Our Ref AMP/13804VA/LMA

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RSA GEOTECHNICS LTD

3 March 2016

Higgins Construction PLC
1 Langston Road
Loughton
Essex
IG10 3SD

For the attention of Mr Shawn Nudd

By Email only –
shawn.nudd@higginsconstruction.co.uk

Dear Shawn

PLENDER STREET, CAMDEN, LONDON NW1 0LG

1. Introduction

Remedial requirements for the above site based on earlier phases of site investigation comprised the placement of a minimum thickness of 550 mm of clean cover soils within areas of soft landscaping, with either a deter-to-dig membrane or a 150 mm layer of crushed aggregate included at the base to deter excavation into the underlying site soils

This letter report details the recent sampling and testing of placed topsoil and crushed aggregate within completed soft landscaped areas at the site.

This letter has been prepared for the sole internal use and reliance of Higgins Construction PLC. It shall not be relied upon by other parties without the express written authority of RSA Geotechnics Limited. If an unauthorised third party comes into possession of this report they rely on it at their own risk and the authors owe them no duty of care and skill.

2. Fieldwork

A site visit was made by a technician from RSA Geotechnics Limited on 22 February 2016 to recover samples of topsoil and aggregate from the referred areas, by hand excavating pits at each inspection location.

Locations inspected and sampled are recorded on drawing number 13804VA/1 later in this report.

The results of the inspections are summarised below.

Table 2 - Summary of Inspections

Location	Topsoil Depth Range (m)	Crushed Aggregate Depth Range (m)
HPA	0.0 - 0.4	0.4 - >0.55
HPB	0.0 - 0.4	0.4 - >0.55
HPC	0.0 - 0.65	0.65 - >0.75
HPD	0.0 - >0.91	-

Samples of the topsoil and the crushed aggregate were recovered for laboratory analysis.

From information provided by the Client, the crushed aggregate was supplied by Recycled Material Supplies Limited, and understood to have been produced under the Quality Protocol devised by the Waste and Resources Action Program (WRAP). Grading certificates were available and have been appended to this report. Conveyance notes for the imported topsoil are also appended, although certification and test certificates were not available.

The minimum requirement of 550 mm of clean cover was met at each location. The basal crushed aggregate was confirmed to be present at locations HPA, HPB and HPC. It was not confirmed present at location HPD however the topsoil was proved to a depth of >0.91 m and consequently suitable protection to end users was considered to be demonstrated.

3. Laboratory Analysis

Each of the samples were screened for the presence of volatile organic compounds (VOC) using a photo-ionisation detector (PID).

Two samples of topsoil and one sample of crushed aggregate were scheduled for laboratory analysis, for a commonly occurring suite of determinands including heavy metals and speciated polycyclic aromatic hydrocarbons (PAH). Four samples of topsoil and two samples of crushed aggregate were screened for the presence of asbestos using optical microscopy.

Chemical contamination analyses were carried out by QTS Environmental Limited, which holds both MCERTS and UKAS accreditation. The results of the laboratory testing are given in the attached test report (analytical report number 16-41041).

The results of the PID screening are also attached.

4. Discussion of Inspection and Test Results

The results of the laboratory analyses were compared against generic screening values for a 'residential without plant uptake' end use, with reference to current guidance.

The screening values and the source from which each screening value was derived are presented in Tables 4A and 4B. For the organic determinands, a soil organic matter content of 2.5% has been adopted in the derivation of the screening values,

for both the topsoil and the crushed aggregate, based on the average measured values.

Table 4A - Tier 1 Human Health Screening Values for Inorganic Determinands (based on a 'Residential Without Plant Uptake' End Use)

Determinand	Screening Values (mg/kg)	Source of Parameters for Tier 1 Screening Values
Arsenic	40	LQM-CIEH S4UL (2015)
Boron	11000	LQM-CIEH S4UL (2015)
Cadmium	85	LQM-CIEH S4UL (2015)
Chromium III	910	LQM-CIEH S4UL (2015)
Chromium VI	6	LQM-CIEH S4UL (2015)
Copper	7100	LQM-CIEH S4UL (2015)
Lead	310	DEFRA C4SL
Mercury	56	LQM-CIEH S4UL (2015)
Nickel	180	LQM-CIEH S4UL (2015)
Selenium	430	LQM-CIEH S4UL (2015)
Zinc	40000	LQM-CIEH S4UL (2015)
Cyanide	34	ATRISK SOIL

Table 4B - Tier 1 Human Health Screening Values for Phenol and PAH in Soils (based on a 'Residential Without Plant Uptake' End Use)

Determinand	Screening Values* (mg/kg) 2.5% SOM	Source of Parameters for Tier 1 Screening Values
Phenol	690	LQM-CIEH S4UL (2015)
Naphthalene	5.6	LQM-CIEH S4UL (2015)
Acenaphthylene	4600	LQM-CIEH S4UL (2015)
Acenaphthene	4700	LQM-CIEH S4UL (2015)
Fluorene	3800	LQM-CIEH S4UL (2015)
Phenanthrene	1500	LQM-CIEH S4UL (2015)
Anthracene	35000	LQM-CIEH S4UL (2015)
Fluoranthene	1600	LQM-CIEH S4UL (2015)
Pyrene	3800	LQM-CIEH S4UL (2015)
Benz(a)anthracene	14	LQM-CIEH S4UL (2015)
Chrysene	31	LQM-CIEH S4UL (2015)
Benzo(b)fluoranthene	4	LQM-CIEH S4UL (2015)
Benzo(k)fluoranthene	110	LQM-CIEH S4UL (2015)
Benzo(a)pyrene	3.2	LQM-CIEH S4UL (2015)
Indeno(123-cd)pyrene	46	LQM-CIEH S4UL (2015)
Dibenz(a,h)anthracene	0.32	LQM-CIEH S4UL (2015)
Benzo(ghi)perylene	360	LQM-CIEH S4UL (2015)

(*concentrations assume no free product present)

Headspace screening results were low, with a maximum of 1.9 ppm recorded. Consequently no further testing for VOC or TPH was considered necessary.

4.1 Human Health

The analysis did not record any concentrations of determinands to exceed human health screening values, and no asbestos was detected during the sample screening.

4.1.2 Plant Health

The analysis did not include testing for soil characteristics to BS 3882 or BS 8601, however the phytotoxic determinands zinc, copper and nickel were compared with the screening values given in BS 3882 of 300, 200 and 110 mg/kg respectively (assuming pH value >7). None of the recorded concentrations exceeded these screening values.

5. Conclusions

It is concluded that based upon the testing and inspections carried out, the topsoil and crushed aggregate inspected within the areas detailed are appropriate for their proposed end use, with respect to human health.

Samples will be retained for a period of three weeks from the date of this report.

Should you require any further information or assistance, please do not hesitate to contact us.

Yours sincerely

Adrian Phillips, FGS
Technical Director

Encs Chemical Contamination Analyses Results (16-41041)
Headspace Monitoring Record Sheet
Plan Indicating Areas Inspected and Sample Locations – Drawing Number 13804VA/1
Site Analytical Services Test certificates for Crushed Aggregate
Conveyance Notes for Imported Topsoil

Copy Gary Crew, Higgins Construction
By Email Only: gary.crew@higginsconstruction.co.uk

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QTS Environmental Ltd
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Rose Lane Industrial Estate
Rose Lane
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Kent
ME17 2JN
t: 01622 850410
russell.jarvis@qtsenvironmental.com

QTS Environmental Report No: 16-41041

Site Reference:	Plender Street, Camden, London NW1 OLG
Project / Job Ref:	13804 VA
Order No:	None Supplied
Sample Receipt Date:	24/02/2016
Sample Scheduled Date:	24/02/2016
Report Issue Number:	1
Reporting Date:	01/03/2016

Authorised by:

Russell Jarvis
Associate Director of Client Services
On behalf of QTS Environmental Ltd

Authorised by:

Kevin Old
Associate Director of Laboratory
On behalf of QTS Environmental Ltd

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Soil Analysis Certificate							
QTS Environmental Report No: 16-41041	Date Sampled	22/02/16	22/02/16	22/02/16	22/02/16	22/02/16
RSA Geotechnics Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Plender Street, Camden, London NW1 OLG	TP / BH No	HPA	HPB	HPB	HPC	HPD
Project / Job Ref: 13804 VA	Additional Refs	D1	D1	D2	D2	D1
Order No: None Supplied	Depth (m)	0.20	0.20	0.50	0.70	0.20
Reporting Date: 01/03/2016	QTSE Sample No	193577	193578	193579	193580	193581

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS		8.1		9.1	7.7
Total Cyanide	mg/kg	< 2	NONE		< 2		< 2	< 2
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS		66		630	367
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS		0.07		0.63	0.37
Elemental Sulphur	mg/kg	< 10	NONE		< 10		< 10	< 10
Organic Matter	%	< 0.1	MCERTS		3		2.8	2.6
Total Organic Carbon (TOC)	%	< 0.1	MCERTS		1.7		1.6	1.5
Arsenic (As)	mg/kg	< 2	MCERTS		5		6	6
W/S Boron	mg/kg	< 1	NONE		1.4		< 1	1.4
Cadmium (Cd)	mg/kg	< 0.2	MCERTS		< 0.2		< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS		17		16	13
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2		< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS		26		13	9
Lead (Pb)	mg/kg	< 3	MCERTS		24		37	18
Mercury (Hg)	mg/kg	< 1	NONE		< 1		< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS		7		8	6
Selenium (Se)	mg/kg	< 3	NONE		< 3		< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS		54		64	40
Total Phenols (monohydric)	mg/kg	< 2	NONE		< 2		< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Analysis carried out on the dried sample is corrected for the stone content
Subcontracted analysis (S)

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Soil Analysis Certificate							
QTS Environmental Report No: 16-41041	Date Sampled	22/02/16					
RSA Geotechnics Ltd	Time Sampled	None Supplied					
Site Reference: Plender Street, Camden, London NW1 OLG	TP / BH No	HPD					
Project / Job Ref: 13804 VA	Additional Refs	D2					
Order No: None Supplied	Depth (m)	0.85					
Reporting Date: 01/03/2016	QTSE Sample No	193582					

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected				
pH	pH Units	N/a	MCERTS					
Total Cyanide	mg/kg	< 2	NONE					
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS					
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS					
Elemental Sulphur	mg/kg	< 10	NONE					
Organic Matter	%	< 0.1	MCERTS					
Total Organic Carbon (TOC)	%	< 0.1	MCERTS					
Arsenic (As)	mg/kg	< 2	MCERTS					
W/S Boron	mg/kg	< 1	NONE					
Cadmium (Cd)	mg/kg	< 0.2	MCERTS					
Chromium (Cr)	mg/kg	< 2	MCERTS					
Chromium (hexavalent)	mg/kg	< 2	NONE					
Copper (Cu)	mg/kg	< 4	MCERTS					
Lead (Pb)	mg/kg	< 3	MCERTS					
Mercury (Hg)	mg/kg	< 1	NONE					
Nickel (Ni)	mg/kg	< 3	MCERTS					
Selenium (Se)	mg/kg	< 3	NONE					
Zinc (Zn)	mg/kg	< 3	MCERTS					
Total Phenols (monohydric)	mg/kg	< 2	NONE					

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Analysis carried out on the dried sample is corrected for the stone content
Subcontracted analysis (S)

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Soil Analysis Certificate - Speciated PAHs							
QTS Environmental Report No: 16-41041	Date Sampled	22/02/16	22/02/16	22/02/16		
RSA Geotechnics Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Plender Street, Camden, London NW1 OLG	TP / BH No	HPB	HPC	HPD		
Project / Job Ref: 13804 VA	Additional Refs	D1	D2	D1		
Order No: None Supplied	Depth (m)	0.20	0.70	0.20		
Reporting Date: 01/03/2016	QTSE Sample No	193578	193580	193581		

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	0.14	< 0.1		
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	0.13	< 0.1		
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	0.69	< 0.1		
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	0.15	< 0.1		
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	1.10	0.20		
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.85	0.15		
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	0.41	< 0.1		
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	0.44	< 0.1		
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.45	< 0.1		
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.19	< 0.1		
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.27	< 0.1		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.17	< 0.1		
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	0.15	< 0.1		
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	5.1	< 1.6		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

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Soil Analysis Certificate - Sample Descriptions	
QTS Environmental Report No: 16-41041	
RSA Geotechnics Ltd	
Site Reference: Plender Street, Camden, London NW1 OLG	
Project / Job Ref: 13804 VA	
Order No: None Supplied	
Reporting Date: 01/03/2016	

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
193578	HPB	D1	0.20	21	Brown sandy clay with vegetation
193580	HPC	D2	0.70	13.6	Brown sandy clay with concrete and vegetation
193581	HPD	D1	0.20	17.7	Brown sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample I/S

Unsuitable Sample U/S

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Soil Analysis Certificate - Methodology & Miscellaneous Information
QTS Environmental Report No: 16-41041
RSA Geotechnics Ltd
Site Reference: Plender Street, Camden, London NW1 OLG
Project / Job Ref: 13804 VA
Order No: None Supplied
Reporting Date: 01/03/2016

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10 C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

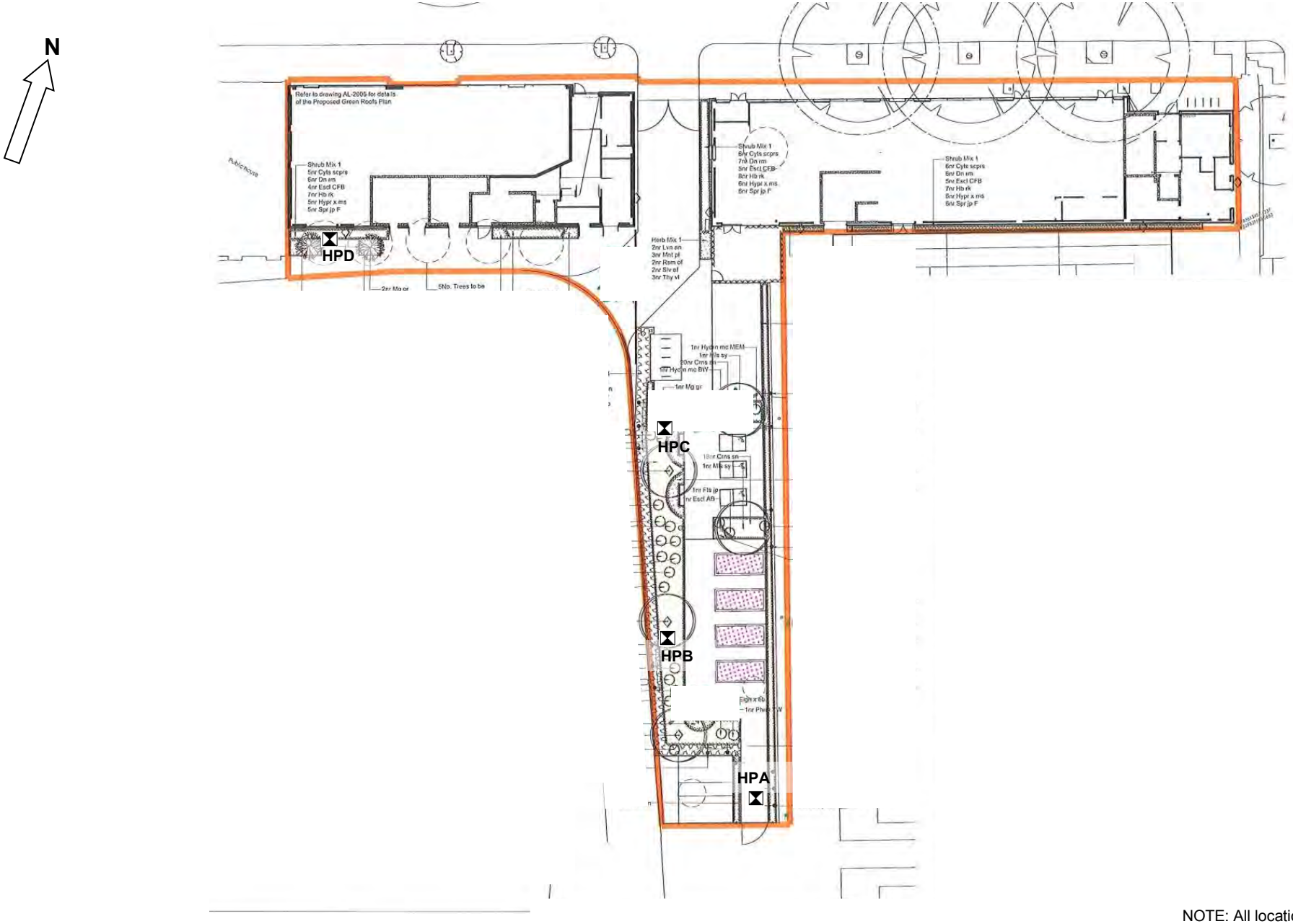
RSA GEOTECHNICS LTD

HEADSPACE MONITORING RECORD SHEET

Type of Test: Photoionisation Detector (PID)

Date	Location	Sample Ref	Depth (m)	Volatile (ppm)
23/02/16	HPA	D1	0.2	<0.1
		D2	0.15	0.3
	HPB	D1	0.2	<0.1
		D2	0.5	<0.1
	HPC	D1	0.15	1.9
		D2	0.7	0.5
	HPD	D1	0.2	<0.1
		D2	0.85	<0.1

Note:



NOTE: All locations are approximate

PLAN INDICATING AREAS INSPECTED AND SAMPLE LOCATIONS (Based upon RPS drawing number AL 2002) PLENDER STREET, CAMDEN, LONDON	Date 3 MARCH 2016 Scale NOT TO SCALE
RSA GEOTECHNICS LIMITED	Drawing No 13804VA/1 Version A

Site Analytical Services Ltd.

Site Investigations, Analytical & Environmental Chemists, Laboratory Testing Services.

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F. J. Gibbs, F.I.B.M.S. F.I.F.S.T., F.R.S.H. K. J. Blanchette

Your Ref: VERBAL
JAMES GANNON

Our Ref: 15/24647-1
JSW/LB

SAMPLE OF `CRUSHED CONCRETE'
RE: BRADFIELD ROAD, LONDON E16

SUBMITTED BY RECYCLED MATERIAL SUPPLIES LIMITED

RECEIVED ON 15th DECEMBER 2015

INTRODUCTION

A sample of the above material was received into the laboratory for determination of particle size distribution for compliance with the grading requirements of the Department for Transport Specification for Highway Works. Volume 1. Series 800. Clause 803. Table 8/5. Granular Sub-base Material Type 1.

RESULTS

The results obtained are presented on Table 1 and graphically attached.

COMMENTS

From the results obtained, it can be seen that the sample as submitted does comply with the grading requirements of the Department of Transport Specification for Type 1 Granular Sub-base Material.

p.p. SITE ANALYTICAL SERVICES LIMITED

21st December 2015

J S Warren M.R.S.C.
DIRECTOR

Site Analytical Services Ltd.

Ref: 15/24647-1

Continuation 1

TABLE 1

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

MESH B.S. SIEVE		% BY MASS PASSING	SPECIFICATION REQUIREMENTS TABLE 8/5
63	mm	100	100
50	mm	100	
40	mm	95	
37.5	mm	93	
31.5	mm	85	75 - 99
28	mm	77	
20	mm	59	
16	mm	52	43 - 81
14	mm	48	
10	mm	40	
8.0	mm	37	23 - 66
6.3	mm	32	
5.00	mm	28	
4.00	mm	25	12 - 53
3.35	mm	23	
2.80	mm	21	
2.00	mm	19	6 - 42
1.18	mm	16	
1.00	mm	15	3 - 32
600	micron	12	
500	micron	10	
425	micron	9	
300	micron	8	
250	micron	7	
212	micron	6	
150	micron	6	
125	micron	5	
75	micron	5	
63	micron	4	0 - 9

Moisture Content	6.5	%
Total Weight of Sample	52	kg

TESTED IN ACCORDANCE WITH BS EN 933-1 : 1997

Site Analytical Services Ltd.

Laboratory Test Results

Site : BRADFIELD ROAD, LONDON E16

Client : RECYCLED MATERIAL SUPPLIES LIMITED

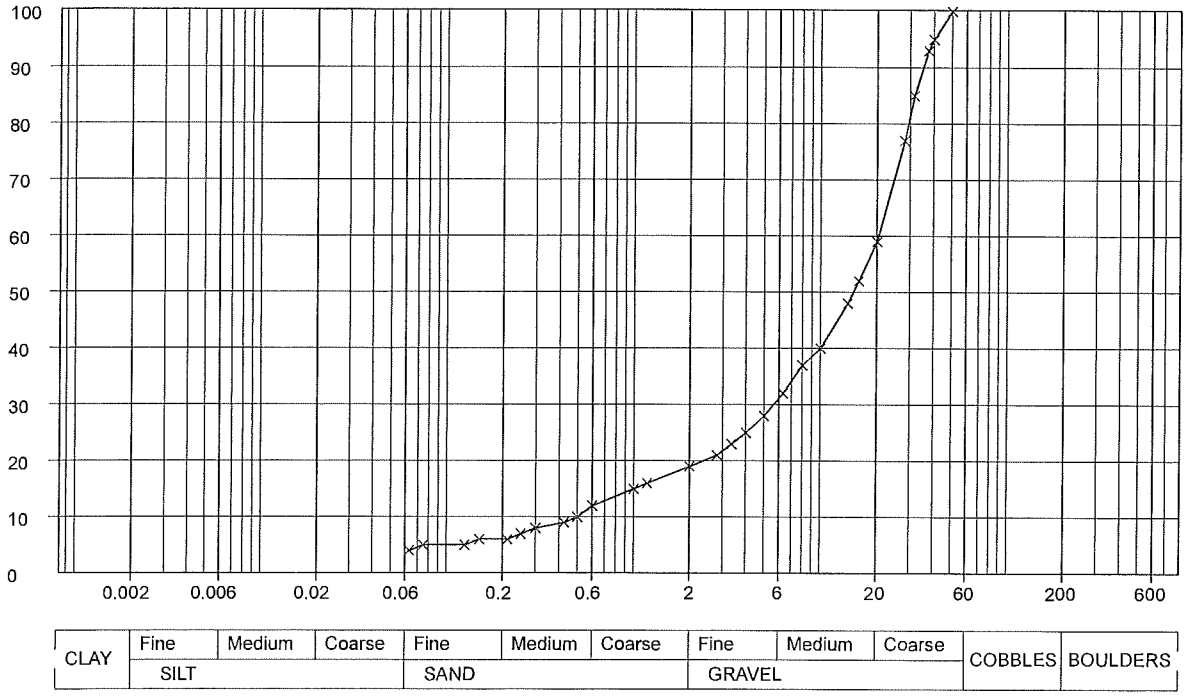
Engineer: DW

Job Number 1524647

Sheet 2/2

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Laboratory Description
NA	0.00	Type 1	



Sieve / Particle Size	% Passing
50 mm	100.0
40 mm	95.0
37.5 mm	93.0
31.5 mm	85.0
28 mm	77.0
20 mm	59.0
16 mm	52.0
14 mm	48.0
10 mm	40.0
8 mm	37.0
6.3 mm	32.0
5 mm	28.0
4 mm	25.0
3.35 mm	23.0
2.8 mm	21.0
2 mm	19.0
1.18 mm	16.0
1 mm	15.0
600 µm	12.0
500 µm	10.0
425 µm	9.0
300 µm	8.0
250 µm	7.0
212 µm	6.0
150 µm	6.0
125 µm	5.0
75 µm	5.0
63 µm	4.0

Grading Analysis	
D85	31.5 mm
D60	20.4 mm
D10	500.0 µm
Uniformity Coefficient	40.9

Particle Proportions	
Cobbles + Boulders	-
Gravel	81.0%
Sand	15.0%
Silt	-
Clay	-

Method of Preparation : BS 1377:PART 1:1990:7.3 Initial preparation 1990:7.4.5 Particle size tests

Method of Test : BS 1377:PART 2:1990:9 Determination of particle size distribution

Remarks :

Site Analytical Services Ltd.

Site Investigations, Analytical & Environmental Chemists, Laboratory Testing Services.

Units 14 + 15, River Road Business Park,
33 River Road, Barking, Essex IG11 0EA

Tel: 020 8594 8134
Fax: 020 8594 8072
E-Mail: services@siteanalytical.co.uk

Directors: J. S. Warren, M.R.S.C., P. C. Warren, J. I. Pattinson, BSc (Hons). MSc
Consultants: G. Evans, BSc., M.Sc., P.G. Dip., FGS., MIEnvSc. A. J. Kingston, BSc C.Eng. MIMM
F. J. Gibbs, F.I.B.M.S. F.I.F.S.T., F.R.S.H. K. J. Blanchette

Your Ref: VERBAL
JAMES GANNON

Our Ref: 15/24647-2
JSW/LB

SAMPLE OF `CRUSHED CONCRETE'
RE: BRADFIELD ROAD, LONDON E16

SUBMITTED BY RECYCLED MATERIAL SUPPLIES LIMITED

RECEIVED ON 15th DECEMBER 2015

INTRODUCTION

A sample of the above material was received into the laboratory for determination of particle size distribution for compliance with the grading requirements of the Department for Transport Specification for Highway Works. Volume 1. Series 600. Table 6/2. Class 6F2 Material.

RESULTS

The results obtained are presented on Table 1 and graphically attached.

COMMENTS

From the results obtained, it can be seen that the sample as submitted does comply with the grading requirements for Class 6F2 Material.

p.p. SITE ANALYTICAL SERVICES LIMITED

21st December 2015

J S Warren M.R.S.C.
DIRECTOR

Ref: 15/24647-2

Continuation 1

TABLE 1

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

B.S. TEST SIEVE		% BY MASS PASSING	SPECIFICATION REQUIREMENTS CLASS 6F2
125	mm	100	100
90	mm	100	80 - 100
80	mm	100	
75	mm	98	65 - 100
63	mm	89	
50	mm	77	
40	mm	67	
37.5	mm	65	45 - 100
31.5	mm	61	
28	mm	57	
20	mm	48	
16	mm	44	
14	mm	41	
10	mm	34	15 - 60
8.0	mm	31	
6.3	mm	28	
5.00	mm	25	10 - 45
4.00	mm	24	
3.35	mm	23	
2.80	mm	22	
2.00	mm	20	
1.18	mm	18	
1.00	mm	17	
600	micron	15	0 - 25
500	micron	13	
425	micron	12	
300	micron	10	
250	micron	10	
212	micron	9	
150	micron	8	
125	micron	7	
75	micron	7	
63	micron	5	0 - 12

Moisture Content	6.3	% Dry Weight
Total Weight of Sample	55	kg

TESTED IN ACCORDANCE WITH B.S. 1377-2 : 1990. METHOD 9.2

Site Analytical Services Ltd.

Laboratory Test Results

Site : BRADFIELD ROAD, LONDON E16

Client : RECYCLED MATERIAL SUPPLIES LIMITED

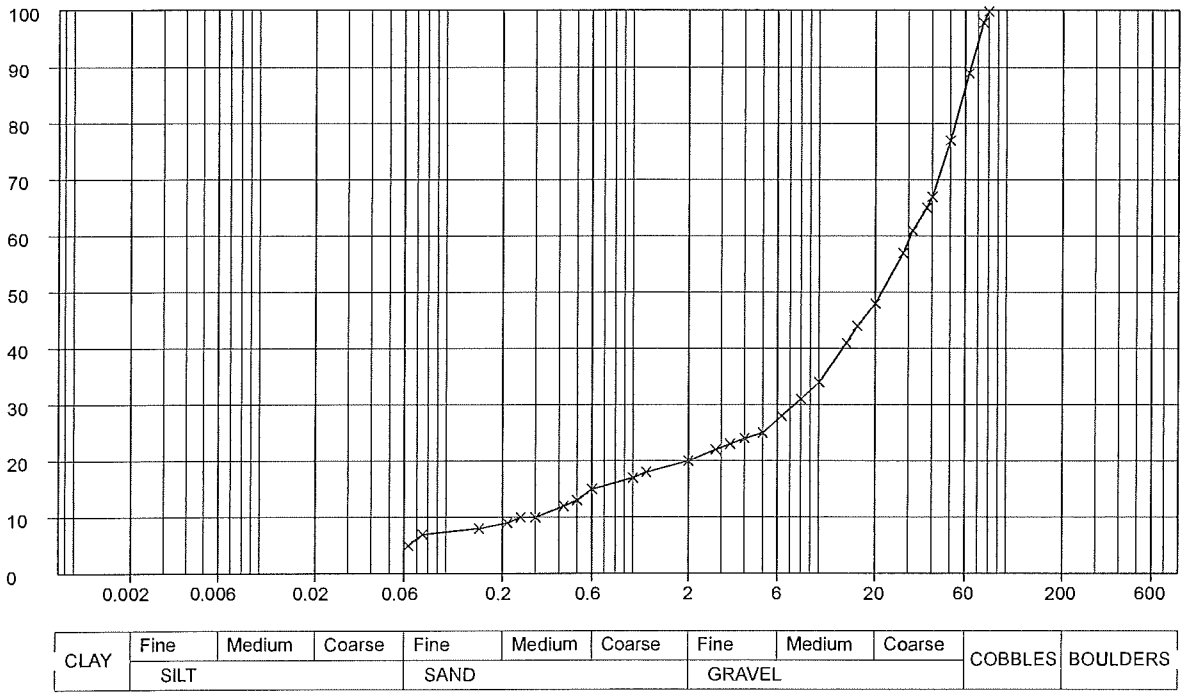
Engineer: DW

Job Number 1524647

Sheet 1/2

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Laboratory Description
NA	0.00	6F2	



Grading Analysis	
D85	58.7 mm
D60	30.6 mm
D10	300.0 µm
Uniformity Coefficient	102.1

Particle Proportions	
Cobbles + Boulders	13.5%
Gravel	66.5%
Sand	15.0%
Silt	-
Clay	-

Sieve / Particle Size	% Passing
80 mm	100.0
75 mm	98.0
63 mm	89.0
50 mm	77.0
40 mm	67.0
37.5 mm	65.0
31.5 mm	61.0
28 mm	57.0
20 mm	48.0
16 mm	44.0
14 mm	41.0
10 mm	34.0
8 mm	31.0
6.3 mm	28.0
5 mm	25.0
4 mm	24.0
3.35 mm	23.0
2.8 mm	22.0
2 mm	20.0
1.18 mm	18.0
1 mm	17.0
600 µm	15.0
500 µm	13.0
425 µm	12.0
300 µm	10.0
250 µm	10.0
212 µm	9.0
150 µm	8.0
75 µm	7.0
63 µm	5.0

Method of Preparation : BS 1377:PART 1:1990:7.3 Initial preparation 1990:7.4.5 Particle size tests

Method of Test : BS 1377:PART 2:1990:9 Determination of particle size distribution

Remarks :

CONVEYANCE NOTE

Weights and Measures Act, 1963
Schedule 5, Para 7

(FORM A VOLUME) 80573

TOULOUSE PLANT HIRE LTD.
HAULAGE & PLANT HIRE

55-71 NORMAN ROAD, GREENWICH, LONDON SE10
TEL: 020-8305 9641 / 020-8692 3879

To Customers,
This is in your interest - Please read this ticket fully, and inspect material, agreeing quantity, quality and that every thing is to your satisfaction, before finally signing this receipt note.
We regret we cannot under any circumstances entertain any claims concerning quantity or quality, once the vehicle has left the site, and a clear signature has been given.

LOADED AT	Date and Time of Leaving Place of Loading
Ferry Lane	9-2-16

Deliver to M SAK Construction c/o Higgins
at Plender St NW1

Registered No. of Vehicle	Name of Person in Charge of Vehicle
RK63 WEX	Peter

CU.MTR.	DESCRIPTION OF MATERIAL
8	Deliver 1x Load GRADE A Top Soil
Tonnes : Kg	
:	GROSS
:	TARE
:	NETT
Received by... R.S	LBS 3882

Certified that the above particulars are true and relate to the sand or ballast being conveyed in the vehicle described, which sand or ballast is being so conveyed in pursuance of a sale or an agreement for the sale thereof made by volume.

Signed for and on behalf of the seller ... Date 9/2/16

Customers ordering vehicles off the public roads do so entirely on their own responsibility.

TP-04

CONVEYANCE NOTE

Weights and Measures Act, 1963
Schedule 5, Para 7

(FORM A VOLUME) 76344

TOULOUSE PLANT HIRE LTD.
HAULAGE & PLANT HIRE

55-71 NORMAN ROAD, GREENWICH, LONDON SE10
TEL: 020-8305 9641 / 020-8692 3879

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LOADED AT	Date and Time of Leaving Place of Loading
FERRY LANE	9/2/2016

Deliver to M SAK CONSTRUCTION C/O HIGGINS
at PLENDER ST. NW1 0BL

Registered No. of Vehicle	Name of Person in Charge of Vehicle
RK63 WEX	Peter Gilmour

CU.MTR.	DESCRIPTION OF MATERIAL
8	Deliver 1x Load
Tonnes : Kg	ex GRADE A Topsoil
:	GROSS
:	TARE
:	NETT
ved by... R.S	LBS 3882

Certified that the above particulars are true and relate to the sand or ballast being conveyed in the vehicle described, which sand or ballast is being so conveyed in pursuance of a sale or an agreement for the sale thereof made by volume.

Signed for and on behalf of the seller ... Date 9/2/16

Customers ordering vehicles off the public roads do so entirely on their own responsibility.

TP-04

CONVEYANCE NOTE

Weights and Measures Act, 1963
Schedule 5, Para 7

(FORM A VOLUME) 80965

TOULOUSE PLANT HIRE LTD.
HAULAGE & PLANT HIRE

55-71 NORMAN ROAD, GREENWICH, LONDON SE10
TEL: 020-8305 9641 / 020-8692 3879

To Customers,
This is in your interest - Please read this ticket fully, and inspect material, agreeing quantity, quality and that every thing is to your satisfaction, before finally signing this receipt note.
We regret we cannot under any circumstances entertain any claims concerning quantity or quality, once the vehicle has left the site, and a clear signature has been given.

LOADED AT	Date and Time of Leaving Place of Loading
HARLEY	10-2-16

Deliver to M SAKS CONST
at PLENDER ST. NW1

Registered No. of Vehicle	Name of Person in Charge of Vehicle
LG61 KBZ	

CU.MTR.	DESCRIPTION OF MATERIAL
	Deliver
	1 Load x Top Soil
Tonnes : Kg	
:	GROSS
:	TARE
:	NETT
Received by...	Sak. LBS 3882

Certified that the above particulars are true and relate to the sand or ballast being conveyed in the vehicle described, which sand or ballast is being so conveyed in pursuance of a sale or an agreement for the sale thereof made by volume.

Signed for and on behalf of the seller ... Date 10-2

Customers ordering vehicles off the public roads do so entirely on their own responsibility.

TP-04

CONVEYANCE NOTE

Weights and Measures Act, 1963
Schedule 5, Para 7

(FORM A VOLUME) 76346

TOULOUSE PLANT HIRE LTD.
HAULAGE & PLANT HIRE

55-71 NORMAN ROAD, GREENWICH, LONDON SE10
TEL: 020-8305 9641 / 020-8692 3879

To Customers,
This is in your interest - Please read this ticket fully, and inspect material, agreeing quantity, quality and that every thing is to your satisfaction, before finally signing this receipt note.
We regret we cannot under any circumstances entertain any claims concerning quantity or quality, once the vehicle has left the site, and a clear signature has been given.

LOADED AT	Date and Time of Leaving Place of Loading
FERRY LANE	10/2/2016

Deliver to M SAK CONSTRUCTION C/O HIGGINS
at PLENDER ST NW1 0BL

Registered No. of Vehicle	Name of Person in Charge of Vehicle
BX08 BZR	

CU.MTR.	DESCRIPTION OF MATERIAL
8	Deliver 1x Load
Tonnes : Kg	
:	GROSS ex
:	TARE GRADE A Topsoil
:	NETT
Received by... R.S	LBS 3882

Certified that the above particulars are true and relate to the sand or ballast being conveyed in the vehicle described, which sand or ballast is being so conveyed in pursuance of a sale or an agreement for the sale thereof made by volume.

Signed for and on behalf of the seller ... Date 10/2/16

Customers ordering vehicles off the public roads do so entirely on their own responsibility.

TP-04

CONVEYANCE NOTE

(FORM A VOLUME) 79540

Weights and Measures Act, 1963
Schedule 5, Para 7

TOULOUSE PLANT HIRE LTD.
HAULAGE & PLANT HIRE

55-71 NORMAN ROAD, GREENWICH, LONDON SE10
TEL: 020-8305 9641 / 020-8692 3879

N To Customers,
This is in your interest - Please read this ticket fully, and inspect material, ...eeing quantity, quality and that every thing is to your satisfaction, before finally signing this receipt note.
We regret we cannot under any circumstances entertain any claims concerning quantity or quality, once the vehicle has left the site, and a clear signature has been given.

LOADED AT	Date and Time of Leaving Place of Loading
Rainham	12-2-16

Deliver to M ... SAK Const
at ... Plender St N.W.1

Registered No. of Vehicle	Name of Person in Charge of Vehicle
GK11 XDH	Paul

CU.MTR.	DESCRIPTION OF MATERIAL
One Load	Topsoil (A)
Tonnes : Kg	
:	GROSS
:	TARE
:	NETT

...ed by... R Sak LBS 3882

Certified that the above particulars are true and relate to the sand or ballast being conveyed in the vehicle described, which sand or ballast is being so conveyed in pursuance of a sale or an agreement for the sale thereof made by volume.

Signed for and on behalf of the seller ... *Date* 12/2

Customers ordering vehicles off the public roads do so entirely on their own responsibility.

TP-04

CONVEYANCE NOTE

(FORM A VOLUME) 79542

Weights and Measures Act, 1963
Schedule 5, Para 7

TOULOUSE PLANT HIRE LTD.
HAULAGE & PLANT HIRE

55-71 NORMAN ROAD, GREENWICH, LONDON SE10
TEL: 020-8305 9641 / 020-8692 3879

N.B To Customers,
This is in your interest - Please read this ticket fully, and inspect material, a... ...ng quantity, quality and that every thing is to your satisfaction, before finally signing this receipt note.
We regret we cannot under any circumstances entertain any claims concerning quantity or quality, once the vehicle has left the site, and a clear signature has been given.

LOADED AT	Date and Time of Leaving Place of Loading
Rainham	12-2-16

Deliver to M ... SAK Const
at ... Plender St N.W.1

Registered No. of Vehicle	Name of Person in Charge of Vehicle
GK11 XDH	Paul

CU.MTR.	DESCRIPTION OF MATERIAL
One Load	Topsoil (A)
Tonnes : Kg	
:	GROSS
:	TARE
:	NETT

...ed by... R Sak LBS 3882

Certified that the above particulars are true and relate to the sand or ballast being conveyed in the vehicle described, which sand or ballast is being so conveyed in pursuance of a sale or an agreement for the sale thereof made by volume.

Signed for and on behalf of the seller ... *Date* 12/2

Customers ordering vehicles off the public roads do so entirely on their own responsibility.

TP-04

CONVEYANCE NOTE

(FORM A VOLUME) 80976

Weights and Measures Act, 1963
Schedule 5, Para 7

TOULOUSE PLANT HIRE LTD.
HAULAGE & PLANT HIRE

55-71 NORMAN ROAD, GREENWICH, LONDON SE10
TEL: 020-8305 9641 / 020-8692 3879

I To Customers,
This is in your interest - Please read this ticket fully, and inspect material, agreeing quantity, quality and that every thing is to your satisfaction, before finally signing this receipt note.
We regret we cannot under any circumstances entertain any claims concerning quantity or quality, once the vehicle has left the site, and a clear signature has been given.

LOADED AT	Date and Time of Leaving Place of Loading
HARLEX	16-2-16

Deliver to M ... SAKs Const.
at ... PLENDER ST, NW1

Registered No. of Vehicle	Name of Person in Charge of Vehicle
LG61 KBZ	

CU.MTR.	DESCRIPTION OF MATERIAL
	Deliver
Tonnes : Kg	LOAD x 18T
:	GROSS
:	TARE
:	NETT

Received by... LBS 3882

Certified that the above particulars are true and relate to the sand or ballast being conveyed in the vehicle described, which sand or ballast is being so conveyed in pursuance of a sale or an agreement for the sale thereof made by volume.

Signed for and on behalf of the seller ... *Date* 16-2

Customers ordering vehicles off the public roads do so entirely on their own responsibility.

TP-04

CONVEYANCE NOTE

(FORM A VOLUME) 80716

Weights and Measures Act, 1963
Schedule 5, Para 7

TOULOUSE PLANT HIRE LTD.
HAULAGE & PLANT HIRE

55-71 NORMAN ROAD, GREENWICH, LONDON SE10
TEL: 020-8305 9641 / 020-8692 3879

N.B. To Customers,
This is in your interest - Please read this ticket fully, and inspect material, ...eing quantity, quality and that every thing is to your satisfaction, before finally ...ng this receipt note.
We regret we cannot under any circumstances entertain any claims concerning quantity or quality, once the vehicle has left the site, and a clear signature has been given.

LOADED AT	Date and Time of Leaving Place of Loading
Rainham	19-2-16

Deliver to M ... SAK Const
at ... Plender St N.W.1

Registered No. of Vehicle	Name of Person in Charge of Vehicle
GK11 XDH	Paul

CU.MTR.	DESCRIPTION OF MATERIAL
One Load	Topsoil (A)
Tonnes : Kg	
:	GROSS
:	TARE
:	NETT

Received by... R Sak LBS 3882

...ied that the above particulars are true and relate to the sand or ballast being conveyed in ... vehicle described, which sand or ballast is being so conveyed in pursuance of a sale or an agreement for the sale thereof made by volume.

Signed for and on behalf of the seller ... *Date* 19/2

Customers ordering vehicles off the public roads do so entirely on their own responsibility.

TP-04