GEOSHIELD Verification Report

PROJECT REFERENCE:	GEO100718		
REPORT NUMBER:	003	REPORT DATE:	10/06/2020
PROJECT:	Godfrey Ltd - Kilburn High Road		
PROJECT ADDRESS:	254 Kilburn High Road		

London

NW6 2BS

MEMBRANE SPECIFICATION: Verified in accordance CIRIA 735.

Design in accordance with BS8485 2015 + 2019 for Methane and Carbon Dioxide.

Substrate prepared in-accordance with manufactures instructions and BS8485

Cordek Tori-Gas Membrane - Taped System

Cordek Cellcore

Cordek Cellvent HX

Telescopic Vents

GEOSHIELD Verification Report

MEMBRANE SPECIFICATION:

DESIGN DETAILS:

3630 - 200F Drainage Layout

3630 - 201 D

3630 - 001 Piling Layout Rev A

3630 - 002 Pile Cap Layout Rev B

3630 - 004 Core Layout Rev A

3630 - 005 Ground Floor Layout Rev E

22_446 - Separation Wall Detail 08 Rev 01

3144_420 External Wall Details Rev 04

3144_421 External Wall Details Rev 03

Issued on 09/12/2019 - 3144 420 External Wall Details Sht 1 Rev 04

GEOSHIELD Verification Report

VERIFICATION OFFICER: Chris Ingham

VERIFICATION COMPANY: GeoShield Limited

Icon Business Park, 4100 Park Approach

Thorpe Park, LEEDS

West Yorkshire

LS15 8GB

CONTACT NUMBER: 07555214679

EMAIL ADDRESS: CIngham@Geoshield.co.uk

ORDER NUMBER:

PER VISIT: YES: ✔ NO: ☐ PROJECT: YES: ☐ NO: ✔

GEOSHIELD Verification Report

CLIENT DETAILS

CLIENT CONTACT:	Aleem Hassoo
CONTACTS ROLE:	Godfrey Ltd
MOBILE PHONE:	02082093048
EMAIL ADDRESS:	Aleem@godfreylondon.co.uk

CLIENT CONTACT:	Robert Lewis
CONTACTS ROLE:	Site Manager
MOBILE PHONE:	07866 464872
EMAIL ADDRESS	Robert.lewis@godfreylondon.co.uk
NOTES:	
NOTES:	
NOTES:	

GEOSHIELD Verification Report

APPLICATION TEAM LEADERS

APPLICATOR NAME:	Bill Ndreu
COMPANY:	BNS Screeding Ltd
APPLICATOR TEL:	
APPLICATOR EMAIL:	Bndreu@bns-screeding.com

APPLICATOR NAME:	
COMPANY:	
APPLICATOR TEL:	
APPLICATOR EMAIL:	
NOTES:	
NOTES:	
NOTES:	
NOTES:	

GEOSHIELD Verification Report

AREA SURVEYED:	A-J:1-21

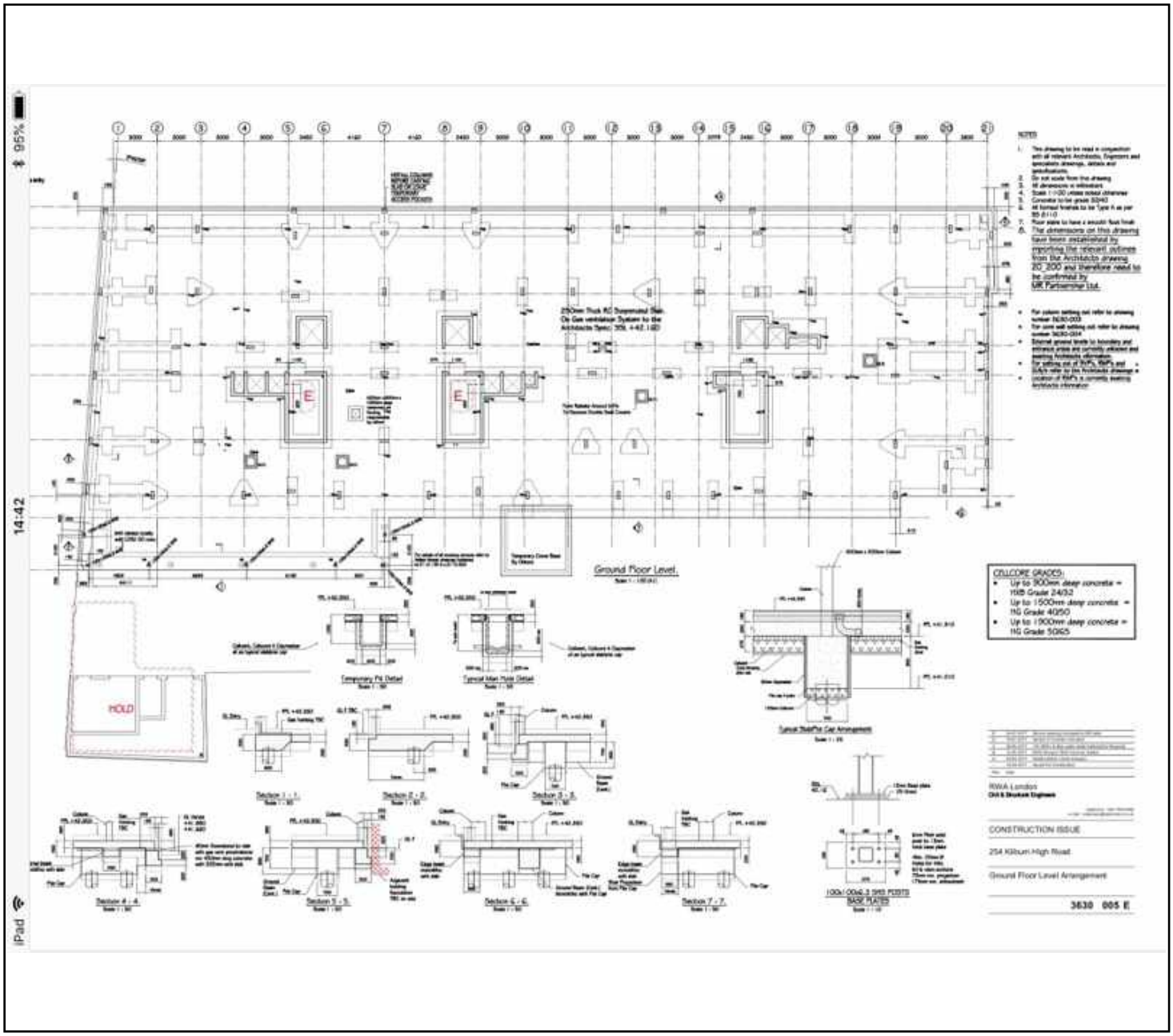
SITE CONDITIONS:

# WEATHER:	N/A - Membrane installed inside the property
# TEMPERATURE:	N/A
# MEMBRANE TEMPERATURE:	N/A
# RELATIVE HUMIDITY:	N/A

TIME:	12:00 - 13:00	REPORT NUMBER:	003
DATE:	3rd June 2020		
ACCOMPANIED			

GEOSHIELD Verification Report

VERIFICATION LAYOUT

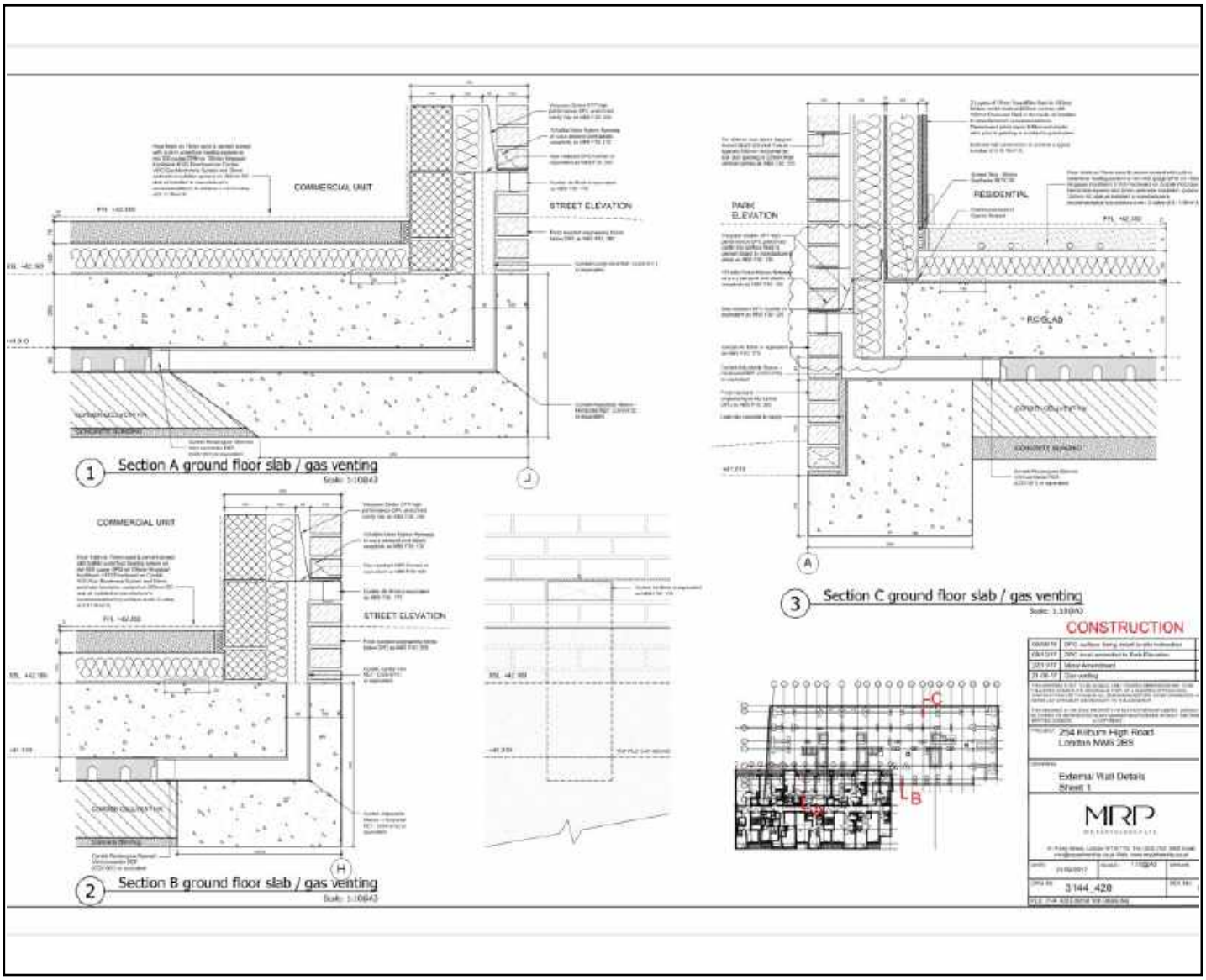


A-J:1-21

Interior of development verified in this report

GEOSHIELD Verification Report

VERIFICATION LAYOUT



Drawing issued confirming the design detail for ventilating beneath the raft

slab. Note: entire building is built on a suspended raft foundation with

ventilation beneath the raft.

GEOSHIELD Verification Report

VERIFICATION LAYOUT

"7.2.9 The results of the calculation (carbon dioxide and methane) would indicate that the site may be classified as Characteristic Situation 2, where basic gas protection measures are required.

7.2.10 The basic gas protection measures may comprise

a) Reinforced concrete cast *in situ* floor slab (suspended, non-suspended or raft) with at least 1200 g damp proof membrane and underfloor venting; or
b) Beam and block or pre-cast concrete and 2000 g DPM/reinforced gas membrane and underfloor venting.
All joints and penetrations must be sealed."

Basic gas protection provided to underside of building was Cordek Cellvent which provides gas venting and allows for ground heave. Thorough ventilation has also been provided from front to back.

Soft Landscaping

There is very little soft landscaping on this development. Jomas executive summary suggests:

"Where the site is to be overlain by either proposed building footprint or areas of hardstanding, these concentrations are not considered to pose a significant risk to human health, as the building / surfacing will provide a suitable barrier to potential receptors. Where areas of soft landscaping are proposed, the risks to end users will be controlled by use of a capping layer. This should comprise of a minimum 300mm thickness of imported clean topsoil."

Also described in:

"8.1.1 Following quantitative risk assessments, the following is noted:

- It is understood that the proposed development comprises demolition of the existing building and construction of a new mixed use development, with commercial ground floor units and residential apartments on upper floors. No private gardens or significant areas of soft landscaping are anticipated.
- Following generic risk assessments and statistical analysis, the upper ninety fifth percentile values of Lead, Mercury and Naphthalene were found to exceed their respective criteria, with a presence of statistical outliers or isolated hotspots of contamination indicated in the case of Mercury and Naphthalene. Individual exceedances of Benzo(a)pyrene and Arsenic were reported, although the upper ninety fifth percentile value for these contaminants did not exceed the respective criteria.
- No other contaminants were reported above their respective criteria and no asbestos fibres were detected."

Conclusion

300 clean topsoil will be used in all areas of soft landscaping.

Approved remediation statement states the ground gas protection system is to

comprise of a suspended raft foundation with underfloor venting with a minimum

1200 gauge membrane on top of the raft.

GEOSHIELD Verification Report

VERIFICATION ITEM ONE

LOCATION/GRID LINE: A-J:1-21

NOTES: The Approved Remediation Strategy states a minimum

1200 gauge DPM is required on top of the slab. The installed membrane is a Visqueen

Low Permeability Membrane. This membrane does not meet requirements of BS8485

but it IS a suitable DPM as required in the Approved Remediation Strategy.

Left photo) yellow damp proof course visible on the perimeter of screed pour.

Right photo) overview of room with damp proof course visible.

GEOSHIELD Verification Report

VERIFICATION ITEM ONE

Above photo) this photo is an overview of an area where screed has been poured on

top of the damp proof course, the dpc can be seen in the photo.

Sufficient evidence has been supplied to confirm a the Visqueen Low Permeabilty

Membrane has been installed as the required DPM.

GEOSHIELD Verification Report

VERIFICATION ITEM TWO

LOCATION/GRID LINE: A-J:1-21

NOTES: Damp proof course has been applied to a large area

and a concrete screed has been poured on top. In the photos below the yellow

damp proof course can be identified.

Left photo) this shows a concrete column with yellow visqueen damp proof course

lapped up against it, coming out above the screed pour.

Right photo) this shows a corner detail of a concrete column, the damp proof course

has again been lapped up the column and above the screed pour.

GEOSHIELD Verification Report

VERIFICATION ITEM TWO

Above photo) the area highlighted above is a stair well that has had a concrete

screed pour on top of the damp proof course. The dpc can be seen at the bottom

off the stairs.

GEOSHIELD Verification Report

VERIFICATION ITEM THREE

LOCATION/GRID LINE: A-J:1-21

NOTES: DPM installations do not require as rigorous testing as ground gas membranes, as in accordance with CIRIA735 and BS8485:2019. The Ground Gas Protection System complies with BS8485:2019 and the Approved Remediation Strategy with a DPM being installed on top of the slab.

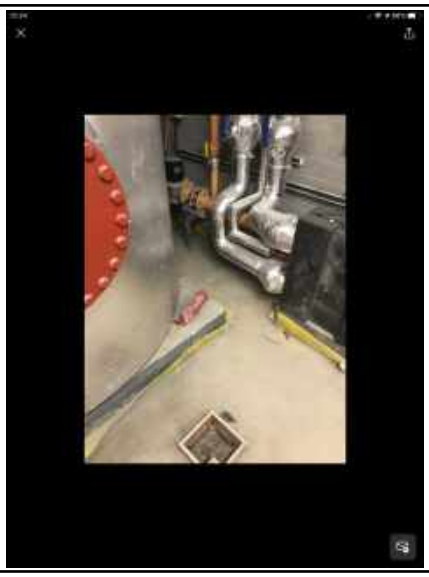
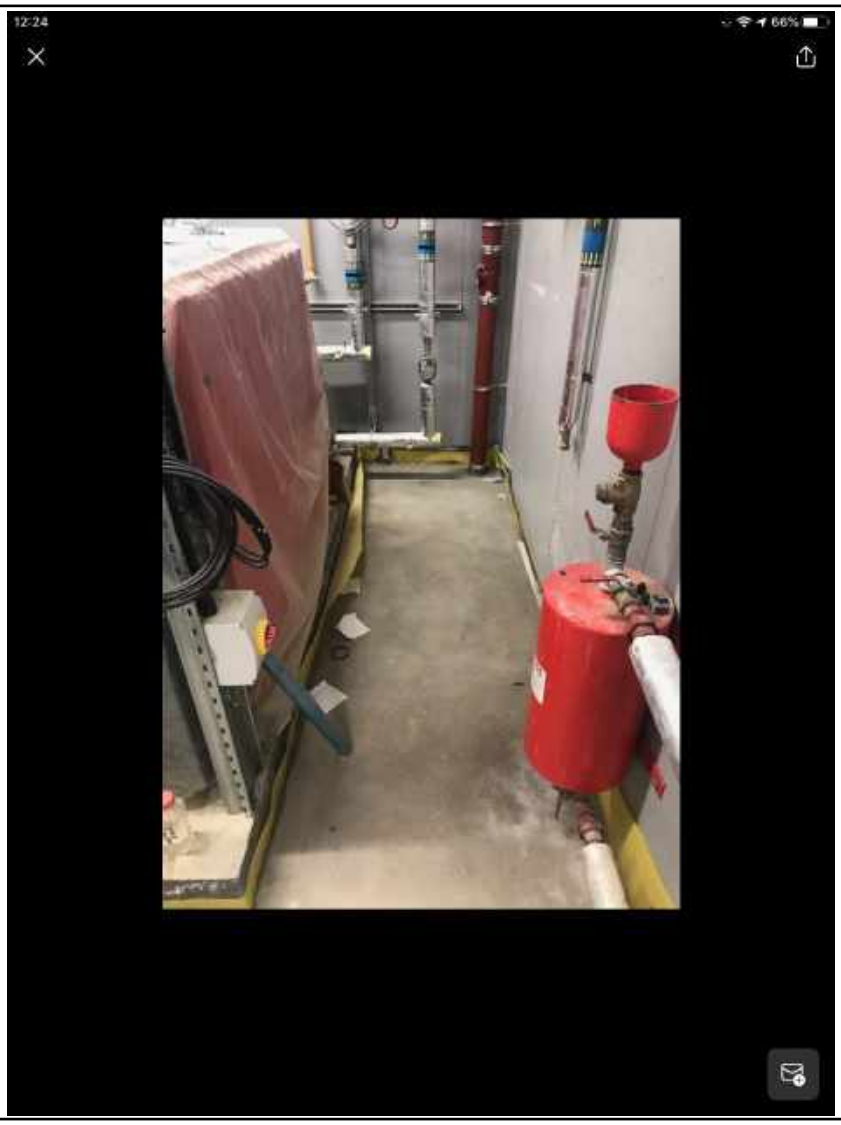


Photo evidence that the DPM has been installed is sufficient evidence to provide sign off the ground gas protection system as the points required are achieved from the Structural Barrier and The Ventilation.

GEOSHIELD Verification Report

VERIFICATION ITEM THREE



Sufficient evidence has been submitted that's DPM has been installed throughout

the development.

GEOSHIELD Verification Report

REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
7th Nov 19	001	Project completed internally where the Membrane had been	
		completed but not verified.	
9th Dec 19	002	Having reviewed the Approved Remediation Strategy the Low	
		Permeability Membrane (DPC) does not require verification.	
		The ground gas protection system comprised venting and	
		structural barrier.	
4th Jun 20	003	No faults found	

GEOSHIELD Verification Report

GAS MEMBRANE TESTING

VISUAL:	YES	✔	NO		SMOKE TEST:	YES		NO	✔
COMPRESSED AIR:	YES		NO	✔	DILECTIC	YES		NO	✔
DESTRUCTIVE:	YES		NO	✔	OTHER:	YES		NO	✔

Testing checklist attached: YES NO

Gridline/Plot Sign off

Gridline/Plot Sign off	A-J/1-21	✔
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		

GEOSHIELD Verification Report

VERIFICATION SUMMARY

Report 003 confirms that a DPM has been installed throughout the entire development. This confirms that the design has been carried in accordance with the Approved Remediation Strategy.

Under BS8485:2019 the installed ground gas protection system does comply without the DPM as the required points are achieved by the Structural Barrier and The Ventilation.

Evidence that the DPM has been installed is sufficient to sign off the installation in accordance with BS8485:2019, CIRIA 735 and the Approved Remediation Strategy. All works to the Ground Gas Protection System are now complete and Signed Off.

GEOSHIELD SIGNATURE:

DATE:	10th June 2020

Appendix 1 - Soft Landscape

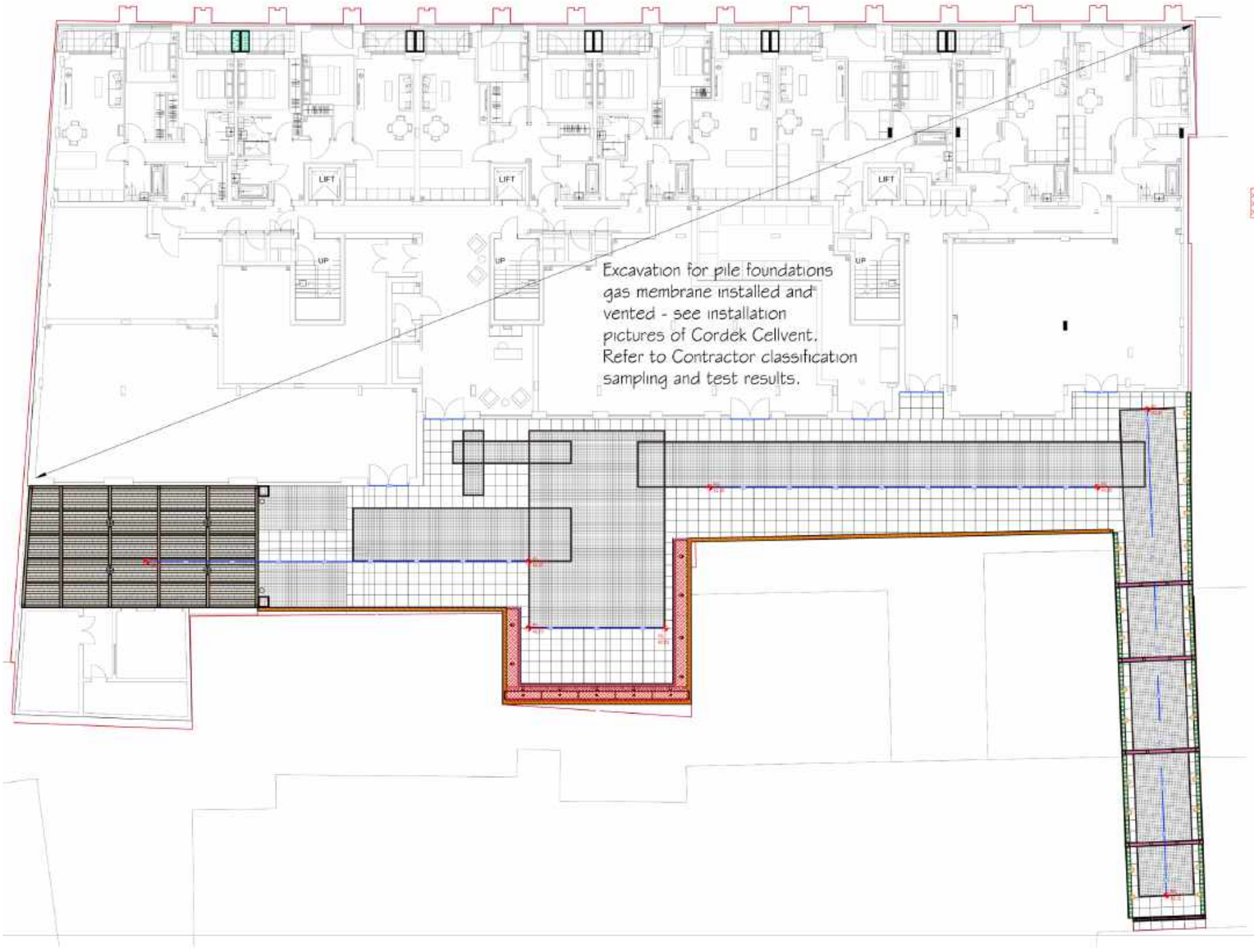
All soft landscape works have been completed in accordance with the location plan included in this appendix.

Springbridge multi-purpose clean topsoil has been imported to the soft landscape areas identified, please refer to the report and texture classification chart included in this appendix along with the relevant supply invoice from the provider MP Moran. The capping material has been sourced from a commercial provider and the information appended shows that it meets BS 3882:2015.

Further details are available from the provider's website at

https://www.springbridge.co.uk/topsoil-/bulk-bags28/multi-purpose-topsoil-bulk-bag

The photographs included in this appendix have also been taken where indicated on plan and show a depth of circa 70cm for imported clean topsoil to the soft landscape areas in accordance with the approved Ground Remediation Strategy.



NOTES

- Site excavation to formation.
- Material stockpiled and sampled - see Tourean Contractors 3/May/2017
- Cordek Cellvent installed - 250mm concrete slab over.
- Hard landscaping over geotextile terrain.
- Soft landscaping 600mm Clean topsoil over compacted soil.

Key

Soft landscaping min 600mm Clean topsoil over compacted soil refer to Ratalic Shadeley details

A	06.03.2018	Information Issue
Rev	Date	

RWA London
Civil & Structural Engineers

telephone: 020 7900 0000
e-mail: engineers@rwalondon.co.uk

Information Issue

254 Kilburn High Road

Remediation Key Plan

3630-061 -1

MP MORAN
BUILDERS & PLUMBERS MERCHANTS

25 Iverson Road, West Hampstead, London, NW6 2QT
Tel:0207 644 9022, Email:sales@mpmoran.co.uk

Sales Invoice

Invoice No:	**02/4054995**
Invoice Date:	30/05/2020
Customer:	GOD00002
Our Ref:	4053791
Your Ref:	
Raised By:	Liam Cannon
Sale Type:	Delivered

Invoice Address
Godfrey Construction (London) Ltd
Hillview House
1 Hallswelle Parade
NW11 ODL

Delivery Address
Godfrey Construction (London) Ltd
254 Kilburn High Road
London
NW6 2BS

No.	Description	Quantity	Price	Unit Price	Goods Total	VAT	Rate
1	**Bulk Bag Springbridge Multi-Purpose Topsoil Approximately 0.5 Cubic Metre**	**10 ea**	**£ 29.96**	**£ 29.96**	**£ 299.6**	**£ 59.9**	20.0%

Subject to our terms and conditions of sale. Copies available on request.
Title of goods do not pass until payment has been received.
Please ensure items marked with an * meet your exact requirements. These are perishable or non stocked products which are non-refundable & non-returnable.
Stocked product lines are subject to a 25% restocking charge when returned within 28 days of purchase AND in their original condition.
Shortages or damages must be notified within 48 hours of delivery/collection.

Total Amount	£ 299.6
Total VAT	£ 59.9
Invoice Total	£ 359.5

FORS FLEET OPERATOR RECOGNITION SCHEME
ID:004142

Chemtest
The right chemistry to deliver results
Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

UKAS TESTING 2183

mCERTS

Final Report

Report No.:	20-07249-1
Initial Date of Issue:	12-Mar-2020
Client	Springbridge Direct Ltd
Client Address:	Oxford Road Denham Middlesex UB9 4DF
Contact(s):	Katie East Tom Hawkins
Project	Springbridge Yard
Quotation No.:	Q19-19030
Order No.:	97478
No. of Samples:	1
Turnaround (Wkdays):	5
Date Approved:	12-Mar-2020
Approved By:	
Details:	Darrell Hall, Director

Date Received:	06-Mar-2020
Date Instructed:	06-Mar-2020
Results Due:	12-Mar-2020

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Springbridge Yard

Client: Springbridge Direct Ltd			Chemtest Job No.:		20-07249
Quotation No.: Q19-19030			Chemtest Sample ID.:		981590
			Client Sample ID.:		1
			Sample Type:		SOIL
			Date Sampled:		02-Mar-2020
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-
Moisture	N	2030	%	0.020	11
Soil Colour	N	2040		N/A	Brown,
Other Material	N	2040		N/A	Roots,
Soil Texture	N	2040		N/A	Loam,
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	1.5
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	9.9
Cadmium	M	2450	mg/kg	0.10	0.12
Chromium	M	2450	mg/kg	1.0	30
Copper	U	2450	mg/kg	0.50	18
Mercury	M	2450	mg/kg	0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	47
Lead	M	2450	mg/kg	0.50	17
Selenium	M	2450	mg/kg	0.20	< 0.20
Zinc	U	2450	mg/kg	0.50	68
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10
Naphthalene	N	2700	mg/kg	0.010	< 0.010

Chemtest
The right chemistry to deliver results

Results - Soil

Project: Springbridge Yard

Client: Springbridge Direct Ltd			**Chemtest Job No.:**		20-07249
Quotation No.: Q19-19030			**Chemtest Sample ID.:**		981590
			Client Sample ID.:		1
			Sample Type:		SOIL
			Date Sampled:		02-Mar-2020
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Acenaphthylene	N	2700	mg/kg	0.010	< 0.010
Acenaphthene	N	2700	mg/kg	0.010	< 0.010
Fluorene	N	2700	mg/kg	0.010	< 0.010
Phenanthrene	N	2700	mg/kg	0.010	< 0.010
Anthracene	N	2700	mg/kg	0.010	< 0.010
Fluoranthene	N	2700	mg/kg	0.010	0.40
Pyrene	N	2700	mg/kg	0.010	0.50
Benzo[a]anthracene	N	2700	mg/kg	0.010	< 0.010
Chrysene	N	2700	mg/kg	0.010	< 0.010
Benzo[b]fluoranthene	N	2700	mg/kg	0.010	< 0.010
Benzo[k]fluoranthene	N	2700	mg/kg	0.010	< 0.010
Benzo[a]pyrene	N	2700	mg/kg	0.010	< 0.010
Indeno(1,2,3-c,d)Pyrene	N	2700	mg/kg	0.010	< 0.010
Dibenz(a,h)Anthracene	N	2700	mg/kg	0.010	< 0.010
Benzo[g,h,i]perylene	N	2700	mg/kg	0.010	< 0.010
Total Of 16 PAH's	N	2700	mg/kg	0.20	0.90
Benzene	M	2760	µg/kg	1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0
Total Phenols	M	2920	mg/kg	0.30	< 0.30

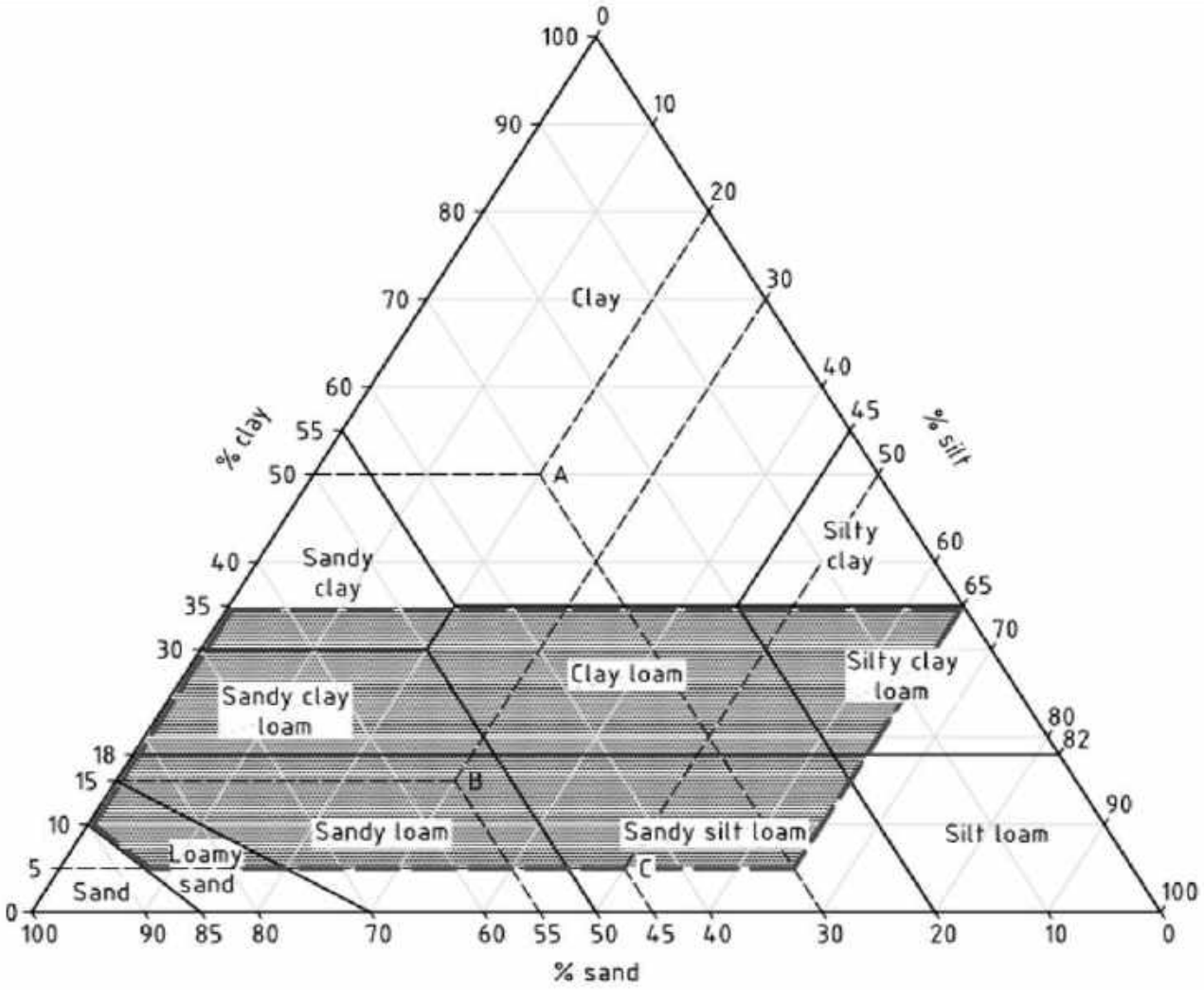
Results - Topsoil Report

BS3882:2015

Chemtest Job No.: 20-07249
Chemtest Sample ID.: 981590
Client Sample Ref.:
Sample Location:
Client Sample ID.: 1
Top Depth (m):
Bottom Depth (m):
Date Sampled: 02-Mar-2020
Time Sampled:

Parameter	Units	Multipurpose Range	Result	Compliant with Multipurpose Range? (Y/N)	Compliant with Specific Purpose Range? (Y/N)		
Texture					**Acid**	**Low F**	**Calc.**
Clay content	%		8.1				
Silt content	%		8.1				
Sand content	%		84				
Soil texture class		See Attached Chart	Loamy Sand	YES			
Mass Loss on Ignition							
Clay 5-20%		3.0-20	4.8	YES	YES	YES	YES
Clay 20-35%		5.0-20					
Stone Content	**% m/m**						
>2mm		0-30	20	YES			
>20mm		0-10	< 0.020	YES			
>50mm		0	< 0.020	YES			
Soil pH value		5.5-8.5	8.5	YES	NO	YES	YES
Carbonate (Calcareous only)	%		1.4				YES
Electrical Conductivity	µS/cm	If >3300 do ESP	3200	YES			
Available Nutrient Content							
Nitrogen %		>0.15	0.20	YES	YES		YES
Extractable phosphorus	mg/l	16-140	16	YES	YES	YES	YES
Extractable potassium	mg/l	121-1500	1100	YES	YES		YES
Extractable magnesium	mg/l	51-600	120	YES	YES		YES
Carbon : Nitrogen Ratio		<20:1	19/1	YES	N/A	N/A	N/A
Exchangeable sodium	**%**	<15	12				
Available Calcium	mg/l		1300				
Available Sodium	mg/l		320				
Phytotoxic Contaminants (by soil pH)		**< 6.0** / **6.0-7.0** / **> 7.0**					
Zinc (Nitric Acid extract)	mg/kg	<200 / <200 / <300	60	YES			
Copper (Nitric Acid extract)	mg/kg	<100 / <135 / <200	18	YES			
Nickel (Nitric Acid extract)	mg/kg	<60 / <75 / <110	47	YES			
Visible Contaminants	**% mm**						
>2mm		<0.5	0.000	YES			
..... of which plastics		<0.25	0.000	YES			
..... man-made sharps		zero in 1kg	0.000	YES			

Topsoil: Texture Classification Chart



Key

Area within which the texture of topsoil is required to fall

NOTE Examples of textural classification are as follows.

- *Soil A with 30% sand, 20% silt and 50% clay is in the "clay" textural class.*
- *Soil B with 55% sand, 30% silt and 15% clay is in the "sandy loam" textural class.*
- *Soil C with 45% sand, 50% silt and 5% clay is in the "sandy silt loam" textural class.*

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2020	Electrical Conductivity	Electrical conductivity (EC) of aqueous extract or calcium sulphate solution for topsoil	Measurement of the electrical resistance of a 2:1 water/soil extract.
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2115	Total Nitrogen in Soils	Nitrogen	Determination by elemental analyser
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2260	Carbonate	Carbonate	Titration
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2400	Cations	Cations	ICP-MS
2420	Phosphate	Phosphate	Spectrophotometry - Discrete analyser
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2620	LOI 440	LOI 440 Trommel Fines	Determination of the proportion by mass that is lost from a soil by ignition at 440°C.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Chemtest
The right chemistry to deliver results

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

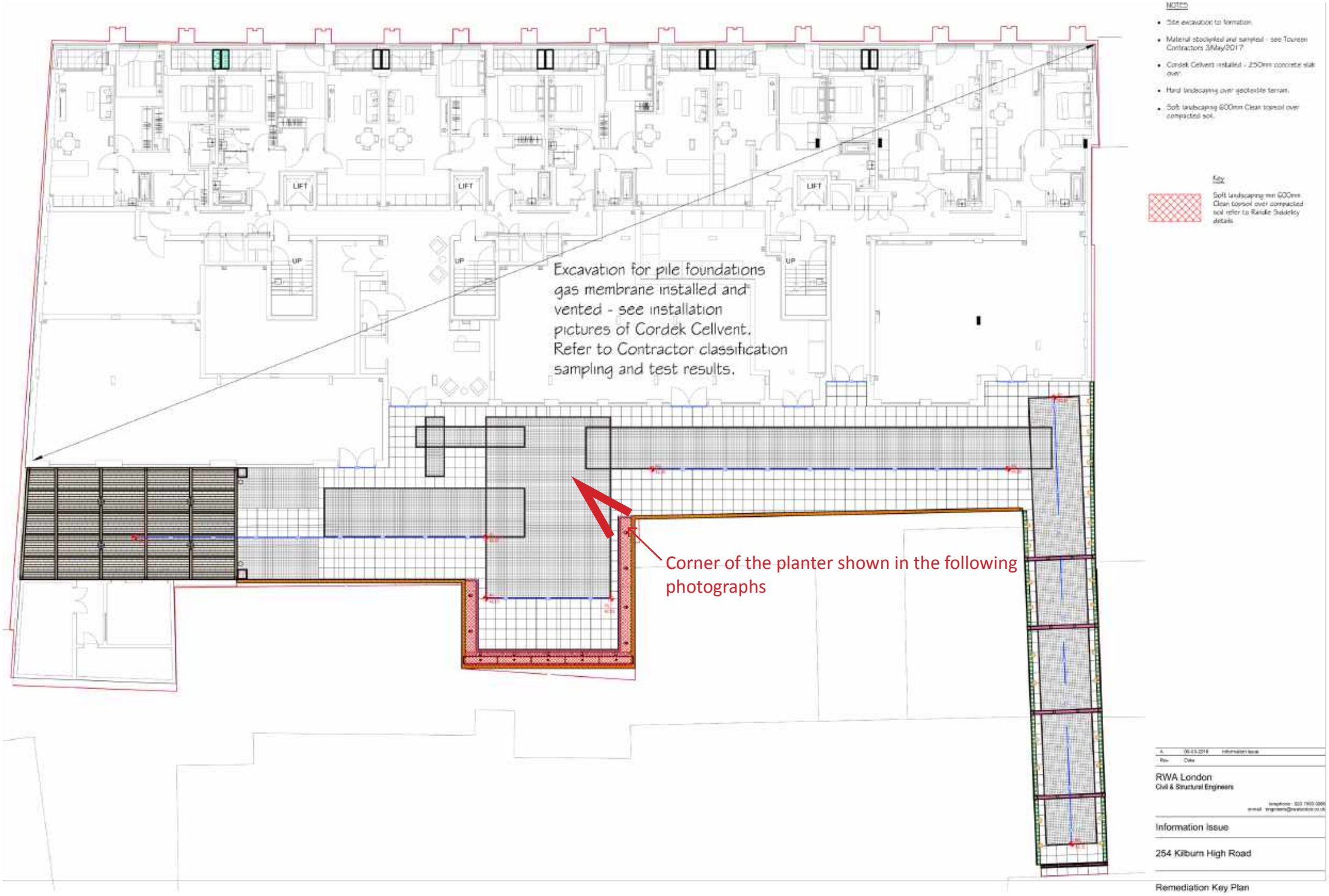
Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



NOTES

- Site excavation to formation.
- Material stockpiled and sampled - see Tourean Contractors 3/May/2017
- Cordek Cellvent installed - 250mm concrete slab over.
- Hard landscaping over geotextile terrain.
- Soft landscaping 600mm Clean topsoil over compacted soil.

Key

Soft landscaping min 600mm Clean topsoil over compacted soil refer to Ratalle Shadeley details

RWA London
Civil & Structural Engineers

Information Issue

254 Kilburn High Road

Remediation Key Plan

3630-061 -1

Appendix 2 - Buried service runs

The photographs and email correspondence with Thames Water Developer Services included in this appendix refer to the selection and installation of buried service runs for potable water supplies.

Barrier Pipes were recommended for the Site. These pipes can be recognised by the blue outer protective layer which is visible in the photographs appended.

Gennaro D'Alo

From: Gary Mahony
Sent: 15 October 2019 12:07
To: DEVELOPER.SERVICES@THAMESWATER.CO.U
Cc: Simon Cox; Robert Lewis
Subject: Godfrey construction
Attachments: KHR ground reports - email 2 of 2

Good morning

Please see attached soil report for 254 Kilburn High Road NW6 2BS ref/no DS/6032717. Requested by your engineer on site please review and get back to me if this is acceptable.

Regards

Gary Mahony
Godfrey Construction
07794765481

Gennaro D'Alo

From: DEVELOPER.SERVICES@THAMESWATER.CO.U <DEVELOPER.SERVICES@THAMESWATER.CO.UK>
Sent: 27 October 2019 08:45
To: Gary Mahony
Cc: Robert Lewis; Simon Cox
Subject: DS6032717 NWC NW6 2BS 254 Kilburn High R

Good Morning,

I have had a senior designer review the soil report that was sent in and he has concluded that based on the sit history, Barrier Pipe will be required as there was an existing work shop/ industrial unit in its place.

If you require any further information about the above then feel free to get in contact with us.

Many thanks,

Priya Begum,

Thames Water

Visit us online www.thameswater.co.uk , follow us on twitter www.twitter.com/thameswater or find us on www.facebook.com/thameswater. We're happy to help you 24/7.

Appendix 3 - Soil transfer notes

The groundworks contractors, Toureen Group, have produced waste transfer notes for all excavated soil in accordance with Regulation 12 of the Waste (England and Wales) Regulations 2011 “Duty in relation to the waste hierarchy”.

A selection of these transfer notes are included in this appendix.

WASTE / MATERIAL TRACKING NOTE

Toureen Group
Solving complex challenges since 1991

MATERIAL CONVEYANCE
WASTE TRANSFER
CONSIGNMENT

A1 – Note Code: / 61510

PART A – Notification Details
A2 – Address of Transfer / Collection Point (Site):
Postcode:
A3 – Premises Code
A4 – Name & Address of Destination:
Postcode:
Permit/Exemption No:
A5 – Current Holder/ Producer of the Waste Material — Transferor
Toureen Group, 25 Cecil Rd. Wealdstone, HA3 5QY. tel: 020 8424 7998

PART B – Description of Waste / Material

B1 – Process giving rise to the waste:

B2 – SIC Code:

- 42.99/0 Civil Engineering
- 42.22/0 Infrastructure/Utilities
- 41.20/1 Commercial Building
- 39.00/0 Remediation/Waste Recycling
- 41.20/2 Residential Building
- 42.11/0 Groundwork's
- 43.11/0 Demolition
- 42.13/0 Tunnelling

B3 – EWC Code & Description of Waste/Original Waste Material

- 17 05 04 – Clean/Inert muck
- 17 01 02 – Brick
- 17 02 01 – Timber/Wood
- 17 01 03 – Tiles & Ceramics
- 17 05 04 – Non-Hazardous muck
- 17 01 07 – Demo Rubble
- 17 02 03 – Plastics
- 13 05 07 – Oily Water
- 17 05 03 – Hazardous muck
- 17 09 04 – Mixed Con. Waste
- 17 02 02 – Glass
- 17 06 05 – Asbestos Containing Mat.
- 17 01 01 – Concrete
- 17 03 02 – Tarmac
- 17 06 04 – Insulat
- 17 04 07 – Mixe

Classification of Waste/Recovered Material:

- Clean/Inert
- Non-Hazardous
- Hazardous

he Concentration of Chemicals/Biological component of concern:

zard Codes

– If the "waste" material has been recycled/treated please identify to what specification it conforms?

- Type I
- Type II
- 6F2
- 6F3
- Other (State)

How is the Waste Transported: No./weight/volume if applicable:

- Articulated Lorry
- Tipper (20 Ton)
- Grab (16 Ton)
- Tanker
- Drum
- RO/RO 40 Yd Bin
- 20 Yd Skip
- 16 Yd Skip
- 12 Yd Skip
- 8 Yd
- 8 Yd Skip
- 6 Yd Skip
- Mini Skip
- Other (State)

– Carriers Certificate

hat I today collected the consignment and that the details in A2, 3 are correct and I have been advised of any special handling nts.

name:

riers Licence No:

gistration:

e:

Time:

PART D – Consignor's Certificate

I certify that the information completed in A, B and C is is registered or exempt and was advised of the appropr measures. All of the waste/recovered material is packe and the carrier has been advised of any special handl

I confirm that I have fulfilled my duty to apply the w Regulation 12 of the Waste (England & Wales) regs

Name:

Signature:

Date:

nsignee's Certificate

Waste Manage

WASTE / MATERIAL TRACKING NOTE

Toureen Group
Solving complex challenges since 1991

MATERIAL CONVEYANCE
WASTE TRANSFER
CONSIGNMENT

A1 – Note Code:

61528

PART A – Notification Details

A2 – Address of Transfer / Collection Point (Site):

A4 – Name & Address of Destination:

Postcode:

A3 – Premises Code

Postcode:

Permit/Exemption No:

A5 – Current Holder/ Producer of the Waste Material — Transferor

Toureen Group, 25 Cecil Rd. Wealdstone, HA3 5QY. tel: 020 8424 7998

PART B – Description of Waste / Material

B1 – Process giving rise to the waste:

B2 – SIC Code:

- 42.99/0 Civil Engineering
- 42.22/0 Infrastructure/Utilities
- 41.20/1 Commercial Building
- 39.00/0 Remediation/Waste Recycling
- 41.20/2 Residential Building
- 42.11/0 Groundwork's
- 43.11/0 Demolition
- 42.13/0 Tunnelling

B3 – EWC Code & Description of Waste/Original Waste Material

- 17 05 04 – Clean/Inert muck
- 17 01 02 – Brick
- 17 02 01 – Timber/Wood
- 17 01 03 – Tiles & Ceramics
- 17 05 04 – Non-Hazardous muck
- 17 01 07 – Demo Rubble
- 17 02 03 – Plastics
- 13 05 07 – Oily Water
- 17 05 03 – Hazardous muck
- 17 09 04 – Mixed Con. Waste
- 17 02 02 – Glass
- 17 06 05 – Asbestos Containing Mat.
- 17 01 01 – Concrete
- 17 03 02 – Tarmac
- 17 06 04 – Insulation
- 17 04 07 – Mixed Metals

Classification of Waste/Recovered Material:

- Clean/Inert
- Non-Hazardous
- Hazardous

The Concentration of Chemicals/Biological component of concern:

Hazard Codes

B4 – If the "waste" material has been recycled/treated please identify to what specification it conforms?

- Type I
- Type II
- 6F2
- 6F3
- Other (State)

B5 – How is the Waste Transported: No./weight/volume if applicable:

- Articulated Lorry
- Tipper (20 Ton)
- Grab (16 Ton)
- Tanker
- Drum/IBC/1
- RO/RO 40 Yd Bin
- 20 Yd Skip
- 16 Yd Skip
- 12 Yd Skip
- 8 Yd Skip
- 8 Yd Skip
- 6 Yd Skip
- Mini Skip
- Other (State)

PART C – Carriers Certificate

certify that I today collected the consignment and that the details in A2, .4 and B3 are correct and I have been advised of any special handling equirements.

ompany name: Toureen Group

ddress: 25 Cecil Rd

stcode: HA3 5QY

ste Carriers Licence No: CBDU107968

icle Registration: FY64 CFO

er Name:

ture:

Date: 30/5/19 Time:

PART D – Consignor's Certificate

I certify that the information completed in A, B and C is correct, is registered or exempt and was advised of the appropriate pre measures. All of the waste/recovered material is packaged an and the carrier has been advised of any special handling requ

I confirm that I have fulfilled my duty to apply the waste hie Regulation 12 of the Waste (England & Wales) regulations

Name:

Signature:

Date: 30/5/19 Time:

PART – Consignee's Certificate

Quanti ry Received (tons)

Material/Waste Accepted

YES NO

Waste Management O

T

eceive d this waste/material at the address detailed in A4 on – Date:

onfirm the Vehicle Registration and Type as Detailed in B5 and Part C: YES NO

ere wa ste/material is rejected; please provide details:

Toureen Group

Solving complex challenges since 1991

MATERIAL / WASTE TRACKING NOTE

Ent 18.2

- MATERIAL CONVEYANCE
- WASTE TRANSFER
- CONSIGNMENT

A1 – Note Code: / 61542

PART A – Notification Details

A2 – Address of Transfer / Collection Point (Site):

Postcode:

A3 – Premises Code

A4 – Name & Address of Destination:

Postcode:

Permit/Exemption No:

A5 – Current Holder/ Producer of the Waste Material — Transferor

Toureen Group, 25 Cecil Rd. Wealdstone, HA3 5QY. tel: 020 8424 7998

PART B – Description of Waste / Material

B1 – Process giving rise to the waste:

B2 – SIC Code:

- 42.99/0 Civil Engineering
- 42.22/0 Infrastructure/Utilities
- 41.20/1 Commercial Building
- 39.00/0 Remediation/Waste Recycling
- 41.20/2 Residential Building
- 42.11/0 Groundwork's
- 43.11/0 Demoli
- 42.13/0 Tunnel

B3 – EWC Code & Description of Waste/Original Waste Material

- 17 05 04 – Clean/Inert muck
- 17 01 02 – Brick
- 17 02 01 – Timber/Wood
- 17 01 03 – Tiles & Ceramics
- 17 05 04 – Non-Hazardous muck
- 17 01 07 – Demo Rubble
- 17 02 03 – Plastics
- 13 05 07 – Oily Water
- 17 05 03 – Hazardous muck
- 17 09 04 – Mixed Con. Waste
- 17 02 02 – Glass
- 17 06 05 – Asbestos Containing Mat.
- 17 01 01 – C
- 17 03 02 –
- 17 06 04 –
- 17 04 07

assification of Waste/Recovered Material:

- Clean/Inert
- Non-Hazardous
- Hazardous

e Concentration of Chemicals/Biological component of concern:

ard Codes

If the "waste" material has been recycled/treated please identify to what specification it conforms?

- Type I
- Type II
- 6F2
- 6F3
- Other (State)

How is the Waste Transported: No./weight/volume if applicable:

- Articulated Lorry
- RO/RO 40 Yd Bin
- 8 Yd Skip
- Tipper (20 Ton)
- 20 Yd Skip
- 6 Yd Skip
- Grab (16 Ton)
- 16 Yd Skip
- Mini Skip
- Tanker
- 12 Yd Skip
- Other (State)

– Carriers Certificate

hat I today collected the consignment and that the details in A2,
3 are correct and I have been advised of any special handling
ents.

y name: Toureen group

rriers Licence No:

egistration:

me:

Time: 1028

PART D – Consignor's Certificate

I certify that the information completed in A, B
is registered or exempt and was advised of the
measures. All of the waste/recovered materi
and the carrier has been advised of any spec

I confirm that I have fulfilled my duty to ap
Regulation 12 of the Waste (England & W

Name:

Signature:

Date: 1-6-19