

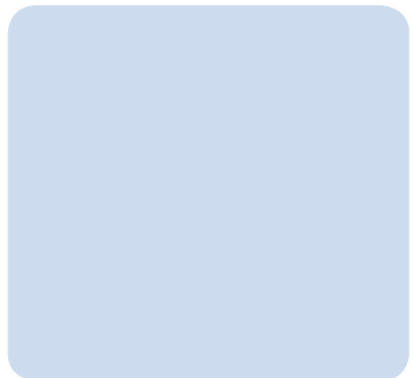











**Performance Report to Cover the Period
from January 2016 to January 2017**

To satisfy EPR/VP3095FS

For Neal Soils Suppliers Ltd

		
		
<p>Date: January 2017 Our Ref: JCD0170</p> <p>RPS Park House Greyfriars Road Cardiff CF10 3AF</p> <p>Tel: (0)2920 668 662 Fax: (0)0920 668 622 Email: rps@rpsgroup.com</p>		


Quality Management

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Drawings & Appendices

Drawings

Drawing JER5540-002a

Appendices

- Appendix A The Aggregates Testing Results
- Appendix B The Filter Cake Results
- Appendix C Waste Returns for the Light Sludge
- Appendix D Waste returns for the Light Debris
- Appendix E Performance Parameters in Schedule 4

1 Introduction

1.1 Background

NRW in pursuance of Part II of the Environment Protection Act 1990 granted a Waste Management Licence to Neal Soil Suppliers Limited (Company Registration Number 3368495) in May 2006. Eight variations of this permit have been issued in September 2009 (002), March 2011(003), May 2011 (004), March 2012 (005), March 2013(007), November 2013 (008), and May 2015 (10).

The first three variations authorised an increase to the list of waste codes for acceptance at the site. The fourth variation (005) included the modernisation of the facility and the inclusion of a washing plant for treatment for hazardous and non-hazardous wastes. The fifth application (006) was submitted to allow the acceptance and treatment of asbestos materials at the wash plant, this application was withdrawn later. The sixth variation (007) was a regulator initiated variation issued by the Environment Agency (now NRW) to implements the changes introduced by IED. The seventh variation (008) was an admin variation relating to the treatment of glass in the washing plant. The eighth (009) was an application to vary few existing conditions in the permit (mainly related to storage conditions) and included an application for a new wash plant. In respond to NRW's advice, the application was withdrawn in January 2014. Another application was submitted early 2014 for an admin variation to remove one of the activities (D9) and was duly made in May 2014. The last issued variation (010) was both to authorise the requirement of the last above mentioned variation and to include an administrative correction to the regulator initiated change under EPR/VP3095FS/V007.

The applicable permit number is EPR/VP3095FS (previously WML30348) and the area covered by the permit is shown on *Drawing JER5040-002a*. Hereinafter this area will be called the site.

1.2 Purpose

This report is issued to satisfy the Permit Condition 4.2.3 that sets out the following:

“For the following activities referenced in Schedule1, Table S1.1 A1 and A2, a report or reports on the performance of the activities over the previous year shall be submitted to NRW by 31 January (or other date agreed in writing by NRW) each year. The report(s) shall include as a minimum:

(a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data; and

(b) the performance parameters set out in Schedule 4 Table S4.2 using the forms specified in Table S4.3 of that schedule.”

With respect to part “a” of the above condition, Tables S1.1 A1 and A2 of the permit sates the following:

“sampling of output from the wash plant shall be undertaken in line with the approved sampling and monitoring methodology as set out in pre-operational condition 2 of table S1.4A, to demonstrate the efficacy of the plant and to show the material are fit for their intended use”.

Condition 2 of Table S1.4A states:

“The operator shall submit a methodology for the monitoring and sampling of outputs from the washing plant, to the Environment Agency for written approval. The methodology should include details of how waste sampling shall be carried out so as to prove the treated waste meets any applicable Quality Protocol or Code of Practice. The washing activities shall not commence until the Environment Agency has approved the methodology”.

A pre-operational condition report titled “The Washing Plant- Waste Characterisation, Batching and Monitoring- Neal Soil Suppliers Ltd-V5” was submitted to NRW (then Environment Agency) to address several of the conditions listed in Table S1.4A including condition 2 above in May 2012. The submission was approved by NRW on the 1st of June 2012. Details of the monitoring and sampling of outputs from the washing plant were covered in Chapter 4 of this approved report.

2 Monitoring and Sampling of Outputs-Wash Plant

2.1 General

Chapter 4 of the approved preoperational condition report provides information on the monitoring and sampling of outputs from the wash plant and includes details on the types of output, sampling methods, the various testing requirement for the different outputs and their frequency in addition to relevant assessment criteria to be used for assessment of suitability of the outputs for their intended uses.

This chapter of the “pre-operational conditions” report list the different output from the wash to include:

- Variety of recovered sands, gravel and aggregates to be provided to the market as a saleable product suitable for their intended uses and as per the requirement of the purchaser of these products.
- Light sludge from the flotation unit for disposal.
- Heavy sludge (the filter cake) that may be recovered or disposed of depending on the quality of the input and the treatment.

Under the section “testing”, the report states that:

- The selected tests will be chosen to be compliant with the requirements of the relevant standards/specifications/guidance and client requirements.
- Samples for analysis will be taken from the final product by competent and suitably trained personnel.

2.2 Aggregates

The report lists the laboratory testing requirement for recovered aggregates to comply with the relevant standards and specifications, applicable at the time. The testing requirements in this report were updated during 2015 when the revised IMS (developed by Green Triangle) was issued. IMS17-01 covered the testing requirement of the Quality Protocol for recovery of aggregates. Data collected throughout 2016 for the aggregates recovered from the wash plant is provided in Appendix A.

Neal Soils have instructed John Barritt Consulting Ltd in December 2016 to carry out another review of IMS 17-02 for the purpose of updating and upgrading of the existing procedure. This work is currently underway and due to be completed by end of January/mid-February.

2.3 Filter cake

In terms of the filter cake, the approved pre-operational conditions report states that the clean filter cake is to be provided to the market, as a saleable product suitable for its intended uses and as per the requirement of the purchaser of these products under an appropriate End of Waste code of practice.

It also states that some of these filter cakes may be blended with others soils and/or soil conditioners within the soil processing area of the site following the completion of their treatment in the washing plant. It states that some of these recovered soils may also be subject to spreading and seeding to produce turf or cultivated soil as required by purchasers. The aim of the blending is to produce different types of soil depending on the market demand.

The reports states that the filter cake designated for manufacturing of soil will be tested for a standard suit of analysis including the following:

- Metals;
- Speciated Total Petroleum Hydrocarbons (TPH), with the fraction of petroleum (gasoline) and diesel range;
- Speciated Polycyclic Aromatic Hydrocarbons (PAHs)

The reports also states that :

- “The soil composition will be compared with appropriate criteria such as the DEFRA and Environment Agency Contaminated Land Exposure Soil Guideline Values (CLEA - SGV) for the different land uses including residential, commercial and allotments or any specific requirements dictated by the purchaser. For contaminants where CLEA values are not available the Land Quality Management LQM/CIEH Generic Assessment Criteria GAC values will be used. It should be noted that acceptable concentrations for soil for the different land uses are regularly changing based on new information provided by DEFRA and the Environment Agency on these assessment criteria”. and
- “Neal Soils will ensure they will utilise the most recent published values”.

In accordance with the above approved methodology, Neal’s have tested all of their filter cake and compared them with current criteria (Currently S4ULs) for the different land uses. All delivered filter cake was provided to the end users specifications under a suitable authorisation. Analysis results of all produced filter cake are provided in Appendix B.

2.4 The Light Sludge from the Flotation Unit

The report stated that the light sludge from the flotation unit resulting from the treatment of contaminated material will be subject to compositional analysis tests for the whole list of contaminants found within in the original waste(s). The analysis results will be used for the purpose of classification to identify appropriate disposal routes. .

The report also states that light sludge resulting from physical treatment of inert materials and containing only inert constituents (such as balls of polystyrene, light plastics, inert fibres and the like) will not be tested for chemical analysis and may be sent to the adjacent Atlantic Recycling for further treatment and recovery, if appropriate.

It is current practice at Neal’s that all the light sludge collected from the DAF unit is stored in a tank until it is full when it is then sent off for disposal to an appropriate facility as “hazardous material”. This is usually

sent to “Castle Environmental”. Three loads were sent out for the year 2016. Scans of the waste disposal tickets for these are provided in Appendix C.

2.5 Light Debris

Although not listed in the above discussed report, the wash plant also produces another fraction. This is collected as debris from the trash screen and usually contains light fractions of materials such as light plastics, paper, and balls of polystyrene, etc. It seems that reference to this material was mixed up with the light sludge mentioned above in the original report and resulted in some confusion during the NRW Audit carried out in 2015/2016. This is usually collected and sent to Atlantic as combustible material capable of being recovered in the RDF production process. A total of 2576.82 tonnes were removed of the site during 2016 as presented in Appendix D.

2.6 Recovery efficiency

During an audit carried out by NRW on Neal's late 2015, NRW requested that the annual report provides information on the efficiency of the treatment process in the wash plant. The audit stated that *“The SGN, referring to metals contamination, requires that the operator provides the regulator with an assessment of the efficiency of the treatment process in relation to Schedule 5 (of the PPC Regulations) pollutants in terms of the removal or partition of substances within the process, for example:*

- *the precipitation of metals from solution for removal in the filter cake*
- *the degree of transfer between the incoming waste and the emissions (to air, solid waste to land and liquid effluent to sewer of, for example, pesticides or solvents).*

In response to the above Neal's replied that

“Due to the nature of the material treated and processes used, calculation of the efficiency cannot be calculated as a ratio of concentration in the input to the output as can be done in “precipitation of metals from solution”. This approach is only applicable to material with high consistency and therefore there is high level of confidence in the concentration being representative of the input material. Accordingly an efficiency calculation was not agreed during the development of the preoperational report. The wash process generate not only one but a number of outputs including not only the filter cake but many other constituent including the different granular materials (sands, gravels and other aggregates) in addition to the light sludge that is removed through the flotation unit. A simple approach can be used to calculate the efficiency of the wash plant by calculating the ratio of the disposed fractions compared to the total treated in any patch or for a specified period of time”.

The light sludge collected in the DAF unit, which is the fraction that contains all the removed contaminants in the flotation unit, is not removed for each batch due to the negligible quantities recovered from each batch (the sludge from the different batches are collected in one tank for later disposal when the tank is full). Similarly the debris fraction collected as a screen trash which contains the remaining inclusions that may contribute to the level of contaminants in the treated material is allowed to accumulate from different batches and removed when it is full. Metals that removed by magnets and eddy currents

also contribute to the removal of contaminants and are difficult to quantify. For these reasons and considering the small quantities, in terms of weight, of all of these constituents in comparison to the bulk quantity of the treated material and their various distributions in the different fractions, quantifying efficiency using the suggested method is not possible.

Based on calculating the efficiency from the total disposed quantity of filter cake to the total bulk of the treated waste, the efficiency for 2016 is considered to be almost complete considering the small quantity of the light sludge (the filter cake, metals and debris are further recovered). All filter cake recovered from the process were supplied to end users under the CLAIRE CoP and assessed against “suitable for use” criteria” and found to be usable. Neal’s supply the filter cake to the market based on customers requirement under the CLAIRE CoP. The Neal’s IMS dictate that:

“It is the responsibility of the end users and/or their consultants to identify the specifications of the required material. This can be in the form of a descriptive criteria (i.e. residential, commercial, general fill) or/and site specific criteria derived from risk assessment (specific concentration for one or more contaminants.

It is the responsibility of the suitably qualified person(s) to ensure that the quality of the supplied material meets the required specifications.

When only a descriptive criteria was provided by the end user, Neal Soils will use appropriate and current Soil Guideline Values (SGVs) such as S4ULs and the CLAIRE and the LQM Guidance acceptance Criteria (GACS) to assess the suitability of material for the different land use scenarios (Residential, commercial, allotments, etc..).”

It also states:

“It is the responsibility of the persons identifying the materials specification (end users) or the producer of the Material Management Plan (MMP) to ensure that all other supplied filter cakes, irrespective of their classification status” are re-used in accordance with Watch Point 15 of the CLAIRE CoP”.

Watch Point 15 of the CLAIRE CoP states the following:

All materials must be suitable for use and must not pose unacceptable risks to the environment in order to comply with the requirements of the CoP. In implementing the precautionary principle and in aiming for a high level of environmental protection (as set out in the Waste Framework Directive and case law) the EA would expect the use of materials with a Cluster project to maintain or improve the quality of land at any Donor or Receiver site. To this end the following general restrictions are applied to materials to be used under the CoP at any receiver site:

- The hazards to human health and the environment must not be increased beyond those which already exist at the receiver site, by importing materials with elevated concentrations of potentially harmful substances. A project may be regarded as “sham recovery” if it involves importation of soils with levels of contamination significantly above those already present i.e. to a degree that would require additional intervention should the site be redeveloped in future; and

- The importation of materials at receiver sites must not introduce any new hazards beyond those that already exist at the Receiver site, by importing materials containing new contaminants present at problematical levels. In any case this includes the importation and use of materials containing new contaminants present above hazardous waste threshold.

3 Resources Efficiency

The performance parameters set out in Schedule 4 Table S4.2 using the relevant forms specified in Table S4.3 of that schedule are presented in Appendix E. more details are provided below:

3.1 Water Usage

The washing plant is topped up with surface water from interceptor ditches on the site and as such has not needed refreshing from the mains. The washing plant water system is a closed loop system and therefore disposal of waters since first operational is not required.

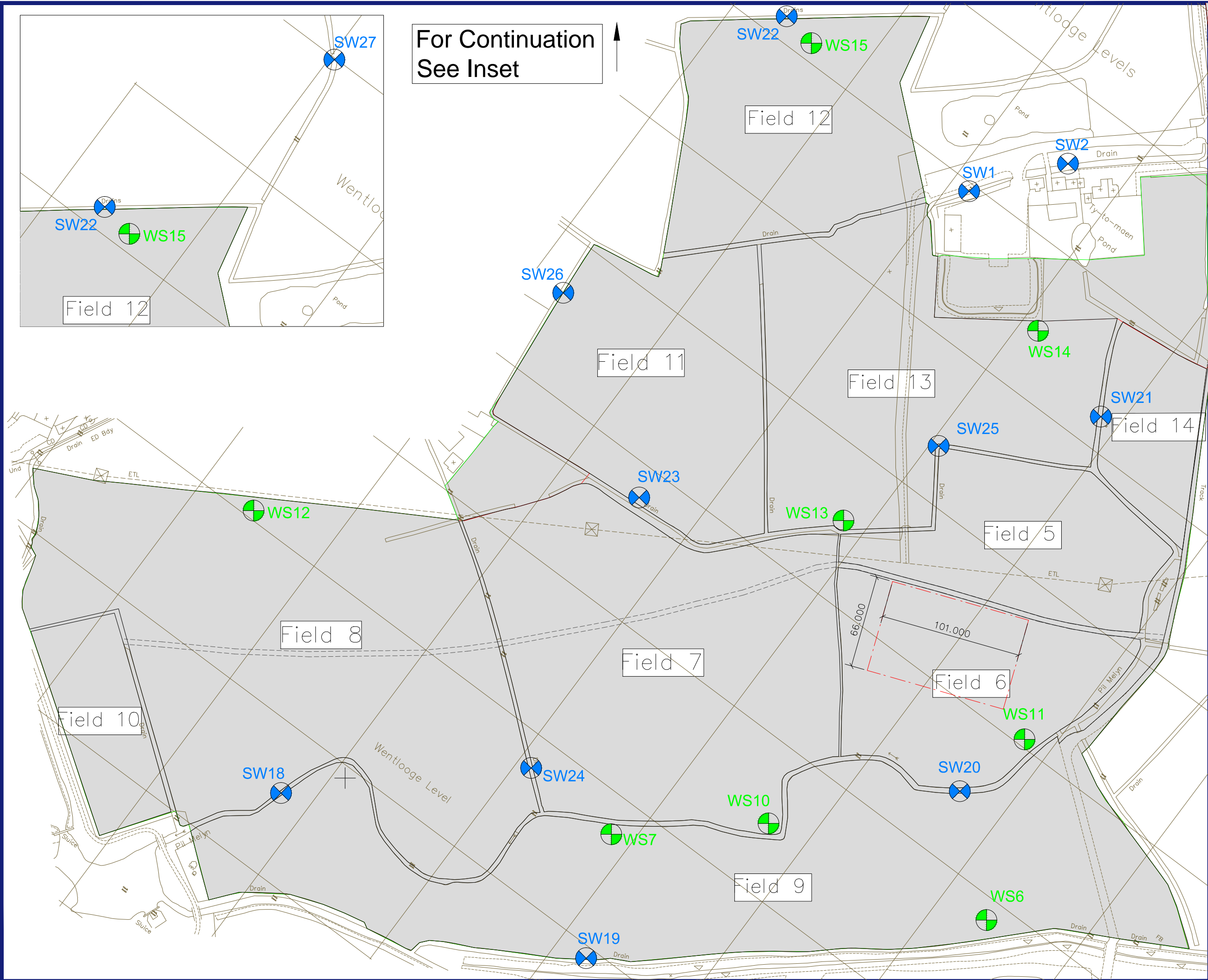
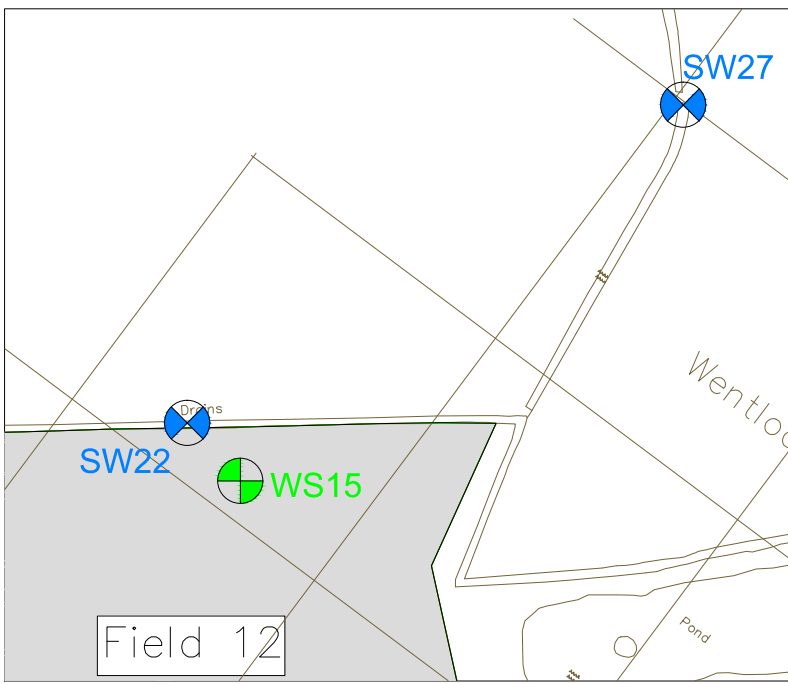
3.2 Energy Usage

The washing plant is currently run via diesel oil generators on site.







A total of 222,878 litres of Diesel Oil was used on site during the reporting period. When multiplied by NRW conversion value of 10.58 (EPR Intensive Farming – Helping you to do your four yearly reviews, January 2012) this converts to 2,421,529 kWh or 2421MWh.

Drawings

For Continuation
See Inset



Key:

-  Environmental Permit Installation Boundary
-  Field boundary
-  Location of Washing Plan
-  WS1 Window Sample Hole Location
-  SW1 Surface Water Sampling Location
-  Surface Water Drainage Discharge Monitoring Poi



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Approved:

Revisions:

Date:
30.11.11

Drawn by:
K Edwards

Scale:
1:2500 @ A3

Client:
Neal Soil

Job:
Environmental Permit Variation

Drawing Title:
Environmental Permit Installatic
Boundary

Drawing Number:
JER5040-002a

Appendices

=

The Aggregates Testing Data

TEST REPORT: DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS

BS 1377 : Part 2 : 1990 : clause 9.2 : Wet Sieving

REPORT NUMBER:	F16-240717-155266-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE NUMBER:	155266/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REFERENCE:	6F2	SITE:	Newton Road
DATE RECEIVED:	13/01/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED	01/09/2015	MATERIAL :	6F2
SAMPLED BY:	Client	CLASSIFICATION:	Class 6F2 selected granular material
DATE TESTED	26/01/2016	LOCATION:	Details Not Supplied
TESTED BY:	MG/TL/JW	PREPARATION METHOD:	BS 1377:Part 1:1990 clause 7.3 & 7.4.5
ORIENTATION OF TEST SPECIMEN		VARIATIONS:	No variations
WITHIN ORIGINAL SPECIMEN:	N/A	TYPE OF SAMPLE:	Disturbed

RESULT:

BS TEST SIEVE mm	PERCENTAGE PASSING %	SPECIFICATION FOR HIGHWAY WORKS GRADING SPECIFICATION LIMITS		
125	100	100	-	100
100	100			
90	100	80	-	100
75	100	65	-	100
63	84			
50	70			
37.5	51	45	-	100
28	41			
20	35			
14	29			
10	25	15	-	60
6.3	22			
5.0	19	10	-	45
3.35	18			
2.00	17			
1.18	16			
0.600	14	0	-	25
0.425	13			
0.300	11			
0.212	9			
0.150	7			
0.063	5	0	-	12

REMARKS:

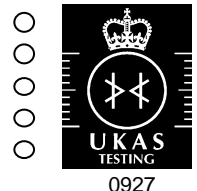
The material tested complies with the grading specification requirements stated above .

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 Page 1 of 1
 Report Format: L/Rep S6a/9

 Approved Signatory
 29-Jan-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


TEST REPORT : DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION
BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)

REPORT No.:	F16-240717-155265-4	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155265/4	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	Type 1	SITE:	Newton Road
DATE RECEIVED:	13/01/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	01/09/2016	MATERIAL:	Type 1
DATE TESTED:	27/01/2016	LOCATION:	Details Not Supplied
TESTED BY:	MG	HEAT TREATMENT:	No
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	5048.3 g
% Retained on size fraction 31.5 - 63mm	33.6 %
% Retained on size fraction 4 - 31.5mm	46.5 %
% Retained on size fraction 0.063 - 4mm	19.9 %

TEST RESULT

PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.34 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.45 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.62 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	4.6 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Approved Signatory

John Newbery - Laboratory Manager
Matt Oliver - Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : **DETERMINATION OF THE PLASTICITY INDEX OF SOIL**
BS 1377:Part 2:1990 clause 5.4

REPORT No.:	F16-240717-155265-6	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155265/6	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	01/09/2015	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	13/01/2016	LOCATION:	Details Not Supplied
DATE TESTED:	21/01/2016	ACCEPT STD:	Contract Specification
TESTED BY:	BM	PREPARATION METHOD:	BS 1377:Part 1:1990
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

ORIENTATION OF TEST SPECIMEN WITHIN ORIGINAL SAMPLE: N/A

RESULT:

TEST DETAILS	TEST RESULT	SPECIFICATION DETAILS	
		Lower Limits	Upper Limits
THE LIQUID LIMIT OF THE SAMPLE: BS 1377: Part 2: 1990 clause 4.4 (1 point)	36%	N/A	- N/A
THE PLASTIC LIMIT OF THE SAMPLE: To BS1377 : Part2 : 1990 cl 5.3	Non Plastic	N/A	- N/A
THE PLASTICITY INDEX OF THE SAMPLE:	N/A		
The Percentage Passing 425µm Test Sieve :	12%		
Sample History :	The material was tested after washing through a 425µm test sieve		

REMARKS:

Specification details not applicable.

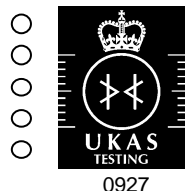
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1
REPORT FORMAT: L/Rep S3S4/rev.6

Approved Signatory
29-Jan-16



TEST REPORT : DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION
BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)

REPORT No.:	F16-240717-155266-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155266/3	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	6F2	SITE:	Newton Road
DATE RECEIVED:	13/01/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	01/09/2016	MATERIAL:	6F2
DATE TESTED:	27/01/2016	LOCATION:	Details Not Supplied
TESTED BY:	MG/MR	HEAT TREATMENT:	No
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	6600 g
% Retained on size fraction 31.5 - 63mm	34.2 %
% Retained on size fraction 4 - 31.5mm	33.6 %
% Retained on size fraction 0.063 - 4mm	25 %

TEST RESULT

PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.33 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.45 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.66 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	5.3 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver - Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Approved Signatory



TEST REPORT : DETERMINATION OF MAGNESIUM SULPHATE VALUE OF AGGREGATE
BS EN 1367-2: 1998

REPORT No.:	F16-240717-155265-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155265/1	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	01/09/2015	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	13/01/2016	LOCATION:	Details Not Supplied
DATE TESTED:	24/02/2016	ACCEPT STD:	Contract Specification
TESTED BY:	MR	SAMPLING CERT.:	Unavailable

TEST RESULT:

TEST PORTION 1

Mass of Test Portion 1 (g):	373.5
Portion 1 Test Result (MS1):	11.9

TEST PORTION 2

Mass of Test Portion 2 (g):	375.2
Portion 2 Test Result (MS2):	12.3

Specification Limits

MAGNESIUM SULPHATE VALUE (MS):	12.1	MS₃₅
---------------------------------------	-------------	------------------------

REMARKS: Proportion by mass of laboratory sample used for the test portion = 15% (nearest 5%)

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



Approved Signatory

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION
 BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-155265-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155265/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	01/09/2015	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	13/01/2016	LOCATION:	Details Not Supplied
DATE TESTED:	21/01/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	MG/JW/EM		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	SHW November 2004 Table 8/5		
125.0	100			
90.0	100			
80.0	100			
63.0	100	100	-	100
40.0	86			
31.5	75	75	-	99
20.0	56			
16.0	50	43	-	81
14.0	47			
10.0	37			
8.0	34	23	-	66
6.3	29			
4.0	23	12	-	53
2.8	22			
2.0	20	6	-	42
1.0	16	3	-	32
0.500	14			
0.425	12			
0.250	9			
0.125	6			
0.063	4.7	0	-	9
Uniformity Co-efficient (D_{60}/D_{10})	73			
Difference in values passing 8 & 16mm test sieve:	16	7	-	30
Difference in values passing 4 & 8mm test sieve:	11	7	-	30

Remarks:

The material tested complies with the specification requirements

A certificate of sampling is not available.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

Approved Signatory

29-Jan-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	F16-240717-155266-4	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155266/4	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	6F2	SITE:	Newton Road
DATE RECEIVED:	13/01/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	01/09/2015	SOURCE:	Details Not Supplied
DATE TESTED:	01/02/2016	MATERIAL:	6F2
TESTED BY:	MG/SCRL	LOCATION:	Details Not Supplied
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	No

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	37	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14mm		

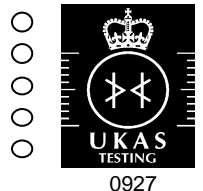
REMARKS: This material complies with the specification requirements stated above.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Approved Signatory



TEST REPORT : DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	F16-240717-155265-5	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155265/5	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	Type 1	SITE:	Newton Road
DATE RECEIVED:	13/01/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	01/09/2015	SOURCE:	Details Not Supplied
DATE TESTED:	01/02/2016	MATERIAL:	Type 1
TESTED BY:	MG/SCRL	LOCATION:	Details Not Supplied
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	No

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	32	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14mm		

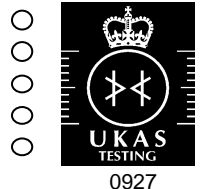
REMARKS: This material complies with the specification requirements stated above.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Approved Signatory



TEST REPORT : **DETERMINATION OF THE MOISTURE CONTENT OF SOIL MATERIAL**
BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.:	F16-240717-155266-5	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155266/5	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	6F2	SITE:	Newton Road
DATE SAMPLED:	01/09/2015	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	6F2
DATE RECEIVED:	13/01/2016	LOCATION:	Details Not Supplied
DATE TESTED:	20/01/2016	ACCEPT STD.:	Contract Specification
TESTED BY:	MG	PREPARATION METHOD:	BS1377:Part1:1990 clauses 7.3 and 7.4.5
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

ORIENTATION OF TEST SPECIMEN WITHIN
ORIGINAL SAMPLE : N/A

RESULTS:

		SPECIFICATION REQUIREMENTS		
		Lower Limit	Upper Limit	
		(%)	(%)	
MATERIAL MOISTURE CONTENT:	7.8 %	N/A	-	N/A

REMARKS:
Specification details not available

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
Report format : L/Rep S2 / rev.8

Approved Signatory
29-Jan-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

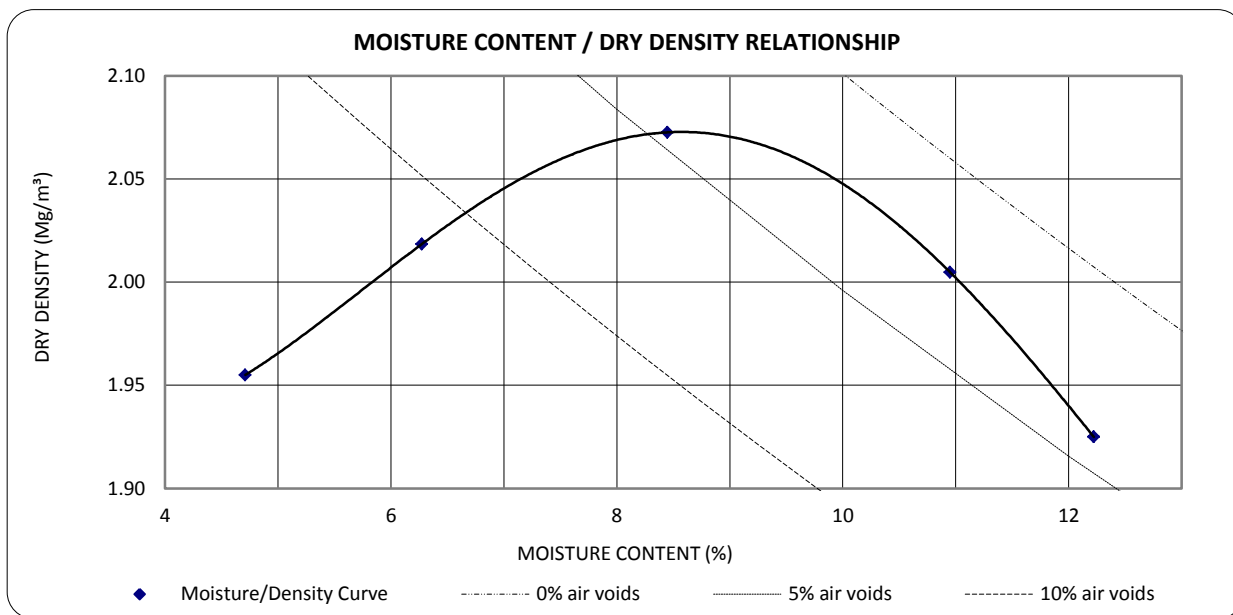


TEST REPORT : DETERMINATION OF DRY DENSITY/MOISTURE CONTENT RELATIONSHIP
BS 1377:Part 4:1990 clause 3.7 Vibrating Hammer Method

REPORT No.:	F16-240717-155266-6	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155266/6	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	6F2		
DATE SAMPLED:	01/09/2015	SITE:	Newton Road
SAMPLED BY:	Client	SUPPLIER:	Details Not Supplied
DATE RECEIVED:	13/01/2016	MATERIAL:	6F2
DATE TESTED:	29/01/2016	LOCATION:	Details Not Supplied
TESTED BY:	MG/BM/SCRL	ACCEPT STD:	Contract Specification
TYPE OF SAMPLE:	Disturbed	PREPARATION METHOD:	BS 1377:Part 1:1990 cl 7.6.3
ORIENTATION OF TEST SPECIMEN		COMPACTION SAMPLE:	Separate Samples
WITHIN ORIGINAL SPECIMEN: N/A		VARIATIONS:	None

RESULT:

MAXIMUM DRY DENSITY :	2.07 Mg/m ³
OPTIMUM MOISTURE CONTENT:	8.5 %
AMOUNT (By dry mass) RETAINED >37.5mm:	49 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS:	2.66 Mg/m ³



REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

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REPORT FORMAT: L/Rep S11-S14a/8

Approved Signatory
02-Feb-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

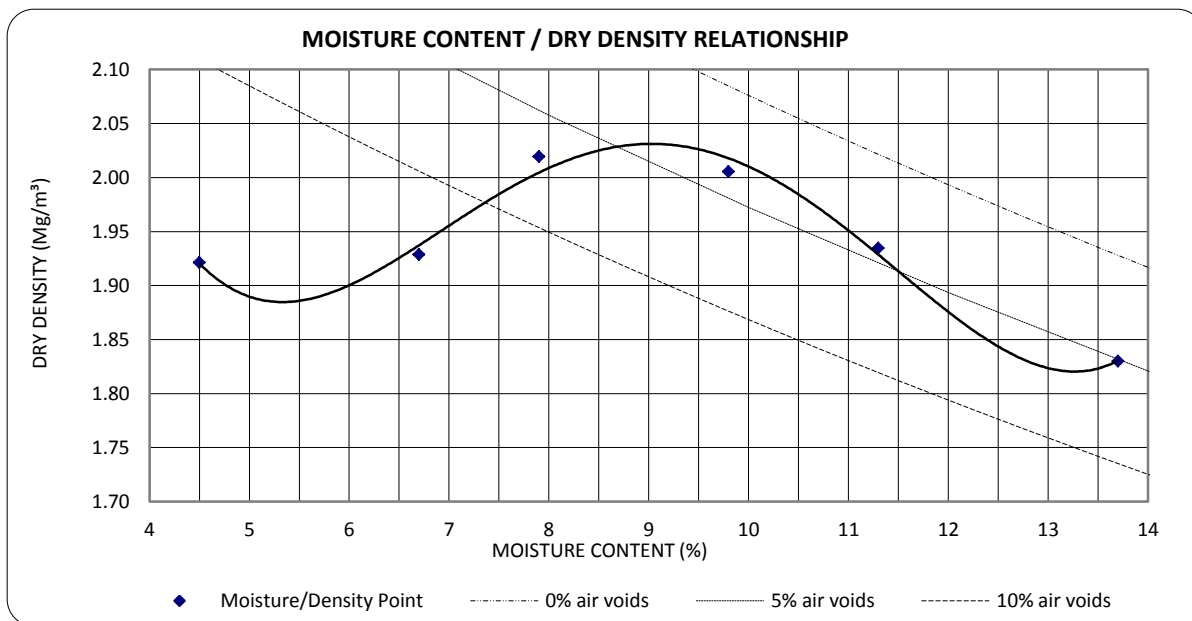


TEST REPORT : DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT
BS EN 13286-4: 2003 - Vibrating Hammer

REPORT No.:	F16-240717-155265-8	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155265/8	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	01/09/2015	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	13/01/2016	LOCATION:	Details Not Supplied
DATE TESTED:	29/01/2016	ACCEPT STD:	Contract Specification
TESTED BY:	MG/SCRL	COMPACTON SAMPLE:	Separate Samples
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

RESULT:

MAXIMUM DRY DENSITY :	2.03 Mg/m ³
OPTIMUM WATER CONTENT:	9.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm:	86 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS:	2.62 Mg/m ³



REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
REPORT FORMAT: L/Rep S11(EN)/rev.1

Approved Signatory
02-Feb-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE

BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-155266-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155266/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	6F2	SITE:	Newton Road
DATE SAMPLED:	01/09/2015	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	6F2
DATE RECEIVED:	13/01/2016	LOCATION:	Details Not Supplied
DATE TESTED:	28/01/2016	ACCEPT STD:	SHW 600 Series - Table 6/1 - Class 6F2
TESTED BY:	MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE: 40 ± 5°C

TEST RESULT:

	<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc	Concrete, concrete products & concrete masonry units.	63 %	Not Specified
Ru	Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	14 % 0.0 %	Not Specified
Rb	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	15 %	Not Specified
Ra	Bituminous Material	7 %	50
Rg	Glass	0 %	Not Specified
X	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0 %	1.0
FL	Floating Particles	0.3 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor

Page 1 of 1

Report Format: L/Rep A16/rev.4

Approved signatory

29-Jan-16



0927

REPORT No.: F16-240717-155266-2

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE

BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-155265-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155265/3	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	01/09/2015	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	13/01/2016	LOCATION:	Details Not Supplied
DATE TESTED:	28/01/2016	ACCEPT STD:	Type 1 Subbase - SHW Cl.802
TESTED BY:	MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE: 40 ± 5°C

TEST RESULT:

CONSTITUENT	FOUND PROPORTION	SPECIFICATION (%)
Rc - Concrete, concrete products & concrete masonry units.	45 %	Not Specified
Ru - Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	25 % 0.1 %	Not Specified
Rb - Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	19 %	Not Specified
Ra - Bituminous Material	10 %	50
Rg - Glass	0 %	25.0
X - Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	1 %	1.0
FL - Floating Particles	0.8 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

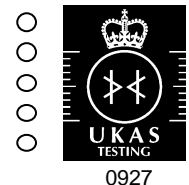
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1
Report Format: L/Rep A16/rev.4

Approved signatory
29-Jan-16



REPORT No.: F16-240717-155265-3

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-155860-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155860/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	10mm	SITE:	Newton Road
DATE SAMPLED:	23/01/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	10mm
DATE RECEIVED:	29/01/2016	LOCATION:	Details Not Supplied
DATE TESTED:	03/02/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	MG/MA		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	99			
14.0	98			
10.0	88			
8.0	70			
6.3	46			
4.0	10			
2.8	5			
2.0	2			
1.0	2			
0.500	2			
0.425	1			
0.250	1			
0.125	1			
0.063	1.2			
Uniformity Co-efficient (D_{60}/D_{10})	2			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is not available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

15-Feb-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : **DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION**
BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)

REPORT No.:	F16-240717-155859-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155859/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	Sharp Sand	SITE:	Newton Road
DATE RECEIVED:	29.01.2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	23.01.2016	MATERIAL:	Sharp Sand
DATE TESTED:	15.02.2016	LOCATION:	Details Not Supplied
TESTED BY:	MG	HEAT TREATMENT:	No
ACCEPABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	1114.3 g
% Retained on size fraction 31.5 - 63mm	0 %
% Retained on size fraction 4 - 31.5mm	6.2 %
% Retained on size fraction 0.063 - 4mm	93.8 %

TEST RESULT

PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.41 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.50 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.66 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	3.9 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver - Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT :	DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION		
	BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)		
REPORT No.:	F16-240717-155860-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155860/3	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	10mm	SITE:	Newton Road
DATE RECEIVED:	29.01.2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	23.01.2016	MATERIAL:	10mm
DATE TESTED:	15.02.2016	LOCATION:	Details Not Supplied
TESTED BY:	MG	HEAT TREATMENT:	No
ACCEPABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	2007.1 g
% Retained on size fraction 31.5 - 63mm	0 %
% Retained on size fraction 4 - 31.5mm	94.7 %
% Retained on size fraction 0.063 - 4mm	5.3 %

TEST RESULT

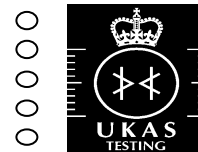
PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.38 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.46 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.61 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	3.8 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver - Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	F16-240717-155860-4	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155860/4	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF.:	10mm	SITE:	Newton Road
DATE RECEIVED:	29/01/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	23/01/2016	SOURCE:	Details Not Supplied
DATE TESTED:	11/02/2016	MATERIAL:	10mm
TESTED BY:	Simon Rowe-Leete	LOCATION:	Details Not Supplied
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	No

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	29	N/A	N/A
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14mm		

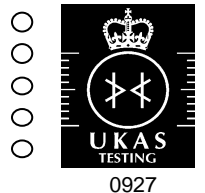
REMARKS:

Remaining sample will be retained for a minimum of 28 days from date of report.

For and on behalf of CET

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Approved Signatory

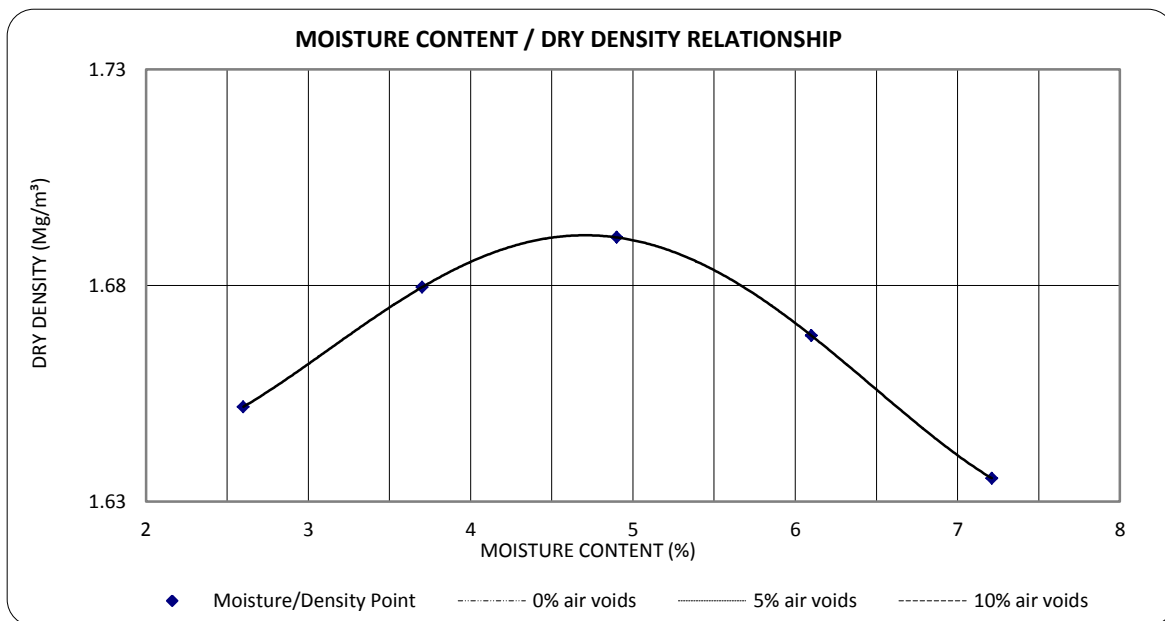


TEST REPORT : DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT
BS EN 13286-4: 2003 - Vibrating Hammer

REPORT No.:	F16-240717-155860-5	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155860/5	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	10mm	SITE:	Newton Road
DATE SAMPLED:	23/01/16	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	10mm
DATE RECEIVED:	29/01/16	LOCATION:	Details Not Supplied
DATE TESTED:	15/02/16	ACCEPT STD:	Contract Specification
TESTED BY:	MG	COMPACTON SAMPLE:	Separate Samples
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

RESULT:

MAXIMUM DRY DENSITY :	1.70 Mg/m ³
OPTIMUM WATER CONTENT:	5.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm:	0.0 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS:	2.61 Mg/m ³



REMARKS:

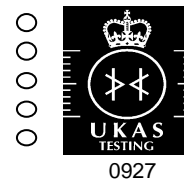
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
REPORT FORMAT: L/Rep S11(EN)/rev.1

Approved Signatory
15-Feb-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : **DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE**

BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-155860-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155860/2	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	10mm	SITE:	Newton Road
DATE SAMPLED:	23.01.2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Recycled Concrete Aggregate
DATE RECEIVED:	29.01.2016	LOCATION:	Details Not Supplied
DATE TESTED:	11.02.2016	ACCEPT STD:	None Specified
TESTED BY:	MG	SAMPLING CERT.:	Available
DRYING TEMPERATURE: ?	40±5°C		

TEST RESULT:

	<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc -	Concrete, concrete products & concrete masonry units.	35 %	Not Specified
Ru -	Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	47 % 0.1 %	Not Specified
Rb -	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	7 %	Not Specified
Ra -	Bituminous Material	7 %	Not Specified
Rg -	Glass	3 %	Not Specified
X -	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0 %	Not Specified
FL -	Floating Particles	0.3 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

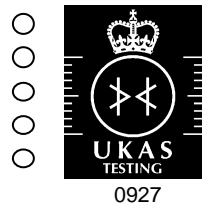
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
 Report Format: L/Rep A16/rev.4

Approved signatory
 15-Feb-16

John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor



TEST REPORT : **DETERMINATION OF THE MOISTURE CONTENT OF SOIL MATERIAL**
BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.:	F16-240717-155996-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155996/1	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	6F2	SITE:	Newton Road
DATE SAMPLED:	30/01/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	6F2
DATE RECEIVED:	02/02/2016	LOCATION:	Details Not Supplied
DATE TESTED:	03/02/2016	ACCEPT STD.:	Contract Specification
TESTED BY:	MG	PREPARATION METHOD:	BS1377:Part1:1990 clauses 7.3 and 7.4.5
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

ORIENTATION OF TEST SPECIMEN WITHIN
ORIGINAL SAMPLE : N/A

RESULTS:

		SPECIFICATION REQUIREMENTS		
		Lower Limit	Upper Limit	
		(%)	(%)	
MATERIAL MOISTURE CONTENT:	14 %	N/A	-	N/A

REMARKS:
Specification details not available

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
Report format : L/Rep S2 / rev.8

Approved Signatory
16-Feb-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT: DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS

BS 1377 : Part 2 : 1990 : clause 9.2 : Wet Sieving

REPORT NUMBER:	F16-240717-155996-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE NUMBER:	155996/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REFERENCE:	6F2	SITE:	Newton Road
DATE RECEIVED:	02/02/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED	30/01/2016	MATERIAL :	6F2
SAMPLED BY:	Client	CLASSIFICATION:	Class 6F2 selected granular material
DATE TESTED	10/02/2016	LOCATION:	Details Not Supplied
TESTED BY:	MG/JW/JDW	PREPARATION METHOD:	BS 1377:Part 1:1990 clause 7.3 & 7.4.5
ORIENTATION OF TEST SPECIMEN		VARIATIONS:	No variations
WITHIN ORIGINAL SPECIMEN:	N/A	TYPE OF SAMPLE:	Disturbed

RESULT:

BS TEST SIEVE mm	PERCENTAGE PASSING %	SPECIFICATION FOR HIGHWAY WORKS GRADING SPECIFICATION LIMITS		
125	100	100	-	100
100	100			
90	100	80	-	100
75	100	65	-	100
63	100			
50	82			
37.5	76	45	-	100
28	72			
20	64			
14	60			
10	56	15	-	60
6.3	48			
5.0	42	10	-	45
3.35	34			
2.00	23			
1.18	19			
0.600	17	0	-	25
0.425	14			
0.300	12			
0.212	11			
0.150	10			
0.063	8	0	-	12

REMARKS:

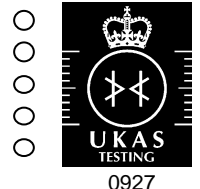
The material tested complies with the grading specification requirements stated above .

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 Page 1 of 1
 Report Format: L/Rep S6a/9

 Approved Signatory
 16-Feb-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


TEST REPORT : **DETERMINATION OF THE PLASTICITY INDEX OF SOIL**
BS 1377:Part 2:1990 clause 5.4

REPORT No.:	F16-240717-155996-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155996/3	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	6F2	SITE:	Newton Road
DATE SAMPLED:	30/01/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	6F2
DATE RECEIVED:	02/02/2016	LOCATION:	Details Not Supplied
DATE TESTED:	09/02/2016	ACCEPT STD:	Contract Specification
TESTED BY:	BM	PREPARATION METHOD:	BS 1377:Part 1:1990
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

ORIENTATION OF TEST SPECIMEN WITHIN ORIGINAL SAMPLE: N/A

RESULT:

TEST DETAILS	TEST RESULT	SPECIFICATION DETAILS	
		Lower Limits	Upper Limits
THE LIQUID LIMIT OF THE SAMPLE: BS 1377: Part 2: 1990 clause 4.4 (1 point)	36%	N/A	- N/A
THE PLASTIC LIMIT OF THE SAMPLE: To BS1377 : Part2 : 1990 cl 5.3	Non Plastic	N/A	- N/A
THE PLASTICITY INDEX OF THE SAMPLE:	N/A		
The Percentage Passing 425µm Test Sieve :	14%		
Sample History :	The material was tested after washing through a 425µm test sieve		

REMARKS:

Specification details not applicable.

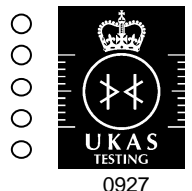
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1
REPORT FORMAT: L/Rep S3S4/rev.6

Approved Signatory
16-Feb-16



TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE

BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-155996-4	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155996/4	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	6F2	SITE:	Newton Road
DATE SAMPLED:	30/01/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	6F2
DATE RECEIVED:	02/02/2016	LOCATION:	Details Not Supplied
DATE TESTED:	16/02/2016	ACCEPT STD:	SHW 600 Series - Table 6/1 - Class 6F2
TESTED BY:	MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE: 40 ± 5°C

TEST RESULT:

	<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc	Concrete, concrete products & concrete masonry units.	61 %	Not Specified
Ru	Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	14 % 0.0 %	Not Specified
Rb	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	21 %	Not Specified
Ra	Bituminous Material	2 %	50
Rg	Glass	1 %	Not Specified
X	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0 %	1.0
FL	Floating Particles	1.6 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

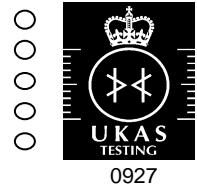
 John Newbery - Laboratory Manager
 Matt Oliver - Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor

Page 1 of 1

Approved signatory

Report Format: L/Rep A16/rev.4

16-Feb-16



REPORT No.: F16-240717-155996-4

TEST REPORT: DETERMINATION OF FROST HEAVE OF UNBOUND AGGREGATE
 BS 812 : Part 124 : 2009 - Annex B (Use of Comparator Specimens)
 To determine the Particle size distribution of Unbound Aggregate in accordance with BS EN 933-1: 1997
 To determine the Laboratory Dry Density and Water Content of Unbound Aggregate in accordance with BS EN 13286-4: 2003

REPORT No.:	F16-240717-155265-7	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155265/7	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	01/09/2015	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	13/01/2016	LOCATION:	Details Not Supplied
DATE TESTED:	04/02/2016	ACCEPT STD:	Contract Specification
TESTED BY:	CLT	TYPE OF SAMPLE:	Disturbed

RESULT:

Dry density at which samples were prepared : 2.03 Mg/m³

Moisture content used to prepare specimens: 9%

Specimen Number	Test Specimen	Comparator Specimen
Specimen 1:	13.5mm	14.mm
Specimen 2:	11.5mm	11.5mm
Specimen 3:	13.5mm	14.5mm
Mean	12.8mm	13.3mm

MEAN FROST HEAVE (to nearest 0.1mm) :	12.8 mm
--	----------------

BS TEST SIEVE	TEST PORTION Percentage Passing	STABLE TEST SPECIMEN Percentage Passing
63mm	100	100
40mm	95	100
31.5mm	78	82
16.0mm	52	54
8.0mm	37	39
4.0mm	27	28
2.0mm	19	20
1.0mm	15	15
63µm	4	4

REMARKS:

The material tested was found to have a frost heave of 12.8mm and is classified as NON FROST SUSCEPTIBLE as detailed in SHW Vol 1 series 800 clause 801.8.

Remaining sample will be retained for a minimum of 28 days from date of report.	For and on behalf of CET	
		John Newbery - Laboratory Manager <input type="radio"/> Matt Oliver- Site Manager <input type="radio"/> Adrian McGilvery - Senior Technician <input type="radio"/> Chris Davidson - Laboratory Supervisor <input type="radio"/> Phil Mayhew - Operations Supervisor <input type="radio"/>
Page 1 of 1	Approved Signatory	

TEST REPORT : DETERMINATION OF THE PLASTIC LIMIT OF SOIL MATERIAL
BS 1377: Part 2: 1990 clause 5.3

REPORT No.:	F16-240717-155995-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155995/3	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	30/01/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	02/02/2016	LOCATION:	Details Not Supplied
DATE TESTED:	08/02/2016	ACCEPTABLE STANDARD :	Contract Specification
TESTED BY:	BM	PREPARATION METHOD:	BS 1377:Part 1:1990 cl 7.3 & 7.4.3
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

ORIENTATION OF TEST SPECIMEN

WITHIN ORIGINAL SAMPLE:

RESULTS:

TEST DETAILS

TEST RESULT

THE PLASTIC LIMIT OF THE SAMPLE: Non-Plastic

THE PERCENTAGE PASSING 425µm TEST SIEVE : 12%

Sample History : The material was tested after washing through a 425µm test sieve

REMARKS:

Remaining sample will be retained for a minimum of 28 days from date of report.

For and on behalf of CET

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION
 BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-155995-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155995/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	30/01/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	02/02/2016	LOCATION:	Details Not Supplied
DATE TESTED:	11/02/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	MG/JDW		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	SHW November 2004 Table 8/5		
125.0	100			
90.0	100			
80.0	100			
63.0	100	100	-	100
40.0	93			
31.5	77	75	-	99
20.0	53			
16.0	47	43	-	81
14.0	44			
10.0	37			
8.0	34	23	-	66
6.3	31			
4.0	25	12	-	53
2.8	23			
2.0	21	6	-	42
1.0	17	3	-	32
0.500	14			
0.425	12			
0.250	9			
0.125	6			
0.063	5.3	0	-	9
Uniformity Co-efficient (D₆₀/D₁₀)	76			
Difference in values passing 8 & 16mm test sieve:	13	7	-	30
Difference in values passing 4 & 8mm test sieve:	9	7	-	30

Remarks:

The material tested complies with the specification requirements

A certificate of sampling is available.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

Approved Signatory

16-Feb-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE

BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-155995-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	155995/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	30/01/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	02/02/2016	LOCATION:	Details Not Supplied
DATE TESTED:	15/02/2016	ACCEPT STD:	Type 1 Subbase - SHW Cl.802
TESTED BY:	MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE: 40 ± 5°C

TEST RESULT:

	<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc	Concrete, concrete products & concrete masonry units.	68 %	Not Specified
Ru	Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	13 % 0.0 %	Not Specified
Rb	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	16 %	Not Specified
Ra	Bituminous Material	1 %	50
Rg	Glass	0 %	25.0
X	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0 %	1.0
FL	Floating Particles	1.3 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

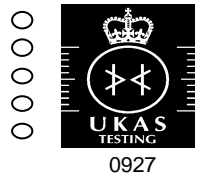
 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor

Page 1 of 1

Report Format: L/Rep A16/rev.4

Approved signatory

16-Feb-16



REPORT No.: F16-240717-155995-2

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION
 BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-157224-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	157224/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	10mm	SITE:	Newton Road
DATE SAMPLED:	19/02/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	10mm
DATE RECEIVED:	02/03/2016	LOCATION:	Details Not Supplied
DATE TESTED:	21/03/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	MG/JDW		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	100			
10.0	82			
8.0	62			
6.3	42			
4.0	11			
2.8	5			
2.0	4			
1.0	2			
0.500	2			
0.425	2			
0.250	1			
0.125	1			
0.063	0.5			
Uniformity Co-efficient (D_{60}/D_{10})		2		
Difference in values passing 8 & 16mm test sieve:		N/A	N/A	N/A
Difference in values passing 4 & 8mm test sieve:		N/A	N/A	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is not available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

21-Mar-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT :**DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION**

BS EN 1097-6:2013 clause 9 (Aggregate 4-0.063mm)

REPORT No.:	F16-240717-157225-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	157225/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	Fine Sand	SITE:	Newton Road
DATE RECEIVED:	02/03/16	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	19/02/16	MATERIAL:	Fine Sand
DATE TESTED:	04/03/2016	LOCATION:	Details Not Supplied
TESTED BY:	MG	HEAT TREATMENT:	No
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	1171.2 g
% Retained on size fraction 31.5 - 63mm	0 %
% Retained on size fraction 4 - 31.5mm	95.3 %
% Retained on size fraction 0.063 - 4mm	4.7 %

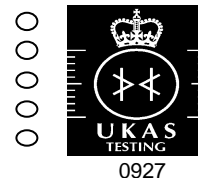
TEST RESULT

PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.48 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.55 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.66 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	2.7 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
Report Format: L/Rep A7a/6Approved Signatory
22-Mar-16John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION
 BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-157225-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	157225/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	Fine Sand	SITE:	Newton Road
DATE SAMPLED:	19/02/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Fine Sand
DATE RECEIVED:	02/03/2016	LOCATION:	Details Not Supplied
DATE TESTED:	21/03/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	MG/JDW		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	100			
10.0	100			
8.0	100			
6.3	100			
4.0	99			
2.8	98			
2.0	96			
1.0	93			
0.500	86			
0.425	80			
0.250	54			
0.125	17			
0.063	1.8			
Uniformity Co-efficient (D_{60}/D_{10})	3			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is not available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

21-Mar-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-157224-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	157224/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	10mm	SITE:	Newton Road
DATE SAMPLED:	19/02/16	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	10mm
DATE RECEIVED:	02/03/16	LOCATION:	Details Not Supplied
DATE TESTED:	04/03/16	ACCEPT STD:	None Specified
TESTED BY:	MG	SAMPLING CERT.:	Unavailable

DRYING TEMPERATURE: 40 ± 5°C

TEST RESULT:

<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc - Concrete, concrete products & concrete masonry units.	18 %	Not Specified
Ru - Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	65 % 0.5 %	Not Specified
Rb - Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	5.3 %	Not Specified
Ra - Bituminous Material	8.0 %	Not Specified
Rg - Glass	2.1 %	Not Specified
X - Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	Not Specified
FL - Floating Particles	0.5 cm ³ /kg	Not Specified

REMARKS:

Remaining sample will be retained for a minimum of 28 days from date of report.

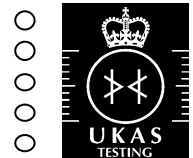
Page 1 of 1
Report Format: L/Rep A16/rev.4

REPORT No.: F16-240717-157224-2

For and on behalf of CET

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Approved signatory
22-Mar-16



0927

TEST REPORT : DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION

BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)

REPORT No.:	F16-240717-157224-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	157224/3	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	10mm	SITE:	Newton Road
DATE RECEIVED:	02/03/16	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	19/02/16	MATERIAL:	10mm
DATE TESTED:	04/03/2016	LOCATION:	Details Not Supplied
TESTED BY:	MG	HEAT TREATMENT:	No
ACCEPABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	2538.6 g
% Retained on size fraction 31.5 - 63mm	0 %
% Retained on size fraction 4 - 31.5mm	94.3 %
% Retained on size fraction 0.063 - 4mm	5.7 %

TEST RESULT

PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.49 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.57 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.70 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	3.2 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1
Report Format: L/Rep A7a/6

Approved Signatory
22-Mar-16



TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-158056-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	158056/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	20mm	SITE:	Newton Road
DATE SAMPLED:	19/03/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	20mm
DATE RECEIVED:	23/03/2016	LOCATION:	Details Not Supplied
DATE TESTED:	07/04/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	MG/JDW		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	95			
16.0	59			
14.0	32			
10.0	6			
8.0	5			
6.3	4			
4.0	4			
2.8	4			
2.0	4			
1.0	4			
0.500	4			
0.425	3			
0.250	3			
0.125	2			
0.063	1.7			
Uniformity Co-efficient (D_{60}/D_{10})	2			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is not available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

08-Apr-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-158056-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	158056/2	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	20mm	SITE:	Newton Road
DATE SAMPLED:	19/03/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	20mm
DATE RECEIVED:	23/03/2016	LOCATION:	Details Not Supplied
DATE TESTED:	31/03/2016	ACCEPT STD:	None Specified
TESTED BY:	MG	SAMPLING CERT.:	Unavailable

DRYING TEMPERATURE: 40 ± 5°C

TEST RESULT:

	<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc -	Concrete, concrete products & concrete masonry units.	27 %	Not Specified
Ru -	Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	60 % 0.0 %	Not Specified
Rb -	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	4.5 %	Not Specified
Ra -	Bituminous Material	6.9 %	Not Specified
Rg -	Glass	1.4 %	Not Specified
X -	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	Not Specified
FL -	Floating Particles	0.7 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

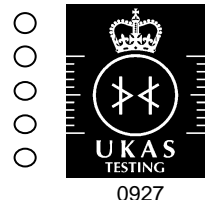
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
Report Format: L/Rep A16/rev.4

Approved signatory
08-Apr-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



REPORT No.: F16-240717-158056-2

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-158057-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	158057/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	Fine Sand	SITE:	Newton Road
DATE SAMPLED:	19/03/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Fine Sand
DATE RECEIVED:	23/03/2016	LOCATION:	Details Not Supplied
DATE TESTED:	07/04/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	MG/JDW		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	100			
10.0	100			
8.0	100			
6.3	100			
4.0	100			
2.8	99			
2.0	98			
1.0	94			
0.500	87			
0.425	81			
0.250	53			
0.125	18			
0.063	6.9			
Uniformity Co-efficient (D_{60}/D_{10})	4			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is not available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

08-Apr-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-146855-159132-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159132/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	ns12754/LH	SITE:	Lab Testing
DATE SAMPLED:	04/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	10mm
DATE RECEIVED:	27/04/2016	LOCATION:	Details Not Supplied
DATE TEST COMPLETED:	18/05/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	MG/DI		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	97			
10.0	69			
8.0	48			
6.3	29			
4.0	7			
2.8	4			
2.0	2			
1.0	2			
0.500	1			
0.425	1			
0.250	1			
0.125	0			
0.063	0.1			
Uniformity Co-efficient (D₆₀/D₁₀)	2			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is not available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

19-May-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
 BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-146855-159134-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159134/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	ns12754/LH	SITE:	Lab Testing
DATE SAMPLED:	04/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	27/04/2016	LOCATION:	Details Not Supplied
DATE TEST COMPLETED:	06/05/2016	ACCEPT STD:	Type 1 Subbase - SHW Cl.802
TESTED BY:	JW/MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE: 110 ± 5°C

TEST RESULT:

<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc - Concrete, concrete products & concrete masonry units.	55 %	Not Specified
Ru - Unbound aggregate, natural stone & Hydraulically bound aggregate.	25 %	Not Specified
(% of CHALK found within Ru)	0.0 %	
Rb - Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	5.8 %	Not Specified
Ra - Bituminous Material	14 %	50
Rg - Glass	0.1 %	25.0
X - Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	1.0
FL - Floating Particles	0.5 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor

 Page 1 of 1
 Report Format: L/Rep A16/rev.4

 Approved signatory
 16-May-16


REPORT No.: F16-146855-159134-1

TEST REPORT: DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS

BS 1377 : Part 2 : 1990 : clause 9.2 : Wet Sieving

REPORT NUMBER:	F16-146855-159045-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE NUMBER:	159045/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REFERENCE:	ns10299/LH	SITE:	Lab Testing
DATE RECEIVED:	26/04/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED	16/04/2016	MATERIAL :	6F2
SAMPLED BY:	Client	CLASSIFICATION:	Class 6F2 selected granular material
DATE TESTED	12/05/2016	LOCATION:	Details Not Supplied
TESTED BY:	JW/JDW/MR	PREPARATION METHOD:	BS 1377:Part 1:1990 clause 7.3 & 7.4.5
ORIENTATION OF TEST SPECIMEN		VARIATIONS:	No variations
WITHIN ORIGINAL SPECIMEN:	N/A	TYPE OF SAMPLE:	Disturbed

RESULT:

BS TEST SIEVE	PERCENTAGE PASSING	SPECIFICATION FOR HIGHWAY WORKS		
		GRADING SPECIFICATION LIMITS		
mm	%			
125	100	100	-	100
100	100			
90	100	80	-	100
75	100	65	-	100
63	83			
50	58			
37.5	46	45	-	100
28	37			
20	26			
14	21			
10	19	15	-	60
6.3	17			
5.0	16	10	-	45
3.35	14			
2.00	12			
1.18	10			
0.600	8	0	-	25
0.425	7			
0.300	6			
0.212	5			
0.150	4			
0.063	3	0	-	12

REMARKS:

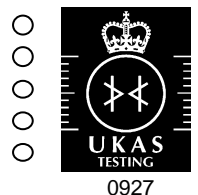
The material tested complies with the grading specification requirements stated above .

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 Page 1 of 1
 Report Format: L/Rep S6a/9

 Approved Signatory
 16-May-16

 John Newbery - Laboratory Manager
 Matt Oliver - Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-146855-159046-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159046/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	ns10299/LH	SITE:	Lab Testing
DATE SAMPLED:	16/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	26/04/2016	LOCATION:	Details Not Supplied
DATE TEST COMPLETED:	12/05/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	JW/MG/DI		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	SHW November 2004 Table 8/5		
125.0	100			
90.0	100			
80.0	100			
63.0	100	100	-	100
40.0	96			
31.5	84	75	-	99
20.0	59			
16.0	53	43	-	81
14.0	50			
10.0	40			
8.0	36	23	-	66
6.3	31			
4.0	26	12	-	53
2.8	24			
2.0	20	6	-	42
1.0	15	3	-	32
0.500	11			
0.425	10			
0.250	8			
0.125	6			
0.063	3.9	0	-	9
Uniformity Co-efficient (D₆₀/D₁₀)	48			
Difference in values passing 8 & 16mm test sieve:	17	7	-	30
Difference in values passing 4 & 8mm test sieve:	10	7	-	30

Remarks:

The material tested complies with the specification requirements

A certificate of sampling is available.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

Approved Signatory

16-May-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF THE MOISTURE CONTENT OF SOIL MATERIAL
BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.:	F16-146855-159045-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159045/2	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	ns10299/LH	SITE:	Lab Testing
DATE SAMPLED:	16/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	6F2
DATE RECEIVED:	26/04/2016	LOCATION:	Details Not Supplied
DATE TESTED:	11/05/2016	ACCEPT STD.:	Contract Specification
TESTED BY:	JW	PREPARATION METHOD:	BS1377:Part1:1990 clauses 7.3 and 7.4.5
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

ORIENTATION OF TEST SPECIMEN WITHIN ORIGINAL SAMPLE : N/A

RESULTS:

SPECIFICATION REQUIREMENTS

		Lower Limit		Upper Limit
		(%)		(%)
MATERIAL MOISTURE CONTENT:	8.7 %	N/A	-	N/A

REMARKS:

Specification details not available

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
Report format : L/Rep S2 / rev.8

Approved Signatory
16-May-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : **DETERMINATION OF THE PLASTICITY INDEX OF SOIL**
BS 1377:Part 2:1990 clause 5.4

REPORT No.:	F16-146855-159046-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159046/3	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	ns10299/LH	SITE:	Lab Testing
DATE SAMPLED:	16/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	26/04/2016	LOCATION:	Details Not Supplied
DATE TESTED:	04/05/2016	ACCEPT STD:	Contract Specification
TESTED BY:	BM	PREPARATION METHOD:	BS 1377:Part 1:1990
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	No Variations

ORIENTATION OF TEST SPECIMEN WITHIN ORIGINAL SAMPLE: N/A

RESULT:

TEST DETAILS	TEST RESULT	SPECIFICATION DETAILS	
		Lower Limits	Upper Limits
THE LIQUID LIMIT OF THE SAMPLE: BS 1377: Part 2: 1990 clause 4.4 (1 point)	34%	N/A	- N/A
THE PLASTIC LIMIT OF THE SAMPLE: To BS1377 : Part2 : 1990 cl 5.3	Non Plastic	N/A	- N/A
THE PLASTICITY INDEX OF THE SAMPLE:	N/A		
The Percentage Passing 425µm Test Sieve :	10%		
Sample History :	The material was tested after washing through a 425µm test sieve		

REMARKS:

Specification details not applicable.

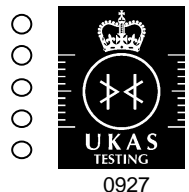
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1
REPORT FORMAT: L/Rep S3S4/rev.6

Approved Signatory
16-May-16



TEST REPORT : **DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE**

BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-146855-159046-4	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159046/4	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	ns10299/LH	SITE:	Lab Testing
DATE SAMPLED:	16/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	26/04/2016	LOCATION:	Details Not Supplied
DATE TEST COMPLETED:	06/05/2016	ACCEPT STD:	Type 1 Subbase - SHW Cl.802
TESTED BY:	JW/MG	SAMPLING CERT.:	Available
DRYING TEMPERATURE:	110 ± 5°C		

TEST RESULT:

<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc - Concrete, concrete products & concrete masonry units.	47 %	Not Specified
Ru - Unbound aggregate, natural stone & Hydraulically bound aggregate.	15 %	Not Specified
(% of CHALK found within Ru)	0.0 %	
Rb - Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	28 %	Not Specified
Ra - Bituminous Material	8.0 %	50
Rg - Glass	0.1 %	25.0
X - Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	1.0
FL - Floating Particles	0.3 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

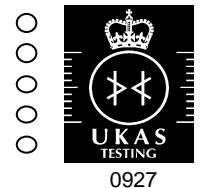
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
 Report Format: L/Rep A16/rev.4

Approved signatory
 16-May-16

John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor



REPORT No.: F16-146855-159046-4

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
 BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-146855-159133-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159133/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	ns12754/LH	SITE:	Lab Testing
DATE SAMPLED:	04/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	6F2
DATE RECEIVED:	27/04/2016	LOCATION:	Details Not Supplied
DATE TEST COMPLETED:	05/05/2016	ACCEPT STD:	SHW 600 Series - Table 6/1 - Class 6F2
TESTED BY:	JW/MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE: 40 ± 5°C

TEST RESULT:

<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc - Concrete, concrete products & concrete masonry units.	70 %	Not Specified
Ru - Unbound aggregate, natural stone & Hydraulically bound aggregate.	17 %	Not Specified
(% of CHALK found within Ru)	0.0 %	
Rb - Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	10 %	Not Specified
Ra - Bituminous Material	2.7 %	50
Rg - Glass	0.0 %	Not Specified
X - Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	1.0
FL - Floating Particles	0.4 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor

 Page 1 of 1
 Report Format: L/Rep A16/rev.4

 Approved signatory
 16-May-16


REPORT No.: F16-146855-159133-1

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
 BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-146855-159132-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159132/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	ns12754/LH	SITE:	Lab Testing
DATE SAMPLED:	04/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	10mm
DATE RECEIVED:	27/04/2016	LOCATION:	Details Not Supplied
DATE TEST COMPLETED:	06/05/2016	ACCEPT STD:	None Specified
TESTED BY:	JW/MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE: 110 ± 5°C

TEST RESULT:

<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc - Concrete, concrete products & concrete masonry units.	33 %	Not Specified
Ru - Unbound aggregate, natural stone & Hydraulically bound aggregate.	37 %	Not Specified
(% of CHALK found within Ru)	0.2 %	
Rb - Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	14 %	Not Specified
Ra - Bituminous Material	12 %	Not Specified
Rg - Glass	0.9 %	Not Specified
X - Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.1 %	Not Specified
FL - Floating Particles	0.9 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

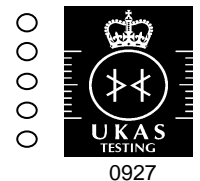
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 Page 1 of 1
 Report Format: L/Rep A16/rev.4

 Approved signatory
 16-May-16

REPORT No.: F16-146855-159132-2

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-159530-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159530/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	30/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	09/05/2016	LOCATION:	Details Not Supplied
DATE TEST COMPLETED:	18/05/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	MG/DI		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	SHW November 2004 Table 8/5		
125.0	100			
90.0	100			
80.0	100			
63.0	100	100	-	100
40.0	95			
31.5	83	75	-	99
20.0	63			
16.0	55	43	-	81
14.0	50			
10.0	39			
8.0	35	23	-	66
6.3	31			
4.0	24	12	-	53
2.8	21			
2.0	17	6	-	42
1.0	12	3	-	32
0.500	9			
0.425	8			
0.250	6			
0.125	5			
0.063	4.1	0	-	9
Uniformity Co-efficient (D₆₀/D₁₀)	28			
Difference in values passing 8 & 16mm test sieve:	20	7	-	30
Difference in values passing 4 & 8mm test sieve:	11	7	-	30

Remarks:

The material tested complies with the specification requirements

A certificate of sampling is not available.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

Approved Signatory

23-May-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF THE MOISTURE CONTENT OF SOIL MATERIAL
BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.:	F16-240717-159531-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159531/1	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	6F2	SITE:	Newton Road
DATE SAMPLED:	30/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	6F2
DATE RECEIVED:	09/05/2016	LOCATION:	Details Not Supplied
DATE TESTED:	18/05/2016	ACCEPT STD.:	Contract Specification
TESTED BY:	MG	PREPARATION METHOD:	BS1377:Part1:1990 clauses 7.3 and 7.4.5
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

ORIENTATION OF TEST SPECIMEN WITHIN ORIGINAL SAMPLE : N/A

RESULTS:

		SPECIFICATION REQUIREMENTS		
		Lower Limit	Upper Limit	
		(%)	(%)	
MATERIAL MOISTURE CONTENT:	2.8 %	N/A	-	N/A

REMARKS:
Specification details not available

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
Report format : L/Rep S2 / rev.8

Approved Signatory
23-May-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : **DETERMINATION OF THE PLASTICITY INDEX OF SOIL**
BS 1377:Part 2:1990 clause 5.4

REPORT No.:	F16-240717-159530-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159530/3	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	30/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	09-May-16	LOCATION:	Details Not Supplied
DATE TESTED:	20/05/2016	ACCEPT STD:	Contract Specification
TESTED BY:	BM	PREPARATION METHOD:	BS 1377:Part 1:1990
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	No Variations

ORIENTATION OF TEST SPECIMEN WITHIN ORIGINAL SAMPLE: N/A

RESULT:

TEST DETAILS	TEST RESULT	SPECIFICATION DETAILS	
		Lower Limits	Upper Limits
THE LIQUID LIMIT OF THE SAMPLE: BS 1377: Part 2: 1990 clause 4.4 (1 point)	35%	N/A	- N/A
THE PLASTIC LIMIT OF THE SAMPLE: To BS1377 : Part2 : 1990 cl 5.3	Non Plastic	N/A	- N/A
THE PLASTICITY INDEX OF THE SAMPLE:	N/A		
The Percentage Passing 425µm Test Sieve :	8%		
Sample History :	The material was tested after washing through a 425µm test sieve		

REMARKS:

Specification details not applicable.

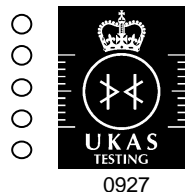
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1
REPORT FORMAT: L/Rep S3S4/rev.6

Approved Signatory
23-May-16



TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
 BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-159530-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159530/2	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	Type 1	SITE:	Newton Road
DATE SAMPLED:	30/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	09/05/2016	LOCATION:	Details Not Supplied
DATE TEST COMPLETED:	19/05/2016	ACCEPT STD:	Type 1 Subbase - SHW Cl.802
TESTED BY:	MG	SAMPLING CERT.:	Unavailable
DRYING TEMPERATURE:	110 ± 5°C		

TEST RESULT:

<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc - Concrete, concrete products & concrete masonry units.	64 %	Not Specified
Ru - Unbound aggregate, natural stone & Hydraulically bound aggregate.	29 %	Not Specified
(% of CHALK found within Ru)	0.3 %	
Rb - Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	4.9 %	Not Specified
Ra - Bituminous Material	1.0 %	50
Rg - Glass	0.0 %	25.0
X - Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	1.0
FL - Floating Particles	0.5 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor

Page 1 of 1

Report Format: L/Rep A16/rev.4

Approved signatory

23-May-16



REPORT No.: F16-240717-159530-2

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
 BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-159531-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	159531/3	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	6F2	SITE:	Newton Road
DATE SAMPLED:	30/04/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	6F2
DATE RECEIVED:	09/05/2016	LOCATION:	Details Not Supplied
DATE TEST COMPLETED:	19/05/2016	ACCEPT STD:	SHW 600 Series - Table 6/1 - Class 6F2
TESTED BY:	MG	SAMPLING CERT.:	Unavailable
DRYING TEMPERATURE:	110 ± 5°C		

TEST RESULT:

<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc - Concrete, concrete products & concrete masonry units.	67 %	Not Specified
Ru - Unbound aggregate, natural stone & Hydraulically bound aggregate.	10.0 %	Not Specified
(% of CHALK found within Ru)	0.1 %	
Rb - Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	18 %	Not Specified
Ra - Bituminous Material	3.5 %	50
Rg - Glass	0.0 %	Not Specified
X - Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	1.0
FL - Floating Particles	0.8 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 Page 1 of 1
 Report Format: L/Rep A16/rev.4

 Approved signatory
 23-May-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


REPORT No.: F16-240717-159531-3



SCIENTIFIC ANALYSIS
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Scientific Analysis Laboratories Ltd

Certificate of Analysis

3 Crittall Drive
Springwood Industrial
Estate
Braintree
Essex
CM7 2RT
Tel : 01376 560120
Fax : 01376 552923

Report Number: 584406-1

Date of Report: 18-Jul-2016

Customer: CET Infrastructure
Northdown House
Harrietsham Maidstone Kent
ME17 1QW

Customer Contact: Mr John Newbery

Customer Job Reference: 240717

Customer Purchase Order: 841261/K2

Customer Site Reference: Neal Soils - Newton Road

Date Job Received at SAL: 12-Jul-2016

Date Analysis Started: 13-Jul-2016

Date Analysis Completed: 18-Jul-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



Report checked
and authorised by :
Chelsea Entwistle
Project Management

Issued by :
Chelsea Entwistle
Project Management

SAL Reference: 584406					
Project Site: Neal Soils - Newton Road					
Customer Reference: 240717					
Soil Analysed as Soil					
Miscellaneous					
SAL Reference					584406 001
Customer Sample Reference					161962
Sample Description					Sharp Sand
Date Sampled					29-JUN-2016
Supplier					Unknown
Determinand	Method	Test Sample	LOD	Units	
Chloride (2:1)	T686	A40	0.5	mg/l	27

SAL Reference: 584406					
Project Site: Neal Soils - Newton Road					
Customer Reference: 240717					
Soil Analysed as Soil					
CET TRL suite					
SAL Reference					584406 001
Customer Sample Reference					161962
Sample Description					Sharp Sand
Date Sampled					29-JUN-2016
Supplier					Unknown
Determinand	Method	Test Sample	LOD	Units	
Electrical Conductivity	T7	A40	10	µS/cm	1900
pH	T7	A40			8.7
(Total Potential) SO4(Total) Expressed as SO4	T403	A40	0.02	%	0.43
(Water Soluble) SO4-- expressed as SO4	T242	A40	0.01	g/l	1.2
(Acid Soluble) SO4--	T192	A40	0.02	%	0.34
(Oxidisable) Sulphide Expressed as SO4	T194	A40	0.02	%	0.10
(Acid Soluble) S expressed as S	T241	A40	0.01	%	0.11
(Water Soluble) S expressed as S	T240	A40	0.001	%	0.078
Sulphur (total)	T6	A40	0.01	%	0.14

Index to symbols used in 584406-1

Value	Description
A40	Assisted dried < 40C
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Method Index

Value	Description
T403	Calc (TRL 447 T4.13 ICP/OES)
T7	Probe
T192	HCl Extraction/ICP/OES (TRL 447 T2)
T240	Calc (TRL 477 T1)
T242	2:1 Extraction/ICP/OES (TRL 447 T1)
T686	Discrete Analyser
T194	Calc (TRL 447 T 4.11)
T6	ICP/OES
T241	Calc (TRL 477 T2)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Chloride (2:1)	T686	A40	0.5	mg/l	N	001
Electrical Conductivity	T7	A40	10	µS/cm	N	001
pH	T7	A40			U	001
(Total Potential) SO4(Total) Expressed as SO4	T403	A40	0.02	%	U	001
(Water Soluble) SO4-- expressed as SO4	T242	A40	0.01	g/l	U	001

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
(Acid Soluble) SO ₄ ⁻⁻	T192	A40	0.02	%	U	001
(Oxidisable) Sulphide Expressed as SO ₄	T194	A40	0.02	%	U	001
(Acid Soluble) S expressed as S	T241	A40	0.01	%	U	001
(Water Soluble) S expressed as S	T240	A40	0.001	%	U	001
Sulphur (total)	T6	A40	0.01	%	U	001

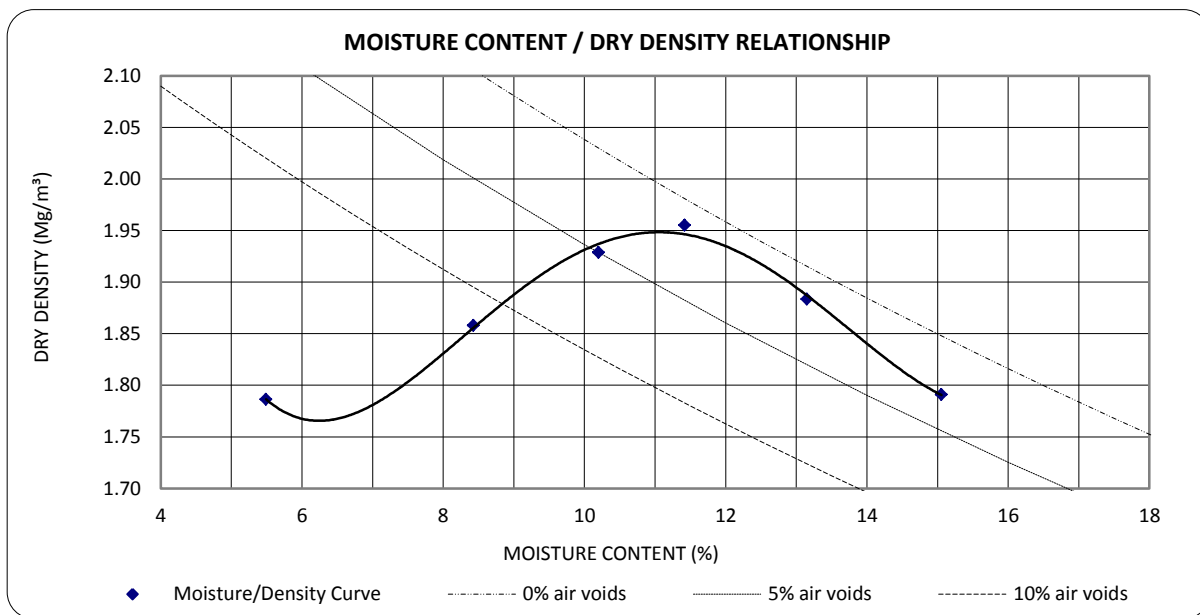


TEST REPORT : DETERMINATION OF DRY DENSITY/MOISTURE CONTENT RELATIONSHIP
BS 1377:Part 4:1990 clause 3.7 Vibrating Hammer Method

REPORT No.:	F16-240717-162269-5	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162269/5	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	NS-2		
DATE SAMPLED:	08/07/2016	SITE:	Newton Road
SAMPLED BY:	Client	SUPPLIER:	Details not supplied
DATE RECEIVED:	19/07/2016	MATERIAL:	6F2-1
DATE TESTED:	19/07/216	LOCATION:	Newton Road
TESTED BY:	BM	ACCEPT STD:	Contract Specification
TYPE OF SAMPLE:	Disturbed	PREPARATION METHOD:	BS 1377:Part 1:1990 cl 7.6.3
ORIENTATION OF TEST SPECIMEN		COMPACTON SAMPLE:	Separate Samples
WITHIN ORIGINAL SPECIMEN: N/A		VARIATIONS:	None

RESULT:

MAXIMUM DRY DENSITY :	1.95 Mg/m ³
OPTIMUM MOISTURE CONTENT:	11 %
AMOUNT (By dry mass) RETAINED >37.5mm:	53 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS:	2.56 Mg/m ³



REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
REPORT FORMAT: L/Rep S11-S14a/8

Approved Signatory
18-Aug-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	F16-240717-162269-4	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162269/4	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF.:	NS-2	SITE:	Newton Road
DATE RECEIVED:	19/07/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	08/07/2016	SOURCE:	Details Not Supplied
DATE TEST COMPLETED:	03/08/2016	MATERIAL:	6F2-1
TESTED BY:	JDW	LOCATION:	Details Not Supplied
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	No

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	41	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14		

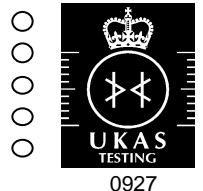
REMARKS: The material tested complies with the specifications stated above.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Approved Signatory



TEST REPORT:
DETERMINATION OF FROST HEAVE OF UNBOUND AGGREGATE

BS 812 : Part 124 : 2009 - Annex B (Use of Comparator Specimens)

To determine the Particle size distribution of Unbound Aggregate in accordance with BS EN 933-1: 1997

To determine the Laboratory Dry Density and Water Content of Unbound Aggregate in accordance with BS EN 13286-4: 2003

REPORT No.:	F16-240717-162268-10	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/10	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS-1	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	19/07/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	20/08/2016	ACCEPT STD:	DTp Specification For Highway Works
TESTED BY:	CLT	TYPE OF SAMPLE:	Disturbed

RESULT:

 Dry density at which samples were prepared : 1.95 Mg/m³

Moisture content used to prepare specimens: 12%

Specimen Number	Test Specimen	Comparator Specimen
Specimen 1:	8.0 mm	10.0 mm
Specimen 2:	8.0 mm	13.0 mm
Specimen 3:	11.0 mm	9.5 mm
Mean	9.0 mm	10.8 mm

MEAN FROST HEAVE (to nearest 0.1mm) :	9 mm
--	-------------

BS TEST SIEVE	TEST PORTION Percentage Passing	STABLE TEST SPECIMEN Percentage Passing
63mm	100	100
40mm	100	100
31.5mm	96	96
16.0mm	71	71
8.0mm	56	56
4.0mm	43	43
2.0mm	32	32
1.0mm	25	25
63µm	5	5

REMARKS:

The material tested was found to have a frost heave of 9mm and is classified as NON FROST SUSCEPTIBLE as detailed in SHW Vol 1 series 800 clause 801.8.

 Remaining sample will be retained for a
 minimum of 28 days from date of report.

For and on behalf of CET

John Newbery - Laboratory Manager	○
Matt Oliver- Site Manager	○
Adrian McGilvery - Senior Technician	○
Chris Davidson - Laboratory Supervisor	○
Phil Mayhew - Operations Supervisor	○

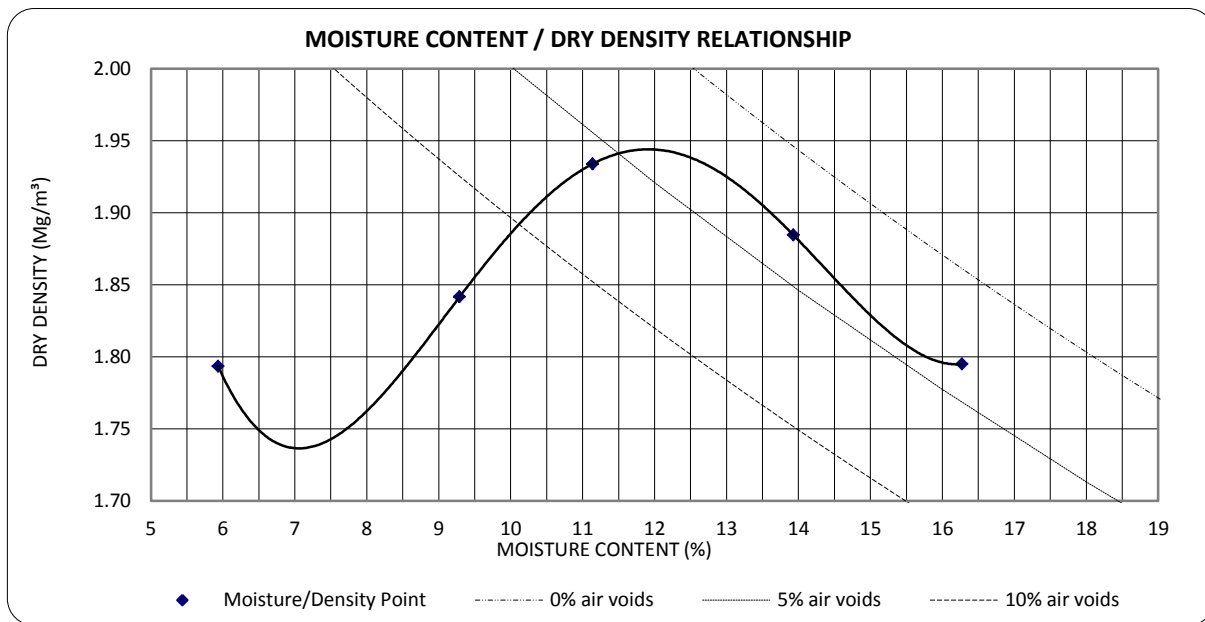
Approved Signatory

TEST REPORT : DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT
BS EN 13286-4: 2003 - Vibrating Hammer

REPORT No.:	F16-240717-162268-6	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/6	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS-1	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	TYPE 1 - 5
DATE RECEIVED:	19/07/2016	LOCATION:	Newton Road
DATE TESTED:	03/08/2016	ACCEPT STD:	Contract Specification
TESTED BY:	MG/SCRL	COMPACTON SAMPLE:	Separate Samples
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

RESULT:

MAXIMUM DRY DENSITY :	1.95 Mg/m ³
OPTIMUM WATER CONTENT:	12.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm:	2.0 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS:	2.67 Mg/m ³



REMARKS:

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
REPORT FORMAT: L/Rep S11(EN)/rev.1

For and on behalf of CET

John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor

Approved Signatory
18-Aug-16



TEST REPORT :**DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION**

BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)

REPORT No.:	F16-240717-162269-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162269/3	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	NS-2	SITE:	Newton Road
DATE RECEIVED:	19/07/2016	SUPPLIER:	Details not supplied
DATE SAMPLED:	08/07/2016	MATERIAL:	6F2-1
DATE TEST COMPLETED:	4/08/2016	LOCATION:	Newton Road
TESTED BY:	MG	HEAT TREATMEN No	
ACCEPABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	7488.7 g
% Retained on size fraction 31.5 - 63mm	58.3 %
% Retained on size fraction 4 - 31.5mm	29.9 %
% Retained on size fraction 0.063 - 4mm	11.8 %

TEST RESULT

PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.23 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.36 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.56 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	5.7 %

REMARKS:

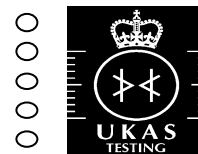
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1

Approved Signatory



TEST REPORT : **DETERMINATION OF THE PLASTICITY INDEX OF SOIL**
BS 1377:Part 2:1990 clause 5.4

REPORT No.:	F16-240717-162268-4	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/4	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	NS-1	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	TYPE 1
DATE RECEIVED:	19/07/2016	LOCATION:	Details Not Supplied
DATE TESTED:	25/07/2016	ACCEPT STD:	Contract Specification
TESTED BY:	JMC	PREPARATION METHOD:	BS 1377:Part 1:1990
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	No Variations

ORIENTATION OF TEST SPECIMEN WITHIN ORIGINAL SAMPLE: N/A

RESULT:

TEST DETAILS	TEST RESULT	SPECIFICATION DETAILS	
		Lower Limits	Upper Limits
THE LIQUID LIMIT OF THE SAMPLE: BS 1377: Part 2: 1990 clause 4.4 (1 point)	32%	N/A	- N/A
THE PLASTIC LIMIT OF THE SAMPLE: To BS1377 : Part2 : 1990 cl 5.3	Non Plastic	N/A	- N/A
THE PLASTICITY INDEX OF THE SAMPLE:	N/A		
The Percentage Passing 425µm Test Sieve :	10%		
Sample History :	The material was tested after washing through a 425µm test sieve		

REMARKS:

Specification details not applicable.

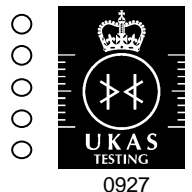
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1
REPORT FORMAT: L/Rep S3S4/rev.6

Approved Signatory
18-Aug-16





SCIENTIFIC ANALYSIS
LABORATORIES
DELIVERING SCIENCE

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Scientific Analysis Laboratories Ltd

Certificate of Analysis

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CM7 2RT
Tel : 01376 560120
Fax : 01376 552923

Report Number: 586925-1

Date of Report: 26-Jul-2016

Customer: CET Infrastructure
Northdown House
Harrietsham Maidstone Kent
ME17 1QW

Customer Contact: Mr John Newbery

Customer Job Reference: 240717

Customer Site Reference: Newton Road

Date Job Received at SAL: 21-Jul-2016

Date Analysis Started: 22-Jul-2016

Date Analysis Completed: 26-Jul-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



1549

Report checked
and authorised by :
Claire Brown Crociquia
Customer Service Manager

Issued by :
Claire Brown Crociquia
Customer Service Manager

TEST REPORT : To determine the Magnesium Sulfate Value of aggregate sample within the size range 10mm to 14mm
In accordance with BS EN 1367-2 : 2009

REPORT No.:	F16-240717-162268-7	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/7	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS-1	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED	19/07/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	16/08/2016	TYPE OF SAMPLE:	Disturbed
TESTED BY:	CLT		

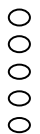
RESULT:

Magnesium Sulfate Value Portion 1 (MS_1) =	7.2
Magnesium Sulfate Value Portion 2 (MS_2) =	5.9
Mean Magnesium Sulfate Value (MS) =	7

REMARKS: Proportion by mass of laboratory sample used for the test portion = 10% (nearest 5%)

For and on behalf of CET

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



Page 1 of 1

Approved Signatory

Report Format: L/Rep ICRL / rev.1

31-Aug-16

TEST REPORT :

DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION

BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)

REPORT No.:	F16-240717-162268-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/3	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	NS-1	SITE:	Newton Road
DATE RECEIVED:	19/07/2016	SUPPLIER:	Details not supplied
DATE SAMPLED:	08/07/2016	MATERIAL:	TYPE 1 - 5
DATE TEST COMPLETED:	04/08/2016	LOCATION:	Newton Road
TESTED BY:	MG	HEAT TREATMEN No	
ACCEPABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	7488.7 g
% Retained on size fraction 31.5 - 63mm	3.3 %
% Retained on size fraction 4 - 31.5mm	81 %
% Retained on size fraction 0.063 - 4mm	15.7 %

TEST RESULT

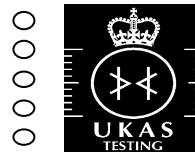
PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.36 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.48 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.67 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	5.0 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : **DETERMINATION OF WATER CONTENT OF AGGREGATE**
BS EN 1097-5: 2008 - Drying in a ventilated oven

REPORT No.:	F16-240717-162268-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS-1	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	19/07/2016	NOMINAL SIZE:	31.5mm
DATE TEST COMPLETED:	19/07/2016	LOCATION:	Newton Road
TESTED BY:	JW	ACCEPT STD:	Contract specification
TYPE OF SAMPLE	Disturbed	PREPARATION METHOD:	BS EN 932-2

TEST RESULT:	SPECIFICATION REQUIREMENTS		
		LOWER LIMIT	UPPER LIMIT
		(%)	(%)
WATER CONTENT (w) %:	3.3	N/A	N/A

REMARKS:
Specification details not available

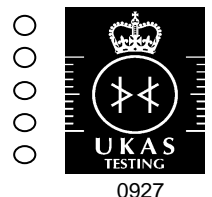
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Report Format: L/Rep A1(EN)/rev.1

Approved Signatory
05-Aug-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	F16-240717-162268-5	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/5	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	NS-1	SITE:	Newton Road
DATE RECEIVED:	19/07/16	SUPPLIER:	Details not supplied
DATE SAMPLED:	08/07/16	SOURCE:	Details not supplied
DATE TEST COMPLETED:	15/08/16	MATERIAL:	TYPE 1 - 5
TESTED BY:	SRL	LOCATION:	Newton Road
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	No

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	36	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14mm		

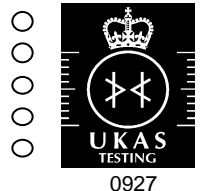
REMARKS: This material complies with the specification requirements stated above.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Approved Signatory





SCIENTIFIC ANALYSIS
LABORATORIES
DELIVERING SCIENCE

Scientific Analysis Laboratories is a
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Scientific Analysis Laboratories Ltd

Certificate of Analysis

3 Crittall Drive
Springwood Industrial
Estate
Braintree
Essex
CM7 2RT
Tel : 01376 560120
Fax : 01376 552923

Report Number: 591799-1

Date of Report: 24-Aug-2016

Customer: CET Infrastructure
Northdown House
Harrietsham Maidstone Kent
ME17 1QW

Customer Contact: Mr John Newbery

Customer Job Reference: 240717

Customer Purchase Order: 841810/K2

Customer Site Reference: Newton Road

Date Job Received at SAL: 10-Aug-2016

Date Analysis Started: 11-Aug-2016

Date Analysis Completed: 24-Aug-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



1549

Report checked
and authorised by :
Chelsea Entwistle
Project Management

Issued by :
Chelsea Entwistle
Project Management

SAL Reference: 591799
 Project Site: Newton Road
 Customer Reference: 240717

Soil Analysed as Soil
 CET TRL suite

SAL Reference		591799 001	591799 002			
Customer Sample Reference		163100	163101			
Sample Description		10mm	20mm			
Date Sampled		27-JUL-2016	27-JUL-2016			
Supplier		Unknown	Unknown			
Determinand	Method	Test Sample	LOD	Units		
Electrical Conductivity	T7	A40	10	µS/cm	2100	2100
pH	T7	A40			11.5	12.0
(Total Potential) SO4(Total) Expressed as SO4	T403	A40	0.02	%	1.2	0.45
(Water Soluble) SO4-- expressed as SO4	T242	A40	0.01	g/l	1.4	0.02
(Acid Soluble) SO4--	T192	A40	0.02	%	1.2	0.36
(Oxidisable) Sulphide Expressed as SO4	T194	A40	0.02	%	<0.02	0.09
(Acid Soluble) S expressed as S	T241	A40	0.01	%	0.39	0.12
(Water Soluble) S expressed as S	T240	A40	0.001	%	0.095	0.002
Sulphur (total)	T6	A40	0.01	%	0.39	0.15

Index to symbols used in 591799-1

Value	Description
A40	Assisted dried < 40C
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Electrical Conductivity was performed on a 2:1 water:soil extract

Method Index

Value	Description
T241	Calc (TRL 477 T2)
T7	Probe
T240	Calc (TRL 477 T1)
T192	HCl Extraction/ICP/OES (TRL 447 T2)
T194	Calc (TRL 447 T 4.11)
T6	ICP/OES
T242	2:1 Extraction/ICP/OES (TRL 447 T1)
T403	Calc (TRL 447 T4.13 ICP/OES)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Electrical Conductivity	T7	A40	10	µS/cm	N	001-002
pH	T7	A40			U	001-002
(Total Potential) SO4(Total) Expressed as SO4	T403	A40	0.02	%	U	001-002
(Water Soluble) SO4-- expressed as SO4	T242	A40	0.01	g/l	U	001-002
(Acid Soluble) SO4--	T192	A40	0.02	%	U	001-002
(Oxidisable) Sulphide Expressed as SO4	T194	A40	0.02	%	U	001-002
(Acid Soluble) S expressed as S	T241	A40	0.01	%	U	001-002
(Water Soluble) S expressed as S	T240	A40	0.001	%	U	001-002
Sulphur (total)	T6	A40	0.01	%	U	001-002

TEST REPORT : DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	F17-240717-163100-5	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	163100/5	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF.:	NS12783 10mm	SITE:	Newton Road
DATE RECEIVED:	08/08/2016	SUPPLIER:	Details not supplied
DATE SAMPLED:	27/07/2016	SOURCE:	Details not supplied
DATE TEST COMPLETED:	10/08/2016	MATERIAL:	10mm
TESTED BY:	SCRL	LOCATION:	Newton Road
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	No

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	32	N/A	N/A
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14mm		

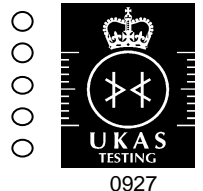
REMARKS:

Remaining sample will be retained for a minimum of 28 days from date of report.

For and on behalf of CET

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Approved Signatory



TEST REPORT : **DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION**
BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)

REPORT No.:	F16-240717-163100-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	163100/3	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	NS12783 10mm	SITE:	Newton Road
DATE RECEIVED:	08/08/2016	SUPPLIER:	Details not supplied
DATE SAMPLED:	05/09/2016	MATERIAL:	10mm
DATE TEST COMPLETED:	06/09/2016	LOCATION:	Newton Road
TESTED BY:	Michael Gray	HEAT TREATMEN No	
ACCEPABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	7488.7 g
% Retained on size fraction 31.5 - 63mm	N/A %
% Retained on size fraction 4 - 31.5mm	N/A %
% Retained on size fraction 0.063 - 4mm	N/A %

TEST RESULT

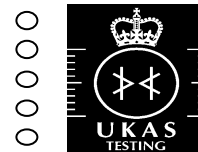
PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.44 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.53 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.68 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	3.7 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	F17-240717-163101-5	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	163101/5	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF.:	NS12783 20mm	SITE:	Newton Road
DATE RECEIVED:	08/08/2016	SUPPLIER:	Details not supplied
DATE SAMPLED:	27/07/2016	SOURCE:	Details not supplied
DATE TEST COMPLETED:	10/08/2016	MATERIAL:	20mm
TESTED BY:	SCRL	LOCATION:	Newton Road
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	No

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	38	N/A	N/A
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14mm		

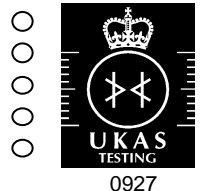
REMARKS:

Remaining sample will be retained for a minimum of 28 days from date of report.

For and on behalf of CET

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Approved Signatory



TEST REPORT : **DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION**
BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)

REPORT No.: F16-240717-163101-3 CLIENT: Neal Soil Supplies Ltd

SAMPLE No.: 163101/3 ADDRESS: Ty to Maen Farm, Newton Road, Rumney, Cardiff

CLIENT REF.: NS12783 20mm SITE: Newton Road

DATE RECEIVED: 08/08/2016 SUPPLIER: Details not supplied

DATE SAMPLED: 05/09/2016 MATERIAL: 20mm

DATE TEST COMPLETED: 06/09/2016 LOCATION: Newton Road

TESTED BY: Michael Gray HEAT TREATMEN No

ACCEPABLE STANDARD : Contract Specification SAMPLING CERTIFICATE: Not Available

RESULT:

MASS OF DRY SAMPLE TESTED 7488.7 g

% Retained on size fraction 31.5 - 63mm N/A %

% Retained on size fraction 4 - 31.5mm N/A %

% Retained on size fraction 0.063 - 4mm N/A %

TEST RESULT

PARTICLE DENSITY (rrd)
(Oven Dry Basis) 2.34 Mg/m³

PARTICLE DENSITY (rssd)
(Saturated Surface Dried Basis) 2.44 Mg/m³

**APPARENT PARTICLE (ra)
DENSITY** 2.60 Mg/m³

WATER ABSORPTION (WA₂₄)
(% of Dry Weight) 4.4 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

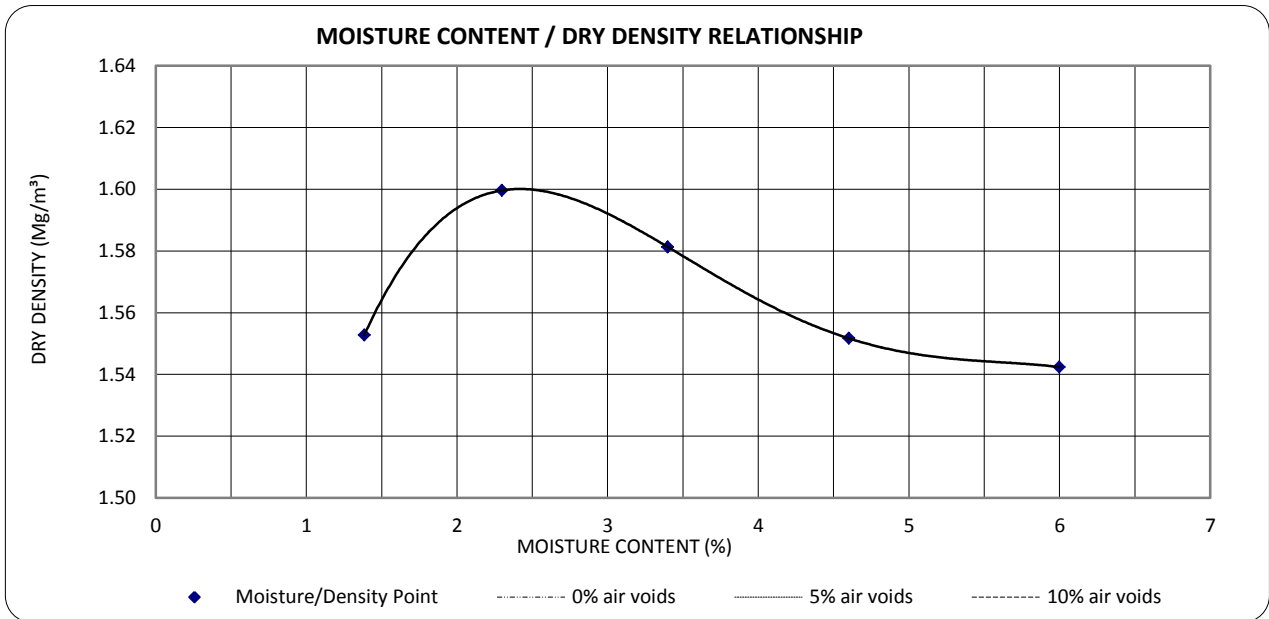


TEST REPORT : DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT
BS EN 13286-4: 2003 - Vibrating Hammer

REPORT No.:	F16-240717-163100-6	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	163100/6	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS12783 10mm	SITE:	Newton Road
DATE SAMPLED:	27/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	10mm
DATE RECEIVED:	08/08/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	30/09/2016	ACCEPT STD:	Contract Specification
TESTED BY:	RB/SCRL	COMPACTON SAMPLE:	Separate Samples
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

RESULT:

MAXIMUM DRY DENSITY :	1.60 Mg/m ³
OPTIMUM WATER CONTENT:	2.5 %
AMOUNT (By Dry Mass) RETAINED >40.0mm:	0.0 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS:	2.68 Mg/m ³



REMARKS:

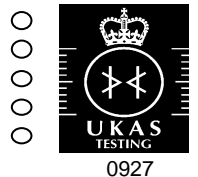
Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
REPORT FORMAT: L/Rep S11(EN)/rev.1

For and on behalf of CET

Approved Signatory
04-Oct-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

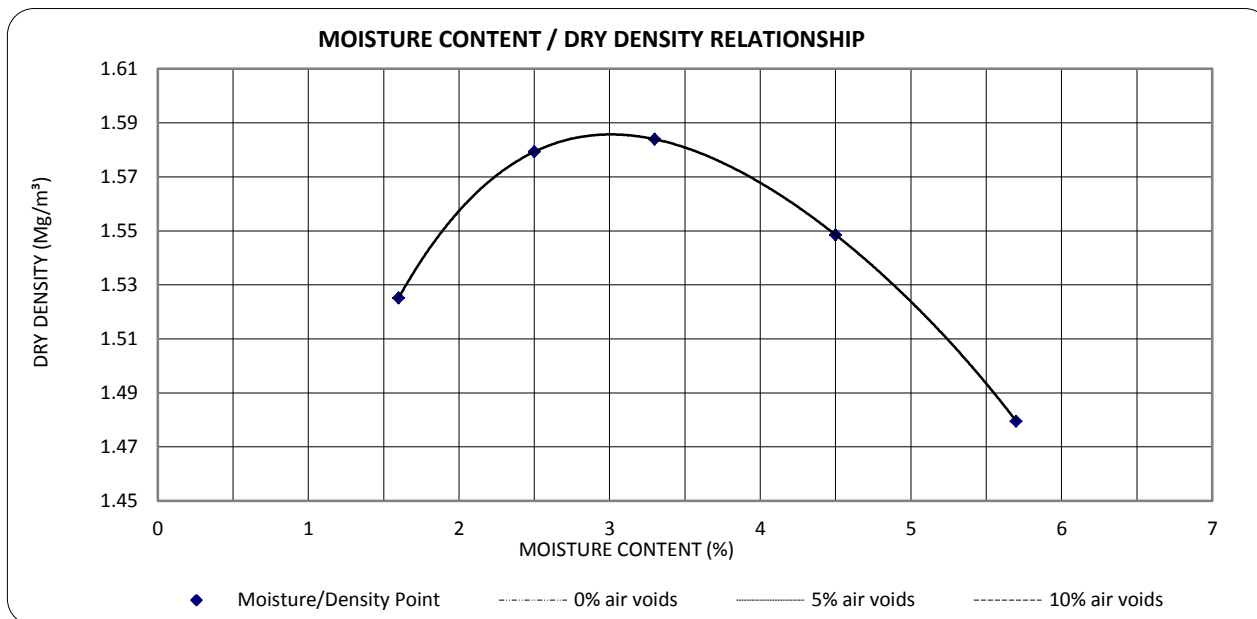


TEST REPORT : DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT
BS EN 13286-4: 2003 - Vibrating Hammer

REPORT No.:	F16-240717-163101-6	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	163101/6	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS12783 20mm	SITE:	Newton Road
DATE SAMPLED:	27/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	20mm
DATE RECEIVED:	08/08/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	30/09/2016	ACCEPT STD:	Contract Specification
TESTED BY:	30/09/2016	COMPACTON SAMPLE:	Separate Samples
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

RESULT:

MAXIMUM DRY DENSITY :	1.59 Mg/m ³
OPTIMUM WATER CONTENT:	3.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm:	0.0 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS:	2.6 Mg/m ³



REMARKS:

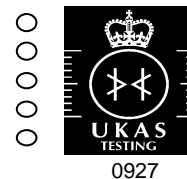
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
REPORT FORMAT: L/Rep S11(EN)/rev.1

Approved Signatory
04-Oct-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-164744-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	164744/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS13352	SITE:	Newton Road
DATE SAMPLED:	12/09/2016	SUPPLIER:	Details Not Suuplied
SAMPLED BY:	Client	MATERIAL:	10mm
DATE RECEIVED:	16/09/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	12/10/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	SCRL		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	100			
10.0	98			
8.0	86			
6.3	57			
4.0	7			
2.8	3			
2.0	2			
1.0	1			
0.500	1			
0.425	1			
0.250	1			
0.125	1			
0.063	0.6			
Uniformity Co-efficient (D₆₀/D₁₀)	2			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

13-Oct-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-164742-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	164742/1	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	NS	SITE:	Newton Road
DATE SAMPLED:	12/09/2016	SUPPLIER:	Details Not Suuplied
SAMPLED BY:	Client	MATERIAL:	Fine Sand
DATE RECEIVED:	16/09/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	12/10/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	SCRL		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	100			
10.0	100			
8.0	100			
6.3	100			
4.0	100			
2.8	100			
2.0	100			
1.0	99			
0.500	97			
0.425	95			
0.250	78			
0.125	34			
0.063	17.7			
Uniformity Co-efficient (D₆₀/D₁₀)	*			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

13-Oct-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-164743-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	164743/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS	SITE:	Newton Road
DATE SAMPLED:	12/09/2016	SUPPLIER:	Details Not Suuplied
SAMPLED BY:	Client	MATERIAL:	Sharp Sand
DATE RECEIVED:	16/09/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	12/10/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	SCRL		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	100			
10.0	100			
8.0	100			
6.3	100			
4.0	98			
2.8	92			
2.0	84			
1.0	70			
0.500	58			
0.425	54			
0.250	34			
0.125	11			
0.063	7.4			
Uniformity Co-efficient (D₆₀/D₁₀)	5			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

13-Oct-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-164746-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	164746/1	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	NS13352	SITE:	Newton Road
DATE SAMPLED:	12/09/2016	SUPPLIER:	Details Not Suuplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	16/09/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	12/10/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	SCRL		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	SHW November 2004 Table 8/5		
125.0	100			
90.0	100			
80.0	100			
63.0	100	100	-	100
40.0	100			
31.5	86	75	-	99
20.0	60			
16.0	53	43	-	81
14.0	49			
10.0	41			
8.0	37	23	-	66
6.3	33			
4.0	26	12	-	53
2.8	22			
2.0	18	6	-	42
1.0	13	3	-	32
0.500	11			
0.425	10			
0.250	8			
0.125	6			
0.063	5.6	0	-	9
Uniformity Co-efficient (D₆₀/D₁₀)	47			
Difference in values passing 8 & 16mm test sieve:	16	7	-	30
Difference in values passing 4 & 8mm test sieve:	11	7	-	30

Remarks:

The material tested complies with the specification requirements

A certificate of sampling is available.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

Approved Signatory

13-Oct-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT: DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS

BS 1377 : Part 2 : 1990 : clause 9.2 : Wet Sieving

REPORT NUMBER:	F16-240717-165460-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE NUMBER:	165460/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REFERENCE:	NS13355-1	SITE:	Newton Road
DATE RECEIVED:	05/10/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED	19/09/2016	MATERIAL :	6F2
SAMPLED BY:	Client	CLASSIFICATION:	Class 6F2 selected granular material
DATE TEST COMPLETED	13/10/2016	LOCATION:	Newton Road
TESTED BY:	DI	PREPARATION METHOD:	BS 1377:Part 1:1990 clause 7.3 & 7.4.5
ORIENTATION OF TEST SPECIMEN		VARIATIONS:	No variations
WITHIN ORIGINAL SPECIMEN:	N/A	TYPE OF SAMPLE:	Disturbed

RESULT:

BS TEST SIEVE	PERCENTAGE PASSING	SPECIFICATION FOR HIGHWAY WORKS		
		GRADING SPECIFICATION LIMITS		
mm	%			
125	100	100	-	100
100	100			
90	100	80	-	100
75	100	65	-	100
63	100			
50	100			
37.5	89	45	-	100
28	81			
20	58			
14	44			
10	32	15	-	60
6.3	21			
5.0	19	10	-	45
3.35	15			
2.00	12			
1.18	11			
0.600	8	0	-	25
0.425	7			
0.300	6			
0.212	5			
0.150	4			
0.063	3	0	-	12

REMARKS:

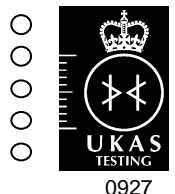
The material tested complies with the grading specification requirements stated above .

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 Page 1 of 1
 Report Format: L/Rep S6a/9

 Approved Signatory
 13-Oct-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-166001-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	166001/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS13357 Fine Sand	SITE:	Newton Road
DATE SAMPLED:	07/10/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Fine Sand
DATE RECEIVED:	19/10/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	28/10/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	DI		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	100			
10.0	100			
8.0	100			
6.3	100			
4.0	98			
2.8	92			
2.0	84			
1.0	70			
0.500	58			
0.425	53			
0.250	31			
0.125	9			
0.063	2.3			
Uniformity Co-efficient (D_{60}/D_{10})	4			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

31-Oct-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-166002-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	166002/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS13357 Sharp Sand	SITE:	Newton Road
DATE SAMPLED:	07/10/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	Sharp Sand
DATE RECEIVED:	19/10/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	28/10/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	DI		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	100			
10.0	100			
8.0	100			
6.3	100			
4.0	100			
2.8	98			
2.0	96			
1.0	92			
0.500	88			
0.425	85			
0.250	67			
0.125	24			
0.063	3.5			
Uniformity Co-efficient (D_{60}/D_{10})	3			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

31-Oct-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927



Laboratory Report



GEO Site & Testing Services Ltd

Contract Number: 33026

Client's Reference: **NS13363**

Report Date: **01-12-2016**

Client **Neal Soils Limited**
Newton Road, Rumney, Cardiff
CF3 3EJ

Contract Title: **NS13363**
For the attention of: **Liam Neal**

Date Received: **07-11-2016**
Date Commenced: **07-11-2016**
Date Completed: **01-12-2016**

Test Description	Qty
PSD Wet Sieve method 1377 : 1990 Part 2 : 9.2 - * UKAS	1
Constituent Parts SHW Clause 710 - @ Non Accredited Test	4
Disposal of Samples on Project	1

Notes: Observations and Interpretations are outside the UKAS Accreditation
* - denotes test included in laboratory scope of accreditation
- denotes test carried out by approved contractor
@ - denotes non accredited tests

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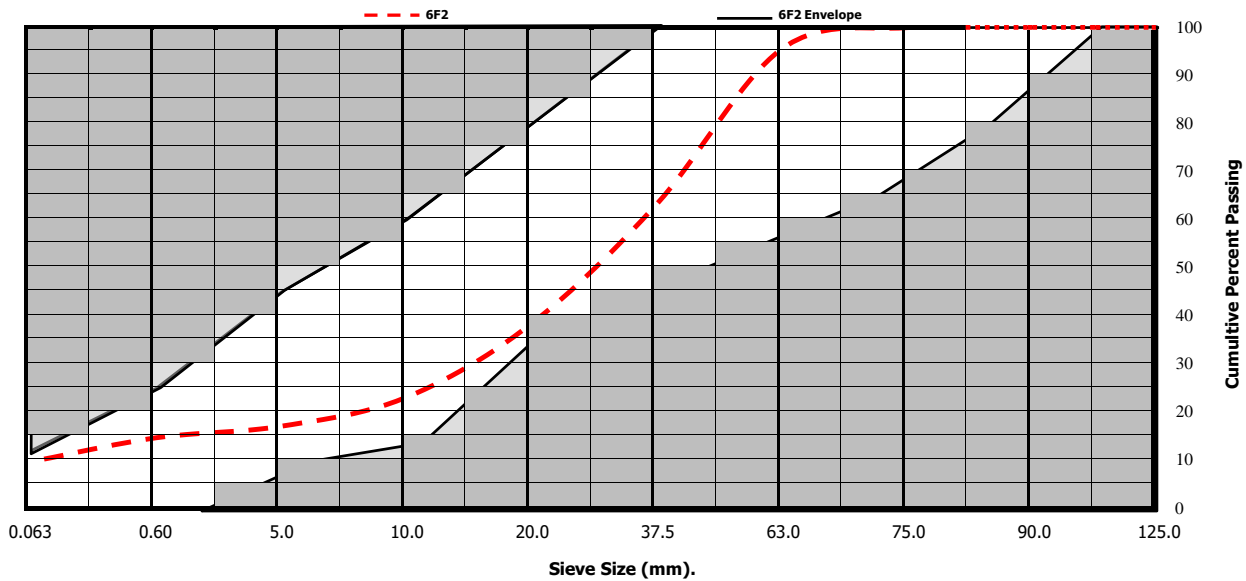
Approved Signatories:

Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - Emma Sharp (Office Manager)
Paul Evans (Quality/Technical Manager) - Vaughan Edwards (Managing Director)

Test Report: Determination of the Particle Size Distribution

**Sieving Method by Washing and Sieving
BS 1377 Part 2 : 1990 Wet Sieve, Clause 9.2**

Client: Neal Soil Suppliers Ltd
Client ref: NS13363
Location:
Contract Number: 33026
Date tested: 30/11/16
Sample Number: 6F2
Type : Type 6F2 Capping
Method of Sampling: By Client
Tested By: Chris John



BS Test Size mm/um	Percentage Passing	Grading Requirement Table 6/2 Percentage Passing
125.0	100	100
90.0	100	80 - 100
75.0	100	65 - 100
63.0	96	
37.5	63	45 - 100
20.0	39	
10.0	23	15 - 60
5.0	17	10 - 45
0.60	15	0 - 25
0.063	10	0 - 12

Soil Fraction	%
Cobbles	0
Gravel	85
Sand	5
Silt/Clay	10

Remarks:
 Complies with the grading requirements for 'TABLE 6/2: (05/04) Grading Requirements for 6F2 Acceptable Earthworks Materials Other Than Classes 6F4, 6F5 and 6S

Remarks:

For and behalf of GEO Site & Testing Services Limited



Paul Evans - Technical/Quality Manager
 Emma Sharp - Office Manager

D P Evans

Date Approved: 1.12.16



Laboratory Report



GEO Site & Testing Services Ltd

Contract Number: 33026

Client's Reference: **NS13363**

Report Date: **01-12-2016**

Client **Neal Soils Limited**
Newton Road, Rumney, Cardiff
CF3 3EJ

Contract Title: **NS13363**
For the attention of: **Liam Neal**

Date Received: **07-11-2016**
Date Commenced: **07-11-2016**
Date Completed: **01-12-2016**

Test Description	Qty
PSD Wet Sieve method 1377 : 1990 Part 2 : 9.2 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation
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Approved Signatories:

Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - Emma Sharp (Office Manager)
Paul Evans (Quality/Technical Manager) - Vaughan Edwards (Managing Director)

PARTICLE SIZE DISTRIBUTION TEST

BS EN 933-1. 2012

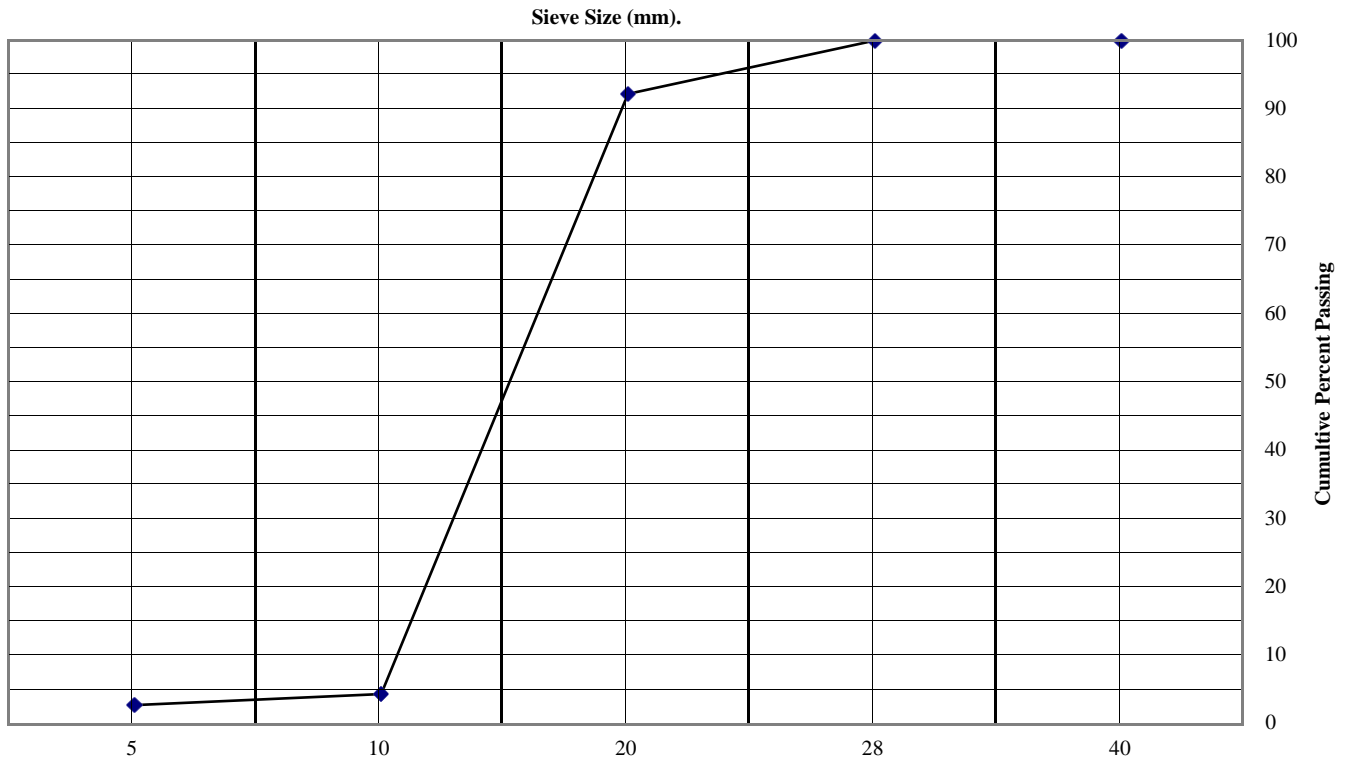
By Washing and Sieving

Sample Number:

20mm

Date

31/11/16



BS Test Sieve	Percentage Passing	EN 13424:2002 Table 2	Result
40	100	100% passing	Pass
28	100	98 - 100	Pass
20	92	85 - 99	Pass
10	4	0 - 15	Pass
5	3	0 - 5	Pass

Remarks:

The material submitted for testing complies with the grading requirements for '20/10 Gc80-15 Material in accordance with the 'EN 13242:2002 Table 2'

1.12.16

Checked by Date

1.12.16

Approved by Date



Contract No.:

33026

Client Ref No.:

NS13363





**MECHANICAL AND PHYSICAL PROPERTIES OF AGGREGATES
PARTICLE DENSITY AND WATER ABSORPTION TEST RESULTS
BS EN 1097-6:2000**

Client Reference:	Sharp Sand
Sandberg Reference:	F89784
Sample Reference:	Sharp Sand
Sampling Details:	Date Sampled: 27/10/16

Date of Test:	7-9/11/16
Method Used (Clause 7, 8 or 9)*	9
Aggregate Size Tested, mm	0-4
Dry Sample Mass, g	1143
Particle Density, Mg/m ³	2.42
Oven-dried -	
Saturated and surface dried -	
Apparent -	2.58
Water Absorption, % by mass:	2.6

Notes * Clause 7 Wire basket method, 31.5-63mm aggregate
 Clause 8 Pyknometer method 4-31.5mm aggregate
 Clause 9 Pyknometer method 0.063-4mm aggregate

NS - Not supplied. N/A - Not applicable NR - Not required.

Client	Neal Soil Suppliers Ltd Atlantic Eco Park Newton Road Rumney Cardiff CF3 2EJ	Signed	For Sandberg LLP
		Name	Richard Rogerson
		Position	Department Manager
		Date	18 November 2016

Materials, samples and test specimens are retained for a period of 2 months from the issue of this test certificate

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



**MECHANICAL AND PHYSICAL PROPERTIES OF AGGREGATES
PARTICLE DENSITY AND WATER ABSORPTION TEST RESULTS
BS EN 1097-6:2000**

Client Reference:	Sharp Sand
Sandberg Reference:	F89784
Sample Reference:	Sharp Sand
Sampling Details:	Date Sampled: 27/10/16

Date of Test:	7-9/11/16
Method Used (Clause 7, 8 or 9)*	9
Aggregate Size Tested, mm	0-4
Dry Sample Mass, g	1143
Particle Density, Mg/m ³	2.42
Oven-dried -	
Saturated and surface dried -	
Apparent -	2.58
Water Absorption, % by mass:	2.6

Notes * Clause 7 Wire basket method, 31.5-63mm aggregate
 Clause 8 Pyknometer method 4-31.5mm aggregate
 Clause 9 Pyknometer method 0.063-4mm aggregate

NS - Not supplied. N/A - Not applicable NR - Not required.

Client	Neal Soil Suppliers Ltd Atlantic Eco Park Newton Road Rumney Cardiff CF3 2EJ	Signed	For Sandberg LLP
		Name	Richard Rogerson
		Position	Department Manager
		Date	18 November 2016

Materials, samples and test specimens are retained for a period of 2 months from the issue of this test certificate

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



ANALYSIS OF AGGREGATE
BS EN 1744-1: 2009, BS EN 196-2:2013*

Client Reference:	Sharp Sand
Sandberg Reference:	F89784
Sample Reference:	Sharp Sand
Sampling Details:	Date Sampled: 27/10/16

Date of Test:	22-23/11/16
Chemical Analysis, % by mass	
Water soluble Chloride, Cl ⁻	0.01
Acid soluble Sulphate, SO ₄	0.45
Total Sulphur, S	0.17
** Carbonate, CO ₃ *	17.33

**N.B. Carbonate content is not currently UKAS accredited for this laboratory

Client	Neal Soil Suppliers Ltd Atlantic Eco Park Newton Road Rumney Cardiff CF3 2EJ	Signed	For Sandberg LLP
		Name	Richard Rogerson
		Position	Department Manager
		Date	29 November 2016

Materials, samples and test specimens are retained for a period of 2 months from the issue of this test certificate

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



Laboratory Report



GEO Site & Testing Services Ltd

Contract Number: 33227

Client's Reference: **NS13371**

Report Date: **01-12-2016**

Client **Neal Soils Limited**
Newton Road, Rumney, Cardiff
CF3 3EJ

Contract Title: **NS13371**
For the attention of: **Liam Neal**

Date Received: **21-11-2016**
Date Commenced: **21-11-2016**
Date Completed: **01-12-2016**

Test Description	Qty
PSD Wet Sieve method 1377 : 1990 Part 2 : 9.2 - * UKAS	2
Disposal of Samples on Project	1

Notes: Observations and Interpretations are outside the UKAS Accreditation
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Approved Signatories:

Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - Emma Sharp (Office Manager)
Paul Evans (Quality/Technical Manager) - Vaughan Edwards (Managing Director)

Test Report:

Particle Size Distribution Test BS 1377 Part 2:1990.

Wet Sieve, Clause 9.2

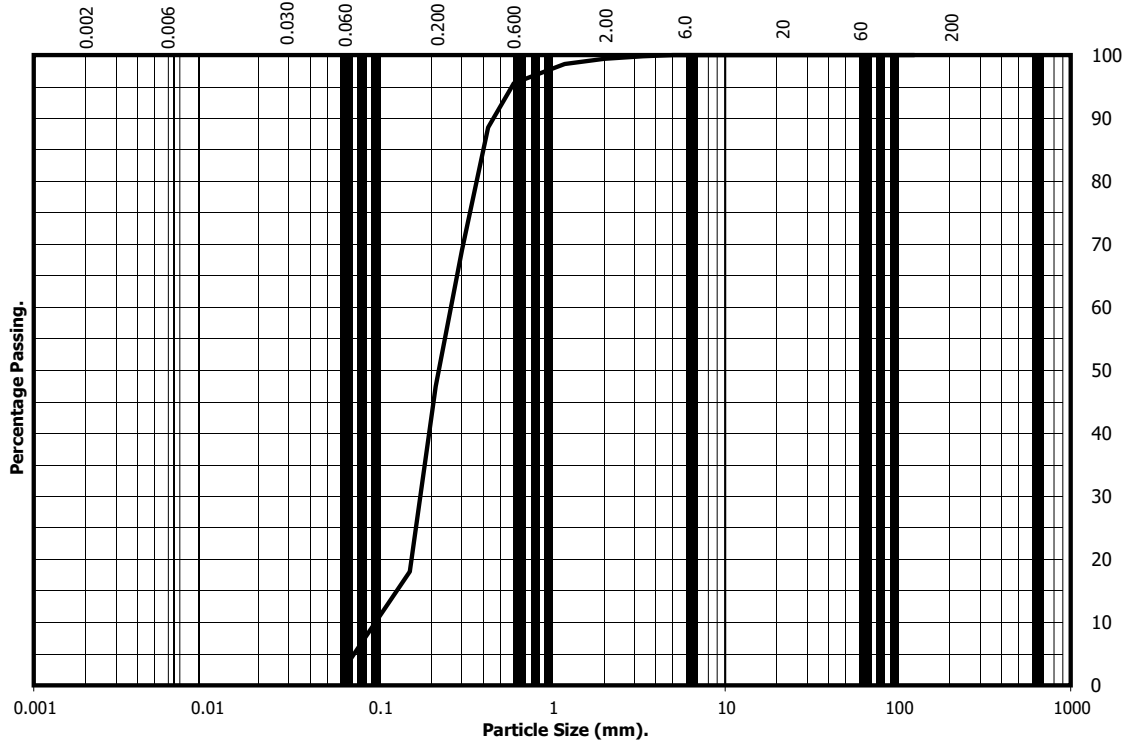
Client ref: **NS13371**
 Contract Number: **33227**
 Hole Number: **FINE SAND**

Sample Number:
 Depth from (m):
 Depth to (m):
 Sample Type: **B**

Location:
 Description: **Brown SAND.**

	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	
CLAY	SILT			SAND			GRAVEL			COBBLES

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	99
1.18	99
0.60	96
0.425	89
0.300	69
0.212	47
0.150	18
0.063	3



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	3	96	1	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
 Paul Evans (Quality/Technical Manager)

Date: 1.12.16



Test Report:

**Particle Size Distribution Test
BS 1377 Part 2:1990.**

Wet Sieve, Clause 9.2

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:

Paul Evans (Quality/Technical Manager)



Date:

1.12.16





Laboratory Report



GEO Site & Testing Services Ltd

Contract Number: 33227

Client's Reference: **NS13371**

Report Date: **01-12-2016**

Client **Neal Soils Limited**
Newton Road, Rumney, Cardiff
CF3 3EJ

Contract Title: **NS13371**
For the attention of: **Liam Neal**

Date Received: **21-11-2016**
Date Commenced: **21-11-2016**
Date Completed: **01-12-2016**

Test Description	Qty
PSD Wet Sieve method 1377 : 1990 Part 2 : 9.2 - * UKAS	2
Disposal of Samples on Project	1

Notes: Observations and Interpretations are outside the UKAS Accreditation
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Approved Signatories:

Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - Emma Sharp (Office Manager)
Paul Evans (Quality/Technical Manager) - Vaughan Edwards (Managing Director)

Test Report:

Particle Size Distribution Test BS 1377 Part 2:1990.

Wet Sieve, Clause 9.2

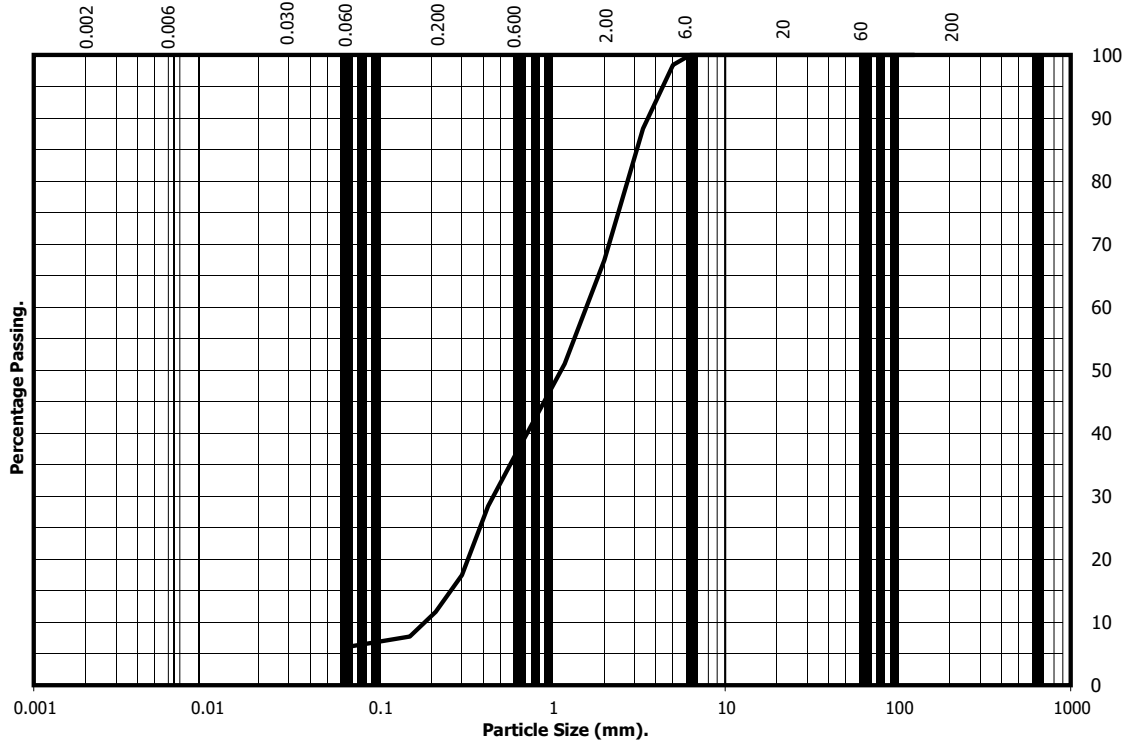
Client ref: **NS13371**
 Contract Number: **33227**
 Hole Number: **Sharp San**

Sample Number:
 Depth from (m):
 Depth to (m):
 Sample Type: **B**

Location:
 Description: **Brown gravelly SAND.**

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	98
3.35	88
2.00	67
1.18	51
0.60	36
0.425	28
0.300	17
0.212	12
0.150	8
0.063	6



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	6	61	33	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
 Paul Evans (Quality/Technical Manager)

Date: 1.12.16



**Test Report: Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client: Neal Soil Suppliers Ltd
Client Ref: NS13363
Contract Number: 33026
Location:
Date Sampled: Unknown
Date tested: 30/11/2016
Sample Number: 6F2
Depth:
Method of Sampling: By Client
Sampled By: Client
Drying temperature: N/A

Rc %	-	88
Ru %	-	0
Rb %	-	8
Ra %	-	4
Rg %	-	0
X %	-	0
FL (cm ³ /kg)	-	0

Rc Concrete, concrete products, mortar
Concrete masonry units
Ru Unbound aggregate, natural stone
Hydraulically bound aggregate
Rb Clay masonry units (i.e. bricks and tiles)
Calcium silicate masonry units
Aerated non-floating concrete

Ra Bituminous materials
Rg Glass
X Other materials (ie clay and soil)
miscellaneous: metals, non floating wood, plastic and
rubber, gypsum plaster
FL Floats on water

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)




Date: 1.12.16

**Test Report: Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client: Neal Soil Suppliers Ltd
Client Ref: NS13363
Contract Number: 33026
Location:
Date Sampled: Unknown
Date tested: 30/11/2016
Sample Number: 10mm
Depth:
Method of Sampling: By Client
Sampled By: Client
Drying temperature: N/A

Rc %	-	62
Ru %	-	13
Rb %	-	19
Ra %	-	6
Rg %	-	0
X %	-	0
FL (cm ³ /kg)	-	0

Rc Concrete, concrete products, mortar
Concrete masonry units
Ru Unbound aggregate, natural stone
Hydraulically bound aggregate
Rb Clay masonry units (i.e. bricks and tiles)
Calcium silicate masonry units
Aerated non-floating concrete

Ra Bituminous materials
Rg Glass
X Other materials (ie clay and soil)
miscellaneous: metals, non floating wood, plastic and
rubber, gypsum plaster
FL Floats on water

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)



Date: 1.12.16

**Test Report: Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client: Neal Soil Suppliers Ltd
Client Ref: NS13363
Contract Number: 33026
Location:
Date Sampled: Unknown
Date tested: 30/11/2016
Sample Number: 20mm
Depth:
Method of Sampling: By Client
Sampled By: Client
Drying temperature: N/A

Rc %	-	90
Ru %	-	0
Rb %	-	4
Ra %	-	5
Rg %	-	0
X %	-	0
FL (cm ³ /kg)	-	0

Rc Concrete, concrete products, mortar
 Concrete masonry units
 Ru Unbound aggregate, natural stone
 Hydraulically bound aggregate
 Rb Clay masonry units (i.e. bricks and tiles)
 Calcium silicate masonry units
 Aerated non-floating concrete

Ra Bituminous materials
 Rg Glass
 X Other materials (ie clay and soil)
 miscellaneous: metals, non floating wood, plastic and
 rubber, gypsum plaster
 FL Floats on water

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
 Paul Evans (Quality/Technical Manager)




Date: 1.12.16

**Test Report: Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client: Neal Soil Suppliers Ltd
Client Ref: NS13363
Contract Number: 33026
Location:
Date Sampled: Unknown
Date tested: 30/11/2016
Sample Number: Type 1
Depth:
Method of Sampling: By Client
Sampled By: Client
Drying temperature: N/A

Rc %	-	74
Ru %	-	0
Rb %	-	22
Ra %	-	4
Rg %	-	0
X %	-	0
FL (cm ³ /kg)	-	0

Rc Concrete, concrete products, mortar
Concrete masonry units
Ru Unbound aggregate, natural stone
Hydraulically bound aggregate
Rb Clay masonry units (i.e. bricks and tiles)
Calcium silicate masonry units
Aerated non-floating concrete

Ra Bituminous materials
Rg Glass
X Other materials (ie clay and soil)
miscellaneous: metals, non floating wood, plastic and
rubber, gypsum plaster
FL Floats on water

For and behalf of GEO Site & Testing Services Ltd

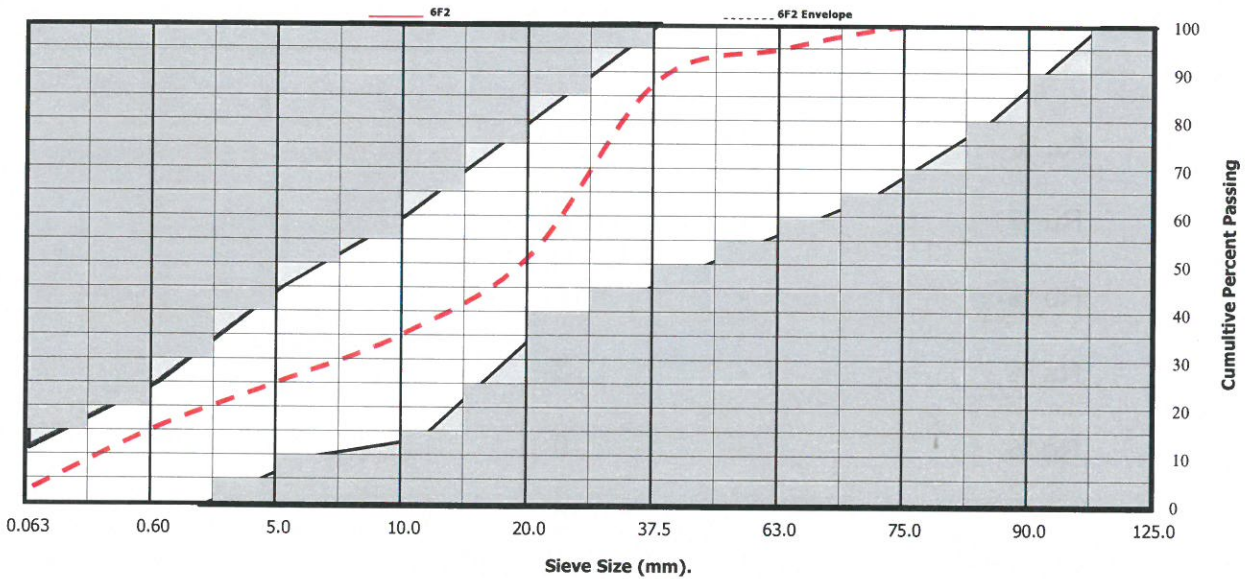
Authorised By:
Paul Evans (Quality/Technical Manager)



Date: 1.12.16

Test Report: Determination of the Particle Size Distribution
 Sieving Method by Washing and Sieving
 BS 1377 Part 2 : 1990 Wet Sieve, Clause 9.2

Client: Neal Soil Suppliers Ltd
Client ref: NS13379
Location:
Contract Number: 33375-051216
Date tested: 14/12/16
Sample Number: 6F2
Type : Type 6F2 Capping
Method of Sampling: By Client
Tested By: Chris John



BS Test Size mm/um	Percentage Passing	Grading Requirement Table 6/2 Percentage passing
125.0	100	100
90.0	100	80 - 100
75.0	100	65 - 100
63.0	95	
37.5	88	45 - 100
20.0	52	
10.0	36	15 - 60
5.0	26	10 - 45
0.60	16	0 - 25
0.063	3	0 - 12

Soil Fraction	%
Cobbles	0
Gravel	84
Sand	13
Silt/Clay	3

Remarks:
 Complies with the grading requirements for 'TABLE 6/2: (05/04) Grading Requirements for 6F2 Acceptable Earthworks Materials Other Than Classes 6F4, 6F5 and 6S

Remarks:

For and behalf of GEO Site & Testing Services Limited



2788



Paul Evans - Technical/Quality Manager
 Emma Sharp - Office Manager

DP [Signature]

Date Approved:

20.12.16

Test Report:**Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client: Neal Soils Limited
Client Ref: NS13379
Contract Number: 33375-051216
Location: NS13379
Date Sampled: Unknown
Date tested: 14/12/2016
Sample Number: 10mm
Depth: N/A
Method of Sampling: Unknown
Sampled By: Unknown
Drying temperature: N/A

Rc %	-	6
Ru %	-	58
Rb %	-	16
Ra %	-	19
Rg %	-	1
X %	-	0
FL (cm ³ /kg)	-	0

Rc Concrete, concrete products, mortar
 Concrete masonry units
 Ru Unbound aggregate, natural stone
 Hydraulically bound aggregate
 Rb Clay masonry units (i.e. bricks and tiles)
 Calcium silicate masonry units
 Aerated non-floating concrete

Ra Bituminous materials
 Rg Glass
 X Other materials (ie clay and soil)
 miscellaneous: metals, non floating wood, plastic and
 rubber, gypsum plaster
 FL Floats on water

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
 Paul Evans (Quality/Technical Manager)




GSTL
 GEO SITE & TESTING SERVICES LTD

Date: 20.12.16

**Test Report: Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client: Neal Soils Limited
Client Ref: NS13379
Contract Number: 33375-051216
Location: NS13379
Date Sampled: Unknown
Date tested: 14/12/2016
Sample Number: 10mm
Depth: N/A
Method of Sampling: Unknown
Sampled By: Unknown
Drying temperature: N/A

Rc %	-	6
Ru %	-	58
Rb %	-	16
Ra %	-	19
Rg %	-	1
X %	-	0
FL (cm ³ /kg)	-	0

Rc Concrete, concrete products, mortar
Concrete masonry units
Ru Unbound aggregate, natural stone
Hydraulically bound aggregate
Rb Clay masonry units (i.e. bricks and tiles)
Calcium silicate masonry units
Aerated non-floating concrete

Ra Bituminous materials
Rg Glass
X Other materials (ie clay and soil)
miscellaneous: metals, non floating wood, plastic and
rubber, gypsum plaster
FL Floats on water

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)

DPG/cws

GSTL
GEO SITE & TESTING SERVICES LTD

Date: 20.12.16

**Test Report: Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client: Neal Soils Limited
Client Ref: NS13379
Contract Number: 33375-051216
Location: NS13379
Date Sampled: Unknown
Date tested: 14/12/2016
Sample Number: 20mm
Depth: N/A
Method of Sampling: Unknown
Sampled By: Unknown
Drying temperature: N/A

Rc %	-	13
Ru %	-	47
Rb %	-	33
Ra %	-	5
Rg %	-	1
X %	-	1
FL (cm3/kg)	-	0

Rc	Concrete, concrete products, mortar Concrete masonry units	Ra	Bituminous materials
Ru	Unbound aggregate, natural stone Hydraulically bound aggregate	Rg	Glass
Rb	Clay masonry units (i.e. bricks and tiles) Calcium silicate masonry units Aerated non-floating concrete	X	Other materials (ie clay and soil) miscellaneous: metals, non floating wood, plastic and rubber, gypsum plaster
		FL	Floats on water

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)




Date: 20.12.16

**Test Report: Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client: Neal Soils Limited
Client Ref: NS13379
Contract Number: 33375-051216
Location: NS13379
Date Sampled: Unknown
Date tested: 14/12/2016
Sample Number: 20mm
Depth: N/A
Method of Sampling: Unknown
Sampled By: Unknown
Drying temperature: N/A

Rc %	-	13
Ru %	-	47
Rb %	-	33
Ra %	-	5
Rg %	-	1
X %	-	1
FL (cm ³ /kg)	-	0

Rc Concrete, concrete products, mortar
Concrete masonry units
Ru Unbound aggregate, natural stone
Hydraulically bound aggregate
Rb Clay masonry units (i.e. bricks and tiles)
Calcium silicate masonry units
Aerated non-floating concrete

Ra Bituminous materials
Rg Glass
X Other materials (ie clay and soil)
miscellaneous: metals, non floating wood, plastic and
rubber, gypsum plaster
FL Floats on water

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)



Date: 20.12.16

GSTL
GEO SITE & TESTING SERVICES LTD

Test Report:**Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client:	Neal Soils Limited
Client Ref:	NS13379
Contract Number:	33375-051216
Location:	NS13379
Date Sampled:	Unknown
Date tested:	14/12/2016
Sample Number:	6f!
Depth:	N/A
Method of Sampling:	Unknown
Sampled By:	Unknown
Drying temperature	N/A

Rc %	-	37
Ru %	-	44
Rb %	-	16
Ra %	-	3
Rg %	-	0
X %	-	0
FL (cm ³ /kg)	-	0

Rc Concrete, concrete products, mortar
Concrete masonry units

Ru Unbound aggregate, natural stone
Hydraulically bound aggregate

Rb Clay masonry units (i.e. bricks and tiles)
Calcium silicate masonry units
Aerated non-floating concrete

Ra Bituminous materials

Rg Glass

X Other materials (ie clay and soil)
miscellaneous: metals, non floating wood, plastic and
rubber, gypsum plaster

FL Floats on water

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)



GSTL
GEO SITE & TESTING SERVICES LTD

Date: 20.12.16

**Test Report: Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client: Neal Soils Limited
Client Ref: NS13379
Contract Number: 33375-051216
Location: NS13379
Date Sampled: Unknown
Date tested: 14/12/2016
Sample Number: Type 1
Depth: N/A
Method of Sampling: Unknown
Sampled By: Unknown
Drying temperature N/A

Rc %	-	29
Ru %	-	46
Rb %	-	20
Ra %	-	5
Rg %	-	0
X %	-	0
FL (cm ³ /kg)	-	0

Rc	Concrete, concrete products, mortar Concrete masonry units	Ra	Bituminous materials
Ru	Unbound aggregate, natural stone Hydraulically bound aggregate	Rg	Glass
Rb	Clay masonry units (i.e. bricks and tiles) Calcium silicate masonry units Aerated non-floating concrete	X	Other materials (ie clay and soil) miscellaneous: metals, non floating wood, plastic and rubber, gypsum plaster
		FL	Floats on water

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Paul Evans (Quality/Technical Manager)




Date: 20.12.16

Test Report: **Determination of the water content of Aggregate**
BS EN 1097-5 2008 Tests for Mechanical and Physical Properties of Aggregates
Determination of the Water Content

Client: **Neal Soils Limited**
Client Ref: **NS13379**
Contract Number: **33375-051216**
Location: **NS13379**
Date Sampled: **Unknown**
Date tested: **14/12/2016**
Hole Number: **n/a**
Sample Number: **6f2**
Sample Type: **B**
Method of Sampling: **Unknown**
Sampled By: **Unknown**
Target Specification: **N/A**

Water
Content

‰

8.8

Remarks:

All remaining samples shall be retained for
a period of one month from the above date,
after which time all samples shall be disposed of.

For and behalf of Geo Site & Testing Ltd

Paul Evans - Quality Manager

Emma Williams - Office Manager

Date Approved: 20.12.16

● DP Evans

○ 



Loose bulk density and voids of Aggregate BS EN 1097-3:1998

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name Hannah Meringolo

Order reference HM1

Order date

24/11/16

Sample Details

Sample type Aggregate

Sampled by Client

Sampling date

N/A

RSK batch no. 17116

No. of samples

6

Receipt date 03/01/17

Test period

09/01/17

Methods

Test The test was undertaken in accordance with BS EN 1097-3:1998. The percentage of voids was calculated from the loose bulk density and the determined particle density.

Deviations The volume of the container was calculated from its measured dimensions.

Precision Repeatability of loose bulk density:
 fine aggregate = $\pm 0.032 \text{ Mg/m}^3$
 coarse aggregate = $\pm 0.019 \text{ Mg/m}^3$

Results

The results are reported on page 2 of this certificate.

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Certificate reviewed by

Dr David B Crofts
 Director

Testing by CR

Certificate issue date

19/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens.



Results				
RSK sample reference	Client sample reference	Loose bulk density (Mg/m ³)		Voids (%)
		Individual	Mean	
A1	6F2	1.41	1.39	36
		1.38		
		1.39		
A2	Type 1	1.31	1.33	43
		1.33		
		1.34		
A3	20 mm	1.23	1.23	45
		1.24		
		1.23		
A4	10 mm	1.26	1.27	45
		1.28		
		1.28		
A5	Fine sand	1.23	1.25	44
		1.25		
		1.28		
A6	Sharp sand	1.33	1.40	39
		1.42		
		1.44		

End of Certificate



Total Sulfur Content of Aggregate

BS EN 1744-1: 2009+A1:2012

289087

Client Details

Neal Soils Suppliers Ltd
 Ty-To-Maen Farm
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name Hannah Meringolo

Order reference	HM1	Order date	03/01/2017
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Sample Details

Sample type	Aggregate		
Sampled by	Client	Sampling date	Not advised
RSK batch no.	17116	No. of samples	2
Receipt date	21/12/16	Test period	17-18/01/17

Methods

Test	The total sulfur content was determined in accordance with BS EN 1744-1, Clause 11. The extraction was carried out using hydrogen peroxide and dilute hydrochloric acid and the sulfur was precipitated as barium sulfate. The result is reported to the nearest 0.1% by mass of dry aggregate.
Deviations	None.
Precision	Repeatability limit from standard deviation of duplicate testing, $r = 0.07$ % by mass.

Result

RSK sample reference	Client sample reference	Sulfur (as S) % by mass of dry aggregate
17116/A5	Fine Sand	0.1
17116/A6	Sharp Sand	0.1

Certification

Certificate prepared by

Sylwia Mianowska
 Chemistry Technician

Testing by SMM

Certificate reviewed by

Ben Stainton
 Principal Chemistry Technician

Certificate issue date 19/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens.

End of Certificate

NEAL SOILS SUPPLIERS LTD

1. Sharp Sand

Sample F90093

Sieve size mm	Sharp Sand Sample F90093	Recommended BS EN 12620 overall grading limits for fine aggregates for concrete for general uses in the UK Fine aggregate size d/D	
		0/4 (CP)	0/4 (MP)
		% by mass passing sieve	
8	100	100	100
6.3	100	95 to 100	95 to 100
4	98	85 to 99	85 to 99
2.8		-	-
2	84	-	-
1	69		
0.5	54	5 to 45	30 to 70
0.25	26		
0.063	2		

The sample meets the requirements for 0/4(MP)

Client	Neal Soil Suppliers Ltd Atlantic Eco Park Newton Road Rumney Cardiff CF3 2EJ	Signed	For Sandberg LLP
		Name	John Gallagher
		Position	Deputy Quality Manager
		Date	22 December 2016

Materials, samples and test specimens are retained for a period of 2 months from the issue of the this test certificate

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

**Test Report: Method of the Determination of Constituents of Coarse Aggregate
BS EN 933-11 2009**

Client: Neal Soils Limited
Client Ref: NS13379
Contract Number: 33375-051216
Location: NS13379
Date Sampled: Unknown
Date tested: 14/12/2016
Sample Number: Type 1
Depth: N/A
Method of Sampling: Unknown
Sampled By: Unknown
Drying temperature: N/A

Rc %	-	29
Ru %	-	46
Rb %	-	20
Ra %	-	5
Rg %	-	0
X %	-	0
FL (cm ³ /kg)	-	0

Rc Concrete, concrete products, mortar
 Concrete masonry units
 Ru Unbound aggregate, natural stone
 Hydraulically bound aggregate
 Rb Clay masonry units (i.e. bricks and tiles)
 Calcium silicate masonry units
 Aerated non-floating concrete

Ra Bituminous materials
 Rg Glass
 X Other materials (ie clay and soil)
 miscellaneous: metals, non floating wood, plastic and
 rubber, gypsum plaster
 FL Floats on water

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
 Paul Evans (Quality/Technical Manager)




Date: 20.12.16



Determination of resistance to fragmentation BS EN 1097-2: 2010

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name Hannah Meringolo

Order reference	HM1	Order date	24/11/17
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Sample Details

Sample type	Bulk	Sampling date	N/A
Sampled by	Client	No of samples	1
RSK batch no.	17116	Test period	12/01/17
Receipt date	03/01/17		

Methods

Test	The resistance to fragmentation was determined by the Los Angeles test method in accordance with BS EN 1097-2: 2010, Clause 5.
Deviations	None.

Results

RSK sample reference	Client sample reference/location	Fraction tested (%)		Los Angeles Coefficient
		14-11.2 mm	11.2-10.0 mm	
A3	20 mm	61	39	31

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Testing by CR

Certificate reviewed by

Dr David Crofts
 Director

Certificate issue date 18/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens. Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.

End of Certificate



Particle Size Distribution BS EN 933-1: 2012

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name | Hannah Meringolo

Order reference | HM1 | Order date | 24/11/16

Sample Details

Sample type | Bulk

Sampled by | Client | Material type/class | Type 1

Client sample ref | Type 1 | Sampling date | N/A

RSK batch no | 17116 | No. of samples | 1

Receipt date | 03/01/17 | Test period | 16/01/17

Methods

Test | The test was carried out in accordance with BS EN 933-1: 2012 using the washing and sieving method.

Deviations | None.

Results

The results are reported on page 2 of this certificate.

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Testing by | CR

Certificate reviewed by

Dr David B Crofts
 Director

Certificate issue date | 18/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens. Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.



RSK sample reference	17116 A2
Client sample reference	Type 1
Sample mass (kg)	14

Results

SIEVE ANALYSIS		
Sieve size (mm)	Percentage passing	Specified limits
63.0	100	100
31.5	83	75-99
16.0	47	43-81
8.0	33	23-66
4.0	24	12-53
2.0	19	6-42
1.0	15	3-32
0.5	10	-
0.25	6	-
0.125	4	-
0.063	1.8	0-9
Differences in values passing selected sieves		
Sieve sizes (mm)	Percentage by mass	Specified limits
16-8	14	7-30
8-4	9	7-30

The mass of sample tested complies with the requirements of the test method.

The sample complies with the grading requirements of SHW Series 800, Nov 2009, Table 8/5.

End of Certificate



Particle Size Distribution BS EN 933-1: 2012

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name | Hannah Meringolo

Order reference | HM1 | Order date | 24/11/16

Sample Details

Sample type	Bulk		
Sampled by	Client	Material type/class	20 mm
Client sample ref	20 mm	Sampling date	N/A
RSK batch no	17116	No. of samples	1
Receipt date	03/01/17	Test period	16/01/17

Methods

Test | The test was carried out in accordance with BS EN 933-1: 2012 using the washing and sieving method.

Deviations | None.

Results

The results are reported on page 2 of this certificate.

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Testing by | CR

Certificate reviewed by

Dr David B Crofts
 Director

Certificate issue date | 18/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens. Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.



RSK sample reference	17116 A3
Client sample reference	20 mm
Sample mass (kg)	14

Results

SIEVE ANALYSIS		
Sieve size (mm)	Percentage passing	Specified limits
40.0	100	100
28.0	100	98-100
20.0	90	85-99
16.0	57	
10.0	4	0-20
8.0	1	
5.0	1	0-5

The mass of sample tested complies with the requirements of the test method.

The sample complies with the requirements for grading tolerance **Gc 85/20** in table 2 BS EN 12620:2002 + A1:2008 for **10/20** aggregate.

End of Certificate



Particle Size Distribution BS EN 933-1: 2012

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name | Hannah Meringolo

Order reference | HM1 | Order date | 24/11/16

Sample Details

Sample type | Bulk

Sampled by | Client | Material type/class | Fine sand

Client sample ref | Fine sand | Sampling date | N/A

RSK batch no | 17116 | No. of samples | 1

Receipt date | 03/01/17 | Test period | 16/01/17

Methods

Test | The test was carried out in accordance with BS EN 933-1: 2012 using the washing and sieving method.

Deviations | None.

Results

The results are reported on page 2 of this certificate.

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Testing by | CR

Certificate reviewed by

Dr David B Crofts
 Director

Certificate issue date | 18/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens. Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.



RSK sample reference	17116 A5
Client sample reference	Fine sand
Sample mass (kg)	0.5

Results

SIEVE ANALYSIS		
Sieve size (mm)	Percentage passing	Specified limits
4.0	100	100
2.0	96	85-99
1.0	91	-
0.5	82	-
0.25	52	-
0.125	19	-
0.063	1.8	-

The mass of sample tested complies with the requirements of the test method.

The sample complies with the requirements for grading tolerance **Gf 85** in table 2 BS EN 12620:2002 +A1:2008 for **0/2** fine aggregate.

End of Certificate

Constituent Materials in Recycled Aggregate BS EN 933-11: 2009

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name Hannah Meringolo

Order reference HM1 Order date 24/11/16

Sample Details

Sample type	Bulk	Receipt date	03/01/17
Sampled By	Client	Sampling date	N/A
Client sample ref	Type 1	No. of samples	1
RSK batch no.	17116	Test period	13/01/17

Methods

Test Testing was carried out in accordance with BS EN 933-11: 2009.
 Samples were dried at 105°C

Deviations No deviations from the test method were employed.

Results

RSK sample reference	Client reference/ location	Constituent Proportions (%)					
		X	Rc	Ru	Rb	Ra	Rg
A2	Type 1	0.1	70	22	4.1	3.6	0.3
	Specification ⁽¹⁾	<1				<50	<25

Constituent	Proportion (cm ³ /kg)
FI	0

Key:

FI = lightweight, floating particles
 RC = Concrete and concrete products
 Ru = Unbound aggregate & natural stone
 Rb = Clay and ca silicate masonry/tiles
 Ra = Bituminous material
 Rg = Glass
 X = Other (Clay, soil, metal, plastic, rubber, wood etc)

⁽¹⁾ Maximum permitted content as stated in Specification for Highway Works Series 800 Table 8/3.

Certification

Certificate prepared by



Clive Rayner
 Principal Technician

Certificate reviewed by



Dr David B Crofts
 Director

Testing by CR

Certificate Issue Date 18/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens.

End of Certificate

Constituent Materials in Recycled Aggregate
BS EN 933-11: 2009
289087

Client Details			
Neal Soil Suppliers Limited Atlantic Ecopark Newton Road Rumney Cardiff CF3 2EJ			
Contact name	Hannah Meringolo		
Order reference	HM1	Order date	24/11/16

Sample Details			
Sample type	Bulk	Receipt date	03/01/17
Sampled By	Client	Sampling date	N/A
Client sample ref	20 mm	No. of samples	1
RSK batch no.	17116	Test period	13/01/17


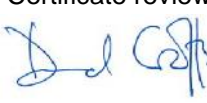
Methods	
Test	Testing was carried out in accordance with BS EN 933-11: 2009. Samples were dried at 105°C
Deviations	No deviations from the test method were employed.

Results							
RSK sample reference	Client reference/location	Constituent Proportions (%)					
		X	Rc	Ru	Rb	Ra	Rg
A3	20 mm	0	72	13	5.0	8.4	0.9

Constituent	Proportion (cm ³ /kg)
FI	0

Key:

- FI = lightweight, floating particles
- RC = Concrete and concrete products
- Ru = Unbound aggregate & natural stone
- Rb = Clay and ca silicate masonry/tiles
- Ra = Bituminous material
- Rg = Glass
- X = Other (Clay, soil, metal, plastic, rubber, wood etc)

Certification			
Certificate prepared by		Certificate reviewed by	
 Clive Rayner Principal Technician		 Dr David B Crofts Director	
Testing by	CR	Certificate Issue Date	18/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens.

End of Certificate

Constituent Materials in Recycled Aggregate
BS EN 933-11: 2009
289087

Client Details			
Neal Soil Suppliers Limited Atlantic Ecopark Newton Road Rumney Cardiff CF3 2EJ			
Contact name	Hannah Meringolo		
Order reference	HM1	Order date	24/11/16

Sample Details			
Sample type	Bulk	Receipt date	03/01/17
Sampled By	Client	Sampling date	N/A
Client sample ref	10 mm	No. of samples	1
RSK batch no.	17116	Test period	13/01/17



Methods	
Test	Testing was carried out in accordance with BS EN 933-11: 2009. Samples were dried at 105°C
Deviations	No deviations from the test method were employed.

Results							
RSK sample reference	Client reference/location	Constituent Proportions (%)					
		X	Rc	Ru	Rb	Ra	Rg
A4	10 mm	0.1	71	15	1.1	9.4	2.8

Constituent	Proportion (cm ³ /kg)
FI	0

Key:

- FI = lightweight, floating particles
- RC = Concrete and concrete products
- Ru = Unbound aggregate & natural stone
- Rb = Clay and ca silicate masonry/tiles
- Ra = Bituminous material
- Rg = Glass
- X = Other (Clay, soil, metal, plastic, rubber, wood etc)

Certification			
Certificate prepared by		Certificate reviewed by	
			
Clive Rayner Principal Technician		Dr David B Crofts Director	
Testing by	CR	Certificate Issue Date	18/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens.

End of Certificate



Particle Density and Water Absorption of Aggregate BS EN 1097-6: 2013

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name Hannah Meringolo

Order reference	HM1	Order date	24/11/16
-----------------	-----	------------	----------

Sample Details

Sample type	Bulk	Receipt date	03/01/17
Sampled by	Client	Sampling date	N/A
RSK sample ref.	17116 / A1	No. of samples	1
Client reference	6F2	Test period	12/01/17-16/01/17

Methods

Test	The test was carried out in accordance with BS EN 1097-6: 2013 Clause 8 (Pyknometer Method).
Deviations	None.

Results

Particle density on an oven dry basis (Mg/m ³)	2.18
Particle density on a saturated surface dry basis (Mg/m ³)	2.31
Apparent particle density (Mg/m ³)	2.51
Water absorption (% of dry mass)	6.1

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Testing by CR

Certificate reviewed by

Dr David B Crofts
 Associate Director

Certificate issue date 23/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens. Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.

End of Certificate



Particle Density and Water Absorption of Aggregate BS EN 1097-6: 2013

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name Hannah Meringolo

Order reference	HM1	Order date	24/11/16
-----------------	-----	------------	----------

Sample Details

Sample type	Bulk	Receipt date	03/01/17
Sampled by	Client	Sampling date	N/A
RSK sample ref.	17116 / A2	No. of samples	1
Client reference	Type 1	Test period	12/01/17-16/01/17

Methods

Test	The test was carried out in accordance with BS EN 1097-6: 2013 Clause 8 (Pyknometer Method).
Deviations	None.

Results

Particle density on an oven dry basis (Mg/m ³)	2.34
Particle density on a saturated surface dry basis (Mg/m ³)	2.45
Apparent particle density (Mg/m ³)	2.62
Water absorption (% of dry mass)	4.5

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Certificate reviewed by

Dr David B Crofts
 Associate Director

Testing by	CR	Certificate issue date	23/01/17
------------	----	------------------------	----------

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens. Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.

End of Certificate



Particle Density and Water Absorption of Aggregate BS EN 1097-6: 2013

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name Hannah Meringolo

Order reference	HM1	Order date	24/11/16
-----------------	-----	------------	----------

Sample Details

Sample type	Bulk	Receipt date	03/01/17
Sampled by	Client	Sampling date	N/A
RSK sample ref.	17116 / A3	No. of samples	1
Client reference	20 mm	Test period	12/01/17-16/01/17

Methods

Test	The test was carried out in accordance with BS EN 1097-6: 2013 Clause 8 (Pyknometer Method).
Deviations	None.

Results

Particle density on an oven dry basis (Mg/m ³)	2.25
Particle density on a saturated surface dry basis (Mg/m ³)	2.35
Apparent particle density (Mg/m ³)	2.52
Water absorption (% of dry mass)	4.8

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Testing by CR

Certificate reviewed by

Dr David B Crofts
 Associate Director

Certificate issue date 23/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens. Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.

End of Certificate



Particle Density and Water Absorption of Aggregate BS EN 1097-6: 2013

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name Hannah Meringolo

Order reference	HM1	Order date	24/11/16
-----------------	-----	------------	----------

Sample Details

Sample type	Bulk	Receipt date	03/01/17
Sampled by	Client	Sampling date	N/A
RSK sample ref.	17116 / A4	No. of samples	1
Client reference	10 mm	Test period	12/01/17-16/01/17

Methods

Test	The test was carried out in accordance with BS EN 1097-6: 2013 Clause 8 (Pyknometer Method).
Deviations	None.

Results

Particle density on an oven dry basis (Mg/m ³)	2.29
Particle density on a saturated surface dry basis (Mg/m ³)	2.41
Apparent particle density (Mg/m ³)	2.61
Water absorption (% of dry mass)	5.3

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Testing by CR

Certificate reviewed by

Dr David B Crofts
 Associate Director

Certificate issue date 23/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens. Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.

End of Certificate



Particle Density and Water Absorption of Aggregate BS EN 1097-6: 2013

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name Hannah Meringolo

Order reference	HM1	Order date	24/11/16
-----------------	-----	------------	----------

Sample Details

Sample type	Bulk	Receipt date	03/01/17
Sampled by	Client	Sampling date	N/A
RSK sample ref.	17116 / A5	No. of samples	1
Client reference	Fine sand	Test period	12/01/17-16/01/17

Methods

Test	The test was carried out in accordance with BS EN 1097-6: 2013 Clause 8 (Pyknometer Method).
Deviations	None.

Results

Particle density on an oven dry basis (Mg/m ³)	2.23
Particle density on a saturated surface dry basis (Mg/m ³)	2.37
Apparent particle density (Mg/m ³)	2.60
Water absorption (% of dry mass)	6.5

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Testing by CR

Certificate reviewed by

Dr David B Crofts
 Associate Director

Certificate issue date 23/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens. Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.

End of Certificate



Particle Density and Water Absorption of Aggregate BS EN 1097-6: 2013

289087

Client Details

Neal Soil Suppliers Limited
 Atlantic Ecopark
 Newton Road
 Rumney
 Cardiff
 CF3 2EJ

Contact name Hannah Meringolo

Order reference	HM1	Order date	24/11/16
-----------------	-----	------------	----------

Sample Details

Sample type	Bulk	Receipt date	03/01/17
Sampled by	Client	Sampling date	N/A
RSK sample ref.	17116 / A6	No. of samples	1
Client reference	Sharp sand	Test period	12/01/17-16/01/17

Methods

Test	The test was carried out in accordance with BS EN 1097-6: 2013 Clause 8 (Pyknometer Method).
Deviations	None.

Results

Particle density on an oven dry basis (Mg/m ³)	2.29
Particle density on a saturated surface dry basis (Mg/m ³)	2.43
Apparent particle density (Mg/m ³)	2.66
Water absorption (% of dry mass)	6.1

Certification

Certificate prepared by

Clive Rayner
 Principal Technician

Testing by CR

Certificate reviewed by

Dr David B Crofts
 Associate Director

Certificate issue date 23/01/17

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens. Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.

End of Certificate

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION
 BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-161549-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	161549/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS	SITE:	Newton Road
DATE SAMPLED:	22/06/2016	SUPPLIER:	Site Won
SAMPLED BY:	Client	MATERIAL:	Sharp Sand
DATE RECEIVED:	30/06/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	'15/07/2016	ACCEPT. STD:	Contract Specification
TESTED BY: MG,SRL			

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	100			
10.0	100			
8.0	100			
6.3	100			
4.0	98			
2.8	95			
2.0	89			
1.0	76			
0.500	58			
0.425	52			
0.250	28			
0.125	7			
0.063	1.8			
Uniformity Co-efficient (D₆₀/D₁₀)	4			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.
 A certificate of sampling is available.

For and on behalf of CET

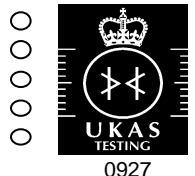
Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

Approved Signatory
 25-Jul-16

John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor



TEST REPORT : DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION

BS EN 1097-6:2013 clause 9 (Aggregate 4-0.063mm)

REPORT No.:	F16-240717-161549-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	161549/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	NS	SITE:	Newton Road
DATE RECEIVED:	30/06/2016	SUPPLIER:	Details not supplied
DATE SAMPLED:	22/06/2016	MATERIAL:	Sharp Sand
DATE TEST COMPLETED:	13/07/2016	LOCATION:	Newton Raod
TESTED BY:	MG	HEAT TREATMEN No	
ACCEPABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	1321.3 g
% Retained on size fraction 31.5 - 63mm	N/A %
% Retained on size fraction 4 - 31.5mm	N/A %
% Retained on size fraction 0.063 - 4mm	N/A %

TEST RESULT

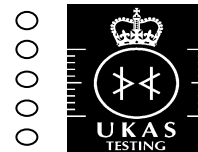
PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.46 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.52 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.63 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	2.6 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : **DETERMINATION OF LOOSE BULK DENSITY AND VOIDS**
BS EN 1097-3:1998

REPORT No.:	F16-240717-161549-5	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	161549/5	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	NS	SITE:	Newton Road
DATE RECEIVED:	30/06/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	22/06/2016	MATERIAL:	Sharp Sand
DATE TEST COMPLETED:	25/07/2016	NOMINAL SIZE:	4mm
TESTED BY:	JW	LOCATION:	Newton Road
ACCEPTABLE STANDARD :	Contract Specification	PARTICLE DENSITY:	2.63 Mg/m ³ used to calculate % air voids
		SAMPLING CERTIFICATE:	Not Available

RESULT:

LOOSE BULK DENSITY :

RESULT

Test Specimen 1	1.24 Mg/m ³
Test Specimen 2	1.22 Mg/m ³
Test Specimen 3	1.20 Mg/m ³

LOOSE BULK DENSITY VALUE (r_b) :
(Mean of Three Results)

1.22 Mg/m³

PERCENTAGE OF VOIDS (v) :

54 %

REMARKS:

Oven dried particle density used in the calculation of the % air voids, measured in accordance with BSEN 1097-6:2000

Remaining sample will be retained for a minimum of 28 days from date of report.

For and on behalf of CET

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1

Approved Signatory



TEST REPORT :

DETERMINATION OF COMPACTED BULK DENSITY AND VOIDS

BS EN 1097-3:1998 - Test Specimen Compacted Using Tamping Rod:
(3 Layers at 100 Compactive Blows Per Layer)

REPORT No.:	F16-240717-161549-6	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	161549/6	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	NS	SITE:	Newton Road
DATE RECEIVED:	30/06/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	22/06/2016	MATERIAL:	Sharp Sand
DATE TEST COMPLETED:	25/07/2016	NOMINAL SIZE:	4mm
TESTED BY:	JW	LOCATION:	Newton Road
ACCEPTABLE STANDARD :	Contract Specification	PARTICLE DENSITY:	2.63 Mg/m ³ used to calculate % air voids
		SAMPLING CERTIFICATE:	Not Available

RESULT:

COMPACTED BULK DENSITY :	RESULT
Test Specimen 1	1.41 Mg/m ³
Test Specimen 2	1.43 Mg/m ³
Test Specimen 3	1.42 Mg/m ³
COMPACTED BULK DENSITY VALUE (r_b) : (Mean of Three Results)	1.42 Mg/m ³
 PERCENTAGE OF VOIDS (v) :	 46 %

REMARKS:

Oven dried particle density used in the calculation of the % air voids, measured in accordance with BSEN 1097-6:2000

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor





SCIENTIFIC ANALYSIS
LABORATORIES
DELIVERING SCIENCE

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Hadfield House, Hadfield Street, Manchester M16 9FE

Scientific Analysis Laboratories Ltd

Certificate of Analysis

3 Crittall Drive
Springwood Industrial
Estate
Braintree
Essex
CM7 2RT
Tel : 01376 560120
Fax : 01376 552923

Report Number: 586925-1

Date of Report: 26-Jul-2016

Customer: CET Infrastructure
Northdown House
Harrietsham Maidstone Kent
ME17 1QW

Customer Contact: Mr John Newbery

Customer Job Reference: 240717

Customer Site Reference: Newton Road

Date Job Received at SAL: 21-Jul-2016

Date Analysis Started: 22-Jul-2016

Date Analysis Completed: 26-Jul-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



1549

Report checked
and authorised by :
Claire Brown Crociquia
Customer Service Manager

Issued by :
Claire Brown Crociquia
Customer Service Manager

TEST REPORT : **DETERMINATION OF WATER CONTENT OF AGGREGATE**
BS EN 1097-5: 2008 - Drying in a ventilated oven

REPORT No.:	F16-240717-162268-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS-1	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	19/07/2016	NOMINAL SIZE:	31.5mm
DATE TEST COMPLETED:	19/07/2016	LOCATION:	Newton Road
TESTED BY:	JW	ACCEPT STD:	Contract specification
TYPE OF SAMPLE	Disturbed	PREPARATION METHOD:	BS EN 932-2

TEST RESULT:	SPECIFICATION REQUIREMENTS		
		LOWER LIMIT	UPPER LIMIT
		(%)	(%)
WATER CONTENT (w) %:	3.3	N/A	N/A

REMARKS:

Specification details not available

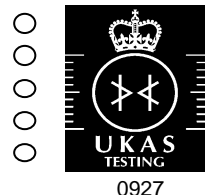
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Report Format: L/Rep A1(EN)/rev.1

Approved Signatory
05-Aug-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-162268-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS-1	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	19/07/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	19/07/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	SCRL/Di		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	SHW November 2004 Table 8/5		
125.0	100			
90.0	100			
80.0	100			
63.0	100	100	-	100
40.0	98			
31.5	98	75	-	99
20.0	79			
16.0	69	43	-	81
14.0	62			
10.0	49			
8.0	42	23	-	66
6.3	31			
4.0	21	12	-	53
2.8	19			
2.0	16	6	-	42
1.0	13	3	-	32
0.500	10			
0.425	10			
0.250	8			
0.125	6			
0.063	5.2	0	-	9
Uniformity Co-efficient (D₆₀/D₁₀)	31			
Difference in values passing 8 & 16mm test sieve:	27	7	-	30
Difference in values passing 4 & 8mm test sieve:	21	7	-	30

Remarks:

The material tested complies with the specification requirements

A certificate of sampling is available.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

Approved Signatory

05-Aug-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT :

DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION

BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)

REPORT No.:	F16-240717-162268-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/3	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	NS-1	SITE:	Newton Road
DATE RECEIVED:	19/07/2016	SUPPLIER:	Details not supplied
DATE SAMPLED:	08/07/2016	MATERIAL:	TYPE 1 - 5
DATE TEST COMPLETED:	04/08/2016	LOCATION:	Newton Road
TESTED BY:	MG	HEAT TREATMEN No	
ACCEPABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	7488.7 g
% Retained on size fraction 31.5 - 63mm	3.3 %
% Retained on size fraction 4 - 31.5mm	81 %
% Retained on size fraction 0.063 - 4mm	15.7 %

TEST RESULT

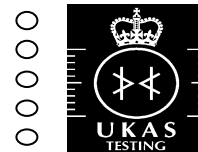
PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.36 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.48 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.67 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	5.0 %

REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : **DETERMINATION OF THE PLASTICITY INDEX OF SOIL**
BS 1377:Part 2:1990 clause 5.4

REPORT No.:	F16-240717-162268-4	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/4	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	NS-1	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details Not Supplied
SAMPLED BY:	Client	MATERIAL:	TYPE 1
DATE RECEIVED:	19/07/2016	LOCATION:	Details Not Supplied
DATE TESTED:	25/07/2016	ACCEPT STD:	Contract Specification
TESTED BY:	JMC	PREPARATION METHOD:	BS 1377:Part 1:1990
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	No Variations

ORIENTATION OF TEST SPECIMEN WITHIN ORIGINAL SAMPLE: N/A

RESULT:

TEST DETAILS	TEST RESULT	SPECIFICATION DETAILS	
		Lower Limits	Upper Limits
THE LIQUID LIMIT OF THE SAMPLE: BS 1377: Part 2: 1990 clause 4.4 (1 point)	32%	N/A	- N/A
THE PLASTIC LIMIT OF THE SAMPLE: To BS1377 : Part2 : 1990 cl 5.3	Non Plastic	N/A	- N/A
THE PLASTICITY INDEX OF THE SAMPLE:	N/A		
The Percentage Passing 425µm Test Sieve :	10%		
Sample History :	The material was tested after washing through a 425µm test sieve		

REMARKS:

Specification details not applicable.

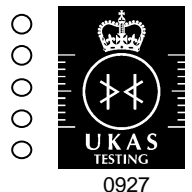
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1
REPORT FORMAT: L/Rep S3S4/rev.6

Approved Signatory
18-Aug-16

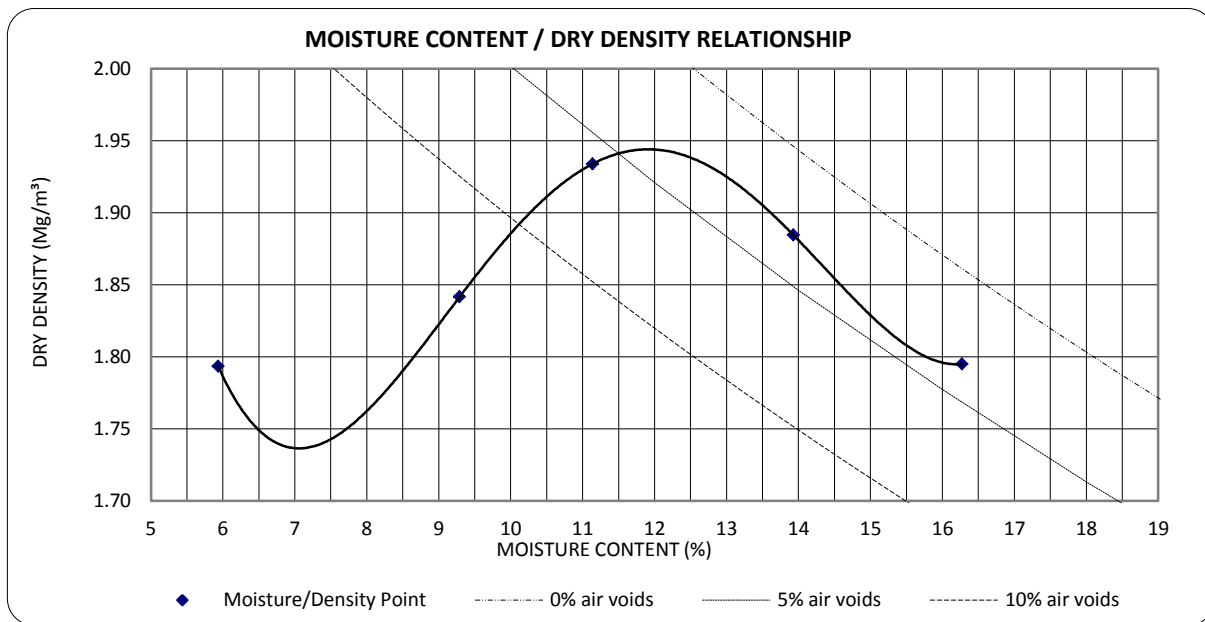


TEST REPORT : DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT
BS EN 13286-4: 2003 - Vibrating Hammer

REPORT No.:	F16-240717-162268-6	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/6	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS-1	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	TYPE 1 - 5
DATE RECEIVED:	19/07/2016	LOCATION:	Newton Road
DATE TESTED:	03/08/2016	ACCEPT STD:	Contract Specification
TESTED BY:	MG/SCRL	COMPACTON SAMPLE:	Separate Samples
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	None

RESULT:

MAXIMUM DRY DENSITY :	1.95 Mg/m ³
OPTIMUM WATER CONTENT:	12.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm:	2.0 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS:	2.67 Mg/m ³



REMARKS:

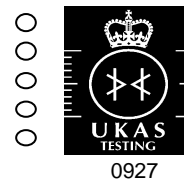
Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
REPORT FORMAT: L/Rep S11(EN)/rev.1

For and on behalf of CET

John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor

Approved Signatory
18-Aug-16



TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-162268-11	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162268/11	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS-1	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	Type 1
DATE RECEIVED:	19/07/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	02/08/2016	ACCEPT STD:	Type 1 Subbase - SHW Cl.803
TESTED BY:	MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE:

TEST RESULT:

	<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc	Concrete, concrete products & concrete masonry units.	23 %	Not Specified
Ru	Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	57 % 0.0 %	Not Specified
Rb	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	14 %	Not Specified
Ra	Bituminous Material	3.4 %	50
Rg	Glass	1.0 %	25.0
X	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.1 %	1.0
FL	Floating Particles	0.7 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1

Report Format: L/Rep A16/rev.4

Approved signatory
18-Aug-16



0927

REPORT No.: F16-240717-162268-11

TEST REPORT : DETERMINATION OF THE MOISTURE CONTENT OF SOILS
BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.:	F16-240717-162269-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162269/1	ADDRESS:	Ty to Maen Farm,Newton Road, Rumney, Cardiff
CLIENT REF:	NS-2	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	6F2-1
DATE RECEIVED:	19/07/2016	LOCATION:	Newton Road
DATE TESTED:	19/07/2016	ACCEPT STD.:	Contract Specification
TESTED BY:	JW	PREPARATION METHOD:	BS1377:Part1:1990 cl 7.3 & 7.4.5
TYPE OF SAMPLE:	Disturbed	VARIATIONS:	N/A

ORIENTATION OF TEST SPECIMEN WITHIN ORIGINAL SAMPLE : N/A

RESULTS:

SAMPLE NO.	CLIENT REF	MATERIAL DESCRIPTION	MOISTURE CONTENT (%)
162269/1	NS-2	6F2	3

REMARKS:

Specification limits not available.

* Denotes specification non-compliance if applicable.

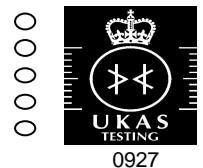
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
REPORT FORMAT: L/Rep S2(Multi)/7

Approved Signatory
18-Aug-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT: DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS

BS 1377 : Part 2 : 1990 : clause 9.2 : Wet Sieving

REPORT NUMBER:	F16-240717-162269-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE NUMBER:	162269/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REFERENCE:	NS-2	SITE:	Newton Road
DATE RECEIVED:	19/07/2016	SUPPLIER:	Details not supplied
DATE SAMPLED	08/07/2016	MATERIAL :	6F2
SAMPLED BY:	Client	CLASSIFICATION:	Class 6F2 selected granular material
DATE TESTED	25/07/2016	LOCATION:	Newton Road
TESTED BY:	MG/Di	PREPARATION METHOD:	BS 1377:Part 1:1990 clause 7.3 & 7.4.5
ORIENTATION OF TEST SPECIMEN		VARIATIONS:	No variations
WITHIN ORIGINAL SPECIMEN:	N/A	TYPE OF SAMPLE:	Disturbed

RESULT:

BS TEST SIEVE	PERCENTAGE PASSING	SPECIFICATION FOR HIGHWAY WORKS		
		GRADING SPECIFICATION LIMITS		
mm	%			
125	100	100	-	100
100	100			
90	100	80	-	100
75	100	65	-	100
63	100			
50	60			
37.5	57	45	-	100
28	43			
20	36			
14	31			
10	27	15	-	60
6.3	23			
5.0	21	10	-	45
3.35	17			
2.00	13			
1.18	10			
0.600	8	0	-	25
0.425	7			
0.300	5			
0.212	4			
0.150	4			
0.063	3	0	-	12

REMARKS:

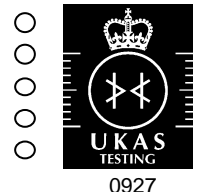
The material tested complies with the grading specification requirements stated above .

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

 Page 1 of 1
 Report Format: L/Rep S6a/9

 Approved Signatory
 18-Aug-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


TEST REPORT :**DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION**

BS EN 1097-6:2013 clause 8 (Aggregate 31.5-4mm)

REPORT No.:	F16-240717-162269-3	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162269/3	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	NS-2	SITE:	Newton Road
DATE RECEIVED:	19/07/2016	SUPPLIER:	Details not supplied
DATE SAMPLED:	08/07/2016	MATERIAL:	6F2-1
DATE TEST COMPLETED:	4/08/2016	LOCATION:	Newton Road
TESTED BY:	MG	HEAT TREATMEN No	
ACCEPABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	Not Available

RESULT:

MASS OF DRY SAMPLE TESTED	7488.7 g
% Retained on size fraction 31.5 - 63mm	58.3 %
% Retained on size fraction 4 - 31.5mm	29.9 %
% Retained on size fraction 0.063 - 4mm	11.8 %

TEST RESULT

PARTICLE DENSITY (rrd) (Oven Dry Basis)	2.23 Mg/m ³
PARTICLE DENSITY (rssd) (Saturated Surface Dried Basis)	2.36 Mg/m ³
APPARENT PARTICLE (ra) DENSITY	2.56 Mg/m ³
WATER ABSORPTION (WA₂₄) (% of Dry Weight)	5.7 %

REMARKS:

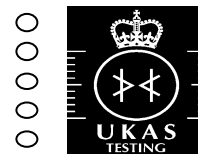
For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1

Approved Signatory



TEST REPORT : DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION
Los Angeles : Coarse Aggregate : BS EN 1097-2: 2010

REPORT No.:	F16-240717-162269-4	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162269/4	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF.:	NS-2	SITE:	Newton Road
DATE RECEIVED:	19/07/2016	SUPPLIER:	Details Not Supplied
DATE SAMPLED:	08/07/2016	SOURCE:	Details Not Supplied
DATE TEST COMPLETED:	03/08/2016	MATERIAL:	6F2-1
TESTED BY:	JDW	LOCATION:	Details Not Supplied
ACCEPTABLE STANDARD :	Contract Specification	SAMPLING CERTIFICATE:	No

RESULT:

		SPECIFICATION REQUIREMENTS	
		LOWER LIMIT	UPPER LIMIT
		(LA)	(LA)
THE LOS ANGELES COEFFICIENT (LA) :	41	N/A	50
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14		

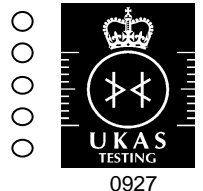
REMARKS: The material tested complies with the specifications stated above.

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Approved Signatory

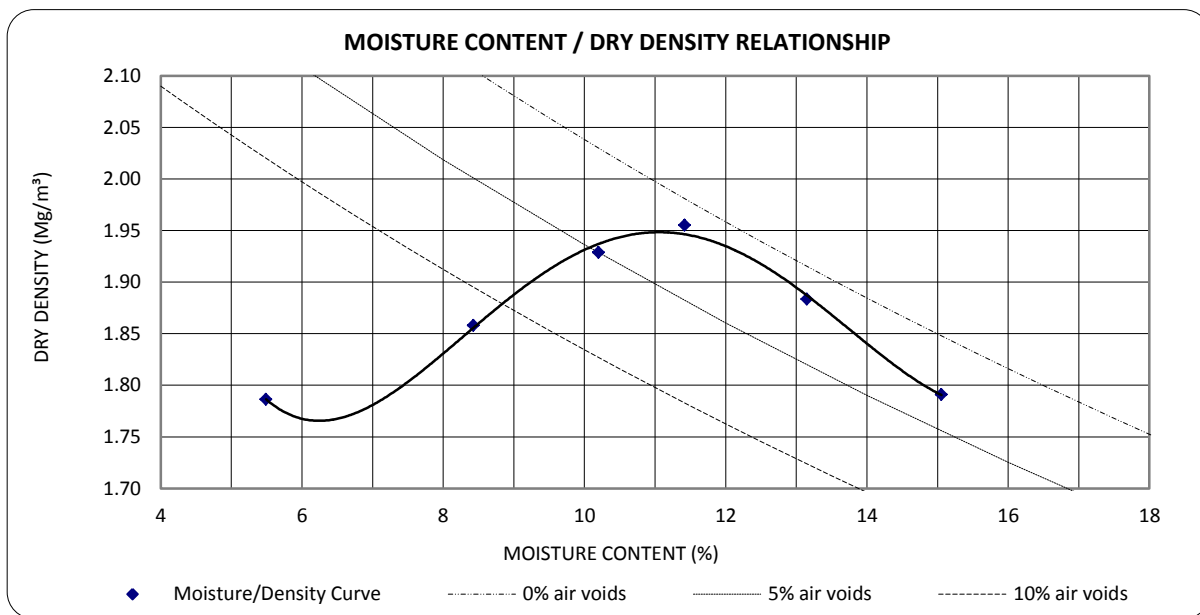


TEST REPORT : DETERMINATION OF DRY DENSITY/MOISTURE CONTENT RELATIONSHIP
BS 1377:Part 4:1990 clause 3.7 Vibrating Hammer Method

REPORT No.:	F16-240717-162269-5	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162269/5	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS-2		
DATE SAMPLED:	08/07/2016	SITE:	Newton Road
SAMPLED BY:	Client	SUPPLIER:	Details not supplied
DATE RECEIVED:	19/07/2016	MATERIAL:	6F2-1
DATE TESTED:	19/07/216	LOCATION:	Newton Road
TESTED BY:	BM	ACCEPT STD:	Contract Specification
TYPE OF SAMPLE:	Disturbed	PREPARATION METHOD:	BS 1377:Part 1:1990 cl 7.6.3
ORIENTATION OF TEST SPECIMEN		COMPACTON SAMPLE:	Separate Samples
WITHIN ORIGINAL SPECIMEN: N/A		VARIATIONS:	None

RESULT:

MAXIMUM DRY DENSITY :	1.95 Mg/m ³
OPTIMUM MOISTURE CONTENT:	11 %
AMOUNT (By dry mass) RETAINED >37.5mm:	53 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS:	2.56 Mg/m ³



REMARKS:

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1
REPORT FORMAT: L/Rep S11-S14a/8

Approved Signatory
18-Aug-16

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor



TEST REPORT : **DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE**
 BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-162269-6	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	162269/6	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS-2	SITE:	Newton Road
DATE SAMPLED:	08/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	6F2
DATE RECEIVED:	19/07/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	02/08/2016	ACCEPT STD:	SHW 600 Series - Table 6/1 - Class 6F2
TESTED BY:	MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE: 110 5c

TEST RESULT:

	<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc	Concrete, concrete products & concrete masonry units.	49 %	Not Specified
Ru	Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	33 % 0.0 %	Not Specified
Rb	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	14 %	Not Specified
Ra	Bituminous Material	3.8 %	50
Rg	Glass	0.0 %	Not Specified
X	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.3 %	1.0
FL	Floating Particles	0.4 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

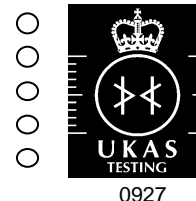
Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor

Page 1 of 1

Report Format: L/Rep A16/rev.4

Approved signatory
 17-Aug-16



REPORT No.: F16-240717-162269-6

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-163100-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	163100/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS12783 10mm	SITE:	Newton Road
DATE SAMPLED:	27/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	10mm-1
DATE RECEIVED:	08/08/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	23/08/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	Di		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	100			
16.0	100			
14.0	100			
10.0	92			
8.0	69			
6.3	42			
4.0	9			
2.8	4			
2.0	3			
1.0	2			
0.500	2			
0.425	1			
0.250	1			
0.125	1			
0.063	0.5			
Uniformity Co-efficient (D_{60}/D_{10})	2			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

01-Sep-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
 BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-163100-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	163100/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS12783 10mm	SITE:	Newton Road
DATE SAMPLED:	27/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	10mm
DATE RECEIVED:	08/08/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	08/08/2016	ACCEPT STD:	Contract Specification
TESTED BY:	MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE: 40 ± 5C

TEST RESULT:

	<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc -	Concrete, concrete products & concrete masonry units.	35 %	Not Specified
Ru -	Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	48 % 0.3 %	Not Specified
Rb -	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	4.1 %	Not Specified
Ra -	Bituminous Material	8.1 %	Not Specified
Rg -	Glass	2.6 %	Not Specified
X -	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.0 %	Not Specified
FL -	Floating Particles	0.5 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor

Page 1 of 1

Report Format: L/Rep A16/rev.4

Approved signatory

03-Oct-16



REPORT No.: F16-240717-163100-1

TEST REPORT : DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 - Washing and Sieving Method

REPORT No.:	F16-240717-163101-1	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	163101/1	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS12783 20mm	SITE:	Newton Road
DATE SAMPLED:	27/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	20mm-1
DATE RECEIVED:	08/08/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	06/09/2016	ACCEPT. STD:	Contract Specification
TESTED BY:	Di		

RESULT:

PARTICLE DIAMETER	PERCENTAGE PASSING	SPECIFICATION LIMITS		
mm	%	Specifications details not supplied		
125.0	100			
90.0	100			
80.0	100			
63.0	100			
40.0	100			
31.5	100			
20.0	66			
16.0	21			
14.0	10			
10.0	1			
8.0	1			
6.3	1			
4.0	1			
2.8	1			
2.0	1			
1.0	1			
0.500	1			
0.425	1			
0.250	1			
0.125	0			
0.063	0.2			
Uniformity Co-efficient (D₆₀/D₁₀)	1			
Difference in values passing 8 & 16mm test sieve:	N/A	N/A	-	N/A
Difference in values passing 4 & 8mm test sieve:	N/A	N/A	-	N/A

Remarks:

Specification Details Not Available.

A certificate of sampling is available.

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 1

Report Format : L/Rep A2EN/rev.6

For and on behalf of CET

Approved Signatory

06-Sep-16

 John Newbery - Laboratory Manager
 Matt Oliver- Site Manager
 Adrian McGilvery - Senior Technician
 Chris Davidson - Laboratory Supervisor
 Phil Mayhew - Operations Supervisor


0927

TEST REPORT : DETERMINATION OF THE GEOMETRICAL PROPERTIES OF AGGREGATE
BSEN 933-11:2009 Classification Test For The Constituents Of Coarse Recycled Aggregate

REPORT No.:	F16-240717-163101-2	CLIENT:	Neal Soil Supplies Ltd
SAMPLE No.:	163101/2	ADDRESS:	Ty to Maen Farm, Newton Road, Rumney, Cardiff
CLIENT REF:	NS12783 20mm	SITE:	Newton Road
DATE SAMPLED:	27/07/2016	SUPPLIER:	Details not supplied
SAMPLED BY:	Client	MATERIAL:	20mm
DATE RECEIVED:	08/08/2016	LOCATION:	Newton Road
DATE TEST COMPLETED:	06/09/2016	ACCEPT STD:	Contract Specification
TESTED BY:	MG	SAMPLING CERT.:	Available

DRYING TEMPERATURE: 40 ± 5C

TEST RESULT:

	<u>CONSTITUENT</u>	<u>FOUND PROPORTION</u>	<u>SPECIFICATION (%)</u>
Rc -	Concrete, concrete products & concrete masonry units.	22 %	Not Specified
Ru -	Unbound aggregate, natural stone & Hydraulically bound aggregate. (% of CHALK found within Ru)	63 % 0.0 %	Not Specified
Rb -	Clay masonry units (ie.bricks & tiles), calcium silicate masonry units & aerated non-floating concrete	8.4 %	Not Specified
Ra -	Bituminous Material	5.0 %	Not Specified
Rg -	Glass	1.0 %	Not Specified
X -	Other: Cohesive (ie clay & soil), gypsum plaster, miscellaneous - metals (ferrous & non ferrous), non-floating wood, plastic & rubber.	0.2 %	Not Specified
FL -	Floating Particles	0.5 cm ³ /kg	Not Specified

REMARKS:

The material supplied complies with the specification limits stated

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

John Newbery - Laboratory Manager
Matt Oliver- Site Manager
Adrian McGilvery - Senior Technician
Chris Davidson - Laboratory Supervisor
Phil Mayhew - Operations Supervisor

Page 1 of 1

Report Format: L/Rep A16/rev.4

Approved signatory

03-Oct-16



0927

REPORT No.: F16-240717-163101-2

**Test Report: Method of the Determination of the plastic limit and plasticity index
BS 1377 : Part 2 : 1990 Method 5**

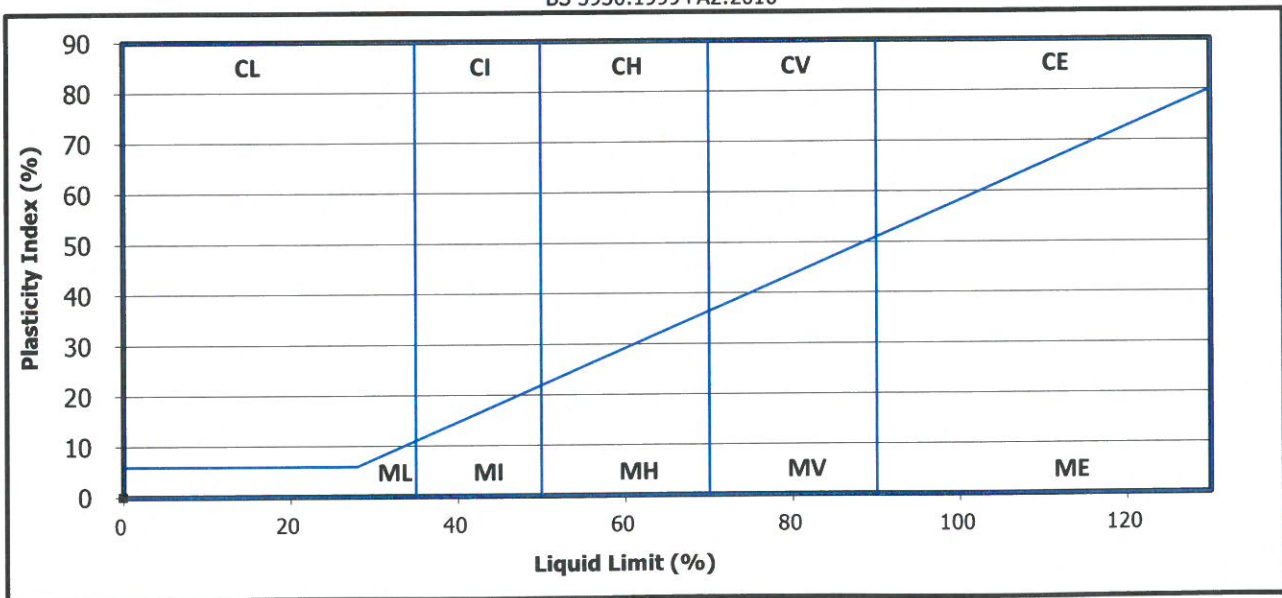
Client ref:

Location: Neal Soils

Contract Number: 33026

Hole/ Sample Number	Sample Type	Depth m	Moisture Content % Cl. 3.2	Liquid Limit % Cl. 4.3/4.4	Plastic Limit % Cl. 5.	Plasticity Index % Cl. 6.	% Passing .425mm	Remarks
6F2 Type 1	B B		5.6 6.7					

Symbols: NP : Non Plastic # : Liquid Limit and Plastic Limit Wet Sieved
PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.
BS 5930:1999+A2:2010



The Filter Cake Data

Filter Cake Data

	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)Anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)Pyrene	Indeno(123-cd)Pyrene	Dibenzo(ah)Anthracene	Benzo(ghi)Perylene	pH	TPH (Total) (C5 - C40)
H19	19	4.8	33	76	230	1.4	29	<3	390	0.6	<0.1	0.2	0.3	2.3	0.8	2.9	2.9	1.4	1.5	1.1	0.9	1	0.4	0.2	0.4	9.4	202
H20	11	0.8	22	47	127	0.76	20	1	174	0.41	0.16	0.73	0.8	6.41	2.56	11.9	9.06	6.21	6.6	7.66	2.76	6.13	3.25	0.94	3.75	8.92	15.2
H21	60	56	28	130	670	6.4	29	7	950	0.5	0.2	0.4	0.4	3.5	1.2	7.7	5.5	4.1	4.2	3.7	3.7	3.8	1.6	0.6	1.7	8.9	247
H22	61	69	29	150	750	7.5	29	8	1100	0.2	<0.1	0.3	0.3	1.7	0.5	3	2.1	1.6	1.9	1.5	1.3	1.5	0.7	0.3	0.6	9.8	1042
H23	41	40	34	130	610	5.3	33	6	1000	0.5	0.3	0.4	0.5	3.3	1	6.3	4.9	3.7	4.6	2	1.7	1.5	1	0.6	1.1	8.5	289
H24	32	24	31	140	500	4.1	29	4	780	0.2	<0.1	<0.1	<0.1	1	0.3	1.8	1.5	1.2	1.4	0.6	0.6	0.4	0.3	0.2	0.3	8.3	420
H25	60	0.8	410	2200	760	<1.0	100	<3	3900	16	2.3	7.9	7	97	6.7	86	65	20	26	15	12	12	7.4	0.8	8.2	8.3	3412
H26	26	16	32	100	320	2.1	35	<3	490	0.3	<0.1	0.2	0.2	1.3	0.4	2.4	2	1.1	1.3	1.1	0.9	1	1	0.4	0.8	8.8	127
H27	15	1.1	29	66	180	<1.0	29	<3	310	0.3	<0.1	0.1	0.2	1.3	0.3	2.2	1.7	1.2	1.4	1.4	0.9	1.1	0.5	0.2	0.5	8.2	322
H28	15	1.4	31	66	180	<1.0	29	<3	300	0.2	<0.1	<0.1	0.1	1.1	0.3	1.8	1.4	1	1.2	1	0.6	0.7	0.3	0.1	0.3	8.4	330
H29	19	3.9	31	100	240	<1.0	30	<3	450	0.2	<0.1	<0.1	<0.1	0.7	0.2	1.4	1.1	0.8	0.9	0.7	0.5	0.5	0.2	<0.1	0.2	8.1	227
H30	17	4.7	29	82	230	<1.0	30	<3	420	0.5	<0.1	<0.1	0.2	1.2	0.3	2	1.7	1.2	1.3	0.8	0.6	0.6	0.2	<0.1	0.2	8.6	392
H31	14	1.2	30	61	180	<1.0	31	<3	300	0.5	0.2	0.2	0.3	2.4	0.6	3.3	2.7	2.3	2.5	1.5	1	1	0.4	0.2	0.5	8.8	569
H32	16	3.1	29	74	190	<1.0	28	<3	360	0.5	0.1	0.2	0.3	2.1	0.6	3.1	2.6	2	2.3	1.3	0.6	0.7	0.3	0.2	0.4	8.7	615
H33/34	16	3	30	87	220	<1.0	30	<3	460	0.1	<0.1	<0.1	<0.1	0.6	0.2	1.1	0.8	0.6	0.6	0.4	0.2	0.2	<0.1	<0.1	<0.1	8.1	165
H35	16	2.4	30	74	200	<1.0	30	<3	380	0.3	<0.1	0.1	0.2	1.3	0.4	2.3	1.9	1.4	1.6	1.2	0.9	0.9	0.3	0.2	0.4	8	402

	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)Anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)Pyrene	Indeno(123-cd)Pyrene	Dibenzo(ah)Anthracene	Benzo(ghi)Perylene	pH	TPH (Total) (C5 - C40)
H36	16	2.7	30	76	200	<1.0	29	<3	390	0.2	<0.1	<0.1	<0.1	0.8	0.2	1.4	1.1	0.8	0.9	0.6	0.5	0.5	0.2	<0.1	0.2	8.9	216
H37	15	1.3	28	73	200	<1.0	27	<3	300	0.3	<0.1	0.2	0.2	1.5	0.4	2.6	2.1	1.6	1.8	1.2	0.7	0.8	0.3	0.2	0.4	8.1	397
H38	17	2.1	30	71	190	<1.0	30	<3	350	0.3	<0.1	<0.1	<0.1	1	0.3	1.7	1.3	1	1.1	0.6	0.6	0.5	0.2	<0.1	0.2	8.6	598
H39	21	0.4	21	50	120	<1.0	28	<3	210	0.2	<0.1	<0.1	<0.1	0.6	<0.1	0.9	0.7	0.6	0.7	0.5	0.5	0.5	0.3	<0.1	0.2	8.2	<2
H40	21	0.4	20	48	120	<1.0	26	<3	200	0.4	<0.1	0.1	0.2	1.3	0.3	1.9	1.6	1.2	1.5	1.4	0.9	1.1	0.4	0.2	0.5	8.1	54
H41	21	0.4	19	46	120	<1.0	26	<3	190	0.5	0.1	0.2	0.3	1.7	0.5	2.6	2.1	1.7	2.1	1.1	0.9	0.7	0.3	0.1	0.4	8.2	92
H42	21	0.4	20	52	120	<1.0	27	<3	210	0.3	<0.1	<0.1	0.1	1.1	0.3	1.5	1.3	0.8	1.3	0.8	0.7	0.6	0.2	<0.1	0.2	8.2	72
H43	22	0.4	20	52	120	<1.0	27	<3	210	0.2	<0.1	0.2	0.2	1.2	0.3	1.7	1.3	1	1.3	0.9	0.6	0.6	0.2	<0.1	0.2	8.1	32
H44	23	0.5	21	64	140	<1.0	27	<3	250	0.3	<0.1	<0.1	0.1	0.9	0.2	1.3	1	0.8	1	0.6	0.5	0.4	0.1	<0.1	0.2	8.2	33
H45	21	0.4	20	51	120	<1.0	27	<3	200	0.4	<0.1	0.1	0.2	1.4	0.4	2.2	1.8	1.4	1.8	1	0.7	0.6	0.2	<0.1	0.3	8.1	80
H46	16	1	26	66	130	<1.0	30	<3	300	0.4	<0.1	0.1	0.2	1.4	0.4	2.2	1.8	1.4	1.8	1	0.7	0.6	0.2	<0.1	0.3	8.6	60
H47	17	1	26	70	130	<1.0	31	<3	290	0.4	<0.1	0.1	0.2	1.4	0.4	2.2	1.8	1.4	1.8	1	0.7	0.6	0.2	<0.1	0.3	8.4	60
H48	17	1.1	26	66	130	<1.0	30	<3	300	0.4	<0.1	0.1	0.2	1.4	0.4	2.2	1.8	1.4	1.8	1	0.7	0.6	0.2	<0.1	0.3	8.5	60
H49	16	0.8	26	59	120	<1.0	30	<3	250	0.4	<0.1	0.1	0.2	1.4	0.4	2.2	1.8	1.4	1.8	1	0.7	0.6	0.2	<0.1	0.3	8.5	60
H50	16	0.8	27	59	120	<1.0	30	<3	250	0.2	<0.1	<0.1	0.2	0.8	0.2	1.2	0.9	0.7	0.7	0.4	0.4	0.3	0.2	<0.1	0.2	8.1	20
H51	16	0.9	26	60	120	<1.0	30	<3	260	<0.1	<0.1	<0.1	<0.1	0.4	0.1	0.6	0.5	0.4	0.4	0.2	0.2	0.1	<0.1	<0.1	<0.1	8.1	42
H52	15	2.5	52	79	180	<1.0	31	<3	366	0.2	0.06	0.23	0.29	1.83	0.47	3.15	2.49	1.75	2.17	1.79	0.63	1.48	0.26	0.32	1.3	9.73	3.4

	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)Anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)Pyrene	Indeno(123-cd)Pyrene	Dibenzo(ah)Anthracene	Benzo(ghi)Perylene	pH	TPH (Total) (C5 - C40)
H53	13	2.7	32	60	152	0.25	33	1	295	0.12	0.05	0.13	0.18	1.19	0.43	2.31	1.85	1.35	1.7	1.69	0.52	1.17	0.65	0.21	0.77	8.64	18.7
H54	14	3.1	39	74	192	0.28	35	1	366	0.1	0.04	0.1	0.11	0.26	0.26	1.72	1.37	1.23	1.4	1.38	0.49	1	0.58	0.17	0.66	8.67	23.5
H55	11	4	162	75	141	<1.0	30	<3	318	0.15	0.03	0.2	0.23	1.53	0.37	2.47	1.96	1.4	1.74	1.65	0.49	1.05	0.61	0.19	0.74	9.42	6
H56	14	2.8	42	73	174	0.45	36	1	346	0.1	0.04	0.15	0.14	1.03	0.33	2.2	1.72	1.5	1.66	1.73	0.53	1.18	0.62	0.19	0.74	9.02	23.5
H57	10	2.2	31	31	76	<0.17	19	1	202	0.15	0.08	0.17	0.17	1.14	0.37	2.66	2.19	1.51	1.52	1.6	0.63	1.23	0.63	0.16	0.79	8.95	20.7
H58	14	2.5	39	72	190	<1.0	33	<3	334	0.28	0.12	0.29	0.41	2.65	0.7	5.28	4.23	3.19	3.3	3.12	1.1	2.61	1.49	0.47	2.05	9	7.3
H59	16	2.6	36	75	181	<1.0	31	<3	351	0.23	0.06	0.31	4.31	1.14	0.58	4.32	3.39	2.37	2.61	2.26	0.8	1.82	1	0.34	1.37	9.42	22
H60	11	2.2	22	43	116	<1.0	24	<3	258	0.09	0.03	0.08	1.13	1.14	0.17	1.13	0.86	0.64	0.69	0.5	0.18	0.41	0.26	0.1	0.35	9.15	6.3
H61	11	2.1	30	54	150	<1.0	26	<3	275	0.3	0.05	0.33	3.86	1.14	0.59	3.86	3.01	2	2.23	1.89	0.65	1.51	0.75	0.26	1.06	8.97	4.9
H62	11	2.7	32	58	149	0.24	27	<1	259	0.18	0.5	0.26	0.26	1.88	0.57	3.39	2.69	1.97	2.01	2.34	0.76	1.54	0.84	0.27	1.05	9.47	14.2
H63	11	3.1	30	60	136	<1.0	25	<3	233	0.21	0.06	0.28	0.32	2.41	0.61	4.15	3.29	2.44	2.91	2.88	0.86	1.92	1.14	0.32	1.34	9.46	10
H64	10	2.5	31	57	140	<0.17	26	<1	247	0.29	0.07	0.39	0.31	2	0.61	3.36	2.7	1.86	2.19	2.64	0.84	1.7	0.88	0.29	1.03	9.24	25.7
H65	9	2.3	30	52	154	0.39	25	<1	250	0.22	0.06	0.27	0.26	1.66	0.48	2.95	2.39	1.69	1.81	2.12	0.83	1.45	0.86	0.27	1	9.6	16
H66	7	2.3	36	53	127	0.31	25	<1	234	0.6	0.04	0.42	0.3	1.71	0.55	2.22	1.77	1.11	1.26	1.37	0.54	0.91	0.42	0.14	0.51	9.39	46.3



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Certificate of Analysis

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limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 544606-1

Date of Report: 16-Feb-2016

Customer: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Customer Contact: Mr Lloyd Howells

Customer Job Reference:

Customer Purchase Order: ns10281

Date Job Received at SAL: 03-Feb-2016

Date Analysis Started: 04-Feb-2016

Date Analysis Completed: 16-Feb-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

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Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



Report checked
and authorised by :
Claire Brown Crociquia
Customer Service Manager

Issued by :
Claire Brown Crociquia
Customer Service Manager

SAL Reference: 544606					
Customer Reference:					
Soil Metals Suite					
Analysed as Soil					
SAL Reference					544606 005
Customer Sample Reference					FC-H19-1
Date Sampled					02-FEB-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Arsenic	T257	A40	2	mg/kg	19
Cadmium	T257	A40	0.1	mg/kg	4.8
Chromium	T257	A40	0.5	mg/kg	31
Copper	T257	A40	2	mg/kg	76
Lead	T257	A40	2	mg/kg	230
Mercury	T245	A40	1.0	mg/kg	1.4
Nickel	T257	A40	0.5	mg/kg	28
Selenium	T257	A40	3	mg/kg	<3
Zinc	T257	A40	2	mg/kg	390
pH	T7	A40			9.3
Moisture @105C	T162	AR	0.1	%	29
Retained on 2mm	T2	A40	0.1	%	<0.1

SAL Reference: 544606					
Customer Reference:					
Soil Total and Speciated USEPA16 PAH (SE) (MCERTS)					
Analysed as Soil					
SAL Reference					544606 005
Customer Sample Reference					FC-H19-1
Date Sampled					02-FEB-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Naphthalene	T16	AR	0.1	mg/kg	0.6
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	0.2
Fluorene	T16	AR	0.1	mg/kg	0.3
Phenanthrene	T16	AR	0.1	mg/kg	1.8
Anthracene	T16	AR	0.1	mg/kg	0.5
Fluoranthene	T16	AR	0.1	mg/kg	2.5
Pyrene	T16	AR	0.1	mg/kg	2.0
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	1.2
Chrysene	T16	AR	0.1	mg/kg	1.4
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	1.0
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.9
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	1.0
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.4
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.2
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.4
PAH(total)	T16	AR	0.1	mg/kg	14

SAL Reference: 544606
Customer Reference:

Soil Analyzed as Soil
TPH (CWG) with MTBE & BTEX SE

SAL Reference		544606 005			
Customer Sample Reference		FC-H19-1			
Date Sampled		02-FEB-2016			
Type		Clay			
Determinand	Method	Test Sample	LOD	Units	
Benzene	T209	AR	10	µg/kg	(13) 17
EthylBenzene	T209	AR	10	µg/kg	30
M/P Xylene	T209	AR	10	µg/kg	120
O Xylene	T209	AR	10	µg/kg	55
Toluene	T209	AR	10	µg/kg	81
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	0.33
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	6
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	9
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	11
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	18
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	66
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	25

Value	Description
A40	Assisted dried < 40C
AR	As Received
10:1	Leachate
32	Whole sample was crushed
13	Results have been blank corrected.
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

PAH, PCB and BTEX - These samples were received in containers that are inappropriate for this parameter of interest. It is possible therefore that the results provided may be compromised.

Retained on 2mm is removed before analysis

Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except TPH c5-c35 aro/ali split

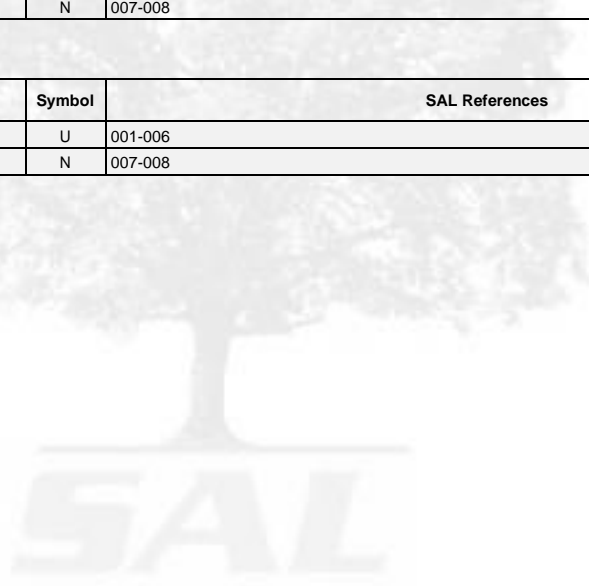
Value	Description
T281	ICP/MS (Filtered)
T54	GC/MS (Headspace)
T209	GC/MS(Head Space)(MCERTS)
T149	GC/MS (SIR)
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T245	ICP/OES(Aqua Regia Extraction)
T2	Grav
T16	GC/MS
T162	Grav (1 Dec) (105 C)
T7	Probe
T219	GC/FID (SE)

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
As (Dissolved)	T281	10:1	0.0002	mg/l	U	001-008
Cd (Dissolved)	T281	10:1	0.00002	mg/l	U	001-008
Cr (Dissolved)	T281	10:1	0.001	mg/l	U	001-008
Cu (Dissolved)	T281	10:1	0.0005	mg/l	U	001-008
Pb (Dissolved)	T281	10:1	0.0003	mg/l	U	001-008
Hg (Dissolved)	T281	10:1	0.00005	mg/l	U	001-008
Ni (Dissolved)	T281	10:1	0.001	mg/l	U	001-008
Se (Dissolved)	T281	10:1	0.0005	mg/l	U	001-008
Zn (Dissolved)	T281	10:1	0.002	mg/l	U	001-008
pH	T7	10:1			N	001-002,005-006
Arsenic	T257	A40	2	mg/kg	M	001-006

Arsenic	T257	A40	2.0	mg/kg	N	007-008
Cadmium	T257	A40	0.1	mg/kg	M	001-006
Cadmium	T257	A40	0.1	mg/kg	N	007-008
Chromium	T257	A40	0.5	mg/kg	M	001-006
Chromium	T257	A40	0.5	mg/kg	N	007-008
Copper	T257	A40	2	mg/kg	M	001-006
Copper	T257	A40	2	mg/kg	N	007-008
Lead	T257	A40	2	mg/kg	M	001-006
Lead	T257	A40	2	mg/kg	N	007-008
Mercury	T245	A40	1.0	mg/kg	U	001-006
Mercury	T245	A40	1.0	mg/kg	N	007-008
Nickel	T257	A40	0.5	mg/kg	M	001-006
Nickel	T257	A40	0.5	mg/kg	N	007-008
Selenium	T257	A40	3	mg/kg	U	001-006
Selenium	T257	A40	3	mg/kg	N	007-008
Zinc	T257	A40	2	mg/kg	M	001-006
Zinc	T257	A40	2	mg/kg	N	007-008
pH	T7	A40			M	001-002,005-006
Moisture @105C	T162	AR	0.1	%	N	001-008
Retained on 2mm	T2	A40	0.1	%	N	001-008
Benzene	T209	AR	10	µg/kg	M	001-006
Benzene	T209	AR	10	µg/kg	N	007-008
EthylBenzene	T209	AR	10	µg/kg	M	001-006
EthylBenzene	T209	AR	10	µg/kg	N	007-008
M/P Xylene	T209	AR	10	µg/kg	M	001-006
M/P Xylene	T209	AR	10	µg/kg	N	007-008
O Xylene	T209	AR	10	µg/kg	M	001-006
O Xylene	T209	AR	10	µg/kg	N	007-008
Toluene	T209	AR	10	µg/kg	M	001-006
Toluene	T209	AR	10	µg/kg	N	007-008
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	M	001-006
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	N	007-008
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	N	001-008
Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C5-C6 aliphatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C6-C7 aromatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C6-C8 aliphatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C7-C8 aromatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C8-C10 aliphatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C8-C10 aromatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C10-C12 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C10-C12 aromatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C12-C16 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C12-C16 aromatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C16-C21 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C16-C21 aromatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C21-C35 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C21-C35 aromatic)	T219	10:1	0.01	mg/l	N	001-008
Naphthalene	T149	10:1	0.01	µg/l	N	001-008
Acenaphthylene	T149	10:1	0.01	µg/l	N	001-008
Acenaphthene	T149	10:1	0.01	µg/l	N	001-008
Fluorene	T149	10:1	0.01	µg/l	N	001-008
Phenanthrene	T149	10:1	0.01	µg/l	N	001-008
Anthracene	T149	10:1	0.01	µg/l	N	001-008
Fluoranthene	T149	10:1	0.01	µg/l	N	001-008
Pyrene	T149	10:1	0.01	µg/l	N	001-008
Benzo(a)Anthracene	T149	10:1	0.01	µg/l	N	001-008
Chrysene	T149	10:1	0.01	µg/l	N	001-008
Benzo(b)fluoranthene	T149	10:1	0.01	µg/l	N	001-008
Benzo(k)fluoranthene	T149	10:1	0.01	µg/l	N	001-008
Benzo(a)Pyrene	T149	10:1	0.01	µg/l	N	001-008
Indeno(123-cd)Pyrene	T149	10:1	0.01	µg/l	N	001-008

Dibenzo(ah)Anthracene	T149	10:1	0.01	µg/l	N	001-008
Benzo(ghi)Perylene	T149	10:1	0.01	µg/l	N	001-008
PAH(total)	T149	10:1	0.01	µg/l	N	001-008
Naphthalene	T16	AR	0.1	mg/kg	U	001-006
Naphthalene	T16	AR	0.1	mg/kg	N	007-008
Acenaphthylene	T16	AR	0.1	mg/kg	U	001-006
Acenaphthylene	T16	AR	0.1	mg/kg	N	007-008
Acenaphthene	T16	AR	0.1	mg/kg	M	001-006
Acenaphthene	T16	AR	0.1	mg/kg	N	007-008
Fluorene	T16	AR	0.1	mg/kg	M	001-006
Fluorene	T16	AR	0.1	mg/kg	N	007-008
Phenanthrene	T16	AR	0.1	mg/kg	U	001-006
Phenanthrene	T16	AR	0.1	mg/kg	N	007-008
Anthracene	T16	AR	0.1	mg/kg	M	001-006
Anthracene	T16	AR	0.1	mg/kg	N	007-008
Fluoranthene	T16	AR	0.1	mg/kg	N	001-008
Pyrene	T16	AR	0.1	mg/kg	N	001-008
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	001-006
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	N	007-008
Chrysene	T16	AR	0.1	mg/kg	M	001-006
Chrysene	T16	AR	0.1	mg/kg	N	007-008
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	U	001-006
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	N	007-008
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	N	001-008
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	001-006
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	N	007-008
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	001-006
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	N	007-008
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	001-006
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	N	007-008
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	001-006
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	N	007-008

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
PAH(total)	T16	AR	0.1	mg/kg	U	001-006
PAH(total)	T16	AR	0.1	mg/kg	N	007-008





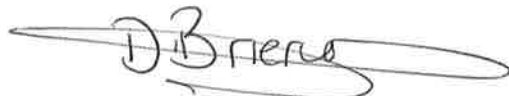
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 16/01443
Issue Number: 1
Date: 23 March, 2016

Client: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Project Manager: Lloyd Howells
Project Name: Newton Road
Project Ref: Not specified
Order No: ns10291
Date Samples Received: 10/03/16
Date Instructions Received: 11/03/16
Date Analysis Completed: 23/03/16

Prepared by:



Danielle Brierley
Administrative Assistant

Approved by:



Iain Haslock
Analytical Consultant

Envirolab Job Number: 16/01443

Client Project Name: Newton Road

Client Project Ref: Not specified

Lab Sample ID	16/01443/16	Units	Method ref
Client Sample No			
Client Sample ID	F.C-1		
Depth to Top			
Depth To Bottom			
Date Sampled	08-Mar-16		
Sample Type	Soil		
Sample Matrix Code	3		
% Stones >10mm _A [#]	<0.1	% w/w	A-T-044
pH _D ^{M#}	8.92	pH	A-T-031s
Phenols - Total by HPLC _A	<0.2	mg/kg	A-T-050s
Arsenic _D ^{M#}	11	mg/kg	A-T-024s
Cadmium _D ^{M#}	0.8	mg/kg	A-T-024s
Copper _D ^{M#}	47	mg/kg	A-T-024s
Chromium _D ^{M#}	22	mg/kg	A-T-024s
Lead _D ^{M#}	127	mg/kg	A-T-024s
Mercury _D	0.76	mg/kg	A-T-024s
Nickel _D ^{M#}	20	mg/kg	A-T-024s
Selenium _D	1	mg/kg	A-T-024s
Zinc _D ^{M#}	174	mg/kg	A-T-024s

Envirolab Job Number: 16/01443

Client Project Name: Newton Road

Client Project Ref: Not specified

Lab Sample ID	16/01443/16	Units	Method ref
Client Sample No			
Client Sample ID	F.C-1		
Depth to Top			
Depth To Bottom			
Date Sampled	08-Mar-16		
Sample Type	Soil		
Sample Matrix Code	3		
PAH 16			
Acenaphthene _A ^{M#}	0.73	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.16	mg/kg	A-T-019s
Anthracene _A ^{M#}	2.56	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	6.21	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	6.13	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	7.66	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	3.25	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	2.76	mg/kg	A-T-019s
Chrysene _A ^{M#}	6.60	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.94	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	11.9	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.80	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	3.75	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.41	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	6.41	mg/kg	A-T-019s
Pyrene _A ^{M#}	9.06	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	69.3	mg/kg	A-T-019s

Envirolab Job Number: 16/01443

Client Project Name: Newton Road

Client Project Ref: Not specified

Lab Sample ID	16/01443/16	Units	Method ref
Client Sample No			
Client Sample ID	F.C-1		
Depth to Top			
Depth To Bottom			
Date Sampled	08-Mar-16		
Sample Type	Soil		
Sample Matrix Code	3		
TPH UKCWG			
Ali >C5-C6 _A [#]	<0.05	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	3.8	mg/kg	A-T-023s
Ali >C35-C44 _A	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	3.8	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	0.03	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<0.1	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	6.4	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	4.8	mg/kg	A-T-023s
Aro >C35-C44 _A	<0.1	mg/kg	A-T-023s
Total Aromatics _A	11.4	mg/kg	A-T-023s
TPH (Ali & Aro) _A	15.2	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	mg/kg	A-T-022s

REPORT NOTES

Notes - Soil chemical analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones and brick and concrete fragments >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis. For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supersedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples which are positive for asbestos and/or if they are from outside the European Union and this supercedes any "D" subscripts.

Superscript "M" indicates method accredited to MCERTS.

If results are in italic font they are associated with an AQC failure. These are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

TPH analysis of water by method A-T-007

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Asbestos in soil

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if present as discrete fibres/fragments. Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample. Samples with Matrix Code 7 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.



Scientific Analysis Laboratories Ltd

Certificate of Analysis

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Springwood Industrial
Estate
Braintree
Essex
CM7 2RT
Tel : 01376 560120
Fax : 01376 552923

Scientific Analysis Laboratories is a
limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 557846-1

Date of Report: 05-Apr-2016

Customer: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Customer Contact: Mr Lloyd Howells

Customer Job Reference:

Customer Purchase Order: ns10296

Customer Site Reference: Newton Road, Rumney, Cardiff

Date Job Received at SAL: 24-Mar-2016

Date Analysis Started: 30-Mar-2016

Date Analysis Completed: 05-Apr-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with SAL SOPs

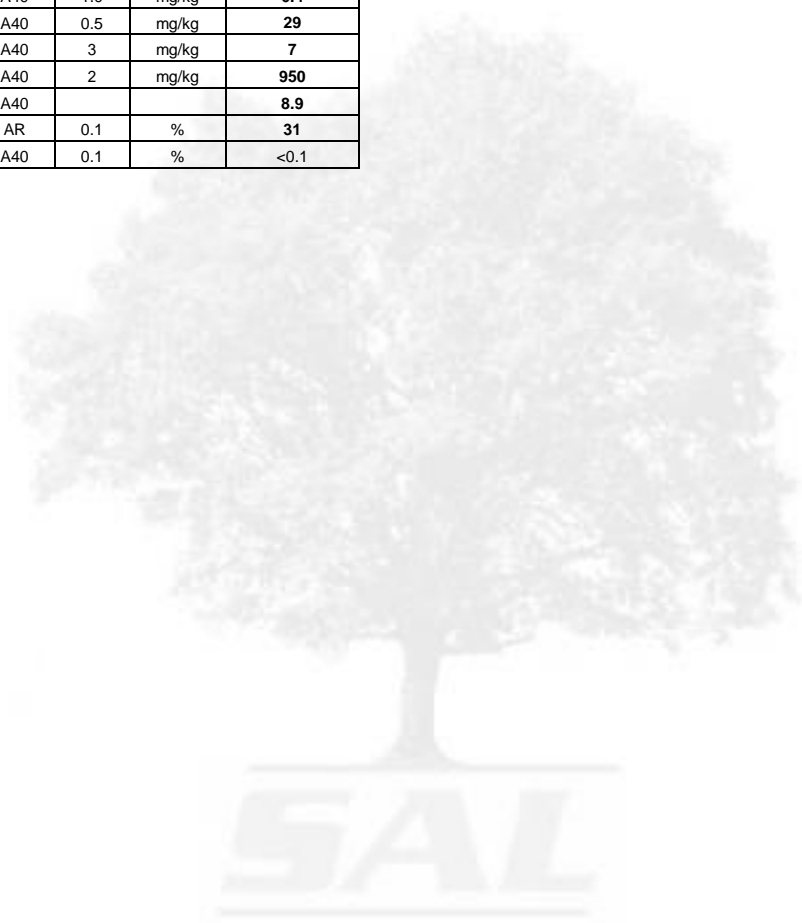
All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



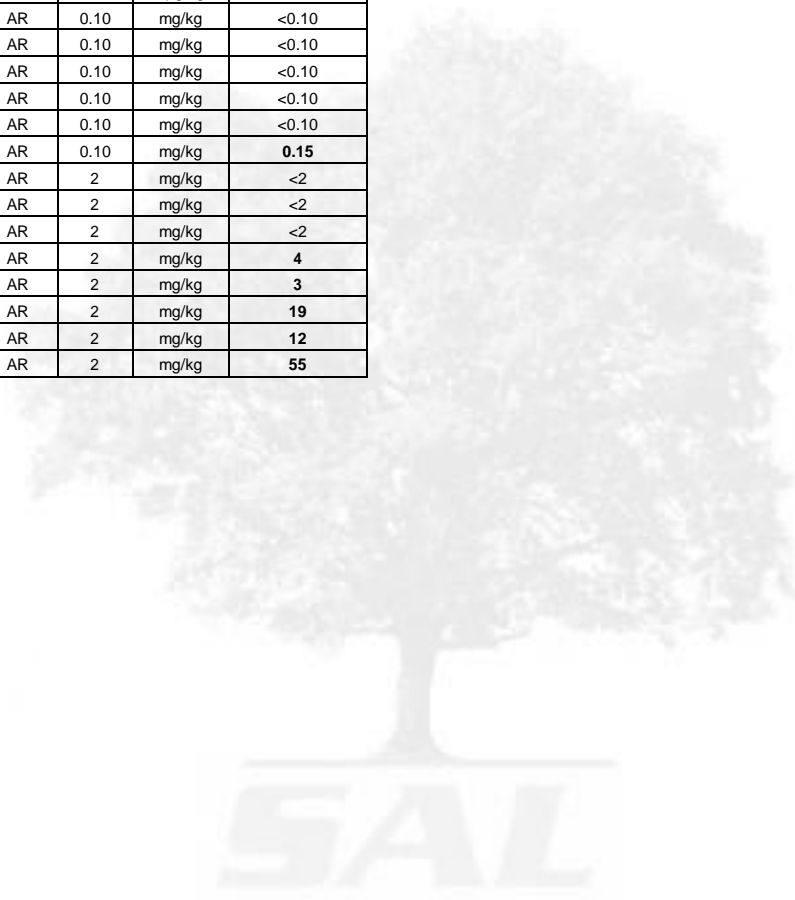
Report checked
and authorised by :
Simi Okanlami
Project Manager

Issued by :
Simi Okanlami
Project Manager

SAL Reference: 557846					
Project Site: Newton Road, Rumney, Cardiff					
Customer Reference:					
Soil Analyzed as Soil					
Metals Suite					
SAL Reference					557846 008
Customer Sample Reference					FC
Date Sampled					23-MAR-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Arsenic	T257	A40	2.0	mg/kg	60
Cadmium	T257	A40	0.1	mg/kg	56
Chromium	T257	A40	0.5	mg/kg	28
Copper	T257	A40	2	mg/kg	130
Lead	T257	A40	2	mg/kg	670
Mercury	T245	A40	1.0	mg/kg	6.4
Nickel	T257	A40	0.5	mg/kg	29
Selenium	T257	A40	3	mg/kg	7
Zinc	T257	A40	2	mg/kg	950
pH	T7	A40			8.9
Moisture @105C	T162	AR	0.1	%	31
Retained on 2mm	T2	A40	0.1	%	<0.1



SAL Reference: 557846					
Project Site: Newton Road, Rumney, Cardiff					
Customer Reference:					
Soil Analyzed as Soil					
TPH (CWG) with MTBE & BTEX SE					
SAL Reference					557846 008
Customer Sample Reference					FC
Date Sampled					23-MAR-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Benzene	T209	AR	10	µg/kg	<10
EthylBenzene	T209	AR	10	µg/kg	<10
M/P Xylene	T209	AR	10	µg/kg	27
O Xylene	T209	AR	10	µg/kg	22
Toluene	T209	AR	10	µg/kg	31
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	0.15
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	4
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	3
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	19
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	12
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	55





Index to symbols used in 557846-1

Value	Description
10:1	Leachate
A40	Assisted dried < 40C
AR	As Received
32	Whole sample was crushed
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited



Notes

Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except TPH c5-c35 aro/ali split
Retained on 2mm is removed before analysis
Samples submitted for GC/MS (Headspace) analysis were submitted in inappropriate containers. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T7	Probe
T149	GC/MS (SIR)
T54	GC/MS (Headspace)
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T162	Grav (1 Dec) (105 C)
T16	GC/MS
T219	GC/FID (SE)
T245	ICP/OES (Aqua Regia Extraction)
T281	ICP/MS (Filtered)
T209	GC/MS (Head Space)(MCERTS)
T2	Grav

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Pb (Dissolved)	T281	10:1	0.0003	mg/l	U	001-008
As (Dissolved)	T281	10:1	0.0002	mg/l	U	001-008
Cd (Dissolved)	T281	10:1	0.00002	mg/l	U	001-008
Cr (Dissolved)	T281	10:1	0.001	mg/l	U	001-008
Cu (Dissolved)	T281	10:1	0.0005	mg/l	U	001-008
Hg (Dissolved)	T281	10:1	0.00005	mg/l	U	001-008
Ni (Dissolved)	T281	10:1	0.001	mg/l	U	001-008
Se (Dissolved)	T281	10:1	0.0005	mg/l	U	001-008
Zn (Dissolved)	T281	10:1	0.002	mg/l	U	001-008
pH	T7	10:1			N	005-008
Arsenic	T257	A40	2.0	mg/kg	N	001-002
Arsenic	T257	A40	2	mg/kg	M	003-004,007-008
Arsenic	T257	A40	2.0	mg/kg	U	005-006
Cadmium	T257	A40	0.1	mg/kg	N	001-002
Cadmium	T257	A40	0.1	mg/kg	M	003-004,007-008
Cadmium	T257	A40	0.1	mg/kg	U	005-006
Chromium	T257	A40	0.5	mg/kg	N	001-002
Chromium	T257	A40	0.5	mg/kg	M	003-004,007-008
Chromium	T257	A40	0.5	mg/kg	U	005-006
Copper	T257	A40	2	mg/kg	N	001-002
Copper	T257	A40	2	mg/kg	M	003-004,007-008
Copper	T257	A40	2	mg/kg	U	005-006
Lead	T257	A40	2	mg/kg	N	001-002
Lead	T257	A40	2	mg/kg	M	003-004,007-008
Lead	T257	A40	2	mg/kg	U	005-006
Mercury	T245	A40	1.0	mg/kg	N	001-002
Mercury	T245	A40	1.0	mg/kg	U	003-008
Nickel	T257	A40	0.5	mg/kg	N	001-002
Nickel	T257	A40	0.5	mg/kg	M	003-004,007-008
Nickel	T257	A40	0.5	mg/kg	U	005-006
Selenium	T257	A40	3	mg/kg	N	001-002
Selenium	T257	A40	3	mg/kg	U	003-008
Zinc	T257	A40	2	mg/kg	N	001-002
Zinc	T257	A40	2	mg/kg	M	003-004,007-008
Zinc	T257	A40	2	mg/kg	U	005-006
pH	T7	A40			U	005-006
pH	T7	A40			M	007-008
Moisture @ 105C	T162	AR	0.1	%	N	001-008
Retained on 2mm	T2	A40	0.1	%	N	001-008
Benzene	T209	AR	10	µg/kg	N	001-002
Benzene	T209	AR	10	µg/kg	M	003-004,007-008
Benzene	T209	AR	10	µg/kg	U	005-006
EthylBenzene	T209	AR	10	µg/kg	N	001-002
EthylBenzene	T209	AR	10	µg/kg	M	003-004,007-008

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
EthylBenzene	T209	AR	10	µg/kg	U	005-006
M/P Xylene	T209	AR	10	µg/kg	N	001-002
M/P Xylene	T209	AR	10	µg/kg	M	003-004,007-008
M/P Xylene	T209	AR	10	µg/kg	U	005-006
O Xylene	T209	AR	10	µg/kg	N	001-002
O Xylene	T209	AR	10	µg/kg	M	003-004,007-008
O Xylene	T209	AR	10	µg/kg	U	005-006
Toluene	T209	AR	10	µg/kg	N	001-002
Toluene	T209	AR	10	µg/kg	M	003-004,007-008
Toluene	T209	AR	10	µg/kg	U	005-006
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	N	001-002
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	M	003-004,007-008
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	U	005-006
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C5-C6 aliphatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C6-C7 aromatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C6-C8 aliphatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C7-C8 aromatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C8-C10 aliphatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C8-C10 aromatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C10-C12 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C10-C12 aromatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C12-C16 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C12-C16 aromatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C16-C21 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C16-C21 aromatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C21-C35 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C21-C35 aromatic)	T219	10:1	0.01	mg/l	N	001-008
Naphthalene	T149	10:1	0.01	µg/l	N	001-008
Acenaphthylene	T149	10:1	0.01	µg/l	N	001-008
Acenaphthene	T149	10:1	0.01	µg/l	N	001-008
Fluorene	T149	10:1	0.01	µg/l	N	001-008
Phenanthrene	T149	10:1	0.01	µg/l	N	001-008
Anthracene	T149	10:1	0.01	µg/l	N	001-008
Fluoranthene	T149	10:1	0.01	µg/l	N	001-008
Pyrene	T149	10:1	0.01	µg/l	N	001-008
Benzo(a)Anthracene	T149	10:1	0.01	µg/l	N	001-008
Chrysene	T149	10:1	0.01	µg/l	N	001-008
Benzo(b)fluoranthene	T149	10:1	0.01	µg/l	N	001-008
Benzo(k)fluoranthene	T149	10:1	0.01	µg/l	N	001-008
Benzo(a)Pyrene	T149	10:1	0.01	µg/l	N	001-008
Indeno(123-cd)Pyrene	T149	10:1	0.01	µg/l	N	001-008
Dibenzo(ah)Anthracene	T149	10:1	0.01	µg/l	N	001-008
Benzo(ghi)Perylene	T149	10:1	0.01	µg/l	N	001-008
PAH(total)	T149	10:1	0.01	µg/l	N	001-008
Naphthalene	T16	AR	0.1	mg/kg	N	001-002
Naphthalene	T16	AR	0.1	mg/kg	U	003-008
Acenaphthylene	T16	AR	0.1	mg/kg	N	001-002
Acenaphthene	T16	AR	0.1	mg/kg	U	003-008
Acenaphthene	T16	AR	0.1	mg/kg	N	001-002
Acenaphthene	T16	AR	0.1	mg/kg	M	003-004,007-008
Acenaphthene	T16	AR	0.1	mg/kg	U	005-006
Fluorene	T16	AR	0.1	mg/kg	N	001-002
Fluorene	T16	AR	0.1	mg/kg	M	003-004,007-008
Fluorene	T16	AR	0.1	mg/kg	U	005-006
Phenanthrene	T16	AR	0.1	mg/kg	N	001-002
Phenanthrene	T16	AR	0.1	mg/kg	U	003-008

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Anthracene	T16	AR	0.1	mg/kg	N	001-002
Anthracene	T16	AR	0.1	mg/kg	M	003-004,007-008
Anthracene	T16	AR	0.1	mg/kg	U	005-006
Fluoranthene	T16	AR	0.1	mg/kg	N	001-008
Pyrene	T16	AR	0.1	mg/kg	N	001-008
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	N	001-002
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	003-004,007-008
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	U	005-006
Chrysene	T16	AR	0.1	mg/kg	N	001-002
Chrysene	T16	AR	0.1	mg/kg	M	003-004,007-008
Chrysene	T16	AR	0.1	mg/kg	U	005-006
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	N	001-002
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	U	003-008
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	N	001-008
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	N	001-002
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	003-004,007-008
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	U	005-006
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	N	001-002
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	003-004,007-008
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	U	005-006
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	N	001-002
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	003-004,007-008
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	U	005-006
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	N	001-002
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	003-004,007-008
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	U	005-006
PAH(total)	T16	AR	0.1	mg/kg	N	001-002
PAH(total)	T16	AR	0.1	mg/kg	U	003-008





Scientific Analysis Laboratories Ltd

Certificate of Analysis

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Scientific Analysis Laboratories is a
limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 562515-1

Date of Report: 21-Apr-2016

Customer: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Customer Contact: Mr Lloyd Howells

Customer Job Reference: H22
Customer Purchase Order: ns10298
Customer Site Reference: Neal Soils
Date Job Received at SAL: 14-Apr-2016
Date Analysis Started: 15-Apr-2016
Date Analysis Completed: 21-Apr-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs
All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



Report checked
and authorised by :
Simi Okanlami
Project Manager

Issued by :
Simi Okanlami
Project Manager

SAL Reference					562515 001
Customer Sample Reference					FC1
Date Sampled					12-APR-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Arsenic	T257	A40	2	mg/kg	61
Cadmium	T257	A40	0.1	mg/kg	69
Chromium	T257	A40	0.5	mg/kg	29
Copper	T257	A40	2	mg/kg	150
Lead	T257	A40	2	mg/kg	750
Mercury	T245	A40	1.0	mg/kg	7.5
Nickel	T257	A40	0.5	mg/kg	29
Selenium	T257	A40	3	mg/kg	8
Zinc	T257	A40	2	mg/kg	1100
pH	T7	A40			9.7
Moisture @ 105C	T162	AR	0.1	%	33
Retained on 2mm	T2	A40	0.1	%	<0.1

SAL Reference					562515 001
Customer Sample Reference					FC1
Date Sampled					12-APR-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Naphthalene	T16	AR	0.1	mg/kg	0.2
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	0.3
Fluorene	T16	AR	0.1	mg/kg	0.3
Phenanthrene	T16	AR	0.1	mg/kg	1.7
Anthracene	T16	AR	0.1	mg/kg	0.5
Fluoranthene	T16	AR	0.1	mg/kg	3.0
Pyrene	T16	AR	0.1	mg/kg	2.2
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	1.6
Chrysene	T16	AR	0.1	mg/kg	1.8
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	1.5
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	1.3
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	1.5
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.6
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.3
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.7
PAH(total)	T16	AR	0.1	mg/kg	17

SAL Reference					562515 001
Customer Sample Reference					FC1
Date Sampled					12-APR-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Benzene	T209	AR	10	µg/kg	10
EthylBenzene	T209	AR	10	µg/kg	<10
M/P Xylene	T209	AR	10	µg/kg	15
O Xylene	T209	AR	10	µg/kg	<10
Toluene	T209	AR	10	µg/kg	18
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	0.11
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	16
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	14
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	8
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	13
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	31
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	310
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	650

Index to symbols used in 562515-1

Value	Description
AR	As Received
A40	Assisted dried < 40C
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Retained on 2mm is removed before analysis
Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except TPH c5-c35 aro/ali split
PAH & TPH - These samples were received in containers that are inappropriate for this parameter of interest. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T2	Grav
T7	Probe
T54	GC/MS (Headspace)
T162	Grav (1 Dec) (105 C)
T209	GC/MS (Head Space)(MCERTS)
T245	ICP/OES (Aqua Regia Extraction)
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T219	GC/FID (SE)
T16	GC/MS

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Naphthalene	T16	AR	0.1	mg/kg	U	001-006
Naphthalene	T16	AR	0.1	mg/kg	N	007-008
Acenaphthylene	T16	AR	0.1	mg/kg	U	001-006
Acenaphthylene	T16	AR	0.1	mg/kg	N	007-008
Acenaphthene	T16	AR	0.1	mg/kg	M	001-006
Acenaphthene	T16	AR	0.1	mg/kg	N	007-008
Fluorene	T16	AR	0.1	mg/kg	M	001-006
Fluorene	T16	AR	0.1	mg/kg	N	007-008
Phenanthrene	T16	AR	0.1	mg/kg	U	001-006
Phenanthrene	T16	AR	0.1	mg/kg	N	007-008
Anthracene	T16	AR	0.1	mg/kg	M	001-006
Anthracene	T16	AR	0.1	mg/kg	N	007-008
Fluoranthene	T16	AR	0.1	mg/kg	N	001-008
Pyrene	T16	AR	0.1	mg/kg	N	001-008
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	001-006
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	N	007-008
Chrysene	T16	AR	0.1	mg/kg	M	001-006
Chrysene	T16	AR	0.1	mg/kg	N	007-008
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	U	001-006
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	N	007-008
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	N	001-008
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	001-006
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	N	007-008
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	001-006
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	N	007-008
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	001-006
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	N	007-008
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	001-006
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	N	007-008
PAH(total)	T16	AR	0.1	mg/kg	U	001-006
PAH(total)	T16	AR	0.1	mg/kg	N	007-008
Arsenic	T257	A40	2	mg/kg	M	001-006
Arsenic	T257	A40	2.0	mg/kg	N	007-008
Cadmium	T257	A40	0.1	mg/kg	M	001-006
Cadmium	T257	A40	0.1	mg/kg	N	007-008
Chromium	T257	A40	0.5	mg/kg	M	001-006

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Chromium	T257	A40	0.5	mg/kg	N	007-008
Copper	T257	A40	2	mg/kg	M	001-006
Copper	T257	AR	2	mg/kg	N	007-008
Lead	T257	A40	2	mg/kg	M	001-006
Lead	T257	A40	2	mg/kg	N	007-008
Mercury	T245	A40	1.0	mg/kg	U	001-006
Mercury	T245	A40	1.0	mg/kg	N	007-008
Nickel	T257	A40	0.5	mg/kg	M	001-006
Nickel	T257	A40	0.5	mg/kg	N	007-008
Selenium	T257	A40	3	mg/kg	U	001-006
Selenium	T257	AR	3	mg/kg	N	007-008
Zinc	T257	A40	2	mg/kg	M	001-006
Zinc	T257	A40	2	mg/kg	N	007-008
pH	T7	A40			M	001-006
pH	T7	A40			N	007-008
Moisture @105C	T162	AR	0.1	%	N	001-008
Retained on 2mm	T2	A40	0.1	%	N	001-008
Benzene	T209	AR	10	µg/kg	M	001-006
Benzene	T209	AR	10	µg/kg	N	007-008
EthylBenzene	T209	AR	10	µg/kg	M	001-006
EthylBenzene	T209	AR	10	µg/kg	N	007-008
M/P Xylene	T209	AR	10	µg/kg	M	001-006
M/P Xylene	T209	AR	10	µg/kg	N	007-008
O Xylene	T209	AR	10	µg/kg	M	001-006
O Xylene	T209	AR	10	µg/kg	N	007-008
Toluene	T209	AR	10	µg/kg	M	001-006
Toluene	T209	AR	10	µg/kg	N	007-008
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	M	001-006
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	N	007-008
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	N	001-008



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Scientific Analysis Laboratories is a
limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 563844-1

Date of Report: 09-May-2016

Customer: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Customer Contact: Mr Lloyd Howells

Customer Job Reference: H23
Customer Purchase Order: ns10298
Customer Site Reference: Neal Soils
Date Job Received at SAL: 20-Apr-2016
Date Analysis Started: 21-Apr-2016
Date Analysis Completed: 27-Apr-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



Report checked
and authorised by :
Chelsea Entwistle
Project Management

Issued by :
Chelsea Entwistle
Project Management

SAL Reference					563844 004
Customer Sample Reference					FC
Date Sampled					18-APR-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Arsenic	T257	A40	2.0	mg/kg	34
Cadmium	T257	A40	0.1	mg/kg	29
Chromium	T257	A40	0.5	mg/kg	32
Copper	T257	A40	2	mg/kg	110
Lead	T257	A40	2	mg/kg	480
Mercury	T245	A40	1.0	mg/kg	4.1
Nickel	T257	A40	0.5	mg/kg	30
Selenium	T257	A40	3	mg/kg	4
Zinc	T257	A40	2	mg/kg	800
pH	T7	A40			8.4
Moisture @ 105C	T162	AR	0.1	%	30
Retained on 2mm	T2	A40	0.1	%	<0.1

SAL Reference					563844 004
Customer Sample Reference					FC
Date Sampled					18-APR-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Naphthalene	T16	AR	0.1	mg/kg	0.4
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	0.3
Fluorene	T16	AR	0.1	mg/kg	0.3
Phenanthrene	T16	AR	0.1	mg/kg	2.0
Anthracene	T16	AR	0.1	mg/kg	0.6
Fluoranthene	T16	AR	0.1	mg/kg	3.7
Pyrene	T16	AR	0.1	mg/kg	2.9
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	2.2
Chrysene	T16	AR	0.1	mg/kg	2.8
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	1.2
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.9
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.8
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.8
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.4
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.8
PAH(total)	T16	AR	0.1	mg/kg	20

SAL Reference					563844 004
Customer Sample Reference					FC
Date Sampled					18-APR-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Benzene	T209	AR	10	µg/kg	<10
EthylBenzene	T209	AR	10	µg/kg	<10
M/P Xylene	T209	AR	10	µg/kg	11
O Xylene	T209	AR	10	µg/kg	<10
Toluene	T209	AR	10	µg/kg	19
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	15
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	<2
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	19
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	61
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	55

Index to symbols used in 563844-1

Value	Description
A40	Assisted dried < 40C
AR	As Received
10:1	Leachate to BS EN 12457-2 (10:1)
32	Whole sample was crushed
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except TPH c5-c35 aro/ali split
Samples submitted for GC/MS (Headspace) analysis were submitted in inappropriate containers. It is possible therefore that the results provided may be compromised.
Retained on 2mm is removed before analysis

Method Index

Value	Description
T7	Probe
T281	ICP/MS (Filtered)
T209	GC/MS (Head Space)(MCERTS)
T245	ICP/OES (Aqua Regia Extraction)
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T54	GC/MS (Headspace)
T149	GC/MS (SIR)
T219	GC/FID (SE)
T2	Grav
T16	GC/MS
T162	Grav (1 Dec) (105 C)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Naphthalene	T16	AR	0.1	mg/kg	U	001-006
Naphthalene	T16	AR	0.1	mg/kg	N	007-008
Acenaphthylene	T16	AR	0.1	mg/kg	U	001-006
Acenaphthylene	T16	AR	0.1	mg/kg	N	007-008

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Acenaphthene	T16	AR	0.1	mg/kg	U	001
Acenaphthene	T16	AR	0.1	mg/kg	M	002-006
Acenaphthene	T16	AR	0.1	mg/kg	N	007-008
Fluorene	T16	AR	0.1	mg/kg	U	001
Fluorene	T16	AR	0.1	mg/kg	M	002-006
Fluorene	T16	AR	0.1	mg/kg	N	007-008
Phenanthrene	T16	AR	0.1	mg/kg	U	001-006
Phenanthrene	T16	AR	0.1	mg/kg	N	007-008
Anthracene	T16	AR	0.1	mg/kg	U	001
Anthracene	T16	AR	0.1	mg/kg	M	002-006
Anthracene	T16	AR	0.1	mg/kg	N	007-008
Fluoranthene	T16	AR	0.1	mg/kg	N	001-008
Pyrene	T16	AR	0.1	mg/kg	N	001-008
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	U	001
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	002-006
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	N	007-008
Chrysene	T16	AR	0.1	mg/kg	U	001
Chrysene	T16	AR	0.1	mg/kg	M	002-006
Chrysene	T16	AR	0.1	mg/kg	N	007-008
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	U	001-006
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	N	007-008
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	N	001-008
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	U	001
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	002-006
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	N	007-008
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	U	001
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	002-006
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	N	007-008
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	U	001
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	002-006
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	N	007-008
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	U	001
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	002-006
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	N	007-008
PAH(total)	T16	AR	0.1	mg/kg	U	001-006
PAH(total)	T16	AR	0.1	mg/kg	N	007-008
As (Dissolved)	T281	10:1	0.0002	mg/l	U	003-004
Cd (Dissolved)	T281	10:1	0.00002	mg/l	U	003-004
Cr (Dissolved)	T281	10:1	0.001	mg/l	U	003-004
Cu (Dissolved)	T281	10:1	0.0005	mg/l	U	003-004
Pb (Dissolved)	T281	10:1	0.0003	mg/l	U	003-004
Hg (Dissolved)	T281	10:1	0.00005	mg/l	U	003-004
Ni (Dissolved)	T281	10:1	0.001	mg/l	U	003-004
Se (Dissolved)	T281	10:1	0.0005	mg/l	U	003-004
Zn (Dissolved)	T281	10:1	0.002	mg/l	U	003-004
pH	T7	10:1			N	003-004
Arsenic	T257	A40	2.0	mg/kg	U	001
Arsenic	T257	A40	2	mg/kg	M	002-006
Arsenic	T257	A40	2.0	mg/kg	N	007-008
Cadmium	T257	A40	0.1	mg/kg	U	001
Cadmium	T257	A40	0.1	mg/kg	M	002-006
Cadmium	T257	A40	0.1	mg/kg	N	007-008
Chromium	T257	A40	0.5	mg/kg	U	001
Chromium	T257	A40	0.5	mg/kg	M	002-006
Chromium	T257	A40	0.5	mg/kg	N	007-008
Copper	T257	A40	2	mg/kg	U	001
Copper	T257	A40	2	mg/kg	M	002-006
Copper	T257	A40	2	mg/kg	N	007-008
Lead	T257	A40	2	mg/kg	U	001
Lead	T257	A40	2	mg/kg	M	002-006
Lead	T257	A40	2	mg/kg	N	007-008
Mercury	T245	A40	1.0	mg/kg	U	001-006
Mercury	T245	A40	1.0	mg/kg	N	007-008
Nickel	T257	A40	0.5	mg/kg	U	001
Nickel	T257	A40	0.5	mg/kg	M	002-006
Nickel	T257	A40	0.5	mg/kg	N	007-008
Selenium	T257	A40	3	mg/kg	U	001-006
Selenium	T257	A40	3	mg/kg	N	007-008
Zinc	T257	A40	2	mg/kg	U	001
Zinc	T257	A40	2	mg/kg	M	002-006

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Zinc	T257	A40	2	mg/kg	N	007-008
pH	T7	A40			N	007-008
pH	T7	A40			U	001
pH	T7	A40			M	002-006
Moisture @105C	T162	AR	0.1	%	N	001-008
Retained on 2mm	T2	A40	0.1	%	N	001-008
Benzene	T209	AR	10	µg/kg	U	001
Benzene	T209	AR	10	µg/kg	M	002-006
Benzene	T209	AR	10	µg/kg	N	007-008
EthylBenzene	T209	AR	10	µg/kg	U	001
EthylBenzene	T209	AR	10	µg/kg	M	002-006
EthylBenzene	T209	AR	10	µg/kg	N	007-008
M/P Xylene	T209	AR	10	µg/kg	U	001
M/P Xylene	T209	AR	10	µg/kg	M	002-006
M/P Xylene	T209	AR	10	µg/kg	N	007-008
O Xylene	T209	AR	10	µg/kg	U	001
O Xylene	T209	AR	10	µg/kg	M	002-006
O Xylene	T209	AR	10	µg/kg	N	007-008
Toluene	T209	AR	10	µg/kg	U	001
Toluene	T209	AR	10	µg/kg	M	002-006
Toluene	T209	AR	10	µg/kg	N	007-008
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	U	001
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	M	002-006
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	N	007-008
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C5-C6 aliphatic)	T54	10:1	0.020	mg/l	N	003-004
TPH (C6-C7 aromatic)	T54	10:1	0.020	mg/l	N	003-004
TPH (C6-C8 aliphatic)	T54	10:1	0.020	mg/l	N	003-004
TPH (C7-C8 aromatic)	T54	10:1	0.020	mg/l	N	003-004
TPH (C8-C10 aliphatic)	T54	10:1	0.020	mg/l	N	003-004
TPH (C8-C10 aromatic)	T54	10:1	0.020	mg/l	N	003-004
TPH (C10-C12 aliphatic)	T219	10:1	0.01	mg/l	N	003-004
TPH (C10-C12 aromatic)	T219	10:1	0.01	mg/l	N	003-004
TPH (C12-C16 aliphatic)	T219	10:1	0.01	mg/l	N	003-004
TPH (C12-C16 aromatic)	T219	10:1	0.01	mg/l	N	003-004
TPH (C16-C21 aliphatic)	T219	10:1	0.01	mg/l	N	003-004
TPH (C16-C21 aromatic)	T219	10:1	0.01	mg/l	N	003-004
TPH (C21-C35 aliphatic)	T219	10:1	0.01	mg/l	N	003-004
TPH (C21-C35 aromatic)	T219	10:1	0.01	mg/l	N	003-004
Naphthalene	T149	10:1	0.01	µg/l	N	003-004
Acenaphthylene	T149	10:1	0.01	µg/l	N	003-004
Acenaphthene	T149	10:1	0.01	µg/l	N	003-004
Fluorene	T149	10:1	0.01	µg/l	N	003-004
Phenanthrene	T149	10:1	0.01	µg/l	N	003-004
Anthracene	T149	10:1	0.01	µg/l	N	003-004
Fluoranthene	T149	10:1	0.01	µg/l	N	003-004
Pyrene	T149	10:1	0.01	µg/l	N	003-004
Benzo(a)Anthracene	T149	10:1	0.01	µg/l	N	003-004
Chrysene	T149	10:1	0.01	µg/l	N	003-004
Benzo(b)fluoranthene	T149	10:1	0.01	µg/l	N	003-004
Benzo(k)fluoranthene	T149	10:1	0.01	µg/l	N	003-004
Benzo(a)Pyrene	T149	10:1	0.01	µg/l	N	003-004
Indeno(123-cd)Pyrene	T149	10:1	0.01	µg/l	N	003-004
Dibenzo(ah)Anthracene	T149	10:1	0.01	µg/l	N	003-004
Benzo(ghi)Perylene	T149	10:1	0.01	µg/l	N	003-004
PAH(total)	T149	10:1	0.01	µg/l	N	003-004



Scientific Analysis Laboratories Ltd

Certificate of Analysis

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Scientific Analysis Laboratories is a
limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 565319-1

Date of Report: 11-May-2016

Customer: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Customer Contact: Mr Lloyd Howells

Customer Job Reference:

Customer Purchase Order: ns12751/LH/ns12754/LH/ns12752/LH

Date Job Received at SAL: 26-Apr-2016

Date Analysis Started: 27-Apr-2016

Date Analysis Completed: 05-May-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

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Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



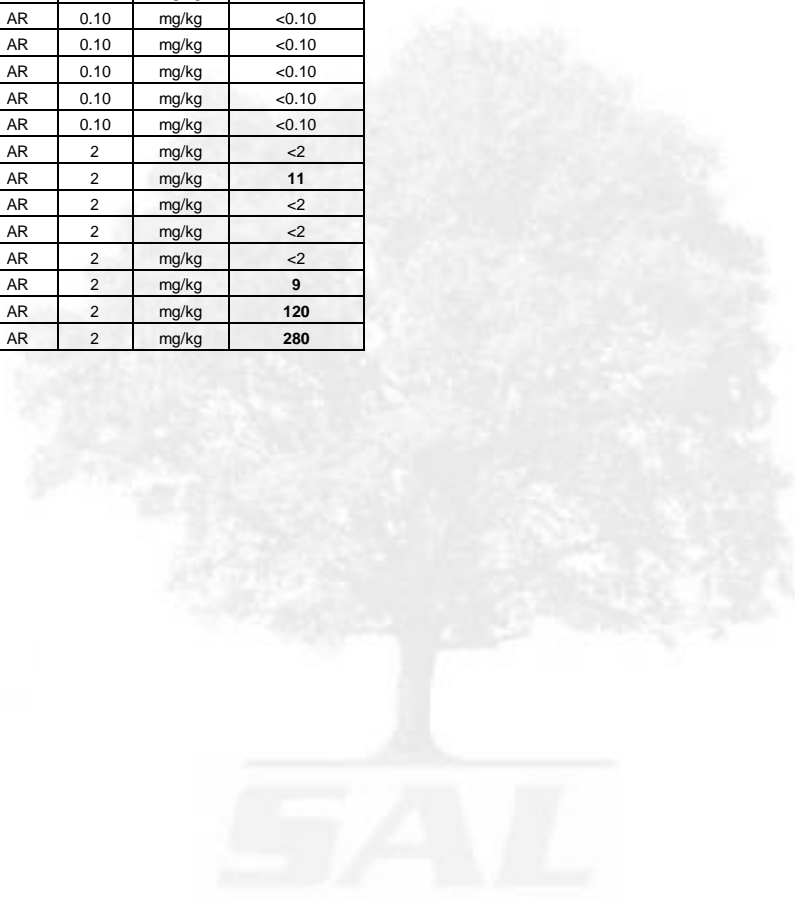
Report checked
and authorised by :
Claire Brown Crociquia
Customer Service Manager

Issued by :
Chelsea Entwistle
Project Management

SAL Reference: 565319					
Customer Reference:					
Soil		Analysed as Soil			
Metals Suite					
SAL Reference					565319 010
Customer Sample Reference					H24 Filter cake
Date Sampled					23-APR-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Arsenic	T257	A40	2.0	mg/kg	32
Cadmium	T257	A40	0.1	mg/kg	24
Chromium	T257	A40	0.5	mg/kg	30
Copper	T257	A40	2	mg/kg	140
Lead	T257	A40	2	mg/kg	500
Mercury	T245	A40	1.0	mg/kg	4.1
Nickel	T257	A40	0.5	mg/kg	29
Selenium	T257	A40	3	mg/kg	4
Zinc	T257	A40	2	mg/kg	780
Moisture @105C	T162	AR	0.1	%	30
Retained on 2mm	T2	A40	0.1	%	<0.1

SAL Reference: 565319					
Customer Reference:					
Soil		Analysed as Soil			
Total and Speciated USEPA16 PAH (SE) (MCERTS)					
SAL Reference					565319 009
Customer Sample Reference					H24 Filtercake 1
Date Sampled					23-APR-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Naphthalene	T16	AR	0.1	mg/kg	0.2
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1
Fluorene	T16	AR	0.1	mg/kg	<0.1
Phenanthrene	T16	AR	0.1	mg/kg	1.0
Anthracene	T16	AR	0.1	mg/kg	0.3
Fluoranthene	T16	AR	0.1	mg/kg	1.8
Pyrene	T16	AR	0.1	mg/kg	1.5
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	1.2
Chrysene	T16	AR	0.1	mg/kg	1.4
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	0.6
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.6
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.4
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.3
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.2
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.3
PAH(total)	T16	AR	0.1	mg/kg	9.9

SAL Reference: 565319					
Customer Reference:					
Soil		Analyzed as Soil			
TPH (CWG) with MTBE & BTEX SE					
SAL Reference				565319 009	
Customer Sample Reference				H24 Filter cake	
Date Sampled				23-APR-2016	
Type				Clay	
Determinand	Method	Test Sample	LOD	Units	
Benzene	T209	AR	10	µg/kg	<10
EthylBenzene	T209	AR	10	µg/kg	<10
M/P Xylene	T209	AR	10	µg/kg	<10
O Xylene	T209	AR	10	µg/kg	<10
Toluene	T209	AR	10	µg/kg	18
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	11
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	<2
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	9
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	120
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	280



Index to symbols used in 565319-1

Value	Description
AR	As Received
A40	Assisted dried < 40C
10:1	Leachate
32	Whole sample was crushed
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited



Notes

Asbestos analysis subcontracted to REC Ltd
Retained on 2mm is removed before analysis
TPH & PAH - These samples were received in containers that are inappropriate for this parameter of interest. It is possible therefore that the results provided may be compromised.
Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except TPH c5-c35 aro/ali split

Method Index

Value	Description
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T219	GC/FID (SE)
T245	ICP/OES (Aqua Regia Extraction)
T281	ICP/MS (Filtered)
T149	GC/MS (SIR)
T209	GC/MS (Head Space)(MCERTS)
T16	GC/MS
T2	Grav
T54	GC/MS (Headspace)
T162	Grav (1 Dec) (105 C)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
As (Dissolved)	T281	10:1	0.0002	mg/l	U	002,005,007-010
Cd (Dissolved)	T281	10:1	0.00002	mg/l	U	002,005,007-010
Cr (Dissolved)	T281	10:1	0.001	mg/l	U	002,005,007-010
Cu (Dissolved)	T281	10:1	0.0005	mg/l	U	002,005,007-010
Pb (Dissolved)	T281	10:1	0.0003	mg/l	U	002,005,007-010
Hg (Dissolved)	T281	10:1	0.00005	mg/l	U	002,005,007-010
Ni (Dissolved)	T281	10:1	0.001	mg/l	U	002,005,007-010
Se (Dissolved)	T281	10:1	0.0005	mg/l	U	002,005,007-010
Zn (Dissolved)	T281	10:1	0.002	mg/l	U	002,005,007-010
Arsenic	T257	A40	2.0	mg/kg	U	001-002,004-005
Arsenic	T257	A40	2	mg/kg	M	007-025
Cadmium	T257	A40	0.1	mg/kg	U	001-002,004-005
Cadmium	T257	A40	0.1	mg/kg	M	007-025
Chromium	T257	A40	0.5	mg/kg	U	001-002,004-005
Chromium	T257	A40	0.5	mg/kg	M	007-025
Copper	T257	A40	2	mg/kg	U	001-002,004-005
Copper	T257	A40	2	mg/kg	M	007-025
Lead	T257	A40	2	mg/kg	U	001-002,004-005
Lead	T257	A40	2	mg/kg	M	007-025
Mercury	T245	A40	1.0	mg/kg	U	001-002,004-005,007-025
Nickel	T257	A40	0.5	mg/kg	U	001-002,004-005
Nickel	T257	A40	0.5	mg/kg	M	007-025
Selenium	T257	A40	3	mg/kg	U	001-002,004-005,007-025
Zinc	T257	A40	2	mg/kg	U	001-002,004-005
Zinc	T257	A40	2	mg/kg	M	007-025
Moisture @ 105C	T162	AR	0.1	%	N	001-002,004-005,007-025
Retained on 2mm	T2	A40	0.1	%	N	001-002,004-005,007-025
Benzene	T209	AR	10	µg/kg	U	001-002,004-005
Benzene	T209	AR	10	µg/kg	M	007-025
EthylBenzene	T209	AR	10	µg/kg	U	001-002,004-005
EthylBenzene	T209	AR	10	µg/kg	M	007-025
M/P Xylene	T209	AR	10	µg/kg	U	001-002,004-005
M/P Xylene	T209	AR	10	µg/kg	M	007-025
O Xylene	T209	AR	10	µg/kg	U	001-002,004-005
O Xylene	T209	AR	10	µg/kg	M	007-025
Toluene	T209	AR	10	µg/kg	U	001-002,004-005
Toluene	T209	AR	10	µg/kg	M	007-025
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	U	001-002,004-005
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	M	007-025
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	N	001-002,004-005,007-025
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	N	001-002,004-005,007-025
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	N	001-002,004-005,007-025
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	N	001-002,004-005,007-025
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	N	001-002,004-005,007-025

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	N	001-002,004-005,007-025
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	N	001-002,004-005,007-025
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	N	001-002,004-005,007-025
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	N	001-002,004-005,007-025
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	N	001-002,004-005,007-025
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	N	001-002,004-005,007-025
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	N	001-002,004-005,007-025
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	N	001-002,004-005,007-025
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	N	001-002,004-005,007-025
TPH (C5-C6 aliphatic)	T54	10:1	0.020	mg/l	N	002,005,007-010
TPH (C6-C7 aromatic)	T54	10:1	0.020	mg/l	N	002,005,007-010
TPH (C6-C8 aliphatic)	T54	10:1	0.020	mg/l	N	002,005,007-010
TPH (C7-C8 aromatic)	T54	10:1	0.020	mg/l	N	002,005,007-010
TPH (C8-C10 aliphatic)	T54	10:1	0.020	mg/l	N	002,005,007-010
TPH (C8-C10 aromatic)	T54	10:1	0.020	mg/l	N	002,005,007-010
TPH (C10-C12 aliphatic)	T219	10:1	0.01	mg/l	N	002,005,007-010
TPH (C10-C12 aromatic)	T219	10:1	0.01	mg/l	N	002,005,007-010
TPH (C12-C16 aliphatic)	T219	10:1	0.01	mg/l	N	002,005,007-010
TPH (C12-C16 aromatic)	T219	10:1	0.01	mg/l	N	002,005,007-010
TPH (C16-C21 aliphatic)	T219	10:1	0.01	mg/l	N	002,005,007-010
TPH (C16-C21 aromatic)	T219	10:1	0.01	mg/l	N	002,005,007-010
TPH (C21-C35 aliphatic)	T219	10:1	0.01	mg/l	N	002,005,007-010
TPH (C21-C35 aromatic)	T219	10:1	0.01	mg/l	N	002,005,007-010
Naphthalene	T149	10:1	0.01	µg/l	N	002,005,007-010
Acenaphthylene	T149	10:1	0.01	µg/l	N	002,005,007-010
Acenaphthene	T149	10:1	0.01	µg/l	N	002,005,007-010
Fluorene	T149	10:1	0.01	µg/l	N	002,005,007-010
Phenanthrene	T149	10:1	0.01	µg/l	N	002,005,007-010
Anthracene	T149	10:1	0.01	µg/l	N	002,005,007-010
Fluoranthene	T149	10:1	0.01	µg/l	N	002,005,007-010
Pyrene	T149	10:1	0.01	µg/l	N	002,005,007-010
Benzo(a)Anthracene	T149	10:1	0.01	µg/l	N	002,005,007-010
Chrysene	T149	10:1	0.01	µg/l	N	002,005,007-010
Benzo(b)fluoranthene	T149	10:1	0.01	µg/l	N	002,005,007-010
Benzo(k)fluoranthene	T149	10:1	0.01	µg/l	N	002,005,007-010
Benzo(a)Pyrene	T149	10:1	0.01	µg/l	N	002,005,007-010
Indeno(123-cd)Pyrene	T149	10:1	0.01	µg/l	N	002,005,007-010
Dibenzo(ah)Anthracene	T149	10:1	0.01	µg/l	N	002,005,007-010
Benzo(ghi)Perylene	T149	10:1	0.01	µg/l	N	002,005,007-010
PAH(total)	T149	10:1	0.01	µg/l	N	002,005,007-010
Naphthalene	T16	AR	0.1	mg/kg	U	001-002,004-005,007-025
Acenaphthylene	T16	AR	0.1	mg/kg	U	001-002,004-005,007-025
Acenaphthene	T16	AR	0.1	mg/kg	U	001-002,004-005
Acenaphthene	T16	AR	0.1	mg/kg	M	007-025
Fluorene	T16	AR	0.1	mg/kg	U	001-002,004-005
Fluorene	T16	AR	0.1	mg/kg	M	007-025
Phenanthrene	T16	AR	0.1	mg/kg	U	001-002,004-005,007-025
Anthracene	T16	AR	0.1	mg/kg	U	001-002,004-005
Anthracene	T16	AR	0.1	mg/kg	M	007-025
Fluoranthene	T16	AR	0.1	mg/kg	N	001-002,004-005,007-025
Pyrene	T16	AR	0.1	mg/kg	N	001-002,004-005,007-025
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	U	001-002,004-005
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	007-025
Chrysene	T16	AR	0.1	mg/kg	U	001-002,004-005
Chrysene	T16	AR	0.1	mg/kg	M	007-025
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	U	001-002,004-005,007-025
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	N	001-002,004-005,007-025
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	U	001-002,004-005
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	007-025
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	U	001-002,004-005
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	007-025
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	U	001-002,004-005
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	007-025
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	U	001-002,004-005
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	007-025
PAH(total)	T16	AR	0.1	mg/kg	U	001-002,004-005,007-025



Scientific Analysis Laboratories Ltd

Certificate of Analysis

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Scientific Analysis Laboratories is a
limited company registered in England and
Wales (No 2514788) whose address is at
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Report Number: 569185-1

Date of Report: 24-May-2016

Customer: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Customer Contact: Mr Lloyd Howells

Customer Job Reference: H25
Customer Purchase Order: ns12756
Customer Site Reference: Neal Soils
Date Job Received at SAL: 12-May-2016
Date Analysis Started: 16-May-2016
Date Analysis Completed: 23-May-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs
All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



Report checked
and authorised by :
Claire Brown Crociquia
Customer Service Manager

Issued by :
Claire Brown Crociquia
Customer Service Manager

SAL Reference					569185 003	569185 004
Customer Sample Reference					FC 1	FC 2
Date Sampled					10-MAY-2016	10-MAY-2016
Type					Sandy Soil	Sandy Soil
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2	mg/kg	60	47
Cadmium	T257	A40	0.1	mg/kg	0.8	0.8
Chromium	T257	A40	0.5	mg/kg	370	410
Copper	T257	A40	2	mg/kg	2200	2100
Lead	T257	A40	2	mg/kg	670	760
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0
Nickel	T257	A40	0.5	mg/kg	100	93
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	3400	3900
pH	T7	A40			7.8	8.3
Moisture @105C	T162	AR	0.1	%	7.1	5.7
Retained on 2mm	T2	A40	0.1	%	13.4	9.5

SAL Reference					569185 003	569185 004
Customer Sample Reference					FC 1	FC 2
Date Sampled					10-MAY-2016	10-MAY-2016
Type					Sandy Soil	Sandy Soil
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	16	9.5
Acenaphthylene	T16	AR	0.1	mg/kg	2.3	1.5
Acenaphthene	T16	AR	0.1	mg/kg	7.9	4.6
Fluorene	T16	AR	0.1	mg/kg	7.0	4.3
Phenanthrene	T16	AR	0.1	mg/kg	97	46
Anthracene	T16	AR	0.1	mg/kg	6.7	4.5
Fluoranthene	T16	AR	0.1	mg/kg	86	41
Pyrene	T16	AR	0.1	mg/kg	65	31
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	20	13
Chrysene	T16	AR	0.1	mg/kg	26	18
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	15	9.1
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	12	9.0
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	12	7.5
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	8.2	5.2
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.8	0.5
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	7.4	4.5
PAH(total)	T16	AR	0.1	mg/kg	390	210

SAL Reference					569185 003	569185 004
Customer Sample Reference					FC 1	FC 2
Date Sampled					10-MAY-2016	10-MAY-2016
Type					Sandy Soil	Sandy Soil
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	160	170
EthylBenzene	T209	AR	10	µg/kg	17	22
M/P Xylene	T209	AR	10	µg/kg	240	250
O Xylene	T209	AR	10	µg/kg	200	240
Toluene	T209	AR	10	µg/kg	200	190
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	0.15	0.16
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	0.18	0.18
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	2.7	3.2
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	300	340
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	82	85
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	380	360
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	300	270
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	420	390
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	680	590
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	390	330
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	860	730

Index to symbols used in 569185-1

Value	Description
AR	As Received
A40	Assisted dried < 40C
10:1	Leachate
F	Filtered
149	LOD raised due to high dissolved solids
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Retained on 2mm is removed before analysis
Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except TPH c5-c35 aro/ali split
PAH - These samples were received in containers that are inappropriate for this parameter of interest. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T281	ICP/MS (Filtered)
T2	Grav
T16	GC/MS
T219	GC/FID (SE)
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T245	ICP/OES (Aqua Regia Extraction)
T162	Grav (1 Dec) (105 C)
T7	Probe
T54	GC/MS (Headspace)
T209	GC/MS (Head Space)(MCERTS)
T149	GC/MS (SIR)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
As (Dissolved)	T281	F	0.0002	mg/l	U	009
Cd (Dissolved)	T281	F	0.00002	mg/l	U	009
Cr (Dissolved)	T281	F	0.001	mg/l	U	009
Cu (Dissolved)	T281	F	0.0005	mg/l	U	009
Pb (Dissolved)	T281	F	0.0003	mg/l	U	009
Hg (Dissolved)	T281	F	0.00005	mg/l	U	009
Ni (Dissolved)	T281	F	0.001	mg/l	U	009
Se (Dissolved)	T281	F	0.0005	mg/l	U	009
Zn (Dissolved)	T281	F	0.002	mg/l	U	009
pH	T7	F			U	009
Arsenic	T257	A40	2	mg/kg	M	001-004,007,010-011
Arsenic	T257	A40	2.0	mg/kg	N	005-006,008
Cadmium	T257	A40	0.1	mg/kg	M	001-004,007,010-011
Cadmium	T257	A40	0.1	mg/kg	N	005-006,008
Chromium	T257	A40	0.5	mg/kg	M	001-004,007,010-011
Chromium	T257	A40	0.5	mg/kg	N	005-006,008
Copper	T257	A40	2	mg/kg	M	001-004,007,010-011
Copper	T257	A40	2	mg/kg	N	005-006,008
Lead	T257	A40	2	mg/kg	M	001-004,007,010-011
Lead	T257	A40	2	mg/kg	N	005-006,008
Mercury	T245	A40	1.0	mg/kg	U	001-004,007,010-011
Mercury	T245	A40	1.0	mg/kg	N	005-006,008
Nickel	T257	A40	0.5	mg/kg	M	001-004,007,010-011
Nickel	T257	A40	0.5	mg/kg	N	005-006,008
Selenium	T257	A40	3	mg/kg	U	001-004,007,010-011
Selenium	T257	A40	3	mg/kg	N	005-006,008
Zinc	T257	A40	2	mg/kg	M	001-004,007,010-011
Zinc	T257	A40	2	mg/kg	N	005-006,008
pH	T7	A40			N	005-006,008
pH	T7	A40			M	001-004,007,010-011
Moisture @105C	T162	AR	0.1	%	N	001-008,010-011

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Retained on 2mm	T2	A40	0.1	%	N	001-008,010-011
Benzene	T209	AR	10	µg/kg	M	001-004,007,010-011
Benzene	T209	AR	10	µg/kg	N	005-006,008
EthylBenzene	T209	AR	10	µg/kg	M	001-004,007,010-011
EthylBenzene	T209	AR	10	µg/kg	N	005-006,008
M/P Xylene	T209	AR	10	µg/kg	M	001-004,007,010-011
M/P Xylene	T209	AR	10	µg/kg	N	005-006,008
O Xylene	T209	AR	10	µg/kg	M	001-004,007,010-011
O Xylene	T209	AR	10	µg/kg	N	005-006,008
Toluene	T209	AR	10	µg/kg	M	001-004,007,010-011
Toluene	T209	AR	10	µg/kg	N	005-006,008
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	M	001-004,007,010-011
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	N	005-006,008
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	N	001-008,010-011
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	N	001-008,010-011
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	N	001-008,010-011
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	N	001-008,010-011
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	N	001-008,010-011
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	N	001-008,010-011
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	N	001-008,010-011
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	N	001-008,010-011
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	N	001-008,010-011
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	N	001-008,010-011
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	N	001-008,010-011
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	N	001-008,010-011
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	N	001-008,010-011
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	N	001-008,010-011
TPH (C5-C6 aliphatic)	T54	10:1	0.020	mg/l	N	001-008,010-011
TPH (C5-C6 aliphatic)	T54	AR	0.020	mg/l	N	009
TPH (C6-C7 aromatic)	T54	10:1	0.020	mg/l	N	001-008,010-011
TPH (C6-C7 aromatic)	T54	AR	0.020	mg/l	N	009
TPH (C6-C8 aliphatic)	T54	10:1	0.020	mg/l	N	001-008,010-011
TPH (C6-C8 aliphatic)	T54	AR	0.020	mg/l	N	009
TPH (C7-C8 aromatic)	T54	10:1	0.020	mg/l	N	001-008,010-011
TPH (C7-C8 aromatic)	T54	AR	0.020	mg/l	N	009
TPH (C8-C10 aliphatic)	T54	10:1	0.020	mg/l	N	001-008,010-011
TPH (C8-C10 aliphatic)	T54	AR	0.020	mg/l	N	009
TPH (C8-C10 aromatic)	T54	10:1	0.020	mg/l	N	001-008,010-011
TPH (C8-C10 aromatic)	T54	AR	0.020	mg/l	N	009
TPH (C10-C12 aliphatic)	T219	10:1	0.01	mg/l	N	001-008,010-011
TPH (C10-C12 aliphatic)	T219	AR	0.01	mg/l	N	009
TPH (C10-C12 aromatic)	T219	10:1	0.01	mg/l	N	001-008,010-011
TPH (C10-C12 aromatic)	T219	AR	0.01	mg/l	N	009
TPH (C12-C16 aliphatic)	T219	10:1	0.01	mg/l	N	001-008,010-011
TPH (C12-C16 aliphatic)	T219	AR	0.01	mg/l	N	009
TPH (C12-C16 aromatic)	T219	10:1	0.01	mg/l	N	001-008,010-011
TPH (C12-C16 aromatic)	T219	AR	0.01	mg/l	N	009
TPH (C16-C21 aliphatic)	T219	10:1	0.01	mg/l	N	001-008,010-011
TPH (C16-C21 aliphatic)	T219	AR	0.01	mg/l	N	009
TPH (C16-C21 aromatic)	T219	10:1	0.01	mg/l	N	001-008,010-011
TPH (C16-C21 aromatic)	T219	AR	0.01	mg/l	N	009
TPH (C21-C35 aliphatic)	T219	10:1	0.01	mg/l	N	001-008,010-011
TPH (C21-C35 aliphatic)	T219	AR	0.01	mg/l	N	009
TPH (C21-C35 aromatic)	T219	10:1	0.01	mg/l	N	001-008,010-011
TPH (C21-C35 aromatic)	T219	AR	0.01	mg/l	N	009
Naphthalene	T149	AR	0.01	µg/l	U	009
Acenaphthylene	T149	AR	0.01	µg/l	U	009
Acenaphthene	T149	AR	0.01	µg/l	U	009
Fluorene	T149	AR	0.01	µg/l	U	009
Phenanthrene	T149	AR	0.01	µg/l	U	009
Anthracene	T149	AR	0.01	µg/l	U	009
Fluoranthene	T149	AR	0.01	µg/l	U	009
Pyrene	T149	AR	0.01	µg/l	U	009
Benzo(a)Anthracene	T149	AR	0.01	µg/l	U	009
Chrysene	T149	AR	0.01	µg/l	U	009
Benzo(k)fluoranthene	T149	AR	0.01	µg/l	U	009
Benzo(a)Pyrene	T149	AR	0.01	µg/l	U	009
Indeno(123-cd)Pyrene	T149	AR	0.01	µg/l	U	009
Dibenzo(ah)Anthracene	T149	AR	0.01	µg/l	U	009
Benzo(ghi)Perylene	T149	AR	0.01	µg/l	U	009

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Naphthalene	T16	AR	0.1	mg/kg	U	001-004,007,010-011
Naphthalene	T16	AR	0.1	mg/kg	N	005-006,008
Acenaphthylene	T16	AR	0.1	mg/kg	U	001-004,007,010-011
Acenaphthylene	T16	AR	0.1	mg/kg	N	005-006,008
Acenaphthene	T16	AR	0.1	mg/kg	M	001-004,007,010-011
Acenaphthene	T16	AR	0.1	mg/kg	N	005-006,008
Fluorene	T16	AR	0.1	mg/kg	M	001-004,007,010-011
Fluorene	T16	AR	0.1	mg/kg	N	005-006,008
Phenanthrene	T16	AR	0.1	mg/kg	U	001-004,007,010-011
Phenanthrene	T16	AR	0.1	mg/kg	N	005-006,008
Anthracene	T16	AR	0.1	mg/kg	M	001-004,007,010-011
Anthracene	T16	AR	0.1	mg/kg	N	005-006,008
Fluoranthene	T16	AR	0.1	mg/kg	N	001-008,010-011
Pyrene	T16	AR	0.1	mg/kg	N	001-008,010-011
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	001-004,007,010-011
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	N	005-006,008
Chrysene	T16	AR	0.1	mg/kg	M	001-004,007,010-011
Chrysene	T16	AR	0.1	mg/kg	N	005-006,008
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	U	001-004,007,010-011
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	N	005-006,008
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	N	001-008,010-011
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	001-004,007,010-011
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	N	005-006,008
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	001-004,007,010-011
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	N	005-006,008
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	001-004,007,010-011
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	N	005-006,008
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	001-004,007,010-011
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	N	005-006,008
PAH(total)	T16	AR	0.1	mg/kg	U	001-004,007,010-011
PAH(total)	T16	AR	0.1	mg/kg	N	005-006,008
As (Dissolved)	T281	10:1	0.0002	mg/l	U	001-008,010-011
Cd (Dissolved)	T281	10:1	0.00002	mg/l	U	001-008,010-011
Cr (Dissolved)	T281	10:1	0.001	mg/l	U	001-008,010-011
Cu (Dissolved)	T281	10:1	0.0005	mg/l	U	001-008,010-011
Pb (Dissolved)	T281	10:1	0.0003	mg/l	U	001-008,010-011
Hg (Dissolved)	T281	10:1	0.00005	mg/l	U	001-008,010-011
Ni (Dissolved)	T281	10:1	0.001	mg/l	U	001-008,010-011
Se (Dissolved)	T281	10:1	0.0005	mg/l	U	001-008,010-011
Zn (Dissolved)	T281	10:1	0.002	mg/l	U	001-008,010-011
pH	T7	10:1			N	001-008,010-011
Naphthalene	T149	10:1	0.01	µg/l	N	001-008,010-011
Acenaphthylene	T149	10:1	0.01	µg/l	N	001-008,010-011
Acenaphthene	T149	10:1	0.01	µg/l	N	001-008,010-011
Fluorene	T149	10:1	0.01	µg/l	N	001-008,010-011
Phenanthrene	T149	10:1	0.01	µg/l	N	001-008,010-011
Anthracene	T149	10:1	0.01	µg/l	N	001-008,010-011
Fluoranthene	T149	10:1	0.01	µg/l	N	001-008,010-011
Pyrene	T149	10:1	0.01	µg/l	N	001-008,010-011
Benzo(a)Anthracene	T149	10:1	0.01	µg/l	N	001-008,010-011
Chrysene	T149	10:1	0.01	µg/l	N	001-008,010-011
Benzo(b)fluoranthene	T149	10:1	0.01	µg/l	N	001-008,010-011
Benzo(k)fluoranthene	T149	10:1	0.01	µg/l	N	001-008,010-011
Benzo(a)Pyrene	T149	10:1	0.01	µg/l	N	001-008,010-011
Indeno(123-cd)Pyrene	T149	10:1	0.01	µg/l	N	001-008,010-011
Dibenzo(ah)Anthracene	T149	10:1	0.01	µg/l	N	001-008,010-011
Benzo(ghi)Perylene	T149	10:1	0.01	µg/l	N	001-008,010-011
PAH(total)	T149	10:1	0.01	µg/l	N	001-008,010-011



Scientific Analysis Laboratories Ltd

Certificate of Analysis

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Scientific Analysis Laboratories is a
limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 570984-3

Date of Report: 24-Jun-2016

Customer: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Customer Contact: Mr Lloyd Howells

Customer Job Reference:
Customer Purchase Order: ns12759
Customer Site Reference: Neal Soils
Date Job Received at SAL: 14-Jun-2016
Date Analysis Started: 15-Jun-2016
Date Analysis Completed: 23-Jun-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs
All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



Report checked
and authorised by :
Chelsea Entwistle
Project Management

Issued by :
Chelsea Entwistle
Project Management

SAL Reference: 570984 Project Site: Neal Soils Customer Reference:					
Soil Analyzed as Soil Metals					
SAL Reference					570984 003
Customer Sample Reference					FC 1
Date Sampled					13-Jun-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Arsenic	T257	A40	2	mg/kg	26
Cadmium	T257	A40	0.1	mg/kg	16
Chromium	T257	A40	0.5	mg/kg	32
Copper	T257	A40	2	mg/kg	100
Lead	T257	A40	2	mg/kg	320
Mercury	T245	A40	1.0	mg/kg	2.1
Nickel	T257	A40	0.5	mg/kg	35
Selenium	T257	A40	3	mg/kg	<3
Zinc	T257	A40	2	mg/kg	490

SAL Reference: 570984 Project Site: Neal Soils Customer Reference:					
Soil Analysed as Soil Miscellaneous					
SAL Reference					570984 003
Customer Sample Reference					FC 1
Date Sampled					13-Jun-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
pH	T7	A40			8.7
Moisture @105C	T162	AR	0.1	%	31
Retained on 2mm	T2	A40	0.1	%	<0.1

SAL Reference: 570984 Project Site: Neal Soils Customer Reference:					
Soil Analysed as Soil Total and Speciated USEPA16 PAH (SE) (MCERTS)					
SAL Reference					570984 003
Customer Sample Reference					FC 1
Date Sampled					13-Jun-
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Naphthalene	T16	AR	0.1	mg/kg	0.3
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	0.2
Fluorene	T16	AR	0.1	mg/kg	0.2
Phenanthrene	T16	AR	0.1	mg/kg	1.3
Anthracene	T16	AR	0.1	mg/kg	0.4
Fluoranthene	T16	AR	0.1	mg/kg	2.4
Pyrene	T16	AR	0.1	mg/kg	2.0
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	1.1
Chrysene	T16	AR	0.1	mg/kg	1.3
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	1.1
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.9
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	1.0
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.8
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.4
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	1.0
PAH(total)	T16	AR	0.1	mg/kg	14

<p>SAL Reference: 570984 Project Site: Neal Soils Customer Reference:</p>					
<p>Soil Analyzed as Soil TPH (CWG) with MTBE & BTEX SE</p>					
SAL Reference					570984 003
Customer Sample Reference					FC 1
Date Sampled					13-Jun-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Benzene	T209	AR	10	µg/kg	<10
EthylBenzene	T209	AR	10	µg/kg	<10
M/P Xylene	T209	AR	10	µg/kg	16
O Xylene	T209	AR	10	µg/kg	<10
Toluene	T209	AR	10	µg/kg	11
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	<2
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	5
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	15
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	62
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	43

Index to symbols used in 570984-3

Value	Description
AR	As Received
A40	Assisted dried < 40C
F	Filtered
10:1	Leachate
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Retained on 2mm is removed before analysis
Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except TPH c5-c35 aro/ali split

Method Index

Value	Description
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T281	ICP/MS (Filtered)
T54	GC/MS (Headspace)
T209	GC/MS (Head Space)(MCERTS)
T219	GC/FID (SE)
T2	Grav
T7	Probe
T149	GC/MS (SIR)
T162	Grav (1 Dec) (105 C)
T245	ICP/OES (Aqua Regia Extraction)
T6	ICP/OES
T16	GC/MS

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Cadmium	T257	A40	0.1	mg/kg	M	003-006
Mercury	T245	A40	1.0	mg/kg	N	007-008
As (Dissolved)	T281	F	0.0002	mg/l	U	009
Cd (Dissolved)	T281	F	0.00002	mg/l	U	009
Cr (Dissolved)	T281	F	0.001	mg/l	U	009
Cu (Dissolved)	T281	F	0.0005	mg/l	U	009
Pb (Dissolved)	T281	F	0.0003	mg/l	U	009
Hg (Dissolved)	T281	F	0.00005	mg/l	U	009
Ni (Dissolved)	T281	F	0.001	mg/l	U	009
Se (Dissolved)	T281	F	0.0005	mg/l	U	009
Zn (Dissolved)	T281	F	0.002	mg/l	U	009
pH	T7	F			U	009
Arsenic	T257	A40	2.0	mg/kg	N	001,007-008
Cadmium	T257	A40	0.1	mg/kg	N	001,007-008
Chromium	T257	A40	0.5	mg/kg	N	001,007-008
Copper	T257	A40	1.0	mg/kg	N	001,007-008
Lead	T257	A40	0.5	mg/kg	N	001,007-008
Mercury	T257	A40	0.5	mg/kg	N	001
Nickel	T257	A40	0.5	mg/kg	N	001,007-008
Selenium	T257	A40	3	mg/kg	N	001,007-008
Zinc	T257	A40	0.5	mg/kg	N	001,007-008
Arsenic	T257	A40	2	mg/kg	M	002-006
Cadmium	T6	A40	0.5	mg/kg	N	002
Chromium	T257	A40	0.5	mg/kg	M	002-006
Copper	T257	A40	2	mg/kg	M	002-006
Lead	T257	A40	2	mg/kg	M	002-006
Mercury	T245	A40	1.0	mg/kg	U	002-006
Nickel	T257	A40	0.5	mg/kg	M	002-006
Selenium	T257	A40	3	mg/kg	U	002-006
Zinc	T257	A40	2	mg/kg	M	002-006
Benzene	T209	AR	10	µg/kg	M	001-006
Benzene	T209	AR	10	µg/kg	N	007-008
EthylBenzene	T209	AR	10	µg/kg	M	001-006
EthylBenzene	T209	AR	10	µg/kg	N	007-008
M/P Xylene	T209	AR	10	µg/kg	M	001-006
M/P Xylene	T209	AR	10	µg/kg	N	007-008
O Xylene	T209	AR	10	µg/kg	M	001-006
O Xylene	T209	AR	10	µg/kg	N	007-008
Toluene	T209	AR	10	µg/kg	M	001-006
Toluene	T209	AR	10	µg/kg	N	007-008
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	M	001-006
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	N	007-008
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	N	001-008

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	N	001-008
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	N	001-008
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	N	001-008
TPH (C5-C6 aliphatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C6-C7 aromatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C6-C8 aliphatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C7-C8 aromatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C8-C10 aliphatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C8-C10 aromatic)	T54	10:1	0.020	mg/l	N	001-008
TPH (C10-C12 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C10-C12 aromatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C12-C16 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C12-C16 aromatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C16-C21 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C16-C21 aromatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C21-C35 aliphatic)	T219	10:1	0.01	mg/l	N	001-008
TPH (C21-C35 aromatic)	T219	10:1	0.01	mg/l	N	001-008
Naphthalene	T149	AR	0.01	µg/l	U	009
Acenaphthylene	T149	AR	0.01	µg/l	U	009
Acenaphthene	T149	AR	0.01	µg/l	U	009
Fluorene	T149	AR	0.01	µg/l	U	009
Phenanthrene	T149	AR	0.01	µg/l	U	009
Anthracene	T149	AR	0.01	µg/l	U	009
Fluoranthene	T149	AR	0.01	µg/l	U	009
Pyrene	T149	AR	0.01	µg/l	U	009
Benzo(a)Anthracene	T149	AR	0.01	µg/l	U	009
Chrysene	T149	AR	0.01	µg/l	U	009
Benzo(k)fluoranthene	T149	AR	0.01	µg/l	U	009
Benzo(a)Pyrene	T149	AR	0.01	µg/l	U	009
Indeno(123-cd)Pyrene	T149	AR	0.01	µg/l	U	009
Dibenzo(ah)Anthracene	T149	AR	0.01	µg/l	U	009
Benzo(ghi)Perylene	T149	AR	0.01	µg/l	U	009
PAH(total)	T149	AR	0.01	µg/l	N	009
Naphthalene	T16	AR	0.1	mg/kg	U	001-006
Naphthalene	T16	AR	0.1	mg/kg	N	007-008
Acenaphthylene	T16	AR	0.1	mg/kg	U	001-006
Acenaphthylene	T16	AR	0.1	mg/kg	N	007-008
Acenaphthene	T16	AR	0.1	mg/kg	M	001-006
Acenaphthene	T16	AR	0.1	mg/kg	N	007-008
Fluorene	T16	AR	0.1	mg/kg	M	001-006
Fluorene	T16	AR	0.1	mg/kg	N	007-008
Phenanthrene	T16	AR	0.1	mg/kg	U	001-006
Phenanthrene	T16	AR	0.1	mg/kg	N	007-008
Anthracene	T16	AR	0.1	mg/kg	M	001-006
Anthracene	T16	AR	0.1	mg/kg	N	007-008
Fluoranthene	T16	AR	0.1	mg/kg	N	001-008
Pyrene	T16	AR	0.1	mg/kg	N	001-008
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	001-006
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	N	007-008
Chrysene	T16	AR	0.1	mg/kg	M	001-006
Chrysene	T16	AR	0.1	mg/kg	N	007-008
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	U	001-006
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	N	007-008
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	N	001-008
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	001-006
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	N	007-008
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	001-006
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	N	007-008
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	001-006
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	N	007-008
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	001-006

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	N	007-008
PAH(total)	T16	AR	0.1	mg/kg	U	001-006
PAH(total)	T16	AR	0.1	mg/kg	N	007-008
Naphthalene	T149	10:1	0.01	µg/l	N	001-008
Acenaphthylene	T149	10:1	0.01	µg/l	N	001-008
Acenaphthene	T149	10:1	0.01	µg/l	N	001-008
Fluorene	T149	10:1	0.01	µg/l	N	001-008
Phenanthrene	T149	10:1	0.01	µg/l	N	001-008
Anthracene	T149	10:1	0.01	µg/l	N	001-008
Fluoranthene	T149	10:1	0.01	µg/l	N	001-008
Pyrene	T149	10:1	0.01	µg/l	N	001-008
Benzo(a)Anthracene	T149	10:1	0.01	µg/l	N	001-008
Chrysene	T149	10:1	0.01	µg/l	N	001-008
Benzo(b)fluoranthene	T149	10:1	0.01	µg/l	N	001-008
Benzo(k)fluoranthene	T149	10:1	0.01	µg/l	N	001-008
Benzo(a)Pyrene	T149	10:1	0.01	µg/l	N	001-008
Indeno(123-cd)Pyrene	T149	10:1	0.01	µg/l	N	001-008
Dibenzo(ah)Anthracene	T149	10:1	0.01	µg/l	N	001-008
Benzo(ghi)Perylene	T149	10:1	0.01	µg/l	N	001-008
PAH(total)	T149	10:1	0.01	µg/l	N	001-008
pH	T7	A40			N	007-008
pH	T7	A40			M	001-006
Moisture @105C	T162	AR	0.1	%	N	001-008
Retained on 2mm	T2	A40	0.1	%	N	001-008
As (Dissolved)	T281	10:1	0.0002	mg/l	U	001-008
Cd (Dissolved)	T281	10:1	0.00002	mg/l	U	001-008
Cr (Dissolved)	T281	10:1	0.001	mg/l	U	001-008
Cu (Dissolved)	T281	10:1	0.0005	mg/l	U	001-008
Pb (Dissolved)	T281	10:1	0.0003	mg/l	U	001-008
Hg (Dissolved)	T281	10:1	0.00005	mg/l	U	001-008
Ni (Dissolved)	T281	10:1	0.001	mg/l	U	001-008
Se (Dissolved)	T281	10:1	0.0005	mg/l	U	001-008
Zn (Dissolved)	T281	10:1	0.002	mg/l	U	001-008
pH	T7	10:1			N	001-008
TPH (C5-C6 aliphatic)	T54	AR	0.020	mg/l	N	009
TPH (C6-C7 aromatic)	T54	AR	0.020	mg/l	N	009
TPH (C6-C8 aliphatic)	T54	AR	0.020	mg/l	N	009
TPH (C7-C8 aromatic)	T54	AR	0.020	mg/l	N	009
TPH (C8-C10 aliphatic)	T54	AR	0.020	mg/l	N	009
TPH (C8-C10 aromatic)	T54	AR	0.020	mg/l	N	009
TPH (C10-C12 aliphatic)	T219	AR	0.01	mg/l	N	009
TPH (C10-C12 aromatic)	T219	AR	0.01	mg/l	N	009
TPH (C12-C16 aliphatic)	T219	AR	0.01	mg/l	N	009
TPH (C12-C16 aromatic)	T219	AR	0.01	mg/l	N	009
TPH (C16-C21 aliphatic)	T219	AR	0.01	mg/l	N	009
TPH (C16-C21 aromatic)	T219	AR	0.01	mg/l	N	009
TPH (C21-C35 aliphatic)	T219	AR	0.01	mg/l	N	009
TPH (C21-C35 aromatic)	T219	AR	0.01	mg/l	N	009



SCIENTIFIC ANALYSIS
LABORATORIES
DELIVERING SCIENCE

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Scientific Analysis Laboratories Ltd

Certificate of Analysis

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Report Number: 592975-1

Date of Report: 30-Aug-2016

Customer: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Customer Contact: Ms Hannah Meringolo

Customer Job Reference:

Customer Purchase Order: NS12788

Customer Site Reference: Neal soils

Date Job Received at SAL: 15-Aug-2016

Date Analysis Started: 17-Aug-2016

Date Analysis Completed: 30-Aug-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual

SAL



Report checked
and authorized by :
Chelsea Entwistle
Project Management

Issued by :
Chelsea Entwistle
Project Management

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil		Analyzed as Soil				
Miscellaneous						
SAL Reference			592975 001		592975 004	
Customer Sample Reference			H27 FC		H28 FC	
Date Sampled			12-AUG-2016		12-AUG-2016	
Type			Clay		Clay	
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2	mg/kg	15	15
Cadmium	T257	A40	0.1	mg/kg	1.1	1.4
Chromium	T257	A40	0.5	mg/kg	29	31
Copper	T257	A40	2	mg/kg	66	66
Lead	T257	A40	2	mg/kg	180	180
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0
Nickel	T257	A40	0.5	mg/kg	29	29
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	310	300
Chromium VI	T6	A40	1	mg/kg	<1	<1
Moisture @105C	T162	AR	0.1	%	26	24
Retained on 2mm	T2	A40	0.1	%	<0.1	<0.1

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil		Analyzed as Soil				
Miscellaneous						
SAL Reference			592975 007		592975 010	
Customer Sample Reference			H29 FC		H30 FC	
Date Sampled			12-AUG-2016		12-AUG-2016	
Type			Clay		Clay	
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2	mg/kg	19	17
Cadmium	T257	A40	0.1	mg/kg	3.9	4.7
Chromium	T257	A40	0.5	mg/kg	31	29
Copper	T257	A40	2	mg/kg	100	82
Lead	T257	A40	2	mg/kg	240	230
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0
Nickel	T257	A40	0.5	mg/kg	30	30
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	450	420
Chromium VI	T6	A40	1	mg/kg	<1	<1
Moisture @105C	T162	AR	0.1	%	21	21
Retained on 2mm	T2	A40	0.1	%	1.1	<0.1

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil		Analyzed as Soil				
Miscellaneous						
SAL Reference					592975 022	592975 025
Customer Sample Reference					H35 FC	H36 FC
Date Sampled					12-AUG-2016	12-AUG-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2	mg/kg	16	16
Cadmium	T257	A40	0.1	mg/kg	2.4	2.7
Chromium	T257	A40	0.5	mg/kg	30	30
Copper	T257	A40	2	mg/kg	74	76
Lead	T257	A40	2	mg/kg	200	200
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0
Nickel	T257	A40	0.5	mg/kg	30	29
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	380	390
Chromium VI	T6	A40	1	mg/kg	<1	<1
Moisture @105C	T162	AR	0.1	%	22	22
Retained on 2mm	T2	A40	0.1	%	2.0	5.6

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil		Analyzed as Soil				
Miscellaneous						
SAL Reference					592975 028	
Customer Sample Reference					H37 FC	
Date Sampled					12-AUG-2016	
Type					Clay	
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2	mg/kg	15	
Cadmium	T257	A40	0.1	mg/kg	1.3	
Chromium	T257	A40	0.5	mg/kg	28	
Copper	T257	A40	2	mg/kg	73	
Lead	T257	A40	2	mg/kg	200	
Mercury	T245	A40	1.0	mg/kg	<1.0	
Nickel	T257	A40	0.5	mg/kg	27	
Selenium	T257	A40	3	mg/kg	<3	
Zinc	T257	A40	2	mg/kg	300	
Chromium VI	T6	A40	1	mg/kg	<1	
Moisture @105C	T162	AR	0.1	%	27	
Retained on 2mm	T2	A40	0.1	%	<0.1	

SAL Reference: 592975					
Project Site: Neal soils					
Customer Reference:					
Soil Analyzed as Soil					
Miscellaneous					
SAL Reference					592975 031
Customer Sample Reference					H38 FC
Date Sampled					12-AUG-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Arsenic	T257	A40	2	mg/kg	17
Cadmium	T257	A40	0.1	mg/kg	2.1
Chromium	T257	A40	0.5	mg/kg	30
Copper	T257	A40	2	mg/kg	71
Lead	T257	A40	2	mg/kg	190
Mercury	T245	A40	1.0	mg/kg	<1.0
Nickel	T257	A40	0.5	mg/kg	30
Selenium	T257	A40	3	mg/kg	<3
Zinc	T257	A40	2	mg/kg	350
Chromium VI	T6	A40	1	mg/kg	<1
Moisture @105C	T162	AR	0.1	%	27
Retained on 2mm	T2	A40	0.1	%	<0.1

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil Analysed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference				592975 001	592975 004	
Customer Sample Reference				H27 FC	H28 FC	
Date Sampled				12-AUG-2016	12-AUG-2016	
Type				Clay	Clay	
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.3	0.2
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	0.1	<0.1
Fluorene	T16	AR	0.1	mg/kg	0.2	0.1
Phenanthrene	T16	AR	0.1	mg/kg	1.3	1.1
Anthracene	T16	AR	0.1	mg/kg	0.3	0.3
Fluoranthene	T16	AR	0.1	mg/kg	2.2	1.8
Pyrene	T16	AR	0.1	mg/kg	1.7	1.4
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	1.2	1.0
Chrysene	T16	AR	0.1	mg/kg	1.4	1.2
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	1.4	1.0
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.9	0.6
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	1.1	0.7
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.5	0.3
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.2	0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.5	0.3
PAH(total)	T16	AR	0.1	mg/kg	14	10

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference			592975 007		592975 010	
Customer Sample Reference			H29 FC		H30 FC	
Date Sampled			12-AUG-2016		12-AUG-2016	
Type			Clay		Clay	
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.2	0.5
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1	<0.1
Fluorene	T16	AR	0.1	mg/kg	<0.1	0.2
Phenanthrene	T16	AR	0.1	mg/kg	0.7	1.2
Anthracene	T16	AR	0.1	mg/kg	0.2	0.3
Fluoranthene	T16	AR	0.1	mg/kg	1.4	2.0
Pyrene	T16	AR	0.1	mg/kg	1.1	1.7
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	0.8	1.2
Chrysene	T16	AR	0.1	mg/kg	0.9	1.3
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	0.7	0.8
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.5	0.6
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.5	0.6
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.2	0.2
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.2	0.2
PAH(total)	T16	AR	0.1	mg/kg	7.3	11

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference			592975 013			
Customer Sample Reference			H31 FC			
Date Sampled			12-AUG-2016			
Type			Clay			
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.5	
Acenaphthylene	T16	AR	0.1	mg/kg	0.2	
Acenaphthene	T16	AR	0.1	mg/kg	0.2	
Fluorene	T16	AR	0.1	mg/kg	0.3	
Phenanthrene	T16	AR	0.1	mg/kg	2.4	
Anthracene	T16	AR	0.1	mg/kg	0.6	
Fluoranthene	T16	AR	0.1	mg/kg	3.3	
Pyrene	T16	AR	0.1	mg/kg	2.7	
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	2.3	
Chrysene	T16	AR	0.1	mg/kg	2.5	
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	1.5	
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	1.0	
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	1.0	
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.5	
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.2	
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.4	
PAH(total)	T16	AR	0.1	mg/kg	20	

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference		592975 016		592975 019		
Customer Sample Reference		H32 FC		H33 & 34 FC		
Date Sampled		12-AUG-2016		12-AUG-2016		
Type		Clay		Clay		
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.5	0.1
Acenaphthylene	T16	AR	0.1	mg/kg	0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	0.2	<0.1
Fluorene	T16	AR	0.1	mg/kg	0.3	<0.1
Phenanthrene	T16	AR	0.1	mg/kg	2.1	0.6
Anthracene	T16	AR	0.1	mg/kg	0.6	0.2
Fluoranthene	T16	AR	0.1	mg/kg	3.1	1.1
Pyrene	T16	AR	0.1	mg/kg	2.6	0.8
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	2.0	0.6
Chrysene	T16	AR	0.1	mg/kg	2.3	0.6
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	1.3	0.4
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.6	0.2
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.7	0.2
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.4	<0.1
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.2	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.3	<0.1
PAH(total)	T16	AR	0.1	mg/kg	17	4.8

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference		592975 022		592975 025		
Customer Sample Reference		H35 FC		H36 FC		
Date Sampled		12-AUG-2016		12-AUG-2016		
Type		Clay		Clay		
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.3	0.2
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	0.1	<0.1
Fluorene	T16	AR	0.1	mg/kg	0.2	<0.1
Phenanthrene	T16	AR	0.1	mg/kg	1.3	0.8
Anthracene	T16	AR	0.1	mg/kg	0.4	0.2
Fluoranthene	T16	AR	0.1	mg/kg	2.3	1.4
Pyrene	T16	AR	0.1	mg/kg	1.9	1.1
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	1.4	0.8
Chrysene	T16	AR	0.1	mg/kg	1.6	0.9
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	1.2	0.6
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.9	0.5
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.9	0.5
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.4	0.2
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.2	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.3	0.2
PAH(total)	T16	AR	0.1	mg/kg	13	7.5

SAL Reference: 592975					
Project Site: Neal soils					
Customer Reference:					
Soil Analyzed as Soil					
Total and Speciated USEPA16 PAH (SE) (MCERTS)					
SAL Reference					592975 028
Customer Sample Reference					H37 FC
Date Sampled					12-AUG-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Naphthalene	T16	AR	0.1	mg/kg	0.3
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	0.2
Fluorene	T16	AR	0.1	mg/kg	0.2
Phenanthrene	T16	AR	0.1	mg/kg	1.5
Anthracene	T16	AR	0.1	mg/kg	0.4
Fluoranthene	T16	AR	0.1	mg/kg	2.6
Pyrene	T16	AR	0.1	mg/kg	2.1
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	1.6
Chrysene	T16	AR	0.1	mg/kg	1.8
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	1.2
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.7
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.8
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.4
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.2
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.3
PAH(total)	T16	AR	0.1	mg/kg	14

SAL Reference: 592975					
Project Site: Neal soils					
Customer Reference:					
Soil Analyzed as Soil					
Total and Speciated USEPA16 PAH (SE) (MCERTS)					
SAL Reference					592975 031
Customer Sample Reference					H38 FC
Date Sampled					12-AUG-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Naphthalene	T16	AR	0.1	mg/kg	0.3
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1
Fluorene	T16	AR	0.1	mg/kg	<0.1
Phenanthrene	T16	AR	0.1	mg/kg	1.0
Anthracene	T16	AR	0.1	mg/kg	0.3
Fluoranthene	T16	AR	0.1	mg/kg	1.7
Pyrene	T16	AR	0.1	mg/kg	1.3
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	1.0
Chrysene	T16	AR	0.1	mg/kg	1.1
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	0.6
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.6
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.5
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.2
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.2
PAH(total)	T16	AR	0.1	mg/kg	8.8

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil Analyzed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference			592975 001		592975 004	
Customer Sample Reference			H27 FC		H28 FC	
Date Sampled			12-AUG-2016		12-AUG-2016	
Type			Clay		Clay	
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	<10
EthylBenzene	T209	AR	10	µg/kg	<10	<10
M/P Xylene	T209	AR	10	µg/kg	<10	<10
O Xylene	T209	AR	10	µg/kg	<10	<10
Toluene	T209	AR	10	µg/kg	<10	<10
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	5	2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	11	9
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	16	12
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	40	37
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	130	140
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	120	130

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil Analyzed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference			592975 007		592975 010	
Customer Sample Reference			H29 FC		H30 FC	
Date Sampled			12-AUG-2016		12-AUG-2016	
Type			Clay		Clay	
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	<10
EthylBenzene	T209	AR	10	µg/kg	<10	<10
M/P Xylene	T209	AR	10	µg/kg	<10	<10
O Xylene	T209	AR	10	µg/kg	<10	<10
Toluene	T209	AR	10	µg/kg	<10	<10
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	6	9
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	11	17
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	26	46
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	98	180
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	86	140

SAL Reference: 592975					
Project Site: Neal soils					
Customer Reference:					
Soil Analyzed as Soil					
TPH (CWG) with MTBE & BTEX SE					
SAL Reference					592975 013
Customer Sample Reference					H31 FC
Date Sampled					12-AUG-2016
Type					Clay
Determinand	Method	Test Sample	LOD	Units	
Benzene	T209	AR	10	µg/kg	<10
EthylBenzene	T209	AR	10	µg/kg	<10
M/P Xylene	T209	AR	10	µg/kg	<10
O Xylene	T209	AR	10	µg/kg	<10
Toluene	T209	AR	10	µg/kg	<10
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	12
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	37
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	60
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	250
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	210

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil Analyzed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference					592975 016	592975 019
Customer Sample Reference					H32 FC	H33 & 34 FC
Date Sampled					12-AUG-2016	12-AUG-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	<10
EthylBenzene	T209	AR	10	µg/kg	<10	<10
M/P Xylene	T209	AR	10	µg/kg	<10	<10
O Xylene	T209	AR	10	µg/kg	<10	<10
Toluene	T209	AR	10	µg/kg	15	16
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	2	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	10	6
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	43	4
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	50	20
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	310	78
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	200	57

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil Analyzed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference			592975 022		592975 025	
Customer Sample Reference			H35 FC		H36 FC	
Date Sampled			12-AUG-2016		12-AUG-2016	
Type			Clay		Clay	
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	<10
EthylBenzene	T209	AR	10	µg/kg	<10	<10
M/P Xylene	T209	AR	10	µg/kg	<10	<10
O Xylene	T209	AR	10	µg/kg	<10	<10
Toluene	T209	AR	10	µg/kg	<10	13
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	0.12	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	2	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	2	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	9	6
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	22	9
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	37	25
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	200	100
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	130	76

SAL Reference: 592975						
Project Site: Neal soils						
Customer Reference:						
Soil Analyzed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference			592975 028			
Customer Sample Reference			H37 FC			
Date Sampled			12-AUG-2016			
Type			Clay			
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	
EthylBenzene	T209	AR	10	µg/kg	<10	
M/P Xylene	T209	AR	10	µg/kg	<10	
O Xylene	T209	AR	10	µg/kg	<10	
Toluene	T209	AR	10	µg/kg	<10	
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	3	
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2	
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	9	
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	18	
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	47	
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	170	
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	150	

Index to symbols used in 592975-1

Value	Description
A40	Assisted dried < 40C
10:1	Leachate
AR	As Received
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except TPH c5-c35 aro/ali split
Retained on 2mm is removed before analysis

Method Index

Value	Description
T54	GC/MS (Headspace)
T149	GC/MS (SIR)
T162	Grav (1 Dec) (105 C)
T2	Grav
T16	GC/MS
T245	ICP/OES (Aqua Regia Extraction)
T219	GC/FID (SE)
T281	ICP/MS (Filtered)
T686	Discrete Analyser
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T6	ICP/OES
T209	GC/MS (Head Space)(MCERTS)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Arsenic	T257	A40	2	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Arsenic	T257	A40	2.0	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Arsenic	T257	A40	2.0	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Cadmium	T257	A40	0.1	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Cadmium	T257	A40	0.1	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Cadmium	T257	A40	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Chromium	T257	A40	0.5	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Chromium	T257	A40	0.5	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Chromium	T257	A40	0.5	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Copper	T257	A40	2	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Copper	T257	A40	2	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Copper	T257	A40	2	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Lead	T257	A40	2	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Lead	T257	A40	2	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Lead	T257	A40	2	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Mercury	T245	A40	1.0	mg/kg	U	001-002,004-005,007-008,010-011,013-014,016-017,019-020,022-023,025-026,028-029,031-032
Mercury	T245	A40	1.0	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Nickel	T257	A40	0.5	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Nickel	T257	A40	0.5	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Nickel	T257	A40	0.5	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Selenium	T257	A40	3	mg/kg	U	001-002,004-005,007-008,010-011,013-014,016-017,019-020,022-023,025-026,028-029,031-032
Selenium	T257	A40	3	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Zinc	T257	A40	2	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Zinc	T257	A40	2	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Zinc	T257	A40	2	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Chromium VI	T6	A40	1	mg/kg	N	001-033
Moisture @105C	T162	AR	0.1	%	N	001-033
Retained on 2mm	T2	A40	0.1	%	N	001-033
Naphthalene	T16	AR	0.1	mg/kg	U	001-002,004-005,007-008,010-011,013-014,016-017,019-020,022-023,025-026,028-029,031-032
Naphthalene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Acenaphthylene	T16	AR	0.1	mg/kg	U	001-002,004-005,007-008,010-011,013-014,016-017,019-020,022-023,025-026,028-029,031-032
Acenaphthylene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Acenaphthene	T16	AR	0.1	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Acenaphthene	T16	AR	0.1	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Acenaphthene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Fluorene	T16	AR	0.1	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Fluorene	T16	AR	0.1	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032

Fluorene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Phenanthrene	T16	AR	0.1	mg/kg	U	001-002,004-005,007-008,010-011,013-014,016-017,019-020,022-023,025-026,028-029,031-032
Phenanthrene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Anthracene	T16	AR	0.1	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Anthracene	T16	AR	0.1	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Anthracene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Fluoranthene	T16	AR	0.1	mg/kg	N	001-033
Pyrene	T16	AR	0.1	mg/kg	N	001-033
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Chrysene	T16	AR	0.1	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Chrysene	T16	AR	0.1	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Chrysene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	U	001-002,004-005,007-008,010-011,013-014,016-017,019-020,022-023,025-026,028-029,031-032
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	N	001-033
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
PAH(total)	T16	AR	0.1	mg/kg	U	001-002,004-005,007-008,010-011,013-014,016-017,019-020,022-023,025-026,028-029,031-032
PAH(total)	T16	AR	0.1	mg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Benzene	T209	AR	10	µg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Benzene	T209	AR	10	µg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Benzene	T209	AR	10	µg/kg	N	003,006,009,012,015,018,021,024,027,030,033
EthylBenzene	T209	AR	10	µg/kg	M	001,004,007,010,013,016,019,022,025,028,031
EthylBenzene	T209	AR	10	µg/kg	U	002,005,008,011,014,017,020,023,026,029,032
EthylBenzene	T209	AR	10	µg/kg	N	003,006,009,012,015,018,021,024,027,030,033
M/P Xylene	T209	AR	10	µg/kg	M	001,004,007,010,013,016,019,022,025,028,031
M/P Xylene	T209	AR	10	µg/kg	U	002,005,008,011,014,017,020,023,026,029,032
M/P Xylene	T209	AR	10	µg/kg	N	003,006,009,012,015,018,021,024,027,030,033
O Xylene	T209	AR	10	µg/kg	M	001,004,007,010,013,016,019,022,025,028,031
O Xylene	T209	AR	10	µg/kg	U	002,005,008,011,014,017,020,023,026,029,032
O Xylene	T209	AR	10	µg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Toluene	T209	AR	10	µg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Toluene	T209	AR	10	µg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Toluene	T209	AR	10	µg/kg	N	003,006,009,012,015,018,021,024,027,030,033
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	M	001,004,007,010,013,016,019,022,025,028,031
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	U	002,005,008,011,014,017,020,023,026,029,032
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	N	003,006,009,012,015,018,021,024,027,030,033
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	N	001-033
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	N	001-033
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	N	001-033
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	N	001-033
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	N	001-033
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	N	001-033
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	N	001-033
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	N	001-033
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	N	001-033
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	N	001-033
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	N	001-033
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	N	001-033
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	N	001-033
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	N	001-033
As (Dissolved)	T281	10:1	0.0002	mg/l	U	001-033
Cd (Dissolved)	T281	10:1	0.00002	mg/l	U	001-033
Cr (Dissolved)	T281	10:1	0.001	mg/l	U	001-033
Cu (Dissolved)	T281	10:1	0.0005	mg/l	U	001-033
Pb (Dissolved)	T281	10:1	0.0003	mg/l	U	001-033
Hg (Dissolved)	T281	10:1	0.00005	mg/l	U	001-033
Ni (Dissolved)	T281	10:1	0.001	mg/l	U	001-033
Se (Dissolved)	T281	10:1	0.0005	mg/l	U	001-033
Zn (Dissolved)	T281	10:1	0.002	mg/l	U	001-033
Chromium VI	T686	10:1	0.003	mg/l	U	001-033
Naphthalene	T149	10:1	0.01	µg/l	N	001-033

Acenaphthylene	T149	10:1	0.01	µg/l	N	001-033
Acenaphthene	T149	10:1	0.01	µg/l	N	001-033
Fluorene	T149	10:1	0.01	µg/l	N	001-033
Phenanthrene	T149	10:1	0.01	µg/l	N	001-033
Anthracene	T149	10:1	0.01	µg/l	N	001-033
Fluoranthene	T149	10:1	0.01	µg/l	N	001-033
Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Pyrene	T149	10:1	0.01	µg/l	N	001-033
Benzo(a)Anthracene	T149	10:1	0.01	µg/l	N	001-033
Chrysene	T149	10:1	0.01	µg/l	N	001-033
Benzo(b)fluoranthene	T149	10:1	0.01	µg/l	N	001-033
Benzo(k)fluoranthene	T149	10:1	0.01	µg/l	N	001-033
Benzo(a)Pyrene	T149	10:1	0.01	µg/l	N	001-033
Indeno(123-cd)Pyrene	T149	10:1	0.01	µg/l	N	001-033
Dibenzo(ah)Anthracene	T149	10:1	0.01	µg/l	N	001-033
Benzo(ghi)Perylene	T149	10:1	0.01	µg/l	N	001-033
PAH(total)	T149	10:1	0.01	µg/l	N	001-033
TPH (C5-C6 aliphatic)	T54	10:1	0.020	mg/l	N	001-033
TPH (C6-C7 aromatic)	T54	10:1	0.020	mg/l	N	001-033
TPH (C6-C8 aliphatic)	T54	10:1	0.020	mg/l	N	001-033
TPH (C7-C8 aromatic)	T54	10:1	0.020	mg/l	N	001-033
TPH (C8-C10 aliphatic)	T54	10:1	0.020	mg/l	N	001-033
TPH (C8-C10 aromatic)	T54	10:1	0.020	mg/l	N	001-033
TPH (C10-C12 aliphatic)	T219	10:1	0.01	mg/l	N	001-033
TPH (C10-C12 aromatic)	T219	10:1	0.01	mg/l	N	001-033
TPH (C12-C16 aliphatic)	T219	10:1	0.01	mg/l	N	001-033
TPH (C12-C16 aromatic)	T219	10:1	0.01	mg/l	N	001-033
TPH (C16-C21 aliphatic)	T219	10:1	0.01	mg/l	N	001-033
TPH (C16-C21 aromatic)	T219	10:1	0.01	mg/l	N	001-033
TPH (C21-C35 aliphatic)	T219	10:1	0.01	mg/l	N	001-033
TPH (C21-C35 aromatic)	T219	10:1	0.01	mg/l	N	001-033





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Scientific Analysis Laboratories Ltd

Certificate of Analysis

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Tel : 01376 560120
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Report Number: 603236-1

Date of Report: 04-Oct-2016

Customer: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Customer Contact: Ms Hannah Meringolo

Customer Job Reference:

Customer Purchase Order: NS13354

Customer Site Reference: Neal Soils

Date Job Received at SAL: 28-Sep-2016

Date Analysis Started: 29-Sep-2016

Date Analysis Completed: 04-Oct-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



Report checked
and authorised by :
Claire Brown Crociquia
Customer Service Manager

Issued by :
Claire Brown Crociquia
Customer Service Manager

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Metals Suite						
SAL Reference					603236 003	603236 006
Customer Sample Reference					H39 FC	H40 FC
Date Sampled					19-SEP-2016	19-SEP-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2.0	mg/kg	21	21
Cadmium	T257	A40	0.1	mg/kg	0.4	0.4
Chromium	T257	A40	0.5	mg/kg	21	20
Copper	T257	A40	2	mg/kg	50	48
Lead	T257	A40	2	mg/kg	120	120
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0
Nickel	T257	A40	0.5	mg/kg	28	26
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	210	200
pH	T7	A40			8.2	8.1
Chromium VI	T6	A40	1	mg/kg	<1	<1
Moisture @105C	T162	AR	0.1	%	21	17
Retained on 2mm	T2	A40	0.1	%	<0.1	<0.1

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Metals Suite						
SAL Reference					603236 009	603236 013
Customer Sample Reference					H42 FC	H43 FC
Date Sampled					19-SEP-2016	19-SEP-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2.0	mg/kg	21	22
Cadmium	T257	A40	0.1	mg/kg	0.4	0.4
Chromium	T257	A40	0.5	mg/kg	20	20
Copper	T257	A40	2	mg/kg	52	52
Lead	T257	A40	2	mg/kg	120	120
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0
Nickel	T257	A40	0.5	mg/kg	27	27
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	210	210
pH	T7	A40			8.2	8.1
Chromium VI	T6	A40	1	mg/kg	<1	<1
Moisture @105C	T162	AR	0.1	%	19	16
Retained on 2mm	T2	A40	0.1	%	<0.1	<0.1

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Metals Suite						
SAL Reference					603236 016	603236 019
Customer Sample Reference					H44 FC	H45 FC
Date Sampled					19-SEP-2016	19-SEP-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2.0	mg/kg	23	21
Cadmium	T257	A40	0.1	mg/kg	0.5	0.4
Chromium	T257	A40	0.5	mg/kg	21	20
Copper	T257	A40	2	mg/kg	64	51
Lead	T257	A40	2	mg/kg	140	120
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0
Nickel	T257	A40	0.5	mg/kg	27	27
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	250	200
pH	T7	A40			8.2	8.1
Chromium VI	T6	A40	1	mg/kg	<1	<1
Moisture @105C	T162	AR	0.1	%	18	19
Retained on 2mm	T2	A40	0.1	%	<0.1	<0.1

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Metals Suite						
SAL Reference					603236 021	
Customer Sample Reference					H41 FC	
Date Sampled					19-SEP-2016	
Type					Clay	
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2.0	mg/kg	21	
Cadmium	T257	A40	0.1	mg/kg	0.4	
Chromium	T257	A40	0.5	mg/kg	19	
Copper	T257	A40	2	mg/kg	46	
Lead	T257	A40	2	mg/kg	120	
Mercury	T245	A40	1.0	mg/kg	<1.0	
Nickel	T257	A40	0.5	mg/kg	26	
Selenium	T257	A40	3	mg/kg	<3	
Zinc	T257	A40	2	mg/kg	190	
pH	T7	A40			8.2	
Chromium VI	T6	A40	1	mg/kg	<1	
Moisture @105C	T162	AR	0.1	%	24	
Retained on 2mm	T2	A40	0.1	%	<0.1	

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference					603236 003	603236 006
Customer Sample Reference					H39 FC	H40 FC
Date Sampled					19-SEP-2016	19-SEP-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.2	0.4
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1	0.1
Fluorene	T16	AR	0.1	mg/kg	<0.1	0.2
Phenanthrene	T16	AR	0.1	mg/kg	0.6	1.3
Anthracene	T16	AR	0.1	mg/kg	<0.1	0.3
Fluoranthene	T16	AR	0.1	mg/kg	0.9	1.9
Pyrene	T16	AR	0.1	mg/kg	0.7	1.6
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	0.6	1.2
Chrysene	T16	AR	0.1	mg/kg	0.7	1.5
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	0.5	1.4
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.5	0.9
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.5	1.1
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.2	0.5
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	0.2
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.3	0.4
PAH(total)	T16	AR	0.1	mg/kg	5.7	13

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference					603236 009	603236 013
Customer Sample Reference					H42 FC	H43 FC
Date Sampled					19-SEP-2016	19-SEP-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.3	0.2
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1	0.2
Fluorene	T16	AR	0.1	mg/kg	0.1	0.2
Phenanthrene	T16	AR	0.1	mg/kg	1.1	1.2
Anthracene	T16	AR	0.1	mg/kg	0.3	0.3
Fluoranthene	T16	AR	0.1	mg/kg	1.5	1.7
Pyrene	T16	AR	0.1	mg/kg	1.3	1.3
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	0.8	1.0
Chrysene	T16	AR	0.1	mg/kg	1.3	1.3
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	0.8	0.9
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.7	0.6
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.6	0.6
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.2	0.2
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.2	0.2
PAH(total)	T16	AR	0.1	mg/kg	9.2	9.9

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference					603236 016	603236 019
Customer Sample Reference					H44 FC	H45 FC
Date Sampled					19-SEP-2016	19-SEP-
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.3	0.4
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1	0.1
Fluorene	T16	AR	0.1	mg/kg	0.1	0.2
Phenanthrene	T16	AR	0.1	mg/kg	0.9	1.4
Anthracene	T16	AR	0.1	mg/kg	0.2	0.4
Fluoranthene	T16	AR	0.1	mg/kg	1.3	2.2
Pyrene	T16	AR	0.1	mg/kg	1.0	1.8
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	0.8	1.4
Chrysene	T16	AR	0.1	mg/kg	1.0	1.8
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	0.6	1.0
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.5	0.7
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.4	0.6
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.2	0.3
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.1	0.2
PAH(total)	T16	AR	0.1	mg/kg	7.4	12

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference					603236 021	
Customer Sample Reference					H41 FC	
Date Sampled					19-SEP-2016	
Type					Clay	
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.5	
Acenaphthylene	T16	AR	0.1	mg/kg	0.1	
Acenaphthene	T16	AR	0.1	mg/kg	0.2	
Fluorene	T16	AR	0.1	mg/kg	0.3	
Phenanthrene	T16	AR	0.1	mg/kg	1.7	
Anthracene	T16	AR	0.1	mg/kg	0.5	
Fluoranthene	T16	AR	0.1	mg/kg	2.6	
Pyrene	T16	AR	0.1	mg/kg	2.1	
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	1.7	
Chrysene	T16	AR	0.1	mg/kg	2.1	
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	1.1	
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.9	
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.7	
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.4	
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	0.1	
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.3	
PAH(total)	T16	AR	0.1	mg/kg	15	

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference		603236 003		603236 006		
Customer Sample Reference		H39 FC		H40 FC		
Date Sampled		19-SEP-2016		19-SEP-2016		
Type		Clay		Clay		
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	<10
Toluene	T209	AR	10	µg/kg	<10	<10
EthylBenzene	T209	AR	10	µg/kg	<10	<10
M/P Xylene	T209	AR	10	µg/kg	<10	<10
O Xylene	T209	AR	10	µg/kg	<10	<10
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2	2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	<2	3
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	<2	8
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	<2	19
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	<2	22

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference		603236 009		603236 013		
Customer Sample Reference		H42 FC		H43 FC		
Date Sampled		19-SEP-2016		19-SEP-2016		
Type		Clay		Clay		
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	<10
Toluene	T209	AR	10	µg/kg	<10	<10
EthylBenzene	T209	AR	10	µg/kg	<10	<10
M/P Xylene	T209	AR	10	µg/kg	<10	<10
O Xylene	T209	AR	10	µg/kg	<10	<10
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	2	2
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	4	<2
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	13	5
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	23	12
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	30	13

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analysed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference					603236 016	603236 019
Customer Sample Reference					H44 FC	H45 FC
Date Sampled					19-SEP-2016	19-SEP-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	<10
Toluene	T209	AR	10	µg/kg	<10	<10
EthylBenzene	T209	AR	10	µg/kg	<10	<10
M/P Xylene	T209	AR	10	µg/kg	<10	<10
O Xylene	T209	AR	10	µg/kg	<10	<10
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2	3
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	2	3
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	<2	4
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	5	10
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	14	33
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	12	27

SAL Reference: 603236						
Project Site: Neal Soils						
Customer Reference:						
Soil Analysed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference					603236 021	
Customer Sample Reference					H41 FC	
Date Sampled					19-SEP-2016	
Type					Clay	
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	
Toluene	T209	AR	10	µg/kg	<10	
EthylBenzene	T209	AR	10	µg/kg	<10	
M/P Xylene	T209	AR	10	µg/kg	<10	
O Xylene	T209	AR	10	µg/kg	<10	
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2	
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	3	
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	4	
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	3	
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	13	
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	28	
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	41	

Index to symbols used in 603236-1

Value	Description
F	Filtered
AR	As Received
A40	Assisted dried < 40C
10:1	Leachate
32	Whole sample was crushed
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Retained on 2mm is removed before analysis
Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except TPH c5-c35 aro/ali split

Method Index

Value	Description
T162	Grav (1 Dec) (105 C)
T245	ICP/OES (Aqua Regia Extraction)
T281	ICP/MS (Filtered)
T2	Grav
T7	Probe
T16	GC/MS
T219	GC/FID (SE)
T6	ICP/OES
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T209	GC/MS (Head Space)(MCERTS)
T686	Discrete Analyser
T54	GC/MS (Headspace)
T149	GC/MS (SIR)

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
As (Dissolved)	T281	10:1	0.0002	mg/l	U	001-009,011-022
As (Dissolved)	T281	F	0.0002	mg/l	U	010
Cd (Dissolved)	T281	10:1	0.00002	mg/l	U	001-009,011-022
Cd (Dissolved)	T281	F	0.00002	mg/l	U	010
Cr (Dissolved)	T281	10:1	0.001	mg/l	U	001-009,011-022
Cr (Dissolved)	T281	F	0.001	mg/l	U	010
Cu (Dissolved)	T281	10:1	0.0005	mg/l	U	001-009,011-022
Cu (Dissolved)	T281	F	0.0005	mg/l	U	010
Pb (Dissolved)	T281	10:1	0.0003	mg/l	U	001-009,011-022
Pb (Dissolved)	T281	F	0.0003	mg/l	U	010
Hg (Dissolved)	T281	10:1	0.00005	mg/l	U	001-009,011-022
Hg (Dissolved)	T281	F	0.00005	mg/l	U	010
Ni (Dissolved)	T281	10:1	0.001	mg/l	U	001-009,011-022
Ni (Dissolved)	T281	F	0.001	mg/l	U	010
Se (Dissolved)	T281	10:1	0.0005	mg/l	U	001-009,011-022
Se (Dissolved)	T281	F	0.0005	mg/l	U	010
Zn (Dissolved)	T281	10:1	0.002	mg/l	U	001-009,011-022
Zn (Dissolved)	T281	F	0.002	mg/l	U	010
pH	T7	10:1			N	001-009,011-022
pH	T7	F			U	010
Chromium VI	T686	10:1	0.003	mg/l	U	001-009,011-022
Chromium VI	T686	F	0.003	mg/l	U	010
Arsenic	T257	A40	2.0	mg/kg	U	001,004,007,011,014,017
Arsenic	T257	A40	2.0	mg/kg	N	002,005,008,012,015,018,020
Arsenic	T257	A40	2	mg/kg	M	003,006,009,013,016,019,021-022
Cadmium	T257	A40	0.1	mg/kg	U	001,004,007,011,014,017
Cadmium	T257	A40	0.1	mg/kg	N	002,005,008,012,015,018,020
Cadmium	T257	A40	0.1	mg/kg	M	003,006,009,013,016,019,021-022
Chromium	T257	A40	0.5	mg/kg	U	001,004,007,011,014,017
Chromium	T257	A40	0.5	mg/kg	N	002,005,008,012,015,018,020
Chromium	T257	A40	0.5	mg/kg	M	003,006,009,013,016,019,021-022
Copper	T257	A40	2	mg/kg	U	001,004,007,011,014,017
Copper	T257	A40	2	mg/kg	N	002,005,008,012,015,018,020
Copper	T257	A40	2	mg/kg	M	003,006,009,013,016,019,021-022

Lead	T257	A40	2	mg/kg	U	001,004,007,011,014,017
Lead	T257	A40	2	mg/kg	N	002,005,008,012,015,018,020
Lead	T257	A40	2	mg/kg	M	003,006,009,013,016,019,021-022
Mercury	T245	A40	1.0	mg/kg	U	001,003-004,006-007,009,011,013-014,016-017,019,021-022
Mercury	T245	A40	1.0	mg/kg	N	002,005,008,012,015,018,020
Nickel	T257	A40	0.5	mg/kg	U	001,004,007,011,014,017
Nickel	T257	A40	0.5	mg/kg	N	002,005,008,012,015,018,020
Nickel	T257	A40	0.5	mg/kg	M	003,006,009,013,016,019,021-022
Selenium	T257	A40	3	mg/kg	U	001,003-004,006-007,009,011,013-014,016-017,019,021-022

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Selenium	T257	A40	3	mg/kg	N	002,005,008,012,015,018,020
Zinc	T257	A40	2	mg/kg	U	001,004,007,011,014,017
Zinc	T257	A40	2	mg/kg	N	002,005,008,012,015,018,020
Zinc	T257	A40	2	mg/kg	M	003,006,009,013,016,019,021-022
pH	T7	A40			U	001,004,007,011,014,017
pH	T7	A40			N	002,005,008,012,015,018,020
pH	T7	A40			M	003,006,009,013,016,019,021-022
Chromium VI	T6	A40	1	mg/kg	N	001-009,011-022
Moisture @ 105C	T162	AR	0.1	%	N	001-009,011-022
Retained on 2mm	T2	A40	0.1	%	N	001-009,011-022
Naphthalene	T149	10:1	0.01	µg/l	N	001-009,011-022
Acenaphthylene	T149	10:1	0.01	µg/l	N	001-009,011-022
Acenaphthene	T149	10:1	0.01	µg/l	N	001-009,011-022
Fluorene	T149	10:1	0.01	µg/l	N	001-009,011-022
Phenanthrene	T149	10:1	0.01	µg/l	N	001-009,011-022
Anthracene	T149	10:1	0.01	µg/l	N	001-009,011-022
Fluoranthene	T149	10:1	0.01	µg/l	N	001-009,011-022
Pyrene	T149	10:1	0.01	µg/l	N	001-009,011-022
Benzo(a)Anthracene	T149	10:1	0.01	µg/l	N	001-009,011-022
Chrysene	T149	10:1	0.01	µg/l	N	001-009,011-022
Benzo(b)fluoranthene	T149	10:1	0.01	µg/l	N	001-009,011-022
Benzo(k)fluoranthene	T149	10:1	0.01	µg/l	N	001-009,011-022
Benzo(a)Pyrene	T149	10:1	0.01	µg/l	N	001-009,011-022
Indeno(123-cd)Pyrene	T149	10:1	0.01	µg/l	N	001-009,011-022
Dibenzo(ah)Anthracene	T149	10:1	0.01	µg/l	N	001-009,011-022
Benzo(ghi)Perylene	T149	10:1	0.01	µg/l	N	001-009,011-022
PAH(total)	T149	10:1	0.01	µg/l	N	001-009,011-022
Benzene	T209	AR	10	µg/kg	U	001,004,007,011,014,017
Benzene	T209	AR	10	µg/kg	N	002,005,008,012,015,018,020
Benzene	T209	AR	10	µg/kg	M	003,006,009,013,016,019,021-022
Toluene	T209	AR	10	µg/kg	U	001,004,007,011,014,017
Toluene	T209	AR	10	µg/kg	N	002,005,008,012,015,018,020
Toluene	T209	AR	10	µg/kg	M	003,006,009,013,016,019,021-022
EthylBenzene	T209	AR	10	µg/kg	U	001,004,007,011,014,017
EthylBenzene	T209	AR	10	µg/kg	N	002,005,008,012,015,018,020
EthylBenzene	T209	AR	10	µg/kg	M	003,006,009,013,016,019,021-022
M/P Xylene	T209	AR	10	µg/kg	U	001,004,007,011,014,017
M/P Xylene	T209	AR	10	µg/kg	N	002,005,008,012,015,018,020
M/P Xylene	T209	AR	10	µg/kg	M	003,006,009,013,016,019,021-022
O Xylene	T209	AR	10	µg/kg	U	001,004,007,011,014,017
O Xylene	T209	AR	10	µg/kg	N	002,005,008,012,015,018,020
O Xylene	T209	AR	10	µg/kg	M	003,006,009,013,016,019,021-022
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	U	001,004,007,011,014,017
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	N	002,005,008,012,015,018,020
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	M	003,006,009,013,016,019,021-022
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	N	001-009,011-022
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	N	001-009,011-022
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	N	001-009,011-022
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	N	001-009,011-022
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	N	001-009,011-022
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	N	001-009,011-022
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	N	001-009,011-022
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	N	001-009,011-022
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	N	001-009,011-022
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	N	001-009,011-022
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	N	001-009,011-022
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	N	001-009,011-022
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	N	001-009,011-022
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	N	001-009,011-022
TPH (C5-C6 aliphatic)	T54	10:1	0.020	mg/l	N	001-009,011-022
TPH (C5-C6 aliphatic)	T54	AR	0.020	mg/l	N	010
TPH (C6-C7 aromatic)	T54	10:1	0.020	mg/l	N	001-009,011-022
TPH (C6-C7 aromatic)	T54	AR	0.020	mg/l	N	010
TPH (C6-C8 aliphatic)	T54	10:1	0.020	mg/l	N	001-009,011-022
TPH (C6-C8 aliphatic)	T54	AR	0.020	mg/l	N	010
TPH (C7-C8 aromatic)	T54	10:1	0.020	mg/l	N	001-009,011-022
TPH (C7-C8 aromatic)	T54	AR	0.020	mg/l	N	010
TPH (C8-C10 aliphatic)	T54	10:1	0.020	mg/l	N	001-009,011-022
TPH (C8-C10 aliphatic)	T54	AR	0.020	mg/l	N	010
TPH (C8-C10 aromatic)	T54	10:1	0.020	mg/l	N	001-009,011-022

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
TPH (C8-C10 aromatic)	T54	AR	0.020	mg/l	N	010
TPH (C10-C12 aliphatic)	T219	10:1	0.01	mg/l	N	001-009,011-022
TPH (C10-C12 aliphatic)	T219	AR	0.01	mg/l	N	010
TPH (C10-C12 aromatic)	T219	10:1	0.01	mg/l	N	001-009,011-022
TPH (C10-C12 aromatic)	T219	AR	0.01	mg/l	N	010
TPH (C12-C16 aliphatic)	T219	10:1	0.01	mg/l	N	001-009,011-022
TPH (C12-C16 aliphatic)	T219	AR	0.01	mg/l	N	010
TPH (C12-C16 aromatic)	T219	10:1	0.01	mg/l	N	001-009,011-022
TPH (C12-C16 aromatic)	T219	AR	0.01	mg/l	N	010
TPH (C16-C21 aliphatic)	T219	10:1	0.01	mg/l	N	001-009,011-022
TPH (C16-C21 aliphatic)	T219	AR	0.01	mg/l	N	010
TPH (C16-C21 aromatic)	T219	10:1	0.01	mg/l	N	001-009,011-022
TPH (C16-C21 aromatic)	T219	AR	0.01	mg/l	N	010
TPH (C21-C35 aliphatic)	T219	10:1	0.01	mg/l	N	001-009,011-022
TPH (C21-C35 aliphatic)	T219	AR	0.01	mg/l	N	010
TPH (C21-C35 aromatic)	T219	10:1	0.01	mg/l	N	001-009,011-022
TPH (C21-C35 aromatic)	T219	AR	0.01	mg/l	N	010
Naphthalene	T149	AR	0.01	µg/l	U	010
Acenaphthylene	T149	AR	0.01	µg/l	U	010
Acenaphthene	T149	AR	0.01	µg/l	U	010
Fluorene	T149	AR	0.01	µg/l	U	010
Phenanthrene	T149	AR	0.01	µg/l	U	010
Anthracene	T149	AR	0.01	µg/l	U	010
Fluoranthene	T149	AR	0.01	µg/l	U	010
Pyrene	T149	AR	0.01	µg/l	U	010
Benzo(a)Anthracene	T149	AR	0.01	µg/l	U	010
Chrysene	T149	AR	0.01	µg/l	U	010
Benzo(b)fluoranthene	T149	AR	0.01	µg/l	N	010
Benzo(k)fluoranthene	T149	AR	0.01	µg/l	U	010
Benzo(a)Pyrene	T149	AR	0.01	µg/l	U	010
Indeno(123-cd)Pyrene	T149	AR	0.01	µg/l	U	010
Dibenzo(ah)Anthracene	T149	AR	0.01	µg/l	U	010
Benzo(ghi)Perylene	T149	AR	0.01	µg/l	U	010
PAH(total)	T149	AR	0.01	µg/l	N	010
Naphthalene	T16	AR	0.1	mg/kg	U	001,003-004,006-007,009,011,013-014,016-017,019,021-022
Naphthalene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Acenaphthylene	T16	AR	0.1	mg/kg	U	001,003-004,006-007,009,011,013-014,016-017,019,021-022
Acenaphthylene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Acenaphthene	T16	AR	0.1	mg/kg	U	001,004,007,011,014,017
Acenaphthene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Acenaphthene	T16	AR	0.1	mg/kg	M	003,006,009,013,016,019,021-022
Fluorene	T16	AR	0.1	mg/kg	U	001,004,007,011,014,017
Fluorene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Fluorene	T16	AR	0.1	mg/kg	M	003,006,009,013,016,019,021-022
Phenanthrene	T16	AR	0.1	mg/kg	U	001,003-004,006-007,009,011,013-014,016-017,019,021-022
Phenanthrene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Anthracene	T16	AR	0.1	mg/kg	U	001,004,007,011,014,017
Anthracene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Anthracene	T16	AR	0.1	mg/kg	M	003,006,009,013,016,019,021-022
Fluoranthene	T16	AR	0.1	mg/kg	N	001-009,011-022
Pyrene	T16	AR	0.1	mg/kg	N	001-009,011-022
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	U	001,004,007,011,014,017
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	003,006,009,013,016,019,021-022
Chrysene	T16	AR	0.1	mg/kg	U	001,004,007,011,014,017
Chrysene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Chrysene	T16	AR	0.1	mg/kg	M	003,006,009,013,016,019,021-022
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	U	001,003-004,006-007,009,011,013-014,016-017,019,021-022
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	N	001-009,011-022
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	U	001,004,007,011,014,017
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	003,006,009,013,016,019,021-022
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	U	001,004,007,011,014,017
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	003,006,009,013,016,019,021-022
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	U	001,004,007,011,014,017
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	003,006,009,013,016,019,021-022
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	U	001,004,007,011,014,017

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	003,006,009,013,016,019,021-022
PAH(total)	T16	AR	0.1	mg/kg	U	001,003-004,006-007,009,011,013-014,016-017,019,021-022
PAH(total)	T16	AR	0.1	mg/kg	N	002,005,008,012,015,018,020





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Report Number: 606580-1

Date of Report: 21-Oct-2016

Customer: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Customer Contact: Ms Hannah Meringolo

Customer Job Reference:

Customer Purchase Order: NS13358

Customer Site Reference: Neal Soils

Date Job Received at SAL: 12-Oct-2016

Date Analysis Started: 13-Oct-2016

Date Analysis Completed: 21-Oct-2016

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

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Tests covered by this certificate were conducted in accordance with SAL SOPs

All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



Report checked
and authorised by :
Claire Brown Crociquia
Customer Service Manager

Issued by :
Claire Brown Crociquia
Customer Service Manager

SAL Reference: 606580						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Metals Suite						
SAL Reference					606580 003	606580 006
Customer Sample Reference					H46 FC	H47 FC
Date Sampled					10-OCT-2016	10-OCT-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2.0	mg/kg	16	17
Cadmium	T257	A40	0.1	mg/kg	1.0	1.0
Chromium	T257	A40	0.5	mg/kg	26	26
Copper	T257	A40	2	mg/kg	66	70
Lead	T257	A40	2	mg/kg	130	130
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0
Nickel	T257	A40	0.5	mg/kg	30	31
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	300	290
pH	T7	A40			8.6	8.4
Chromium VI	T6	A40	1	mg/kg	<1	<1
Moisture @105C	T162	AR	0.1	%	21	23
Retained on 2mm	T2	A40	0.1	%	<0.1	<0.1

SAL Reference: 606580						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Metals Suite						
SAL Reference					606580 009	606580 012
Customer Sample Reference					H48 FC	H49 FC
Date Sampled					10-OCT-2016	10-OCT-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2.0	mg/kg	17	16
Cadmium	T257	A40	0.1	mg/kg	1.1	0.8
Chromium	T257	A40	0.5	mg/kg	26	26
Copper	T257	A40	2	mg/kg	66	59
Lead	T257	A40	2	mg/kg	130	120
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0
Nickel	T257	A40	0.5	mg/kg	30	30
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	300	250
pH	T7	A40			8.5	8.5
Chromium VI	T6	A40	1	mg/kg	<1	<1
Moisture @105C	T162	AR	0.1	%	23	27
Retained on 2mm	T2	A40	0.1	%	<0.1	<0.1

SAL Reference: 606580						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Metals Suite						
SAL Reference					606580 015	606580 018
Customer Sample Reference					H50 FC	H51 FC
Date Sampled					10-OCT-2016	10-OCT-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T257	A40	2.0	mg/kg	16	16
Cadmium	T257	A40	0.1	mg/kg	0.8	0.9
Chromium	T257	A40	0.5	mg/kg	27	26
Copper	T257	A40	2	mg/kg	59	60
Lead	T257	A40	2	mg/kg	120	120
Mercury	T245	A40	1.0	mg/kg	<1.0	<1.0
Nickel	T257	A40	0.5	mg/kg	30	30
Selenium	T257	A40	3	mg/kg	<3	<3
Zinc	T257	A40	2	mg/kg	250	260
pH	T7	A40			8.4	8.3
Chromium VI	T6	A40	1	mg/kg	<1	<1
Moisture @105C	T162	AR	0.1	%	24	24
Retained on 2mm	T2	A40	0.1	%	<0.1	<0.1

SAL Reference: 606580						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference					606580 003	606580 006
Customer Sample Reference					H46 FC	H47 FC
Date Sampled					10-OCT-2016	10-OCT-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.2	0.2
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1	<0.1
Fluorene	T16	AR	0.1	mg/kg	<0.1	<0.1
Phenanthrene	T16	AR	0.1	mg/kg	0.7	0.7
Anthracene	T16	AR	0.1	mg/kg	0.2	0.2
Fluoranthene	T16	AR	0.1	mg/kg	1.1	1.2
Pyrene	T16	AR	0.1	mg/kg	0.8	0.9
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	0.6	0.7
Chrysene	T16	AR	0.1	mg/kg	0.7	0.8
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	0.5	0.5
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.4	0.4
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.4	0.4
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.2	0.2
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.1	0.2
PAH(total)	T16	AR	0.1	mg/kg	5.7	6.5

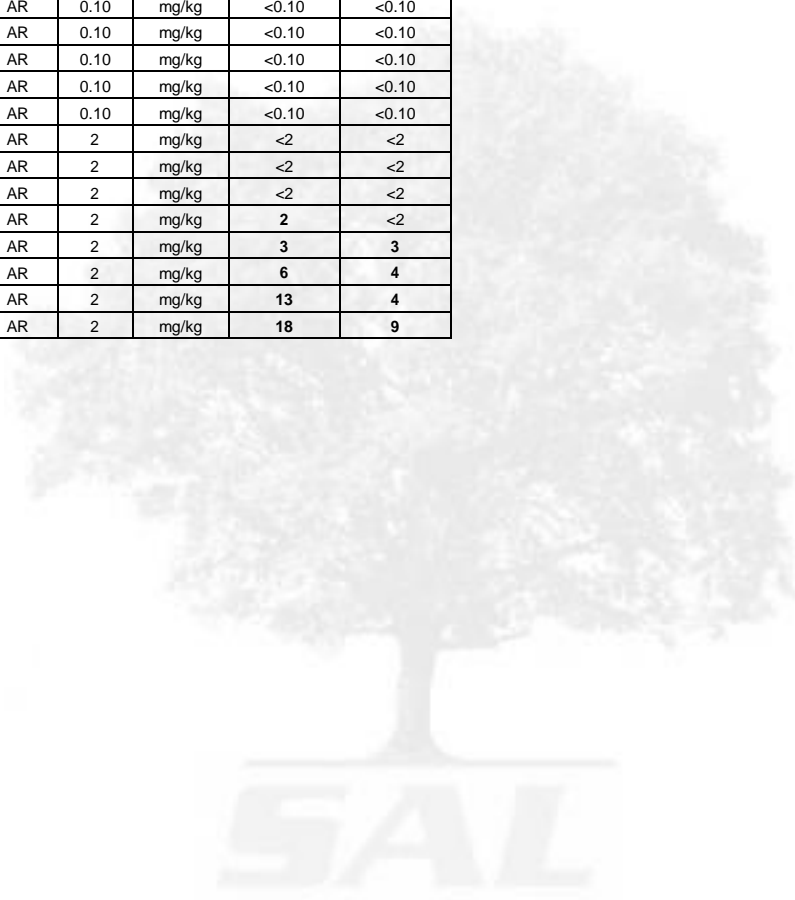
SAL Reference: 606580						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference					606580 009	606580 012
Customer Sample Reference					H48 FC	H49 FC
Date Sampled					10-OCT-2016	10-OCT-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.1	<0.1
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1	<0.1
Fluorene	T16	AR	0.1	mg/kg	<0.1	<0.1
Phenanthrene	T16	AR	0.1	mg/kg	0.6	0.4
Anthracene	T16	AR	0.1	mg/kg	0.1	<0.1
Fluoranthene	T16	AR	0.1	mg/kg	0.9	0.6
Pyrene	T16	AR	0.1	mg/kg	0.7	0.4
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	0.5	0.3
Chrysene	T16	AR	0.1	mg/kg	0.6	0.4
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	0.3	0.2
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.3	0.2
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.2	<0.1
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	<0.1	<0.1
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	<0.1	<0.1
PAH(total)	T16	AR	0.1	mg/kg	4.5	2.5

SAL Reference: 606580						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
Total and Speciated USEPA16 PAH (SE) (MCERTS)						
SAL Reference					606580 015	606580 018
Customer Sample Reference					H50 FC	H51 FC
Date Sampled					10-OCT-2016	10-OCT-2016
Type					Clay	Clay
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T16	AR	0.1	mg/kg	0.2	<0.1
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	<0.1	<0.1
Fluorene	T16	AR	0.1	mg/kg	<0.1	<0.1
Phenanthrene	T16	AR	0.1	mg/kg	0.8	0.4
Anthracene	T16	AR	0.1	mg/kg	0.2	0.1
Fluoranthene	T16	AR	0.1	mg/kg	1.2	0.6
Pyrene	T16	AR	0.1	mg/kg	0.9	0.5
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	0.7	0.4
Chrysene	T16	AR	0.1	mg/kg	0.7	0.4
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	0.4	0.2
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	0.4	0.2
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.3	0.1
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.2	<0.1
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.2	<0.1
PAH(total)	T16	AR	0.1	mg/kg	6.0	2.9

SAL Reference: 606580						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference		606580 003		606580 006		
Customer Sample Reference		H46 FC		H47 FC		
Date Sampled		10-OCT-2016		10-OCT-2016		
Type		Clay		Clay		
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	<10
Toluene	T209	AR	10	µg/kg	<10	<10
EthylBenzene	T209	AR	10	µg/kg	<10	<10
M/P Xylene	T209	AR	10	µg/kg	<10	<10
O Xylene	T209	AR	10	µg/kg	<10	<10
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2	2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	4	3
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	5	7
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	7	9
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	6	23
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	14	19

SAL Reference: 606580						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference		606580 009		606580 012		
Customer Sample Reference		H48 FC		H49 FC		
Date Sampled		10-OCT-2016		10-OCT-2016		
Type		Clay		Clay		
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	<10
Toluene	T209	AR	10	µg/kg	16	11
EthylBenzene	T209	AR	10	µg/kg	<10	<10
M/P Xylene	T209	AR	10	µg/kg	<10	11
O Xylene	T209	AR	10	µg/kg	<10	<10
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	4	<2
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	4	<2
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	6	4
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	10	8
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	16	8

SAL Reference: 606580						
Project Site: Neal Soils						
Customer Reference:						
Soil Analyzed as Soil						
TPH (CWG) with MTBE & BTEX SE						
SAL Reference			606580 015	606580 018		
Customer Sample Reference			H50 FC	H51 FC		
Date Sampled			10-OCT-2016	10-OCT-2016		
Type			Clay	Clay		
Determinand	Method	Test Sample	LOD	Units		
Benzene	T209	AR	10	µg/kg	<10	<10
Toluene	T209	AR	10	µg/kg	<10	<10
EthylBenzene	T209	AR	10	µg/kg	<10	<10
M/P Xylene	T209	AR	10	µg/kg	<10	<10
O Xylene	T209	AR	10	µg/kg	<10	<10
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	<10	<10
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	<0.10	<0.10
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	<2	<2
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	2	<2
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	3	3
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	6	4
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	13	4
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	18	9



Index to symbols used in 606580-1

Value	Description
A40	Assisted dried < 40C
AR	As Received
10:1	Leachate
F	Filtered
9	LOD raised due to dilution of sample
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Retained on 2mm is removed before analysis
Reported results on as received samples are corrected to a 105 degree centigrade dry weight basis except TPH c5-c35 aro/ali split

Method Index

Value	Description
T2	Grav
T6	ICP/OES
T162	Grav (1 Dec) (105 C)
T209	GC/MS (Head Space)(MCERTS)
T7	Probe
T219	GC/FID (SE)
T245	ICP/OES (Aqua Regia Extraction)
T281	ICP/MS (Filtered)
T257	ICP/OES (SIM) (Aqua Regia Extraction)
T16	GC/MS
T686	Discrete Analyser
T54	GC/MS (Headspace)
T149	GC/MS (SIR)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
As (Dissolved)	T281	10:1	0.0002	mg/l	U	001-018
As (Dissolved)	T281	F	0.0002	mg/l	U	019

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Cd (Dissolved)	T281	10:1	0.00002	mg/l	U	001-018
Cd (Dissolved)	T281	F	0.00002	mg/l	U	019
Cr (Dissolved)	T281	10:1	0.001	mg/l	U	001-018
Cr (Dissolved)	T281	F	0.001	mg/l	U	019
Cu (Dissolved)	T281	10:1	0.0005	mg/l	U	001-018
Cu (Dissolved)	T281	F	0.0005	mg/l	U	019
Pb (Dissolved)	T281	10:1	0.0003	mg/l	U	001-018
Pb (Dissolved)	T281	F	0.0003	mg/l	U	019
Hg (Dissolved)	T281	10:1	0.00005	mg/l	U	001-018
Hg (Dissolved)	T281	F	0.00005	mg/l	U	019
Ni (Dissolved)	T281	10:1	0.001	mg/l	U	001-018
Ni (Dissolved)	T281	F	0.001	mg/l	U	019
Se (Dissolved)	T281	10:1	0.0005	mg/l	U	001-018
Se (Dissolved)	T281	F	0.0005	mg/l	U	019
Zn (Dissolved)	T281	10:1	0.002	mg/l	U	001-018
Zn (Dissolved)	T281	F	0.002	mg/l	U	019
pH	T7	10:1			N	001-018
pH	T7	F			U	019
Chromium VI	T686	10:1	0.003	mg/l	U	001-018
Chromium VI	T686	F	0.003	mg/l	U	019
Arsenic	T257	A40	2.0	mg/kg	U	001,004,007,010,013,016
Arsenic	T257	A40	2.0	mg/kg	N	002,005,008,011,014,017
Arsenic	T257	A40	2	mg/kg	M	003,006,009,012,015,018
Cadmium	T257	A40	0.1	mg/kg	U	001,004,007,010,013,016
Cadmium	T257	A40	0.1	mg/kg	N	002,005,008,011,014,017
Cadmium	T257	A40	0.1	mg/kg	M	003,006,009,012,015,018
Chromium	T257	A40	0.5	mg/kg	U	001,004,007,010,013,016
Chromium	T257	A40	0.5	mg/kg	N	002,005,008,011,014,017
Chromium	T257	A40	0.5	mg/kg	M	003,006,009,012,015,018
Copper	T257	A40	2	mg/kg	U	001,004,007,010,013,016
Copper	T257	A40	2	mg/kg	N	002,005,008,011,014,017
Copper	T257	A40	2	mg/kg	M	003,006,009,012,015,018
Lead	T257	A40	2	mg/kg	U	001,004,007,010,013,016
Lead	T257	A40	2	mg/kg	N	002,005,008,011,014,017
Lead	T257	A40	2	mg/kg	M	003,006,009,012,015,018
Mercury	T245	A40	1.0	mg/kg	U	001,003-004,006-007,009-010,012-013,015-016,018
Mercury	T245	A40	1.0	mg/kg	N	002,005,008,011,014,017
Nickel	T257	A40	0.5	mg/kg	U	001,004,007,010,013,016
Nickel	T257	A40	0.5	mg/kg	N	002,005,008,011,014,017
Nickel	T257	A40	0.5	mg/kg	M	003,006,009,012,015,018
Selenium	T257	A40	3	mg/kg	U	001,003-004,006-007,009-010,012-013,015-016,018
Selenium	T257	A40	3	mg/kg	N	002,005,008,011,014,017
Zinc	T257	A40	2	mg/kg	U	001,004,007,010,013,016
Zinc	T257	A40	2	mg/kg	N	002,005,008,011,014,017
Zinc	T257	A40	2	mg/kg	M	003,006,009,012,015,018
pH	T7	A40			U	001,004,007,010,013,016
pH	T7	A40			N	002,005,008,011,014,017
pH	T7	A40			M	003,006,009,012,015,018
Chromium VI	T6	A40	1	mg/kg	N	001-018
Moisture @105C	T162	AR	0.1	%	N	001-018
Retained on 2mm	T2	A40	0.1	%	N	001-018
Naphthalene	T149	10:1	0.01	µg/l	N	001-018
Acenaphthylene	T149	10:1	0.01	µg/l	N	001-018
Acenaphthene	T149	10:1	0.01	µg/l	N	001-018
Fluorene	T149	10:1	0.01	µg/l	N	001-018
Phenanthrene	T149	10:1	0.01	µg/l	N	001-018
Anthracene	T149	10:1	0.01	µg/l	N	001-018
Fluoranthene	T149	10:1	0.01	µg/l	N	001-018
Pyrene	T149	10:1	0.01	µg/l	N	001-018
Benzo(a)Anthracene	T149	10:1	0.01	µg/l	N	001-018
Chrysene	T149	10:1	0.01	µg/l	N	001-018
Benzo(b)fluoranthene	T149	10:1	0.01	µg/l	N	001-018
Benzo(k)fluoranthene	T149	10:1	0.01	µg/l	N	001-018
Benzo(a)Pyrene	T149	10:1	0.01	µg/l	N	001-018
Indeno(123-cd)Pyrene	T149	10:1	0.01	µg/l	N	001-018
Dibenzo(ah)Anthracene	T149	10:1	0.01	µg/l	N	001-018
Benzo(ghi)Perylene	T149	10:1	0.01	µg/l	N	001-018
PAH(total)	T149	10:1	0.01	µg/l	N	001-018
Benzene	T209	AR	10	µg/kg	U	001,004,007,010,013,016
Benzene	T209	AR	10	µg/kg	N	002,005,008,011,014,017

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Benzene	T209	AR	10	µg/kg	M	003,006,009,012,015,018
Toluene	T209	AR	10	µg/kg	U	001,004,007,010,013,016
Toluene	T209	AR	10	µg/kg	N	002,005,008,011,014,017
Toluene	T209	AR	10	µg/kg	M	003,006,009,012,015,018
EthylBenzene	T209	AR	10	µg/kg	U	001,004,007,010,013,016
EthylBenzene	T209	AR	10	µg/kg	N	002,005,008,011,014,017
EthylBenzene	T209	AR	10	µg/kg	M	003,006,009,012,015,018
M/P Xylene	T209	AR	10	µg/kg	U	001,004,007,010,013,016
M/P Xylene	T209	AR	10	µg/kg	N	002,005,008,011,014,017
M/P Xylene	T209	AR	10	µg/kg	M	003,006,009,012,015,018
O Xylene	T209	AR	10	µg/kg	U	001,004,007,010,013,016
O Xylene	T209	AR	10	µg/kg	N	002,005,008,011,014,017
O Xylene	T209	AR	10	µg/kg	M	003,006,009,012,015,018
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	U	001,004,007,010,013,016
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	N	002,005,008,011,014,017
Methyl tert-Butyl Ether	T209	AR	10	µg/kg	M	003,006,009,012,015,018
TPH (C5-C6 aliphatic)	T54	AR	0.10	mg/kg	N	001-018
TPH (C6-C7 aromatic)	T54	AR	0.10	mg/kg	N	001-018
TPH (C6-C8 aliphatic)	T54	AR	0.10	mg/kg	N	001-018
TPH (C7-C8 aromatic)	T54	AR	0.10	mg/kg	N	001-018
TPH (C8-C10 aliphatic)	T54	AR	0.10	mg/kg	N	001-018
TPH (C8-C10 aromatic)	T54	AR	0.10	mg/kg	N	001-018
TPH (C10-C12 aliphatic)	T219	AR	2	mg/kg	N	001-018
TPH (C10-C12 aromatic)	T219	AR	2	mg/kg	N	001-018
TPH (C12-C16 aliphatic)	T219	AR	2	mg/kg	N	001-018
TPH (C12-C16 aromatic)	T219	AR	2	mg/kg	N	001-018
TPH (C16-C21 aliphatic)	T219	AR	2	mg/kg	N	001-018
TPH (C16-C21 aromatic)	T219	AR	2	mg/kg	N	001-018
TPH (C21-C35 aliphatic)	T219	AR	2	mg/kg	N	001-018
TPH (C21-C35 aromatic)	T219	AR	2	mg/kg	N	001-018
TPH (C5-C6 aliphatic)	T54	10:1	0.020	mg/l	N	001-018
TPH (C5-C6 aliphatic)	T54	AR	0.020	mg/l	N	019
TPH (C6-C7 aromatic)	T54	10:1	0.020	mg/l	N	001-018
TPH (C6-C7 aromatic)	T54	AR	0.020	mg/l	N	019
TPH (C6-C8 aliphatic)	T54	10:1	0.020	mg/l	N	001-018
TPH (C6-C8 aliphatic)	T54	AR	0.020	mg/l	N	019
TPH (C7-C8 aromatic)	T54	10:1	0.020	mg/l	N	001-018
TPH (C7-C8 aromatic)	T54	AR	0.020	mg/l	N	019
TPH (C8-C10 aliphatic)	T54	10:1	0.020	mg/l	N	001-018
TPH (C8-C10 aliphatic)	T54	AR	0.020	mg/l	N	019
TPH (C8-C10 aromatic)	T54	10:1	0.020	mg/l	N	001-018
TPH (C8-C10 aromatic)	T54	AR	0.020	mg/l	N	019
TPH (C10-C12 aliphatic)	T219	10:1	0.01	mg/l	N	001-018
TPH (C10-C12 aliphatic)	T219	AR	0.01	mg/l	N	019
TPH (C10-C12 aromatic)	T219	10:1	0.01	mg/l	N	001-018
TPH (C10-C12 aromatic)	T219	AR	0.01	mg/l	N	019
TPH (C12-C16 aliphatic)	T219	10:1	0.01	mg/l	N	001-018
TPH (C12-C16 aliphatic)	T219	AR	0.01	mg/l	N	019
TPH (C12-C16 aromatic)	T219	10:1	0.01	mg/l	N	001-018
TPH (C12-C16 aromatic)	T219	AR	0.01	mg/l	N	019
TPH (C16-C21 aliphatic)	T219	10:1	0.01	mg/l	N	001-018
TPH (C16-C21 aliphatic)	T219	AR	0.01	mg/l	N	019
TPH (C16-C21 aromatic)	T219	10:1	0.01	mg/l	N	001-018
TPH (C16-C21 aromatic)	T219	AR	0.01	mg/l	N	019
TPH (C21-C35 aliphatic)	T219	10:1	0.01	mg/l	N	001-018
TPH (C21-C35 aliphatic)	T219	AR	0.01	mg/l	N	019
TPH (C21-C35 aromatic)	T219	10:1	0.01	mg/l	N	001-018
TPH (C21-C35 aromatic)	T219	AR	0.01	mg/l	N	019
Naphthalene	T149	AR	0.01	µg/l	U	019
Acenaphthylene	T149	AR	0.01	µg/l	U	019
Acenaphthene	T149	AR	0.01	µg/l	U	019
Fluorene	T149	AR	0.01	µg/l	U	019
Phenanthrene	T149	AR	0.01	µg/l	U	019
Anthracene	T149	AR	0.01	µg/l	U	019
Fluoranthene	T149	AR	0.01	µg/l	U	019
Pyrene	T149	AR	0.01	µg/l	U	019
Benzo(a)Anthracene	T149	AR	0.01	µg/l	U	019
Chrysene	T149	AR	0.01	µg/l	U	019
Benzo(b)fluoranthene	T149	AR	0.01	µg/l	N	019
Benzo(k)fluoranthene	T149	AR	0.01	µg/l	U	019

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Benzo(a)Pyrene	T149	AR	0.01	µg/l	U	019
Indeno(123-cd)Pyrene	T149	AR	0.01	µg/l	U	019
Dibenzo(ah)Anthracene	T149	AR	0.01	µg/l	U	019
Benzo(ghi)Perylene	T149	AR	0.01	µg/l	U	019
PAH(total)	T149	AR	0.01	µg/l	N	019
Naphthalene	T16	AR	0.1	mg/kg	U	001,003-004,006-007,009-010,012-013,015-016,018
Naphthalene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Acenaphthylene	T16	AR	0.1	mg/kg	U	001,003-004,006-007,009-010,012-013,015-016,018
Acenaphthylene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Acenaphthene	T16	AR	0.1	mg/kg	U	001,004,007,010,013,016
Acenaphthene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Acenaphthene	T16	AR	0.1	mg/kg	M	003,006,009,012,015,018
Fluorene	T16	AR	0.1	mg/kg	U	001,004,007,010,013,016
Fluorene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Fluorene	T16	AR	0.1	mg/kg	M	003,006,009,012,015,018
Phenanthrene	T16	AR	0.1	mg/kg	U	001,003-004,006-007,009-010,012-013,015-016,018
Phenanthrene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Anthracene	T16	AR	0.1	mg/kg	U	001,004,007,010,013,016
Anthracene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Anthracene	T16	AR	0.1	mg/kg	M	003,006,009,012,015,018
Fluoranthene	T16	AR	0.1	mg/kg	N	001-018
Pyrene	T16	AR	0.1	mg/kg	N	001-018
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	U	001,004,007,010,013,016
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	M	003,006,009,012,015,018
Chrysene	T16	AR	0.1	mg/kg	U	001,004,007,010,013,016
Chrysene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Chrysene	T16	AR	0.1	mg/kg	M	003,006,009,012,015,018
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	U	001,003-004,006-007,009-010,012-013,015-016,018
Benzo(b)fluoranthene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Benzo(k)fluoranthene	T16	AR	0.1	mg/kg	N	001-018
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	U	001,004,007,010,013,016
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	M	003,006,009,012,015,018
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	U	001,004,007,010,013,016
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	M	003,006,009,012,015,018
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	U	001,004,007,010,013,016
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	M	003,006,009,012,015,018
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	U	001,004,007,010,013,016
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	M	003,006,009,012,015,018
PAH(total)	T16	AR	0.1	mg/kg	U	001,003-004,006-007,009-010,012-013,015-016,018
PAH(total)	T16	AR	0.1	mg/kg	N	002,005,008,011,014,017



FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 16/07308
Issue Number: 1
Date: 23 November, 2016

Client: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Project Manager: Hannah Meringolo; Gavin Powell
Project Name: Neal Soil
Project Ref: NS13376
Order No: NS13376
Date Samples Received: 16/11/16
Date Instructions Received: 16/11/16
Date Analysis Completed: 23/11/16

Prepared by:


Melanie Marshall
Laboratory Coordinator

Approved by:


Iain Haslock
Analytical Consultant

Envirolab Job Number: 16/07308

Client Project Name: Neal Soil

Client Project Ref: NS13376

Lab Sample ID	16/07308/3	16/07308/6	Units	Method ref
Client Sample No				
Client Sample ID	H52 FC	H58 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	14-Nov-16	14-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	6	6		
% Stones >10mm [#]	<0.1	<0.1	% w/w	A-T-044
pH _D ^{M#}	9.73	9.00	pH	A-T-031s
Arsenic _D ^{M#}	15	14	mg/kg	A-T-024s
Cadmium _D ^{M#}	2.5	2.5	mg/kg	A-T-024s
Copper _D ^{M#}	79	72	mg/kg	A-T-024s
Chromium _D ^{M#}	52	39	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	mg/kg	A-T-040s
Chromium (trivalent)	52	39	mg/kg	Calc
Lead _D ^{M#}	180	190	mg/kg	A-T-024s
Mercury _D	0.56	0.59	mg/kg	A-T-024s
Nickel _D ^{M#}	31	33	mg/kg	A-T-024s
Selenium _D	2	1	mg/kg	A-T-024s
Zinc _D ^{M#}	366	334	mg/kg	A-T-024s

Envirolab Job Number: 16/07308

Client Project Name: Neal Soil

Client Project Ref: NS13376

Lab Sample ID	16/07308/3	16/07308/6	Units	Method ref
Client Sample No				
Client Sample ID	H52 FC	H58 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	14-Nov-16	14-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	6	6		
PAH 16				
Acenaphthene _A ^{M#}	0.23	0.29	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.06	0.12	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.47	0.70	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	1.75	3.19	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	1.48	2.61	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	1.79	3.12	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.97	1.49	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.63	1.10	mg/kg	A-T-019s
Chrysene _A ^{M#}	2.17	3.30	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.32	0.47	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	3.15	5.28	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.29	0.41	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	1.30	2.05	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.20	0.28	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	1.83	2.65	mg/kg	A-T-019s
Pyrene _A ^{M#}	2.49	4.23	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	19.1	31.3	mg/kg	A-T-019s

Envirolab Job Number: 16/07308

Client Project Name: Neal Soil

Client Project Ref: NS13376

Lab Sample ID	16/07308/3	16/07308/6	Units	Method ref
Client Sample No				
Client Sample ID	H52 FC	H58 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	14-Nov-16	14-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	6	6		
TPH CWG				
Ali >C5-C6 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	0.01	0.03	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	0.02	0.04	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	1.7	1.9	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	1.6	5.2	mg/kg	A-T-023s
Total Aromatics _A	3.4	7.3	mg/kg	A-T-023s
TPH (Ali & Aro) _A	3.4	7.3	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	mg/kg	A-T-022s

Envirolab Job Number: 16/07308

Client Project Name: Neal Soil

Client Project Ref: NS13376

Lab Sample ID	16/07308/9	16/07308/12	16/07308/15	Units	Method ref
Client Sample No					
Client Sample ID	H59 FC	H60 FC	H61 FC		
Depth to Top					
Depth To Bottom					
Date Sampled	14-Nov-16	14-Nov-16	14-Nov-16		
Sample Type	Soil	Soil	Soil		
Sample Matrix Code	6	6	6		
% Stones >10mm [#]	<0.1	<0.1	<0.1		
pH _D ^{M#}	9.42	9.15	8.97	pH	A-T-031s
Arsenic _D ^{M#}	16	11	11	mg/kg	A-T-024s
Cadmium _D ^{M#}	2.6	2.2	2.1	mg/kg	A-T-024s
Copper _D ^{M#}	75	43	54	mg/kg	A-T-024s
Chromium _D ^{M#}	36	22	30	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	mg/kg	A-T-040s
Chromium (trivalent)	36	22	30	mg/kg	Calc
Lead _D ^{M#}	181	116	150	mg/kg	A-T-024s
Mercury _D	0.60	<0.17	0.36	mg/kg	A-T-024s
Nickel _D ^{M#}	31	24	26	mg/kg	A-T-024s
Selenium _D	1	1	1	mg/kg	A-T-024s
Zinc _D ^{M#}	351	258	275	mg/kg	A-T-024s

Envirolab Job Number: 16/07308

Client Project Name: Neal Soil

Client Project Ref: NS13376

Lab Sample ID	16/07308/9	16/07308/12	16/07308/15	Units	Method ref
Client Sample No					
Client Sample ID	H59 FC	H60 FC	H61 FC		
Depth to Top					
Depth To Bottom					
Date Sampled	14-Nov-16	14-Nov-16	14-Nov-16		
Sample Type	Soil	Soil	Soil		
Sample Matrix Code	6	6	6		
PAH 16					
Acenaphthene _A ^{M#}	0.31	0.08	0.33	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.06	0.03	0.05	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.58	0.17	0.59	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	2.37	0.64	2.00	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	1.82	0.41	1.51	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	2.26	0.50	1.89	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	1.00	0.26	0.75	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.80	0.18	0.65	mg/kg	A-T-019s
Chrysene _A ^{M#}	2.61	0.69	2.23	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.34	0.10	0.26	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	4.32	1.13	3.86	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.36	0.12	0.38	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	1.37	0.35	1.06	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.23	0.09	0.30	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	2.37	0.69	2.48	mg/kg	A-T-019s
Pyrene _A ^{M#}	3.39	0.86	3.01	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	24.2	6.26	21.4	mg/kg	A-T-019s

Envirolab Job Number: 16/07308

Client Project Name: Neal Soil

Client Project Ref: NS13376

Lab Sample ID	16/07308/9	16/07308/12	16/07308/15	Units	Method ref
Client Sample No					
Client Sample ID	H59 FC	H60 FC	H61 FC		
Depth to Top					
Depth To Bottom					
Date Sampled	14-Nov-16	14-Nov-16	14-Nov-16		
Sample Type	Soil	Soil	Soil		
Sample Matrix Code	6	6	6		
TPH CWG					
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	0.04	<0.01	<0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	1.8	<0.1	<0.1	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	4.7	2.6	2.6	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	15.6	3.7	2.3	mg/kg	A-T-023s
Total Aromatics _A	22.0	6.3	4.9	mg/kg	A-T-023s
TPH (Ali & Aro) _A	22.0	6.3	4.9	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s

REPORT NOTES

General:

This report shall not be reproduced, except in full, without written approval from Envirolab.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure. These are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 16/07029
Issue Number: 1
Date: 09 November, 2016


Client: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Project Manager: Hannah Meringolo
Project Name: Neal Soils
Project Ref: Not specified
Order No: NS13366
Date Samples Received: 03/11/16
Date Instructions Received: 03/11/16
Date Analysis Completed: 09/11/16

Prepared by:


Melanie Marshall
Laboratory Coordinator

Approved by:


Iain Haslock
Analytical Consultant

Envirolab Job Number: 16/07029

Client Project Name: Neal Soils

Client Project Ref: Not specified

Lab Sample ID	16/07029/1	16/07029/4	16/07029/7	Units	Method ref
Client Sample No					
Client Sample ID	H53 FC	H54 FC	H56 FC		
Depth to Top					
Depth To Bottom					
Date Sampled	02-Nov-16	02-Nov-16	02-Nov-16		
Sample Type	Soil	Soil	Soil		
Sample Matrix Code	6	6A	6		
% Stones >10mm [#]	<0.1	<0.1	<0.1		
pH _D ^{M#}	8.64	8.67	9.02	pH	A-T-031s
Arsenic _D ^{M#}	13	14	14	mg/kg	A-T-024s
Cadmium _D ^{M#}	2.7	3.1	2.8	mg/kg	A-T-024s
Copper _D ^{M#}	60	74	73	mg/kg	A-T-024s
Chromium _D ^{M#}	32	39	42	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	mg/kg	A-T-040s
Chromium (trivalent)	32	39	42	mg/kg	Calc
Lead _D ^{M#}	152	192	174	mg/kg	A-T-024s
Mercury _D	0.25	0.28	0.45	mg/kg	A-T-024s
Nickel _D ^{M#}	33	35	36	mg/kg	A-T-024s
Selenium _D	1	1	1	mg/kg	A-T-024s
Zinc _D ^{M#}	295	366	346	mg/kg	A-T-024s

Envirolab Job Number: 16/07029

Client Project Name: Neal Soils

Client Project Ref: Not specified

Lab Sample ID	16/07029/1	16/07029/4	16/07029/7	Units	Method ref
Client Sample No					
Client Sample ID	H53 FC	H54 FC	H56 FC		
Depth to Top					
Depth To Bottom					
Date Sampled	02-Nov-16	02-Nov-16	02-Nov-16		
Sample Type	Soil	Soil	Soil		
Sample Matrix Code	6	6A	6		
PAH 16					
Acenaphthene _A ^{M#}	0.13	0.10	0.15	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.05	0.04	0.04	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.43	0.26	0.33	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	1.35	1.23	1.50	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	1.17	1.00	1.18	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	1.69	1.38	1.73	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.65	0.58	0.62	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.52	0.49	0.53	mg/kg	A-T-019s
Chrysene _A ^{M#}	1.70	1.40	1.66	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.21	0.17	0.19	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	2.31	1.72	2.20	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.18	0.11	0.14	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.77	0.66	0.74	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.12	0.10	0.10	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	1.19	0.83	1.03	mg/kg	A-T-019s
Pyrene _A ^{M#}	1.85	1.37	1.72	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	14.3	11.4	13.9	mg/kg	A-T-019s

Envirolab Job Number: 16/07029

Client Project Name: Neal Soils

Client Project Ref: Not specified

Lab Sample ID	16/07029/1	16/07029/4	16/07029/7	Units	Method ref
Client Sample No					
Client Sample ID	H53 FC	H54 FC	H56 FC		
Depth to Top					
Depth To Bottom					
Date Sampled	02-Nov-16	02-Nov-16	02-Nov-16		
Sample Type	Soil	Soil	Soil		
Sample Matrix Code	6	6A	6		
TPH CWG					
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	0.8	<0.1	1.0	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	5.4	8.8	5.6	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	12.5	14.7	16.8	mg/kg	A-T-023s
Total Aromatics _A	18.7	23.5	23.5	mg/kg	A-T-023s
TPH (Ali & Aro) _A	18.7	23.5	23.5	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	mg/kg	A-T-022s

Envirolab Job Number: 16/07029

Client Project Name: Neal Soils

Client Project Ref: Not specified

Lab Sample ID	16/07029/10	Units	Method ref
Client Sample No			
Client Sample ID	H57 FC		
Depth to Top			
Depth To Bottom			
Date Sampled	02-Nov-16		
Sample Type	Soil		
Sample Matrix Code	6		
% Stones >10mm [#]	<0.1	% w/w	A-T-044
pH _D ^{M#}	8.95	pH	A-T-031s
Arsenic _D ^{M#}	10	mg/kg	A-T-024s
Cadmium _D ^{M#}	2.2	mg/kg	A-T-024s
Copper _D ^{M#}	31	mg/kg	A-T-024s
Chromium _D ^{M#}	31	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	mg/kg	A-T-040s
Chromium (trivalent)	31	mg/kg	Calc
Lead _D ^{M#}	76	mg/kg	A-T-024s
Mercury _D	<0.17	mg/kg	A-T-024s
Nickel _D ^{M#}	19	mg/kg	A-T-024s
Selenium _D	1	mg/kg	A-T-024s
Zinc _D ^{M#}	202	mg/kg	A-T-024s

Envirolab Job Number: 16/07029

Client Project Name: Neal Soils

Client Project Ref: Not specified

Lab Sample ID	16/07029/10	Units	Method ref
Client Sample No			
Client Sample ID	H57 FC		
Depth to Top			
Depth To Bottom			
Date Sampled	02-Nov-16		
Sample Type	Soil		
Sample Matrix Code	6		
PAH 16			
Acenaphthene _A ^{M#}	0.17	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.08	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.37	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	1.51	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	1.23	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	1.60	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.63	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.63	mg/kg	A-T-019s
Chrysene _A ^{M#}	1.52	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.16	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	2.66	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.17	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.79	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.15	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	1.14	mg/kg	A-T-019s
Pyrene _A ^{M#}	2.19	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	15	mg/kg	A-T-019s

Envirolab Job Number: 16/07029

Client Project Name: Neal Soils

Client Project Ref: Not specified

Lab Sample ID	16/07029/10	Units	Method ref
Client Sample No			
Client Sample ID	H57 FC		
Depth to Top			
Depth To Bottom			
Date Sampled	02-Nov-16		
Sample Type	Soil		
Sample Matrix Code	6		
TPH CWG			
Ali >C5-C6 _A [#]	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	0.7	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	2.9	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	17.0	mg/kg	A-T-023s
Total Aromatics _A	20.7	mg/kg	A-T-023s
TPH (Ali & Aro) _A	20.7	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	mg/kg	A-T-022s

REPORT NOTES

General:

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Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure. These are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

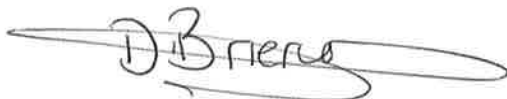
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 16/07542
Issue Number: 1
Date: 01 December, 2016

Client: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Project Manager: Hannah Meringolo; Gavin Powell
Project Name: Neal Soil
Project Ref: NS13377
Order No: NS13377
Date Samples Received: 25/11/16
Date Instructions Received: 25/11/16
Date Analysis Completed: 01/12/16

Prepared by:



Danielle Brierley
Administrative Assistant

Approved by:



Lianne Bromiley
Senior Client Manager

Envirolab Job Number: 16/07542

Client Project Name: Neal Soil

Client Project Ref: NS13377

Lab Sample ID	16/07542/1	16/07542/4	Units	Method ref
Client Sample No				
Client Sample ID	H55 FC	H63 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	23-Nov-16	23-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	4A	6A		
% Stones >10mm [#]	<0.1	<0.1	% w/w	A-T-044
pH _D ^{M#}	9.42	9.46	pH	A-T-031s
Arsenic _D ^{M#}	11	11	mg/kg	A-T-024s
Cadmium _D ^{M#}	4.0	3.1	mg/kg	A-T-024s
Copper _D ^{M#}	75	60	mg/kg	A-T-024s
Chromium _D ^{M#}	162	30	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	mg/kg	A-T-040s
Chromium (trivalent)	162	30	mg/kg	Calc
Lead _D ^{M#}	141	136	mg/kg	A-T-024s
Mercury _D	0.19	0.47	mg/kg	A-T-024s
Nickel _D ^{M#}	30	25	mg/kg	A-T-024s
Selenium _D	1	<1	mg/kg	A-T-024s
Zinc _D ^{M#}	318	233	mg/kg	A-T-024s

Envirolab Job Number: 16/07542

Client Project Name: Neal Soil

Client Project Ref: NS13377

Lab Sample ID	16/07542/1	16/07542/4	Units	Method ref
Client Sample No				
Client Sample ID	H55 FC	H63 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	23-Nov-16	23-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	4A	6A		
PAH 16				
Acenaphthene _A ^{M#}	0.20	0.28	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.03	0.06	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.37	0.61	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	1.40	2.44	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	1.05	1.92	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	1.65	2.88	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.61	1.14	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.49	0.86	mg/kg	A-T-019s
Chrysene _A ^{M#}	1.74	2.91	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.19	0.32	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	2.47	4.15	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.23	0.32	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.74	1.34	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.15	0.21	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	1.53	2.41	mg/kg	A-T-019s
Pyrene _A ^{M#}	1.96	3.29	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	14.8	25.1	mg/kg	A-T-019s

Envirolab Job Number: 16/07542

Client Project Name: Neal Soil

Client Project Ref: NS13377

Lab Sample ID	16/07542/1	16/07542/4	Units	Method ref
Client Sample No				
Client Sample ID	H55 FC	H63 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	23-Nov-16	23-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	4A	6A		
TPH CWG				
Ali >C5-C6 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	0.03	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	2.9	3.5	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	3.1	6.5	mg/kg	A-T-023s
Total Aromatics _A	6.0	10.0	mg/kg	A-T-023s
TPH (Ali & Aro) _A	6.0	10.0	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	mg/kg	A-T-022s

REPORT NOTES

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If results are in italic font they are associated with an AQC failure. These are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 16/07605
Issue Number: 1

Date: 05 December, 2016

Client: Neal Soil Suppliers Ltd
Ty-To-Maen Farm
Newton Road
Rumney
Cardiff
CF3 2EJ

Project Manager: Hannah Meringolo; Gavin Powell
Project Name: Neal Soil
Project Ref: NS13380
Order No: NS13380
Date Samples Received: 29/11/16
Date Instructions Received: 29/11/16
Date Analysis Completed: 05/12/16

Prepared by:



Kate Keningale
Administrative Assistant

Approved by:



Lianne Bromiley
Senior Client Manager

Envirolab Job Number: 16/07605

Client Project Name: Neal Soil

Client Project Ref: NS13380

Lab Sample ID	16/07605/3	16/07605/6	Units	Method ref
Client Sample No				
Client Sample ID	H62 FC	H64 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	28-Nov-16	28-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	4A	4A		
% Stones >10mm [#]	<0.1	<0.1	% w/w	A-T-044
pH _D ^{M#}	9.47	9.24	pH	A-T-031s
Arsenic _D ^{M#}	11	10	mg/kg	A-T-024s
Cadmium _D ^{M#}	2.7	2.5	mg/kg	A-T-024s
Copper _D ^{M#}	58	57	mg/kg	A-T-024s
Chromium _D ^{M#}	32	31	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	mg/kg	A-T-040s
Chromium (trivalent)	32	31	mg/kg	Calc
Lead _D ^{M#}	149	140	mg/kg	A-T-024s
Mercury _D	0.24	<0.17	mg/kg	A-T-024s
Nickel _D ^{M#}	27	26	mg/kg	A-T-024s
Selenium _D	<1	<1	mg/kg	A-T-024s
Zinc _D ^{M#}	259	247	mg/kg	A-T-024s

Envirolab Job Number: 16/07605

Client Project Name: Neal Soil

Client Project Ref: NS13380

Lab Sample ID	16/07605/3	16/07605/6	Units	Method ref
Client Sample No				
Client Sample ID	H62 FC	H64 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	28-Nov-16	28-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	4A	4A		
PAH 16				
Acenaphthene _A ^{M#}	0.26	0.39	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.05	0.07	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.57	0.61	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	1.97	1.86	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	1.54	1.70	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	2.34	2.64	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.84	0.88	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.76	0.84	mg/kg	A-T-019s
Chrysene _A ^{M#}	2.01	2.19	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.27	0.29	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	3.39	3.36	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.26	0.31	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	1.05	1.03	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.18	0.29	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	1.88	2.00	mg/kg	A-T-019s
Pyrene _A ^{M#}	2.69	2.70	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	20	21.1	mg/kg	A-T-019s

Envirolab Job Number: 16/07605

Client Project Name: Neal Soil

Client Project Ref: NS13380

Lab Sample ID	16/07605/3	16/07605/6	Units	Method ref
Client Sample No				
Client Sample ID	H62 FC	H64 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	28-Nov-16	28-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	4A	4A		
TPH CWG				
Ali >C5-C6 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	0.01	<0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	0.01	0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	3.4	7.1	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	10.9	18.6	mg/kg	A-T-023s
Total Aromatics _A	14.2	25.7	mg/kg	A-T-023s
TPH (Ali & Aro) _A	14.2	25.7	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	mg/kg	A-T-022s

Envirolab Job Number: 16/07605

Client Project Name: Neal Soil

Client Project Ref: NS13380

Lab Sample ID	16/07605/9	16/07605/12		
Client Sample No			Units	Method ref
Client Sample ID	H65 FC	H66 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	28-Nov-16	28-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	6A	6A		
% Stones >10mm [#]	<0.1	<0.1	% w/w	A-T-044
pH _D ^{M#}	9.60	9.39	pH	A-T-031s
Arsenic _D ^{M#}	9	7	mg/kg	A-T-024s
Cadmium _D ^{M#}	2.3	2.3	mg/kg	A-T-024s
Copper _D ^{M#}	52	53	mg/kg	A-T-024s
Chromium _D ^{M#}	30	36	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	mg/kg	A-T-040s
Chromium (trivalent)	30	36	mg/kg	Calc
Lead _D ^{M#}	154	127	mg/kg	A-T-024s
Mercury _D	0.39	0.31	mg/kg	A-T-024s
Nickel _D ^{M#}	25	25	mg/kg	A-T-024s
Selenium _D	<1	<1	mg/kg	A-T-024s
Zinc _D ^{M#}	250	234	mg/kg	A-T-024s

Envirolab Job Number: 16/07605

Client Project Name: Neal Soil

Client Project Ref: NS13380

Lab Sample ID	16/07605/9	16/07605/12	Units	Method ref
Client Sample No				
Client Sample ID	H65 FC	H66 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	28-Nov-16	28-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	6A	6A		
PAH 16				
Acenaphthene _A ^{M#}	0.27	0.42	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.06	0.04	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.48	0.55	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	1.69	1.11	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	1.45	0.91	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	2.12	1.37	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.86	0.42	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.83	0.54	mg/kg	A-T-019s
Chrysene _A ^{M#}	1.81	1.26	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.27	0.14	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	2.95	2.22	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.26	0.30	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	1.00	0.51	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.22	0.60	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	1.66	1.71	mg/kg	A-T-019s
Pyrene _A ^{M#}	2.39	1.77	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	18.3	13.9	mg/kg	A-T-019s

Envirolab Job Number: 16/07605

Client Project Name: Neal Soil

Client Project Ref: NS13380

Lab Sample ID	16/07605/9	16/07605/12	Units	Method ref
Client Sample No				
Client Sample ID	H65 FC	H66 FC		
Depth to Top				
Depth To Bottom				
Date Sampled	28-Nov-16	28-Nov-16		
Sample Type	Soil	Soil		
Sample Matrix Code	6A	6A		
TPH CWG				
Ali >C5-C6 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	<0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	0.01	0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<0.1	7.0	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	3.6	11.8	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	12.5	27.4	mg/kg	A-T-023s
Total Aromatics _A	16.0	46.3	mg/kg	A-T-023s
TPH (Ali & Aro) _A	16.0	46.3	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	mg/kg	A-T-022s

REPORT NOTES

General:

This report shall not be reproduced, except in full, without written approval from Envirolab.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure. These are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

Waste Disposal Tickets for the Light Sludge



EGAN WASTE

Egan Waste Services Limited
 The Recycling Centre, unit A15,
 Severn Road, Treforest Industrial Estate,
 Pontypridd, CF37 5TA
 Tel: 01443 841833 Fax: 01443 842801
 enquiries@eganwasteservices.co.uk
 www.eganwasteservices.co.uk

Date: **19/01/2016**

Ticket Number: 148767

CONTROLLED WASTE TRANSFER NOTE

Licence No.: CB/NP3497SR

Invoicing Address Customer NEAL NEAL SOIL SUPPLIES LTD TY-TO-MAEN FARM NEWTON ROAD RUMNEY CARDIFF CF3 2EJ Telephone 029 2079 7835 Contact JOHN DARMANIN	A. Current Holder / Producer of Waste - Pick Up Point Site No. -1 NEAL SOIL SUPPLIES LTD TY-TO-MAEN FARM NEWTON ROAD RUMNEY CARDIFF CF3 2EJ SIC Code : 28.92/2 Main Location Telephone 029 2079 7835 Contact JOHN DARMANIN
---	--

Instructions
 Uplift Dirty water/oil from Holding tank in washplant

Job Description SERVICE OF 1 X Tanker Hire **Order No.**

B. Description of Waste	Qty Last Visit 1
Oil and Water - 16 07 08* <i>WATER + OIL</i>	Qty Disposed <i>8.880</i>

Receiver/Collector Of Waste Egan Waste Services Ltd, The Recycling Centre, Unit A15, Severn Road, Treforest Industrial Estate, Pontypridd CF37 5TA	By signing Section D below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the waste (England and Wales) Regulations 2011 Tick for Yes
--	--

C. Transfer Details Vehicle Reg EGR10 <i>CF63 HJJ</i> Date 19-January-2016 Time On Site Signed (Driver) <i>[Signature]</i> Full Name Colin S... <i>Colin SOWATHAN</i> On Behalf of EGAN WASTE SERVICES LTD	Place of Transfer Castle Environmental Clipper Road Roath Dock Cardiff CF10 4LX Signed Full Name On Behalf of
---	--

D. Delivery Note Service Received By

Customer Signature *[Signature]* Print *CLIFF WILLIAMS* Date



Established 1978
 Waste Licence No: EPR/KP3636HB Waste Carriers No: CB/NP3497SR
 Company Registration Number: 4920542 VAT Registration Number: 821 7068 41





Atlantic Eco Park
Newton Road
Rumney
Cardiff
CF3 2EJ

Tel: (029) 2079 7835
Fax: (029) 2036 0043

www.neal-soils.co.uk

EA Site Permit: EPR/VP3095FS

Customer / Supplier
ORGANIC WASTE
Haulier
OWN
Vehicle Reg. No.
QRB3 LSS
Ref. No.

Description of Goods
OIL / WATER

Customer Signature

GOODS		TICKET No.
IN	OUT	118430

Re-entered 1st Weight

Code	Consec. No.
Date	Time
1st Weight	

Code	Consec. No.
Date	Time
2nd Weight	

NET Weight

Driver's Signature

Weighbridge Operator's Signature

Waste Regulations 2005:

Assignment Note

Consignor's / Carrier's / Consignee's copy (Delete as appropriate)



Part A - Notification Details

1 - Consignment note code: CAD029/00001
 2 - The waste described below is to be removed from (Name, address, postcode, telephone, email, facsimile):
 3 - Premises Code (where applicable): CAD029
 4 - The waste will be taken to (name, address and postcode):
 CASTLE ENVIRONMENTAL, CLIPPER ROAD,
 ROATH DOCK, CARDIFF, CF10 4LX
 Consignor: JOHN DARMANIN
 Consignee: NEAL SOIL SUPPLIES LTD,
 TY-TO-MAEN FARM, NEWTON ROAD,
 RUMNEY, CARDIFF, CF3 2EJ
 Tel: 029 2079 7835
 Tel: 02920 496467
 Fax: [blank]

Part B - Description of the waste

1 - Process Giving Rise to the Waste was: Demolition and wrecking of buildings; earth moving
 2 - SIC for the process giving rise to the waste: 28.92/2
 3 - Waste Details (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC code) (6 digits)	Quantity (kg)	The chemical/biological components of the waste and their concentrations are:		Physical Form (gas, liquid, solid, powder, sludge or mixed)	Hazard code(s)	Container number; type and size
			Component	Concentration (% or mg/kg)			
Oil and Water	16 07 08*	0	hydrocarbons	5%	Liquid	HP14 HP 7	1 X Tanker Hire

EWC Code	Packing group(s)	Tunnel Code	UN Identification number(s)	Proper shipping name(s)	UN Class(es)	Special handling requirements
6 07 08*			9999	N	0	

Part C - Carrier's Certificate

If more than one carrier is used, please attach schedule for subsequent carriers. If a schedule of carriers is attached tick here:

I certify that I today collected the consignment and that the details in A2, A4 and B3 are correct and I have been advised of any specific handling requirements.

Carrier Name: [blank]

On behalf of (name, address, postcode, telephone, e-mail, facsimile):
 EGAN WASTE SERVICES, UNIT A15, SEVERN ROAD, TREForest IND
 TONYPRIDD CF37 5TA, 01443 841833
 Tel: [blank] Fax: [blank]

Carriers Registration Number / reason for exemption:
 NP3497SR

Vehicle Registration no. (or mode of transport if not road):
 CB63 LSS

Signature: [Signature]
 Date: 14/1/16 Time: [blank]

Part D - Consignor's certificate

I certify that the information in A, B, and C above are correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I, the waste producer/holder/transferor, confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the waste (England and Wales) Regulations 2011

1 - Consignor Name:
 On behalf of (name, address, postcode, telephone, e-mail, facsimile):
 NEAL SOIL SUPPLIES LTD, TY-TO-MAEN FARM, NEWTON ROAD,
 RUMNEY, CARDIFF, CF3 2EJ
 Tel: 029 2079 7835 Fax: [blank] Email: [blank]

Signature: [Signature]
 Date: 19/1/2016 Time: [blank]

Part E - Consignee's certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

Individual EWC Code(s) received	Quantity of each EWC code received (Kg)	EWC Code Accepted / Rejected	Waste Management operation (R or D code)
6 07 08*			

- I received this waste at the address given in A4 on: Date: [blank] Time: [blank]

- Vehicle registration no. (or mode of transport if not road): [blank] Name: [blank]

- Where waste is rejected please provide details: [blank] on behalf of (name, address, postcode, email, facsimile): [blank]

I certify that waste management licence / permit / authorised exemption no(s): [blank] Signature: [blank]

I authorise the management of the waste described in B at the address given in A4. Date: [blank] Time: [blank]

The Hazardous Waste Regulations 2005:
Consignment Note

Consignor's / Carrier's / Consignee's copy (Delete as appropriate)



Part A - Notification Details

1 - Consignment note code: CAD029/00002
 2 - The waste described below is to be removed from (Name, address, postcode, telephone, email, facsimile):
 c: JOHN DARMANIN NEAL SOIL SUPPLIES LTD,
 t: 029 2079 7835 TY-TO-MAEN FARM, NEWTON ROAD,
 RUMNEY, CARDIFF, CF3 2EJ
 f: e:
 3 - Premises Code (where applicable): CAD029
 4 - The waste will be taken to (name, address and postcode):
 CASTLE ENVIRONMENTAL, CLIPPER ROAD,
 ROATH DOCK, CARDIFF, CF10 4LX
 t: 02920 496467 c:

Part B - Description of the waste

1 - Process Giving Rise to the Waste was: Demolition and wrecking of buildings; earth moving
 2 - SIC for the process giving rise to the waste: 28.92/2
 3 - Waste Details (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC code) (6 digits)	Quantity (kg)	The chemical/biological components of the waste and their concentrations are:		Physical Form (gas, liquid, solid, powder, sludge or mixed)	Hazard code(s)	Container number; type and size
			Component	Concentration (% or mg/kg)			
Oil and Water	16 07 08*	11500	hydrocarbons	5%	Liquid	HP14 HP 7	1 X Tanker Hire
EWC Code	Packing group(s)	Tunnel Code	UN Identification number(s)	Proper shipping name(s)	UN Class(es)	Special handling requirements	
16 07 08*			9999	N	0		

Part C - Carrier's Certificate

(If more than one carrier is used, please attach schedule for subsequent carriers. If a schedule of carriers is attached tick here.)
 I certify that I today collected the consignment and that the details in A2, A4 and B3 are correct and I have been advised of any specific handling requirements.

1 - Carrier Name:
 On behalf of (name, address, postcode, telephone, e-mail, facsimile)
 EGAN WASTE SERVICES, UNIT A15, SEVERN ROAD, TREFOREST INDUSTRIAL ESTATE, PONTYPRIDD CF37 5TA, 01443 841833
 f: e:

2 - Carriers Registration Number / reason for exemption:
 CB/NP3497SR
 3 - Vehicle Registration no. (or mode of transport if not road):
 CE63LJJ
 Signature:
 Date: 26/1/06 Time:

Part D - Consignor's certificate

I certify that the information in A, B, and C above are correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I, the waste producer/holder/transferor, confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the waste (England and Wales) Regulations 2011
 1- Consignor Name:
 On behalf of (name, address, postcode, telephone, e-mail, facsimile):
 NEAL SOIL SUPPLIES LTD, TY-TO-MAEN FARM, NEWTON ROAD, RUMNEY, CARDIFF, CF3 2EJ
 t: 029 2079 7835
 Signature:
 Date: 26/1/06 Time:

Part E - Consignee's certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

Individual EWC Code(s) received	Quantity of each EWC code received (Kg)	EWC Code Accepted / Rejected	Waste Management operation (R or D code)
16 07 08*			

1 - I received this waste at the address given in A4 on: Date: Time:
 2 - Vehicle registration no. (or mode of transport if not road): Name:
 3 - Where waste is rejected please provide details: on behalf of (name, address, postcode, email, facsimile)

I certify that waste management licence / permit / authorised exemption no(s)

authorises the management of the waste described in B at the address given in A4.

Signature:
 Date: Time:



Atlantic Eco Park
Newton Road
Rumney
Cardiff
CF3 2EJ

Tel: (029) 2079 7835
Fax: (029) 2036 0043

www.neal-soils.co.uk

EA Site Permit: EPR/VP3095FS

Customer / Supplier EGAD WASTE
Haulier OWN
Vehicle Reg. No. CE63 LSS
Ref. No. WASH PLANT

Description of Goods OIL / WATER
--

Customer Signature

GOODS	TICKET No.
IN	117877
OUT	

Re-entered 1st Weight 14420 kg
--

Code	Consec. No.
	1451
Date	Time
8-11-05	1417
1st Weight 14420 kg	

Code	Consec. No.
	1452
Date	Time
8-11-05	1448
2nd Weight 25920 kg	

NET Weight 11500 kg

Driver's Signature

Weighbridge Operator's Signature



EGAN WASTE

Egan Waste Services Limited
 The Recycling Centre, unit A15,
 Severn Road, Treforest Industrial Estate,
 Pontypridd, CF37 5TA
 Tel: 01443 841833 Fax: 01443 842801
 enquiries@eganwasteservices.co.uk
 www.eganwasteservices.co.uk

Date: **26/01/2016**

Ticket Number: 148902

CONTROLLED WASTE TRANSFER NOTE

Licence No.: CB/NP3497SR

Invoicing Address Customer NEAL NEAL SOIL SUPPLIES LTD TY-TO-MAEN FARM NEWTON ROAD RUMNEY CARDIFF CF3 2EJ Telephone 029 2079 7835 Contact JOHN DARMANIN	A. Current Holder / Producer of Waste - Pick Up Point Site No. -1 NEAL SOIL SUPPLIES LTD TY-TO-MAEN FARM NEWTON ROAD RUMNEY CARDIFF CF3 2EJ SIC Code : 28.92/2 Main Location Telephone 029 2079 7835 Contact JOHN DARMANIN
---	--

Instructions
 Uplift Dirty water/oil from Holding tank in washplant. See Colin Jon for fittings

Job Description SERVICE OF 1 X Tanker Hire **Order No.**

B. Description of Waste Oil and Water - 16 07 08* <i>WATER + OIL</i>	Qty Last Visit 1 Qty Disposed <i>11.500</i>
--	--

Receiver/Collector Of Waste
 Egan Waste Services Ltd,
 The Recycling Centre, Unit A15, Severn Road,
 Treforest Industrial Estate, PontyPridd CF37 5TA

By signing Section D below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the waste (England and Wales) Regulations 2011
 Tick for Yes

C. Transfer Details Vehicle Reg CE63LJJ Date 26-January-2016 Time On Site Signed (Driver) <i>[Signature]</i> Full Name Colin Jonathon On Behalf of EGAN WASTE SERVICES LTD	Place of Transfer Castle Environmental Clipper Road Roath Dock Cardiff CF10 4LX	Signed Full Name On Behalf of
---	--	---

D. Delivery Note Service Received By

Customer Signature *[Signature]* Print *SB* Date



Waste Licence No: EPR/KP3636HB Waste Carriers No: CB/NP3497SR
 Company Registration Number: 4920542 VAT Registration Number: B21 7068 41



The Hazardous Waste Regulations 2005:

Consignment Note

Consignor's / Carrier's / Consignee's copy (Delete as appropriate)

Part A - Notification Details

1 - Consignment note code: CAD030/00002

4 - The waste will be taken to (name, address and postcode):

2 - The waste described below is to be removed from (Name, address, postcode, telephone, email, facsimile):

CASTLE ENVIRONMENTAL, CLIPPER ROAD, ROATH DOCK, CARDIFF, CF10 4LX

3 - JOHN DARMANIN
NEAL SOIL SUPPLIES LTD,
TY-TO-MAEN FARM, NEWTON ROAD,
RUMNEY, CARDIFF, CF3 2EJ

t: 02920 496467 c:

e:

- Premises Code (where applicable): CAD030

Part B - Description of the waste

- Process Giving Rise to the Waste was: Demolition and wrecking of buildings; earth moving 2 - SIC for the process giving rise to the waste: 28.92/2

- Waste Details (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC code) (6 digits)	Quantity (kg)	The chemical/biological components of the waste and their concentrations are:		Physical Form (gas, liquid, solid, powder, sludge or mixed)	Hazard code(s)	Container number; type and size
			Component	Concentration (% or mg/kg)			
Oil and Water	16 07 08*	13,500L	hydrocarbons	5%	Liquid	HP 7 HP14	1 X Tanker Hire

WC Code	Packing group(s)	Tunnel Code	UN Identification number(s)	Proper shipping name(s)	UN Class(es)	Special handling requirements
16 07 08*			9999	N	0	

Part C - Carrier's Certificate

more than one carrier is used, please attach schedule for subsequent carriers. (If schedule of carriers is attached tick here)

I certify that I today collected the consignment and that the details in A2, A4 and B3 are correct and I have been advised of any specific handling requirements.

Carrier Name: Steve Holt
on behalf of (name, address, postcode, telephone, e-mail, facsimile)

WASTE SERVICES, UNIT A15, SEVERN ROAD, TREForest IND
PONTYPRIDD CF37 5TA, 01443 841833
f: e:

Carriers Registration Number / reason for exemption:

NP3497SR

Vehicle Registration no. (or mode of transport if not road):

Signature: [Signature]

Date: 20/12/16 Time:

Part D - Consignor's certificate

I certify that the information in A, B, and C above are correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I, the waste producer/holder/transferor, confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the waste (England and Wales) Regulations 2011

1- Consignor Name: X D: TANNER

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

NEAL SOIL SUPPLIES LTD, TY-TO-MAEN FARM, NEWTON ROAD, RUMNEY, CARDIFF, CF3 2EJ

t: 029 2079 7835 f: e:

Signature: [Signature]

Date: 20/12/16 Time:

Part E - Consignee's certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

Individual EWC Code(s) received	Quantity of each EWC code received (Kg)	EWC Code Accepted / Rejected	Waste Management operation (R or D code)
16 07 08*			

I received this waste at the address given in A4 on: Date: Time:

Vehicle registration no. (or mode of transport if not road): Name:

If the waste is rejected please provide details: on behalf of (name, address, postcode, email, facsimile)

I certify that waste management licence / permit / authorised exemption no(s)

Signature:

I authorises the management of the waste described in B at the address given in A4.

Date:

Time:



Atlantic Eco Park
Newton Road
Rumney
Cardiff
CF3 2EJ

Tel: (029) 2079 7835
Fax: (029) 2036 0043
www.neal-soils.co.uk

EA Site Permit: EPR/VP3095FS

Customer / Supplier
EGAN WASTE
Haulier
OWN
Vehicle Reg. No.
KSOP VMD
Ref. No.

Description of Goods
Oil a waste from wasabent

Customer Signature

GOODS	TICKET No.
IN OUT	133769

Re-entered 1st Weight
15140 kg

Code	Consec. No.
	06190
Date	Time
10-12-16	14:27
1st Weight	
15140 kg	

Code	Consec. No.
	06190
Date	Time
10-12-16	15:00
2nd Weight	
29160 kg	

NET Weight
13020 kg

Driver's Signature

Weighbridge Operator's Signature



Egan Waste Services Limited
 The Recycling Centre, unit A15,
 Severn Road, Treforest Industrial Estate,
 Pontypridd, CF37 5TA
 Tel: 01443 841833 Fax: 01443 842801
 enquiries@eganwasteservices.co.uk
 www.eganwasteservices.co.uk

Date: **20/12/2016**

Ticket Number: 154925

Licence No.: CBDU5859

CONTROLLED WASTE TRANSFER NOTE

Invoicing Address Customer NEAL NEAL SOIL SUPPLIES LTD TY-TO-MAEN FARM NEWTON ROAD RUMNEY CARDIFF CF3 2EJ Telephone 029 2079 7835 Contact JOHN DARMANIN	A. Current Holder / Producer of Waste - Pick Up Point Site No. -1 NEAL SOIL SUPPLIES LTD TY-TO-MAEN FARM NEWTON ROAD RUMNEY CARDIFF CF3 2EJ SIC Code : 28.92/2 Main Location Telephone 029 2079 7835 Contact JOHN DARMANIN
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Instructions
 Uplift Dirty water/oil from Holding tank in washplant

Job Description SERVICE OF 1 X Tanker Hire * **Order No.** LIAM WASHPLANT

B. Description of Waste Oil and Water - 16 07 08*	Qty Last Visit 1 Qty Disposed 13,500L
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Receiver/Collector Of Waste Egan Waste Services Ltd, The Recycling Centre, Unit A15, Severn Road, Treforest Industrial Estate, PontyPridd CF37 5TA	By signing Section D below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the waste (England and Wales) Regulations 2011 Tick for Yes
--	--

C. Transfer Details Vehicle Reg KS08VMD Date 20-December-2016 Time On Site Signed (Driver) Full Name Steven Holt On Behalf of EGAN WASTE SERVICES LTD	Place of Transfer Castle Environmental Clipper Road Roath Dock Cardiff CF10 4LX Signed Full Name On Behalf of
--	--

D. Delivery Note Service Received By

Customer Signature Print **D. TANNER** Date



Waste Licence No: EPR/KP3636HB Waste Carriers No: CB/NP3497SR
 Company Registration Number: 4920542 VAT Registration Number: 821 7068 41



Waste Disposal Tickets for the Light Debris

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
188730	09/06/2016	16:15	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.62	23.50	5.12
188740	09/06/2016	16:57	DUMPER1	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.96	23.50	5.46
188745	09/06/2016	17:21	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.78	23.50	4.28
189035	14/06/2016	14:54	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.72	24.50	6.22
189038	14/06/2016	15:06	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.72	23.50	10.22
189040	14/06/2016	15:14	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.44	24.50	8.94
189041	14/06/2016	15:18	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.98	23.50	9.48
189047	14/06/2016	15:30	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.98	23.50	10.48
189050	14/06/2016	15:35	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.42	24.50	9.92
189052	14/06/2016	15:43	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.82	23.50	11.32
189054	14/06/2016	15:55	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	37.62	23.50	14.12
189057	14/06/2016	16:02	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.24	23.50	11.74

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
189059	14/06/2016	16:16	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	39.08	23.50	15.58
189072	15/06/2016	07:30	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.38	23.50	2.88
189114	15/06/2016	10:43	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	36.10	24.50	11.60
189123	15/06/2016	11:06	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	38.28	24.50	13.78
189127	15/06/2016	11:19	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.48	24.50	9.98
189130	15/06/2016	11:37	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.50	24.50	10.00
189299	16/06/2016	16:31	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.68	24.50	11.18
189300	16/06/2016	16:36	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	38.32	23.50	14.82
189302	16/06/2016	16:50	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.58	24.50	11.08
189598	22/06/2016	08:14	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	42.54	23.50	19.04
189601	22/06/2016	08:35	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.46	23.50	8.96
189685	23/06/2016	07:56	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	41.30	23.50	17.80
189692	23/06/2016	08:15	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.60	23.50	12.10

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
189886	25/06/2016	09:39	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.54	23.50	12.04
189937	27/06/2016	11:58	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.78	23.50	7.28
189938	27/06/2016	12:12	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.00	23.50	8.50
189939	27/06/2016	12:22	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.40	24.50	8.90
189941	27/06/2016	12:42	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.78	23.50	5.28
189943	27/06/2016	12:56	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.36	24.50	8.86
189946	27/06/2016	13:08	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.10	23.50	9.60
189949	27/06/2016	13:14	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.54	24.50	4.04
189960	27/06/2016	14:30	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.12	23.50	2.62
190211	30/06/2016	08:45	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.70	23.50	10.20
190512	04/07/2016	17:09	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.12	23.50	10.62
190675	06/07/2016	10:44	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.00	23.50	11.50

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
190679	06/07/2016	10:58	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.84	23.50	12.34
191532	16/07/2016	11:44	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.44	27.50	7.94
191533	16/07/2016	12:01	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.42	27.50	6.92
191534	16/07/2016	12:21	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.98	27.50	5.48
191535	16/07/2016	12:34	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.54	27.50	3.04
191781	19/07/2016	16:44	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.52	23.50	3.02
191786	19/07/2016	17:03	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.56	23.50	4.06
191882	20/07/2016	15:23	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.04	23.50	11.54
193059	02/08/2016	14:49	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	39.02	27.50	11.52
193074	02/08/2016	15:27	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.38	23.50	6.88
193083	02/08/2016	16:16	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.40	23.50	5.90
193086	02/08/2016	16:38	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.12	23.50	5.62
193090	02/08/2016	16:59	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.56	23.50	7.06

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
193108	03/08/2016	07:33	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.14	23.50	8.64
193117	03/08/2016	08:13	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.64	27.50	6.14
193318	04/08/2016	12:31	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.58	23.50	12.08
193326	04/08/2016	12:59	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	37.00	23.50	13.50
193328	04/08/2016	13:17	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.46	23.50	3.96
193554	08/08/2016	11:19	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.20	23.50	3.70
193563	08/08/2016	12:57	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.64	23.50	3.14
193895	11/08/2016	11:34	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.28	23.50	8.78
193897	11/08/2016	11:50	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.10	23.50	8.60
194049	12/08/2016	15:51	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.02	23.50	8.52
194050	12/08/2016	15:58	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.72	23.50	6.22
194818	23/08/2016	15:25	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.38	14.00	18.38

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
194820	23/08/2016	15:29	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.12	14.00	16.12
194821	23/08/2016	15:36	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	31.86	14.00	17.86
194824	23/08/2016	15:46	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.26	14.00	20.26
194828	23/08/2016	16:17	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.50	13.00	16.50
194853	24/08/2016	07:37	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	41.40	23.50	17.90
194856	24/08/2016	07:55	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	42.20	23.50	18.70
194864	24/08/2016	08:25	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	43.34	23.50	19.84
194923	24/08/2016	14:53	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	31.64	13.80	17.84
194926	24/08/2016	15:06	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	36.32	14.00	22.32
194929	24/08/2016	15:10	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	37.10	14.00	23.10
194931	24/08/2016	15:16	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	31.94	14.00	17.94
194936	24/08/2016	15:28	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.82	14.00	21.82
194937	24/08/2016	15:33	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	31.24	12.98	18.26

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
194939	24/08/2016	15:41	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.58	14.00	18.58
194943	24/08/2016	15:46	V197KFM	Neal Soil Suppliers Ltd	General Waste	Neal Soil Suppliers Ltd	37.48	14.00	23.48
194944	24/08/2016	15:51	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	36.44	14.00	22.44
194945	24/08/2016	15:58	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.00	14.00	16.00
194947	24/08/2016	16:01	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.90	14.00	21.90
194950	24/08/2016	16:12	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.20	14.00	19.20
195871	07/09/2016	09:41	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.04	13.00	15.04
195890	07/09/2016	11:18	V197KFM	Neal Soil Suppliers Ltd	General Waste	Neal Soil Suppliers Ltd	26.48	13.00	13.48
195893	07/09/2016	11:48	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.44	13.00	14.44
195897	07/09/2016	12:10	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.74	13.00	13.74
195899	07/09/2016	12:41	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.32	13.00	15.32
195903	07/09/2016	13:07	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.26	13.00	15.26

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
195921	07/09/2016	15:05	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.72	13.00	14.72
195926	07/09/2016	15:27	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	22.68	13.00	9.68
195934	07/09/2016	15:49	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.34	13.00	15.34
195945	07/09/2016	16:39	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.66	13.00	13.66
195963	08/09/2016	07:55	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	17.86	13.00	4.86
195969	08/09/2016	08:04	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.30	13.00	14.30
195994	08/09/2016	10:59	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.26	13.00	16.26
195998	08/09/2016	11:10	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.44	13.00	14.44
196000	08/09/2016	11:46	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.30	0.00	27.30
196001	08/09/2016	11:49	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.00	13.00	19.00
196004	08/09/2016	12:13	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	31.74	13.00	18.74
196007	08/09/2016	12:42	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.50	13.00	16.50
196013	08/09/2016	13:15	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.28	13.00	15.28

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
196020	08/09/2016	14:17	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.30	13.00	16.30
196033	08/09/2016	14:54	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.60	13.00	16.60
196036	08/09/2016	14:58	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.52	13.00	16.52
196040	08/09/2016	15:27	V197KFM	Neal Soil Suppliers Ltd	General Waste	Neal Soil Suppliers Ltd	25.20	13.00	12.20
196043	08/09/2016	15:46	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.48	13.00	15.48
196047	08/09/2016	15:59	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.62	13.00	15.62
196058	08/09/2016	16:26	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.42	13.00	17.42
196063	08/09/2016	17:14	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.40	13.00	16.40
196083	09/09/2016	07:55	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	31.92	13.00	18.92
196091	09/09/2016	08:45	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.96	13.00	17.96
196098	09/09/2016	09:16	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.18	13.00	15.18
196099	09/09/2016	09:25	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.40	13.00	16.40

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
196105	09/09/2016	09:46	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.68	13.00	17.68
196114	09/09/2016	10:35	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	31.42	13.00	18.42
196129	09/09/2016	11:41	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.96	13.00	16.96
196131	09/09/2016	12:00	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.26	13.00	16.26
196132	09/09/2016	12:14	V197KFM	Neal Soil Suppliers Ltd	General Waste	Neal Soil Suppliers Ltd	29.92	13.00	16.92
196137	09/09/2016	12:32	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.74	13.00	16.74
196140	09/09/2016	12:48	V197KFM	Neal Soil Suppliers Ltd	General Waste	Neal Soil Suppliers Ltd	28.42	13.00	15.42
196149	09/09/2016	13:09	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.50	13.00	19.50
196151	09/09/2016	13:24	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.22	13.00	17.22
196160	09/09/2016	14:16	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	25.64	13.00	12.64
196176	09/09/2016	15:01	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	23.88	13.00	10.88
196177	09/09/2016	15:08	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	25.60	13.00	12.60
196180	09/09/2016	15:25	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.32	13.00	14.32

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
196182	09/09/2016	15:36	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	21.50	13.00	8.50
196184	09/09/2016	16:00	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	21.68	13.00	8.68
196191	09/09/2016	16:54	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	24.80	13.00	11.80
196208	10/09/2016	08:40	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	36.02	23.50	12.52
196211	10/09/2016	09:13	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.72	23.50	12.22
196216	10/09/2016	09:48	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.84	23.50	10.34
196222	10/09/2016	11:28	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	38.90	23.50	15.40
196224	10/09/2016	11:46	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.46	23.50	10.96
196227	10/09/2016	12:13	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	36.08	23.50	12.58
196331	12/09/2016	15:33	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	39.96	23.50	16.46
196340	12/09/2016	15:57	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	38.96	23.50	15.46
196347	12/09/2016	16:27	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.24	23.50	10.74

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
196381	13/09/2016	08:04	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.66	23.50	3.16
196544	14/09/2016	11:52	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.48	13.00	15.48
196549	14/09/2016	12:33	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.30	13.00	15.30
196556	14/09/2016	13:16	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.06	13.00	14.06
196572	14/09/2016	14:26	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	24.46	13.00	11.46
196759	16/09/2016	08:18	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.88	13.00	13.88
196765	16/09/2016	08:50	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	22.56	13.00	9.56
196772	16/09/2016	09:17	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	19.72	13.00	6.72
196890	19/09/2016	09:11	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.80	13.00	16.80
196899	19/09/2016	09:43	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	25.24	13.00	12.24
196917	19/09/2016	10:52	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.52	13.00	14.52
196939	19/09/2016	11:15	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.26	13.00	13.26
196956	19/09/2016	11:37	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	24.76	13.00	11.76

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
96961	19/09/2016	12:01	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	18.38	13.00	5.38
197033	20/09/2016	07:47	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	48.28	23.50	24.78
197053	20/09/2016	09:39	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	51.00	23.50	27.50
197170	21/09/2016	09:06	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.38	13.00	13.38
197213	21/09/2016	12:22	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.94	13.00	14.94
197216	21/09/2016	13:00	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.28	13.00	14.28
197283	22/09/2016	09:00	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	19.74	13.00	6.74
197292	22/09/2016	09:27	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	25.90	13.00	12.90
197329	22/09/2016	12:04	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	22.06	13.00	9.06
197331	22/09/2016	12:26	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	23.02	13.00	10.02
197388	22/09/2016	14:41	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	25.78	13.00	12.78
197389	22/09/2016	16:32	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	25.18	13.00	12.18

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
197485	23/09/2016	14:42	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	19.72	13.00	6.72
197861	28/09/2016	15:34	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	27.28	23.50	3.78
197862	28/09/2016	15:41	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.40	23.50	6.90
197990	29/09/2016	15:54	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	17.28	13.00	4.28
198107	01/10/2016	08:09	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	21.88	13.00	8.88
198108	01/10/2016	08:38	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	18.06	13.00	5.06
198113	01/10/2016	10:07	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.22	13.00	21.22
198127	03/10/2016	08:35	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.72	23.50	7.22
198135	03/10/2016	09:05	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.06	23.50	8.56
198394	05/10/2016	13:07	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	18.06	13.00	5.06
198798	10/10/2016	16:50	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	18.22	14.00	4.22
198943	12/10/2016	08:45	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	16.30	13.00	3.30
199042	13/10/2016	07:53	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	25.32	13.50	11.82

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
199624	21/10/2016	08:29	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	20.56	13.00	7.56
199733	22/10/2016	09:45	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.72	23.50	6.22
199734	22/10/2016	09:50	DUMPER	Neal Soil Suppliers Ltd	General Waste	Neal Soil Suppliers Ltd	33.34	23.50	9.84
199882	25/10/2016	11:17	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.92	14.00	12.92
199966	26/10/2016	09:54	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.42	14.00	15.42
200050	26/10/2016	06:46	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.04	23.50	8.54
200087	27/10/2016	11:17	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	17.64	14.00	3.64
200324	31/10/2016	12:38	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	18.36	14.00	4.36
200569	02/11/2016	14:39	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.52	22.50	6.02
200821	04/11/2016	15:43	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	20.82	13.00	7.82
200830	04/11/2016	16:20	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	22.06	14.00	8.06

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
200971	08/11/2016	09:53	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	18.88	14.00	4.88
201127	09/11/2016	16:06	V197KFM	Neal Soil Suppliers Ltd	General Waste	Neal Soil Suppliers Ltd	19.26	14.00	5.26
201133	09/11/2016	16:32	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	21.02	14.00	7.02
201213	10/11/2016	15:40	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.90	23.50	6.40
201217	10/11/2016	15:55	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	19.04	14.00	5.04
201283	11/11/2016	11:27	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.42	23.50	5.92
201326	11/11/2016	15:48	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	16.42	14.00	2.42
201665	16/11/2016	17:03	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	19.68	14.00	5.68
201728	17/11/2016	10:51	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.46	24.50	8.96
201828	17/11/2016	17:13	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	16.88	13.00	3.88
201969	18/11/2016	16:53	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	15.70	13.00	2.70
202337	24/11/2016	15:51	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.34	23.50	5.84
202342	24/11/2016	16:14	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.08	23.50	4.58

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
202434	25/11/2016	15:54	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.18	23.50	6.68
202550	28/11/2016	17:00	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.34	23.50	2.84
202552	28/11/2016	17:11	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.42	23.50	6.92
202553	28/11/2016	17:28	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.28	23.50	6.78
202650	29/11/2016	16:11	V197KFM	Neal Soil Suppliers Ltd	General Waste	Neal Soil Suppliers Ltd	18.34	13.00	5.34
202652	29/11/2016	16:40	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	21.94	13.00	8.94
202762	30/11/2016	16:30	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	24.32	13.00	11.32
202764	30/11/2016	16:47	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	17.44	13.00	4.44
202876	01/12/2016	16:38	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	21.26	13.00	8.26
203055	05/12/2016	12:54	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	21.18	13.00	8.18
203090	05/12/2016	16:50	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	19.46	13.00	6.46
203119	06/12/2016	09:59	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	22.22	13.00	9.22

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
203141	06/12/2016	11:36	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	21.44	13.00	8.44
203210	06/12/2016	16:36	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.30	23.50	10.80
203319	07/12/2016	16:26	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.16	23.50	10.66
203321	07/12/2016	16:56	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.48	23.50	9.98
203416	08/12/2016	16:30	V197KFM	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	24.60	13.40	11.20
203499	09/12/2016	16:28	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.60	23.50	6.10
203500	09/12/2016	16:32	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	31.58	23.50	8.08
203524	10/12/2016	12:40	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	32.40	23.50	8.90
203601	12/12/2016	16:52	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	34.36	23.50	10.86
203656	13/12/2016	13:24	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	35.60	23.50	12.10
203684	13/12/2016	16:13	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	26.46	23.50	2.96
203780	14/12/2016	16:00	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	33.98	23.50	10.48
203883	15/12/2016	15:46	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.20	23.50	4.70

Weighbridge Transaction Audit Report

Between 01/01/2016 and 31/12/2016

Ticket Number	Date	Time	Vehicle Number	Customer Name	Product Type	Source	Gross Weight	Tare Weight	Net Weight
203998	17/12/2016	12:33	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.22	23.50	4.72
204088	19/12/2016	16:40	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	28.68	23.50	5.18
204182	20/12/2016	16:22	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.40	23.50	6.90
204297	21/12/2016	15:56	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	29.50	23.50	6.00
204307	21/12/2016	16:15	DUMPER	Neal Soil Suppliers Ltd	General Waste	NEALS WASH PLANT	30.18	24.50	5.68
							6,763.00	4,186.18	2576.82

Performance Parameters in Schedule 4

Permit Number: EPR/VP3095FS

Operator: Neal Soil Suppliers Ltd

Facility: Neal Soil Suppliers Limited

Form Number: WaterUsage1/ 08/03/12

Reporting of Water Usage for the year ~~XXXX~~ 2016

Water Source	Usage (m ³ /year)	Specific Usage (m ³ /unit output)
NIL	NIL	
TOTAL WATER USAGE	NIL	

Operator's comments : ADDITIONAL WATER USAGE : THIS HAS BEEN OBTAINED FROM OUR OWN INTERCEPTOR DITCH ON SITE FOR THE TOPPING UP OF THE WASH PLANT .

Signed *F Edwards*
(authorised to sign as representative of Operator)

Date 17/01/17 .

Drafting note: if the operator is required to submit Resource Efficiency Physical Index (REPI) data to the Pollution Inventory, please ensure that no metrics are repeated in this reporting form.

Permit Number: EPR/VP3095FS

Operator: Neal Soil Suppliers Ltd

Facility: Neal Soil Suppliers Limited

Form Number: Energy1 / 08/03/12

Reporting of Energy Usage for the year ~~YYYY~~ 2016.

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity *	MWh		
DIESEL	228,878 LTRS.		
TOTAL	- 228,878 LTRS.		

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments :

Signed *A Schwabe*
(Authorised to sign as representative of Operator)

Date: 17/01/2017

Drafting note: if the operator is required to submit Resource Efficiency Physical Index (REPI) data to the Pollution Inventory, please ensure that no metrics are repeated in this reporting form.

