Time (HH:MM)	Temp (oC)	Sp.Cond (µS/cm)	D.O. (mg/l)	pH (units)	ORP (mV)	Depth to Water (m)	Corr. REDOX (mV)*	Notes / Flow (ml/min)
Well Diameter (mm)										
Well Material										
Static Water Level (m)										
LNAPL Present?	Y N									
LNAPL Level (m)										
Well Headspace Reading (PID/FID)										
Purge Method	Low Flow									
	Other:									
Sampling Method	Peristaltic Other:									
	Bladder									
Pump Intake Depth (m)										
Depth to Base (m)		Sampling Notes (e.g. oil/colour/odour), Reasons if not monitored								
DNAPL Present?	Y N	Sample Containers Obtained								
DNAPL Level (m)		Sample Collection Time								

Annex E: Laboratory Chemical Data

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Analytical Report Number : 21-99340

Project / Site name:	West Drayton, UB7 ODU	**Samples received on:**	03/08/2021
Your job number:	460336 0000 0000	**Samples instructed on/ Analysis started on:**	15/09/2021
Your order number:	460336	**Analysis completed by:**	23/09/2021
Report Issue Number:	1	**Report issued on:**	23/09/2021
Samples Analysed:	4 soil samples		

Signed: A. Czerwińska

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-99340
Project / Site name: West Drayton, UB7 ODU
Your Order No: 460336

Lab Sample Number				2010597	2010598	2010599	2010600
Sample Reference				BH101	BH101	BH103	BH103
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	1.80	0.30	1.30
Date Sampled				02/08/2021	02/08/2021	30/07/2021	30/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	14	12	6.5	11
Total mass of sample received	kg	0.001	NONE	1.0	1.0	1.0	1.0
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	7.0	8.1	9.1	8.5
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.28	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.1	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.4	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	1.4	0.84	14	0.35
Anthracene	mg/kg	0.05	MCERTS	0.36	< 0.05	3.5	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	3.7	0.87	30	0.80
Pyrene	mg/kg	0.05	MCERTS	3.3	0.60	21	0.65
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.3	0.36	13	0.59
Chrysene	mg/kg	0.05	MCERTS	1.8	0.35	10	0.36
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	3.5	0.39	14	0.51
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.79	0.14	5.2	0.33
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.3	0.30	11	0.53
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.5	< 0.05	7.7	0.31
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.50	< 0.05	2.3	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.8	< 0.05	8.3	0.31
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	23.3	3.85	143	4.74
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	20	15	11
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8	0.3	< 0.2	0.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.4	< 0.2	1.1	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (III)	mg/kg	1	NONE	34	29	14	29
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	35	29	14	29
Copper (aqua regia extractable)	mg/kg	1	MCERTS	31	18	23	15
Lead (aqua regia extractable)	mg/kg	1	MCERTS	230	36	93	20
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.1	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	26	15	21
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110	52	160	83

Analytical Report Number: 21-99340
Project / Site name: West Drayton, UB7 ODU
Your Order No: 460336

Lab Sample Number				2010597	2010598	2010599	2010600
Sample Reference				BH101	BH101	BH103	BH103
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	1.80	0.30	1.30
Date Sampled				02/08/2021	02/08/2021	30/07/2021	30/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	60	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	66	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	1.4	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	14	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	260	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	51	< 10	530	17
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	60	< 10	800	20

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-99340
Project / Site name: West Drayton, UB7 ODU

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2010597	BH101	None Supplied	0.4	Brown clay and loam with gravel and vegetation.
2010598	BH101	None Supplied	1.8	Brown clay and sand with gravel.
2010599	BH103	None Supplied	0.3	Brown clay and sand with gravel.
2010600	BH103	None Supplied	1.3	Brown clay and sand with gravel.

Analytical Report Number : 21-99340
Project / Site name: West Drayton, UB7 ODU

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Sample Deviation Report

Analytical Report Number : 21-99340
Project / Site name: West Drayton, UB7 ODU

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH101	None Supplied	S	2010597	c	Hexavalent chromium in soil	L080-PL	c
BH101	None Supplied	S	2010597	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
BH101	None Supplied	S	2010597	c	Cr (III) in soil	L080-PL	c
BH101	None Supplied	S	2010597	c	Speciated EPA-16 PAHs in soil	L064-PL	c
BH101	None Supplied	S	2010597	c	TPHCWG (Soil)	L088/76-PL	c
BH101	None Supplied	S	2010597	c	pH in soil (automated)	L099-PL	c
BH101	None Supplied	S	2010598	c	Hexavalent chromium in soil	L080-PL	c
BH101	None Supplied	S	2010598	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
BH101	None Supplied	S	2010598	c	Cr (III) in soil	L080-PL	c
BH101	None Supplied	S	2010598	c	Speciated EPA-16 PAHs in soil	L064-PL	c
BH101	None Supplied	S	2010598	c	TPHCWG (Soil)	L088/76-PL	c
BH101	None Supplied	S	2010598	c	pH in soil (automated)	L099-PL	c
BH103	None Supplied	S	2010599	c	Hexavalent chromium in soil	L080-PL	c
BH103	None Supplied	S	2010599	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
BH103	None Supplied	S	2010599	c	Cr (III) in soil	L080-PL	c
BH103	None Supplied	S	2010599	c	Speciated EPA-16 PAHs in soil	L064-PL	c
BH103	None Supplied	S	2010599	c	TPHCWG (Soil)	L088/76-PL	c
BH103	None Supplied	S	2010599	c	pH in soil (automated)	L099-PL	c
BH103	None Supplied	S	2010600	c	Hexavalent chromium in soil	L080-PL	c
BH103	None Supplied	S	2010600	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
BH103	None Supplied	S	2010600	c	Cr (III) in soil	L080-PL	c
BH103	None Supplied	S	2010600	c	Speciated EPA-16 PAHs in soil	L064-PL	c
BH103	None Supplied	S	2010600	c	TPHCWG (Soil)	L088/76-PL	c
BH103	None Supplied	S	2010600	c	pH in soil (automated)	L099-PL	c

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Analytical Report Number : 21-90131

Replaces Analytical Report Number: 21-90131, issue no. 1
Report format change.

Project / Site name:	West Drayton UB7 0DU	**Samples received on:**	30/07/2021
Your job number:	453101 0000 0000	**Samples instructed on/ Analysis started on:**	30/07/2021
Your order number:		**Analysis completed by:**	10/08/2021
Report Issue Number:	2	**Report issued on:**	21/10/2021
Samples Analysed:	10 soil samples		

Signed: Karolina Marek

Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-90131
Project / Site name: West Drayton UB7 0DU

Lab Sample Number				1957038	1957039	1957040	1957041	1957042
Sample Reference				WS102	WS102	WS103	WS103	WS105
Sample Number				ENV1	ENV2	ENV1	ENV2	ENV1
Depth (m)				0.20	1.20	0.35	1.00	0.30
Date Sampled				29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	5.6	12	5.3	12	15
Total mass of sample received	kg	0.001	NONE	1.2	1.0	2.0	1.7	1.0
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	0.935
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	0.935
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.7	8.5	8.8	7.9	8.8
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.35
Acenaphthylene	mg/kg	0.05	MCERTS	0.37	< 0.05	7.1	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	2.6	< 0.05	57	< 0.05	0.50
Fluorene	mg/kg	0.05	MCERTS	2.5	0.22	75	< 0.05	0.43
Phenanthrene	mg/kg	0.05	MCERTS	19	0.88	390	< 0.05	4.3
Anthracene	mg/kg	0.05	MCERTS	3.9	0.26	170	< 0.05	0.83
Fluoranthene	mg/kg	0.05	MCERTS	29	1.2	610	< 0.05	5.3
Pyrene	mg/kg	0.05	MCERTS	22	0.99	470	< 0.05	4.7
Benzo(a)anthracene	mg/kg	0.05	MCERTS	16	0.76	270	< 0.05	3.4
Chrysene	mg/kg	0.05	MCERTS	12	0.60	280	< 0.05	2.5
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	22	1.0	300	< 0.05	3.6
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	5.0	0.28	140	< 0.05	1.5
Benzo(a)pyrene	mg/kg	0.05	MCERTS	14	0.73	250	< 0.05	2.9
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	7.9	0.43	120	< 0.05	1.6
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	2.2	< 0.05	35	< 0.05	0.47
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	8.9	0.50	130	< 0.05	1.9
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	167	7.90	3290	< 0.80	34.1
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	14	7.5	11	18
Boron (water soluble)	mg/kg	0.2	MCERTS	0.5	0.5	0.3	0.3	0.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.7	< 0.2	1.1	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (III)	mg/kg	1	NONE	24	35	19	25	22
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	24	35	19	25	22
Copper (aqua regia extractable)	mg/kg	1	MCERTS	69	17	60	20	72
Lead (aqua regia extractable)	mg/kg	1	MCERTS	190	15	98	19	450
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	27	49	24	19	27
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	2.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	260	81	190	56	200

Analytical Report Number: 21-90131
Project / Site name: West Drayton UB7 0DU

Lab Sample Number				1957038	1957039	1957040	1957041	1957042
Sample Reference				WS102	WS102	WS103	WS103	WS105
Sample Number				ENV1	ENV2	ENV1	ENV2	ENV1
Depth (m)				0.20	1.20	0.35	1.00	0.30
Date Sampled				29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	60	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	140	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	200	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	34	< 8.0	680	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	37	< 10	1100	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	16	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	14	< 2.0	250	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	76	< 10	550	< 10	15
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	170	23	2800	< 10	28
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	260	30	3700	< 10	43
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Project / Site name: West Drayton UB7 0DU

Lab Sample Number				1957038	1957039	1957040	1957041	1957042
Sample Reference				WS102	WS102	WS103	WS103	WS105
Sample Number				ENV1	ENV2	ENV1	ENV2	ENV1
Depth (m)				0.20	1.20	0.35	1.00	0.30
Date Sampled				29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample

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Lab Sample Number				1957043	1957044	1957045	1957046	1957047
Sample Reference				WS105	WS106	WS106	WS107	WS107
Sample Number				ENV2	ENV1	ENV2	ENV1	ENV2
Depth (m)				1.00	0.40	1.80	0.50	1.10
Date Sampled				29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	15	12	11	11	13
Total mass of sample received	kg	0.001	NONE	0.80	1.1	1.3	1.0	1.2
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected	-	Not-detected	-
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.8	8.3	8.7	8.7	7.2
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.49	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.48	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.94	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.3	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	1.7	< 0.05	14	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.39	< 0.05	3.7	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	5.8	< 0.05	23	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	5.5	< 0.05	21	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	3.8	< 0.05	13	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	3.9	< 0.05	8.9	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	5.1	< 0.05	15	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	2.5	< 0.05	3.8	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	4.7	< 0.05	12	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	2.5	< 0.05	5.3	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.68	< 0.05	1.5	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	2.9	< 0.05	6.2	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	39.4	< 0.80	129	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	15	10	17	23	15
Boron (water soluble)	mg/kg	0.2	MCERTS	0.9	1.8	1.2	1.5	1.0
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.8	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (III)	mg/kg	1	NONE	37	30	32	29	37
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	37	30	32	29	37
Copper (aqua regia extractable)	mg/kg	1	MCERTS	24	36	16	51	21
Lead (aqua regia extractable)	mg/kg	1	MCERTS	19	75	17	580	28
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	33	19	31	26	42
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	60	120	49	330	60

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Lab Sample Number				1957043	1957044	1957045	1957046	1957047
Sample Reference				WS105	WS106	WS106	WS107	WS107
Sample Number				ENV2	ENV1	ENV2	ENV1	ENV2
Depth (m)				1.00	0.40	1.80	0.50	1.10
Date Sampled				29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	1.2	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	29	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	31	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	12	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	70	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	30	< 10	150	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	39	< 10	230	< 10
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Lab Sample Number				1957043	1957044	1957045	1957046	1957047
Sample Reference				WS105	WS106	WS106	WS107	WS107
Sample Number				ENV2	ENV1	ENV2	ENV1	ENV2
Depth (m)				1.00	0.40	1.80	0.50	1.10
Date Sampled				29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-90131
Project / Site name: West Drayton UB7 0DU
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1957042	WS105	0.30	151	Hard/Cement Type Material	**Chrysotile**	0.935	**0.935**

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

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* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1957038	WS102	ENV1	0.2	Brown gravelly loam with vegetation.
1957039	WS102	ENV2	1.2	Brown clay and loam with gravel and vegetation.
1957040	WS103	ENV1	0.35	Brown loam and clay with gravel.
1957041	WS103	ENV2	1	Brown loam and clay with gravel and vegetation.
1957042	WS105	ENV1	0.3	Brown gravelly loam.
1957043	WS105	ENV2	1	Brown loam and clay with gravel.
1957044	WS106	ENV1	0.4	Brown loam and clay with gravel and vegetation.
1957045	WS106	ENV2	1.8	Brown loam and clay with gravel.
1957046	WS107	ENV1	0.5	Brown gravelly loam.
1957047	WS107	ENV2	1.1	Brown loam and clay with gravel.

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Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Sample Deviation Report

Analytical Report Number : 21-90131
Project / Site name: West Drayton UB7 0DU

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
WS105	ENV2	S	1957043	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
WS105	ENV2	S	1957043	b	Speciated EPA-16 PAHs in soil	L064-PL	b
WS105	ENV2	S	1957043	b	TPHCWG (Soil)	L088/76-PL	b
WS105	ENV2	S	1957043	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 21-23501

Project / Site name:	NCP Heathrow	**Samples received on:**	17/11/2021
Your job number:	460336.0001	**Samples instructed on/ Analysis started on:**	18/11/2021
Your order number:		**Analysis completed by:**	24/11/2021
Report Issue Number:	1	**Report issued on:**	24/11/2021
Samples Analysed:	4 soil samples		

Signed: A. Czerwińska

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-23501
Project / Site name: NCP Heathrow

Lab Sample Number				2085615	2085616	2085617	2085618
Sample Reference				BH204	BH202	BH201	BH203
Sample Number				01	01	01	02
Depth (m)				0.30	0.20	0.30	3.00
Date Sampled				16/11/2021	15/11/2021	15/11/2021	15/11/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	73	36	< 0.1	31
Moisture Content	%	0.01	NONE	4.4	9.7	9.0	10
Total mass of sample received	kg	0.001	NONE	1.0	1.0	1.0	1.0
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Amosite	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	< 0.001	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	< 0.001	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	9.2	9.2	8.0	8.3
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	1.0	1.0	0.78	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	7.9	9.8	1.3	< 0.05
Fluorene	mg/kg	0.05	MCERTS	6.7	9.3	1.6	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	78	79	19	1.6
Anthracene	mg/kg	0.05	MCERTS	25	20	9.9	0.61
Fluoranthene	mg/kg	0.05	MCERTS	89	100	61	4.3
Pyrene	mg/kg	0.05	MCERTS	78	75	44	3.5
Benzo(a)anthracene	mg/kg	0.05	MCERTS	41	55	33	1.8
Chrysene	mg/kg	0.05	MCERTS	32	46	26	1.4
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	36	64	46	2.1
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	16	24	9.5	0.68
Benzo(a)pyrene	mg/kg	0.05	MCERTS	31	47	29	1.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	17	31	22	1.1
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	5.5	8.9	6.5	0.33
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	18	30	22	1.1
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	479	602	332	20.0
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.5	12	10	15
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4	0.6	0.6	0.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.7	1.5	1.3	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (III)	mg/kg	1	NONE	12	31	19	29
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	12	31	19	29
Copper (aqua regia extractable)	mg/kg	1	MCERTS	15	110	42	18
Lead (aqua regia extractable)	mg/kg	1	MCERTS	260	110	140	40
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	11	37	19	26
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	140	300	210	72

Analytical Report Number: 21-23501
Project / Site name: NCP Heathrow

Lab Sample Number				2085615	2085616	2085617	2085618
Sample Reference				BH204	BH202	BH201	BH203
Sample Number				01	01	01	02
Depth (m)				0.30	0.20	0.30	3.00
Date Sampled				16/11/2021	15/11/2021	15/11/2021	15/11/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	7.2	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	23	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	83	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	110	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	7.8	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	42	35	26	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	280	270	230	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	410	460	500	20
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	720	770	760	28

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-23501
Project / Site name: NCP Heathrow
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
2085617	BH201	0.30	138	Loose Fibres	**Amosite**	< 0.001	**< 0.001**

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Analytical Report Number : 21-23501
Project / Site name: NCP Heathrow

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2085615	BH204	1	0.3	Brown clay and loam with stones.
2085616	BH202	1	0.2	Brown loam and gravel with vegetation and stones.
2085617	BH201	1	0.3	Brown clay and loam with gravel and vegetation.
2085618	BH203	2	3	Brown clay and loam with gravel and stones.

Analytical Report Number : 21-23501
Project / Site name: NCP Heathrow

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

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Analytical Report Number : 21-23474

Project / Site name:	NCP Heathrow	**Samples received on:**	17/11/2021
Your job number:	460336.001	**Samples instructed on/ Analysis started on:**	17/11/2021
Your order number:		**Analysis completed by:**	23/11/2021
Report Issue Number:	1	**Report issued on:**	23/11/2021
Samples Analysed:	5 water samples		

Signed: A. Czerwińska

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-23474
Project / Site name: NCP Heathrow

Lab Sample Number				2085526	2085527	2085528	2085529	2085530
Sample Reference				BH101	BH103	BH201	BH202	BH204
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/11/2021	16/11/2021	17/11/2021	17/11/2021	17/11/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	6.8	6.6	7.2	6.8	7.7
Sulphate as SO4	mg/l	0.045	ISO 17025	47.0	50.3	70.6	76.9	72.4
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	140	160	170	150	100
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	3.0	3.1	2.6	2.9	1.6
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.95	0.32	0.35	0.49	1.20
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.08	0.02	0.06	0.05	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	3.0	3.1	2.6	2.9	1.6
Copper (dissolved)	µg/l	0.5	ISO 17025	3.6	4.8	3.2	2.3	1.2
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.1	3.0	6.0	4.0	2.6
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.2	1.2	0.7	0.6	< 0.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	10	10	7.0	5.2	3.7
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 21-23474
Project / Site name: NCP Heathrow

Lab Sample Number				2085526	2085527	2085528	2085529	2085530
Sample Reference				BH101	BH103	BH201	BH202	BH204
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/11/2021	16/11/2021	17/11/2021	17/11/2021	17/11/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-23474
Project / Site name: NCP Heathrow

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

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Analytical Report Number : 21-11919

Project / Site name:	NCP Fightpath, Heathrow	**Samples received on:**	23/09/2021
Your job number:	460336	**Samples instructed on/ Analysis started on:**	23/09/2021
Your order number:	460336	**Analysis completed by:**	01/10/2021
Report Issue Number:	1	**Report issued on:**	01/10/2021
Samples Analysed:	3 water samples		

Signed: A. Czerwińska

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-11919
Project / Site name: NCP Fightpath, Heathrow

Your Order No: 460336

Lab Sample Number				2021454	2021455	2021456
Sample Reference				BH101	BH102	BH103
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				22/09/2021	22/09/2021	22/09/2021
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
General Inorganics						
pH	pH Units	N/A	ISO 17025	6.7	6.9	6.9
Sulphate as SO4	mg/l	0.045	ISO 17025	49.2	172	58.3
Speciated PAHs						
Naphthalene	µg/l	0.01	ISO 17025	2.82	2.38	3.29
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Total PAH						
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	2.82	2.38	3.29
Heavy Metals / Metalloids						
Boron (dissolved)	µg/l	10	ISO 17025	150	1200	170
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	3.1	8.6	6.7
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.10	2.34	0.36
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.09	0.03	0.05
Chromium (dissolved)	µg/l	0.2	ISO 17025	3.1	8.6	6.7
Copper (dissolved)	µg/l	0.5	ISO 17025	2.4	1.0	1.2
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.9	7.1	6.7
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.7	3.8	0.9
Zinc (dissolved)	µg/l	0.5	ISO 17025	5.1	5.7	11
Monoaromatics & Oxygenates						
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0

Analytical Report Number: 21-11919
Project / Site name: NCP Fightpath, Heathrow

Your Order No: 460336

Lab Sample Number				2021454	2021455	2021456
Sample Reference				BH101	BH102	BH103
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				22/09/2021	22/09/2021	22/09/2021
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Petroleum Hydrocarbons						
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	3300	2300	3800
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	400	270	420
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	3700	2500	4300
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	990	660	990
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	200	150	230
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	1200	810	1200

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-11919
Project / Site name: NCP Fightpath, Heathrow

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Annex F: Screened Data

TRC Environmental - Chemical Assessment Record	
Contract Engineer	Colin Morton
Project/Site Name	NCP Carpark, Heathrow
Project Number	460366.0000.0000

Sample Reference	WS102	WS102	WS103	WS103	WS105	WS105	WS106	WS106	WS107	WS107	BH101	BH101	BH103	BH103
Depth	0.2	1.2	0.35	1	0.3	1	0.4	1.8	0.5	1.1	0.4	1.8	0.3	1.3
Date Sampled	29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021	29/07/2021	02/08/2021	02/08/2021	30/07/2021	30/07/2021
Time Taken														

Analytical Parameter (Soil Analysis)	Units	C4SL														
Stone Content	%		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%		5.6	12	5.3	12	15	15	12	11	11	13	14	12	6.5	11
Speciated PAHs																
Naphthalene	mg/kg	190	< 0.05	< 0.05	< 0.05	< 0.05	0.35	< 0.05	< 0.05	< 0.05	0.49	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	83000	0.37	< 0.05	7.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.48	< 0.05	< 0.05	< 0.05	0.28	< 0.05
Acenaphthene	mg/kg	84000	2.6	< 0.05	57	< 0.05	0.5	< 0.05	< 0.05	< 0.05	0.94	< 0.05	< 0.05	< 0.05	1.1	< 0.05
Fluorene	mg/kg	63000	2.5	0.22	75	< 0.05	0.43	< 0.05	< 0.05	< 0.05	1.3	< 0.05	< 0.05	< 0.05	1.4	< 0.05
Phenanthrene	mg/kg	22000	19	0.88	390	< 0.05	4.3	< 0.05	1.7	< 0.05	14	< 0.05	1.4	0.84	14	0.35
Anthracene	mg/kg	520000	3.9	0.26	170	< 0.05	0.83	< 0.05	0.39	< 0.05	3.7	< 0.05	0.36	< 0.05	3.5	< 0.05
Fluoranthene	mg/kg	23000	29	1.2	610	< 0.05	5.3	< 0.05	5.8	< 0.05	23	< 0.05	3.7	0.87	30	0.8
Pyrene	mg/kg	54000	22	0.99	470	< 0.05	4.7	< 0.05	5.5	< 0.05	21	< 0.05	3.3	0.6	21	0.65
Benzo(a)anthracene	mg/kg	170	16	0.76	270	< 0.05	3.4	< 0.05	3.8	< 0.05	13	< 0.05	2.3	0.36	13	0.59
Chrysene	mg/kg	350	12	0.6	280	< 0.05	2.5	< 0.05	3.9	< 0.05	8.9	< 0.05	1.8	0.35	10	0.36
Benzo(b)fluoranthene	mg/kg	44	22	1	300	< 0.05	3.6	< 0.05	5.1	< 0.05	15	< 0.05	3.5	0.39	14	0.51
Benzo(k)fluoranthene	mg/kg	1200	5	0.28	140	< 0.05	1.5	< 0.05	2.5	< 0.05	3.8	< 0.05	0.79	0.14	5.2	0.33
Benzo(a)pyrene	mg/kg	36	14	0.73	250	< 0.05	2.9	< 0.05	4.7	< 0.05	12	< 0.05	2.3	0.3	11	0.53
Indeno(1,2,3-cd)pyrene	mg/kg	500	7.9	0.43	120	< 0.05	1.6	< 0.05	2.5	< 0.05	5.3	< 0.05	1.5	< 0.05	7.7	0.31
Dibenz(a,h)anthracene	mg/kg	3.5	2.2	< 0.05	35	< 0.05	0.47	< 0.05	0.68	< 0.05	1.5	< 0.05	0.5	< 0.05	2.3	< 0.05
Benzo(ghi)perylene	mg/kg	3900	8.9	0.5	130	< 0.05	1.9	< 0.05	2.9	< 0.05	6.2	< 0.05	1.8	< 0.05	8.3	0.31
Total PAH																
Speciated Total EPA-16 PAHs	mg/kg	N/A	167	7.9	3290	< 0.80	34.1	< 0.80	39.4	< 0.80	129	< 0.80	23.3	3.85	143	4.74

Heavy Metals / Metalloids																
Arsenic	mg/kg	640	13	14	7.5	11	18	15	10	17	23	15	14	20	15	11
Boron	mg/kg	240000	0.5	0.5	0.3	0.3	0.3	0.9	1.8	1.2	1.5	1	0.8	0.3	< 0.2	0.4
Cadmium	mg/kg	190	1.7	< 0.2	1.1	< 0.2	< 0.2	< 0.2	0.8	< 0.2	< 0.2	< 0.2	1.4	< 0.2	1.1	< 0.2
Chromium (hexavalent)	mg/kg	33	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (III)	mg/kg	8600	24	35	19	25	22	37	30	32	29	37	34	29	14	29
Copper	mg/kg	68000	69	17	60	20	72	24	36	16	51	21	31	18	23	15
Lead	mg/kg	2300	190	15	98	19	450	19	75	17	580	28	230	36	93	20
Elemental Mercury	mg/kg	58	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	1.1	< 0.3	< 0.3	< 0.3
Inorganic Mercury	mg/kg	1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Methyl Mercury	mg/kg	320	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nickel	mg/kg	980	27	49	24	19	27	33	19	31	26	42	18	26	15	21
Selenium	mg/kg	12000	< 1.0	< 1.0	< 1.0	2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	mg/kg	730000	260	81	190	56	200	60	120	49	330	60	110	52	160	83

Monoaromatics																
Benzene	µg/kg	27000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	56000000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	5700000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	5900000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	6600000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	7900000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons																
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	3200	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	7800	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	2000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	9700	< 1.0	< 1.0	60	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	59000	< 2.0	< 2.0	140	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	1600000	< 8.0	< 8.0	200	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	1600000	34	< 8.0	680	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	29	< 8.0	< 8.0	< 8.0	60	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	N/A	37	< 10	1100	< 10	< 10	< 10	< 10	< 10	31	< 10	< 10	< 10	66	< 10

Petroleum Hydrocarbons																
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	26000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	56000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	3500	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	16000	< 1.0	< 1.0	16	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.4	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	36000	14	< 2.0	250	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	12	< 2.0	< 2.0	< 2.0	14	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	28000	76	< 10	550	< 10	15	< 10	< 10	< 10	70	< 10	< 10	< 10	260	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	28000	170	23	2800	< 10	28	< 10	30	< 10	150	< 10	51	< 10	530	17
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	N/A	260	30	3700	< 10	43	< 10	39	< 10	230	< 10	60	< 10	800	20

TRC Companies Ltd - Groundwater Assessment Record (DWS)	
Contract Engineer	Colin Morton
Project/Site Name	NCP Carpark, Heathrow
Project Number	460366.0000.0000

Sample Reference						BH101	BH102	BH103
Depth						-	-	-
Date Sampled						22/09/2021	22/09/2021	22/09/2021
Time Taken						-	-	-
Determinand	**Unit**	**Source**	**Screening Criteria**	**Min**	**Max**			
General Inorganics								
pH	Units	N/A	N/A	6.70	6.90	6.7	6.9	6.9
Electrical Conductivity at 20 °C	µS/cm	N/A	N/A	-	-	-	-	-
Total Cyanide	µg/l	N/A	N/A	-	-	-	-	-
Complex Cyanide	µg/l	N/A	N/A	-	-	-	-	-
Free Cyanide	µg/l	N/A	N/A	-	-	-	-	-
Thiocyanate as SCN	µg/l	N/A	N/A	-	-	-	-	-
Sulphate as SO_4	µg/l	N/A	N/A	-	-	-	-	-
Sulphate as SO_4	mg/l	N/A	N/A	49.20	172.00	49.2	172	58.3
Total Sulphur	µg/l	N/A	N/A	-	-	-	-	-
Sulphide	µg/l	N/A	N/A	-	-	-	-	-
Chloride	mg/l	US EPA	250	-	-	-	-	-
Ammonium as NH_4	µg/l	N/A	N/A	-	-	-	-	-
Dissolved Organic Carbon (DOC)	mg/l	N/A	N/A	-	-	-	-	-
Total Suspended Solids	mg/l	N/A	N/A	-	-	-	-	-
Phenols by HPLC								
Catechol	µg/l	N/A	N/A	-	-	-	-	-
Resorcinol	µg/l	N/A	N/A	-	-	-	-	-
Ethylphenol & Dimethylphenol	µg/l	N/A	N/A	-	-	-	-	-
Cresols	µg/l	N/A	N/A	-	-	-	-	-
Naphthols	µg/l	N/A	N/A	-	-	-	-	-
Isopropylphenol	µg/l	N/A	N/A	-	-	-	-	-
Phenol	µg/l	N/A	N/A	-	-	-	-	-
Trimethylphenol	µg/l	N/A	N/A	-	-	-	-	-
Total Phenols								
Total Phenols (HPLC)	µg/l	N/A	N/A	<0.16	<0.16	0	0	0
Speciated PAHs								
Naphthalene (aq)	ug/l	DWI 17	0.1	<0.16	<0.16	2.82	2.38	3.29
Acenaphthene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Fluoranthene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Anthracene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Phenanthrene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Fluorene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Chrysene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Pyrene (aq)	ug/l	DWI 17	0.01	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene (aq)	ug/l	DWI 17	0.1	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Total EPA-16 PAHs	ug/l	DWI 17	0.1	<0.16	<0.16	2.82	2.38	3.29
Heavy Metals / Metalloids								
Arsenic (dissolved)	ug/l	WSR 18	10	0.36	2.34	1.1	2.34	0.36
Boron (dissolved)	ug/l	WSR 18	1,000	150.00	1200.00	150	1200	170
Cadmium (dissolved)	ug/l	WSR 18	5	0.03	0.09	0.09	0.03	0.05
Chromium (hexavalent)	ug/l	WHO CICAD / US EPA RfD	5.4	<5.0	<5.0	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	ug/l	WSR 18	50	3.10	8.60	3.1	8.6	6.7
Copper (dissolved)	ug/l	WSR 18	2,000	1.00	2.40	2.4	1	1.2
Lead (dissolved)	ug/l	WSR 18	10	<0.2	0.00	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	ug/l	WSR 18	1	<0.05	<0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	ug/l	WSR 18	20	4.90	7.10	4.9	7.1	6.7
Selenium (dissolved)	ug/l	WSR 18	10	0.70	3.80	0.7	3.8	0.9
Zinc (dissolved)	ug/l	US EPA	5000	5.10	11.00	5.1	5.7	11
Monoaromatics								
Benzene	ug/l	PHG 17	10	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Toluene	ug/l	PHG 17	700	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	ug/l	PHG 17	300	<1.0	<1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	ug/l	PHG 17	500	<1.0	<1.0	< 1.0	< 1.0	< 1.0
o-xylene	ug/l	PHG 17	500	<1.0	<1.0	< 1.0	< 1.0	< 1.0
MTBE	ug/l	N/A	N/A	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
Aliphatic >C5 - C6	ug/l	PHG 17	15000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C6 - C8	ug/l	PHG 17	15000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C8 - C10	ug/l	PHG 17	300	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C10 - C12	ug/l	PHG 17	300	2300.00	3800.00	3300	2300	3800
Aliphatic >C12 - C16	ug/l	PHG 17	300	270.00	420.00	400	270	420
Aliphatic >C16 - C21	ug/l	N/A	N/A	<10	<10	< 10	< 10	< 10
Aliphatic >C21 - C35	ug/l	N/A	N/A	<10	<10	< 10	< 10	< 10
Aliphatic (C5 - C35)	ug/l	N/A	N/A	2500.00	4300.00	3700	2500	4300
Petroleum Hydrocarbons								
Aromatic >C5 - C7	ug/l	PHG 17	10	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aromatic >C7 - C8	ug/l	PHG 17	700	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aromatic >C8 - C10	ug/l	PHG 17	500	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aromatic >C10 - C12	ug/l	PHG 17	90	660.00	990.00	990	660	990
Aromatic >C12 - C16	ug/l	PHG 17	90	150.00	230.00	200	150	230
Aromatic >C16 - C21	ug/l	PHG 17	90	<10	<10	< 10	< 10	< 10
Aromatic >C21 - C35	ug/l	PHG 17	90	<10	<10	< 10	< 10	< 10
Total >C5 - C35	ug/l	N/A	N/A	810.00	1200.00	1200	810	1200

TRC Companies Ltd - Groundwater Assessment Record (SoBRA Commercial)	
Contract Engineer	Colin Morton
Project/Site Name	NCP Flightpath, Heathrow
Project Number	460336.0000.0000

Sample Reference	BH101	BH102	BH103
Depth	-	-	-
Date Sampled	22/09/2021	22/09/2021	22/09/2021
Time Taken	-	-	-

Determinand	Unit	Source	Screening Criteria	Min	Max			
General Inorganics								
pH	Units	N/A	N/A	6.70	6.90	6.7	6.9	6.9
Electrical Conductivity at 20 °C	µS/cm	N/A	N/A	-	-	-	-	-
Total Cyanide	µg/l	N/A	N/A	-	-	-	-	-
Complex Cyanide	µg/l	N/A	N/A	-	-	-	-	-
Free Cyanide	µg/l	N/A	N/A	-	-	-	-	-
Thiocyanate as SCN	µg/l	N/A	N/A	-	-	-	-	-
Sulphate as SO_4	µg/l	N/A	N/A	-	-	-	-	-
Sulphate as SO_4	mg/l	N/A	N/A	49.20	172.00	49.2	172	58.3
Total Sulphur	µg/l	N/A	N/A	-	-	-	-	-
Sulphide	µg/l	N/A	N/A	-	-	-	-	-
Chloride	mg/l	N/A	N/A	-	-	-	-	-
Ammonium as NH_4	µg/l	N/A	N/A	-	-	-	-	-
Dissolved Organic Carbon (DOC)	mg/l	N/A	N/A	-	-	-	-	-
Total Suspended Solids	mg/l	N/A	N/A	-	-	-	-	-
Phenols by HPLC								
Catechol	µg/l	N/A	N/A	-	-	-	-	-
Resorcinol	µg/l	N/A	N/A	-	-	-	-	-
Ethylphenol & Dimethylphenol	µg/l	N/A	N/A	-	-	-	-	-
Cresols	µg/l	N/A	N/A	-	-	-	-	-
Naphthols	µg/l	N/A	N/A	-	-	-	-	-
Isopropylphenol	µg/l	N/A	N/A	-	-	-	-	-
Phenol	µg/l	N/A	N/A	-	-	-	-	-
Trimethylphenol	µg/l	N/A	N/A	-	-	-	-	-
Total Phenols								
Total Phenols (HPLC)	µg/l	N/A	N/A	<0.16	<0.16	0	0	0
Speciated PAHs								
Naphthalene (aq)	ug/l	SOBRA 17	23000	2.38	3.29	2.82	2.38	3.29
Acenaphthene (aq)	ug/l	SOBRA 17	15000000	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene (aq)	ug/l	SOBRA 17	20000000	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Fluoranthene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Anthracene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Phenanthrene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Fluorene (aq)	ug/l	SOBRA 17	18000000	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Chrysene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Pyrene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene (aq)	ug/l	N/A	N/A	<0.01	<0.01	< 0.01	< 0.01	< 0.01
Total EPA-16 PAHs	ug/l	N/A	N/A	2.38	3.29	2.82	2.38	3.29
Heavy Metals / Metalloids								
Arsenic (dissolved)	ug/l	N/A	N/A	0.36	2.34	1.1	2.34	0.36
Boron (dissolved)	ug/l	N/A	N/A	150.00	1200.00	150	1200	170
Cadmium (dissolved)	ug/l	N/A	N/A	0.03	0.09	0.09	0.03	0.05
Chromium (hexavalent)	ug/l	N/A	N/A	<5.0	<5.0	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	ug/l	N/A	N/A	3.10	8.60	3.1	8.6	6.7
Copper (dissolved)	ug/l	N/A	N/A	1.00	2.40	2.4	1	1.2
Lead (dissolved)	ug/l	N/A	N/A	<0.2	0.00	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	ug/l	N/A	N/A	<0.05	<0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	ug/l	N/A	N/A	4.90	7.10	4.9	7.1	6.7
Selenium (dissolved)	ug/l	N/A	N/A	0.70	3.80	0.7	3.8	0.9
Zinc (dissolved)	ug/l	N/A	N/A	5.10	11.00	5.1	5.7	11
Monoaromatics								
Benzene	ug/l	SOBRA 17	20000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Toluene	ug/l	SOBRA 17	230000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	ug/l	SOBRA 17	960000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	ug/l	SOBRA 17	94000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
o-xylene	ug/l	SOBRA 17	1100000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
MTBE	ug/l	SOBRA 17	7800000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
Aliphatic >C5 - C6	ug/l	SOBRA 17	190000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C6 - C8	ug/l	SOBRA 17	150000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C8 - C10	ug/l	SOBRA 17	5700	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C10 - C12	ug/l	SOBRA 17	3600	2300.00	3800.00	3300	2300	3800
Aliphatic >C12 - C16	ug/l	N/A	N/A	270.00	420.00	400	270	420
Aliphatic >C16 - C21	ug/l	N/A	N/A	<10	<10	< 10	< 10	< 10
Aliphatic >C21 - C35	ug/l	N/A	N/A	<10	<10	< 10	< 10	< 10
Aliphatic (C5 - C35)	ug/l	N/A	N/A	2500.00	4300.00	3700	2500	4300
Petroleum Hydrocarbons								
Aromatic >C5 - C7	ug/l	SOBRA 17	20000000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aromatic >C7 - C8	ug/l	SOBRA 17	21000000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aromatic >C8 - C10	ug/l	SOBRA 17	190000	<1.0	<1.0	< 1.0	< 1.0	< 1.0
Aromatic >C10 - C12	ug/l	SOBRA 17	660000	660.00	990.00	990	660	990
Aromatic >C12 - C16	ug/l	SOBRA 17	3700000	150.00	230.00	200	150	230
Aromatic >C16 - C21	ug/l	N/A	N/A	<10	<10	< 10	< 10	< 10
Aromatic >C21 - C35	ug/l	N/A	N/A	<10	<10	< 10	< 10	< 10
Total >C5 - C35	ug/l	N/A	N/A	810.00	1200.00	1200	810	1200

TRC Companies Ltd - Chemical Assessment Record	
Contract Engineer	Nyemh Johnson
Project/Site Name	NCP Heathrow
Project Number	460336.0001.0000

Sample Reference						BH101	BH103	BH201	BH202	BH204	
Depth						None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled						16/11/2021	16/11/2021	17/11/2021	17/11/2021	17/11/2021	
Time Taken						None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	
Determinand	**Unit**	**Source**	**Screening Criteria**	**Min**	**Max**						
General Inorganics											
pH	Units	N/A	N/A	6.60	7.70	6.8	6.6	7.2	6.8	7.7	
Electrical Conductivity at 20 °C	µS/cm	N/A	N/A	0	0	0	0	0	0	0	
Total Cyanide	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Complex Cyanide	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Free Cyanide	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Thiocyanate as SCN	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Sulphate as SO_4	µg/l	N/A	N/A	0	0	0	0	0	0	0	
Sulphate as SO_4	mg/l	N/A	N/A	47.00	76.90	47	50.3	70.6	76.9	72.4	
Total Sulphur	µg/l	N/A	N/A	0	0	0	0	0	0	0	
Sulphide	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Chloride	mg/l	US EPA	250	0.00	0.00	0	0	0	0	0	
Ammonium as NH_4	µg/l	N/A	N/A	0	0	0	0	0	0	0	
Dissolved Organic Carbon (DOC)	mg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Total Suspended Solids	mg/l	N/A	N/A	0	0	0	0	0	0	0	
Phenols by HPLC											
Catechol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Resorcinol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Ethylphenol & Dimethylphenol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Cresols	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Naphthols	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Isopropylphenol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Phenol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Trimethylphenol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Total Phenols											
Total Phenols (HPLC)	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0	
Speciated PAHs											
Naphthalene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthylene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Fluoranthene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Anthracene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Phenanthrene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Fluorene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Chrysene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Pyrene (aq)	ug/l	DWI 17	0.01	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)anthracene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(k)fluoranthene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)pyrene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Dibenzo(a,h)anthracene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(g,h,i)perylene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene (aq)	ug/l	DWI 17	0.1	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Total EPA-16 PAHs	ug/l	DWI 17	0.1	0.00	0.00	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	
Heavy Metals / Metalloids											
Arsenic (dissolved)	ug/l	WSR 18	10	0.32	1.20	0.95	0.32	0.35	0.49	1.2	
Boron (dissolved)	ug/l	WSR 18	1,000	100.00	170.00	140	160	170	150	100	
Cadmium (dissolved)	ug/l	WSR 18	5	0.02	0.08	0.08	0.02	0.06	0.05	< 0.02	
Chromium (hexavalent)	ug/l	VHO CICAD / US EPA Rfd	5.4	0.00	0.00	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Chromium (dissolved)	ug/l	WSR 18	50	1.60	3.10	3	3.1	2.6	2.9	1.6	
Copper (dissolved)	ug/l	WSR 18	2,000	1.20	4.80	3.6	4.8	3.2	2.3	1.2	
Lead (dissolved)	ug/l	WSR 18	10	0.00	0.00	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Mercury (dissolved)	ug/l	WSR 18	1	0.00	0.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Nickel (dissolved)	ug/l	WSR 18	20	2.60	6.00	5.1	3	6	4	2.6	
Selenium (dissolved)	ug/l	WSR 18	10	0.60	1.20	1.2	1.2	0.7	0.6	< 0.6	
Zinc (dissolved)	ug/l	US EPA	5000	3.70	10.00	10	10	7	5.2	3.7	
Monoaromatics											
Benzene	ug/l	PHG 17	10	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	ug/l	PHG 17	700	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	ug/l	PHG 17	300	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	ug/l	PHG 17	500	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	ug/l	PHG 17	500	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE	ug/l	N/A	N/A	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons											
Aliphatic >C5 - C6	ug/l	PHG 17	15000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic >C6 - C8	ug/l	PHG 17	15000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic >C8 - C10	ug/l	PHG 17	300	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic >C10 - C12	ug/l	PHG 17	300	0.00	0.00	< 10	< 10	< 10	< 10	< 10	
Aliphatic >C12 - C16	ug/l	PHG 17	300	0.00	0.00	< 10	< 10	< 10	< 10	< 10	
Aliphatic >C16 - C21	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10	
Aliphatic >C21 - C35	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10	
Aliphatic (C5 - C35)	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10	
Petroleum Hydrocarbons											
Aromatic >C5 - C7	ug/l	PHG 17	10	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic >C7 - C8	ug/l	PHG 17	700	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic >C8 - C10	ug/l	PHG 17	500	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic >C10 - C12	ug/l	PHG 17	90	0.00	0.00	< 10	< 10	< 10	< 10	< 10	
Aromatic >C12 - C16	ug/l	PHG 17	90	0.00	0.00	< 10	< 10	< 10	< 10	< 10	
Aromatic >C16 - C21	ug/l	PHG 17	90	0.00	0.00	< 10	< 10	< 10	< 10	< 10	
Aromatic >C21 - C35	ug/l	PHG 17	90	0.00	0.00	< 10	< 10	< 10	< 10	< 10	
Total >C5 - C35	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10	

TRC Companies Ltd - Chemical Assessment Record	
Contract Engineer	Nyemh Johnson
Project/Site Name	NCP Heathrow
Project Number	460336.0001.0000

Sample Reference	BH101	BH103	BH201	BH202	BH204
Depth	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	16/11/2021	16/11/2021	17/11/2021	17/11/2021	17/11/2021
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied

Determinand	Unit	Source	Screening Criteria	Min	Max					
General Inorganics										
pH	Units	N/A	N/A	6.60	7.70	6.8	6.6	7.2	6.8	7.7
Electrical Conductivity at 20 °C	µS/cm	N/A	N/A	0	0	0	0	0	0	0
Total Cyanide	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Complex Cyanide	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Free Cyanide	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Thiocyanate as SCN	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Sulphate as SO_4	µg/l	N/A	N/A	0	0	0	0	0	0	0
Sulphate as SO_4	mg/l	N/A	N/A	47.00	76.90	47	50.3	70.6	76.9	72.4
Total Sulphur	µg/l	N/A	N/A	0	0	0	0	0	0	0
Sulphide	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Chloride	mg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Ammonium as NH_4	µg/l	N/A	N/A	0	0	0	0	0	0	0
Dissolved Organic Carbon (DOC)	mg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Total Suspended Solids	mg/l	N/A	N/A	0	0	0	0	0	0	0
Phenols by HPLC										
Catechol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Resorcinol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Ethylphenol & Dimethylphenol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Cresols	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Naphthols	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Isopropylphenol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Phenol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Trimethylphenol	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Total Phenols										
Total Phenols (HPLC)	µg/l	N/A	N/A	0.00	0.00	0	0	0	0	0
Speciated PAHs										
Naphthalene (aq)	ug/l	SOBRA 17	23000	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene (aq)	ug/l	SOBRA 17	15000000	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene (aq)	ug/l	SOBRA 17	20000000	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene (aq)	ug/l	SOBRA 17	18000000	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene (aq)	ug/l	N/A	N/A	0.00	0.00	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total EPA-16 PAHs	ug/l	N/A	N/A	0.00	0.00	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids										
Arsenic (dissolved)	ug/l	N/A	N/A	0.32	1.20	0.95	0.32	0.35	0.49	1.2
Boron (dissolved)	ug/l	N/A	N/A	100.00	170.00	140	160	170	150	100
Cadmium (dissolved)	ug/l	N/A	N/A	0.02	0.08	0.08	0.02	0.06	0.05	< 0.02
Chromium (hexavalent)	ug/l	N/A	N/A	0.00	0.00	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	ug/l	N/A	N/A	1.60	3.10	3	3.1	2.6	2.9	1.6
Copper (dissolved)	ug/l	N/A	N/A	1.20	4.80	3.6	4.8	3.2	2.3	1.2
Lead (dissolved)	ug/l	N/A	N/A	0.00	0.00	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	ug/l	N/A	N/A	0.00	0.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	ug/l	N/A	N/A	2.60	6.00	5.1	3	6	4	2.6
Selenium (dissolved)	ug/l	N/A	N/A	0.60	1.20	1.2	1.2	0.7	0.6	< 0.6
Zinc (dissolved)	ug/l	N/A	N/A	3.70	10.00	10	10	7	5.2	3.7
Monoaromatics										
Benzene	ug/l	SOBRA 17	20000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	ug/l	SOBRA 17	230000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	ug/l	SOBRA 17	960000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	ug/l	SOBRA 17	94000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	ug/l	SOBRA 17	1100000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE	ug/l	SOBRA 17	7800000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons										
Aliphatic >C5 - C6	ug/l	SOBRA 17	190000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C6 - C8	ug/l	SOBRA 17	150000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C8 - C10	ug/l	SOBRA 17	5700	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C10 - C12	ug/l	SOBRA 17	3600	0.00	0.00	< 10	< 10	< 10	< 10	< 10
Aliphatic >C12 - C16	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10
Aliphatic >C16 - C21	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10
Aliphatic >C21 - C35	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C35)	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons										
Aromatic >C5 - C7	ug/l	SOBRA 17	20000000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C7 - C8	ug/l	SOBRA 17	21000000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C8 - C10	ug/l	SOBRA 17	190000	0.00	0.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C10 - C12	ug/l	SOBRA 17	660000	0.00	0.00	< 10	< 10	< 10	< 10	< 10
Aromatic >C12 - C16	ug/l	SOBRA 17	3700000	0.00	0.00	< 10	< 10	< 10	< 10	< 10
Aromatic >C16 - C21	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10
Aromatic >C21 - C35	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10
Total >C5 - C35	ug/l	N/A	N/A	0.00	0.00	< 10	< 10	< 10	< 10	< 10

Annex G: Laboratory Geotechnical Data

LABORATORY REPORT

4043

Contract Number: PSL21/7376

Report Date: 28 September 2021

Client's Reference: 435101

Client Name: TRC Companies Ltd
20 Red Lion Street
London
WC1R 4PQ

For the attention of: Troy Randall

Contract Title: NCP Car Park, Heathrow

Date Received: 14/9/2021
Date Commenced: 14/9/2021
Date Completed: 28/9/2021

Notes: Opinions and Interpretations are outside the UKAS Accreditation

Checked and Approved Signatories:

A Watkins (Director)	R Berriman (Quality Manager)	S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)	S Eyre (Senior Technician)	T Watkins (Senior Technician)

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e-mail: rberriman@prosoils.co.uk
awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH101		B	2.50		Brown very sandy GRAVEL.
BH101		U100	5.00		Stiff brown slightly gravelly sandy CLAY.
BH101		D	5.50		Brown slightly sandy CLAY.
BH101		U100	10.00		Stiff brown slightly sandy CLAY.
BH102		B	1.40		Brown gravelly sandy CLAY.
BH102		B	3.00		Brown very sandy GRAVEL.
BH102		D	5.00		Brown slightly gravelly slightly sandy CLAY.
BH102		U100	9.00		Stiff brown slightly sandy CLAY.
BH103		D	1.50		Brown gravelly sandy CLAY.
BH103		B	3.50		Brown slightly sandy GRAVEL.
BH103		U100	6.50		Firm brown slightly gravelly sandy CLAY.
BH103		D	7.50		Brown slightly sandy CLAY.
BH103		U100	9.00		Stiff brown slightly sandy CLAY.
WS101		D	1.30		Brown very gravelly very sandy CLAY.
WS104		D	1.20		Brown slightly gravelly sandy CLAY.
WS104		D	1.80		Brown very sandy clayey silty GRAVEL.
WS107		D	1.30		Brown slightly gravelly sandy CLAY.
WS107		B	2.10		Brown very sandy slightly clayey silty GRAVEL.

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
BH101		D	5.50		28			57	25	32	100	High Plasticity CH
BH102		B	1.40		23			41	19	22	87	Intermediate Plasticity CI
BH102		D	5.00		26			60	26	34	95	High Plasticity CH
BH103		D	1.50		14			33	17	16	87	Low Plasticity CL
BH103		D	7.50		29			67	28	39	100	High Plasticity CH
WS101		D	1.30		12			35	18	17	69	Intermediate Plasticity CI
WS104		D	1.20		23			43	20	23	94	Intermediate Plasticity CI
WS107		D	1.30		23			47	22	25	97	Intermediate Plasticity CI

SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

UKAS TESTING 4043

PSL Professional Soils Laboratory

NCP Carpark, Heathrow

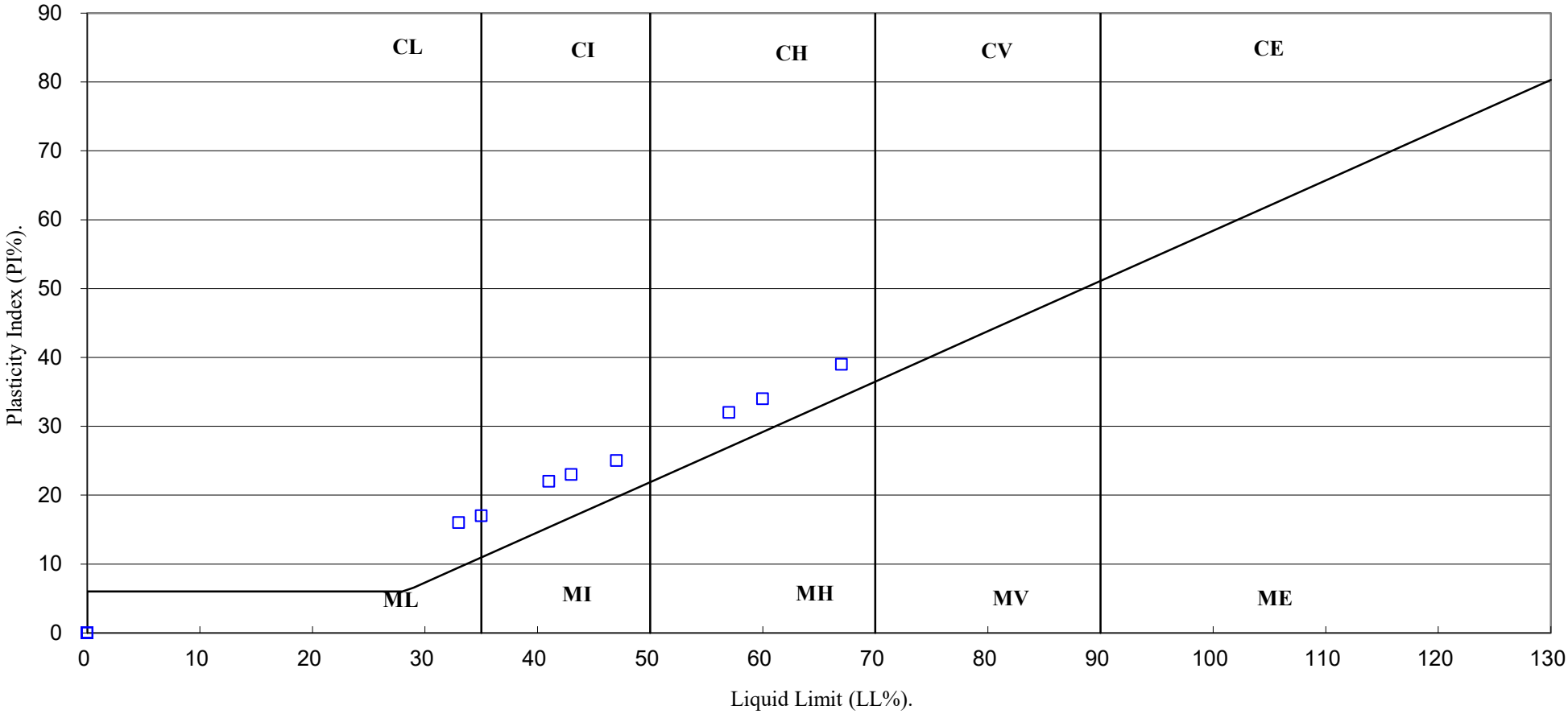
Contract No:

PSL21/7376

Client Ref:

435101

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



UKAS TESTING 4043	PSL Professional Soils Laboratory	NCP Carpark, Heathrow	Contract No: PSL21/7376 Client Ref: 435101

PARTICLE SIZE DISTRIBUTION TEST

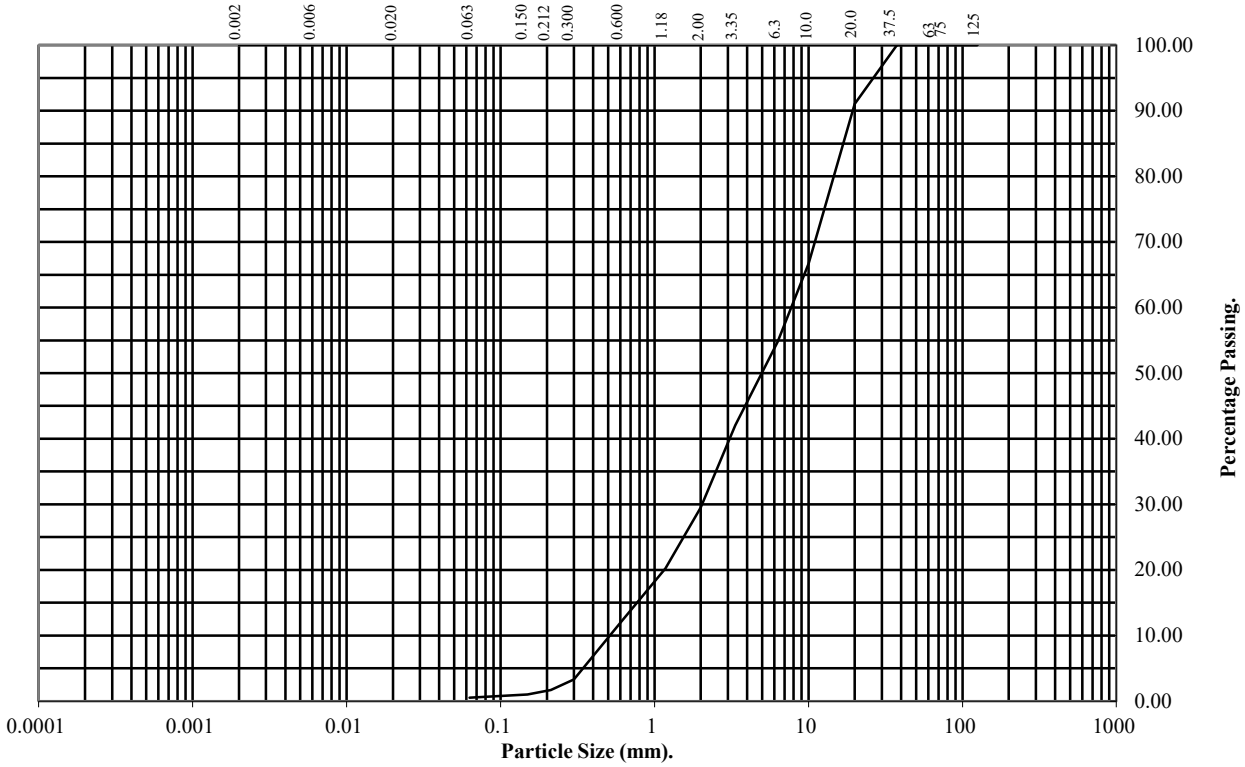
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH101** **Top Depth (m):** **2.50**

Sample Number: **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	91
10	67
6.3	55
3.35	42
2	30
1.18	20
0.6	12
0.3	3
0.212	2
0.15	1
0.063	1

Soil Fraction	Total Percentage
Cobbles	0
Gravel	70
Sand	29
Silt/Clay	1

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

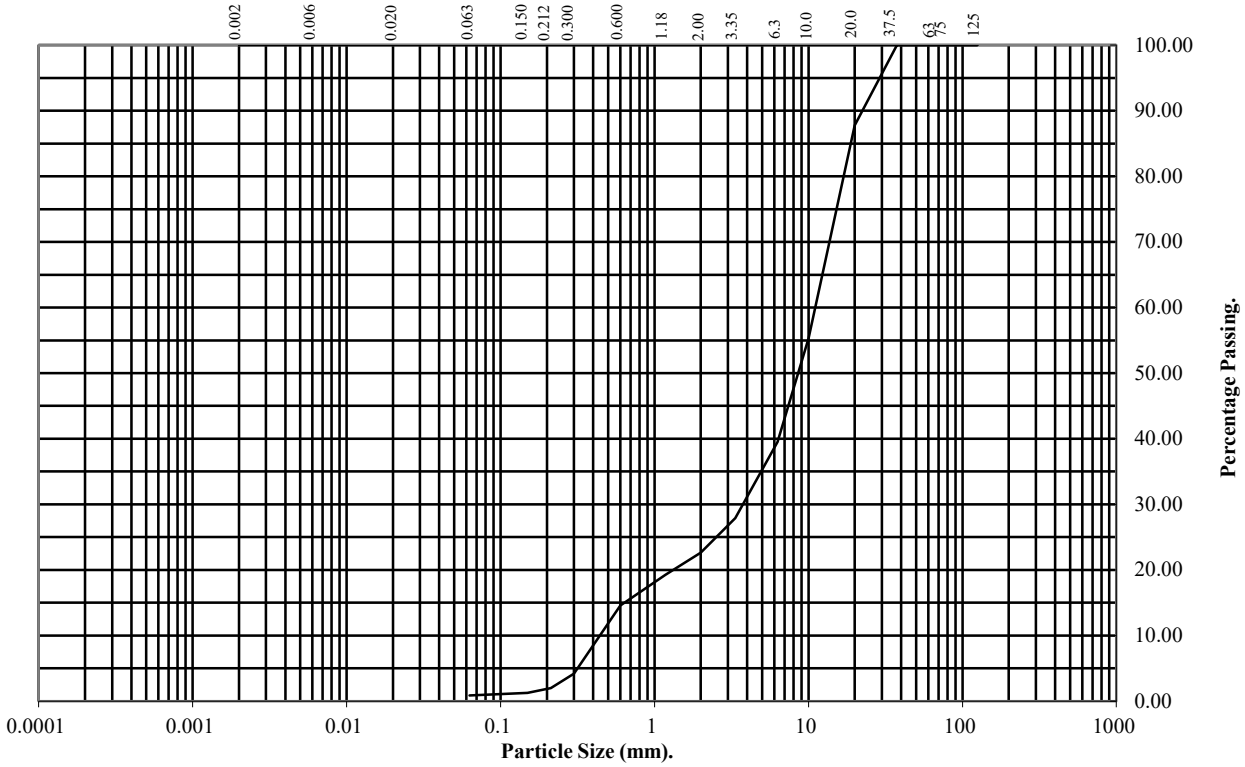
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH102 **Top Depth (m):** 3.00

Sample Number: **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	88
10	55
6.3	40
3.35	28
2	23
1.18	19
0.6	15
0.3	4
0.212	2
0.15	1
0.063	1

Soil Fraction	Total Percentage
Cobbles	0
Gravel	77
Sand	22
Silt/Clay	1

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

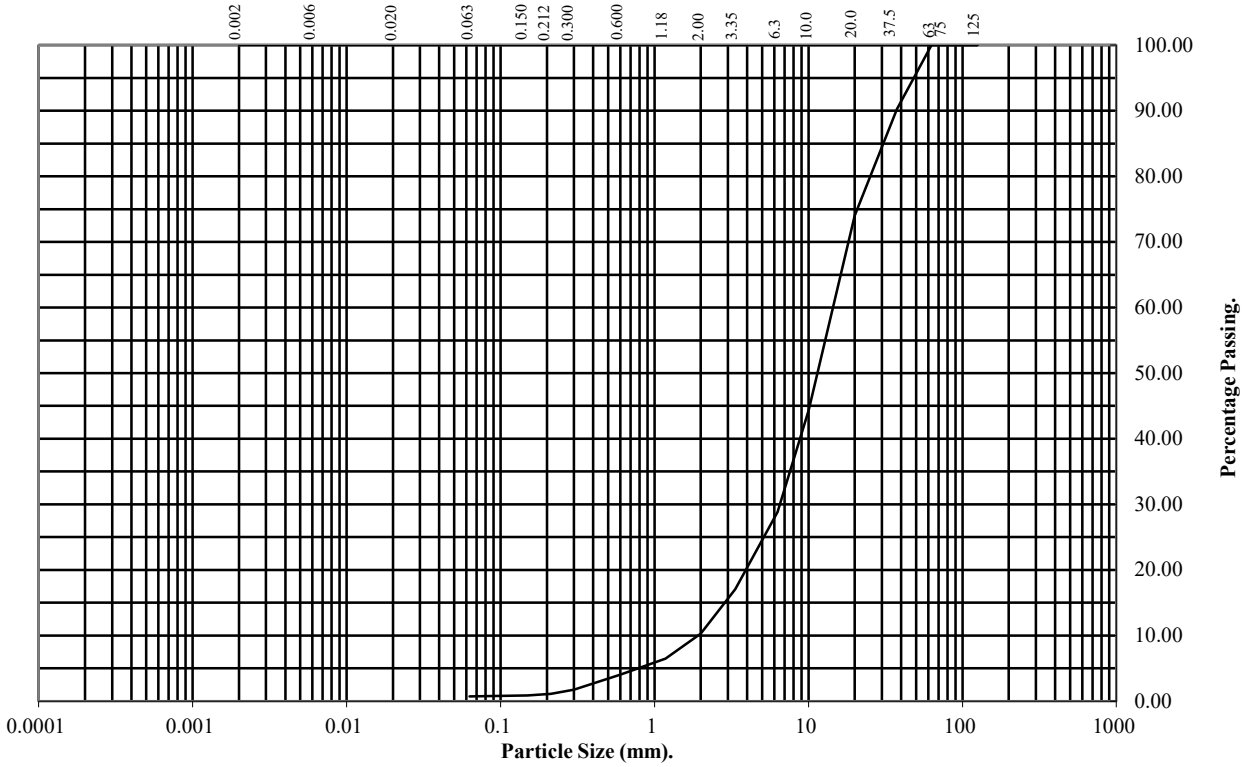
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH103** **Top Depth (m):** **3.50**

Sample Number: **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	90
20	74
10	44
6.3	29
3.35	17
2	10
1.18	6
0.6	4
0.3	2
0.212	1
0.15	1
0.063	1

Soil Fraction	Total Percentage
Cobbles	0
Gravel	90
Sand	9
Silt/Clay	1

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

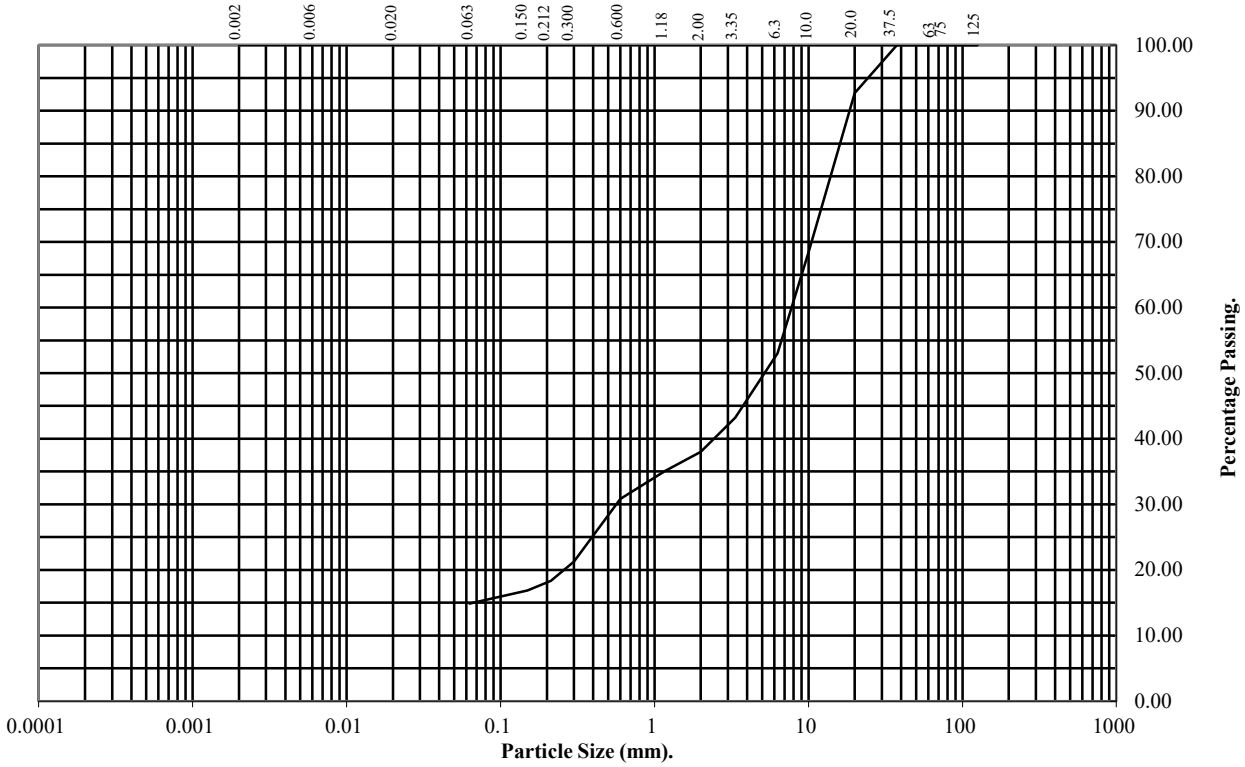
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **WS104** **Top Depth (m):** **1.80**

Sample Number: **Base Depth(m):**

Sample Type: **D**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	93
10	68
6.3	53
3.35	43
2	38
1.18	35
0.6	31
0.3	21
0.212	18
0.15	17
0.063	15

Soil Fraction	Total Percentage
Cobbles	0
Gravel	62
Sand	23
Silt/Clay	15

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

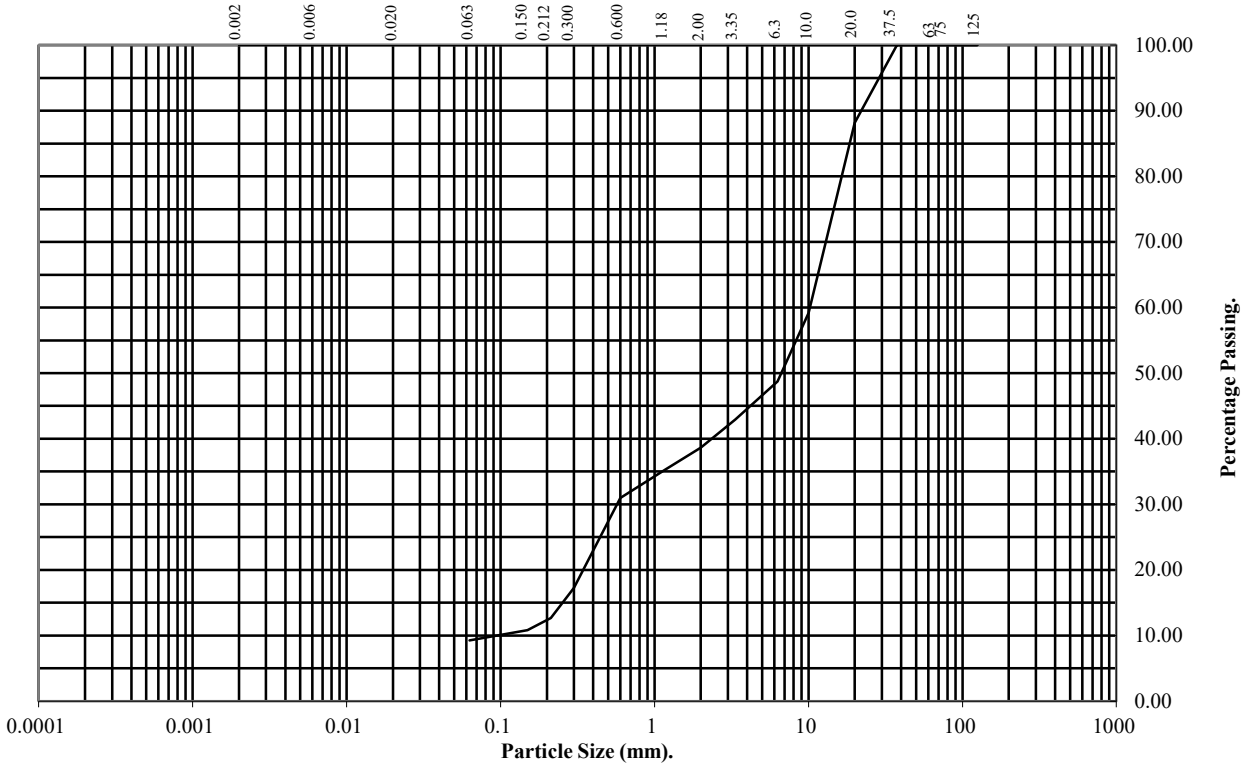
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **WS107** **Top Depth (m):** **2.10**

Sample Number: **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	88
10	59
6.3	49
3.35	43
2	39
1.18	35
0.6	31
0.3	17
0.212	13
0.15	11
0.063	9

Soil Fraction	Total Percentage
Cobbles	0
Gravel	61
Sand	30
Silt/Clay	9

Remarks:

See Summary of Soil Descriptions

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

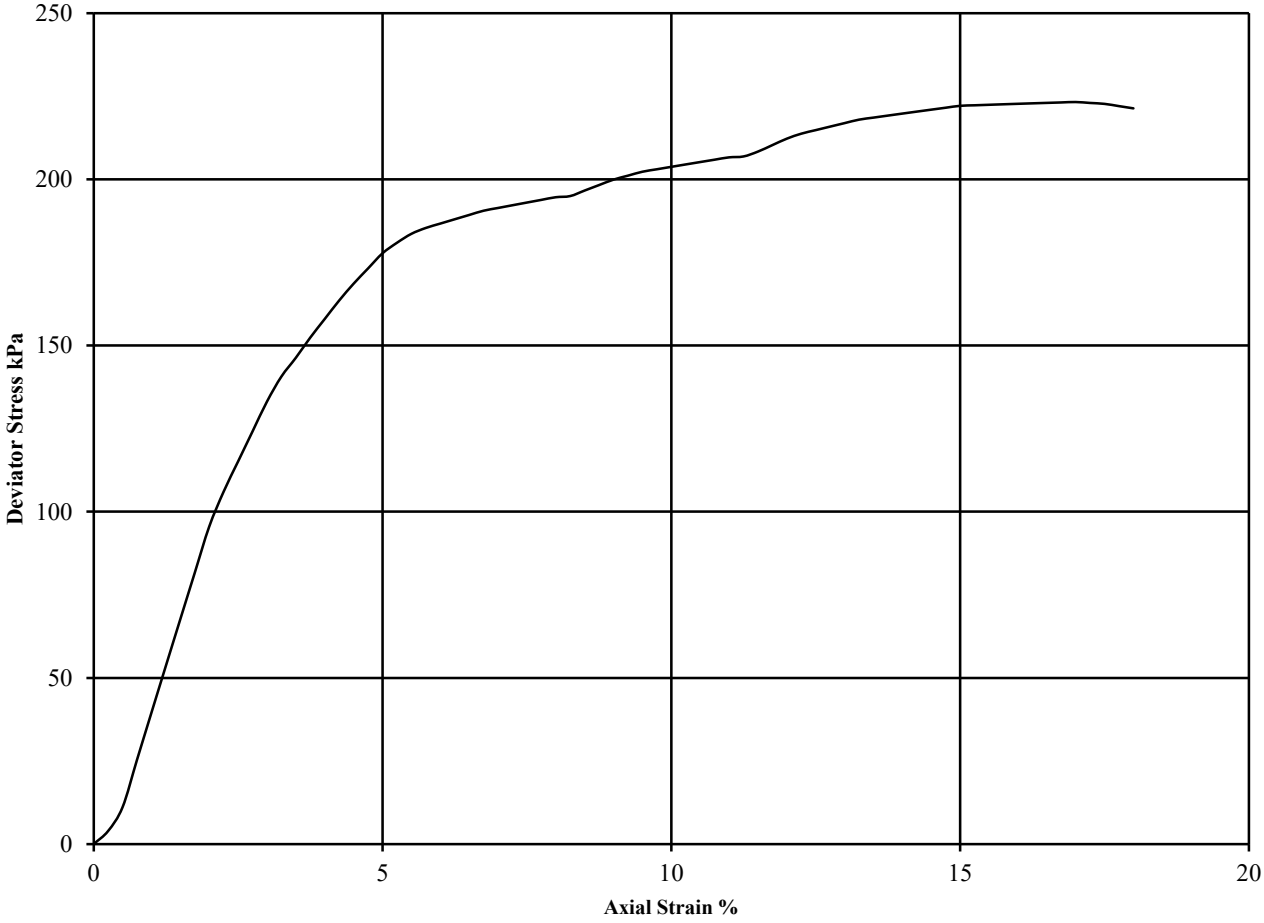
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number: **BH101** **Top Depth (m):** **5.00**

Sample Number: **Base Depth (m):**

Sample Type **U100**



Diameter (mm):		102	Height (mm):		204	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	24	2.09	1.68	50	195	97	8.3		0.36 0.35 0.34
				100	207	103	11.3		See summary of soil descriptions
				200	223	112	17.0	Plastic	

UKAS TESTING 4043

PSL Professional Soils Laboratory

NCP Carpark, Heathrow

Contract No: PSL21/7376

Client Ref: 435101

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

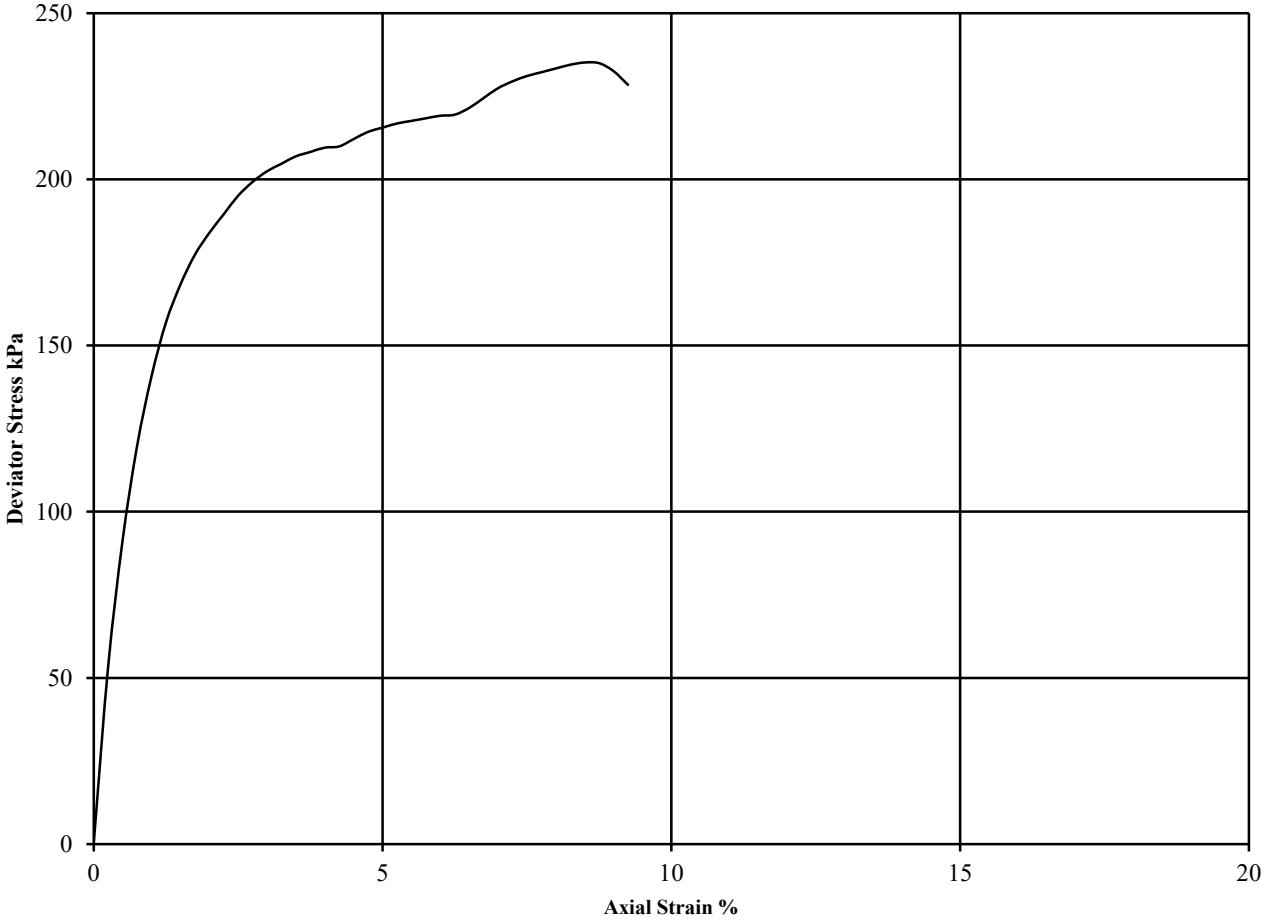
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number: **BH101** **Top Depth (m):** **10.00**

Sample Number: **Base Depth (m):**

Sample Type **U100**



Diameter (mm):		102	Height (mm):		204	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	27	2.02	1.60	100	210	105	4.3		0.36 0.36 0.36
				200	219	110	6.3		See summary of soil descriptions
				400	235	118	8.5	Plastic	

UKAS TESTING 4043

PSL Professional Soils Laboratory

NCP Carpark, Heathrow

Contract No: PSL21/7376

Client Ref: 435101

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

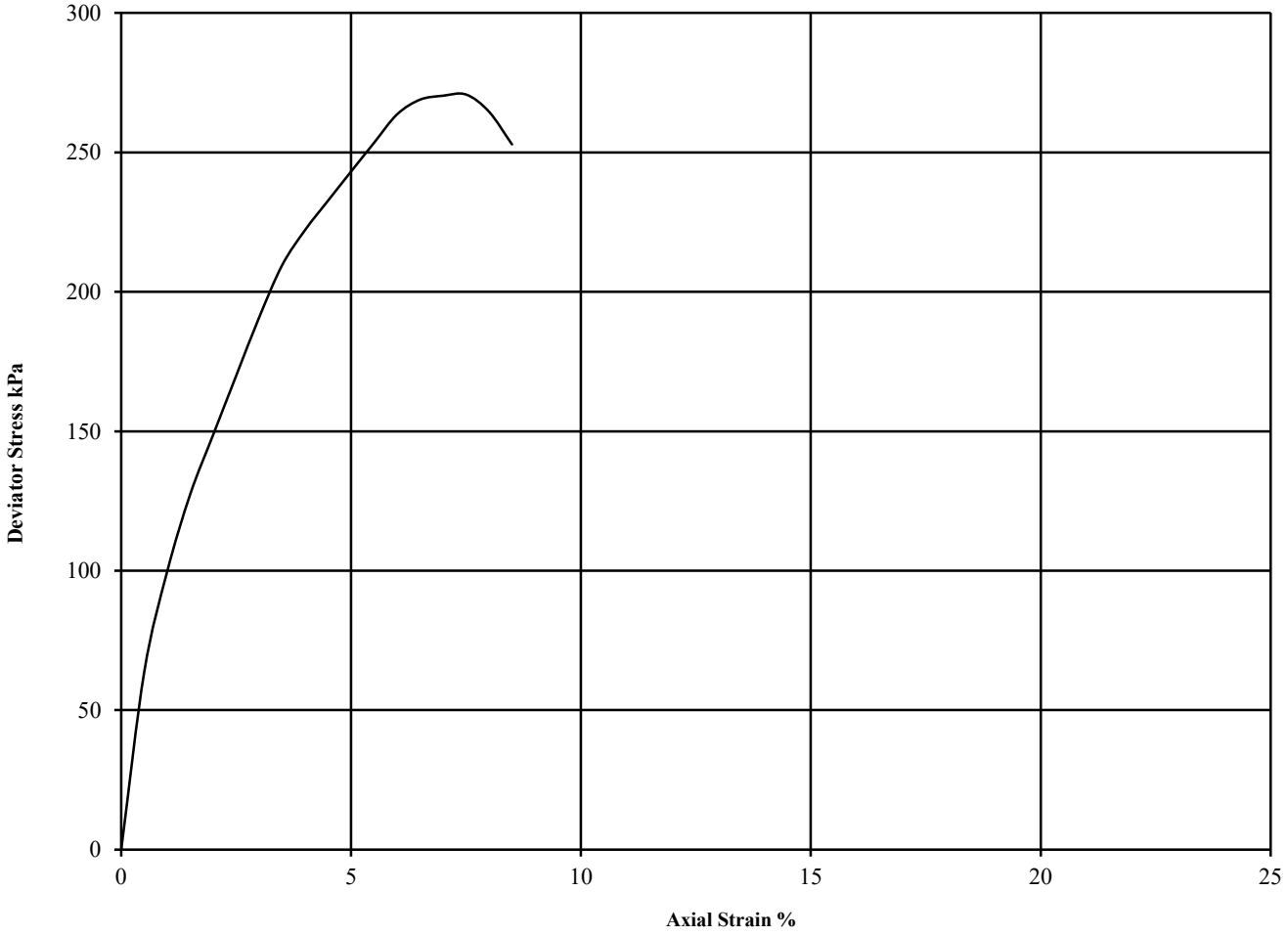
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: **BH102** **Top Depth (m):** **9.00**

Sample Number: **Base Depth (m):**

Sample Type **U100**



Diameter (mm):		102	Height (mm):		204	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.36
1	30	2.02	1.56	90	271	135	7.5	Brittle	See summary of soil descriptions

*** Single stage test due to early brittle failure**

UKAS TESTING 4043	PSL Professional Soils Laboratory	**NCP Carpark, Heathrow**	**Contract No:** PSL21/7376 **Client Ref:** 435101

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

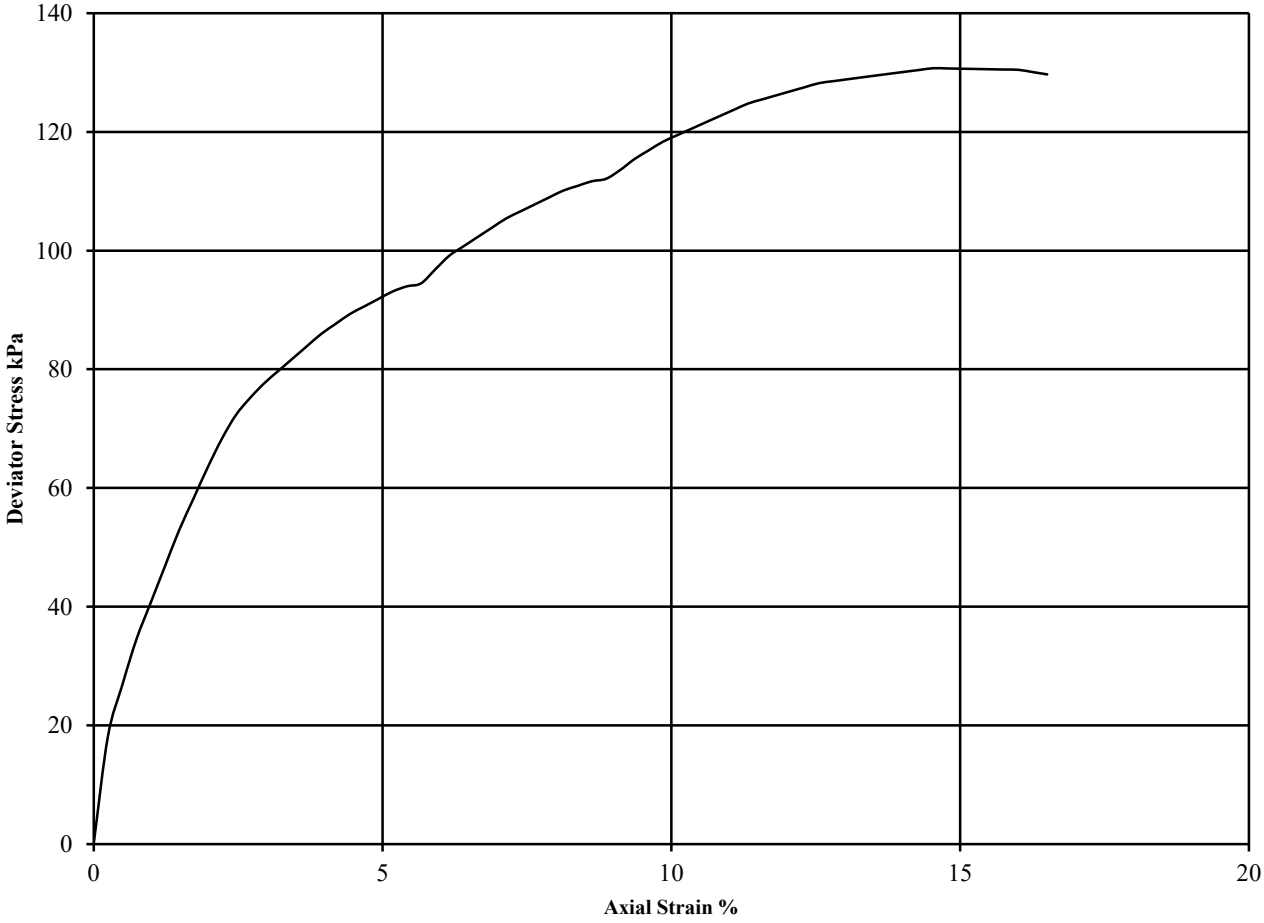
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number: **BH103** **Top Depth (m):** **6.50**

Sample Number: **Base Depth (m):**

Sample Type **U100**



Diameter (mm):		102	Height (mm):		207	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	25	2.03	1.63	70	94	47	5.7		0.36 0.36 0.34
				140	112	56	8.9		See summary of soil descriptions
				280	131	65	14.5	Plastic	

UKAS TESTING 4043

PSL Professional Soils Laboratory

NCP Carpark, Heathrow

Contract No: PSL21/7376

Client Ref: 435101

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

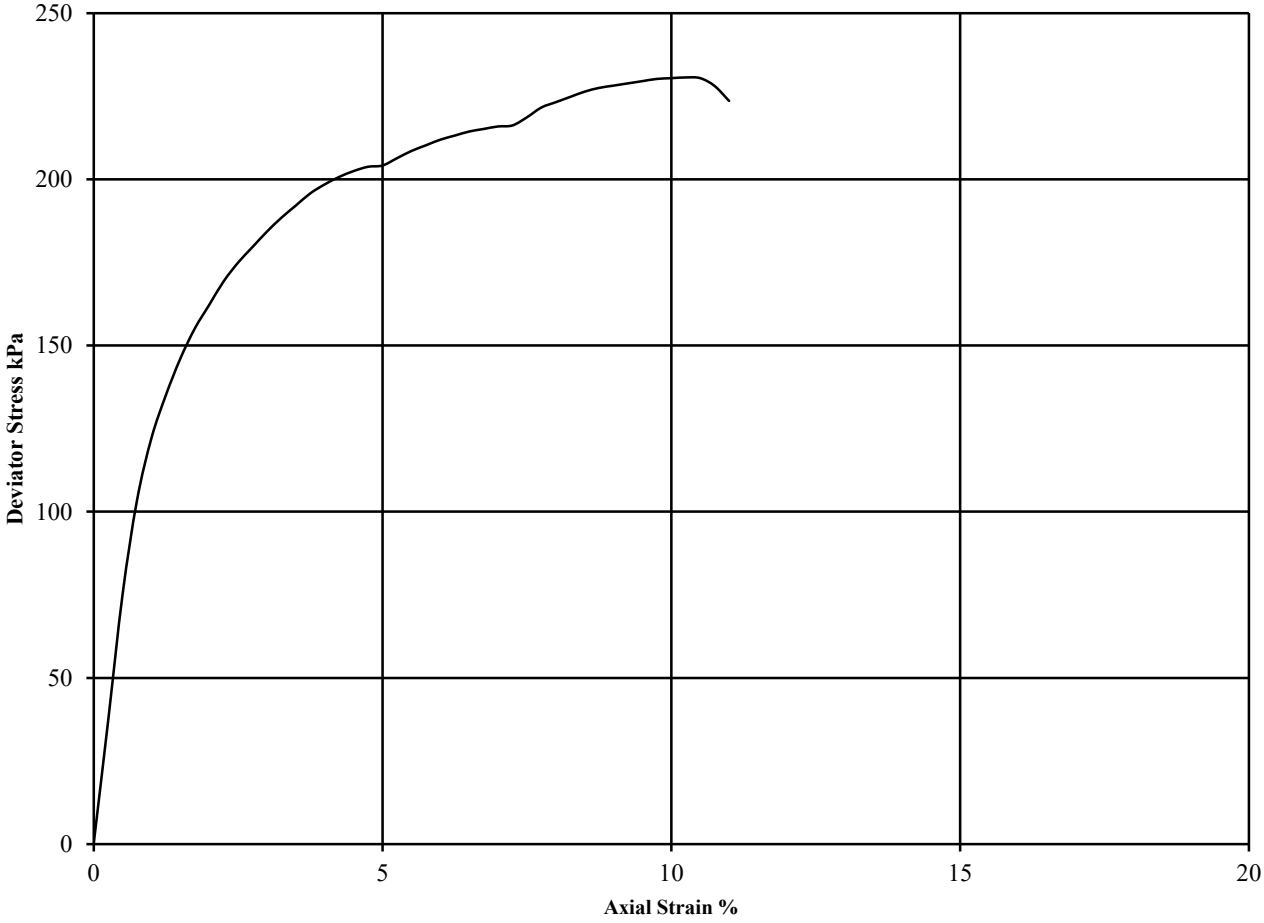
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number: BH103 **Top Depth (m):** 9.00

Sample Number: **Base Depth (m):**

Sample Type U100



Diameter (mm):		102	Height (mm):		204	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	26	2.04	1.61	90	204	102	5.0		0.36 0.36 0.35
				180	216	108	7.3		See summary of soil descriptions
				360	231	115	10.3	Plastic	

2531

ANALYTICAL TEST REPORT

Contract no: 100735

Contract name: NCP Carpark, Heathrow

Client reference: PSL21/7376

Clients name: Professional Soils Laboratory

Clients address: 5/7 Hexthorpe Road
Doncaster
DN4 0AR

Samples received: 23 September 2021

Analysis started: 23 September 2021

Analysis completed: 30 September 2021

Report issued: 30 September 2021

Notes:
Opinions and interpretations expressed herein are outside the UKAS accreditation scope.
Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.
All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.
Methods, procedures and performance data are available on request.
Results reported herein relate only to the material supplied to the laboratory.
This report shall not be reproduced except in full, without prior written approval.
Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

Key:
U UKAS accredited test
M MCERTS & UKAS accredited test
$ Test carried out by an approved subcontractor
I/S Insufficient sample to carry out test
N/S Sample not suitable for testing

Approved by:
Rachael Burton
Customer Support Squad Leader

Chemtech Environmental Limited

SOILS

Lab number			100735-1	100735-2	100735-3	100735-4	100735-5	100735-6
Sample id			BH101	BH102	BH103	BH103	WS101	WS102
Depth (m)			5.50	9.50	6.10	10.00	0.60	1.60
Date sampled			02/08/2021	29/07/2021	30/07/2021	29/07/2021	29/07/2021	29/07/2021
Test	**Method**	**Units**						
pH	CE004 [U]	units	8.4	8.4	7.3	7.5	7.1	8.2
Magnesium (2:1 water soluble)	CE061	mg/l Mg	12	18	5.6	41	11	3.6
Chloride (2:1 water soluble)	CE049 [U]	mg/l Cl	5.3	3.6	4.8	3.1	4.2	9.3
Nitrate (2:1 water soluble)	CE049 [U]	mg/l NO_3	<1	<1	<1	<1	3.4	13
Sulphate (2:1 water soluble)	CE061	mg/l SO_4	188	208	66	811	400	83
Sulphate (total)	CE062	mg/kg SO_4	599	689	208	2061	929	434
Sulphur (total)	CE119	mg/kg S	3011	3114	708	32683	2856	302
Sulphur (total)	CE119	% w/w S	0.30	0.31	0.07	3.27	0.29	0.03

Chemtech Environmental Limited

SOILS

Lab number			100735-7	100735-8	100735-9
Sample id			WS104	WS106	WS107
Depth (m)			0.75	2.00	3.50
Date sampled			29/07/2021	29/07/2021	29/07/2021
Test	**Method**	**Units**			
pH	CE004 [U]	units	7.5	8.6	8.3
Magnesium (2:1 water soluble)	CE061	mg/l Mg	6.9	2.9	1.2
Chloride (2:1 water soluble)	CE049 [U]	mg/l Cl	6.0	3.6	1.1
Nitrate (2:1 water soluble)	CE049 [U]	mg/l NO_3	47	2.4	11
Sulphate (2:1 water soluble)	CE061	mg/l SO_4	148	30	<10
Sulphate (total)	CE062	mg/kg SO_4	440	245	<100
Sulphur (total)	CE119	mg/kg S	197	197	<100
Sulphur (total)	CE119	% w/w S	0.02	0.02	<0.01

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE004	pH	Based on BS 1377, pH Meter	As received	U	-	units
CE061	Magnesium (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry		1	mg/l Mg
CE049	Chloride (2:1 water soluble)	Aqueous extraction, IC-COND	Dry	U	1	mg/l Cl
CE049	Nitrate (2:1 water soluble)	Aqueous extraction, IC-COND	Dry	U	1	mg/l NO_3
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry		10	mg/l SO_4
CE062	Sulphate (total)	Acid extraction, ICP-OES	Dry		100	mg/kg SO_4
CE119	Sulphur (total)	Acid extraction, ICP-OES	Dry		100	mg/kg S
CE119	Sulphur (total)	Acid extraction, ICP-OES	Dry		0.01	% w/w S

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments
Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.
For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.
Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
100735-1	BH101	5.50	Y	All (EHT)
100735-2	BH102	9.50	Y	All (EHT)
100735-3	BH103	6.10	Y	All (EHT)
100735-4	BH103	10.00	Y	All (EHT)
100735-5	WS101	0.60	Y	All (EHT)
100735-6	WS102	1.60	Y	All (EHT)
100735-7	WS104	0.75	Y	All (EHT)
100735-8	WS106	2.00	Y	All (EHT)
100735-9	WS107	3.50	Y	All (EHT)

Further Background Information

WSP. September 2021. ‘Bridge Point Heathrow. Scoping Report’, Reference: 70088897.01, produced for Bridge Industrial.

Bridge Industrial

BRIDGE POINT HEATHROW

Scoping Note

70088897.01
SEPTEMBER 2021

CONFIDENTIAL

Bridge Industrial

BRIDGE POINT HEATHROW

Scoping Note

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 70088897

OUR REF. NO. 70088897.01

DATE: SEPTEMBER 2021

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QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks				
Date				
Prepared by	J Wood / S Boynton			
Signature				
Checked by	B Handley			
Signature				
Authorised by	D Meehan			
Signature				
Project number	70088897			
Report number				
File reference				

CONTENTS

1 INTRODUCTION

1.1 PREAMBLE

1.1.1 WSP has been appointed by Bridge Industrial to prepare a scoping note prior to the submission of a full planning application for the change of use of the existing surface level Heathrow Flightpath NCP car park off Bath Road, north of Heathrow Airport, to warehousing and storage under Use Class B2/B8 with associated office space (E(g)(ii)&(iii))). The proposal is for some 8,562m^2 of this use.

1.1.2 This scoping note aims to agree the scope of the transport report which will be prepared to support the planning application including policy to be considered, sustainable transport provision, development access, and trip rates to be used. It is considered a Transport Statement (TS) is appropriate for considering the impact of the development rather than a full Transport Assessment (TA) due to the net impact of trips on the highway network which are unlikely to be severe and it considered there will be no need for junction modelling as part of the application.

1.1.3 The site is located within the London Borough of Hillingdon who act as Local Planning Authority (LPA) and the Local Highway Authority (LHA). Transport for London (TFL) are responsible many areas of the transport network in London including rail networks, buses, taxis, principal roads, cycling provision, trams and river services. National Highways (NH) is responsible for the Strategic Road Network (SRN) such as the M4, however, it is anticipated the impact of the proposals on the SRN will be negligible.

1.1.4 It is considered the application site is ideally located for a development of this nature due to its proximity to the SRN and Heathrow Airport which provide the opportunity for the site to accommodate both road and air freight.

1.2 PLANNING HISTORY

1.2.1 The NCP car park was granted planning permission in June 2021 with provision of a new vehicular access to the car park via A4 Bath Road to the south of the site (Planning reference 41632/APP/2021/1301). The junction comprises a left-in/left-out priority arrangement from the site frontage onto the A4 with a break proposed in the bus lane on the A4 to ensure safe access and egress from the site.

1.2.2 As part of this planning application the appropriateness of this access will be reviewed by undertaking swept path analysis with revisions proposed to the access where required, however, it is considered this access should be suitable with only potential for minor changes.

1.3 REPORT STRUCTURE

1.3.1 The structure of this scoping note is as follows:

- Section 2 outlines policy which will be considered as part of the TS;
- Section 3 describes the existing conditions including the local highway network;
- Section 4 outlines the sustainable transport connections from the site;
- Section 5 provides an overview of the development proposals at this stage in the application process;
- Section 6 proposed trip rates to be used for the application and considered likely trip generation;
- Section 7 summarises this scoping note.

2 POLICY ANALYSIS

2.1.1 As part of the full planning application a detailed review of national and local planning policy will be undertaken, however, for the purpose of this scoping note the policy to be reviewed and key points have been outlined below.

2.2 NATIONAL PLANNING POLICY FRAMEWORK

- Safe and sustainable access can be achieved to the development;
- Sustainable transport will be available to the development with the proposals encouraging sustainable transport where possible;
- The development will be designed to enable to safe movement of all users including pedestrians, cyclists and delivery vehicles;
- The proposals won't result in a residual cumulative impact on the highway network which could be considered severe.

2.3 NATIONAL PLANNING PRACTICE GUIDANCE

- A full TS will be submitted as part of the planning application to consider the impact of the proposals;
- The trip generation of the proposals and cumulative impact will be considered as part of a full TS;
- A review of PIC data will be undertaken as part of the planning application to consider the impact of the proposals on highway safety;
- The need for any further mitigation on the highway network will be considered as part of a full TS.

2.4 HILLINGDON LOCAL PLAN PART 1: STRATEGIC POLICIES (NOVEMBER 2012)

- The plan sets out the need to use the presence of Heathrow airport to prosper;
- The development will be highly accessible by sustainable transport reducing its environmental impact;
- The development will help meet the quota of providing 9,000 new jobs in the borough which would be conveniently accessible from throughout London;
- Further improvements to public transport set out in the plan would further enhance the accessibility of the site.

2.5 HILLINGDON LOCAL PLAN PART 2: DEVELOPMENT MANAGEMENT POLICIES (JANUARY 2020)

- The proposals will accord with policy DMT1 Managing Transport impacts by ensuring the development can be conveniently accessed by public transport as well as being inclusive for pedestrians and cyclists;
- Policy DM2 Highway Impacts will be considered in the TS to ensure the impacts of the proposals on the surrounding highway network are minimised;
- The level of vehicle parking will be detailed in the full TS in accordance with Policy DMT6;
- The development is ideally located for freight development due to its proximity to the SRN as set out in Policy DMT7.

2.6 MAYOR'S TRANSPORT STRATEGY 2018

- The transport strategy sets out the need to deliver a London-wide cycle network with new, high-quality and safe routes, this route would connect to Heathrow airport providing convenient access to the development;
- Policies 15 and 16 set out the need to reduce freight in the city centre while improving freight on the city's SRN, the proposal is ideally located to support this;
- The Elizabeth Line will also be open within the lifespan of the strategy which will serve Heathrow airport, further improving the accessibility of the development.

3 EXISTING CONDITIONS

3.1 SITE LOCATION

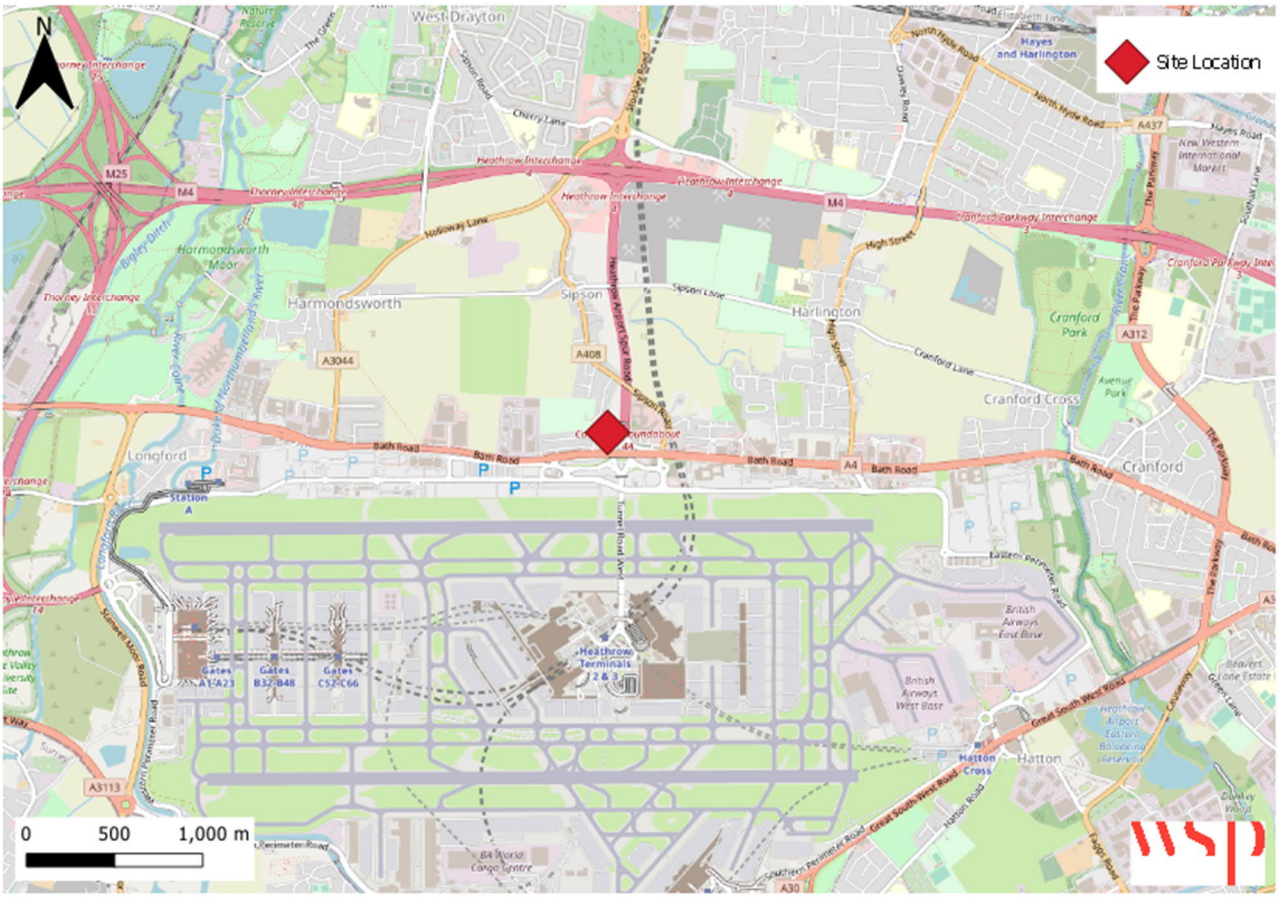
3.1.1 The site is located within the London Borough of Hillington and strategically located north of Heathrow Airport and is within proximity of both the M4 and M25. The site is located in the Village of Sipson and is bound to east by the M4 and to the south by the A4 Bath Road with residential properties to the west with what are understood to be unoccupied buildings to the north.

3.1.2 A map showing the site in relation to the wider context of the area is shown in **Figure 3-1**.

3.1.3 The site benefits from excellent access to the following strategic locations:

- Heathrow Cargo Terminal – 13 Minute Drive – 8.5km;
- Heathrow Terminals 2 & 3 (including underground and rail stations) – 4-minute drive – 1.7km;
- M4 Junction 4 – 6-minute drive – 3.3km;
- M25 Junction 14 – 8-minute drive – 5.0km;
- Heathrow Terminal 5 (including underground and rail stations) 8-minute drive – 4.6km; and
- Heathrow Terminal 4 (including underground and rail stations) – 11 minutes' drive – 6.7km.

Figure 3-1 - Site Location - Wider Context



3.2 EXISTING SITE

3.2.1 The existing site is occupied via the Heathrow Flightpath NCP car park intended to serve terminals two and three of Heathrow airport. Under the existing car park layout access is achieved from the northeast of the site, via a bridge over the M4 which is accessed to the rear of the Park Inn Radisson Hotel.

3.2.2 As previously discussed, the car park was granted planning permission for a new access to be provided from the A4 Bath Road in June 2021. The junction comprises a left-in/left-out priority arrangement from the site frontage onto the A4 with a break proposed in the bus lane on the A4 to ensure safe access and egress from the site.

3.2.3 The car park provides 630 parking bays including 4 disabled bays and EV parking. The car park is open 24 hours a day with access to the car park is controlled by automatic barrier with staff also present on site.

3.2.4 A shuttle bus operates between the site and terminals 2 and 3 of Heathrow airport every 20 minutes between 04:00 and 23:40.

3.3 LOCAL HIGHWAY NETWORK

A4 BATH ROAD

3.3.1 The A4 Bath Road, located to the south of the site, is a dual carriageway with proposed access and egress arrangements to and from the site taken from the eastbound carriageway when the new access is developed. The westbound carriageway can conveniently be accessed via the Nene Road Roundabout located 400m east of the proposed site access.

3.3.2 Within the vicinity of the site Bath Road is a 50-mph dual carriageway. The eastbound direction has a bus, taxi, motorcycle and cycle lane which operates at all times and one general traffic lane; the total width of this carriageway is circa 6.7m. The westbound direction is a dual carriageway open to all traffic and has a total width of circa 6.7m.

3.3.3 The A4 benefits from shared space footways between Stanwell Moor Road and Henley's Roundabout which covers the site frontage; this is a long-distance continuous route between the site and key destinations. Within the frontage of the site the shared space footway is circa 2.5m on the northern side of Bath Road and circa 2.0m on the southern side of Bath Road.

3.3.4 To the west of the site a priority cycle crossing is provided at the Sipson Way / Bath Road junction. This allows cycles to cross the Sipson Way / Bath Road junction and also cross the A4 Bath Road via a central refuge which is circa 2.0m in length.

3.3.5 The A4 in its entirety links Central London to Bath and Bristol however the majority of traffic is carried by the nearby M4 which lies to the north of the site.

M4

3.3.6 To the east of the site there is an interchange between the A4 and the M4 spur road; this links the Heathrow Airport tunnel to the M4.

3.3.7 The M4 spur is circa 1.5km in length and interchanges with the M4 at Junction 4 (Heathrow Interchange). The southbound carriageway has a bus lane located in the offside lane, 3 lanes for general traffic and a hard shoulder on the nearside lane. The northbound carriageway has three lanes plus a hard shoulder; this widens to five lanes at the stop line located at the Heathrow Interchange junction.

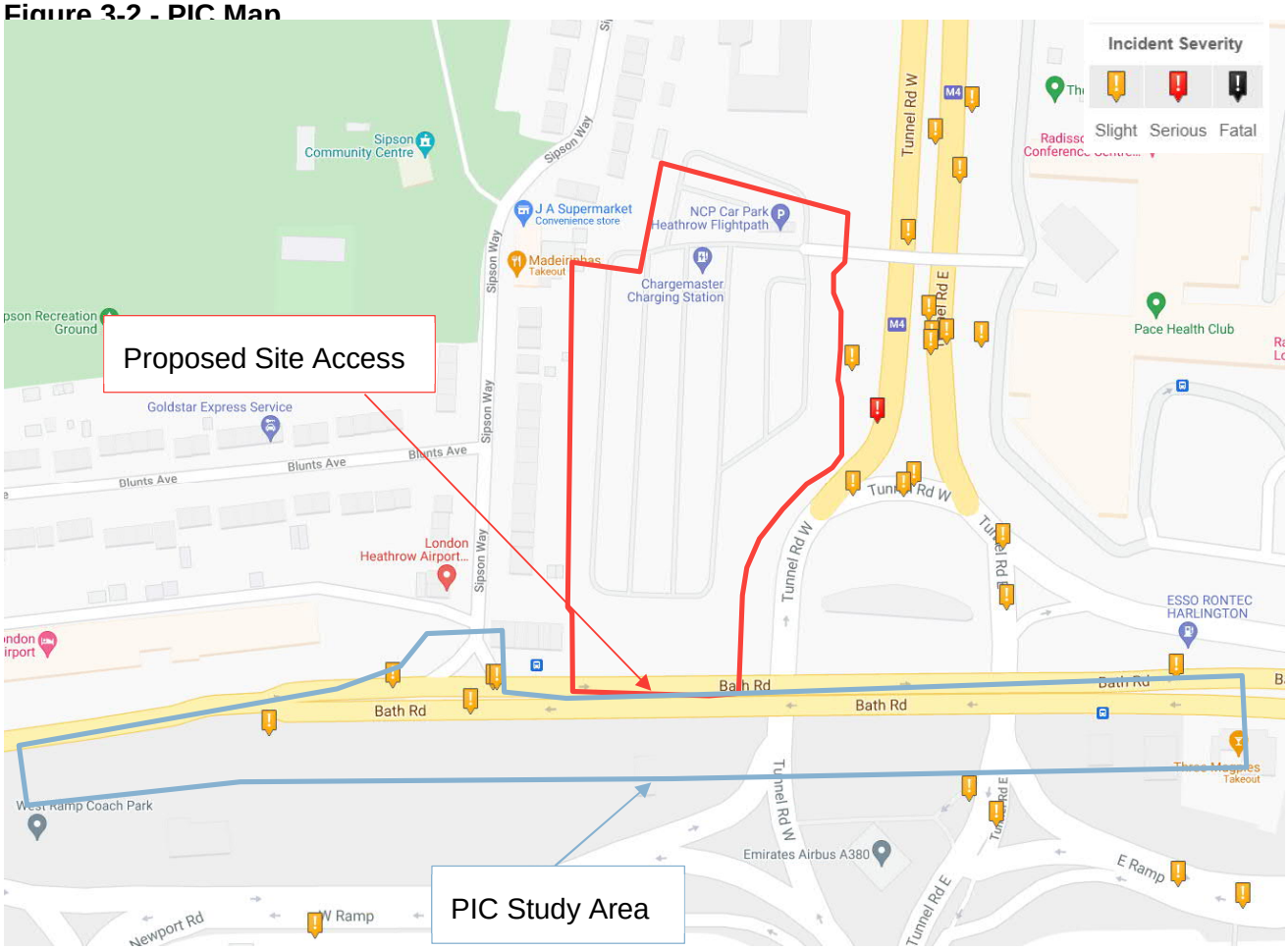
3.3.8 The M4 in its entirety runs from London to South Wales via the Severn Bridge and runs roughly parallel to the A4 between London and Bristol.

3.4 HIGHWAY SAFETY

3.4.1 As part of the full planning application, Personal Injury Collision (PIC) data will be obtained from the LHA if required, however, a preliminary review of highway safety have been undertaken using the free online service Crashmap for the years 2016 – 2020. The collisions recorded are shown in Figure 3-2 below.

3.4.2 Based on analysis of the accident data there are no accident hotspots within the study area and therefore there is not considered to be an underlying road safety risk within the vicinity of the site. The PIC records clearly demonstrate that the average frequency of incidents is low and there are no accident hotspots near the site. The local highway network does not require mitigation measures to be implemented as part of the proposed redevelopment in planning terms.

Figure 3-2 - PIC Map



4 SUSTAINABLE TRANSPORT PROVISION

4.1 INTRODUCTION

4.1.1 Central and Local Government objectives aim to ensure that new developments are provided in sustainable locations, where the need to travel is minimised and the use of alternative modes of travel to the private car can be maximised.

4.1.2 The development is located immediately north of Heathrow airport and, therefore, benefits from a range of sustainable transport provision which provides connections to the area from destinations throughout London. As the proposals are developed, provision will be made to ensure sustainable transport is encouraged to the site (i.e. through the provision of showers/changing facilities).

4.2 WALKING AND CYCLING

WALKING

4.2.1 Walking has traditionally been recognised as a significant mode of travel when accessing local services and has the greatest potential to substitute for short car-borne trips (i.e. those which involve journeys of less than 2km). In addition, walking can easily be integrated within all forms of transport for journeys further afield, as part of a multi-modal journey. This is consistent with advice contained in the Institution of Highways and Transportation published 'Guidelines for Providing for Journeys on Foot', which sets out suggested maximum walking distances to/from new developments for commuting and other journeys.

4.2.2 The site is in walking distance of a range of services and amenities which will benefit future employees of the proposed development. The development is in walking distance of numerous food outlets including restaurants and takeaways reducing car trips which will be made by the employees at the development on breaks. The site is also immediately east of 'J A Supermarket" which will provide access to a range of daily provisions which may be required without the need for private vehicular trips.

4.2.3 The site is also located to a number of residential properties in the villages of Sipson and Harlington which have the potential to provide a proportion of the workforce at the proposed development reducing vehicle trips generated by commuters. Green space and recreational grounds are also available in these villages which will provide local space for employees at the development to spend their breaks and encourage a culture of sustainability at the development.

4.2.4 As discussed in Section 3 the surrounding pedestrian infrastructure is of a high-quality to encourage journeys to the site on foot, suitable infrastructure is also proposed at the development to ensure the proposals encourage pedestrian journeys to the development.

4.2.5 CYCLING

4.2.6 Cycling is also a convenient way to travel and there is a network of road routes available to cyclists within the vicinity of the application site, providing linkage to public transport hubs and facilities.

4.2.7 Cycling has traditionally been recognised as a significant mode of travel which has the potential to substitute for short car-borne trips (i.e. particularly those which involve journeys of less than 5km) and can often form part of longer multi- modal trips involving public transport.

4.2.8 This is consistent with advice contained within the DfT, published 'Local Transport Note 2/08' which reaffirms that a 5km catchment represents an acceptable maximum distance, with 8km forming a preferred maximum distance. As such, the public transport hubs and residential areas are highlighted as falling within an acceptable walking distance of the site must also be considered accessible by cycle.

4.2.9 The site is in comfortable cycling distance of a range of destinations including Drayton Garden Village, Harmondsworth and Cranford. Public transport hubs are also within cycling distance including Heathrow T2 & 3, Heathrow T5 and Hayes & Harlington train station further enhancing the accessibly of the site.

4.2.10 Direct cycle access to Terminal 2 & 3 will be provided in the first quarter of 2023 where segregated cycle lanes will be provided via a tunnel parallel to the existing traffic tunnel (Tunnel Road).

4.2.11 As previously discussed, a shared-use facility is provided along Bath Road which will provide a safe route to the development for cyclists. Additionally, the development will provide appropriate cycle infrastructure and parking to ensure the site can be safely navigated by bicycle.

4.3 EXISTING PUBLIC TRANSPORT PROVISION

4.3.1 With regards to public transport provision at new developments, the Institution of Highways and Transportation publication 'Planning for Public Transport in Development' states:

- "The maximum walking distance to a bus stop should not exceed 400m and preferably be no more than 300m. These distances are quoted for guidance and should not be followed slavishly if that would lead to complex or indirect bus routes." (Executive Summary)
- "The Department of the Environment has recommended that residents should not have to walk more than 400m (¼ mile) to their nearest bus stop. These standards should be treated as guidance, to be achieved where possible by services that operate at regular frequencies along direct routes. It is more important to provide services that are easy for passengers to understand and attractive to use than to achieve slavish adherence to some arbitrary criteria for walking distance. Residential areas in particular need sensible routes that do not spoil the quality of the place." (Paragraph 5.18)
- "New developments should be located so that public transport trips involve a walking distance of less than 400m from the nearest bus stop or 800m from the nearest railway station." (Paragraph 5.21)

4.3.2 The application site is well located in terms of its proximity to public transport routes, including bus and rail services which operate within the immediate vicinity of the application site and local area. Further details relating to these provisions are set out below.

BUS SERVICES

4.3.3 Due to the proximity of the site to Heathrow Airport there are numerous bus services available within walking distance of the site which provide routes to a number of destinations throughout London and surrounding towns and villages.

4.3.4 The nearest bus stops to the site are located immediately to the south of the development on Bath Road, with a layby, shelter, seating and timetable information available for eastbound and westbound services; buses travelling east on Bath Road also benefit from a bus lane. A number of other stops are also in walking distance of the site with stops of a similar high-quality.

4.3.5 The bus services available are summarised in **Table 4-1** below.

Table 4-1 – Summary of nearby Bus Services	Route	Mon – Sat Frequency	Sunday Frequency
4 (non-TFL bus)	Heathrow Central Bus Station - Maidenhead	30 minutes	60 minutes
7 (non-TFL bus)	Kennedy Park Shops - Heathrow, Central Bus Station	4 per day (overnight)	4 per day (overnight)
8 (non-TFL bus)	Slough Bus Station - Heathrow, Central Bus Station	1 per day (early morning)	2 per day (overnight)
81	Hounslow – Colnbrook – Slough	12 minutes	12-15 minutes
105	Heathrow – Southall - Greenford	15 minutes	15 minutes
111	Heathrow – Hounslow – Kingston	10 minutes	12-15 minutes
278	Heathrow – Hayes – Ruislip	15 minutes	20 minutes
285	Heathrow – Feltham – Kingston	10 – 15 minutes	12 minutes
423	Heathrow (Terminal 5) – Beavers Farm - Hounslow	20 minutes	30 minutes
N140	Heathrow–Harrow–Harrow Weald	30 minutes	30 minutes
U3	Heathrow – West Drayton – Uxbridge	12 - 20 minutes	20 minutes
555 (non-TFL bus)	London Heathrow Airport - Whiteley Village	60 minutes	60 minutes

N9	Heathrow (Terminal 5)– Hammersmith - Aldwych	30-60 minutes	60 minutes
222	Hounslow – West Drayton – Uxbridge	10 minutes	12 minutes

4.3.6 As shown by **Table 4-1** regular services are available to the site from a range of destinations including Heathrow Airport, allowing for rail and underground connections, as well as Kingston, Hounslow and Hayes

4.3.7 The majority of these services are available to the nearest bus stops to the site on Bath Road with a service available from these stops approximately every 2-3 minutes. The number and frequency of these services ensure that bus journeys to the site have the potential to provide a primary mode of travel for future employees at the development.

4.3.8 Further bus services are available at the Heathrow Terminal 2&3 interchange approximately 2km south of the site, this is beyond the walking distance to bus services set out in the CIHT guidance, however, it may be a viable distance for some employees of the development. In addition to further local services, National Express services are available to destinations throughout the UK.

ACCESS BY RAIL

4.3.9 The nearest railway stations to the site are the Heathrow Terminal 2&3 national rail and underground stations approximately 2km south of the site, although this is beyond the 800m walking distance to railway stations set out in the CIHT guidance previously discussed it may be a viable distance for some future employees of the development. Particularly since the rail station can be accessed via a non-stop bus service and by cycling.

4.3.10 Heathrow Terminal 2 & 3 Railway Station provides access to the Heathrow Express which provides a fast, non-stop route to London Paddington from where a range of destinations throughout the UK are subsequently available. Tickets for the Heathrow Express are available to buy in the station with help available from staff as required. Step free access is also available throughout the station, ensuring the services can be accessed by all members of the public.

4.3.11 Heathrow Terminal 2 & 3 Railway Station is also served by TFL Rail Services which provides a direct route to Paddington via Hayes & Harlington, Southall, Hanwell, West Ealing, Ealing Broadway, Acton Main Line every 30 minutes. This service will form part of the Elizabeth Line when it launches; this new railway will extend the current route from Paddington to Shenfield via Stratford and to Abbey Wood via Canary Wharf.

4.3.12 The underground station at Terminal 2 & 3 provides access to the Piccadilly line which provides access to numerous destinations throughout London including; Hammersmith, Kensington, Leicester Square, Kings Cross/St. Pancras and Finsbury Park. Alternative underground lines are also subsequently accessible from stops on the Piccadilly Line providing access to further destinations throughout London.

PUBLIC TRANSPORT ACCESSIBLITY LEVEL

4.3.13 To further consider the accessibility of the site the Public Transport Accessibility Level (PTAL) has been reviewed using the TfL WebCAT tool. The PTAL is a detailed and accurate measure of a point to the public transport network in London which considers walk access time and service availability. Each area is a 100m square which receives a grade between 0 and 6b where 0 is poor access to public transport and 6b is excellent access.

4.3.14 The grade received reflects the following:

- Walking time from the point-of interest to the public transport access points;
- The reliability of the service modes available;
- The number of services available within the catchment; and
- The level of service at the public transport access points - i.e. average waiting time.

4.3.15 The 2021 forecast year has been reviewed in the TfL WebCAT tool which shows the proposed site has a PTAL of 4 which is above average. The tool also shows the area around the Terminal 2 and 3 interchange has a grade varying between 6A and 6B which are the highest grades available.

4.3.16 Based on the PTAL score it is clear the proposed development will benefit from a high-quality public transport network which will be able to facilitate trips to the development by sustainable transport modes.

5 PROPOSED DEVELOPMENT

5.1.1 **Figure 5-1** shows the preliminary site layout which consists of the four-industry storage and distribution units with associated office & Mezzanine space plus car parking and new access arrangements. The layout will be revised throughout the application proposals to ensure all concerns of the LHA are addressed.

Figure 5-1 - Proposed Site Layout

5.2 DEVELOPMENT ACCESS

5.2.1 As previously mentioned, the existing NCP car park was granted planning permission in June 2021 for the provision of a new vehicular access to the car park via A4 Bath Road to the south of the site (Planning reference 41632/APP/2021/1301). The junction comprises a left-in/left-out priority arrangement from the site frontage onto the A4 with a break proposed in the bus lane on the A4 to ensure safe access and egress from the site. As part of the application process, swept path analysis of this access will be undertaken to consider its appropriateness for the development, with revisions to the access proposed as necessary, however, at this stage it is considered the current design should be appropriate and only minor changes will be necessary.

5.3 PARKING PROVISION

5.3.1 At this stage, 56 parking spaces are proposed at the development, including 6 disabled bays. Parking standards set out in the LBH Local Plan Part 2 set out that 1 space should be provided per 50-100sqm of floorspace. Under the approximate 8,562sqm currently proposed this would equate to a maximum of between 85 – 171 parking bays. The proposed provision is clearly well below this maximum threshold which is possible due to highly accessible nature which will enable a high proportion of trips to be undertaken by public transport and other sustainable modes. The standards also set out 10% of bays should be disabled bays, the 6 disabled bays currently proposed meets this threshold.

5.3.2 The parking proposed as part of the development will be detailed in the full TS and will include the quantum of disabled bays , electric vehicles spaces and cycle parking proposed. The final level of parking provided will be agreed with the LHA and will be based on the parking standards for the borough as well as the applicant knowledge from developing similar sites through the UK.

6 TRIP GENERATION AND IMPACT

6.1 METHODOLOGY

6.1.1 As discussed previously, the site has extant consent in place. As part of the application for the new site access, a TS was prepared that set out the existing vehicle movement to the site based on traffic surveys undertaken between 2nd and 8th July 2019.

6.1.2 The forecast traffic generation from the proposed use is compared against this extant trip generation. This nett approach is consistent with advice provided by the DfT guidance that acknowledges the appropriateness of quantifying/appraising the trips generated by an existing site or those which might realistically be generated by any extant planning consent or permitted uses.

6.1.3 Furthermore, Section 38(6) of the Planning and Compulsory Purchase Act 2004 also requires that applications be determined in accordance with the development plan unless other material considerations indicate otherwise. In the general note on this section in the Encyclopaedia of Planning Law, Paragraph 9(8) discusses material considerations and reference is made to the planning history of the site, stating that *"an existing planning permission may be a material consideration in determining an application…the planning authority are entitled, and indeed obliged, to have regard to the "fall-back" position, i.e. what the applicant could do without any fresh planning permission."*

6.1.4 The trip generation associated with the car park and permitted access from Bath Lane should, therefore, be considered as a legitimate planning "fall-back" position, the details of which are set out below and should be considered as part of a full planning application.

6.2 EXISTING TRIP GENERATION

6.2.1 Within the TS agreed with LBH for the extant planning consent the existing trips to the site were set out. The existing trips were based on traffic surveys undertaken on the existing access bridge between 2nd and 8th July 2019. Surveys were also undertaken on Bath Road to determine the network peak times of 09:00 – 10:00 and 18:00 – 19:00.

6.2.2 The TS did not consider how a more prominent access to the car park on Bath Road may increase traffic flows to the car park, or, how traffic generation to the car park may be higher at certain times of the year, such as during peak holiday times in the school holidays. For the purpose of providing a fall-back position the arrivals and departures to the car park are set out in Table 6-1 below, the raw data is not available in the TS to determine the number of trips generated at the car park through the day.

6.2.3 It is considered this data will be appropriate for use in the full TS to set out a "fall-back" position against which the impact of the development can be considered.

Table 6-1 – Existing Car Park Trips

	Network AM Peak (8:00-9:00)			Network PM Peak (18:00-19:00)		
	Arrival	Departure	Two-way	Arrival	Departures	Two-Way
All Vehicles	10	9	19	4	7	11

6.2.4 As shown in the Table above, the car park generates approximately 19 two-way trips in the AM Peak and 11 two-way trips in the network PM Peak. Due to the nature of the car park it is likely the number of trips are higher at different points throughout the day, however, the times shown in Table 6-1 coincide with the peak traffic flows on Bath Road and were therefore considered to be the network peak times.

6.3 FORECAST TRIP GENERATION (WAREHOUSING - COMMERICAL)

6.3.1 To consider the trip generation of the proposed development, it is proposed trip rates obtained from the TRICS V7.8.2 database are used with the proposed parameters set out below.

- 02 – Employment – F – Warehousing;
- Greater London sites selected;
- GFA 1,000sqm – 20,000sqm; and
- Suburban Area and Edge of Town locations selected.

6.3.2 The above parameters return two relevant surveys in the Hillingdon and Hounslow boroughs of London. It should be noted the sites have a PTAL rating of 1b and 2 which equates to very poor and poor, this is below the proposed site's PTAL rating of 4 meaning these sites are significantly less accessible than the proposed development will be. These trip rates should, therefore, be considered a robust, worst-case scenario, particularly with regards to car trips to the site which will be appropriate for considering the impact of the development in a full TS.

6.3.3 The trip rates obtained are shown in Table 6-2 below, these have been applied to the floorspace of 8,562sqm which is currently proposed at the site with it anticipated this floorspace is unlikely to significantly change prior to a full application being submitted. The resultant trip generation is shown in Table 6-3.

Table 6-2 – Forecasted Trip Rates (Warehousing - Commercial)

	AM Peak (09:00-10:00)			PM Peak (18:00-19:00)		
	Arrival	Departure	Two-way	Arrival	Departures	Two-Way
Cars/LGVs	0.253	0.122	0.375	0.122	0.347	0.469
OGVs	0.072	0.054	0.126	0.036	0.023	0.059
All Vehicles	**0.325**	**0.176**	**0.501**	**0.158**	**0.370**	**0.528**

TRICS 7.8.2

Table 6-3 – Forecasted Trip Generation (Rounded) (Warehousing - Commercial)

	AM Peak (09:00-10:00)			PM Peak (18:00-19:00)		
	Arrival	Departure	Two-way	Arrival	Departures	Two-Way
Cars/LGVs	22	10	32	10	30	40
OGVs	6	5	11	3	2	5
All Vehicles	**28**	**15**	**43**	**13**	**32**	**45**

TRICS 7.8.2

6.3.4 As shown by Table 6-3 the development is anticipated to generate approximately 43 trips in the AM Peak and 45 trips in the PM Peak, these equate to less one trip per minute. Due to the proximity of the development to the SRN these trips will be able to easily access major routes and dissipate on the network without the need to travel on sensitive routes through towns or villages. Even without considering the “fall-back” position it is, therefore, considered the development is unlikely to have a severe impact on the highway network and no further junction modelling should be required.

6.4 NET IMPACT

6.4.1 The impact of the proposed development against the “fall-back” position of the proposed car park is shown in Table 6-4 below.

Table 6-4 – Development Net Impact

	AM Peak (09:00-10:00)			PM Peak (18:00-19:00)		
	Arrival	Departure	Two-way	Arrival	Departures	Two-Way
Cars/LGVs	+12	+1	+13	+6	+23	+29
OGVs	+6	+5	+11	+3	+2	+5
All Vehicles	**+18**	**+6**	**+24**	**+9**	**+25**	**+34**

6.4.2 As shown by Table 6-4 the development will result in an increase of 24 two-way trips in the AM Peak, which is below the 30 two-way trip threshold which is usually considered a material impact. All these trips will arrive via the permitted Bath Road access which will be possible to safely access and egress due to the left-in / left-out arrangement with vehicles then able to conveniently access the SRN. The TS for the permitted site access demonstrated the proposed access would operate with a maximum RFC of 0.02 in the AM Peak suggesting there is significant capacity to accommodate additional trips.

6.4.3 In the PM Peak the development is anticipated to result in an increase of 34 two-way trips which is slightly above the 30-trip threshold at which point the impact would usually be considered material. However, the TS for the proposed site access from Bath Road demonstrated the junction would operate with a maximum RFC of 0.01 in the PM Peak suggesting the junction has a significant amount of spare capacity for additional trips. Again, once egressing the site trips will quickly dissipate on the SRN.

6.4.4 Based on the information presented in this section it is considered no further junction modelling will be required as part of the planning application and a TS rather than a TA is appropriate for assessing the impact of the proposed development. No further developments have been identified on the surrounding network which would need to be considered as part of a cumulative assessment.

7 CONCLUSION

7.1.1 WSP has been appointed by Bridge Industrial to prepare a scoping note prior to the submission of a full planning application for the change of use of the existing surface level Heathrow Flightpath NCP car park off Bath Road, north of Heathrow Airport, to warehousing and storage under Use Class B2/B8 with associated office space (E(g)(ii)&(iii))). The proposal is for some 8,562m^2 of this use.

7.1.2 This scoping note has provided a detailed overview of the information which will be provided as part of a full application. To summarise, it is proposed the following information is provided to assess the impact of the proposals:

- A TS rather than a full TA should be appropriate to consider the impact of the proposed development due to the likely net impact of the development on the highway network;
- A full review of National and Local planning policy will be provided as part of the TS; however, it is considered the proposals are compliant and will help support policy aspirations;
- The surrounding highway network is of a good quality with the number of trips generated unlikely to have a severe impact on its operation or safety;
- The site is ideally located for a development of this nature due to the proximity to the SRN and Heathrow airport;
- A preliminary review of highway safety has identified no safety issues which would be exacerbated by the proposals, a more detailed review can be undertaken using data obtained from the LHA as part of a full planning application;
- The pedestrian and cycle infrastructure in the vicinity of the site is of a high quality to facilitate sustainable trips to the site;
- The site benefits from a wide range of public transport choices to the site, including bus services on Bath Road and underground and national rail services available from Heathrow airport;
- The site has a PTAL rating of 4, which is classed as above average;
- The development will benefit from a permitted access from Bath Road. Initial assessment suggests this access will be fit for purpose, however, swept path analysis will be undertaken to ensure this access to fit for purpose with any necessary revisions proposed as part of the application;
- The development will provide facilities to encourage sustainable transport where possible such as showers and changing facilities;
- A review of local parking standards will be undertaken as part of the full planning application;
- Trip generation for the existing site is available from the TS for the permitted site access, this will be used to set out a “fall-back” position;
- Trip rates have been proposed which are obtained from the TRICS database, the identified sites have PTAL rating worse than the proposed development so the trip rates should provide a robust assessment of the development impacts;
- Using the trip rates proposed, and current proposed floorspace the development will have a net-impact of 24 two-way trips in the AM Peak and 34 two-way trips in the PM Peak, this is not a significant impact on should not warrant further junction assessment. A TS rather than a full TA should, therefore, be appropriate to assess the impact of the development.

Three White Rose Office Park
Millshaw Park Lane
Leeds
LS11 0DL

wsp.com

The Council of the London Borough of Hillingdon. 28th June 2021. 'Grant of Planning Permission. NCP Heathrow Flightpath, Bath Road, Sipson', Application Reference: 41632/APP/2021/1301.

HILLINGDON
LONDON

Mrs Grace Crook
118 Pall Mall
London
SW1Y 5EA

Application Ref:
41632/APP/2021/1301

TOWN AND COUNTRY PLANNINGACT 1990 (AS AMENDED)

GRANT OF PLANNING PERMISSION

The Council of the London Borough of Hillingdon as the Local Planning Authority within the meaning of the above Act and associated Orders **GRANTS** permission for the following:-

Description of development:

Provision of a new vehicular access to existing NCP car park via A4 Bath Road

Location of development: Ncp Heathrow Flight Path Bath Road Sipson

Date of application: 31 March 2021

Plan Numbers: See attached Schedule of plans

Permission is subject to the condition(s) listed on the attached schedule:-

James Rodger

Head of Planning, Transportation and Regeneration

Date: 28 June 2021

NOTES: (i) Please also see the informatives included in the Schedule of Conditions.

(ii) Should you wish to appeal against any of the conditions please read the attached sheet which explains the procedure.

(iii) This decision does not convey any approval or consent which may be required under any by-laws, building regulations or under any Act other than the Town and Country Planning Act 1990 (as amended).

TOWN AND COUNTRY PLANNINGACT 1990 (AS AMENDED)

GRANT OF PLANNING PERMISSION

Application Ref: 41632/APP/2021/1301

SCHEDULE OF CONDITIONS

1 · The development hereby permitted shall be begun before the expiration of three years from the date of this permission.

REASON: To comply with Section 91 of the Town and Country Planning Act 1990.

2 · The development hereby permitted shall not be carried out except in complete accordance with the details shown on the submitted plans and documents below:

Location Plan MBSK210222-08 P2
Transport Assessment Final May 2021
Stage 1 Road Safety Audit May 2021
Arboricultural Impact assessment March 2021

REASON: To ensure the development complies with the provisions of the Hillingdon Local Plan Parts 1 (November 2012) and 2 (January 2020) and the London Plan (2021).

3 · Notwithstanding drawing number MBSK210222-08 P2 the submitted tactile paving details are not approved as part of this permission. A revised access layout plan showing tactile paving at a depth of 1.2m across the full width of the dropped kerb shall be submitted to the Local Planning Authority within one month of the date of this permission. The revised access layout plan shall be approved in writing by the Local Planning Authority and the development hereby permitted shall not be carried out except in complete accordance with the details shown on the revised access layout plan.

REASON: To ensure an accessible and safe public realm and to comply with Hillingdon Local Plan Part 2 Policies DMHB 11, DMT2 and DMT5.

SCHEDULE OF CONDITIONS

4 . No development shall take place until a landscape scheme has been submitted to and approved in writing by the Local Planning Authority. The scheme shall include: -

1. Details of Soft Landscaping
1.a Planting plans (at not less than a scale of 1:100),
1.b Written specification of planting and cultivation works to be undertaken,
1.c Schedule of plants giving species, plant sizes, and proposed numbers/densities where appropriate

4. Details of Landscape Maintenance
4.a Landscape Maintenance Schedule for a minimum period of 5 years.
4.b Proposals for the replacement of any tree, shrub, or area of surfing/seeding within the landscaping scheme which dies or in the opinion of the Local Planning Authority becomes seriously damaged or diseased.

5. Schedule for Implementation

REASON: To ensure that the proposed development will provide appropriate replacement planting and preserve and enhance the visual amenities of the locality in compliance with Policies DMHB 11 and DMHB 14 of the Hillingdon Local Plan Part 2 (2020).

5 . Prior to the use of the proposed access commencing, a Car Park Management Plan shall be submitted to and approved in writing by the Local Planning Authority. The Car Park Management Plan shall include details of how short term parking will be prevented and how queueing at the access point will be prevented. The development hereby permitted shall not be carried out except in complete accordance with the details shown on the approved Car Park Management Plan.

Reason: To ensure the proposal does not generate additional trips and to ensure no adverse impact on highway safety and the free flow of traffic in compliance with Hillingdon Local Plan Part 2 Policies DMT1 and DMT 2.

INFORMATIVES:

1 . The decision to GRANT planning permission has been taken having regard to all relevant planning legislation, regulations, guidance, circulars and Council policies, including The Human Rights Act (1998) (HRA 1998) which makes it unlawful for the Council to act incompatibly with Convention rights, specifically Article 6 (right to a fair hearing); Article 8 (right to respect for private and family life); Article 1 of the First Protocol (protection of property) and Article 14 (prohibition of discrimination).

2 . The decision to GRANT planning permission has been taken having regard to the policies and proposals in the Hillingdon Local Plan Part 1 (2012) and Part 2 (2020) set out below, including Supplementary Planning Guidance, and to all relevant material considerations, including The London Plan - The Spatial Development Strategy for London consolidated with alterations since 2011 (2016) and national guidance.

Part 1 Policies:

Part 2 Policies

3 . In dealing with the application the Council has implemented the requirement in the

SCHEDULE OF CONDITIONS

National Planning Policy Framework to work with the applicant in a positive and proactive way. We have made available detailed advice in the form of our statutory policies from Local Plan Part 1, Local Plan Part 2, Supplementary Planning Documents, Planning Briefs and other informal written guidance, as well as offering a full pre-application advice service, in order to ensure that the applicant has been given every opportunity to submit an application which is likely to be considered favourably.

4 . Given the nature of the proposed development it is possible that a crane may be required during its construction. The applicant's attention is drawn to the requirement within the British Standard Code of Practice for the safe use of Cranes, for crane operators to consult the aerodrome before erecting a crane in close proximity to an aerodrome. This is explained further in Advice Note 4, 'Cranes and Other Construction Issues' (available at www.aoa.org.uk/publications/safeguarding.asp)

END OF SCHEDULE

Address:
Residents Services
London Borough of Hillingdon
3 North Civic Centre, High Street, Uxbridge UB8 1UW
Tel: 01895 250230
www.hillingdon.gov.uk

GRANT OF PLANNING PERMISSION

Application Ref.No.: 41632/APP/2021/1301

SCHEDULE OF PLANS

Arboricultural Impact Assessment, March 2021 - received 31 Mar 2021

Application Covering Letter. - received 31 Mar 2021

SiteandOtherPlans_included_in_TransportAssessment. - received 31 Mar 2021

MBSK210222-08 P2. - received 31 Mar 2021

Transport Assessment Final May 2021 - received 07 Jun 2021

Stage 1 Road Safety Audit May 2021 - received 07 Jun 2021

RIGHTS OF APPLICANTS AGGRIEVED BY DECISION OF LOCAL PLANNING AUTHORITY

TOWN AND COUNTRY PLANNING ACT 1990 (AS AMENDED)

If you are aggrieved by the decision of your local planning authority to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the office of the First Secretary of State under Section 78 of hte Town and Country Planning Act 1990.

If you want to appeal, then you must do so within six months of the date of this notice, using a form which you can get from the Planning Inspecorate at Customer Support Unit, Room 3/15 Eagle Wing, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6PN (Tel 0117 372 8424) Appeal forms can be downloaded from the Planning Inspectorate's website at **www.Planning-inspectorate.gov.uk**

If you intend to submit an appeal that you would like examined by inquiry then you must notify the Local Planning Authority and Planning Inspectorate (inquiryappeals@planninginspectorate.gov.uk) at least 10 days before submitting the appeal.
Further details are available at **www.gov.uk/government/collections/casework-dealt-with-by-inquiries**

The Secretary of State can allow a longer period for giving notice of an appeal, but he will not normally be prepared to use this power inless there are special circumstances, which excuse the deploy in giving notice of an appeal.

The Secretary of State need not consider an appeal if it seems to him that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

In practice, the Secretary of State does not refuse to consider appeals solely because the local planning authority based their decision on a direction given by him.

Purchase Notices.

If either the local planning authority or the officer of the First Secretary of State refuses permission to develop land or grants it subject to conditions, the owner may claim that he can neither put the land to a reasonably beneficial use by carrying out of any development which has been or would be permitted.

In these circumstances, the owner may serve a purchase notice on the Council (District Council, London Borough Council or Common Council of the City of London) in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990.

The Council of the London Borough of Hillingdon. 7th June 2021. 'Report of the Head of Planning, Transportation and Regeneration', Application Reference: 41632/APP/2021/1301.

Residents Services

APP. REF. NO: 41632/APP/2021/1301

DELEGATED DECISION

- *Please select each of the categories that enables this application to be determined under delegated powers*
- *Criteria 1 to 5 or criteria 7 to 9 must be addressed for all categories of application, except for applications for Certificates of Lawfulness, etc.*

APPROVAL RECOMMENDED: GENERAL	Select Option
1. No valid planning application objection in the form of a petition of 20 or more signatures, has been received	☐
2. Application complies with all relevant planning policies and is acceptable on planning grounds	☐
3. There is no Committee resolution for the enforcement action	☐
4. There is no effect on listed buildings or their settings	☐
5. The site is not in the Green Belt (but see 11 below)	☐
REFUSAL RECOMMENDED: GENERAL	
6. Application is contrary to relevant planning policies/standards	☐
7. No petition of 20 or more signatures has been received	☐
8. Application has not been supported independently by a person/s	☐
9. The site is not in Green Belt (but see 11 below)	☐
RESIDENTIAL DEVELOPMENT	
10. Single dwelling or less then 10 dewlling units and/or a site of less than 0.5 ha	☐
11. Householder application in the Green Belt	☐
COMMERCIAL, INDUSTRIAL AND RETAIL DEVELOPMENT	
12. Change of use of retail units on site less than 1 ha or with less than 1000 sq m other than a change involving a loss of A1 uses	☐
13. Refusal of change of use from retail class A1 to any other use	☐
14. Change of use of industrial units on site less than 1 ha or with less than 1000sq.m. of floor space other than to a retail use.	☐
CERTIFICATE OF LAWFULNESS	
15. Certificate of Lawfulness (for proposed use or Development)	☐
16. Certificate of Lawfulness (for existing use or Development)	☐
17. Certificate of Appropriate Alternative Development	☐
CERTIFICATE OF LAWFULNESS	
18. ADVERTISMENT CONSENT (excluding Hoardings)	☐
19. PRIOR APPROVAL APPLICATION	☐
20. OUT-OF-BOROUGH OBSERVATIONS	☐
21. CIRCULAR 18/84 APPLICATION	☐
22. CORPSEWOOD COVENANT APPLICATION	☐
23. APPROVAL OF DETAILS	☐
24. ANCILLARY PLANNING AGREEMENT (S.106 or S.278) where Heads of Terms have already received Committee approval	☐
25. WORKS TO TREES	☐
26. OTHER (please specify)	☐

The delegation powers schedule has been checked. Director of Residents Services can determine this application.

Case Officer

Signature:

Date:

A delegated decision is appropriate and the recommendation, conditions/reasons for refusal and informatives are satisfactory.

Team Manager:

Signature:

Date:

The decision notice for this application can be issued.

Director / Member of Senior Management Team:

Signature:

Date:

NONE OF THE ABOVE DATES SHOULD BE USED IN THE PS2 RETURNS TO THE ODPM

Item No. **Report of the Head of Planning, Transportation and Regeneration**

Address NCP HEATHROW FLIGHT PATH BATH ROAD SIPSON

Development: Provision of a new vehicular access to existing NCP car park via A4 Bath Road

LBH Ref Nos: **41632/APP/2021/1301**

Drawing Nos: Arboricultural Impact Assessment, March 2021
Application Covering Letter.
SiteandOtherPlans_included_in_TransportAssessment.
MBSK210222-08 P2.
Transport Assessment Final May 2021
Stage 1 Road Safety Audit May 2021

Date Plans received : 31/03/2021 **Date(s) of Amendment(s):** 07/06/2021

Date Application Valid: 31/03/2021

1. SUMMARY

The application is for a new access from Bath Road to an existing car park. Subject to conditions it is considered that the proposal is acceptable in terms of highway, access and tree impacts and it is recommended that permission be granted.

2. RECOMMENDATION

APPROVAL subject to the following:

1 COM3 Time Limit

The development hereby permitted shall be begun before the expiration of three years from the date of this permission.

REASON: To comply with Section 91 of the Town and Country Planning Act 1990.

2 COM4 Accordance with Approved Plans

The development hereby permitted shall not be carried out except in complete accordance with the details shown on the submitted plans and documents below:

Location Plan MBSK210222-08 P2
Transport Assessment Final May 2021
Stage 1 Road Safety Audit May 2021
Arboricultural Impact assessment March 2021

REASON: To ensure the development complies with the provisions of the Hillingdon Local Plan Parts 1 (November 2012) and 2 (January 2020) and the London Plan (2021).

3 NONSC Non Standard Condition

Notwithstanding drawing number MBSK210222-08 P2 the submitted tactile paving details are not approved as part of this permission. A revised access layout plan showing tactile paving at a depth of 1.2m across the full width of the dropped kerb shall be submitted to the Local Planning Authority within one month of the date of this permission. The revised access layout plan shall be approved in writing by the Local Planning Authority and the development hereby permitted shall not be carried out except in complete accordance

with the details shown on the revised access layout plan.

REASON: To ensure an accessible and safe public realm and to comply with Hillingdon Local Plan Part 2 Policies DMHB 11, DMT2 and DMT5.

4 COM9 Landscaping (car parking & refuse/cycle storage)

No development shall take place until a landscape scheme has been submitted to and approved in writing by the Local Planning Authority. The scheme shall include: -

1. Details of Soft Landscaping
1.a Planting plans (at not less than a scale of 1:100),
1.b Written specification of planting and cultivation works to be undertaken,
1.c Schedule of plants giving species, plant sizes, and proposed numbers/densities where appropriate

4. Details of Landscape Maintenance
4.a Landscape Maintenance Schedule for a minimum period of 5 years.
4.b Proposals for the replacement of any tree, shrub, or area of surfing/seeding within the landscaping scheme which dies or in the opinion of the Local Planning Authority becomes seriously damaged or diseased.

5. Schedule for Implementation

REASON: To ensure that the proposed development will provide appropriate replacement planting and preserve and enhance the visual amenities of the locality in compliance with Policies DMHB 11 and DMHB 14 of the Hillingdon Local Plan Part 2 (2020).

5 NONSC Non Standard Condition

Prior to the use of the proposed access commencing, a Car Park Management Plan shall be submitted to and approved in writing by the Local Planning Authority. The Car Park Management Plan shall include details of how short term parking will be prevented and how queueing at the access point will be prevented. The development hereby permitted shall not be carried out except in complete accordance with the details shown on the approved Car Park Management Plan.

Reason: To ensure the proposal does not generate additional trips and to ensure no adverse impact on highway safety and the free flow of traffic in compliance with Hillingdon Local Plan Part 2 Policies DMT1 and DMT 2.

INFORMATIVES

1 I52 Compulsory Informative (1)

The decision to GRANT planning permission has been taken having regard to all relevant planning legislation, regulations, guidance, circulars and Council policies, including The Human Rights Act (1998) (HRA 1998) which makes it unlawful for the Council to act incompatibly with Convention rights, specifically Article 6 (right to a fair hearing); Article 8 (right to respect for private and family life); Article 1 of the First Protocol (protection of property) and Article 14 (prohibition of discrimination).

2 I53 Compulsory Informative (2)

The decision to GRANT planning permission has been taken having regard to the policies and proposals in the Hillingdon Local Plan Part 1 (2012) and Part 2 (2020) set out below, including Supplementary Planning Guidance, and to all relevant material considerations, including The London Plan - The Spatial Development Strategy for

London consolidated with alterations since 2011 (2016) and national guidance.

3 I70 LBH worked applicant in a positive & proactive (Granting)

In dealing with the application the Council has implemented the requirement in the National Planning Policy Framework to work with the applicant in a positive and proactive way. We have made available detailed advice in the form of our statutory policies from Local Plan Part 1, Local Plan Part 2, Supplementary Planning Documents, Planning Briefs and other informal written guidance, as well as offering a full pre-application advice service, in order to ensure that the applicant has been given every opportunity to submit an application which is likely to be considered favourably.

4 I60 Cranes

Given the nature of the proposed development it is possible that a crane may be required during its construction. The applicant's attention is drawn to the requirement within the British Standard Code of Practice for the safe use of Cranes, for crane operators to consult the aerodrome before erecting a crane in close proximity to an aerodrome. This is explained further in Advice Note 4, 'Cranes and Other Construction Issues' (available at www.aoa.org.uk/publications/safeguarding.asp)

3. CONSIDERATIONS

3.1 Site and Locality

The application site comprises the National Car Parks (NCP) 'Flightpath' car park (630 spaces), located on land to the north of the A4, Bath Road, and to the west of the motorway spur from the M4 leading to the Airport. Currently the site has two entrances. The main entrance is from the Park Inn Hotel service road via a single-track bridge over the motorway spur. The length of Bath Road outside the site is dual carriageway. The road was formerly a trunk road, but the responsible highway authority is now Transport for London. It is a major traffic route and an urban clearway. The section outside the site is subject to a 50mph speed limit, with a single offside traffic lane open to all vehicles and a nearside traffic lane open to buses, cyclists and taxis only. To the north of this, a combined footway and cycleway crosses the site frontage, with a width of around 4.5m. At present there is no access to the site from Bath Road.

3.2 Proposed Scheme

Planning permission is sought to create a new left in left out entry/exit from an existing car park north of the A4 Bath Road onto the eastbound carriageway of the A4 Bath Road. The size of the car park and the number of parking spaces would not change as part of this planning application.

The applicant explains that there is a need to increase the accessibility of the existing off-airport parking facility. Accessing and egressing the car park via the A4 will make it easier for users to find and access the car park, and also cut out the circuitous route for the shuttle buses taking people to the airport. In addition, the proposal would allow for the halving of the number of bus movements using the A4/Sipson Road/Nene Road junction which is a complex and congested signal junction. The Inspector in 2004 noted the unsatisfactory existing access arrangements.

As advised at pre-application stage the application is accompanied by a Road Safety Audit.

3.3 Relevant Planning History

41632/APP/2002/147 N C P Car Park (West Of Excelsior Hotel) Bath Road Sipson

RELOCATION OF EXISTING ENTRANCE FROM REAR OF THE EXCELSIOR HOTEL TO THE BATH ROAD

Decision: 26-02-2003 Refused **Appeal:** 26-03-2004 Allowed

41632/APP/2010/2301 Ncp Car Park (West Of The Park Inn Hotel) Bath Road Sipson

New vehicular access to A4.

Decision: 02-02-2011 Approved

41632/PRC/2017/138 Site West Of Excelsior Hotel Bath Road Sipson

Heathrow s106 (41632C/90/2177) - Agreement dated 31st May 1991

Decision: 19-08-2020 NFA

41632/PRC/2017/142 Ncp Heathrow Flight Path Bath Road Sipson

Planning application for new access road on Bath Road

Decision: 14-09-2017 OBJ

41632/PRC/2018/249 Ncp Heathrow Flight Path Bath Road Sipson

Proposed new access off A4 to the car park (alternative access)

Decision: 20-02-2019 OBJ

Comment on Planning History

A similar planning application (41632/APP/2002/147), to create a new access from the A4 was refused in 2002 because it was recognised that the A4 Bath Road is a busy strategic route and the applicant had failed to advance any compelling evidence to justify the need for a new access point. A second highway reason for refusal was that the development would be contrary to UDP Policy seeking to prohibit developments whose traffic generation is likely to prejudice the free flow of traffic or conditions or road safety generally. The applicant appealed against the decision (APP/R5510/A/03/1125426), and the appeal was allowed and permission granted. This scheme was never implemented, and the planning permission expired.

Subsequently a further application was submitted in 2010 (41632/APP/2010/2301), taking into account the site's planning history and all other relevant matters, and this was approved but again not implemented.

The present application follows pre-application submissions in 2017 and 2018 (41632/PRC/2018/249).

4. Advertisement and Site Notice

4.1 Advertisement Expiry Date:- 30th April 2021

4.2 Site Notice Expiry Date:- Not applicable

5. Comments on Public Consult

EXTERNAL CONSULTEES:

Four objections were received. The points raised and the applicant's responses are set out below.

Harmondsworth and Sipson Residents' Association:
The company claim the current entry and exit points are no longer satisfactory because clients have difficulty in finding them. We would strongly disagree with this statement. We believe the current access points to be far safer for all road users and easier to access for anyone who is unfamiliar with the locality. Object because:
1. Running a 20 minute shuttle bus service between 4.00 am and 11.40 pm would potentially only allow 4 hours 20
minutes of respite from traffic noise for the residents who would be living next to this proposed new road. We consider this unacceptable.
2. Since the last granting of planning permission the number of bus routes and bus frequency have both increased meaning that it is not uncommon for 4 or 5 buses to arrive at bus stop BC at the same time. When this happens it becomes exceptionally difficult for drivers in oncoming traffic to see any object or person trying to gain access to the road at the designated location of the new road.
3. In mitigation NCP have requested the stretch of road from Sipson Way to the next set of traffic lights on the Bath Road to be reduced to 40mph. It expected this would eliminate the problem of restricted visibility and speeding motorists in the vicinity of the new road junction. As a regular user of the Bath Road I would anticipate that without a set of traffic lights at this point the traffic would continue at 50 mph until the traffic lights at the crossroads.
4. The statistics given for the number of accidents at this point do not take into account the possibility of a stream of vehicles trying to pull out of junction where they have restricted vision to the right, need to cross a busy bus lane and join a road where vehicles will be travelling up to 60 mph. Nor do these statistics give consideration to a vehicle wanting to turn left into a junction which is obstructed by a convoy of buses.
5. The owners of the NCP car park do not show any responsibility for the upkeep of the land on the margins of the parking area. The emergency exit on Sipson Way is allowed to be regularly blocked by PHVs and other vehicles when drivers are visiting the Portuguese Caf and the ground next to the Bath Road is a fly tippers haven. This car park has never provided any added value to the amenities on offer to the residents and a new access point in the Bath Road would seriously compromise road safety and the efficient running of our local bus service.

Applicant response -
1. The proposal does not include any change to the shuttle bus schedule, and so this point falls outside of the scope of this application. For traffic to have a significant amenity impact there would need to be a doubling, or more, of existing traffic volumes. Given the existing volume of traffic along the Bath Road, the minor re-routing of minibuses will have no perceptible impact on residential properties in the vicinity.
2. As outlined within the submitted TS, the site access has been designed to afford appropriate visibility for egressing vehicles.
3. Again, as outlined within the TS, current recorded vehicle speeds along this stretch of road are below 40mph and amending the speed limit is therefore an appropriate measure to accompany the new access.
4. The accident analysis is a matter of reporting factual statistics and considering them in the light of the development proposals. As set out in the Transport Statement, vehicle speeds are below 40mph on this section of the A4 and the analysis concluded that there would unlikely be any material impact on highway safety. As part of the analysis, statistics were considered for the junction of Sipson Way/A4, which comprises an almost identical arrangement as being proposed for the NCP car park. The data for this junction identified no particular issues.
5. The Sipson Way emergency access does not fall within the ownership of the applicant, who merely have a right of access across it for emergency use. Any unlawful parking or fly tipping etc. is not the responsibility of either the applicant or the NCP to enforce.

Heathrow Villages Conservation Area Advisory Panel:

In this case we can see the benefit to the owners of direct access off the Bath Road to their car park but regret the need to remove two mature trees from the roadside verge and more trees from the strip of vegetation that separates the car park from the pavement. Nowadays such biodiversity loss should be resisted, but if permission is to be granted then compensatory planting should be sought so there is a net biodiversity gain. There is plenty of space within the car park to allow new trees to be planted, even if it means that one or two parking places have to be lost. An alternative approach would be to move the access point to the south-east corner of the site which would reduce the loss of street trees to one while also moving the access further away from the residential properties to the west, though compensatory planting would still be needed. A final comment relates to the width of the access road. If this were an application for a 'dropped kerb' in front of a residential property it would be refused as being too wide; do similar criteria not also apply to commercial undertakings? Although aware of the benefits of the proposals, we hope that permission will not be granted. If it is, then a significant planting plan must be one of the conditions.

Applicant response -
We have minimised tree loss as far as possible through the scheme design and, as above, are happy to work with the Council's Tree Officer to suggest an appropriate scheme of replanting and/or landscaping at conditions stage.
The access position cannot move any further to the east due to the proximity of the bridge over the M4 spur and the associated vehicle restraint system. The access is in the best location in operational highways terms. It has been designed in accordance with all relevant standards and affords both pedestrians and cyclists suitable refuge between vehicles entering and exiting the site, reducing potential conflict at any one point.

Two further objections make following points -

1. Not needed: This additional entry/exit is not required. This is evidenced by the fact that NCP obtained permission years ago, having applied in 2002 and appealed, yet has never seen the need to create it. This also suggests there is an ulterior motive - eg increasing resale value of site.
2. Dangerous for all users: The two-lane A4 has been reduced to one lane for cars and lorries at this point because there is a bus lane. Buses that do not need to stop will be travelling at speed. The Leonardo Hotel, at the top of Sipson Way, has large coaches joining the traffic. An ambulance station is on Sipson Way next to The Leonardo Hotel. There is a bus stop, a cycle lane and a pavement, which will all be affected by vehicles using the proposed access to the car park.
3. Disruptive to residents: The extra activity from the 634 spaces, including a shuttle bus every 20 mins between 4am and 11.40pm, will be disturbing, particularly for the residents of Dalton Villas who live between Sipson Way
and the proposed entrance.
4. Transport statement massively outdated: The use of buses and active transport such as bicycles and walking will continue to be encouraged - to reduce private cars to cut pollution and climate change emissions. Greater priority should be given to these modes of travel. Figures quoted are pre-covid and also do not take account of Free Travel Zone, which encouraged bus use thus reducing car numbers in recent years but is set to end due to cost cutting by Heathrow.
5. Traffic and vehicle speed: There is only one lane for car traffic on the A4 at this point and there are already traffic lights at regular intervals. At off-peak times, vehicles travel on the A4 at the speed limit making it difficult to join traffic from side roads. At peak times, traffic can be noseto-tail and vehicles find it very difficult to get into the traffic. If a vehicle pauses in the bus lane they risk causes an accident. I live in the area and have seen innumerable near misses as people try to cross the bus lane.
6. Current access is more than is needed: NCP does not manage the site well as it has sufficient access. The access on Sipson Way is often blocked by parked PHVs; I have

never seen it in use. Signage for on the spur road and Sipson Road would be seen by everyone if it was better placed. The signage on Sipson Road is within the branches of a tree! Opposite are very large signs for a restaurant, convenience store, offices to let, garage services etc.
7. Loss of trees: The vegetation at the front of the site acts as a buffer to pollution. It has not been maintained by NCP, who do not attend to the rubbish dropped over the wall. I do not believe they will suddenly decide to maintain it if given permission for access to the A4. Vehicular traffic on Sipson Way will increase as people coming from M4 will have no choice but to cut through
Sipson Way to join Bath road in order to take left into the proposed site. At the moment we get enough traffic as it is coming from Bath Road and causing nuisance. Bringing in vehicles , will inevitably increase pollution and the probability of accidents , especially as it is going to take over a bus lane and also a cycling route.(confirmed by TFL). Pedestrians will have to face the extra challenge of crossing this entrance. I can for see that when vehicles will be taking left from Bath Road onto the site itself , if for whatever reason there is a failure at the entrance (barriers not operating or a vehicle broken down at entrance) it will cause havoc for other vehicle then turning left from a fast road (50mph) and in turn causing traffic jams and delaying buses as well.
This proposal fails on plans for providing safety and also the vehicular traffic that will increase in the locality, especially on Sipson Way , directly effecting quality of life for my family and others who live locally. By giving another entrance to the site it will increase the opportunities for thieves as well to enter/exit. I regularly attend ward panel meetings with the local police and our ward (Heathrow Villages) suffers greatly with theft from motor vehicles.

Applicant response -

1. Vehicles arriving at the site from the M4 will have a number of route options, including use of the northern perimeter road, avoiding Sipson Way. The volumes of vehicles identified as using the NCP car park were set out in Table 3.2 of the Technical Note and were recorded as between 19 and 11 vehicles in the typical peak periods - this equates to one vehicle every 3-5 minutes and will not give rise to any material harm. The Technical Note included a review of the accident statistics for the area and concluded that the development would not give rise to any material increase in risk. Moreover, the proposals have been subject to an independent Road Safety Audit (approved by TfL) which identified no significant highway safety issues.

2. Pedestrians already satisfactorily cross the end of Sipson Way which carries significantly more traffic that the proposed access into the NCP car park. The proposals include the reduction of the speed limit to 40mph, to reflect the actual recorded speeds of vehicles on the A4. In the event of a barrier failure, they can be readily raised manually to avoid any potential for blocking back. As above, the proposals were subject to an independent Stage 1 RSA (approved by TfL) which identified no material issue with the access arrangements.

3. Vehicle crime is a matter is not directly related to the proposal, but we can confirm that the site will continue to be subject to appropriate security measures.

4. The two-lane A4 arrangement for one lane for cars and lorries with a bus lane is not an uncommon arrangement. It has been subject to an independent Stage 1 RSA (approved by TfL) and is very similar to the junction of Mondial Way approximately 750m east of the site.

5. Regarding disruption to residents, there will be no additional traffic to/from the site. All vehicles accessing the site will already be on the adjacent highway network. For traffic volumes to present a noticeable change in noise, there has to be a doubling or halving of

traffic movements. In the context of flows on Sipson Way and the A4, the existing traffic to the site is negligible and will not present any impact on noise amenity.

7. Comment that transport statement massively outdated - The Technical Note is dated May 2021 and utilises appropriate data/information to draw its conclusions.

8. Comment on traffic and vehicle speed - The surveys identify that vehicles on the A4 travel well below the posted speed limit. The Technical Note takes account of vehicle volumes on the A4 and the proposals have been the subject of an independent Stage 1 RSA (approved by TfL).

9. Comment that current access is more than is needed - The reasons why the proposed access is required are covered in detail within the submitted Planning Statement. The Sipson Way access does not fall within the ownership of NCP or the applicant, who have a right of access for emergency vehicles only. This is why it is rarely used. It does not fall under the responsibility of NCP or the applicant to enforce traffic/parking restrictions in this area.

HIGHWAYS ENGLAND:
We consider the provision of a new vehicular access from the A4 to the NCP Car Park would be unlikely to materially affect the safety, reliability and/or operation of the SRN (the tests set out in DfT C2/13 para 10 and MHCLG NPPF para 109). Therefore, Highways England have no objection to this application.

NATS:
The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

Heathrow Safeguarding:
We have now assessed the below application against safeguarding criteria and can confirm we have no safeguarding objections to the proposed application. However, we would like to make the following observation:

Cranes
Given the nature of the proposed application, it is possible that a crane may be required during development. We would, therefore, draw the applicant's attention to the requirement within the British Standard Code of Practice for the safe use of Cranes, for crane operators to consult the aerodrome before erecting a crane in close proximity to an aerodrome. This is explained further in Advice Note 4, 'Cranes' (available at http://www.aoa.org.uk/wp-content/uploads/2016/09/Advice-Note-4-Cranes-2016.pdf)

INTERNAL CONSULTEES:

HIGHWAYS:
The size of the car park would not be increased as part of this application as such the proposal will not result in any additional traffic on the highway network, it would have an insignificant impact on the A4 Bath Road in terms of capacity or queuing.

The Highway Authority note that the Road Safety Audit highlights that the former Department for the Environment, Transport and the Regions recommended that 'in-line' tactile paving should be 1,200mm deep across the full width of the dropped kerb, this is to ensure that necessary warning is provided to a vision impaired pedestrian proceeding at normal pace. However, the tactile paving provided is 800mm deep when measured back from the channel line, which could lead to a vision impaired pedestrian stepping over the tactile paving and entering the carriageway unaware, with consequent risk of being struck

by a moving vehicle. The Highway Authority require that the design of the junction is modified in response to these comments. This requirement should be secured by way of a planning condition.

As mentioned above size of the car park - number of spaces would not change and as such the neither would the number of vehicle trips generated. However, the number trips generated could change if the use car park were to be used for short stay parking - as the turnover of spaces would increase so would the number of cars arriving and departing. With the new access, the car park would be more prominent and more able to 'catch passing trade' - people driving along Bath Road looking for somewhere to park for an hour or so. To protect against the car park being used for short-stay parking the Highway Authority require that the submission of a Car Parking Management Plan is made a condition of any forthcoming planning approval. This Car Parking Management Plan should contain information regarding duration of stay and cost.

The Highway Authority is aware that if entry to the car park is controlled by a barrier, then situations may arise whereby cars queue back onto the Bath Road waiting for their turn to enter the car park. The Car Parking Management Plan should also set out how the cost to park would be collected, the method of payment must not require the provision of a barrier.

Subject to the above there are no highway objections to this application.

TREE/LANDSCAPE OFFICER:
This site is occupied by the wooded southern boundary of an NCP car park and a roadside verge to the west of the M4 spur road linking the M4 to Heathrow airport. The car park is currently only accessible via a road over bridge which is accessed via the Park Inn (Radisson) and Conference Centre to the east of the spur road. Aside from the landscape buffer of dense woody vegetation which screen the car from the south, there are roadside trees along the northern edge of Bath Road, thought to be managed by Highways England. - These trees are not protected by TPO or Conservation Area designation, nevertheless they are a valuable asset for their visual amenity and capacity to improve air quality.

This application follows the approval of a similar proposal, 41632/APP/2010/2301, which was never implemented. A tree report by Tamla, dated March 2021, has identified and assessed 4 highway trees and the on-site woodland shelter belt. Three individual trees and the shelter belt are 'B' category trees; T1, T2, T3 and TG1. T4 is a 'C' category tree. The report confirms that T3 Norway maple (B), T4 London Plane (C) and a length of the shelter belt, TG1 (B) will be removed to enable the new access point. Two adjacent street tree, T1 and T2 on plan, which are close to the proposed junction will be protected during the construction work. Tree loss is regrettable on the Bath Road, where pollution and poor air quality is recorded. Replacement tree planting should be provided by condition.

Recommendation
No objection subject to conditions COM9 (parts 1, 4 and 5).

ACCESS OFFICER:
I have assessed this application for a new vehicle crossover for access into the NCP car park leading from Bath Road. Drawing No.MBSK210222-08 appears to show two dropped kerbs with tactile paving, with the central island. Conclusion: acceptable.

6. Local Plan Designation and London Plan

The following Local Plan Policies are considered relevant to the application:-

Part 1 Policies:

Part 2 Policies:

In addition: Relevant Local Plan policies:

PART 1
BE1 - Built environment

PART 2
DMHB 11 - Design of New Development
DMT1 - Managing transport impacts
DMT2 - Highway impacts
DMT5 - Pedestrian and cyclists
DMT6 - Vehicle parking

7. MAIN PLANNING ISSUES

7.1 Impact on the amenities of the occupiers of neighbouring residential properties

No residential occupiers would be significantly affected by the proposal.

7.2 Impact on Street Scene

The proposed new access would result in the loss of some trees. The Tree/Landscape Officer does not object, subject to replacement tree planting being required by condition. A condition is recommended to require a replacement planting scheme. Subject to this, and given the highway context no significant adverse visual impact would result.

7.3 Traffic Impact/Pedestrian Safety

The size of the car park would not be increased as part of the application and as such the proposal is not envisaged to result in any additional traffic on the highway network. In response to the Highway Officer comments on potential short stay parking and queuing, the applicant responded as follows:

"1) With a more visible entrance/site, how will we avoid casual, short term (20 minute) parking (and therefore a potential increase in trips)?

The business model for the NCP car park is that of an airport car park, providing secure parking for leisure and business travellers in/out of Heathrow Terminals 2 & 3. This is very much set out on the operators website which states:
"Heathrow Flightpath provides convenient parking for Heathrow Terminals 2 & 3. Located less than half a mile from the terminal building behind the Park Inn Hotel, this Heathrow car park is the best kept secret in Heathrow parking. Whether you're planning a holiday or jetting off on a business trip, park at Heathrow Flightpath and take advantage of the following benefits:"
While the minimum charge is £5 for two hours, I understand that these smaller charges allow customers to be charged for a partial day, rather than whole day, providing flexibility around flight times and it is not aimed at encouraging casual short term visits.

Moreover, realistically there is little (if anything) in the immediately vicinity that a casual visitor is likely to be trying to access - all of the local hotels have their own parking, as does the nearest public house so I believe that any casual short term visits will be negligible, if any.

2) Could the barrier provision result in blocking back onto the A4?
The proposed barriers are located circa 22m from the A4 bus lane and would operate very much as the existing ones do - the ANPR system will raise the barrier automatically for pre-booked customers . For those who have not pre-booked, their number plate is recorded and a ticket issued, with the barrier then raising to let them enter.

Within the 22m barrier setback, 3-4 vehicles could wait without blocking back onto the bus lane. To provide some context, it is generally accepted that a lifting arm barrier can cater for 360-400 vehicles per hour (Design Recommendations for Multi-storey and underground Car Parks, 4th Edition) - that's one vehicle every 10 seconds or so being able to pass. The level of traffic recorded at the NCP access was 19 vehicle in the morning peak period, only 10 of which were accessing the car park. With the barriers having a through-put capacity of up to 400 vehicles and only 10 vehicles presently entering in the morning peak, it seem very unlikely any blocking will occur - even if there is a modest increase in trips. I would add that the Stage 1 RSA (as approved by TfL) did not consider this a material risk.

It is considered this satisfactorily addresses the Highway Officers comments. Notwithstanding this, a condition is recommended to require a Car Park Management Plan to demonstrate that no unacceptable adverse effects would occur. Subject to this it is considered that the the proposal would not have any significant impact on the A4 Bath Road in terms of capacity, queuing, and highway safety and the free flow of traffic.

7.4 Carparking & Layout

See Traffic Impact above.

7.5 Urban Design, Access and Security Considerations

A condition is recommended to require details of tactile paving for subsequent approval to ensure the safety of pedestrians when crossing the new access point.

7.6 Other Issues

None.

8. Reference Documents

Hillingdon Local Plan Part 1 2012
Hillingdon Local Plan Part 2 2020
London Plan 2021
NPPF 2019
Accessible Hillingdon Supplementary Planning Document 2010

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