

**New Settlement Area, Heyford Park
Oxfordshire**

**Dorchester Phase 1b: Area 2
Remediation Earthworks
Completion Report**

For: Urban Regen Ltd.

February 2016

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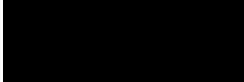

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1. Introduction

- 1.1. Planning permission for the redevelopment of the former RAF/USAF Upper Heyford airbase was granted by Cherwell District Council (CDC) on the 2nd November 2012, reference 10/01642/OUT. The site, converted to commercial and residential uses is known as Heyford Park, and is divided between the Flying Field Area (FFA) and New Settlement Area (NSA). Urban Regen Ltd. (URL) was instructed by the consortium of Dorchester Heyford Park Group Ltd and Bovis Homes to carry out demolition, remediation and preparatory earthworks across the NSA to prepare various zones for residential development. Dorchester Group and Bovis have divided the site into a number of development phases, and the URL works are referenced to these various phases.
- 1.2. The above planning consent contains the following conditions relating to contamination remediation:

24	<p><i>No operational development approved by this planning permission shall take place (or such other date or stage in development as may be agreed in writing with the Local Planning Authority), until the following components of a scheme to deal with the risks associated with contamination of the site shall each be submitted to and approved, in writing, by the local planning authority:</i></p> <p>a. <i>A preliminary risk assessment which has identified:</i></p> <p>(i) <i>- all previous uses.</i></p> <p>(ii) <i>- potential contaminants associated with those uses.</i></p> <p>b. <i>A conceptual model of the site indicating sources, pathways and receptors.</i></p> <p>c. <i>Potentially unacceptable risks arising from contamination at the site.</i></p> <p>d. <i>A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.</i></p> <p>e. <i>The site investigation results and the detailed risk assessment (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.</i></p> <p>f. <i>A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.</i> <i>Any changes to these components require the express consent of the local planning authority. The scheme shall be implemented as approved.</i></p>
25	<p><i>Prior to occupation of any new build dwellings, a verification report demonstrating completion of the works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved, in writing, by the local planning authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include any plan (a "long-term monitoring and maintenance plan") for longer-term monitoring of pollutant linkages,</i></p>

26	<p><i>maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the local planning authority.</i></p> <p><i>If during development contamination not previously identified is found to be present at the site then no further development within 20m of the contamination shall be carried out until the developer has submitted to and obtained written approval from the local planning authority for an addendum to the method statement. This addendum to the method statement shall detail how this unsuspected contamination will be remediated (if necessary) and thereafter this will be carried out as approved before any development within 20m recommences. Following completion of any such additional remediation, a verification report shall be submitted within 3 months of the completion of the works for the approval of the Local Planning Authority in writing.</i></p>
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- 1.3. A Remediation Strategy (ref: EED10658-109_S_12.2.3_FA, September 2012) prepared by Waterman Energy, Environment and Design Ltd. (Waterman) on behalf of Dorchester Group, together with a Demolition and Remediation Method Statement produced by Vertase F.L.I Ltd. were submitted to the Local Planning Authority (Cherwell District Council). The Council subsequently approved the discharge of Condition 24 on 2/11/12. Whilst the role of Waterman has changed within the remediation scheme, and Vertase FLI is no longer involved in the site, the principles of the remediation strategy remain the same, and have been adopted by URL in their role as Principal Contractor to Dorchester Group and Bovis.
- 1.4. For clarity, SGP re-submitted an updated Remediation Strategy (R1742-R01-v3) in April 2014 that reflects the changed contractual circumstances with respect to contamination remediation. Approval of the revised Strategy was received from the EHO in October 2014; however the completed works as detailed within this report were completed in accordance with that of the Waterman Strategy.
- 1.5. Smith Grant LLP (SGP) has been instructed by URL to advise upon the implementation of the remediation works and to carry out all necessary inspections and monitoring of the works and to prepare all necessary verification reports as the preparatory earthworks in each phase are completed by URL. This verification reporting is intended to assist in the discharge of Condition 25 (although some aspects can only be completed by the developers). SGP also assesses whether the requirements of Condition 26 relating to previously unidentified contamination need to be invoked.
- 1.6. This report deals with the completion of remediation by URL for Dorchester Group (the Developer) across Dorchester Phase D1b: Area 2. The site location is shown below and the site boundary that makes up the wider Dorchester Phase 1b area (D1B) and the sub-phase area (referred to by the Developer as Phase 3) is marked on Drawing D02. A separate Completion Report (R1742-R07-v2) was submitted for the sub-phase handover area of Dorchester Phase D1b: Area 1 in November 2014.

- 1.7. A development layout plan has not been provided however it is anticipated that the development will consist of a variety of detached, semi-detached and terraced housing with private gardens and associated infrastructure.

Figure 1.1 Approximate boundary of Phase D1B: Area 2



- 1.8. SGP has regularly inspected the URL preparatory earthworks carried out to date, and has collected samples of the stripped or replaced soil surfaces and aggregate for determination of compliance with the agreed quality standards. This report describes the works carried out, drawing conclusions and making recommendations concerning the further works required by Dorchester in order to fully discharge Planning Conditions 25 and 26.

2. Remediation Strategy

2.1. Expected Contamination

- 2.1.1. The wider development comprises an area of the former Upper Heyford Airbase, latterly developed and used by the United States Airforce, which has been decommissioned and is used in part for civilian purposes, including commercial and residential uses as part of Heyford Park. Identified known or potential contamination sources determined from the historical uses of the site and site investigations were generally found to be minor, consisting of low-level but pervasive contamination by metals / metalloids and PAHs, with localised hydrocarbons associated with bulk fuel storage tanks and the potential for asbestos in pipe laggings and gaskets, insulation board and cement-bound products, or as dispersed fibre in

made ground. The key identified contamination hot-spots in the wider site were associated with bulk underground fuel storage tanks (USTs).

2.1.2. Natural background contamination may be present in the bedrock and soils. The site lies within or adjacent to the "ironstone domain" as described in DEFRA Technical Guidance Sheet TGS01 "Arsenic", July 2012; the site lies within 1km of mapped outcrops of ironstones within the Jurassic sedimentary rocks. Within the ironstone domain, the normal background concentration (NBC) of arsenic is reported to be 220 mg/kg; the NBC is defined as the upper 95% confidence limit of the 95th percentile of topsoil concentrations. The normal background concentration of vanadium within the ironstone domain is reported by BGS to be >128 mg/kg. Both values substantially exceed the Remediation Strategy Table B1 criteria for cover soils.

2.2. Remediation Objectives and Approach

2.2.1. The key contamination remediation objectives are to:

- create a significant betterment of the groundwater environment thereby protecting groundwater quality at and beyond the site boundary;
- remove/remediate significant pollution sources such as hydrocarbon hot-spots, if present, that pose a risk to man and the environment, to the extent feasible;
- break significant or potentially significant future pollutant linkages resulting from the change of landuse, in particular related to shallow garden soils and human exposure;
- carry out further soil investigations/inspections to complete gaps in the existing investigation coverage;
- respond appropriately to contingencies in particular the discovery of previously undisclosed contamination;
- remove development constraints and prepare the site physically to enable residential development;
- manage all emissions to air and water to protect surface waters and groundwater and the atmosphere during the remediation works;
- provide appropriate additional protection measures where necessary, to be implemented during construction, including building gas barriers, water mains protection, and garden / open space soil quality and thickness.

2.2.2. The general requirements for garden and landscaped soils taken from the approved Remediation Strategy are as follows:

- provision of 600mm of clean soil cover over made ground materials within garden and landscaped areas;
- materials to be used as the garden/landscape soils must be suitable for use and validated, to comply with contamination targets set out in the Remediation Strategy at a rate of 1 sample per 500m³;

- imported soils used for cover purposes to comply with contamination targets set out in the approved Remediation Strategy at a rate of 1 sample per 250m³ with a minimum of 3 samples per source;
- in areas where natural uncontaminated soils are present following the site re-grade, clean topsoil may be required as a growing medium but there will be no requirement for a full 600mm of placed soil cover;

2.2.3. It is confirmed that the Dorchester D1B phase may be generally classed as “Green” under the NHBC classification scheme with no special measures required to address risks posed by ground gas. A localised area of residual heavy fuel oil within bedrock was present in the area of former borehole BH-NSA-06 following remediation of the source area (underground storage tanks UG-NSA1 – 3); in the absence of post-remediation ground gas monitoring, precautionary building gas protection measures are recommended in this area.

2.3. Site Characterisation

2.3.1. Area 2 of the wider Dorchester Phase 1b area extends to about 7.4 ha and was previously occupied by 31 buildings, roads and grassed areas. Buildings formerly located within the D1B-Area2 are detailed in the table below:

Table 2.1 Buildings formerly located within the D1B-Area2

Building Number	Building Use	Date of Construction
441, 467	Boiler House	1970
445, 446	Barrack Blocks	1970/72
449, 484	Disused	1940/77
459	Single Sergeants Quarters	1925
461	Cabin/Sheds	1939
465	Bunker/Command Centre	1935
466, 471, 483	Barracks; Block Type C	1925
467	Boiler House	1925
468	Office/Store	1940
470	Unknown	1940/77
481	Thrift Shop	1973
487	Electric Substation	1940
493	Petrol Station	1985
498, 500, 594	Barracks; Block Type H	1926
502	Offices	1939
529	Leisure Unit	1935
593, 596, 598	Barrack Block	1970-72
472A	Mess Complex	1939

472B	Recreation Centre	1939
UH11	Portacabin	-
UH9	Generator	Unknown

2.3.2. Two buildings (488 and 465) currently remain in the centre of D1B: Area 2. SGP understand that it is proposed that these buildings will remain as part of the re-development works.

2.3.3. Three clusters of tanks were present within the Phase D1B: Area 2 with the adjacent ground investigated by Jomas in 2011. SGP attended site on 20th November, 2013 to inspect the tanks and their contents.

2.3.4. The first set of tanks (UG-NSA-1- UG-NSA-3) was present in the north-west of the site and was associated with building 467, a former boiler house. Ground conditions observed during the initial intrusive investigation reported some hydrocarbon staining within the fissures of the limestone and sandstone bedrock at depths of between 2.5 - 4.8m bgl. Screening with a PID reported a maximum reading of 50.7 ppm at 2.7m bgl. The tanks were of steel construction of which two (UG-NSA-1 and UG-NSA-2) contained a slight sheen whilst UG-NSA-3 was found to contain ~54,000 litres (~14,000 US gallons) of heating oil based on the tank dimensions recorded. PID screening of the headspace recorded a maximum reading of 15.5 ppm in UG-NSA-1.

2.3.5. A monitoring well located approximately 11m to the south of the UG-NSA-1-3 tanks, BH-NSA-06, had previously recorded variable thicknesses of floating hydrocarbon product on the water table, although contamination had not been found to extend as far as a second line of wells subsequently installed down-gradient to the south (BH-NSA-42 – 44), about 40m from UG-NSA-1-3. Hydrocarbons that had historically leaked into bedrock were found to pose a low environmental risk and their remediation was considered not cost-effective and was therefore not required under the approved Remediation Strategy.

2.3.6. A second boiler house (building 441) with associated fuel tanks (UG-NSA-5 - UG-NSA-7) was also present in the south-west corner of the site. Contamination indicators were observed within borehole entry (BH-NSA-10) where a faint hydrocarbon odour (2.3 ppm) was observed within a horizon of silty clayey sand between 2.7-3.1m bgl. SGP observed an oily film/sheen within the water in the tanks which were of steel construction and were an estimated volume of ~ 55,000 litres (~14,500 US gallons). Screening of the headspace with a PID reported a maximum concentration of 3.4 ppm in UG-NSA-7.

2.3.7. The final set of tanks within the D1B: Area 2 was located in the north-east of the site associated with the former filling station (building 493). Ground adjacent to the tanks was previously investigated by borehole (BH-NSA-3) which reported a moderate hydrocarbon

odour with some staining within fissures in the limestone bedrock between 3.2 and 4.2 m bgl. Screening of arisings with a PID reported a reading of 7.8 ppm at 3.5m bgl and 14.2 ppm at 4.0m bgl. Inspection of the tanks prior to remediation identified that they were of steel construction with an estimated volume of ~23,000 litres (~6,000 US gallons) based on the dimensions recorded. Residual product (petrol) was present within base of the tanks and screening of the headspace reported a maximum reading 870 ppm in UG-NSA-20

2.3.8. Elsewhere, and outside services trenches, the site was found to generally have a thin veneer of made ground or tarmac to around 0.3m depth over sandy clayey gravel derived from the weathered limestone at around 1m depth. The former filling station was located on the site of an old stone quarry, however inspection of the fill surrounding the storage tanks (UG-NSA-16-20) only revealed clayey gravel and cobbles fill similar to the natural made ground elsewhere within the site, and contained within limestone bedrock surrounds.

2.4. Phase-specific Strategy

2.4.1. It was concluded that the Dorchester Phase 1B-Area 2 posed a localised risk of contamination associated with the former underground fuel tanks (UG-NSA-1-3, 5-7 and 16-20) and former buildings.

2.4.2. The site-wide strategy of ensuring clean cover soils to 600mm depth is considered to be appropriate approach. No requirement for hydrocarbon remediation of soils or groundwater was identified pending additional inspection / investigation of the former UST locations after emptying and removal of the tanks. The verification measures specific to dealing with USTs as set down in the approved Remediation Strategy were to be invoked with regard to the UG-NSA-1-3, UG-NSA-5-7 and US-NSA 16-20 locations.

3. Description of Works

3.1. General Approach

3.1.1. Preparatory works within Phase 1B: Area 2 included:

- soft strip and vegetation clearance;
- asbestos survey and strip in accessible buildings and structures;
- segregation of waste materials including wood, metal and plastic for recovery / disposal;
- demolition of all above ground structures.

3.1.2. Remediation earthworks within Phase 1b: Area 2 included:

- grubbing out of relict ground floor slabs, foundations, roadways and services down to natural strata;

- removal / treatment of underground storage tanks in accordance with the Remediation Strategy
- trim site surfaces to approximately -250mm below pre-existing ground levels
- crushing on-site of suitable hard materials (masonry, concrete and brick) to recover aggregate for reuse.

3.1.3. The works within the Phase D1b: Area 2, including site preparatory works, were carried out over the period from March 2014 and were completed by November 2014 with the exception of finalising development levels which SGP understands is to be completed by the developer.

3.1.4. The existing buildings were demolished following an asbestos survey carried out by a specialist sub-contractor. Removal of any asbestos containing material (ACM) from the buildings was carried out prior to demolition; copies of the asbestos survey reports and removal of ACM certificates are retained by URL and are available on request.

3.1.5. Shallow natural deposits of weathered limestone were present at surface levels following breaking out and removal of hard-standing. Bedrock of limestone underlies the weathered natural deposits and was encountered at a minimum depth of approximately 0.5m bgl.

3.1.6. Oversized materials (classed as those which may present an obstacle to sub-surface infrastructure and foundation construction), voids and relict structures such as foundations, drains and redundant infrastructure were removed. Recoverable materials such as concrete, brick and masonry were segregated before crushing to produce aggregate to be used by the developer as bulk fill or construction platform/sub-base under building footprints, roads and private gardens. Waste timbers were removed to a processing area in the north of the remaining Phase 1b area to undergo chipping prior to off-site removal. Scrap metal was sent for recycling.

3.1.7. An estimated 22,000m³ of site-generated aggregate has been placed within 5 temporary stockpiles (referred to as Agg-D1B-SE, Agg-D1B-W, Agg-D1B-NW, Agg-D1B-SW and Agg-D1B-Centre) which are intended to be handed over to the developer for use within the Ph1b: Area 2.

3.2 Contamination Hot-Spots

3.2.1 Three areas within the Phase D1b: Area 2 were determined as potential contamination hotspots due to the presence of underground fuel tanks (UG-NSA-1-3, UG-NSA-5-7 and UG-NSA-16-20), the locations of which are indicated on Drawing D01. Previous intrusive investigations around the USTs identified that residual contamination existed although this was generally limited to fissures within the shallow bedrock, however there was considered to be potential for significant hydrocarbon contamination.

- 3.2.2 Tanks were subject to emptying, purging and removal, followed by validation testing as described in Section 4 and 5. Contamination indicators encountered were considered indicative of a small quantity of potentially unacceptable contamination consisting of black hydrocarbon impacted gravel. Contaminated arisings were removed and placed on an impermeable membrane in a temporary quarantine area within Phase D1b: Area 2 with along with arisings generated from other UST remediation within the wider site.
- 3.2.3 Validation testing on the base and sidewalls of the excavation following tank and contaminated arisings removal was carried out by SGP in accordance with the Remediation Strategy.
- 3.2.4 Following removal of the UG-NSA-1-3 tanks and their bedding surrounds, it was noted that residual hydrocarbon was present in the south and southeast faces of the excavation at below around 2.4m depth, down to the water table at around 3.0m depth. The hydrocarbon was a viscous black liquid that was present in some joints and bedding planes within the weathered rock. This material was excavated back to solid bedrock during the remediation works and prior to validation testing.
- 3.2.5 Groundwater monitoring in BH-NSA-06 by SGP at the same time as the UG-NSA-1-3 remediation recorded an approximate 20mm thick layer of LNAPL (light non-aqueous phase liquid) at around 3.17m depth below ground level. PID monitoring of the borehole headspace recorded a VOC concentration of 7ppm. A sample of the LNAPL was found to comprise a weathered heavy fuel oil with the characteristics of low mobility, low solubility and low volatility, and appeared to be the same substance as observed in the bedrock on the southern wall of the UG-NSA-1-3 excavation. Further remediation of this material was not required, however precautionary recommendations are made with respect to building gas protection and water mains protection in the potentially affected area, as shown on drawing D11
- 3.2.6 Following a period of turnover by URL, SGP sampled the quarantined soil stockpile on 24.09.14 to identify whether hydrocarbon contamination had reduced to concentrations acceptable for retention on the site. Three samples 'HC Spile 1A – 1C' were collected and submitted for TPHCWG analysis (lab ref: 14-11667). Concentrations were below the remediation target criteria and the stockpile material was placed into the excavation void of UST 22-23.
- 3.3 Validation of Formation Level Strata
- 3.3.1 It is a requirement under the Remediation Strategy that a 600mm cover of clean soils over made ground is placed in garden areas, however due to the requirement to trim development areas by -200mm below existing ground levels, made ground was largely absent due to the

shallowness of natural strata. This meant that a 400mm depth of natural soil/ weathered rock will be left which could form part of the full 600mm of garden soil cover after placement of garden topsoil.

3.3.2 In-situ sampling of the formation level strata was carried out by sampling of the upper 400mm at a test frequency of 1 sample per 500m³, the residual depth 400mm depth equating to 1 sample per 1250m² plan area of development. Sixty one in-situ samples were collected from the exposed formation level with depth validation photos showing the 0-400mm soil profile. Samples were analysed for a suite of contaminants as specified within the Remediation Strategy.

3.3.3 Multiple or significantly elevated concentration exceedances within the in-situ sampling resulted in the collection of further validation samples to delineate areas around the exceedance and to provide further assessment.

3.4 Site Waste Management

3.4.1 As described, waste materials removed from the Phase D1b: Area 2 included timber, scrap metal, ACM and hydrocarbon impacted soils. Recovered wastes of metal and wood were temporarily stockpiled in the north of Phase D1B: Area 2 before off-site removal of further treatment and assessment.

3.4.2 Timber associated with beams, flooring and roof-trusses was recovered following demolition and were temporarily stockpiled in the north of Phase D1B: Area 2 along with recovered timber waste from the wider phase area. A specialist sub-contractor chipped the timber which has been subsequently removed from the site.

3.4.3 ACM removed prior to demolition works was disposed off-site by a specialist sub-contractor.

3.4.4 Hydrocarbon impacted arisings generated from the removal of contaminated strata from UG-NSA 1-3, 4, 5-7, 24-25 and 34-35 were temporarily stored on an area of hard-standing before placement on an impermeable membrane within the D1B:Area 2. The stockpile was frequently turned and mixed by a mechanical excavator to allow aeration of the soils before further sampling and assessment was carried out. The results of the further assessment are detailed within section 3.2.6 above, and in the SGP UST Remediation Verification Report (R1742-R06).

3.5 Constraints and Limitations

3.5.1 Remediation earthworks within the Phase 1B: Area 2 were constrained due to a number of live services which cross the site. An electricity cable crosses the southern half of the site in a westerly direction, whilst a water and sewer line run across the southern boundary. A

stand-off corridor was adopted in the location of the services during the remediation earthworks; SGP understand that the services are to be diverted at a later date. A number of structures are also to be retained within the site which has not undergone remediation; these are two buildings in the centre/south of the site (building 488 and 465) and a roadway in the north-west corner. The locations of these constraints to the remediation earthworks are reproduced in Drawings D02 and D03.

3.6 Unforeseen Contamination

3.6.1 No unforeseen contamination was identified or encountered during the remediation earthworks.

4. Inspections and Testing

4.1. SGP attended the site on nineteen occasions during and following the remediation earthworks. The dates and activities carried out in the Phase D1B: Area 2 during SGP attendance, cross referenced to the site inspection photographic record (Appendix A), formation level validation photo record (Appendix B) and Analysis Results (Appendix C) are summarised in the table below.

Table 4.1 SGP Inspection Summary

Date	SGP Activities	Record
05.12.13	Collection of in-situ validation samples (PLOT 459-SS1 – SS3) following demolition of building 459	Appendix A – Photo 1 Appendix B – Photo 1-3 Appendix C - Lab Ref: 13/11463
30.04.14	Site inspection prior to demolition works	Appendix A - Photos: 2-7
02.06.14	Site inspection; supervision of underground storage tanks UG-NSA 5-7 removal	A detailed photographic record; validation samples and laboratory certificates are provided within R1742-R06-UST Remediation Verification Report
03.06.14	Site inspection; supervision of underground storage tanks UG-NSA 5-7 and UG-NSA 1-3 removal	See R1742-R06- UST Remediation Verification Report
04.06.14	Site inspection; supervision of underground storage tanks UG-NSA 5-7 and UG-NSA 1-3 removal	See R1742-R06- UST Remediation Verification Report
05.06.14	Site inspection; supervision of underground storage tanks UG-NSA 5-7 and UG-NSA 1-3 removal; collection of validation samples	See R1742-R06- UST Remediation Verification Report
09.06.14	Site inspection; supervision of underground storage tanks UG-NSA 1-3 removal	See R1742-R06- UST Remediation Verification Report
09.07.14	Site inspection; supervision of underground storage tanks UG-NSA 1-3 removal; collection of validation samples	See R1742-R06- UST Remediation Verification Report
04.08.14	Site inspection; supervision of underground storage tanks UG-NSA 16-20 removal	See R1742-R06- UST Remediation Verification Report
07.08.14	Site inspection; supervision of underground storage tanks UG-NSA 16-20 removal; collection of validation samples	See R1742-R06- UST Remediation Verification Report

Date	SGP Activities	Record
18.08.14	Site inspection; in-situ formation level sampling (SS1, 5, 7, 9, 13-35)	Appendix B – Photos: 4-31 Appendix C – Lab Ref: 14-08441 & 14-9392
19.08.14	Site inspection; sample aggregate stockpile Agg-SE (1-3)	Appendix A – Photos: 8-14 Appendix C – Lab Ref: 14-08439 & 14-9392
26.08.14	Site inspection; sample aggregate stockpiles Agg-W (1-6), Agg-NW (1-3) & UST16-20 (A1-A2 & B1-B2)	Appendix A – Photos: 15-19 Appendix C – Lab Ref: 14-08801 & 14-9695
10.09.14	Site inspection; sample aggregate stockpile Agg-SW (1-8)	Appendix A – Photos: 20-25 Appendix C – Lab Ref: 14-09783 & 14-10359
24.09.14	Site inspection; in-situ formation level sampling (SS37-43, 46-48, 50-54 & 57); sample hydrocarbon arisings from UST remediation	Appendix A – Photos: 26-31 Appendix B – Photos 32-47 Appendix C – Lab Ref: 14-11667 & 14-10872
07.10.14-08.10.14	Site inspection; sample aggregate stockpiles Agg-SE (4-10) & Agg-SW (9-14), sample site won subsoil (Sub 1-3); in-situ formation level sampling (SS45, 49, 55-56, 58, 66, 69)	Appendix A – Photos: 32-36 Appendix B – Photos 48-54 Appendix C – Lab Ref: 14-11756 & 14-12168
22.10.14	Site inspection; sample aggregate stockpile Agg-Centre (1-2); sample site won subsoil (4-9); in-situ formation level sampling (SS59-60, 63-64, 67-68, 70-71); in-situ re-tests following exceedance SS38 (A-D), SS41 (A-D), SS42 (A-D)	Appendix A – Photos: 37-40 Appendix B – Photos 55-74 Appendix C – Lab Ref: 14-12802 & 14-12853
12.01.15	Completion visit; sample aggregate stockpile Agg-SW (15-18 & Agg-W (7-11) following finalised volumes	Appendix A – 41–48 Appendix C – Lab Ref: 15-00973 & 15-2346
20.01.16	Collection of 4 samples of site won subsoil stockpile following removal of asbestos impacted portion of stockpile	Appendix C – Lab Ref: 16/00802
04.02.16	Sampling of site won topsoil stockpile and vegetation stockpile prior to screening of organic matter	Appendix C – Lab Ref: 16/02787 & 16-4531

4.2. Validation of USTs (UG-NSA-1-3, 5-7 & 16-20) Removal

4.2.1. SGP attended site during the removal of UG-NSA-1-3 (03.06.14 – 09.07.14), UG-NSA-5-7 (02.06.14 – 05.06.14) and UG-NSA-16-20 (04.08.14 – 07.08.14) to carry out the required inspection and validation procedure as outlined within the Remediation Strategy. Information detailing the screening of excavated arisings, the collection of validation samples, removal of contaminated strata and the interpretation of the chemical results are discussed in detail within the SGP UST Verification Report (R1742-R06). Validation works within the report are supplemented with a detailed photographic record.

4.2.2. Minor volumes of contaminated soils were identified and removed during the removal of UG-NSA-1-3 and UG-NSA-5-7; no residual contamination was identified within the excavation of UG-NSA-16-20. Following the removal of tanks and concrete surrounds, and chasing out and removal of any contaminated soils, validation samples were collected from the sidewalls of the excavations. Concentrations of hydrocarbons within the validation samples were below the assessment criteria in all instances.

4.3. Validation of Formation Level Soils

- 4.3.1. Sampling and analysis was carried out to determine the suitability of formation level soils to form part of the 600mm soil cover system. Development levels for the site are yet to be confirmed by the developer; however in-situ sampling of the formation level will determine whether a reduced 200mm topsoil cover can be placed within garden areas providing the 400mm of natural strata is chemically suitable for retention.
- 4.3.2. A total of 62 samples (excluding re-samples) were taken from the stripped or replaced soil surfaces within the Phase D1B: Area 2 and within sampling cells which straddle both areas of the site. On the worst case assumption of the soils forming the lower 400mm of the garden / landscaping cover layer and a total site area of ~73,700m², the volume of validated soil is effectively 29,500m³ and the test rate is equivalent to 1 sample per 475m³, achieving the specified rate of 1 sample per 500m³.
- 4.3.3. All samples were collected by SGP geo-environmental consultants and were placed in appropriate laboratory-provided containers and stored in cooled boxes. Samples submitted for chemical analysis were delivered to Jones Environmental Ltd (JEL) within 24 hours of collection and samples for asbestos screen were sent to Chemtest within 48 hours of collection. SGP retains chain of custody documentation.
- 4.3.4. Chemical laboratory certificates (13-11463, 14-9392, 14-11667, 14-12802, 14-12168, and 14-12802) and asbestos laboratory certificates (14-08441, 14-10872, 14-11756 and 14-12853) are included within Appendix C. Results are summarised in the table below and are compared to assessment criteria for garden cover soils.

Table 4.2 Analysis Summary for 0-400mm Formation Level Soils

Contaminant	Samples	Range of Concentrations (mg/kg unless stated)	Residential Use	
			Screening criteria* (mg/kg unless stated)	Exceedances
SOM	62	0.2-22.8	-	None
pH	62	8-11.03	WRAS <5>8	All
asbestos fibre*	62	NFD (<0.001%)	<0.001%	None
antimony	59	<1-7	550	None
arsenic	66	7.8-40.70	32	(1) SS38
barium	62	14-500	1300	None
beryllium	62	<0.5-1.9	51	None
cadmium	62	<0.1-1.1	10	None
chromium	62	6.8-56.5	3000	None
chromium IV	62	<0.3	4.3	None
cobalt	62	2.8-16.8	240	None
copper	62	<1-42	300	None
lead	66	<5-613	450	(1) SS42

Contaminant	Samples	Range of Concentrations (mg/kg unless stated)	Residential Use	
			Screening criteria* (mg/kg unless stated)	Exceedances
mercury	62	<0.1-0.4	1	None
molybdenum	62	0.5-5.2	670	None
nickel	62	7-33.8	130	None
selenium	62	<1	350	None
vanadium	62	20-124	75	(9) SS7 SS21, SS33, SS38, SS42, SS58, SS64, Plot 459-SS2 & Plot 459-SS3
water soluble boron	62	<0.1-2.9	291	None
zinc	62	14-621	300	(1) SS68
naphthalene	70	<0.04-0.8	1.5	None
acenaphthylene	70	<0.03-1.21	210	None
acenaphthene	70	<0.05-7.31	170	None
fluorene	70	<0.04-5.2	160	None
phenanthrene	70	<0.03-42.64	92	None
anthracene	70	<0.04-14.49	2300	None
fluoranthene	70	<0.03-77.02	260	None
pyrene	70	<0.03-59.42	560	None
benzo(a)anthracene	70	<0.06-29.44	3.1	(1) SS37
chrysene	70	<0.02-25.32	6	(1) SS37
benzo(bk)fluoranthene	70	<0.07-38.79	-	-
benzo(a)pyrene	70	<0.04-25.98	0.83	(11) SS9, SS16, SS27, SS37, SS38, SS41, SS62, SS64, SS66, SS68, SS69
indeno(123cd)pyrene	70	<0.04-14.04	3.2	(1) SS37
dibenzo(ah)anthracene	70	<0.04-1.91	0.76	(1) SS37
benzo(ghi)perylene	70	<0.04-12.68	44	None
aliphatic C5-C6	62	<0.1	30	None
aliphatic C6-C8	62	<0.1	73	None
aliphatic C8-C10	62	<0.1	19	None
aliphatic C10-C12	62	<0.2-33.3	93	None
aliphatic C12-C16	62	<4-71	740	None
aliphatic C16-C21	62	<7-8	1000	None
aliphatic C21-C35	62	<7-157	1000	None
aromatic C6-C7	62	<0.1	30	None
aromatic C7-C8	62	<0.1	120	None
aromatic C8-C10	62	<0.1	27	None
aromatic C10-C12	62	<0.2-2	69	None
aromatic C12-C16	62	<4-22	140	None
aromatic C16-C21	62	<7-218	250	None
aromatic C21-C35	62	<7-418	890	None
benzene	62	<0.005	0.08	None
toluene	62	<0.005	120	None
ethylbenzene	62	<0.005	65	None
o-xylene	62	<0.005	45	None
m-xylene	62	<0.005	44	None

Contaminant	Samples	Range of Concentrations (mg/kg unless stated)	Residential Use	
			Screening criteria* (mg/kg unless stated)	Exceedances
p-xylene	62	<0.005	42	None
methyl tert butyl ether	62	<0.005	49	None

* not included in approved Waterman's Remedial Strategy but proposed in SGP revised Strategy, R1742-R01 Table 6.2

4.4. Validation of Formation Level Soils – Arsenic Exceedance

4.4.1. A single sample of the natural soil of weathered bedrock in D1B-SS38 was found to marginally exceed the 32 mg/kg screening criteria for arsenic, at 40.7 mg/kg. Following the exceedance a further four samples (SS38A-SS38D) were collected within the D1B-SS38 sampling location to assess whether the elevated arsenic was representative of the soils within that area. Re-test results were below the respective assessment criteria with a concentration range of 13.9-21.9 mg/kg. In the absence of any identified anthropogenic material, it was determined that a statistical estimate should be carried out of the sample mean within the Phase 1B: Area 2 as a single averaging area. The location of the arsenic exceedance is reproduced in Drawing D03 with results of the statistical analysis tabulated in the table below:

Table 4.3 Statistical Analysis of Arsenic Concentrations

statistic	arsenic (mg/kg)
criterion	32.0
no. of samples	66
Grubbs outlier test for highest value (P0.05)	D1B-SS38 (max value 40.7 mg/kg) is an outlier
arithmetic mean, including outlier	18.5
upper confidence limit (UCL 0.95) including outlier	19.37 (pass)
arithmetic mean, excluding D1B-SS12 outlier	17.80 (pass)
upper confidence limit (UCL 0.95) excluding outlier	18.89 (pass)

4.4.2. The statistical analysis shows that the single arsenic exceedance is a statistical outlier with a UCL (0.95) of 19.37 mg/kg when the outlier of D1B-SS38 is included in the dataset. Arithmetic mean of arsenic concentrations within the D1B: Area 2 including the outlier is below the assessment criteria (32 mg/kg) with a concentration of 18.5 mg/kg.

4.4.3. Soil sampled was of natural appearance from an area of the site remote from identified historical contaminative activities, identical in appearance to other soils around the phase, and mineralisation is therefore likely to be of natural origin. Typically the bio-accessibility of naturally occurring arsenic associated with ironstones (normally present in the form of arsenopyrite) will be low, and the risk to future residential use is therefore considered also likely to be low. Updated generic soil quality criteria were published by LQM/CIEH in 2015,

following DEFRA and EA guidance, referred to as “Safe for Use” levels or S4ULs, indicating minimal risk of harm to human health². The S4UL for arsenic in residential garden soil where plants may be grown for consumption is 37 mg/kg. The maximum soil concentration recorded was only slightly above this value.

4.5. Validation of Formation Level Soils – Vanadium Exceedances

4.5.1. Exceedances of vanadium were recorded in 9 samples (D1B: SS7, SS21, SS33, SS38, SS42, SS58, SS64, Plot 459-SS2 and Plot 459-SS3), exceeding the 75 mg/kg screening criterion with a maximum concentration of 124 mg/kg.

4.5.2. Statistical analysis on the dataset including the exceedances are summarised in the table below with vanadium locations reproduced on Drawing D06.

Table 4.4 Statistical Analysis of Vanadium Concentrations

statistic	vanadium (mg/kg)
criterion	75
no. of samples	62
Grubbs outlier test for highest value (P0.05)	No Outliers
arithmetic mean, including outlier	59.56
upper confidence limit (UCL 0.95)	64.59 (pass)
arithmetic mean, excluding outlier	As above (no outlier) - Pass
upper confidence limit (UCL 0.95) excluding outlier	As above (no outlier) - Pass

4.5.3. Elevated vanadium concentrations were not determined as statistical outliers with concentrations recorded within the natural background concentrations of the ironstone domain. Statistical analysis of the dataset produced an arithmetic mean of 59.56 mg/kg and an Upper Confidence Limit of 64.59 mg/kg below the assessment criteria of 75 mg/kg.

4.5.4. Vanadium forms very insoluble compounds with iron as demonstrated by analysis of naturally elevated concentrations in soils formed on Jurassic ironstone rocks in the elsewhere in the UK¹. The GAC screening criterion is published by LQM/CIEH based on a tolerable daily intake (oral) of 3 µg per kg bodyweight per day of vanadium in the form of sodium metavanadate, a highly soluble compound (water solubility 211 g/l. The GAC is therefore highly conservative and is unrealistic for exposure to naturally occurring vanadium in soil.

4.5.5. An updated GAC has been published by LQM/CIEH since the date of the Remediation Strategy in the S4ULs for Human Health Risk Assessment² document. The report provides

¹ N Breward, BGS “Arsenic and presumed resistate trace element geochemistry of the Lincolnshire (UK) sedimentary ironstones, as revealed by a regional geochemical survey using soil, water and stream sediment sampling”. Applied Geochemistry 22 (2007) 1970-1993

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an updated assessment utilising revised toxicological data. In the case of vanadium, the tolerable daily intake (oral) has increased to 10 µg per kg bodyweight per day of vanadium. A revised vanadium GAC value of 410 mg/kg for residential soil with plant uptake is reported, this would result in all vanadium concentrations within the D1B: Area 2 falling below the GAC.

4.5.6. It is concluded that vanadium within the site and within future garden soils poses no significant risk to human health.

4.6. Validation of Formation Level Soils – Lead and Zinc Exceedance

4.6.1. Single exceedances of the metals lead (613 mg/kg) and zinc (621 mg/kg) were reported in sample D1B-SS42 (lab ref: 14-11667) and sample D1B-SS68 respectively. Following the reported exceedance of lead which was though likely to be due to lead based paint used on the site, SGP attended site to collect a further 4 samples (denoted SS42 A-D) to confirm whether the exceedance was representative of the soil within the area. Re-test concentrations were significantly reduced and below the assessment criteria with a lead concentration range of 7-16 mg/kg. The exceedance location of lead and in-situ retest locations are reproduced in Drawing D07 and D08.

4.6.2. Statistical analysis has been completed on the dataset to confirm that the single exceedances of lead and zinc are outliers. Results of the analysis are summarised in the table below:

Table 4.5 Statistical Analysis of Lead and Zinc Concentrations

statistic	lead (mg/kg)	Zinc (mg/kg)
criterion	200	300
no. of samples	66	62
Grubbs outlier test for highest value (P0.05)	D1B-SS42 (max value 613 mg/kg) is an outlier	D1B-SS68 (max value 621 mg/kg) is an outlier
arithmetic mean, including outlier	28.01	66.50
upper confidence limit (UCL 0.95)	43.32 (pass)	83.66 (pass)
arithmetic mean, excluding outlier	19.01 (pass)	57.41 (pass)
upper confidence limit (UCL 0.95) excluding outlier	21.99 (pass)	65.55 (pass)

4.6.3. It is concluded that the both the elevated lead (D1B-SS42) and zinc (D1B-SS68) samples are statistical outliers and even when included within the dataset the upper confidence limit and arithmetic mean are below the respective assessment criteria.

4.6.4. The assessment criterion for zinc is based on the DEFRA sensitive plant species threshold value of 300 mg/kg, a concentration at which phytotoxic effects may be observed within metal-sensitive plants. The recently published LQM/CIEH S4ULs for Human Health Risk

Assessment adopt a concentration of 3,700 mg/kg of zinc for residential soils with plant uptake calculated with updated toxicological data within CLEA v1.06. For the purpose of human health risk assessment the zinc concentrations have been compared to the S4UL value of 3,700 mg/kg which is specific for the intended end-use of the site; this would result in the initial exceedance falling below the criterion.

4.7. Validation of Formation Level Soils – PAH Exceedances

4.7.1. Eleven sampling locations (D1B-SS9, SS16, SS27, SS37, SS38, SS41, SS62, SS64, SS66, SS68 and SS69) recorded elevated concentrations of PAHs, these were generally limited to the PAH benzo(a)pyrene (BaP), however sample D1B-SS37 contained widespread PAH exceedances of benzo(a)anthracene, chrysene, benzo(a)pyrene, ideno(a)pyrene, dibenzo(ah)anthracene, benzo(b)fluoranthene and benzo(k)fluoranthene. Exceedances of BaP ranged between 0.85 mg/kg in D1B-SS9 (a marginal exceedance of 0.02 mg/kg) to a maximum concentration of 25.98 mg/kg in D1B-SS37. The exceedance locations of PAH are reproduced in Drawing D09.

4.7.2. Widespread B(a)P exceedances of the assessment criteria (0.83 mg/kg) excluding the D1B-SS7 location ranged from 0.85 mg/kg to 3.12 mg/kg, a similar concentration range to those recorded in the D1B: Area 1.

4.7.3. PAH ratio analysis to confirm the source of the PAHs on the 11 samples where exceedances in retained soils remained was carried out in order to determine the likely source. Source identification suggests a coal (pyrolitic) source; a copy of the plot is included within Appendix D. It is likely as per previous PAH exceedances across the re-development area that inclusions of relatively small proportions of coal/clinker/tarmac may be mixed up within the formation level soils following removal of hard-standing and the -200mm trim. Source identification confirms a probable low bio-availability due to the sequestration of PAHs within a carbon or vitrified matrix with BaP concentrations (with the exception of sample D1B-SS7) significantly below the DEFRA C4SL criteria of 5 mg/kg for garden soils, and BaP is therefore unlikely to represent an unacceptable risk to human health.

4.7.4. Multiple PAH exceedances reported within validation sample D1B-SS37 are located within an area of proposed landscaping associated with the cricket pitch, therefore there is only a requirement for a reduced (300mm) cover system. The risk associated to residual PAHs beneath the reduced cover system in landscaped/open space areas is considered low in comparison to soils within private garden areas.

4.8. Validation of Formation Level Soils – pH Exceedances

4.8.1. Soil pH values ranged from 8 within D1B-SS28 to alkaline at 11.03 within D1B-SS52 with all samples (62) exceeding the former WRAS trigger pH value of >8. Elevated concentrations of

pH are likely to be attributed to the ubiquitous presence of carbonate limestone identified across the NSA, although the highest pH values are probably also indicative of concrete fragments; the hydroxides in freshly exposed concrete will undergo carbonation over a period of days, with an accompanying reduction in pH.

4.9. Validation of Site Generated Crushed Aggregate

4.9.1. Sampling and analysis was carried out to determine the suitability of crushed recovered aggregate for potential reuse during the development phase. A total of five stockpiles of processed aggregate remain on the D1B: Area 2, the locations of which are reproduced on Drawing D10. It is proposed that the stockpiles will be handed over to the developer for use during construction. Stockpiles have been denoted as “Centre, SE, SW, W and NW” depending on their location within the phase, their approximate volumes and sampling frequencies completed are summarised in the table below:

Table 4.6 Site Generated Aggregate Stockpile Sampling Information

Stockpile Ref	Approximate Volume (m ³)	No. Chemical Tests	Sampling Frequency	No. Asbestos Tests	Sampling Frequency
D1B-Centre	1,000	1	1 per 1000m ³	2	1 per 500m ³
D1B-SE	5,000	5	1 per 1000m ³	10	1 per 500m ³
D1B-SW	9,000	9	1 per 1000m ³	18	1 per 500m ³
D1B-W	5,500	6	1 per 917m ³	11	1 per 500m ³
D1B-NW	1,500	2	1 per 750m ³	3	1 per 500m ³
Total	22,000	23	1 per 956m³	44	1 per 500m³

4.9.2. Results of the chemical testing (lab ref: 14-9392, 14-12168, 14-9695, 14-10359, 14-12802 and 15-2346) and asbestos screen (lab ref: 14-08439, 14-11756, 14-08801, 14-09783, 14-12853 and 15-00973) are provided in Appendix C and are summarised in the table below:

Table 4.7 Screening Summary for Aggregate Stockpiles within D1B: Area 2

Contaminant	Samples	Range of Concentrations (mg/kg unless stated)	Screening criteria* (mg/kg unless stated)	Albion Water Pipeline Screening Criteria (mg/kg unless stated)	Exceedances
SOM	23	0.2-23	-	-	-
pH	23	8.49-11.95	WRAS <5>8	-	All
asbestos fibre*	47	NFD (<0.001%)	<0.001%	-	None
antimony	23	<1-4	550	-	None
arsenic	23	9.10-45	32	-	(2) W-Agg7, SW-Agg-2
barium	23	34-211	1300	-	None
beryllium	23	<0.5-1.10	51	-	None
cadmium	23	<0.1-0.9	10	-	None
chromium	23	14.3-51.2	3000	-	None

Contaminant	Samples	Range of Concentrations (mg/kg unless stated)	Screening criteria* (mg/kg unless stated)	Albion Water Pipeline Screening Criteria (mg/kg unless stated)	Exceedances
chromium IV	23	<0.3-0.6	4.3	-	None
cobalt	23	3.4-7.8	240	-	None
copper	23	<1-18	300	-	None
lead	23	8-150	450	-	None
mercury	23	<0.1-0.2	1	-	None
molybdenum	23	0.8-3.5	670	-	None
nickel	23	8.4-24.3	130	-	None
selenium	23	<1	350	-	None
vanadium	23	24-56	75	-	None
water soluble boron	23	0.9-4.6	291	-	None
zinc	23	32-230	300	-	None
naphthalene	23	<0.04-1.21	1.5	-	None
acenaphthylene	23	<0.03-0.6	210	-	None
acenaphthene	23	<0.05-1.83	170	-	None
fluorene	23	<0.04-1.23	160	-	None
phenanthrene	23	<0.05-13.35	92	-	None
anthracene	23	<0.04-4.40	2300	-	None
fluoranthene	23	<0.06-18.92	260	-	None
pyrene	23	<0.06-15.28	560	-	None
benzo(a)anthracene	23	<0.06-7.62	3.1	-	(7) SE-S4, SE-S5, W-Agg8, SW-Agg1, SW-Agg3, SW-S12, SW-S13
chrysene	23	<0.04-7.16	6	-	(1) SW-S13
benzo(bk)fluoranthene	23	<0.07-11.85	-	-	-
benzo(a)pyrene	23	<0.04-8.27	0.83	-	(12) SE-Agg1, SE-S4, SE-S5, SE-S6, W-Agg7, W-Agg8, SW-Agg1, SW-Agg2, SW-Agg3, SW-S12, SW-S13, Centre-1
indeno(123cd)pyrene	23	<0.04-5.36	3.2	-	(2) SE-S5, SW-12
dibenzo(ah)anthracene	23	<0.04-0.8	0.76	-	(2) SE-S5, SW-12
benzo(ghi)perylene	23	<0.04-4.57	44	-	None
aliphatic C5-C6	23	<0.1	30	10	None
aliphatic C6-C8	23	<0.1	73	10	None
aliphatic C8-C10	23	<0.1	19	10	None
aliphatic C10-C12	23	<0.2-<0.8	93	10	None
aliphatic C12-C16	23	<4-<16	740	10	(3) W-Agg7, W-Agg9, SW-Agg16
aliphatic C16-C21	23	<7-28	1000	10	(3) W-Agg7, W-Agg9, SW-Agg16
aliphatic C21-C35	23	<7-153	1000	500	None
aromatic C6-C7	23	<0.1	30	10	None

Contaminant	Samples	Range of Concentrations (mg/kg unless stated)	Screening criteria* (mg/kg unless stated)	Albion Water Pipeline Screening Criteria (mg/kg unless stated)	Exceedances
aromatic C7-C8	23	<0.1	12	10	None
aromatic C8-C10	23	<0.1	27	10	None
aromatic C10-C12	23	<0.2-1.4	69	10	None
aromatic C12-C16	23	<4-18	140	10	(1) SE-S6
aromatic C16-C21	23	<7-118	250	10	(13) SE-Agg1, SE-S4, SE-S5, SE-S6, W-Agg3, SW-Agg1, SW-Agg2, SW-Agg3, SW-Agg4, SW-S12, SW-S13, SW-S14, Agg-Centre1
aromatic C21-C35	23	<7-416	890	500	None
benzene	23	<0.005	0.08	0.1	None
toluene	23	<0.005	120	0.1	None
ethylbenzene	23	<0.005	65	0.1	None
o-xylene	23	<0.005	45	0.1	None
m-xylene	23	<0.005	44	0.1	None
p-xylene	23	<0.005	42	0.1	None
methyl tert butyl ether	23	<0.005	49	0.1	None

* not included in approved Remedial Strategy but proposed in SGP revised Strategy, R1742-R01 Table 6.2

4.2.1 All samples collected from the D1B: Area 2 stockpiles were reported as containing 'no asbestos fibres present'. Chemical exceedances above the assessment criteria for material within the capping / garden cover system were reported within the following stockpiles:

Table 4.8 Exceedance of capping / garden cover system criteria for Aggregate Stockpiles within D1B: Area 2

Stockpile	Exceedance of capping / garden cover system criteria
D1b-Centre	benzo(a)pyrene
D1b-SE	benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(123cd)pyrene and dibenzo(ah)anthracene
D1b-SW	arsenic, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(123cd)pyrene;
D1b-W	arsenic, benzo(a)anthracene, benzo(a)pyrene;
D1b-NW	none

4.2.2 Aliphatic (C12-C16 and C16-C21) and aromatic (C12-C16 and C16-C21) hydrocarbons exceeded the Albion Water Pipeline Screening criteria (10 mg/kg) in at least one instance within all stockpiles with the exception of AGG-NW where there were no exceedances. A maximum concentration of 118 mg/kg for the aromatic (C16-C21) range was reported in stockpile Agg-SE (S6).

4.2.3 It is anticipated that the PAH and aromatic hydrocarbon exceedances are attributed to the minor presence of “tarmac” fragments which have been processed with the concrete hard-standing during crushing.

4.2.4 The stockpiles (SE, SW and W) have been sampled for grading analysis with a total of 5 samples collected for analysis by Murray Rix. The laboratory certificate of analysis is provided in Appendix C; all samples met the grading requirement for class 6F2 material.

4.3 D1B Phase Won Subsoil

4.3.1 During the preparatory earthworks within the larger D1B area, approximately 400m³ of subsoil was recovered from landscaped areas and verges. The subsoil was temporarily stockpiled in the south of the D1B: Area 2 pending testing to determine the suitability for re-use within the development.

4.3.2 SGP collected 4 samples (lab ref: 14-11756 and 14-12168) achieving a sampling frequency of 1 sample per 100m³ of soil and submitted them for analysis in accordance with chemical criteria outlined in the Strategy for material in the capping layer. Results are summarised in the table below:

Table 4.9 Analysis summary for D1B won subsoil

Contaminant	Samples	Range of Concentrations (mg/kg unless stated)	Residential Use	
			Screening criteria* (mg/kg unless stated)	Exceedances
SOM	4	1.4-1.8	-	None
pH	4	8.07-8.53	WRAS <5>8	None
asbestos fibre*	4	Fibres Detected	<0.001%	1: Sub-1 (Possible exceedance, asbestos not quantified)
antimony	4	1-2	550	None
arsenic	4	18.7-25.6	32	None
barium	4	96-108	1300	None
beryllium	4	1.1-1.6	51	None
cadmium	4	<0.1-0.2	10	None
chromium	4	34.6-71.3	3000	None
chromium IV	4	<0.3	4.3	None
cobalt	4	8-13.5	240	None
copper	4	4-14	300	None
lead	4	24-27	450	None
mercury	4	<0.1	1	None
molybdenum	4	1.9-3.3	670	None
nickel	4	18.5-34.1	130	None
selenium	4	<1	350	None
vanadium	4	56-103	75	2: Sub-2, Sub-3
water soluble boron	4	1.3-2.2	291	None
zinc	4	69-88	300	None

Contaminant	Samples	Range of Concentrations (mg/kg unless stated)	Residential Use	
			Screening criteria* (mg/kg unless stated)	Exceedances
naphthalene	4	<0.04-<0.8	1.5	None
acenaphthylene	4	<0.03-<0.6	210	None
acenaphthene	4	<0.05-<1	170	None
fluorene	4	<0.04-<0.8	160	None
phenanthrene	4	0.27-0.99	92	None
anthracene	4	0.06-<0.8	2300	None
fluoranthene	4	0.47-1.7	260	None
pyrene	4	0.41-1.48	560	None
benzo(a)anthracene	4	0.25-<1.2	3.1	None
chrysene	4	0.26-0.95	6	None
benzo(bk)fluoranthene	4	0.35-1.79	-	None
benzo(a)pyrene	4	0.18-1.2	0.83	1: Sub-4
indeno(123cd)pyrene	4	0.16-0.73	3.2	None
dibenzo(ah)anthracene	4	<0.04-<0.8#	0.76	None
benzo(ghi)perylene	4	0.13-<0.8	44	None
aliphatic C5-C6	4	<0.1	30	None
aliphatic C6-C8	4	<0.1	73	None
aliphatic C8-C10	4	<0.1	19	None
aliphatic C10-C12	4	<0.2	93	None
aliphatic C12-C16	4	<4	740	None
aliphatic C16-C21	4	<7	1000	None
aliphatic C21-C35	4	<7	1000	None
aromatic C6-C7	4	<0.1	30	None
aromatic C7-C8	4	<0.1	120	None
aromatic C8-C10	4	<0.1	27	None
aromatic C10-C12	4	<0.2	69	None
aromatic C12-C16	4	<4	140	None
aromatic C16-C21	4	<7-22	250	None
aromatic C21-C35	4	<7-145	890	None
benzene	4	<0.005	0.08	None
toluene	4	<0.005	120	None
ethylbenzene	4	<0.005	65	None
o-xylene	4	<0.005	45	None
m-xylene	4	<0.005	44	None
p-xylene	4	<0.005	42	None
methyl tert butyl ether	4	<0.005	49	None

* not included in approved Waterman's Remedial Strategy but proposed in SGP revised Strategy, R1742-R01 Table 6.2

Concentration exceeds screening criteria following x20 dilution

4.3.3 Three potential exceedances were reported above the assessment criteria with the identification of chrysotile fibres in cement form within sample Sub-1 (not quantified), two exceedances for vanadium (Sub-2 and Sub-3) and a single exceedance for the PAH benzo(a)pyrene (Sub-4).

-
- 4.3.4 Following identification of asbestos fibres within sample Sub-1, SGP collected a further 5 samples (lab ref: 14-12853) from the stockpile to delineate the volume impacted by asbestos fibres. The further screening indicated that no additional fibres were detected and consequently only the northern portion of the stockpile (location of Sub-1) was determined not suitable for use within the capping layer or placement at shallow depth where future disturbance is likely.
- 4.3.5 The Remediation Strategy notes in Section 4.6.5 that if asbestos fibre is detected in quantifiable amounts (over 0.001%) in fills, then this material will be excluded from use in soil cover and will be placed at depths over 1m below ground level within excavations (primarily within tank backfills) subject to geotechnical suitability.
- 4.3.6 URL subsequently segregated the impacted subsoil and placed it as backfill within the remediated tank void of UG-NSA-22-23. SGP collected a further 4 samples of the subsoil (lab ref: 16/00802) following removal of the impacted portion to confirm adequate removal; no further asbestos incidences were reported.
- 4.3.7 Minor vanadium exceedances of 93 mg/kg (Sub-2) and 108 mg/kg (Sub-3) were reported however these concentrations are lower than those reported within the in-situ formation soils which have undergone further assessment (see section 4.5) and are deemed to pose no significant risk to human health. The values are substantially below the 2015 S4UL generic assessment criterion for garden soil of 410 mg/kg referred to above.
- 4.3.8 A minor exceedance of the assessment criteria for benzo(a)pyrene (1.2 mg/kg) was reported in sample Sub-4 which following a PAH source identifications confirms a coal signature with a probably low bio-availability due to the sequestration of PAHs within a carbon of vitrified matrix with BaP concentrations significantly below the DEFRA C4SL criteria of 5 mg/kg and the LQM/CIEH S4UL of 2.2 mg/kg for garden soils. Minor exceedances were reported within the formation level soils at concentrations similar to that within the subsoil stockpile, further assessment has been provided (section 4.7) and confirmed that the reported BaP concentrations are unlikely to represent an unacceptable risk to human health.
- 4.3.9 It is concluded that following the removal of the fibre impacted section (northern 100m³) of subsoil then the remaining 300m³ is suitable for use within the capping layer.
- 4.4 D1B Phase Won Topsoil
- 4.4.1 During the preparatory earthworks within the larger D1B area, approximately 300m³ of topsoil (TS1) and 600m³ of vegetation strip including topsoil (TS2) was recovered and temporarily stockpiled in the south of the D1B: Area 2, adjacent to the site won subsoil, pending testing to determine the suitability for re-use within the development.

4.4.2 SGP collected 3 samples (lab refs: 16-4531 & 16-02787) of the topsoil stockpile on 04/02/2016 achieving a sampling frequency of 1 sample per 100m³ and 2 samples of the vegetation stockpile prior to organic matter removal at a screening frequency of 1 sample per 300m³ to determine the potential for re-use. Results are summarised in the table below:

Table 4.10 Analysis summary for D1B won topsoil

Contaminant	Samples	Range of Concentrations (mg/kg unless stated)	Residential Use	
			Screening criteria* (mg/kg unless stated)	Exceedances
SOM	5	3-5.1	-	None
pH	5	7.86-8.25	WRAS <5>8	(3) D1B-TS1-A, D1B-TS1-C, D1B-TS2-A, D1B-TS2-B
asbestos fibre*	5	NAD	<0.001%	None
antimony	5	-	550	None
arsenic	5	27-47.6	32	(3) D1B-TS1-C, D1B-TS2-A, D1B-TS2-B
barium	5	68-159	1300	None
beryllium	5	1.1-2.7	51	None
cadmium	5	<0.1	10	None
chromium	5	42.6-98.8	3000	None
chromium IV	5	<0.3	4.3	None
cobalt	5	8.4-14.8	240	None
copper	5	13-19	300	None
lead	5	44-77	450	None
mercury	5	<0.1-0.1	1	None
molybdenum	5	1.5-2.2	670	None
nickel	5	19.4-45.1	130	None
selenium	5	1-2	350	None
vanadium	5	70-172	75	(4) D1B-TS1-A, D1B-TS1-B, D1B-TS1-C, D1B-TS2-B
water soluble boron	5	1.9-4.6	291	None
zinc	5	81-165	300	None
naphthalene	5	<0.04	1.5	None
acenaphthylene	5	<0.03-0.09	210	None
acenaphthene	5	<0.05	170	None
fluorene	5	<0.04	160	None
phenanthrene	5	0.14-0.42	92	None
anthracene	5	<0.04-0.18	2300	None
fluoranthene	5	0.38-1.56	260	None
pyrene	5	0.31-1.43	560	None
benzo(a)anthracene	5	0.19-0.85	3.1	None
chrysene	5	0.19-0.88	6	None
benzo(bk)fluoranthene	5	0.33-1.69	-	None
benzo(a)pyrene	5	0.19-0.96	0.83	(1) D1B-TS2-B
indeno(123cd)pyrene	5	0.14-0.7	3.2	None
dibenzo(ah)anthracene	5	0.06-0.12	0.76	None
benzo(ghi)perylene	5	0.13-0.65	44	None
aliphatic C5-C6	5	<0.1	30	None
aliphatic C6-C8	5	<0.1	73	None

Contaminant	Samples	Range of Concentrations (mg/kg unless stated)	Residential Use	
			Screening criteria* (mg/kg unless stated)	Exceedances
aliphatic C8-C10	5	<0.1	19	None
aliphatic C10-C12	5	<0.2	93	None
aliphatic C12-C16	5	<4	740	None
aliphatic C16-C21	5	<7	1000	None
aliphatic C21-C35	5	<7-35	1000	None
aromatic C6-C7	5	<0.1	30	None
aromatic C7-C8	5	<0.1	120	None
aromatic C8-C10	5	<0.1	27	None
aromatic C10-C12	5	<0.2	69	None
aromatic C12-C16	5	<4	140	None
aromatic C16-C21	5	<7-31	250	None
aromatic C21-C35	5	<7-504	890	None
benzene	5	<0.005	0.08	None
toluene	5	<0.005	120	None
ethylbenzene	5	<0.005	65	None
o-xylene	5	<0.005	45	None
m-xylene	5	<0.005	44	None
p-xylene	5	<0.005	42	None
methyl tert butyl ether	5	<0.005	49	None

* not included in approved Waterman's Remedial Strategy but proposed in SGP revised Strategy, R1742-R01 Table 6.2

- 4.4.3 A single minor arsenic exceedance of 38.6 mg/kg was reported in the topsoil stockpile (D1B-TS1-C) and two exceedances of 32.9 mg/kg and 47.6 mg/kg within the two samples from vegetation stockpile D1B-TS2. When concentrations are compared to the LQM/CIEH Suitable For Use Levels (S4UL) for a residential scenario at 37 mg/kg only two exceedances occur, one within each stockpile remain, and one of these was marginal. The average of all 5 tests is 35.2 mg/kg, with the results being normally distributed and the maximum value is not a statistical outlier.
- 4.4.4 No made ground or ashy deposits were observed within the topsoil and it is anticipated that some vertical mixing of the underlying ironstone where naturally elevated arsenic and vanadium concentrations have been reported within similar concentration ranges has taken place. Typically the bio-accessibility of naturally occurring arsenic associated with ironstones (normally present in the form of arsenopyrite) will be low, and the risk to future residential use is therefore considered to be low.
- 4.4.5 Vanadium exceedances were reported within 5 out of the 6 samples collected with exceedance concentrations ranging from 76 mg/kg (D1B-TS1-B) to 172 mg/kg (D1B-TS1-B). Concentrations reported were similar to those reported within the in-situ formation soils which have undergone further assessment (see section 4.5) and are deemed to pose no significant risk to human health.

4.4.6 A minor exceedance of the assessment criteria for the PAH benzo(a)pyrene (0.96 mg/kg) was reported within sample D1B-TS2-A which exceeded the criteria of 0.94 mg/kg when the relevant SOM content of 2.5% is adopted. When the recently published S4UL for B(a)P is utilised for a residential scenario with an SOM content of 2.5% the assessment criteria is raised to 2.7 mg/kg resulting in no exceedances. It is therefore determined that the reported B(a)P concentrations are unlikely to represent an unacceptable risk to human health.

4.5 Unknown Contamination

4.5.1 No previously unknown contamination was encountered within the Dorchester Phase 1b: Area 2, with the exceptions of the locally elevated natural concentrations of arsenic and vanadium within the formation level strata. Exceedances of the PAHs, primarily benzo(a)pyrene, zinc, lead and arsenic have been identified and have undergone further assessment.

5. Conclusions and Recommendations

5.1. Verification of Remediation

5.1.1. The site formation level surfaces and generated aggregate materials have been inspected and sampled by SGP in accordance with the approved Remediation Strategy. The types of materials encountered during the additional assessment and remediation works carried out in Phase 1B: Area 2 area was consistent with those described in the site characterisation.

5.1.2. On the basis that URL has stripped the overall area to -200mm existing ground levels (development levels are yet to be confirmed), SGP has validated and sampled the formation level surfaces to an average depth of 400mm (see validation photos in Appendix B). A sampling frequency of 1 per 500m³ of potential cover soil material has therefore been achieved.

5.1.3. One exceedance of the arsenic screening criterion and 9 of vanadium were identified with capping layer soils, however concentrations are considered to represent normal background concentrations in the area arising from the bedrock, and evidence is available to suggest their low bio-availability, and consequent minimal significance for human health.

5.1.4. Statistical analysis conducted on the sample of arsenic exceedance confirmed that sample D1B-SS38 (40.7 mg/kg) was a statistical outlier to the dataset and when the outlier was removed, the upper confidence limit (UCL 0.95) reduced to 18.89 mg/kg below the assessment criteria value of 32 mg/kg. Statistical analysis on vanadium exceedances confirmed that concentrations were not outliers and is typical of natural background concentrations, the UCL (0.95) of the D1B: Area 2 dataset for vanadium produced a

concentration of 64.59 mg/kg, below the assessment criteria of 70 mg/kg. SGP conclude that on the basis of statistical analysis and assessment on the solubility and availability to human uptake that there is a minimal risk to future site occupants on the basis of arsenic and vanadium concentrations present in the capping layer soils.

- 5.1.5. Development levels are not finalised, and whilst in-situ validation sampling has been carried out to confirm the suitability of a reduced cover system in garden areas (i.e. 200mm of topsoil placed on top of validated formation level strata) it is possible that the final levels will require more than 200mm additional topsoil cover. SGP considers that the occurrences of elevated arsenic and vanadium in some validation samples represent normal background concentrations and are very unlikely to pose a risk to human health for future site residents, due to low bioavailability of these elements. However the concentrations do exceed the approved Remedial Strategy criteria and therefore represent a departure from the Strategy which should be agreed with CDC.
- 5.1.6. Single minor exceedances were reported for lead (D1B-SS42) and zinc (D1B-SS68) within formation soils, however statistical analysis confirmed that both lead (613 mg/kg) and zinc (621 mg/kg) were statistical outliers. When the outliers were removed from the dataset the UCL (0.95) for lead reduced to 21.00 mg/kg and zinc reduced to 65.55 mg/kg, both below their respective assessment criteria of 200 mg/kg and 300 mg/kg.
- 5.1.7. Exceedance of the soil cover screening criterion for benzo(a)pyrene (BaP) was found in a total of 11 sampling locations. One sampling location (D1B-SS37) reported multiple PAH exceedances, however this was located within a proposed open space / landscaping area associated with the cricket pitch and a 300mm soil cover is required rather than a full 600mm as per private gardens.
- 5.1.8. Residual exceedances for BaP were significantly below the DEFRA C4SL for garden soils of 5 mg/kg (with the exception of D1B-SS37) and a source identification ratio plot confirms the likely source to be coal. The identified sources are likely to be of low significance in terms of solubility and bioavailability due to the sequestration within coal / coal ash or bitumen, and in light of concentrations below the C4SL value SGP considers that the risk associated to future site occupants to concentrations within the capping layer to be minimal. Both DCLG and NHBC have confirmed that they consider C4SLs as useful in assessing the suitability of soils for planned residential land uses. Again, the concentrations do exceed the approved Remedial Strategy criteria and therefore represent a departure from the Strategy which should be agreed with CDC.
- 5.1.9. Three clusters of underground fuel storage tanks were located within the site (UG-NSA1-3, 5-7 and 16-20) associated with two former boiler houses and a petrol filling station. The tank

contents were removed for specialist treatment and the tank and surrounds were removed in accordance with the Remediation Strategy requirements, together with a small volume of hydrocarbon impacted soil / gravel. The tank surrounds were validated in accordance with the Strategy, and no significant hydrocarbon contamination was found; accordingly, no further remediation was required. Weathered fuel oil is recorded within bedrock, floating on the water table, in ground to the immediate south and southeast of UG-NSA-1-3; there is no requirement under the Remediation Strategy for further works to remove this; the plume areas has been previously shown to be effectively immobile and will be subject to depletion by natural processes (microbial decomposition).

5.2. Recovered Materials

5.2.1. Approximately 22,000m³ recovered aggregate was generated on site and is temporarily placed in 5 stockpiles. A total of 44 samples have been collected for asbestos screening achieving the 1 per 500m³ frequency and 23 samples for chemical analysis. No asbestos fibres were detected within the samples; however single exceedances of arsenic and multiple exceedances of PAHs mean that recovered aggregate from stockpiles Agg-Centre, Agg-SE, Agg-SW and Agg-W cannot form part of the garden capping layer. No exceedances of the criteria were reported in Agg-NW suggesting it may be placed within the capping layer. Recovered aggregate should not be used for water main pipe bedding or trench backfill, but there are no other restrictions on its' reuse.

5.2.2. Approximately 400m³ of subsoil was recovered from the D1B area and is temporarily stockpiled in the south of the D1B: Area 2. Four validation samples were collected and reported exceedances for vanadium and BaP, and the identification of asbestos cement in one sample. Further asbestos screening sampling was carried out to delineate the portion of fibre impacted stockpile, and did not reveal any further asbestos. URL has removed the northernmost 100m³ of soil and placed the material as backfill within the remediation void following removal of UG-NSA-22-23. Four further samples were collected from the remaining subsoil stockpile for an asbestos screen to confirm the sufficient removal of impacted material, and no fibres were identified. The remaining 300m³ of subsoil contained 2 vanadium and 1 BaP exceedances above the cover layer criteria; however these concentrations are below those reported within the retained formation level soils which have undergone further assessment. The concentrations do exceed the approved Remedial Strategy criteria and therefore represent a departure from the Strategy which should be agreed with CDC before use within the cover layer.

5.2.3. Two phase-won topsoil stockpiles exist in the south of D1B: Area 2 adjacent to the subsoil stockpile; stockpile D1B-TS1 consists of recovered topsoil (300m³) and D1B-TS2 consists of a topsoil and turf/vegetation strip (600m³) which is currently awaiting organic matter screening and removal. Exceedances of vanadium were reported in all 3 samples of D1B-TS1 and 2

within D1B-TS2 which also included a single exceedance of B(a)P. Exceedances of vanadium and B(a)P were below the respective LQM/CIEH S4UL criterion. Three arsenic exceedances were reported, two of which remained above the LQM/CIEH S4UL of 37 mg/kg, one within each stockpile. The average of the 5 samples is below the S4UL value. No made ground material was observed and the topsoil / vegetation was stripped from landscape and POS areas. It is anticipated that the concentration reflect vertical mixing to the underlying ironstone deposits where naturally elevated arsenic concentrations within similar ranges have been recorded. Further assessment has been provided, however the concentrations do exceed the approved Strategy criteria and require confirmation of suitability for reuse within the cover layer by CDC prior to placement. Further sampling is required within D1B-TS2 following screening of organic matter to achieve the required sampling frequency.

5.3. Ground Gas / Vapour Hazards

5.3.1. No significant sources of hydrocarbon vapours were identified on or adjacent to the general site during remediation works. The former underground storage tanks (UG-NSA-1-3, 5-7 and 16-20) locations were not significantly contaminated following remediation, however the southern and southeastern faces of the excavation to UG-NSA-1-3 exhibited traces of a heavy fuel oil within the intact limestone bedrock at approximately 2.4m below ground level, and the same zone of contamination was recorded in BH-NSA-06, 11m to the south, at 3.17m depth. Whilst the gas and vapour risks from this residual contamination are likely to be low, in the absence of post-remediation ground gas monitoring it is recommended that precautionary measures be taken for building protection in the potentially-affected zone; this is delineated on Drawing 11.

5.3.2. Building gas protection measures where plots overlay the zone indicated on Drawing 11 should comprise sub-floor ventilation and use of a metal foil type gas barrier membrane with sealed service entries. Design details should be forwarded to CDC for approval.

5.3.3. Significant amounts of degradable organic materials were not reported elsewhere during the site turnover and there is no evidence to revise the classification of the site in respect to risks to development from hazardous ground gas.

5.4. Water Main Risk Assessment

5.4.1. No significant risks have been identified with respect to the laying of water mains; however the requirements of the water services provider, including risk assessment, should be followed. In particular, although the depth to any residual fuel oil contamination in the zone indicated on Drawing 11 is likely to be at least 1.5m vertically below any water mains, the service provider may still require use of protected pipe material as a precaution.

5.4.2. Further assessment should be carried out when the pipeline routes are confirmed, and following the completion of groundworks / prior to trench excavation.

5.5. Sulphates and Concrete

5.5.1. No specific testing has been undertaken for potentially aggressive conditions to concrete. Reference should be made to the preceding site investigation reports.

5.6. Further Requirements

5.6.1. In order to secure completion of remediation in Dorchester Phase D1B: Area 2 in accordance with the Remediation Strategy, the Developer is required to complete the agreed garden / landscaping cover system. This will entail a minimum further 200mm of clean, validated soils in all garden and landscaped areas and up to 600mm in gardens / 300mm in landscaping areas depending on development levels and acceptance by CDC of the risk assessments conclusions that the occasional residual minor exceedances of generic risk assessment criteria for arsenic, lead, zinc, vanadium and benzo(a)pyrene do not pose an unacceptable risk to human health.

5.6.2. Further sampling is required on the stockpile of phase won topsoil/vegetation (D1B-TS2) in order to satisfy the required sampling frequency. It is recommended that sampling is carried out once the screening of organic matter has taken in order to accurately determine the volume of topsoil present. It would be prudent to include bio-availability testing for arsenic if further exceedance of the target criteria are detected.

5.6.3. With the adoption of the above normal practices for Brownfield development, and on the information available to it, SGP concludes that the preparatory remedial works have been completed in accordance with the agreed strategy. In the event that any previously undisclosed contamination or suspect materials are identified then this should be assessed by an appropriately qualified and experienced person.

5.7. Long-term Management and Monitoring

5.7.1. No specific requirements for long-term monitoring or management have been identified within the site. Residual contamination has been found to be of low significance, low mobility and stable, and is unlikely to become a pollution source in the future.

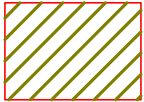
5.8. Limitations

5.8.1. SGP reserves the right to alter any of the foregoing information in the event of new information being disclosed or provided and in the light of changes to legislation, guidelines and responses by the statutory and regulatory authorities.

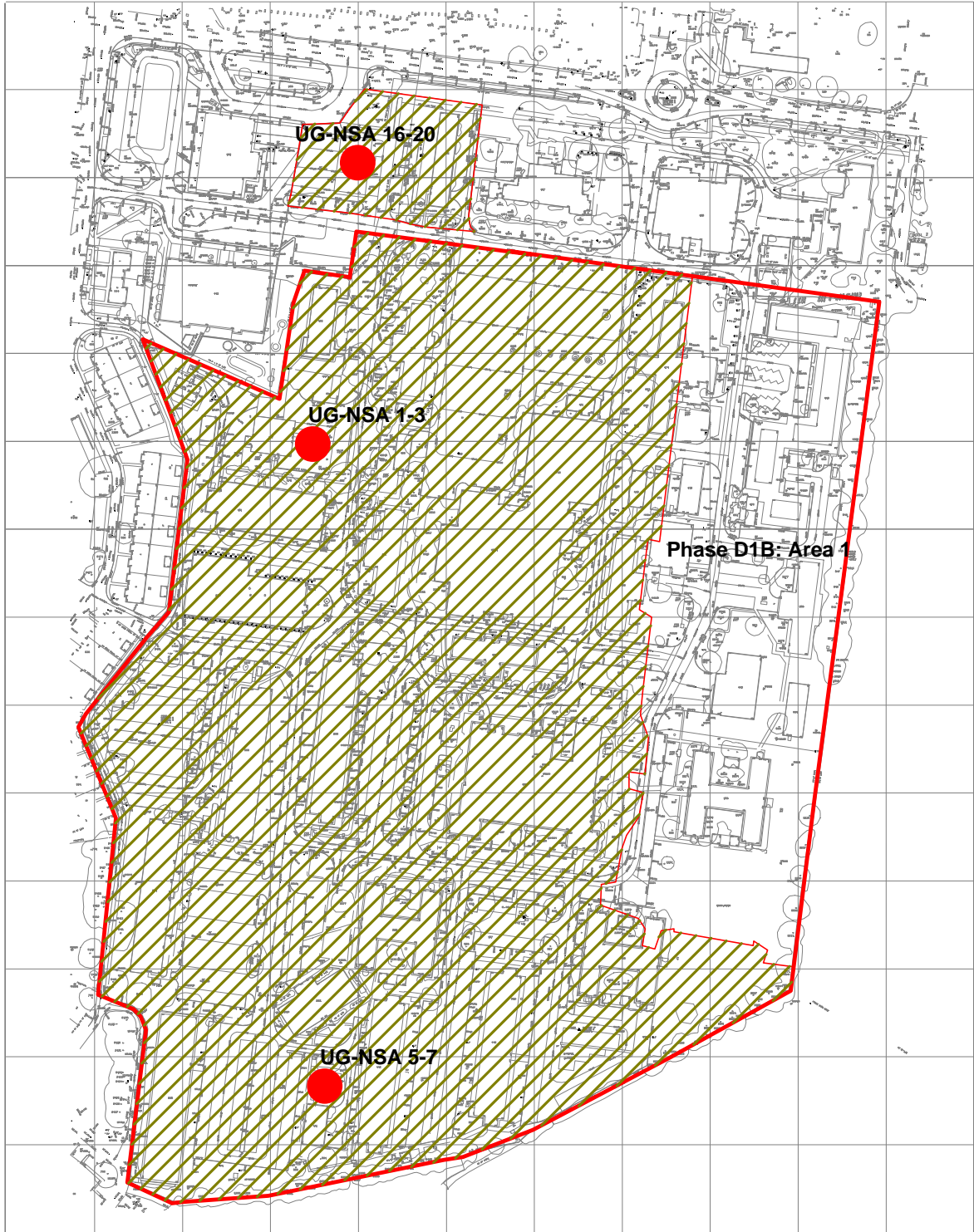
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- 5.9. This report has been prepared by Smith Grant LLP, for the sole and exclusive use of Urban Regen Ltd. and Dorchester Group, and the benefit of this report may not be assigned to any third party without the prior agreement in writing of Smith Grant LLP.
- 5.10. Reasonable skill, care and diligence have been exercised within the timescale and budget available, and in accordance with the technical requirements of the brief. Notwithstanding the efforts made by the professional team in undertaking the assessment and preparing this report, it is possible that other ground conditions and contamination as yet undetected may exist. Reliance on the findings of this report must therefore be limited accordingly. Such reliance must be based on the whole report and not on extracts which may lead to incomplete or incorrect conclusions when taken out of context. This report reviews and relies upon site investigations largely conducted by others. If errors or omissions in previous work have been noted then these have been duly noted, however SGP accepts no responsibility for advice given on the basis of incorrect factual information provided to it.

DRAWINGS

● UST



Phase D1B: Area 2



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Project: Upper Heyford:
Ph1b Dorchester

Drawing: Phase Boundary and UST Location Plan

Drawn: DW

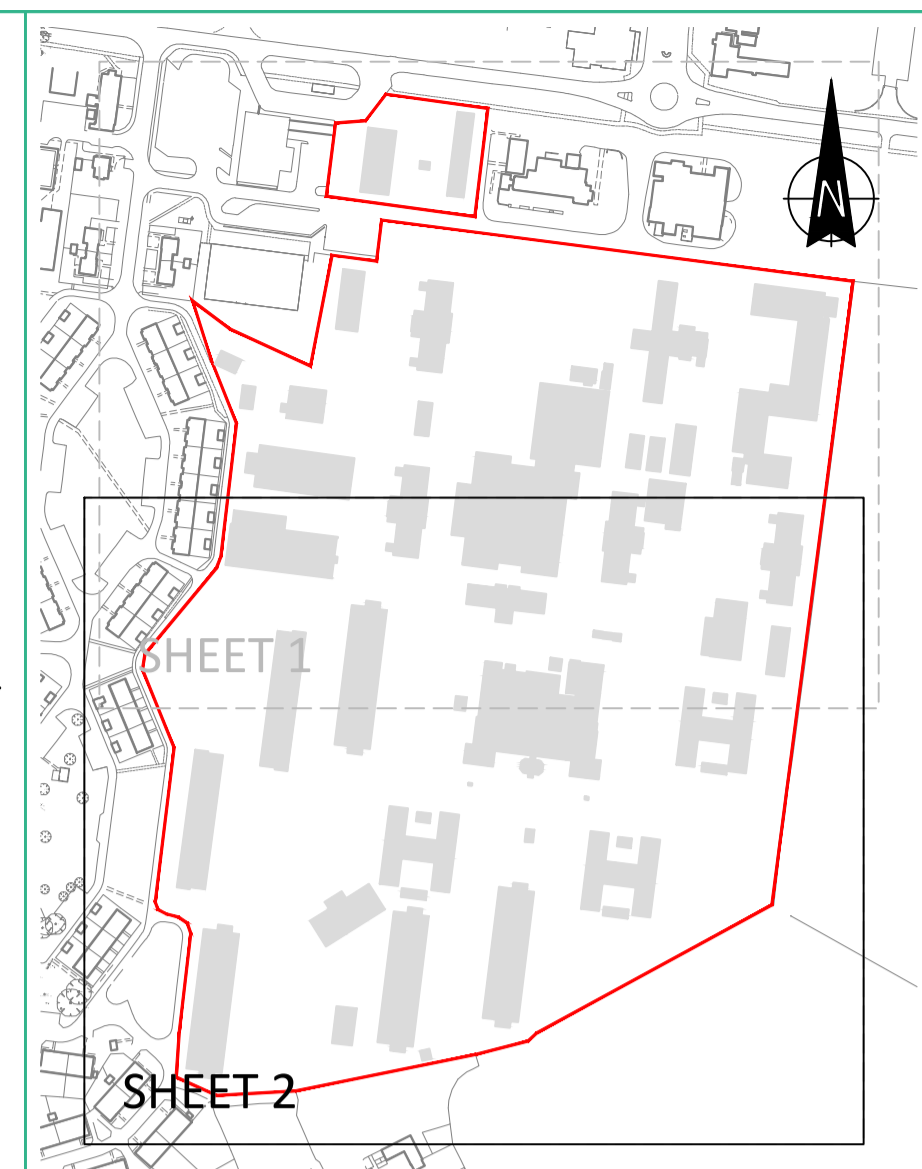
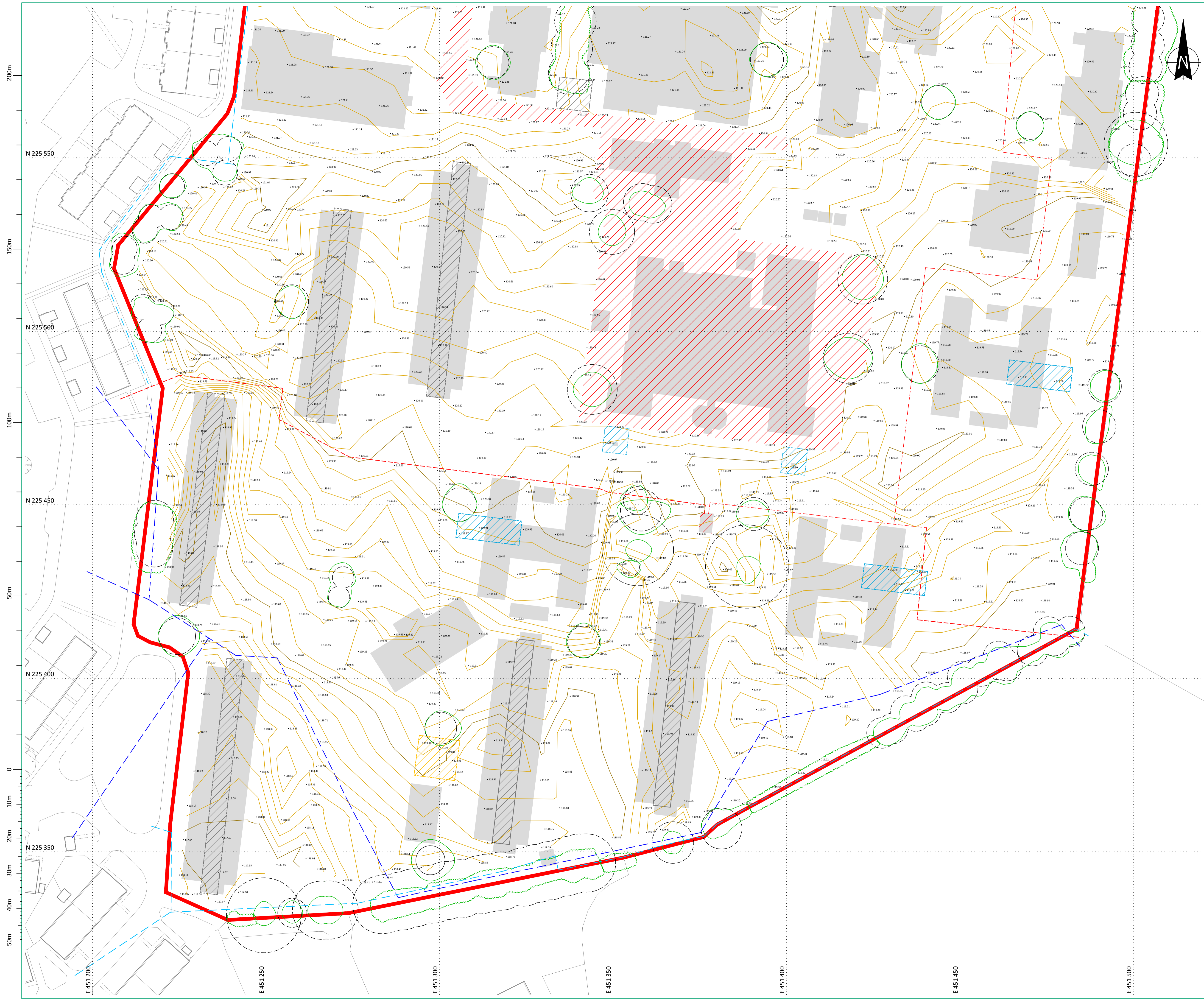
Date: 28.01.15

Job No: R1742B

Checked: AFS

Scale: 1:2,500

Drg No: D01



Sheet Plan **Scale NTS**

- Legend**
- Site boundary —
 - Major contour —
 - Minor contour —
 - Spot level • $\times 120.12$
 - Bottom / top of bank - - - -
 - Area unremediated due to structures being retained / / / /
 - Historic building footprints (see note 2) ■
 - In ground excavations (see note 3) / / / /
 - Cellar excavations (see note 4) / / / /
 - Tank excavations (see note 5) / / / /
 - Trees and associated root zones (unremediated) ○
 - Electricity cables (approximate position only - see note 7) - - - -
 - Water (approximate position only) - - - -
 - Sewer (approximate position only) - - - -

- Notes**
1. This plan is to be read in conjunction with SGP Reports R1742-R06-v1, R1742-R07-v2, R1742-R09-v1.
 2. Made ground associated with the removal of the historic building foundations extends to approximately 0.5-1.5m below remediated ground levels.
 3. Made ground associated with the removal of building service trenches, deep foundations and EWS's extends to approximately 1.5-2.5m below remediated ground levels.
 4. Made ground associated with the removal of cellar structures extends to approximately 3-4m below remediated ground levels.
 5. Made ground associated with the removal of in-ground tanks extends to approximately 4m below remediated ground levels.
 6. Localised areas of made ground associated with the remediation works may be present on site but which are not detailed on this plan.
 7. A 2m easement was established along the line of the live electricity cables. This easement may contain in-ground structures.

Survey Information:

Co-ord System: OSGB36(2)	Co-ord Type: Grid	Primary Survey Control: Leica SmartNet	Secondary Survey Control:	
Rev	Date	Amendment	Drawn	Checked

Woodrow Surveying and Management Services Ltd.
 22 Manor Farm Close,
 Carlton,
 Nr. Goole,
 East Yorkshire,
 DN16 9PS

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WSMS
 WOODROW SURVEYING AND
 MANAGEMENT SERVICES LTD.

Client: **urban regen** Urban Regen Ltd.,
 23 Springvale,
 Edgworth,
 Baildon,
 BL7 0FS

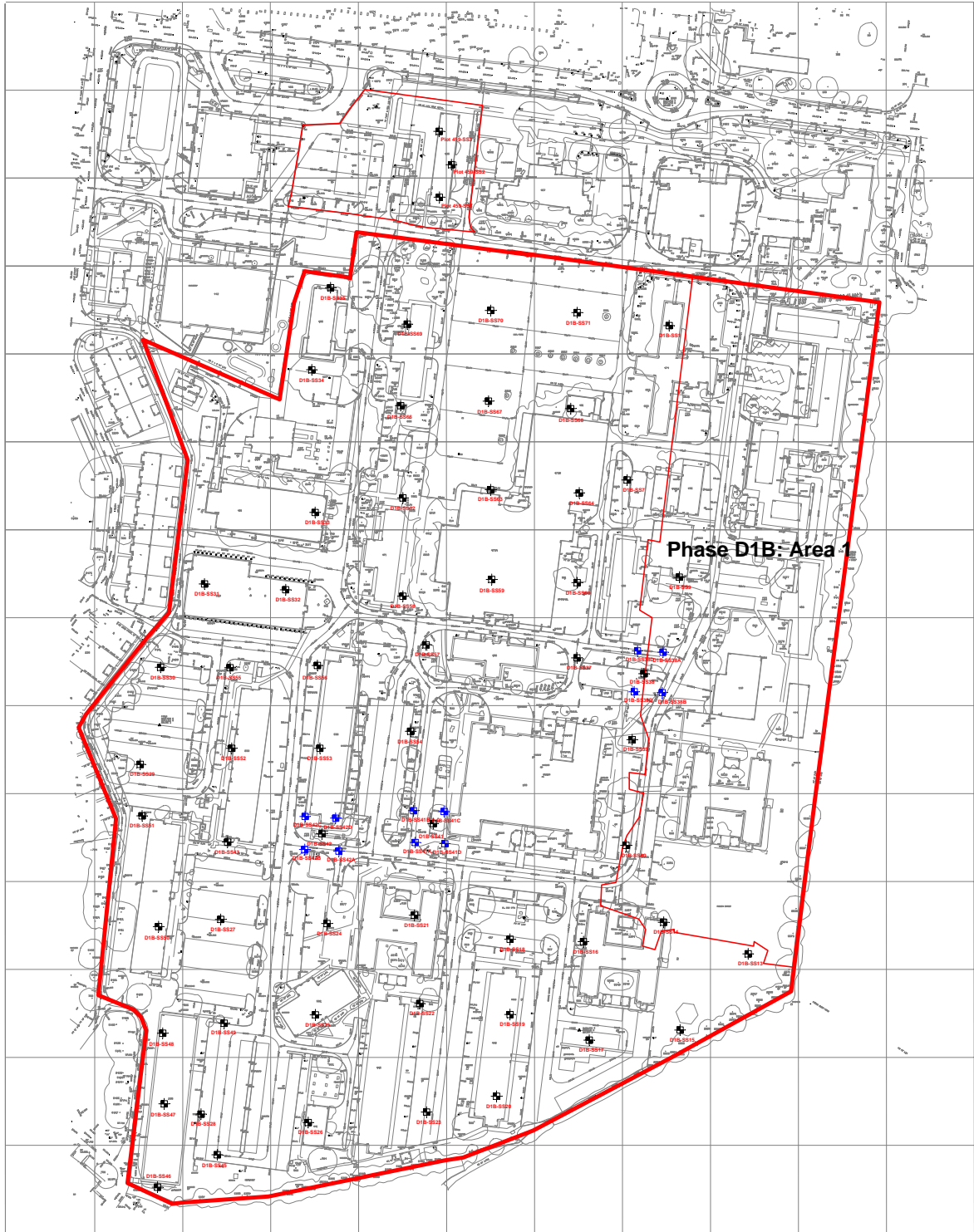
Project: **Upper Heyford (Dorchester)**

Title: **As built topographical survey
 and constraints plan - Phase D1B**

Scale: 1 : 500	First Issue: 16th Jan 2015	Drawn: D.J.Woodrow	Checked: D.J.Woodrow
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Drawing No: **0032-14-001-02** Revision:

- ⊠ In-situ test
- ⊠ In-situ re-test



Phase D1B: Area 1



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Project: Upper Heyford:
 Ph1b Dorchester

Drawing: In-Situ Soil Validation Location Plan

Drawn: DW	Checked: AFS
Date: 28.01.15	Scale: 1:2,500
Job No: R1742B	Drg No: D04

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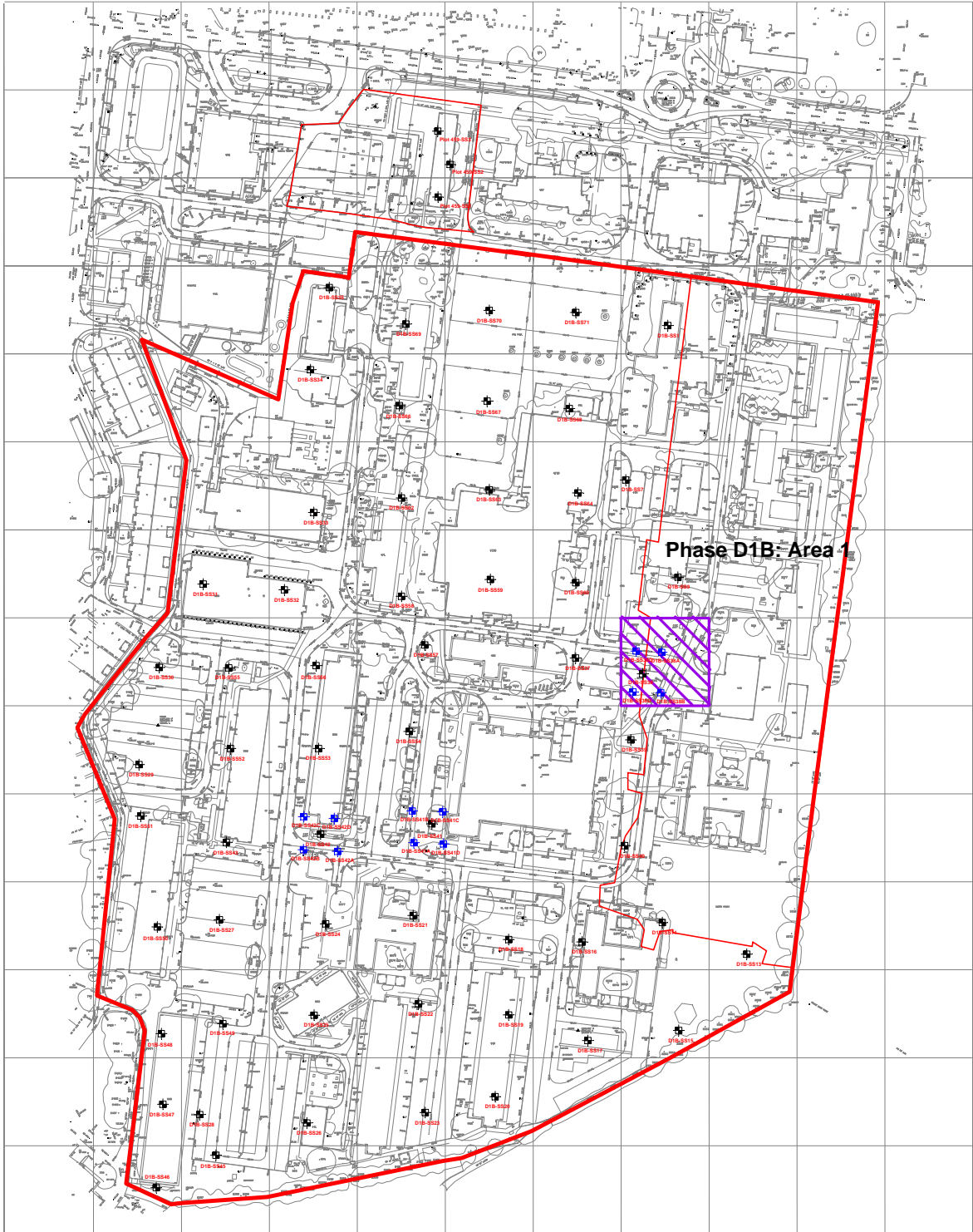


⊕ In-situ test

⊕ In-situ re-test



Arsenic



Phase D1B: Area 1



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Project:
Upper Heyford:
Ph1b Dorchester

Drawing:
Soil Validation Exceedance: Arsenic

Drawn:
DW

Date:
28.01.15

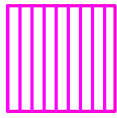
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R1742B

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AFS

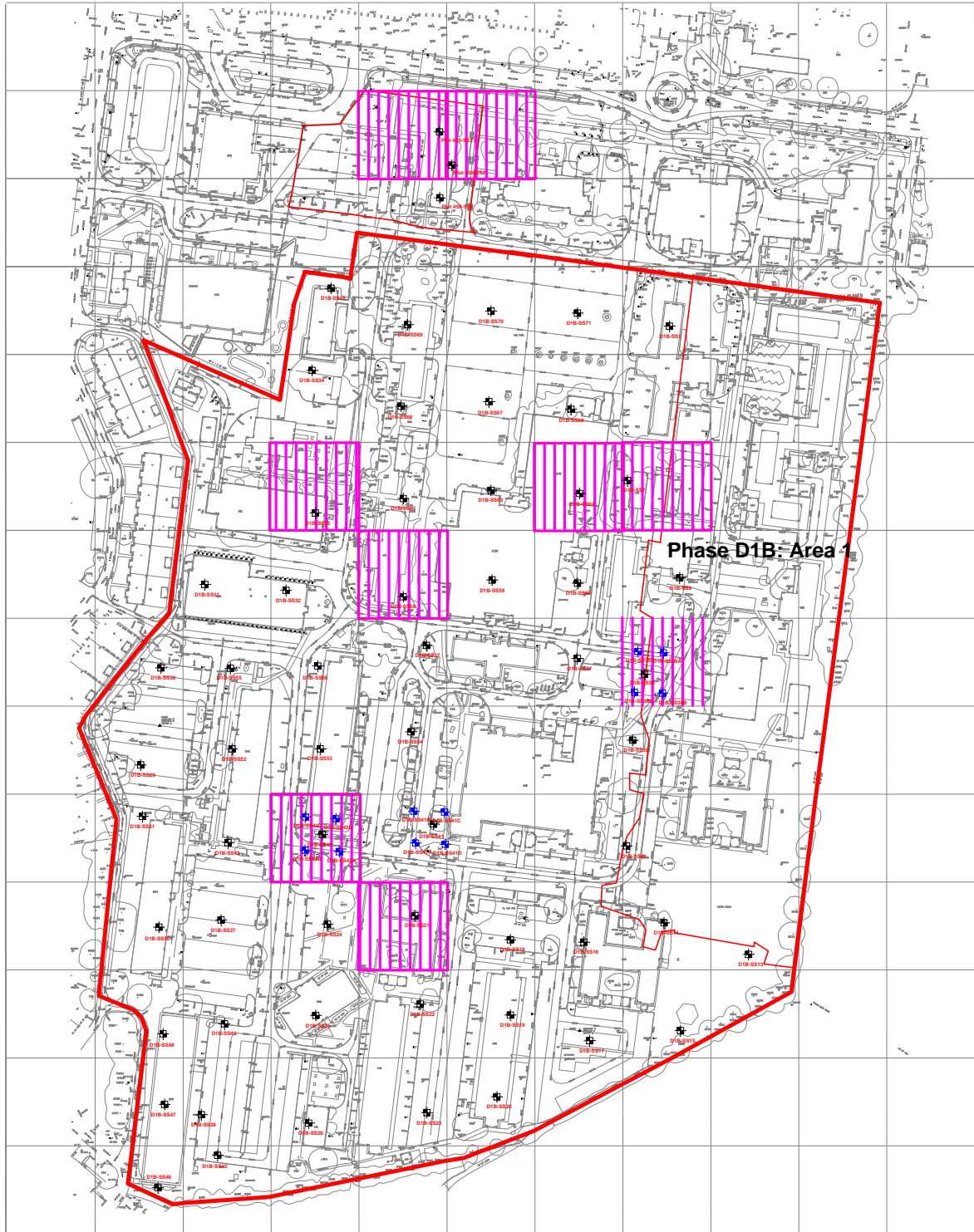
Scale:
1:2,500

Drg No:
D05

- ⊕ In-situ test
- ⊕ In-situ re-test



Vanadium



Smith Grant LLP
 Station House
 Station Road
 Ruabon, LL14 6DL
 Tel: 01978 822367
 Fax: 01978 824718

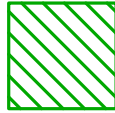
www.smithgrant.co.uk
 email: consult@smithgrant.co.uk

Project: Upper Heyford:
 Ph1b Dorchester

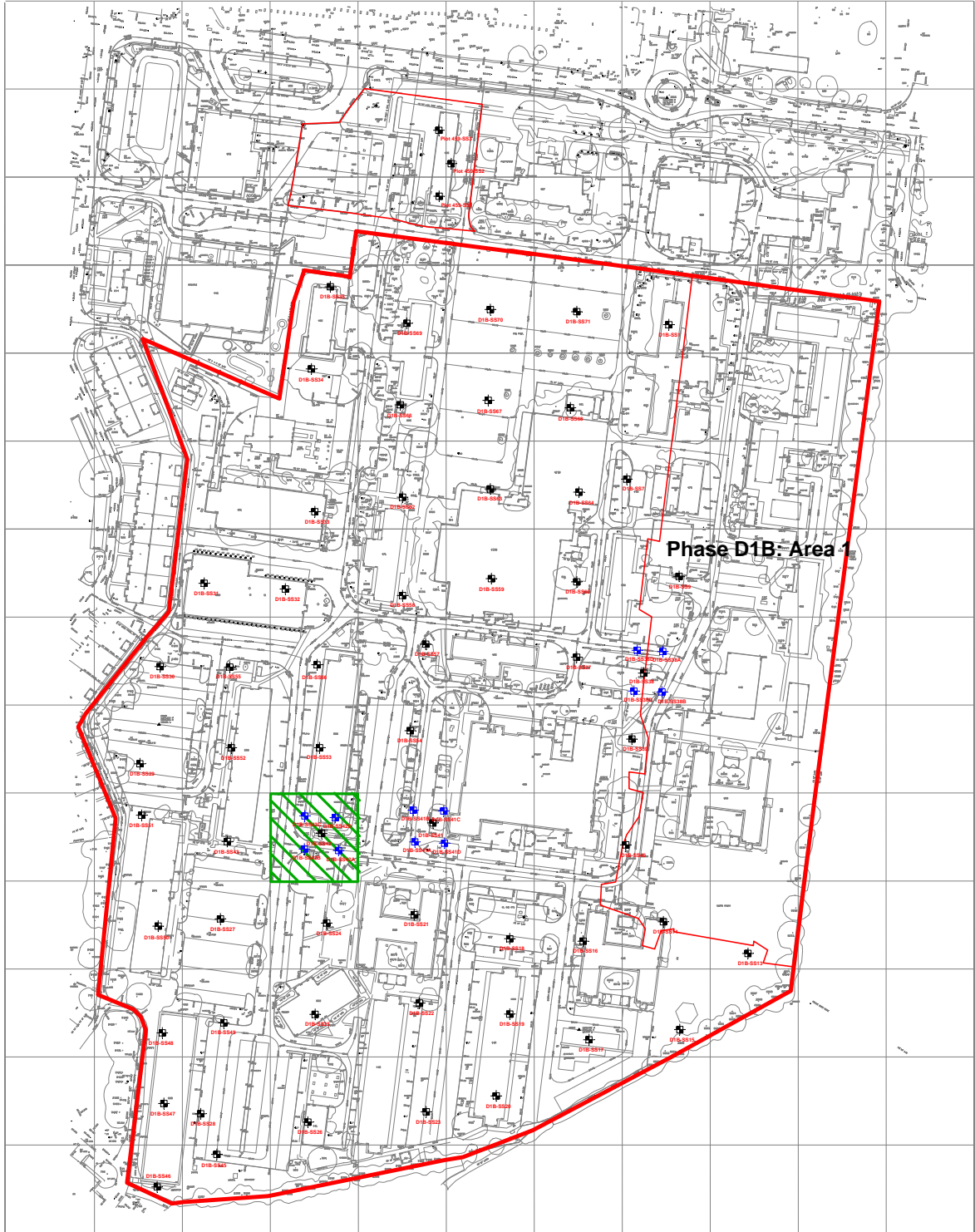
Drawing: Soil Validation Exceedance: Vanadium

Drawn: DW	Checked: AFS
Date: 28.01.15	Scale: 1:2,500
Job No: R1742B	Drg No: D06

- ⊕ In-situ test
- ⊕ In-situ re-test



Lead



Smith Grant LLP
 Station House
 Station Road
 Ruabon, LL14 6DL
 Tel: 01978 822367
 Fax: 01978 824718

www.smithgrant.co.uk
 email: consult@smithgrant.co.uk

Project: Upper Heyford:
 Ph1b Dorchester

Drawing: Soil Validation Exceedance: Lead

Drawn: DW



Checked: AFS

Date: 28.01.15

Scale: 1:2,500

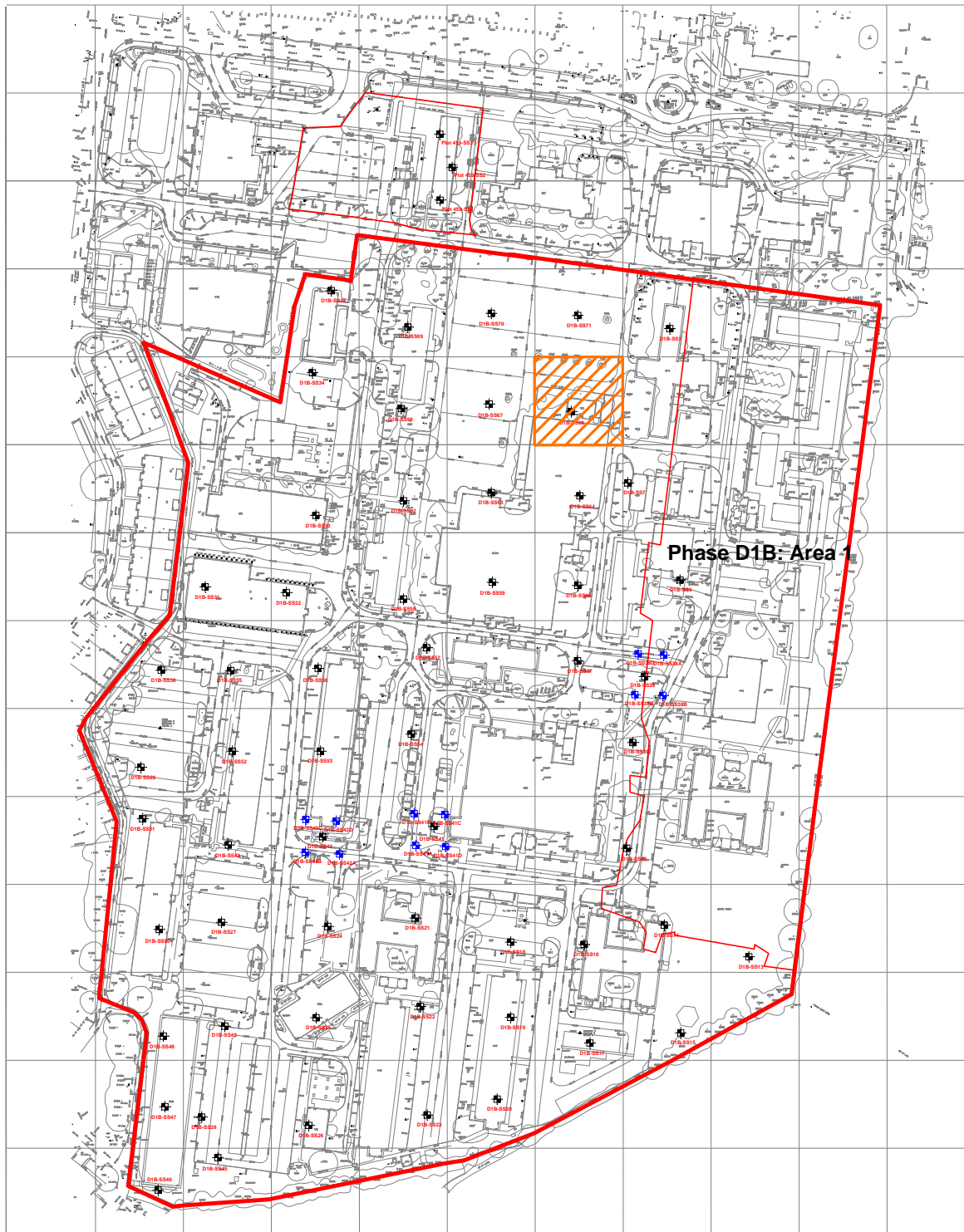
Job No: R1742B

Drg No: D07

-  In-situ test
-  In-situ re-test



Zinc



Smith Grant LLP
 Station House
 Station Road
 Ruabon, LL14 6DL
 Tel: 01978 822367
 Fax: 01978 824718

www.smithgrant.co.uk
 email: consult@smithgrant.co.uk

Project:
 Upper Heyford:
 Ph1b Dorchester

Drawing:
 Soil Validation Exceedance: Zinc

Drawn: DW

Date: 28.01.15

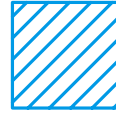
Job No: R1742B

Checked: AFS

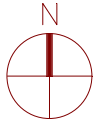
Scale: 1:2,500

Drg No: D08

- ⊠ In-situ test
- ⊕ In-situ re-test



PAHs



Smith Grant LLP
 Station House
 Station Road
 Ruabon, LL14 6DL
 Tel: 01978 822367
 Fax: 01978 824718

www.smithgrant.co.uk
 email: consult@smithgrant.co.uk

Project:
 Upper Heyford:
 Ph1b Dorchester

Drawing:
 Soil Validation Exceedance: PAHs

Drawn:
 DW

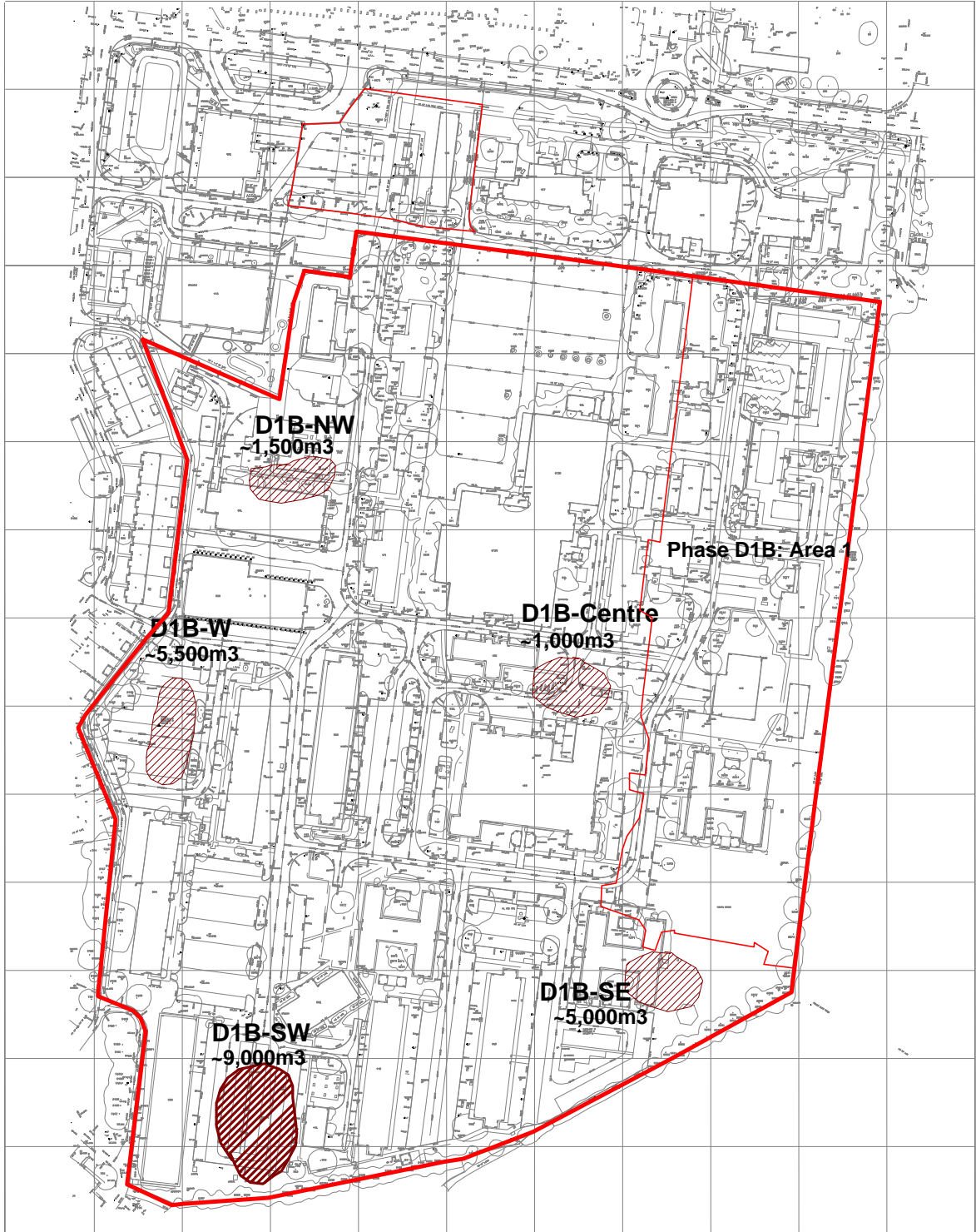
Date:
 28.01.15

Job No:
 R1742B

Checked:
 AFS

Scale:
 1:2,500

Drg No:
 D09



Smith Grant LLP
Station House
Station Road
Ruabon, LL14 6DL
Tel: 01978 822367
Fax: 01978 824718

www.smithgrant.co.uk
email: consult@smithgrant.co.uk

Project: Upper Heyford:
Ph1b Dorchester

Drawing: Site Generated Aggregate Stockpiles

Drawn: DW	Checked: AFS
Date: 28.01.15	Scale: 1:2,500
Job No: R1742B	Drg No: D10



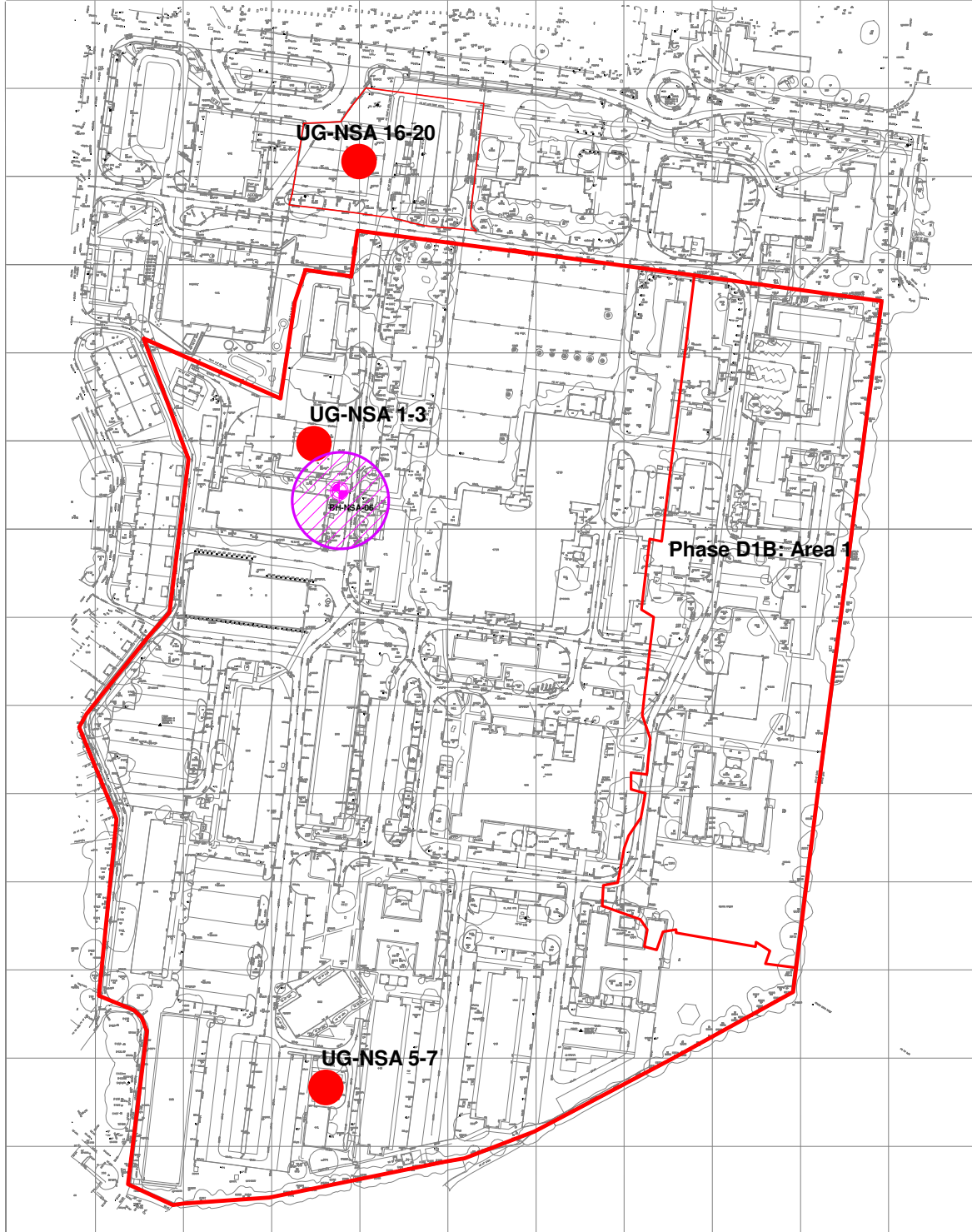
UST



Gas & Water Main Protection Required



BH (free product observed)



Smith Grant LLP
 Station House
 Station Road
 Ruabon, LL14 6DL
 Tel: 01978 822367
 Fax: 01978 824718

www.smithgrant.co.uk
 email: consult@smithgrant.co.uk

Project:
 Upper Heyford:
 Ph1b Dorchester

Drawing:
 Gas & Water Main protection

Drawn:
 DW

Date:
 28.01.15

Job No:
 R1742B

Checked:
 AFS

Scale:
 1:2,500

Drg No:
 D11

APPENDIX A

Site Photographs

1.



05.12.13 Earthworks complete in location of former building 459

2.



30.04.14 Petrol forecourt located in the north of D1B: Area 2 (building 493); location of UG-NSA-16-20

3.



30.04.14 Southern view of building 467 (boiler house); location of UG-NSA 1-3

4.



30.04.14 Northern view in the south-east of D1B: Area 2, Barrack block (building 593 (left) and 566 (right)) visible

5.



30.04.14 South-west corner of the site, barracks buildings 594 (right) and 598 (left) visible

6.



30.04.14 Southern view of the site prior to demolition

7.



30.04.14 Chimney associated with boiler house (building 441); location of UG-NSA- 5-7

8.



19.08.14 Backfilled area following remediation of UG-NSA- 16-20

9.



19.08.14 Waste processing area in the north of the site, stockpile of chipped wood waste visible in background

10.



19.08.14 Demolition of former barracks (building 598) taking place in the south-west corner

11.



19.08.14 Northern view across the centre of the site

12.



19.08.14 Site processed aggregate stockpile along the site's western boundary (Agg-W)

13.



19.08.14 North-west corner of the site, boiler house (building 457) visible behind aggregate stockpile Agg-NW

14.



19.08.14 Centre of the site with building 498 that is to remain as part of the redevelopment

15.



26.06.14 Western view across the southern end of the site, building 488 visible in the background

16.



26.06.14 Processing of site won aggregates in the south of the site

17.



26.06.14 Demolition material awaiting processing from buildings 594 and 598

18.



26.06.14 Northern view along the site's western boundary

19.



26.06.14 Recycling of recovered metal waste (tanks) in the waste processing area in the north of the site

20.



10.09.14 Breaking out of relict drains in the south-west of the site

21.



10.09.14 Processing site won aggregate (Agg-W); dust suppression in use

22.



10.09.14 Removal of foundations/obstructions associated with building 598

23.



10.09.14 Northern view across the site with processing of hard-standing taking place

24.



10.09.14 North-east view across the site, building 488 which is to remain visible in the background

25.



10.09.14 Eastern view along the south of the site, stockpile storage area

26.



24.09.14 View to the south of the site, Agg-SW visible in the background

27.



24.09.14 Removal of hard-standing exposed natural soils across the south-west of the site

28.



24.09.14 Aggregate stockpile Agg-W located along the western boundary

29.



24.09.14 Remediation earthworks completed in the north-west corner

30.



24.09.14 Aggregate stockpile Agg-SW

31.



24.09.14 Aggregate stockpile Agg-SE

32.



07.10.14 Western view across the southern face of retained building 488

33.



07.10.14 Northern view along the western side of the site, exposed natural strata following hard-standing strip

34.



07.10.14 Temporary stockpiles of hydrocarbon waste generated from UST remediation temporarily stockpile (background)

35.



07.10.14 Protected trees in the south of the site

36.



07.10.14 Stockpile storage area in the south with tarmac, subsoil and concrete awaiting processing

37.



22.10.14 – View of the centre of the site with building 465 visible in the background (to be retained)

38.



22.10.14 – Central view of the site, natural soils exposed following strip of hard-standing

39.



22.10.14 – Waste processing area in the north of the site, waste awaiting off-site disposal/recycling

40.



22.10.14 - Waste processing area in the north of the site, waste awaiting off-site disposal/recycling

41.



12.01.15 – Eastern view to the centre of the site, building 465 which is to be retained is visible in the background

42.



12.01.15 - Southern view from the centre of the site, stockpile Agg-SW visible in background

43.



12.01.15 – Western view across the site following completion of earthworks, stockpile Agg-W visible in the background

44.



12.01.15 – Southern view down the centre of the site, northern face of building 465 visible.

45.



12.01.15 – Eastern view across the north of the site following completion of earthworks, D1B:Area 1 visible in the background

46.



12.01.15 – Temporary stockpile of waste wood which has undergone processing (chipping) awaiting removal off-site

47.



12.01.15 – North-west corner of the site being utilised as a brick store following completion of earthworks

48.



12.01.15 - North-west corner of the site being utilised as a brick store following completion of earthworks. Retained road which not remediated.

APPENDIX B

Formation Level Validation Photo Record

1.



05.12.13 - Cover Validation: Plot 459-SS1

2.



05.12.13 - Cover Validation: Plot 459-SS2

3.

No Photo

05.12.13 - Cover Validation: Plot 459-SS3

4.



18.08.14 - Cover Validation: D1B-SS1

5.



18.08.14 - Cover Validation: D1B-SS5

6.



18.08.14 - Cover Validation: D1B-SS6

7.



18.08.14 - Cover Validation: D1B-SS7

8.



18.08.14 - Cover Validation: D1B-SS9

9.



18.08.14 - Cover Validation: D1B-SS13

10.



18.08.14 - Cover Validation: D1B-SS14

11.



18.08.14 - Cover Validation: D1B-SS15

12.



18.08.14 - Cover Validation: D1B-SS16

13.



18.08.14 - Cover Validation: D1B-SS17

14.



18.08.14 - Cover Validation: D1B-SS18

15.



18.08.14 - Cover Validation: D1B-SS19

16.



18.08.14 - Cover Validation: D1B-SS20

17.



18.08.14 - Cover Validation: D1B-SS21

18.



18.08.14 - Cover Validation: D1B-SS22

19.



18.08.14 - Cover Validation: D1B-SS23

20.



18.08.14 - Cover Validation: D1B-SS24

21.



18.08.14 - Cover Validation: D1B-SS25

22.



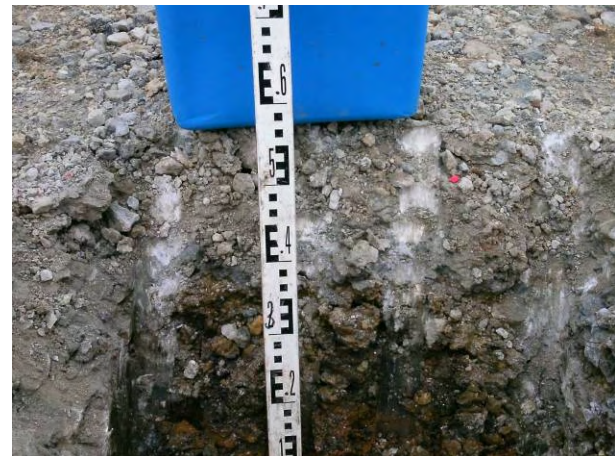
18.08.14 - Cover Validation: D1B-SS26

23.



18.08.14 - Cover Validation: D1B-SS27

24.



18.08.14 - Cover Validation: D1B-SS28

25.



18.08.14 - Cover Validation: D1B-SS29

26.



18.08.14 - Cover Validation: D1B-SS30

27.



18.08.14 - Cover Validation: D1B-SS31

28.



18.08.14 - Cover Validation: D1B-SS32

29.



18.08.14 - Cover Validation: D1B-SS33

30.



18.08.14 - Cover Validation: D1B-SS34

31.



18.08.14 - Cover Validation: D1B-SS35

32.



24.09.14 - Cover Validation: D1B-SS37

33.



24.09.14 - Cover Validation: D1B-SS38

34.



24.09.14 - Cover Validation: D1B-SS39

35.



24.09.14 - Cover Validation: D1B-SS40

36.



24.09.14 - Cover Validation: D1B-SS41

37.



24.09.14 - Cover Validation: D1B-SS42

38.



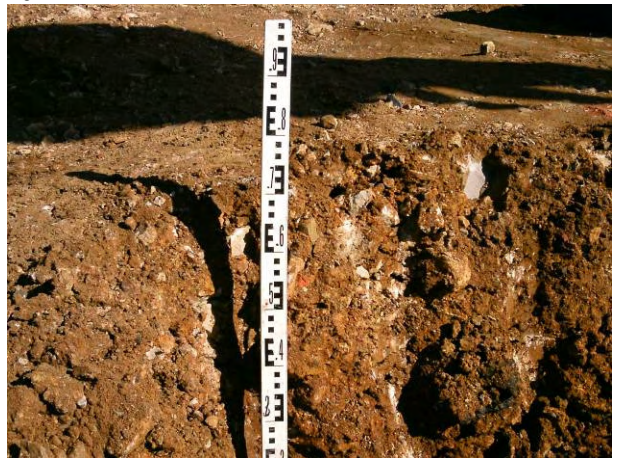
24.09.14 - Cover Validation: D1B-SS43

39.



24.09.14 - Cover Validation: D1B-SS46

40.



24.09.14 - Cover Validation: D1B-SS47

41.



24.09.14 - Cover Validation: D1B-SS48

42.



24.09.14 - Cover Validation: D1B-SS50

43.



24.09.14 - Cover Validation: D1B-SS51

44.



24.09.14 - Cover Validation: D1B-SS52

45.



24.09.14 - Cover Validation: D1B-SS53

46.



24.09.14 - Cover Validation: D1B-SS54

47.



24.09.14 - Cover Validation: D1B-SS57

48.



07.10.14 - Cover Validation: D1B-SS45

49.



07.10.14 - Cover Validation: D1B-SS49

50.



07.10.14 - Cover Validation: D1B-SS55

51.



07.10.14 - Cover Validation: D1B-SS56

52.



07.10.14 - Cover Validation: D1B-SS58

53.



07.10.14 - Cover Validation: D1B-SS66

54.



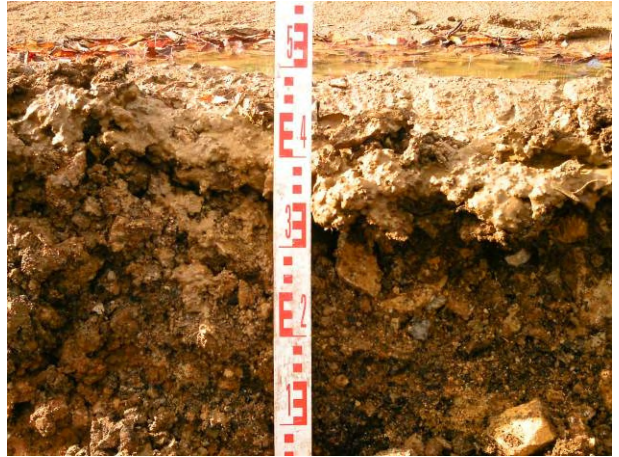
07.10.14 - Cover Validation: D1B-SS69

55.



22.10.14 – D1B-SS38A

56.



22.10.14 - D1B-SS38B

57.

No Photo

22.10.14 – D1B-SS38C

58.



22.10.14 – D1B-SS38D

59.



22.10.14 – D1B-SS41A

60.



22.10.14 – D1B-SS41B

61.



22.10.14 – D1B-SS41C

62.



22.10.14 – D1B-SS41D

63.



22.10.14 – D1B-SS42A

64.



22.10.14 – D1B-SS42B

65.



22.10.14 – D1B-SS42C

66.



22.10.14 – D1B-SS42D

67.



22.10.14 – D1B-SS59

68.



22.10.14 – D1B-SS60

69.



22.10.14 – D1B-SS63

70.



22.10.14 – D1B-SS64

71.



22.10.14 – D1B-SS67

72.



22.10.14 – D1B-SS68

73.



22.10.14 – D1B-SS70

74.



22.10.14 – D1B-SS71

APPENDIX C

Analytical Results



Final Report

Report No.: 16-02787-1

Initial Date of Issue: 11-Feb-2016

Client: Smith Grant LLP

Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL

Contact(s): Dan Wayland

Project: R1742b - Heyford (Dorchester)

Quotation No.: **Date Received:** 08-Feb-2016

Order No.: **Date Instructed:** 08-Feb-2016

No. of Samples: 5 **Target Date:** 11-Feb-2016

Turnaround (Wkdays): 4 **Results Due:** 11-Feb-2016

Date Approved: 11-Feb-2016

Approved By:

[Redacted Signature]

Details: Keith Jones, Technical Manager

Results - Soil

Client: Smith Grant LLP	Chemtest Job No.:				16-02787	16-02787	16-02787	16-02787	16-02787
Quotation No.:	Chemtest Sample ID.:				251070	251071	251072	251073	251074
Order No.:	Client Sample Ref.:				DIB-TS1-A	DIB-TS1-B	DIB-TS1-C	DIB-TS2-A	DIB-TS2-B
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL
	Date Sampled:				04-Feb-2016	04-Feb-2016	04-Feb-2016	04-Feb-2016	04-Feb-2016
Determinand	Accred.	SOP	Units	LOD					
ACM Type	U	2192		N/A	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report No.: 16-00802-1
Initial Date of Issue: 20-Jan-2016
Client: Smith Grant LLP
Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL
Contact(s): Dan Wayland
Project: R1742b - Upper Heyford (Dorchester)

Quotation No.:		Date Received:	15-Jan-2016
Order No.:		Date Instructed:	15-Jan-2016
No. of Samples:	4	Target Date:	20-Jan-2016
Turnaround (Wkdays):	4	Results Due:	20-Jan-2016
Date Approved:	20-Jan-2016		

Approved By:



Details: Robert Monk, Technical Development
Chemist

Results - Soil

Client: Smith Grant LLP	Chemtest Job No.:				16-00802	16-00802	16-00802	16-00802
Quotation No.:	Chemtest Sample ID.:				240612	240613	240614	240615
Order No.:	Client Sample Ref.:				DIB-Sub-A	DIB-Sub-B	DIB-Sub-C	DIB-Sub-D
	Sample Type:				SOIL	SOIL	SOIL	SOIL
	Date Sampled:				13-Jan-2016	13-Jan-2016	13-Jan-2016	13-Jan-2016
Determinand	Accred.	SOP	Units	LOD				
ACM Type	U	2192		N/A	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 15-00973 Issue-1

Initial Date of Issue: 20-Jan-15

Client: Smith Grant LLP

Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL

Contact(s): Dan Wayland

Project: R1742b - Upper Heyford (Dorchester)

Quotation No.: **Date Received:** 19-Jan-15

Order No.: **Date Instructed:** 19-Jan-15

No. of Samples: 13 **Results Due:** 21-Jan-15

Turnaround: 3
(Weekdays)

Date Approved: 20-Jan-15




Details: Darrell Hall, Laboratory Director

Results Summary - Soil

Project: R1742b - Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Job No.:				15-00973	15-00973	15-00973	15-00973	15-00973	15-00973	15-00973	15-00973	15-00973
Quotation No.:	Chemtest Sample ID.:				90543	90544	90545	90546	90547	90548	90549	90550	90551
Order No.:	Client Sample Ref.:				DIB-W-AGG	DIB-W-AGG	DIB-W-AGG	DIB-W-AGG	DIB-W-AGG	DIB-SW-AGG	DIB-SW-AGG	DIB-SW-AGG	DIB-SW-AGG
	Client Sample ID.:				7	8	9	10	11	15	16	17	18
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):												
	Bottom Depth(m):												
	Date Sampled:				12-Jan-15	12-Jan-15	12-Jan-15	12-Jan-15	12-Jan-15	12-Jan-15	12-Jan-15	12-Jan-15	12-Jan-15
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Project: R1742b - Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Job No.:				15-00973	15-00973	15-00973
Quotation No.:	Chemtest Sample ID.:				90552	90553	90554
Order No.:	Client Sample Ref.:				ACM-SP1A	ACM-SP1B	ACM-SP1C
	Client Sample ID.:						
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):						
	Bottom Depth(m):						
	Date Sampled:				13-Jan-15	13-Jan-15	13-Jan-15
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192			Cement	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

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



Final Report

Report Number: 14-12853 Issue-1

Initial Date of Issue: 30-Oct-14

Client: Smith Grant LLP

Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL

Contact(s): Dan Wayland

Project: Upper Heyford (Dorchester) - R1742B

Quotation No.: **Date Received:** 27-Oct-14

Order No.: **Date Instructed:** 24-Oct-14

No. of Samples: 16 **Results Due:** 30-Oct-14

Turnaround:
(Weekdays) 5

Date Approved: 30-Oct-14

Approved By:

Details: Keith Jones, Technical Manager

The results reported herein relate only to the material supplied to the laboratory.
This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Results Summary - Soil

Project: Upper Heyford (Dorchester) - R1742B

Client: Smith Grant LLP	Chemtest Job No.:				14-12853	14-12853	14-12853	14-12853	14-12853	14-12853	14-12853	14-12853	14-12853	
Quotation No.:	Chemtest Sample ID.:				62594	62595	62596	62597	62598	62599	62600	62601	62602	62603
Order No.:	Client Sample Ref.:										DIB-AGG-CENTRE	DIB-AGG-CENTRE		
	Client Sample ID.:				Sub-4	Sub-5	Sub-6	Sub-7	Sub-8	Sub-9	1	2	DIB-SS59	DIB-SS60
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):													
	Bottom Depth(m):													
	Date Sampled:													
Determinand	Accred.	SOP	Units	LOD										
ACM Type	U	2192			-	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Results Summary - Soil

Project: Upper Heyford (Dorchester) - R1742B

Client: Smith Grant LLP	Chemtest Job No.:				14-12853	14-12853	14-12853	14-12853	14-12853	14-12853
Quotation No.:	Chemtest Sample ID.:				62604	62605	62606	62607	62608	62641
Order No.:	Client Sample Ref.:									
	Client Sample ID.:				DIB-SS63	DIB-SS64	DIB-SS67	DIB-SS68	DIB-SS70	DIB-SS71
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):									
	Bottom Depth(m):									
	Date Sampled:									22-Oct-14
Determinand	Accred.	SOP	Units	LOD						
ACM Type	U	2192			-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
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- I/S Insufficient Sample
- U/S Unsuitable sample
- N/E not evaluated
- < "less than"
- > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

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The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

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Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers

Sample Retention and Disposal

All soil samples will be retained for a period of 1 month following the date of the test report

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 14-11756 Issue-1

Initial Date of Issue: 15-Oct-14

Client: Smith Grant LLP

Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL

Contact(s): Dan Wayland

Project: Upper Heyford (Dorchester)

Quotation No.: **Date Received:** 09-Oct-14

Order No.: **Date Instructed:** 09-Oct-14

No. of Samples: 30 **Results Due:** 15-Oct-14

**Turnaround:
(Weekdays)** 5

Date Approved: 15-Oct-14

Approved By:

Details: Darrell Hall, Laboratory Director

Results Summary - Soil

Project: Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Job No.:				14-11756	14-11756	14-11756	14-11756	14-11756	14-11756	14-11756	14-11756	14-11756
Quotation No.:	Chemtest Sample ID.:				57418	57419	57420	57421	57422	57423	57424	57425	57426
Order No.:	Client Sample Ref.:				D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B
	Client Sample ID.:				SS45	SS49	SS55	SS56	SS58	SS62	SS66	SS69	SS4F
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0	0	0	0	0	0	0	0	0
	Bottom Depth(m):				0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	Date Sampled:				07-Oct-14	07-Oct-14	07-Oct-14	07-Oct-14	07-Oct-14	07-Oct-14	07-Oct-14	07-Oct-14	07-Oct-14
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Results Summary - Soil

Project: Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Job No.:				14-11756	14-11756	14-11756	14-11756	14-11756	14-11756	14-11756	14-11756	14-11756
Quotation No.:	Chemtest Sample ID.:				57427	57428	57429	57430	57431	57432	57433	57434	57435
Order No.:	Client Sample Ref.:				D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B
	Client Sample ID.:				SS4G	SS4H	SS4I	SS4J	SS4K	SE-S4	SE-S5	SE-S6	SE-S7
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0								
	Bottom Depth(m):				0.4								
	Date Sampled:				07-Oct-14	07-Oct-14	07-Oct-14	07-Oct-14	07-Oct-14	08-Oct-14	08-Oct-14	08-Oct-14	08-Oct-14
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Results Summary - Soil

Project: Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Job No.:				14-11756	14-11756	14-11756	14-11756	14-11756	14-11756	14-11756	14-11756	14-11756
Quotation No.:	Chemtest Sample ID.:				57436	57437	57438	57439	57440	57441	57442	57443	57444
Order No.:	Client Sample Ref.:				D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B
	Client Sample ID.:				SE-S8	SE-S9	SE-S10	SUB-1	SUB-2	SUB-3	SW-S9	SW-S10	SW-S11
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):												
	Bottom Depth(m):												
	Date Sampled:				08-Oct-14	08-Oct-14	08-Oct-14	08-Oct-14	08-Oct-14	08-Oct-14	08-Oct-14	08-Oct-14	08-Oct-14
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	cement	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	Chrysotile	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Project: Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Job No.:				14-11756	14-11756	14-11756
Quotation No.:	Chemtest Sample ID.:				57445	57446	57447
Order No.:	Client Sample Ref.:				D1B	D1B	D1B
	Client Sample ID.:				SW-S12	SW-S13	SW-S14
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):						
	Bottom Depth(m):						
	Date Sampled:				08-Oct-14	08-Oct-14	08-Oct-14
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192			-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

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Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers

Sample Retention and Disposal

All soil samples will be retained for a period of 1 month following the date of the test report

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 14-10872 Issue-1

Initial Date of Issue: 02-Oct-14

Client: Smith Grant LLP

Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL

Contact(s): Dan Wayland

Project: Heyford Park

Quotation No.: **Date Received:** 26-Sep-14

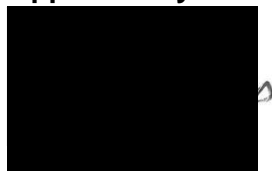
Order No.: R1742b **Date Instructed:** 26-Sep-14

No. of Samples: 17 **Results Due:** 02-Oct-14

**Turnaround:
(Weekdays)** 5

Date Approved: 02-Oct-14

Approved By:



Keith Jones, Technical Manager

Results Summary - Soil

Project: Heyford Park

Client: Smith Grant LLP	Chemtest Job No.:				14-10872	14-10872	14-10872	14-10872	14-10872	14-10872	14-10872	14-10872	14-10872
Quotation No.:	Chemtest Sample ID.:				52974	52975	52976	52977	52978	52979	52980	52981	52982
Order No.: R1742b	Client Sample Ref.:				D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B
	Client Sample ID.:				SS36	SS37	SS38	SS39	SS40	SS41	SS42	SS43	SS46
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bottom Depth(m):				0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	Date Sampled:				24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Results Summary - Soil

Project: Heyford Park

Client: Smith Grant LLP	Chemtest Job No.:				14-10872	14-10872	14-10872	14-10872	14-10872	14-10872	14-10872	14-10872
Quotation No.:	Chemtest Sample ID.:				52983	52984	52985	52986	52987	52988	52989	52990
Order No.: R1742b	Client Sample Ref.:				D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B
	Client Sample ID.:				SS47	SS48	SS50	SS51	SS52	SS53	SS54	SS57
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Bottom Depth(m):				0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	Date Sampled:				24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14	24-Sep-14
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192			-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

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Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers

Sample Retention and Disposal

All soil samples will be retained for a period of 1 month following the date of the test report

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 14-09783 Issue-1

Initial Date of Issue: 16-Sep-14

Client: Smith Grant LLP

Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL

Contact(s): Dan Wayland

Project: R1742B Upper Heyford (Dorchester)

Quotation No.: **Date Received:** 12-Sep-14

Order No.: **Date Instructed:** 12-Sep-14

No. of Samples: 14 **Results Due:** 16-Sep-14

**Turnaround:
(Weekdays)** 3

Date Approved: 16-Sep-14

Approved By:



Keith Jones, Technical Manager

The results reported herein relate only to the material supplied to the laboratory.
This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Project: R1742B Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Job No.:				14-09783	14-09783	14-09783	14-09783	14-09783	14-09783	14-09783	14-09783	14-09783
Quotation No.:	Chemtest Sample ID.:				47946	47947	47948	47949	47950	47951	47952	47953	47954
Order No.:	Client Sample Ref.:				D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B	D1B
	Client Sample ID.:				SW-AGG1	SW-AGG2	SW-AGG3	SW-AGG4	SW-AGG5	SW-AGG6	SW-AGG7	SW-AGG8	SS6-B
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):												
	Bottom Depth(m):												
	Date Sampled:				10-Sep-14	10-Sep-14	10-Sep-14	10-Sep-14	10-Sep-14	10-Sep-14	10-Sep-14	10-Sep-14	10-Sep-14
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Project: R1742B Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Job No.:				14-09783	14-09783	14-09783	14-09783	14-09783
Quotation No.:	Chemtest Sample ID.:				47955	47956	47957	47958	47959
Order No.:	Client Sample Ref.:				D1B	D1B	D1B	D1B	D1B
	Client Sample ID.:				SS6-C	SS6-D	SS6-E	SS6-F	SS6-G
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):								
	Bottom Depth(m):								
	Date Sampled:				10-Sep-14	10-Sep-14	10-Sep-14	10-Sep-14	10-Sep-14
Determinand	Accred.	SOP	Units	LOD					
ACM Type	U	2192			-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Report Information

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Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers

Sample Retention and Disposal

All soil samples will be retained for a period of 1 month following the date of the test report

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 14-08801 Issue-1

Initial Date of Issue: 04-Sep-14

Client: Smith Grant LLP

Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL

Contact(s): Dan Wayland

Project: R1742B- Upper Heyford (Dorchester)

Quotation No.: **Date Received:** 28-Aug-14

Order No.: **Date Instructed:** 28-Aug-14

No. of Samples: 12 **Results Due:** 05-Sep-14

**Turnaround:
(Weekdays)** 7

Date Approved: 04-Sep-14

Details: Darrell Hall, Laboratory Director
Keith Jones, Technical Manager

The results reported herein relate only to the material supplied to the laboratory.
This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Project: R1742B- Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Job No.:				14-08801	14-08801	14-08801	14-08801	14-08801	14-08801	14-08801	14-08801	14-08801
Quotation No.:	Chemtest Sample ID.:				43881	43882	43883	43884	43885	43886	43887	43888	43889
Order No.:	Client Sample Ref.:												
	Client Sample ID.:				D1B-W-Agg-1	D1B-W-Agg-2	D1B-W-Agg-3	D1B-W-Agg-4	D1B-W-Agg-5	D1B-W-Agg-6	D1B-NW-Agg-1	D1B-NW-Agg-2	D1B-NW-Agg-3
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):												
	Bottom Depth(m):												
	Date Sampled:				26-Aug-14	26-Aug-14	26-Aug-14	26-Aug-14	26-Aug-14	26-Aug-14	26-Aug-14	26-Aug-14	26-Aug-14
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Project: R1742B- Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Job No.:				14-08801	14-08801	14-08801
Quotation No.:	Chemtest Sample ID.:				43890	43891	43892
Order No.:	Client Sample Ref.:						
	Client Sample ID.:				UST16-20AggA1	UST16-20AggB1	UST16-20AggB2
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):						
	Bottom Depth(m):						
	Date Sampled:				26-Aug-14	26-Aug-14	26-Aug-14
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192			-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Report Information

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Sample Deviation Codes

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C - Sample not received in appropriate containers

Sample Retention and Disposal

All soil samples will be retained for a period of 1 month following the date of the test report

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 14-08441 Issue-1

Initial Date of Issue: 01-Sep-14

Client: Smith Grant LLP

Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL

Contact(s): Dan Wayland

Project: R1742B - Upper Heyford (Dorchester)

Quotation No.: **Date Received:** 21-Aug-14

Order No.: **Date Instructed:** 21-Aug-14

No. of Samples: 35 **Results Due:** 01-Sep-14

**Turnaround:
(Weekdays)** 7

Date Approved: 01-Sep-14

Approved By:


Keith Jones, Technical Manager

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Results Summary - Soil

Report Number: 14-08441 Issue-1

Project: R1742B - Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Sample ID.:				42050	42051	42052	42053	42054	42055	42056	42057	42058
Quotation No.:	Client Sample Ref.:												
Order No.:	Client Sample ID.:				D1B-SS1	D1B-SS2	D1B-SS3	D1B-SS4	D1B-SS5	D1B-SS6	D1B-SS7	D1B-SS8	D1B-SS9
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):												
	Bottom Depth(m):												
	Date Sampled:				18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	-	-	Fibres/Clumps	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	Amosite	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Results Summary - Soil

Report Number: 14-08441 Issue-1

Project: R1742B - Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Sample ID.:				42059	42060	42061	42062	42063	42064	42065	42066	42067
Quotation No.:	Client Sample Ref.:												
Order No.:	Client Sample ID.:				D1B-SS10	D1B-SS11	D1B-SS12	D1B-SS13	D1B-SS14	D1B-SS15	D1B-SS16	D1B-SS17	D1B-SS18
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):												
	Bottom Depth(m):												
	Date Sampled:				18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Results Summary - Soil

Report Number: 14-08441 Issue-1

Project: R1742B - Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Sample ID.:				42068	42069	42070	42071	42072	42073	42074	42075	42076
Quotation No.:	Client Sample Ref.:												
Order No.:	Client Sample ID.:				D1B-SS19	D1B-SS20	D1B-SS21	D1B-SS22	D1B-SS23	D1B-SS24	D1B-SS25	D1B-SS26	D1B-SS27
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):												
	Bottom Depth(m):												
	Date Sampled:				18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Results Summary - Soil

Report Number: 14-08441 Issue-1

Project: R1742B - Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Sample ID.:				42077	42078	42079	42080	42081	42082	42083	42084
Quotation No.:	Client Sample Ref.:											
Order No.:	Client Sample ID.:				D1B-SS28	D1B-SS29	D1B-SS30	D1B-SS31	D1B-SS32	D1B-SS33	D1B-SS34	D1B-SS35
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):											
	Bottom Depth(m):											
	Date Sampled:				18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14	18-Aug-14
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192			-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

Sample Retention and Disposal

All soil samples will be retained for a period of 1 month following the date of the test report

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk



Final Report

Report Number: 14-08439 Issue-1

Initial Date of Issue: 01-Sep-14

Client: Smith Grant LLP

Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL

Contact(s): Dan Wayland

Project: R1742B - Upper Heyford (Dorchester)

Quotation No.: **Date Received:** 21-Aug-14

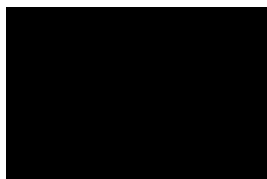
Order No.: **Date Instructed:** 21-Aug-14

No. of Samples: 3 **Results Due:** 01-Sep-14

**Turnaround:
(Weekdays)** 7

Date Approved: 01-Sep-14

Approved By:



Keith Jones, Technical Manager

The results reported herein relate only to the material supplied to the laboratory.
This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Report Number: 14-08439 Issue-1
Project: R1742B - Upper Heyford (Dorchester)

Client: Smith Grant LLP	Chemtest Sample ID.:				42042	42043	42044
Quotation No.:	Client Sample Ref.:						
Order No.:	Client Sample ID.:				D1B-SE-AGG1	D1B-SE-AGG2	D1B-SE-AGG3
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):						
	Bottom Depth(m):						
	Date Sampled:				19-Aug-14	19-Aug-14	19-Aug-14
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192			-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

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All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied

B - Sample age exceeds stability time (sampling to extraction)

C - Sample not received in appropriate containers

Sample Retention and Disposal

All soil samples will be retained for a period of 1 month following the date of the test report

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING
TEST REPORT



Client Urban Regen Ltd

Address 23 Spring Vale
Off Bury Road
Edgeworth
Bolton
BL7 0FS

Contract Upper Heyford

Job Number MRN 2305/80
Date of Issue 04 November 2014
Page 1 of 13

Approved Signatory

S J Hutchings, A W Hutchings, A Richardson

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.



33C, Vauxhall Industrial Estate, Greg Street, Reddish, Stockport SK5 7BR Tel: 0161 475 0870 Fax: 0161 475 0871

Email: steve@mtt-uk.com Website: www.murrayrix.com

Also at: London: 020 8523 1999

Murray Rix is the trading name of Murray Rix (Northern) Limited. Registered in England 2878361

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

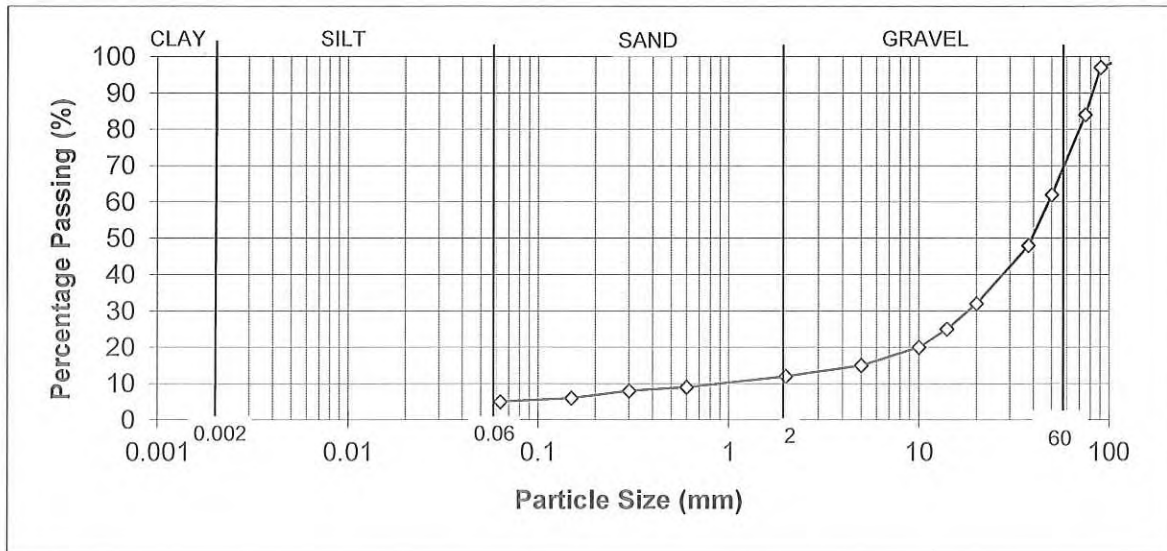
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	D1B-Northeast-Sample-1	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59908	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	20	15-60
90	97	80-100	5	15	10-45
75	84	65-100	2	12	
50	62		0.6	9	0-25
37.5	48	45-100	0.3	8	
20	32		0.15	6	
14	25		0.063	5	0-12



REMARKS

As received moisture content = 7.6%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED [REDACTED]

NAME A Richardson DATE 04-Nov-14
 (Deputy Laboratory Manager)

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

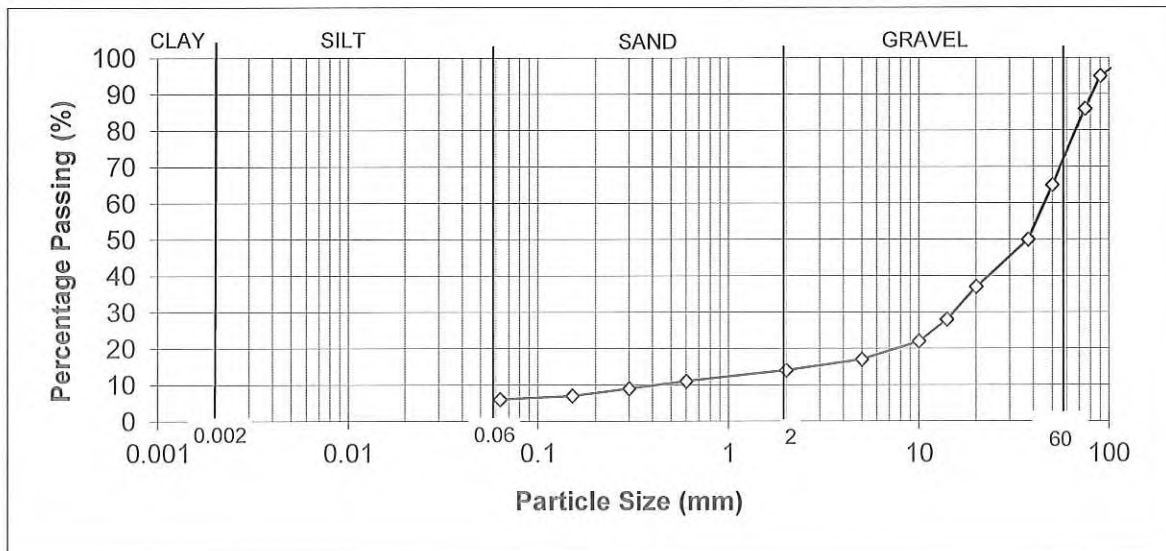
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	D1B-Northeast-Sample-2	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59909	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	22	15-60
90	95	80-100	5	17	10-45
75	86	65-100	2	14	
50	65		0.6	11	0-25
37.5	50	45-100	0.3	9	
20	37		0.15	7	
14	28		0.063	6	0-12



REMARKS

As received moisture content = 7.8%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED



NAME

A Richardson
 (Deputy Laboratory Manager)

DATE

04-Nov-14

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

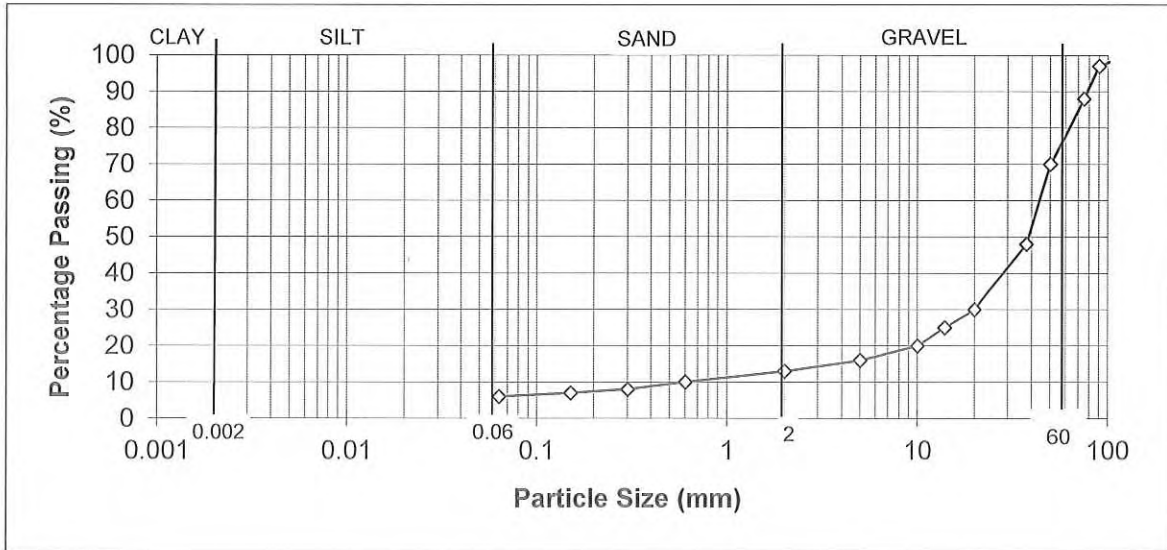
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	D1B-Northeast-Sample-3	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	55910	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	20	15-60
90	97	80-100	5	16	10-45
75	88	65-100	2	13	
50	70		0.6	10	0-25
37.5	48	45-100	0.3	8	
20	30		0.15	7	
14	25		0.063	6	0-12



REMARKS

As received moisture content = 7.7%
 Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED [REDACTED]

NAME A Richardson DATE 04-Nov-14
 (Deputy Laboratory Manager)

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

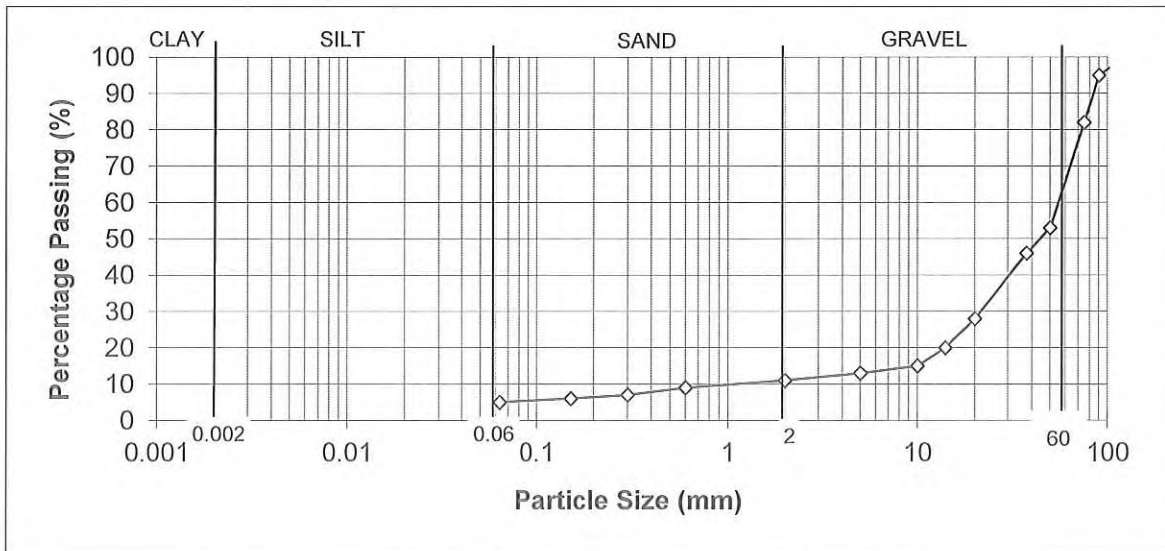
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	D1B-South East-Sample-1	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59911	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	15	15-60
90	95	80-100	5	13	10-45
75	82	65-100	2	11	
50	53		0.6	9	0-25
37.5	46	45-100	0.3	7	
20	28		0.15	6	
14	20		0.063	5	0-12



REMARKS

As received moisture content = 8.4%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED

NAME

A Richardson
 (Deputy Laboratory Manager)

DATE

04-Nov-14

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

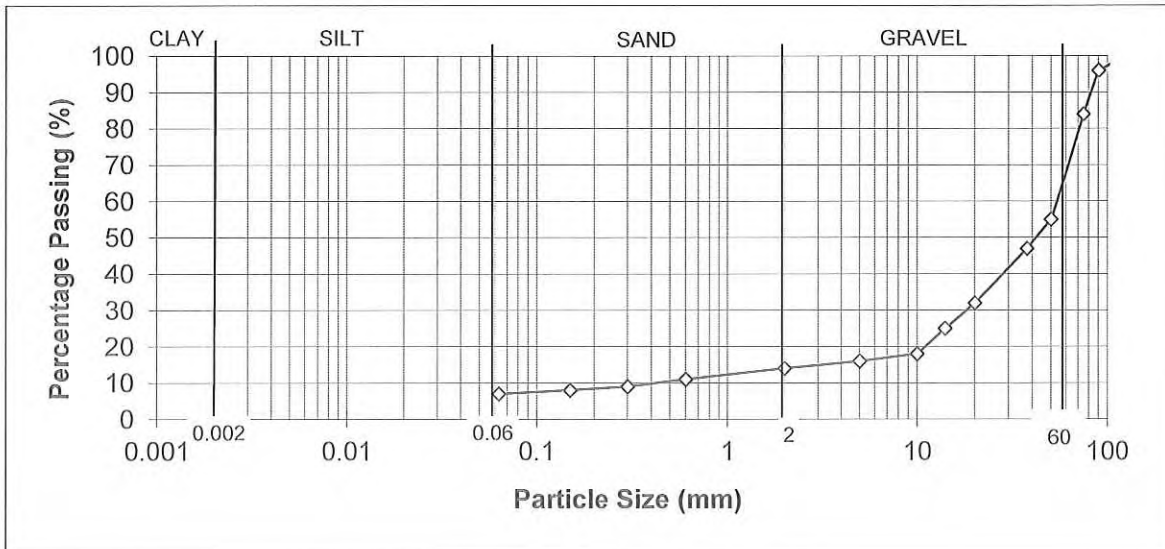
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	D1B-South West-Sample-1	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59912	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	18	15-60
90	96	80-100	5	16	10-45
75	84	65-100	2	14	
50	55		0.6	11	0-25
37.5	47	45-100	0.3	9	
20	32		0.15	8	
14	25		0.063	7	0-12

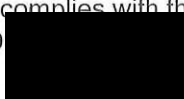


REMARKS

As received moisture content = 8.1%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED



NAME

A Richardson
 (Deputy Laboratory Manager)

DATE

04-Nov-14

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

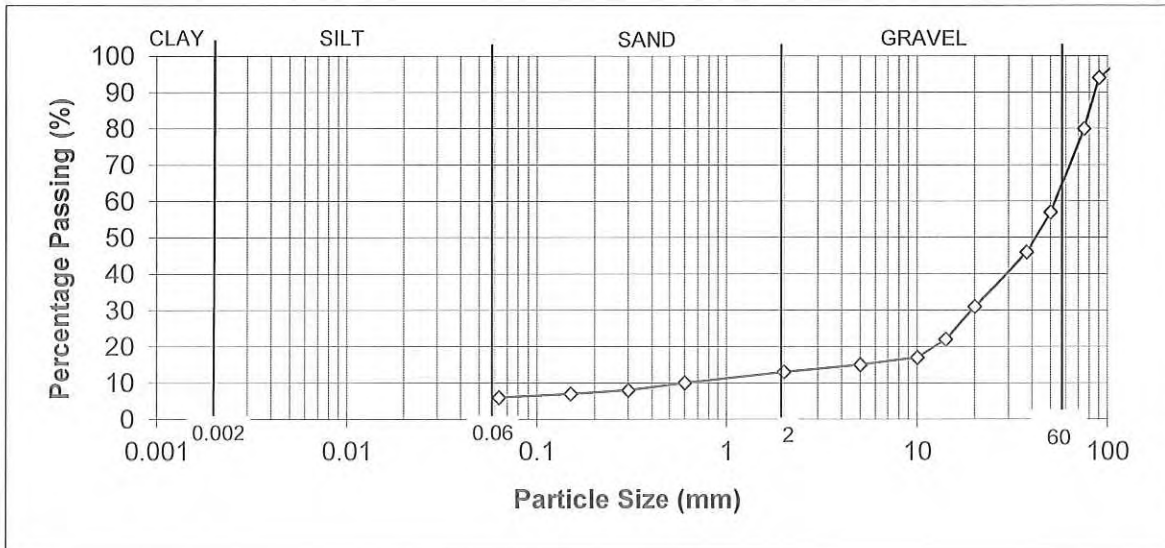
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	D1B-South West-Sample-2	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59913	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	17	15-60
90	94	80-100	5	15	10-45
75	80	65-100	2	13	
50	57		0.6	10	0-25
37.5	46	45-100	0.3	8	
20	31		0.15	7	
14	22		0.063	6	0-12

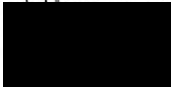


REMARKS

As received moisture content = 8.2%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED



NAME

A Richardson
 (Deputy Laboratory Manager)

DATE

04-Nov-14

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

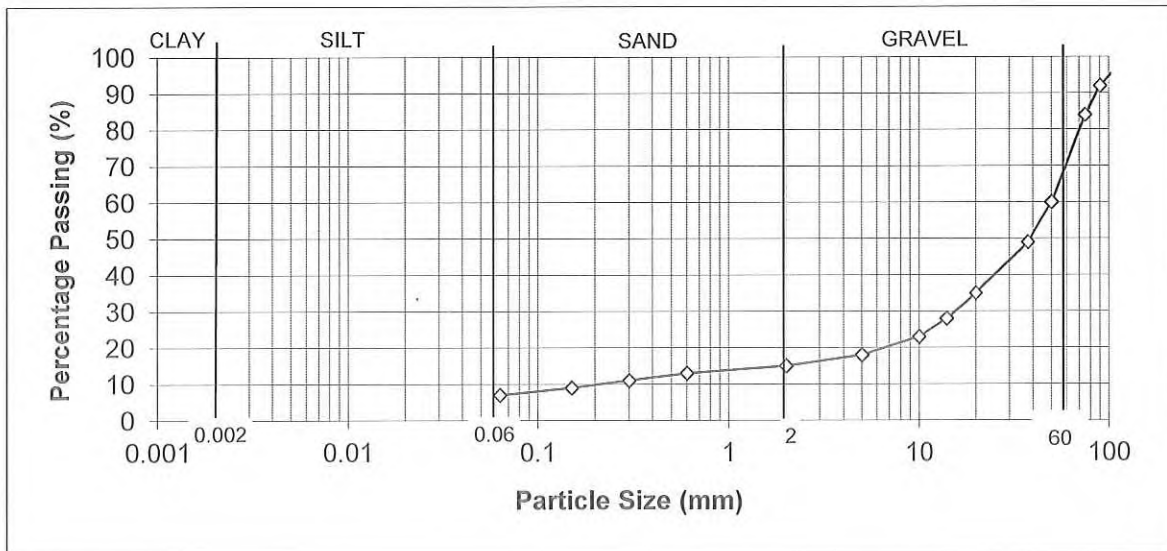
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	D1B-West-Sample-1	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59914	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	23	15-60
90	92	80-100	5	18	10-45
75	84	65-100	2	15	
50	60		0.6	13	0-25
37.5	49	45-100	0.3	11	
20	35		0.15	9	
14	28		0.063	7	0-12



REMARKS

As received moisture content = 9.0%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED



NAME

A Richardson
 (Deputy Laboratory Manager)

DATE

04-Nov-14

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

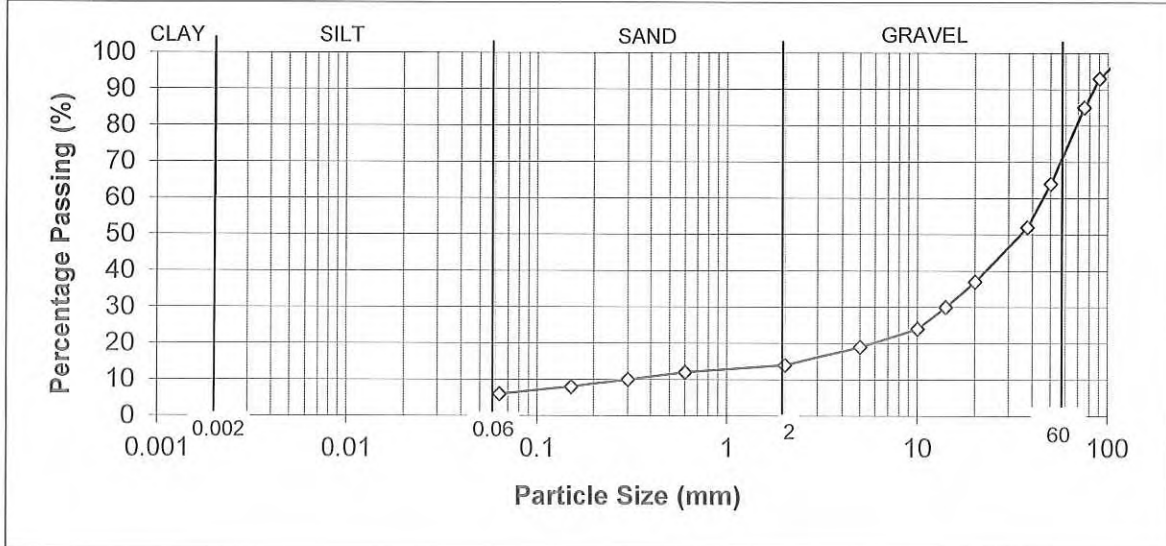
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	D1B-West-Sample-2	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59915	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	24	15-60
90	93	80-100	5	19	10-45
75	85	65-100	2	14	
50	64		0.6	12	0-25
37.5	52	45-100	0.3	10	
20	37		0.15	8	
14	30		0.063	6	0-12



REMARKS

As received moisture content = 8.9%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED



NAME

A Richardson
 (Deputy Laboratory Manager)

DATE

04-Nov-14

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

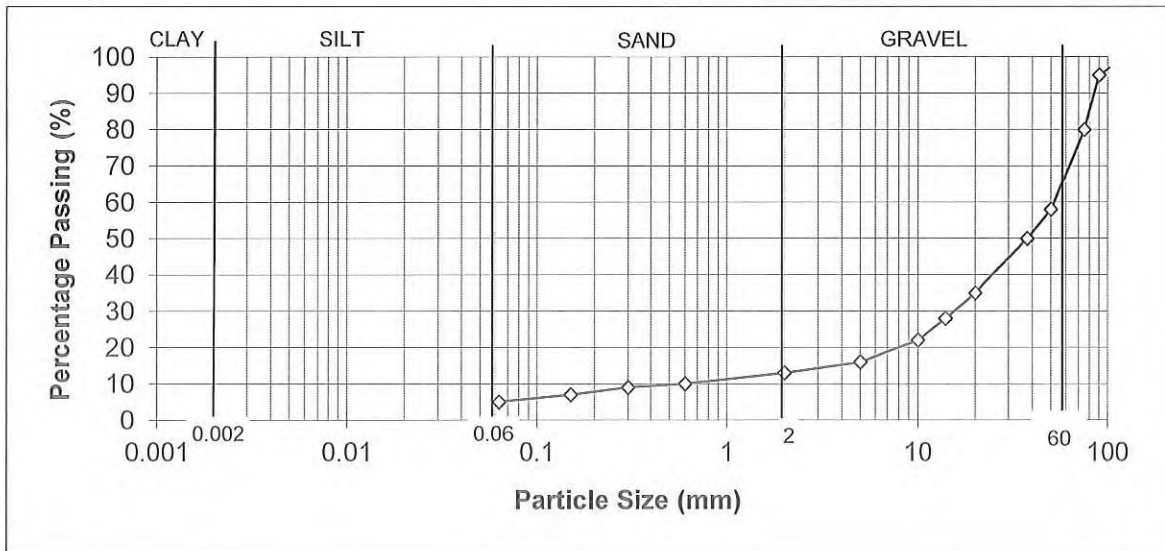
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	B31-Sample-1	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59916	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	22	15-60
90	95	80-100	5	16	10-45
75	80	65-100	2	13	
50	58		0.6	10	0-25
37.5	50	45-100	0.3	9	
20	35		0.15	7	
14	28		0.063	5	0-12



REMARKS

As received moisture content = 7.9%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED



NAME

A Richardson
 (Deputy Laboratory Manager)

DATE

04-Nov-14

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

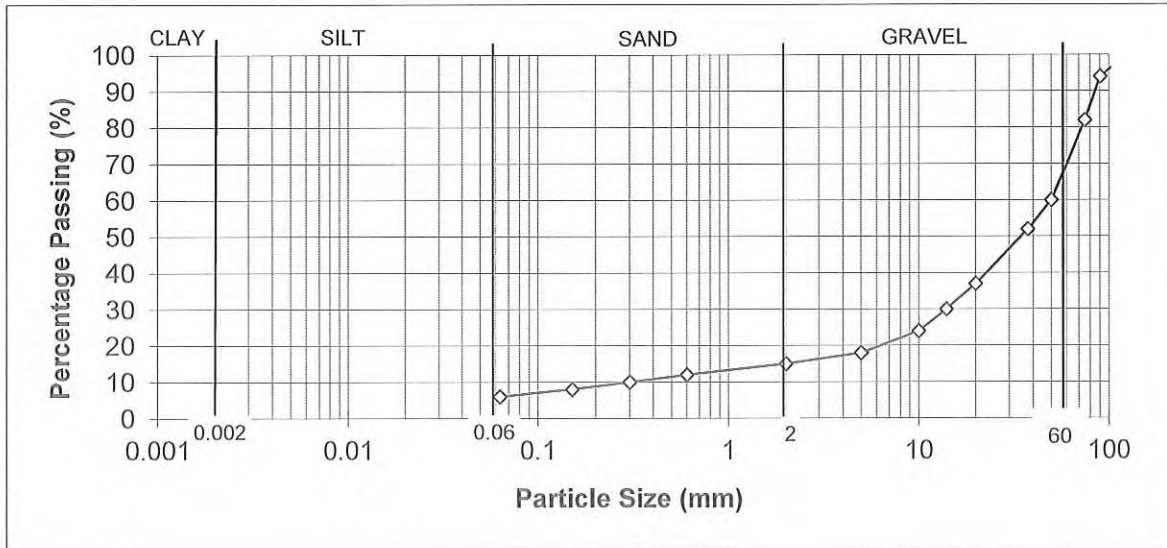
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	B31-Sample-2	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59917	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	24	15-60
90	94	80-100	5	18	10-45
75	82	65-100	2	15	
50	60		0.6	12	0-25
37.5	52	45-100	0.3	10	
20	37		0.15	8	
14	30		0.063	6	0-12



REMARKS

As received moisture content = 7.7%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNE



NAME

A Richardson
 (Deputy Laboratory Manager)

DATE

04-Nov-14

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

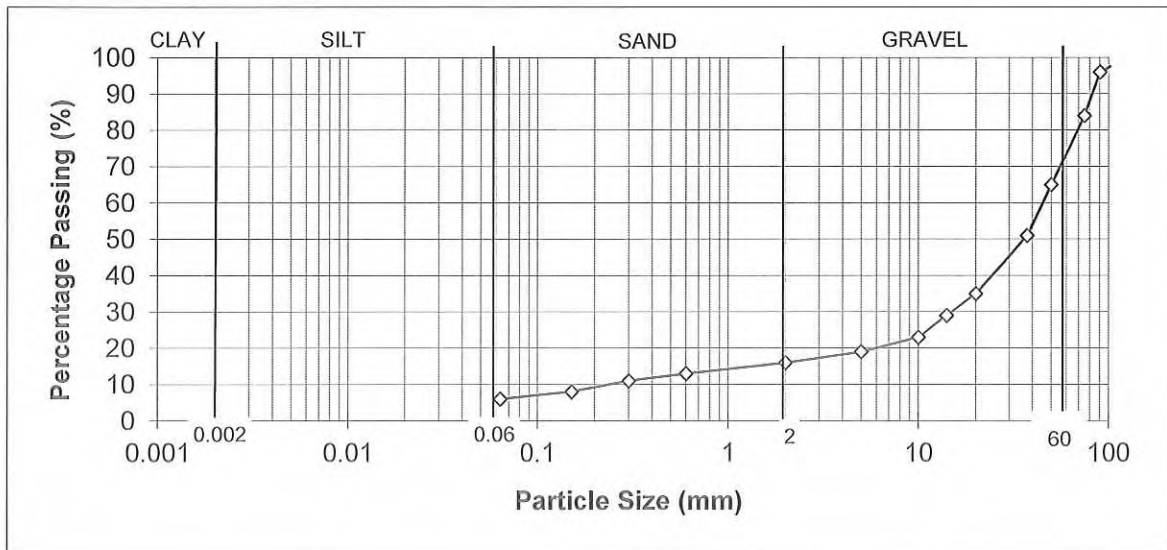
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	B31-Sample-3	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59918	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	23	15-60
90	96	80-100	5	19	10-45
75	84	65-100	2	16	
50	65		0.6	13	0-25
37.5	51	45-100	0.3	11	
20	35		0.15	8	
14	29		0.063	6	0-12

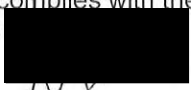


REMARKS

As received moisture content = 7.8%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED



NAME

A Richardson
 (Deputy Laboratory Manager)

DATE

04-Nov-14

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
 Reddish, Stockport SK5 7BR
 TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

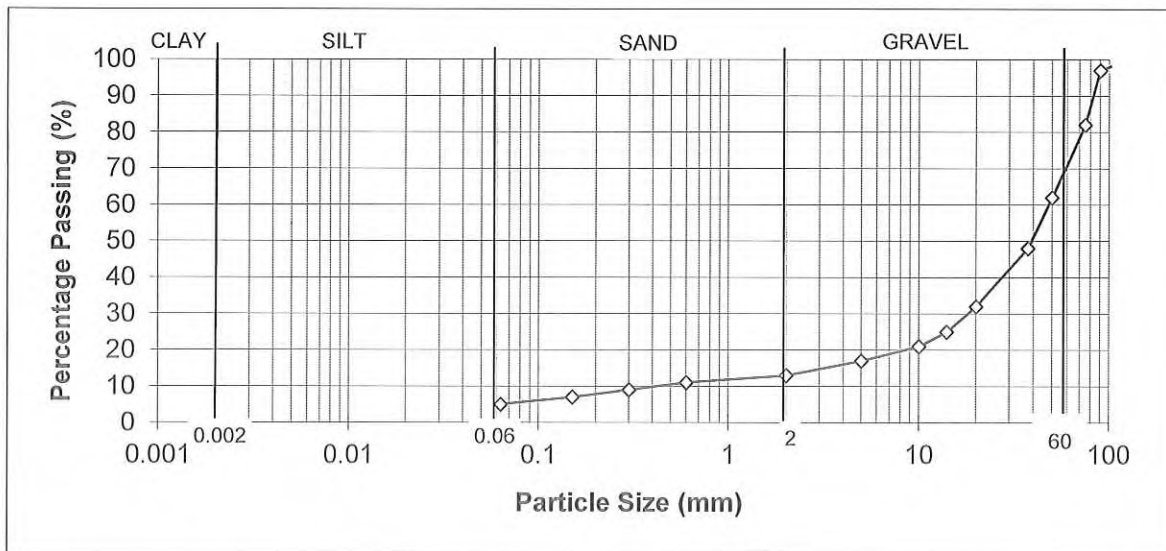
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	Urban Regen Ltd
SITE	Upper Heyford
JOB NUMBER	MRN 2305/80

SAMPLE LABEL	B32-Sample-1	DATE SAMPLED	22-Oct-14
LAB SAMPLE No	59919	DATE RECEIVED	22-Oct-14
DATE TESTED	23-Oct-14	SAMPLED BY	Murray Rix

MATERIAL	6F2
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	21	15-60
90	97	80-100	5	17	10-45
75	82	65-100	2	13	
50	62		0.6	11	0-25
37.5	48	45-100	0.3	9	
20	32		0.15	7	
14	25		0.063	5	0-12

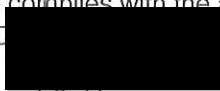


REMARKS

As received moisture content = 7.5%

Sample complies with the advised grading specification for a 6F2 material (SHW 2009)

SIGNED



NAME

A Richardson
 (Deputy Laboratory Manager)

DATE

04-Nov-14



Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

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Attention : Dan Wayland
Date : 12th February, 2016
Your reference : R1742b
Our reference : Test Report 16/4531 Batch 1
Location : Heyford(Porchester)
Date samples received : 5th February, 2016
Status : Final report
Issue : 1

Five samples were received for analysis on 5th February, 2016 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:



Phil Sommerton BSc
Project Manager

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/4531

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 16/4531

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM12/PM16	CWG GC-FID			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes

JE Job No: 16/4531

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM76	Modified US EPA method 120.1. Determination of Specific Conductance by Metrohm automated probe analyser.	PM58	Dried and ground solid samples are extracted with water in a 5:1 water to solid ratio, the samples are shaken on an orbital shaker.			AD	Yes



Jones Environmental Laboratory

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Tel: +44 (0) 1244 833780

Fax: +44 (0) 1244 833781



Attention : Dan Wayland
Date : 22nd January, 2015
Your reference : R1742B
Our reference : Test Report 15/2346 Batch 1
Location : Upper Heyford (Dorchester)
Date samples received : 14th January, 2015
Status : Final report
Issue : 1

Five samples were received for analysis on 14th January, 2015 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/2346

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range
A	x3 Dilution
D	x4 Dilution
E	x20 Dilution

JE Job No: 15/2346

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM12/PM16	CWG GC-FID			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes

JE Job No: 15/2346

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM76	Modified US EPA method 120.1. Determination of Specific Conductance by Metrohm automated probe analyser.	PM58	Dried and ground solid samples are extracted with water in a 5:1 water to solid ratio, the samples are shaken on an orbital shaker.			AD	Yes

JE Job No: 15/2346

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes



Jones Environmental Laboratory

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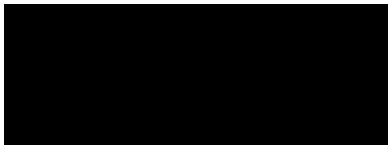


Attention : Dan Wayland
Date : 6th November, 2014
Your reference : R1742B
Our reference : Test Report 14/12802 Batch 1
Location : Upper Heyford (Dorchester)
Date samples received : 23rd October, 2014
Status : Final report
Issue : 1

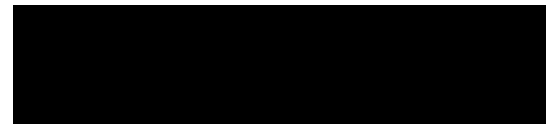
Twenty three samples were received for analysis on 23rd October, 2014 of which twenty three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:



Project Co-ordinator



**Bob Millward BSc FRSC
Principal Chemist**

Client Name: Smith Grant LLP
 Reference: R1742B
 Location: Upper Heyford (Dorchester)
 Contact: Dan Wayland
 JE Job No.: 14/12802

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms		
Sample ID	SUB-4	DIB-AGG-CENTREL	DIB-SS59	DIB-SS60	DIB-SS63	DIB-SS64	DIB-SS67	DIB-SS68	DIB-SS70	DIB-SS71			
Depth													
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	LOD/LOR	Units	Method No.
Antimony	2	4	1	3	<1	2	<1	1	<1	2	<1	mg/kg	TM30/PM15
Arsenic ^{#M}	18.7	14.8	24.3	26.1	11.5	28.1	18.2	15.1	12.4	27.2	<0.5	mg/kg	TM30/PM15
Barium ^{#M}	96	87	84	103	18	60	45	78	25	94	<1	mg/kg	TM30/PM15
Beryllium	1.1	0.8	1.5	1.5	0.5	1.4	0.9	1.1	0.5	1.7	<0.5	mg/kg	TM30/PM15
Cadmium ^{#M}	0.2	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Chromium ^{#M}	34.6	40.6	42.2	48.4	16.8	56.5	31.2	36.2	18.3	49.8	<0.5	mg/kg	TM30/PM15
Cobalt ^{#M}	8.7	5.2	9.8	12.4	4.1	7.6	8.2	9.1	4.9	12.1	<0.5	mg/kg	TM30/PM15
Copper ^{#M}	14	<1	5	<1	<1	<1	<1	1	<1	<1	<1	mg/kg	TM30/PM15
Lead ^{#M}	27	55	10	20	<5	37	8	10	<5	12	<5	mg/kg	TM30/PM15
Mercury ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Molybdenum ^{#M}	1.9	2.0	1.9	2.2	0.6	1.3	1.6	1.4	1.0	2.0	<0.1	mg/kg	TM30/PM15
Nickel ^{#M}	19.1	15.1	23.5	27.1	8.1	24.7	19.4	22.3	10.8	27.7	<0.7	mg/kg	TM30/PM15
Selenium ^{#M}	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM30/PM15
Vanadium	56	44	99	99	51	111	52	62	35	119	<1	mg/kg	TM30/PM15
Water Soluble Boron ^{#M}	1.3	2.7	1.7	2.9	2.0	0.8	0.9	1.4	1.2	1.3	<0.1	mg/kg	TM74/PM32
Zinc ^{#M}	86	86	47	76	18	97	49	621	20	55	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene ^{#M}	<0.04	<0.40 _A	<0.04	<0.04	<0.04	0.05	<0.04	0.05	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.03	<0.30 _A	<0.03	<0.03	<0.03	0.19	<0.03	0.12	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	<0.50 _A	<0.05	<0.05	<0.05	0.09	<0.05	0.70	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	<0.40 _A	<0.04	<0.04	<0.04	0.07	<0.04	0.55	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	0.65	3.11 _A	0.30	<0.03	<0.03	2.02	<0.03	9.42	<0.03	0.06	<0.03	mg/kg	TM4/PM8
Anthracene [#]	0.22	0.81 _A	0.10	<0.04	<0.04	0.71	<0.04	2.72	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	1.70	5.74 _A	0.83	0.05	0.03	4.03	<0.03	9.21	<0.03	0.33	<0.03	mg/kg	TM4/PM8
Pyrene [#]	1.48	4.84 _A	0.71	0.03	0.03	3.36	<0.03	7.10	<0.03	0.33	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.90	2.11 _A	0.32	<0.06	<0.06	1.79	<0.06	2.79	<0.06	0.22	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	0.95	2.27 _A	0.52	0.02	0.02	1.65	<0.02	3.04	<0.02	0.21	<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene ^{#M}	1.79	3.15 _A	0.43	<0.07	<0.07	2.68	<0.07	4.68	<0.07	0.33	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	1.20	1.38 _A	0.24	<0.04	<0.04	1.78	<0.04	3.12	<0.04	0.19	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.73	0.93 _A	0.14	<0.04	<0.04	0.86	<0.04	2.01	<0.04	0.11	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	0.08	<0.40 _A	<0.04	<0.04	<0.04	0.11	<0.04	0.16	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.60	0.83 _A	0.12	<0.04	<0.04	0.80	<0.04	1.38	<0.04	0.11	<0.04	mg/kg	TM4/PM8
PAH 16 Total	10.3	25.2 _A	3.7	<0.6	<0.6	20.2	<0.6	47.1	<0.6	1.9	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.29	2.27 _A	0.31	<0.05	<0.05	1.93	<0.05	3.37	<0.05	0.24	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.50	0.88 _A	0.12	<0.02	<0.02	0.75	<0.02	1.31	<0.02	0.09	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	104	95 _A	101	102	105	95	103	95	103	103	<0	%	TM4/PM8

Client Name: Smith Grant LLP
Reference: R1742B
Location: Upper Heyford (Dorchester)
Contact: Dan Wayland
JE Job No.: 14/12802

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms		
Sample ID	SUB-4	DIB-AGG-CENTREL	DIB-SS59	DIB-SS60	DIB-SS63	DIB-SS64	DIB-SS67	DIB-SS68	DIB-SS70	DIB-SS71			
Depth													
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	46	<7	<7	<7	68	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	46	<19	<19	<19	68	<19	<19	<19	<19	<19	mg/kg	TM5/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4	<4	<4	<4	7	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21	22	21	50	<7	<7	109	<7	15	<7	<7	<7	mg/kg	TM5/PM16
>EC21-EC35	145	165	167	<7	<7	418	<7	12	<7	<7	<7	mg/kg	TM5/PM16
Total aromatics C5-35	167	186	217	<19	<19	534	<19	27	<19	<19	<19	mg/kg	TM5/PM16
Total aliphatics and aromatics(C5-35)	167	232	217	<38	<38	602	<38	<38	<38	<38	<38	mg/kg	TM5/PM16
MTBE #													
MTBE #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene #													
Benzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Toluene #													
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene #													
Ethylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene #													
m/p-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene #													
o-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)													
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Natural Moisture Content													
Natural Moisture Content	15.6	12.4	20.0	15.5	9.3	14.7	13.4	17.8	11.1	17.2	<0.1	%	PM4/PM0
Hexavalent Chromium #													
Hexavalent Chromium #	<0.3	0.6	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Free Cyanide													
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Complex Cyanide													
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Organic Matter													
Organic Matter	1.8	1.6	0.8	1.2	0.2	1.6	0.3	0.8	0.3	1.1	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)													
Electrical Conductivity @25C (5:1 ext)	278	512	236	256	160	603	143	145	108	139	<100	uS/cm	TM76/PM58
pH ^{#M}													
pH ^{#M}	8.07	11.69	8.38	8.23	8.61	8.77	8.73	8.63	8.91	8.71	<0.01	pH units	TM73/PM11
Sample Type													
Sample Type	Clay	Loamy Sand	Clay	Clay	Clay	Clayey Sand	Sand	Clay	Clay	Clay		None	PM13/PM0
Sample Colour													
Sample Colour	Light Brown	Medium Brown	Medium Brown	Medium Brown	Light Brown	Medium Brown	Medium Brown	Medium Brown	Light Brown	Light Brown		None	PM13/PM0
Other Items													
Other Items	stones	roots, stones	stones	stones	stones, sand	stones	NA	stones	stones, sand	stones		None	PM13/PM0

Please include all sections of this report if it is reproduced

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B
Location: Upper Heyford (Dorchester)
Contact: Dan Wayland
JE Job No.: 14/12802

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	21	22	23	24	25	26	27	28	29	30	Please see attached notes for all abbreviations and acronyms		
Sample ID	DIB-SS38A	DIB-SS38B	DIB-SS38C	DIB-SS38D	DIB-SS41A	DIB-SS41B	DIB-SS41C	DIB-SS41D	DIB-SS42A	DIB-SS42B			
Depth													
COC No / misc													
Containers	J	J	J	J	J	J	J	J	J	J			
Sample Date	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	LOD/LOR	Units	Method No.
Antimony	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Arsenic ^{#M}	16.6	16.1	21.9	13.9	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15
Barium ^{#M}	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Beryllium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15
Cadmium ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15
Chromium ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15
Cobalt ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15
Copper ^{#M}	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Lead ^{#M}	-	-	-	-	-	-	-	-	16	7	<5	mg/kg	TM30/PM15
Mercury ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15
Molybdenum ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15
Nickel ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM15
Selenium ^{#M}	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Vanadium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Water Soluble Boron ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM32
Zinc ^{#M}	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene ^{#M}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.05	0.12	<0.03	0.04	<0.03	<0.03	<0.03	-	-	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	-	-	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	0.05	0.19	0.14	0.03	0.43	<0.03	<0.03	<0.03	-	-	<0.03	mg/kg	TM4/PM8
Anthracene [#]	<0.04	0.09	0.12	<0.04	0.19	<0.04	<0.04	<0.04	-	-	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	0.17	0.86	1.68	0.08	1.49	<0.03	0.03	<0.03	-	-	<0.03	mg/kg	TM4/PM8
Pyrene [#]	0.17	0.93	1.57	0.07	1.45	<0.03	0.03	<0.03	-	-	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.10	0.58	1.32	<0.06	0.78	<0.06	<0.06	<0.06	-	-	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	0.13	0.58	1.44	0.06	0.83	<0.02	<0.02	<0.02	-	-	<0.02	mg/kg	TM4/PM8
Benzo(k)fluoranthene ^{#M}	0.20	1.52	2.82	<0.07	1.75	<0.07	<0.07	<0.07	-	-	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	0.13	1.08	1.96	0.06	1.23	<0.04	<0.04	<0.04	-	-	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.09	0.66	1.19	<0.04	0.75	<0.04	<0.04	<0.04	-	-	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	0.09	0.12	<0.04	0.09	<0.04	<0.04	<0.04	-	-	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.09	0.57	1.07	<0.04	0.66	<0.04	<0.04	<0.04	-	-	<0.04	mg/kg	TM4/PM8
PAH 16 Total	1.1	7.2	13.6	<0.6	9.8	<0.6	<0.6	<0.6	-	-	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.14	1.09	2.03	<0.05	1.26	<0.05	<0.05	<0.05	-	-	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.06	0.43	0.79	<0.02	0.49	<0.02	<0.02	<0.02	-	-	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	95	100	97	105	94	101	93	94	-	-	<0	%	TM4/PM8

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Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	21	22	23	24	25	26	27	28	29	30			
Sample ID	DIB-SS38A	DIB-SS38B	DIB-SS38C	DIB-SS38D	DIB-SS41A	DIB-SS41B	DIB-SS41C	DIB-SS41D	DIB-SS42A	DIB-SS42B			
Depth													
COC No / misc													
Containers	J	J	J	J	J	J	J	J	J	J			
Sample Date	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014	22/10/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	23/10/2014	LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	-	-	-	-	-	-	-	-	-	-	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	-	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	-	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	-	-	-	-	-	-	-	-	<19	mg/kg	TM5/PM16/PM12/PM15
Aromatics													
>C5-EC7	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12	-	-	-	-	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16	-	-	-	-	-	-	-	-	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21	-	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35	-	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35	-	-	-	-	-	-	-	-	-	-	<19	mg/kg	TM5/PM16/PM12/PM15
Total aliphatics and aromatics(C5-35)	-	-	-	-	-	-	-	-	-	-	<38	mg/kg	TM5/PM16/PM12/PM15
MTBE [#]	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
Benzene [#]	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
Toluene [#]	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
Ethylbenzene [#]	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
m/p-Xylene [#]	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
o-Xylene [#]	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)	-	-	-	-	-	-	-	-	-	-	<10	ug/kg	TM16/PM8
Natural Moisture Content	13.7	15.7	19.8	13.0	11.9	8.4	8.5	10.3	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium [#]	-	-	-	-	-	-	-	-	-	-	<0.3	mg/kg	TM38/PM20
Free Cyanide	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45
Complex Cyanide	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45
Organic Matter	-	-	-	-	-	-	-	-	-	-	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)	-	-	-	-	-	-	-	-	-	-	<100	uS/cm	TM76/PM58
pH ^{#M}	-	-	-	-	-	-	-	-	-	-	<0.01	pH units	TM73/PM11
Sample Type	Clay	Clay	Clay	Clay	Loamy Sand	Sand	Clayey Loam	Clayey Loam	Clayey Loam	Clay		None	PM13/PM0
Sample Colour	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Medium Brown	Light Brown		None	PM13/PM0
Other Items	stones, roots	stones, sand	roots	stones	stones	stones	stones	stones	stones, roots	stones		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/12802

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range
A	x10 Dilution

JE Job No: 14/12802

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID.	PM12/PM16	CWG GC-FID			AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				

JE Job No: 14/12802

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

JE Job No: 14/12802

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.				
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM76	Modified US EPA method 120.1. Determination of Specific Conductance by Metrohm automated probe analyser.	PM58	Dried and ground solid samples are extracted with water in a 5:1 water to solid ratio, the samples are shaken on an orbital shaker.			AD	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
NONE	No Method Code	NONE	No Method Code				



Jones Environmental Laboratory

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Attention : Dan Wayland
Date : 20th October, 2014
Your reference : R1742B
Our reference : Test Report 14/12168 Batch 1
Location : Upper Heyford (Dorchester)
Date samples received : 8th October, 2014
Status : Final report
Issue : 1

Seventeen samples were received for analysis on 8th October, 2014 of which seventeen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B
Location: Upper Heyford (Dorchester)
Contact: Dan Wayland
JE Job No.: 14/12168

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS45	D1B-SS49	D1B-SS55	D1B-SS56	D1B-SS58	D1B-SS62	D1B-SS66	D1B-SS69	D1B-SUB-1	D1B-SUB-2			
Depth	0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4					
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	LOD/LOR	Units	Method No.
Antimony	<1	<1	<1	2	<1	<1	<1	<1	2	1	<1	mg/kg	TM30/PM15
Arsenic ^{#M}	12.1	9.3	16.5	19.7	19.4	19.0	14.6	16.1	19.6	23.9	<0.5	mg/kg	TM30/PM15
Barium ^{#M}	55	15	54	78	105	74	75	109	102	99	<1	mg/kg	TM30/PM15
Beryllium	0.7	<0.5	0.8	1.0	1.2	0.9	0.9	0.9	1.2	1.4	<0.5	mg/kg	TM30/PM15
Cadmium ^{#M}	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.2	<0.1	<0.1	mg/kg	TM30/PM15
Chromium ^{#M}	30.2	14.5	37.4	44.6	49.7	37.9	35.5	37.0	46.9	68.4	<0.5	mg/kg	TM30/PM15
Cobalt ^{#M}	5.2	2.8	6.4	8.6	9.2	7.9	6.5	7.5	8.0	11.7	<0.5	mg/kg	TM30/PM15
Copper ^{#M}	24	4	10	17	7	4	6	15	12	4	<1	mg/kg	TM30/PM15
Lead ^{#M}	15	6	18	37	42	27	35	63	24	27	<5	mg/kg	TM30/PM15
Mercury ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Molybdenum ^{#M}	2.1	1.2	1.8	2.3	2.4	1.6	1.3	1.5	2.5	3.3	<0.1	mg/kg	TM30/PM15
Nickel ^{#M}	14.4	7.0	14.8	19.2	23.6	20.0	16.2	19.1	18.5	31.1	<0.7	mg/kg	TM30/PM15
Selenium ^{#M}	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM30/PM15
Vanadium	41	31	50	58	78	66	58	58	58	93	<1	mg/kg	TM30/PM15
Water Soluble Boron ^{#M}	1.1	0.5	1.3	1.7	1.3	1.0	1.3	0.9	2.2	1.5	<0.1	mg/kg	TM74/PM32
Zinc ^{#M}	44	15	58	114	70	54	59	267	88	70	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene ^{#M}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.80 _E	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	0.06	0.19	0.08	0.05	0.09	<0.60 _E	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	0.11	<0.05	0.08	<1.00 _E	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	<0.04	<0.04	<0.04	<0.04	0.10	0.07	<0.04	<0.04	<0.80 _E	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	0.04	<0.03	0.15	0.05	0.42	1.91	1.73	0.67	0.99	<0.60 _E	<0.03	mg/kg	TM4/PM8
Anthracene [#]	<0.04	<0.04	0.07	<0.04	0.14	0.70	0.50	0.17	0.29	<0.80 _E	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	0.13	0.06	0.33	0.20	1.13	4.21	4.19	1.91	1.63	<0.60 _E	<0.03	mg/kg	TM4/PM8
Pyrene [#]	0.12	0.08	0.33	0.19	0.95	3.34	3.26	1.50	1.25	<0.60 _E	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.08	0.06	0.21	0.13	0.55	1.81	1.69	0.84	0.71	<1.20 _E	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	0.08	0.04	0.21	0.13	0.55	1.70	1.63	0.92	0.71	<0.40 _E	<0.02	mg/kg	TM4/PM8
Benzo(k)fluoranthene ^{#M}	0.12	0.09	0.35	0.19	1.07	2.94	2.73	1.64	1.24	<1.40 _E	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	0.07	0.04	0.19	0.10	0.58	1.94	1.73	1.01	0.78	<0.80 _E	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.20	<0.04	0.14	0.07	0.50	1.11	0.97	0.61	0.44	<0.80 _E	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	0.14	<0.04	<0.04	<0.04	0.06	0.16	0.13	0.07	0.07	<0.80 _E	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.19	<0.04	0.14	0.07	0.45	0.95	0.87	0.52	0.42	<0.80 _E	<0.04	mg/kg	TM4/PM8
PAH 16 Total	1.2	<0.6	2.1	1.1	6.5	21.2	19.7	9.9	8.7	<12.0 _E	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.09	0.06	0.25	0.14	0.77	2.12	1.97	1.18	0.89	<1.00 _E	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.03	0.03	0.10	0.05	0.30	0.82	0.76	0.46	0.35	<0.40 _E	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	103	113	111	110	110	113	113	115	113	114 _E	<0	%	TM4/PM8

Please include all sections of this report if it is reproduced

Client Name: Smith Grant LLP
Reference: R1742B
Location: Upper Heyford (Dorchester)
Contact: Dan Wayland
JE Job No.: 14/12168

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS45	D1B-SS49	D1B-SS55	D1B-SS56	D1B-SS58	D1B-SS62	D1B-SS66	D1B-SS69	D1B-SUB-1	D1B-SUB-2			
Depth	0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4	0.0-0.4					
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014	07/10/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	<7	<7	<7	157	<7	<7	104	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	<19	<19	<19	157	<19	<19	104	<19	<19	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21	<7	<7	<7	<7	<7	<7	18	15	10	<7	<7	mg/kg	TM5/PM16
>EC21-EC35	11	<7	19	47	274	41	86	158	54	14	<7	mg/kg	TM5/PM16
Total aromatics C5-35	<19	<19	19	47	274	41	104	173	64	<19	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	<38	<38	<38	47	431	41	104	277	64	<38	<38	mg/kg	TM5/TM36/PM12/PM16
MTBE [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<500 _F	<10	ug/kg	TM16/PM8
Natural Moisture Content	11.0	8.3	14.0	15.8	15.5	11.0	14.7	15.0	12.7	15.2	<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Organic Matter	0.8	0.3	1.2	1.9	1.5	1.4	1.8	1.3	1.5	1.4	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)	794	151	831	511	193	157	172	288	382	168	<100	uS/cm	TM76/PM58
pH ^{#M}	8.60	8.60	8.76	8.40	8.51	8.51	8.43	8.65	8.09	8.53	<0.01	pH units	TM73/PM11
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay		None	PM13/PM0
Sample Colour	Medium Brown	Light Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones and brick fragment	stones and sand	stones	stones and sand	stones and roots	stones and sand	stones and roots	stones	stones	stones		None	PM13/PM0

Please include all sections of this report if it is reproduced

Client Name: Smith Grant LLP
Reference: R1742B
Location: Upper Heyford (Dorchester)
Contact: Dan Wayland
JE Job No.: 14/12168

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	21-22	23-24	25-26	27-28	29-30	31-32	33-34							
Sample ID	D1B-SUB-3	D1B-SE-S4	D1B-SE-S5	D1B-SE-S6	D1B-SW-S12	D1B-SW-S13	D1B-SW-S14							
Depth														
COC No / misc														
Containers	V J	V J	V J	V J	V J	V J	V J							
Sample Date	07/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1	1							
Date of Receipt	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014	08/10/2014							
								LOD/LOR	Units	Method No.				
TPH CWG														
Aliphatics														
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12				
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12				
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	mg/kg	TM36/PM12				
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16				
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16				
>C16-C21 ^{#M}	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16				
>C21-C35 ^{#M}	<7	43	24	64	51	18	113	<7	mg/kg	TM5/PM16				
Total aliphatics C5-35	<19	43	24	64	51	<19	113	<19	mg/kg	TM5/PM16/PM15				
Aromatics														
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12				
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12				
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12				
>EC10-EC12	<0.2	<0.2	0.6	1.4	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16				
>EC12-EC16	<4	<4	9	18	8	<4	<4	<4	mg/kg	TM5/PM16				
>EC16-EC21	<7	50	77	118	86	16	11	<7	mg/kg	TM5/PM16				
>EC21-EC35	<7	323	215	345	321	157	186	<7	mg/kg	TM5/PM16				
Total aromatics C5-35	<19	373	302	482	415	173	197	<19	mg/kg	TM5/PM16/PM12/PM15				
Total aliphatics and aromatics(C5-35)	<38	416	326	546	466	173	310	<38	mg/kg	TM5/PM16/PM12/PM15				
MTBE [#]	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12				
Benzene [#]	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12				
Toluene [#]	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12				
Ethylbenzene [#]	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12				
m/p-Xylene [#]	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12				
o-Xylene [#]	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12				
PCBs (Total vs Aroclor 1254)	<10	<100 _D	<100 _D	<500 _F	<200 _E	<100 _D	<100 _D	<10	ug/kg	TM16/PM8				
Natural Moisture Content	17.5	11.0	13.0	10.1	7.2	8.8	5.9	<0.1	%	PM4/PM0				
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20				
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45				
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45				
Organic Matter	1.4	1.2	2.6	0.7	0.7	1.2	0.8	<0.2	%	TM21/PM24				
Electrical Conductivity @25C (5:1 ext)	177	1091	1757	2294	1684	2169	3737	<100	uS/cm	TM76/PM58				
pH ^{#M}	8.35	9.76	9.13	10.26	11.33	11.72	11.90	<0.01	pH units	TM73/PM11				
Sample Type	Clay	Clayey Sand	Sand	Clayey Sand	Sand	Clayey Sand	Sand		None	PM13/PM0				
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Light Brown	Light Brown	Light Brown		None	PM13/PM0				
Other Items	stones	stones and glass	stone and brick/fragment	stones and roots	stones	stones and brick fragment	stones and cement		None	PM13/PM0				

Please see attached notes for all abbreviations and acronyms

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/12168

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range
A	x5 Dilution
D	x10 Dilution
E	x20 Dilution
F	x50 Dilution

JE Job No: 14/12168

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
PM13	Soil Typing for MCERTS	PM0	No preparation is required.			AR	
TM16	In-House method based on USEPA 8270. Determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS. Accredited to ISO 17025 for waters. All accreditation is matrix specific. Quantification by Internal Standard method.	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM21	TOC and TC by Combustion	PM24	Eltra preparation			AD	Yes

JE Job No: 14/12168

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM20	Solid samples are extracted with two parts de-ionised water to one part solid material for analysis of the extract for various parameters.	Yes		AR	Yes
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No
TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes
TM76	Electrical Conductivity by Metrohm	PM58	Preparation of sample for Electrical Conductivity			AD	Yes

JE Job No: 14/12168

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes



Jones Environmental Laboratory

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Attention : Dan Wayland
Date : 7th October, 2014
Your reference : R1742B (Dorchester)
Our reference : Test Report 14/11667 Batch 1
Location : Heyford Park
Date samples received : 25th September, 2014
Status : Final report
Issue : 1

Twenty samples were received for analysis on 25th September, 2014 of which twenty were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B (Dorchester)
Location: Heyford Park
Contact: Dan Wayland
JE Job No.: 14/11667

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS36	D1B-SS37	D1B-SS38	D1B-SS39	D1B-SS40	D1B-SS41	D1B-SS42	D1B-SS43	D1B-SS46	D1B-SS47	LOD/LOR	Units	Method No.
Depth	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014			
Antimony	<1	<1	1	<1	<1	<1	2	<1	1	<1	<1	mg/kg	TM30/PM15
Arsenic ^{#M}	14.0	16.3	40.7	14.7	17.7	19.2	23.9	12.8	21.8	14.9	<0.5	mg/kg	TM30/PM15
Barium ^{#M}	52	47	103	35	63	66	44	36	154	42	<1	mg/kg	TM30/PM15
Beryllium	0.6	0.7	1.2	0.7	0.9	1.0	1.3	0.5	1.1	0.7	<0.5	mg/kg	TM30/PM15
Cadmium ^{#M}	0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	mg/kg	TM30/PM15
Chromium ^{#M}	17.7	20.1	35.0	16.7	24.9	25.6	50.2	16.5	28.6	17.3	<0.5	mg/kg	TM30/PM15
Cobalt ^{#M}	5.1	6.4	9.9	5.3	7.4	12.1	8.9	4.0	9.8	6.0	<0.5	mg/kg	TM30/PM15
Copper ^{#M}	8	7	17	7	10	12	6	7	18	8	<1	mg/kg	TM30/PM15
Lead ^{#M}	22	15	41	13	17	18	613	12	40	17	<5	mg/kg	TM30/PM15
Mercury ^{#M}	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Molybdenum ^{#M}	0.9	0.7	1.2	0.5	0.7	1.6	0.8	0.9	1.1	0.9	<0.1	mg/kg	TM30/PM15
Nickel ^{#M}	12.1	13.3	21.9	11.0	15.7	23.8	25.7	10.8	20.4	12.6	<0.7	mg/kg	TM30/PM15
Selenium ^{#M}	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM30/PM15
Vanadium	41	49	84	48	65	75	91	34	53	44	<1	mg/kg	TM30/PM15
Water Soluble Boron ^{#M}	1.5	1.2	1.7	0.8	1.4	1.7	1.7	1.1	2.6	1.3	<0.1	mg/kg	TM74/PM32
Zinc ^{#M}	64	44	112	29	47	57	70	51	107	50	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene ^{#M}	<0.04	<0.80 _A	<0.04	<0.04	<0.04	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.04	1.21 _A	0.14	<0.03	<0.03	0.07	<0.03	0.04	<0.03	0.05	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	7.31 _A	<0.05	<0.05	<0.05	0.34	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	5.20 _A	0.04	<0.04	<0.04	0.27	<0.04	0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	0.23	42.64 _A	0.63	0.21	<0.03	1.59	0.04	0.48	0.26	0.17	<0.03	mg/kg	TM4/PM8
Anthracene [#]	0.11	14.49 _A	0.27	0.08	<0.04	0.56	<0.04	0.11	0.06	0.08	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	1.01	77.02 _A	2.21	0.40	0.06	3.02	0.12	0.63	0.82	0.60	<0.03	mg/kg	TM4/PM8
Pyrene [#]	0.92	59.42 _A	1.93	0.32	0.04	2.42	0.10	0.51	0.70	0.51	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.75	29.44 _A	1.35	0.21	<0.06	1.33	0.09	0.29	0.48	0.37	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	0.69	25.32 _A	1.33	0.19	0.03	1.11	0.07	0.30	0.51	0.36	<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene ^{#M}	1.14	38.79 _A	2.64	0.28	<0.07	1.98	0.10	0.41	0.82	0.55	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	0.76	25.98 _A	1.67	0.23	0.04	1.35	0.08	0.27	0.56	0.37	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.45	14.04 _A	1.08	0.14	<0.04	0.79	0.04	0.15	0.32	0.25	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	0.08	1.91 _A	0.23	<0.04	<0.04	0.13	<0.04	<0.04	0.07	0.05	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.44	12.68 _A	1.09	0.12	<0.04	0.79	0.05	0.16	0.37	0.21	<0.04	mg/kg	TM4/PM8
PAH 16 Total	6.6	355.5 _A	14.6	2.2	<0.6	15.8	0.7	3.4	5.0	3.6	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.82	27.93 _A	1.90	0.20	<0.05	1.43	0.07	0.30	0.59	0.40	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.32	10.86 _A	0.74	0.08	<0.02	0.55	0.03	0.11	0.23	0.15	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	104	105 _A	102	101	105	106	97	109	102	106	<0	%	TM4/PM8

Please include all sections of this report if it is reproduced

Client Name: Smith Grant LLP
Reference: R1742B (Dorchester)
Location: Heyford Park
Contact: Dan Wayland
JE Job No.: 14/11667

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS36	D1B-SS37	D1B-SS38	D1B-SS39	D1B-SS40	D1B-SS41	D1B-SS42	D1B-SS43	D1B-SS46	D1B-SS47	LOD/LOR	Units	Method No.
Depth	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014			
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	65	<7	<7	<7	<7	20	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	65	<19	<19	<19	<19	20	<19	<19	<19	<19	<19	mg/kg	TM5/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	16	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21	17	218	24	70	<7	17	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>EC21-EC35	140	178	111	358	<7	101	<7	34	29	39	<7	mg/kg	TM5/PM16
Total aromatics C5-35	157	412	135	428	<19	118	<19	34	29	39	<19	mg/kg	TM5/PM16
Total aliphatics and aromatics(C5-35)	222	412	135	428	<38	138	<38	<38	<38	39	<38	mg/kg	TM5/PM16
MTBE #													
MTBE #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene #													
Benzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Toluene #													
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene #													
Ethylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene #													
m/p-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene #													
o-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)													
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Natural Moisture Content													
Natural Moisture Content	10.6	9.7	9.1	8.9	10.5	10.6	9.7	8.9	11.2	12.6	<0.1	%	PM4/PM0
Hexavalent Chromium													
Hexavalent Chromium	0.6	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Free Cyanide													
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Complex Cyanide													
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Organic Matter													
Organic Matter	1.2	1.7	2.7	2.9	1.0	4.2	2.7	0.8	2.5	1.1	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)													
Electrical Conductivity @25C (5:1 ext)	310	118	126	127	116	218	622	504	174	225	<100	uS/cm	TM76/PM58
pH ^{#M}													
pH ^{#M}	8.32	8.56	8.25	8.51	8.43	8.26	8.73	10.91	8.28	8.13	<0.01	pH units	TM73/PM11
Sample Type													
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Loam	Clayey Loam	Clayey Loam	Loam	Loam	Clayey Loam		None	PM13/PM0
Sample Colour													
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items													
Other Items	Stones	Stones	Stones	Stones, Clay	Stones, Sand	Stones	Stones	Stones	Stones, roots	Stones		None	PM13/PM0

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Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B (Dorchester)
Location: Heyford Park
Contact: Dan Wayland
JE Job No.: 14/11667

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	21-22	23-24	25-26	27-28	29-30	31-32	33-34	35-36	37-38	39-40	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS48	D1B-SS50	D1B-SS51	D1B-SS52	D1B-SS53	D1B-SS54	D1B-SS57	HC-SPILE 1A	HC-SPILE 1B	HC-SPILE 1C			
Depth	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40						
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	LOD/LOR	Units	Method No.
Antimony	<1	<1	<1	<1	<1	<1	<1	-	-	-	<1	mg/kg	TM30/PM15
Arsenic ^{#M}	10.7	11.6	13.6	12.5	14.4	15.0	18.1	-	-	-	<0.5	mg/kg	TM30/PM15
Barium ^{#M}	27	22	23	48	33	41	64	-	-	-	<1	mg/kg	TM30/PM15
Beryllium	0.6	0.5	<0.5	0.5	0.6	0.9	1.0	-	-	-	<0.5	mg/kg	TM30/PM15
Cadmium ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	<0.1	mg/kg	TM30/PM15
Chromium ^{#M}	11.7	12.5	11.5	13.0	15.1	24.4	25.3	-	-	-	<0.5	mg/kg	TM30/PM15
Cobalt ^{#M}	4.2	4.7	4.1	3.9	4.5	6.4	7.9	-	-	-	<0.5	mg/kg	TM30/PM15
Copper ^{#M}	7	5	5	6	7	7	10	-	-	-	<1	mg/kg	TM30/PM15
Lead ^{#M}	11	5	9	14	10	10	20	-	-	-	<5	mg/kg	TM30/PM15
Mercury ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	<0.1	mg/kg	TM30/PM15
Molybdenum ^{#M}	1.7	0.6	0.7	0.6	1.2	0.8	0.9	-	-	-	<0.1	mg/kg	TM30/PM15
Nickel ^{#M}	11.0	11.6	9.1	9.4	11.0	14.8	16.4	-	-	-	<0.7	mg/kg	TM30/PM15
Selenium ^{#M}	<1	<1	<1	<1	<1	<1	<1	-	-	-	<1	mg/kg	TM30/PM15
Vanadium	29	33	35	36	40	60	64	-	-	-	<1	mg/kg	TM30/PM15
Water Soluble Boron ^{#M}	1.0	0.7	0.6	1.4	0.8	0.9	1.5	-	-	-	<0.1	mg/kg	TM74/PM32
Zinc ^{#M}	30	22	20	45	36	34	54	-	-	-	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene ^{#M}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	-	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	0.03	<0.03	<0.03	-	-	-	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	-	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	0.60	<0.03	<0.03	0.27	0.08	<0.03	0.42	-	-	-	<0.03	mg/kg	TM4/PM8
Anthracene [#]	0.19	<0.04	<0.04	0.09	0.04	<0.04	0.11	-	-	-	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	0.86	<0.03	0.08	0.69	0.27	<0.03	1.01	-	-	-	<0.03	mg/kg	TM4/PM8
Pyrene [#]	0.63	<0.03	0.07	0.56	0.24	<0.03	0.77	-	-	-	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.43	<0.06	0.07	0.35	0.17	<0.06	0.48	-	-	-	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	0.38	<0.02	0.05	0.34	0.18	<0.02	0.49	-	-	-	<0.02	mg/kg	TM4/PM8
Benzo(k)fluoranthene ^{#M}	0.50	<0.07	0.09	0.58	0.32	<0.07	0.77	-	-	-	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	0.33	<0.04	0.05	0.38	0.24	<0.04	0.53	-	-	-	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.19	<0.04	<0.04	0.24	0.20	<0.04	0.32	-	-	-	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	-	-	-	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.19	<0.04	<0.04	0.23	0.19	<0.04	0.32	-	-	-	<0.04	mg/kg	TM4/PM8
PAH 16 Total	4.4	<0.6	<0.6	3.7	2.0	<0.6	5.3	-	-	-	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.36	<0.05	0.06	0.42	0.23	<0.05	0.55	-	-	-	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.14	<0.02	0.03	0.16	0.09	<0.02	0.22	-	-	-	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	105	105	103	98	107	106	106	-	-	-	<0	%	TM4/PM8

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Client Name: Smith Grant LLP
Reference: R1742B (Dorchester)
Location: Heyford Park
Contact: Dan Wayland
JE Job No.: 14/11667

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	21-22	23-24	25-26	27-28	29-30	31-32	33-34	35-36	37-38	39-40	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS48	D1B-SS50	D1B-SS51	D1B-SS52	D1B-SS53	D1B-SS54	D1B-SS57	HC-SPILE 1A	HC-SPILE 1B	HC-SPILE 1C			
Depth	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40						
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014	24/09/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	25/09/2014	LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	33.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	11.5	19.5	15.0	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	71	<4	<4	<4	<4	<4	<4	154	177	130	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	<7	<7	<7	<7	141	201	154	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	<7	<7	<7	<7	<7	11	386	490	390	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	104	<19	<19	<19	<19	<19	<19	693	888	689	<19	mg/kg	TM5/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12	2.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16	8	<4	<4	<4	<4	<4	22	29	28	21	<4	mg/kg	TM5/PM16
>EC16-EC21	<7	<7	<7	<7	<7	<7	100	102	101	88	<7	mg/kg	TM5/PM16
>EC21-EC35	<7	<7	<7	64	<7	<7	172	304	309	253	<7	mg/kg	TM5/PM16
Total aromatics C5-35	<19	<19	<19	64	<19	<19	294	435	438	362	<19	mg/kg	TM5/PM16
Total aliphatics and aromatics(C5-35)	104	<38	<38	64	<38	<38	294	1128	1326	1051	<38	mg/kg	TM5/PM16
MTBE #													
MTBE #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene #													
Benzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Toluene #													
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene #													
Ethylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene #													
m/p-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene #													
o-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)													
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	<10	<10	<10	-	-	-	<10	ug/kg	TM16/PM8
Natural Moisture Content													
Natural Moisture Content	16.3	9.9	9.9	10.7	10.9	12.2	8.8	13.0	9.1	13.0	<0.1	%	PM4/PM0
Hexavalent Chromium													
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	-	-	<0.3	mg/kg	TM38/PM20
Free Cyanide													
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	mg/kg	TM89/PM45
Complex Cyanide													
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	mg/kg	TM89/PM45
Organic Matter													
Organic Matter	0.5	0.2	0.4	1.4	0.5	0.6	1.4	1.5	0.7	1.6	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)													
Electrical Conductivity @25C (5:1 ext)	210	126	101	305	294	124	145	-	-	-	<100	uS/cm	TM76/PM58
pH ^{#M}													
pH ^{#M}	8.96	8.65	8.64	11.03	8.63	8.42	8.34	-	-	-	<0.01	pH units	TM73/PM11
Sample Type													
Sample Type	Clayey Loam	Loam	Clayey Loam	Sand	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Loam		None	PM13/PM0
Sample Colour													
Sample Colour	Medium Brown	Light Brown	Medium Brown	Light Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items													
Other Items	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones, Roots		None	PM13/PM0

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NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/11667

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

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All solid results are expressed on a dry weight basis unless stated otherwise.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range
A	x20 Dilution

JE Job No: 14/11667

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
PM13	Soil Typing for MCERTS	PM0	No preparation is required.			AR	
TM16	In-House method based on USEPA 8270. Determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS. Accredited to ISO 17025 for waters. All accreditation is matrix specific. Quantification by Internal Standard method.	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM21	TOC and TC by Combustion	PM24	Eltra preparation			AD	Yes

JE Job No: 14/11667

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM20	Solid samples are extracted with two parts de-ionised water to one part solid material for analysis of the extract for various parameters.			AR	Yes
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No
TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes
TM76	Electrical Conductivity by Metrohm	PM58	Preparation of sample for Electrical Conductivity			AD	Yes

JE Job No: 14/11667

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes



Jones Environmental Laboratory

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Attention : Dan Wayland
Date : 25th September, 2014
Your reference : R1742B
Our reference : Test Report 14/10359 Batch 1
Location : Upper Heyford (Dorchester)
Date samples received : 11th September, 2014
Status : Final report
Issue : 1

Fourteen samples were received for analysis on 11th September, 2014 of which fourteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Bob Millward BSc FRSC
Principal Chemist

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B
Location: Upper Heyford (Dorchester)
Contact: Dan Wayland
JE Job No.: 14/10359

Report : Solid
Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17	18	Please see attached notes for all abbreviations and acronyms			
Sample ID	D1B-SW-AGG1	D1B-SW-AGG2	D1B-SW-AGG3	D1B-SW-AGG4	D1B-SS4B	D1B-SS4C	D1B-SS4D	D1B-SS4E	D1B-SS6B	D1B-SS6C				
Depth					0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40				
COC No / misc														
Containers	V J	V J	V J	V J	V J	V J	V J	V J	J	J				
Sample Date	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1	1				
Date of Receipt	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	LOD/LOR	Units	Method No.	
Antimony	<1	1	1	1	-	-	-	-	-	-	<1	mg/kg	TM30/PM15	
Arsenic ^{#M}	13.4	23.1	45.0	14.0	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15	
Barium ^{#M}	79	96	68	178	-	-	-	-	-	-	<1	mg/kg	TM30/PM15	
Beryllium	0.7	1.0	0.8	0.9	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15	
Cadmium ^{#M}	<0.1	0.1	<0.1	0.3	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15	
Chromium ^{#M}	19.2	26.8	19.6	20.9	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15	
Cobalt ^{#M}	4.7	6.6	6.2	6.2	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15	
Copper ^{#M}	7	11	6	15	-	-	-	-	-	-	<1	mg/kg	TM30/PM15	
Lead ^{#M}	11	21	13	29	-	-	-	-	5	10	<5	mg/kg	TM30/PM15	
Mercury ^{#M}	<0.1	<0.1	<0.1	0.2	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15	
Molybdenum ^{#M}	0.8	1.2	1.4	1.3	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15	
Nickel ^{#M}	13.1	18.5	16.5	14.3	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM15	
Selenium ^{#M}	<1	<1	<1	<1	-	-	-	-	-	-	<1	mg/kg	TM30/PM15	
Vanadium	37	48	38	37	-	-	-	-	-	-	<1	mg/kg	TM30/PM15	
Water Soluble Boron ^{#M}	3.0	4.6	3.4	3.6	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM32	
Zinc ^{#M}	47	73	51	116	-	-	-	-	-	-	<5	mg/kg	TM30/PM15	
PAH MS														
Naphthalene ^{#M}	<0.40 _D	<0.40 _D	1.21 _D	<0.20 _A	<0.04	<0.04	<0.04	0.16	-	-	<0.04	mg/kg	TM4/PM8	
Acenaphthylene	<0.30 _D	<0.30 _D	<0.30 _D	<0.15 _A	<0.03	<0.03	<0.03	0.20	-	-	<0.03	mg/kg	TM4/PM8	
Acenaphthene ^{#M}	0.91 _D	0.62 _D	1.76 _D	<0.25 _A	<0.05	<0.05	<0.05	0.20	-	-	<0.05	mg/kg	TM4/PM8	
Fluorene ^{#M}	0.67 _D	0.42 _D	1.23 _D	<0.20 _A	<0.04	<0.04	<0.04	0.19	-	-	<0.04	mg/kg	TM4/PM8	
Phenanthrene ^{#M}	6.61 _D	4.52 _D	13.06 _D	0.60 _A	0.59	<0.03	<0.03	1.76	-	-	<0.03	mg/kg	TM4/PM8	
Anthracene [#]	1.90 _D	1.31 _D	3.54 _D	<0.20 _A	0.07	<0.04	<0.04	0.87	-	-	<0.04	mg/kg	TM4/PM8	
Fluoranthene ^{#M}	7.66 _D	5.25 _D	14.01 _D	0.89 _A	0.84	<0.03	0.10	6.28	-	-	<0.03	mg/kg	TM4/PM8	
Pyrene [#]	6.19 _D	4.31 _D	10.84 _D	0.77 _A	0.65	<0.03	0.12	5.85	-	-	<0.03	mg/kg	TM4/PM8	
Benzo(a)anthracene [#]	3.48 _D	2.61 _D	5.84 _D	0.54 _A	0.23	<0.06	0.10	3.36	-	-	<0.06	mg/kg	TM4/PM8	
Chrysene ^{#M}	3.15 _D	2.28 _D	5.31 _D	0.47 _A	0.34	<0.02	0.09	3.40	-	-	<0.02	mg/kg	TM4/PM8	
Benzo(k)fluoranthene ^{#M}	4.43 _D	3.31 _D	7.13 _D	0.62 _A	0.49	<0.07	0.21	5.73	-	-	<0.07	mg/kg	TM4/PM8	
Benzo(a)pyrene [#]	2.86 _D	2.26 _D	4.68 _D	0.40 _A	0.28	<0.04	0.15	3.87	-	-	<0.04	mg/kg	TM4/PM8	
Indeno(123cd)pyrene ^{#M}	1.69 _D	1.40 _D	2.77 _D	0.25 _A	0.21	<0.04	0.10	2.66	-	-	<0.04	mg/kg	TM4/PM8	
Dibenzo(ah)anthracene [#]	<0.40 _D	<0.40 _D	0.49 _D	<0.20 _A	0.05	<0.04	<0.04	0.63	-	-	<0.04	mg/kg	TM4/PM8	
Benzo(ghi)perylene [#]	1.54 _D	1.13 _D	2.30 _D	0.22 _A	0.20	<0.04	0.11	2.59	-	-	<0.04	mg/kg	TM4/PM8	
PAH 16 Total	41.1 _D	29.4 _D	74.2 _D	4.8 _A	4.0	<0.6	1.0	37.8	-	-	<0.6	mg/kg	TM4/PM8	
Benzo(b)fluoranthene	3.19 _D	2.38 _D	5.13 _D	0.45 _A	0.35	<0.05	0.15	4.13	-	-	<0.05	mg/kg	TM4/PM8	
Benzo(k)fluoranthene	1.24 _D	0.93 _D	2.00 _D	0.17 _A	0.14	<0.02	0.06	1.60	-	-	<0.02	mg/kg	TM4/PM8	
PAH Surrogate % Recovery	97 _D	114 _D	101 _D	92 _A	101	107	109	106	-	-	<0	%	TM4/PM8	

Client Name: Smith Grant LLP
Reference: R1742B
Location: Upper Heyford (Dorchester)
Contact: Dan Wayland
JE Job No.: 14/10359

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17	18	Please see attached notes for all abbreviations and acronyms			
Sample ID	D1B-SW-AGG1	D1B-SW-AGG2	D1B-SW-AGG3	D1B-SW-AGG4	D1B-SS4B	D1B-SS4C	D1B-SS4D	D1B-SS4E	D1B-SS6B	D1B-SS6C				
Depth					0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40	0.00-0.40				
COC No / misc														
Containers	V J	V J	V J	V J	V J	V J	V J	V J	J	J				
Sample Date	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014	10/09/2014				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1	1				
Date of Receipt	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	11/09/2014	LOD/LOR	Units	Method No.	
TPH CWG														
Aliphatics														
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12	
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12	
>C8-C10	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12	
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16	
>C12-C16 ^{#M}	<4	<4	<4	<4	-	-	-	-	-	-	<4	mg/kg	TM5/PM16	
>C16-C21 ^{#M}	<7	<7	<7	<7	-	-	-	-	-	-	<7	mg/kg	TM5/PM16	
>C21-C35 ^{#M}	<7	<7	26	153	-	-	-	-	-	-	<7	mg/kg	TM5/PM16	
Total aliphatics C5-35	<19	<19	26	153	-	-	-	-	-	-	<19	mg/kg	TM5/PM16	
Aromatics														
>C5-EC7	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12	
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12	
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12	
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16	
>EC12-EC16	6	<4	<4	7	-	-	-	-	-	-	<4	mg/kg	TM5/PM16	
>EC16-EC21	82	20	41	98	-	-	-	-	-	-	<7	mg/kg	TM5/PM16	
>EC21-EC35	231	120	170	393	-	-	-	-	-	-	<7	mg/kg	TM5/PM16	
Total aromatics C5-35	319	140	211	498	-	-	-	-	-	-	<19	mg/kg	TM5/PM16	
Total aliphatics and aromatics(C5-35)	319	140	237	651	-	-	-	-	-	-	<38	mg/kg	TM5/PM16	
MTBE [#]	<5	<5	<5	<5	-	-	-	-	-	-	<5	ug/kg	TM31/PM12	
Benzene [#]	<5	<5	<5	<5	-	-	-	-	-	-	<5	ug/kg	TM31/PM12	
Toluene [#]	<5	<5	<5	<5	-	-	-	-	-	-	<5	ug/kg	TM31/PM12	
Ethylbenzene [#]	<5	<5	<5	<5	-	-	-	-	-	-	<5	ug/kg	TM31/PM12	
m/p-Xylene [#]	<5	<5	<5	<5	-	-	-	-	-	-	<5	ug/kg	TM31/PM12	
o-Xylene [#]	<5	<5	<5	<5	-	-	-	-	-	-	<5	ug/kg	TM31/PM12	
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	-	-	-	-	-	-	<10	ug/kg	TM16/PM8	
Natural Moisture Content	3.8	1.7	1.2	7.0	23.2	8.4	12.7	5.4	-	-	<0.1	%	PM4/PM0	
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	-	-	-	-	-	-	<0.3	mg/kg	TM38/PM76	
Free Cyanide	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45	
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45	
Organic Matter	1.7	1.2	0.5	1.3	1.5	<0.2	0.2	NDP	-	-	<0.2	%	TM21/PM24	
Electrical Conductivity @25C (5:1 ext)	1123	1938	1567	2363	-	-	-	-	-	-	<100	uS/cm	TM76/PM58	
pH ^{#M}	10.73	9.40	9.56	10.58	-	-	-	-	-	-	<0.01	pH units	TM73/PM11	
Sample Type	Other	Other	Other	Other	Clay	Clay	Clay	Sandy Loam	Clayey Sand	Clay		None	PM13/PM0	
Sample Colour	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown		None	PM13/PM0	
Other Items	stones and brick fragment	stones, brick fragment and cement	stones and brick fragment	stones and brick fragment	stones, roots	stones	stones	stones, fibre board	stones	stones, sand		None	PM13/PM0	

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/10359

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range
A	x5 Dilution
D	x10 Dilution

JE Job No: 14/10359

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
PM13	Soil Typing for MCERTS	PM0	No preparation is required.			AR	
TM16	In-House method based on USEPA 8270. Determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS. Accredited to ISO 17025 for waters. All accreditation is matrix specific. Quantification by Internal Standard method.	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes

JE Job No: 14/10359

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	TOC and TC by Combustion	PM24	Eltra preparation			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes
TM36	In-house method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM76	As received samples are extracted using Sodium Hydroxide			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	

JE Job No: 14/10359

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No
TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes
TM76	Electrical Conductivity by Metrohm	PM58	Preparation of sample for Electrical Conductivity			AD	Yes
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes



Jones Environmental Laboratory

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Attention : Dan Wayland
Date : 10th September, 2014
Your reference : R1742B (Dorchester)
Our reference : Test Report 14/9695 Batch 1
Location : Upper Hayford
Date samples received : 27th August, 2014
Status : Final report
Issue : 1

Eleven samples were received for analysis on 27th August, 2014. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Bob Millward BSc FRSC
Principal Chemist

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B (Dorchester)
Location: Upper Hayford
Contact: Dan Wayland
JE Job No.: 14/9695

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms			
Sample ID	D1B-W-AGG1	D1B-W-AGG2	D1B-W-AGG3	D1B-NW-AGG1	D1B-NW-AGG2	UST16-20-AGGA1	UST16-20-AGGA2	UST16-20-AGGA3	UST16-20-AGGB1	UST16-20-AGGB2				
Depth														
COC No / misc														
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J				
Sample Date	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1	1				
Date of Receipt	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	LOD/LOR	Units	Method No.	
Antimony	3	2	2	<1	<1	-	-	-	-	-	<1	mg/kg	TM30/PM15	
Arsenic ^{#M}	16.7	11.3	18.7	13.4	13.1	-	-	-	-	-	<0.5	mg/kg	TM30/PM15	
Barium ^{#M}	197	70	144	84	61	-	-	-	-	-	<1	mg/kg	TM30/PM15	
Beryllium	0.8	0.7	0.9	0.7	0.5	-	-	-	-	-	<0.5	mg/kg	TM30/PM15	
Cadmium ^{#M}	0.4	0.3	0.4	0.5	0.2	-	-	-	-	-	<0.1	mg/kg	TM30/PM15	
Chromium ^{#M}	29.8	24.1	23.3	18.5	16.6	-	-	-	-	-	<0.5	mg/kg	TM30/PM15	
Cobalt ^{#M}	5.4	5.0	6.4	4.2	3.9	-	-	-	-	-	<0.5	mg/kg	TM30/PM15	
Copper ^{#M}	13	12	18	7	5	-	-	-	-	-	<1	mg/kg	TM30/PM15	
Lead ^{#M}	75	11	26	14	13	-	-	-	-	-	<5	mg/kg	TM30/PM15	
Mercury ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	mg/kg	TM30/PM15	
Molybdenum ^{#M}	1.8	1.6	3.5	0.9	0.8	-	-	-	-	-	<0.1	mg/kg	TM30/PM15	
Nickel ^{#M}	14.1	11.9	17.8	10.8	9.9	-	-	-	-	-	<0.7	mg/kg	TM30/PM15	
Selenium ^{#M}	<1	<1	<1	<1	<1	-	-	-	-	-	<1	mg/kg	TM30/PM15	
Vanadium	36	29	38	31	33	-	-	-	-	-	<1	mg/kg	TM30/PM15	
Water Soluble Boron ^{#M}	2.2	2.0	3.4	1.9	1.9	-	-	-	-	-	<0.1	mg/kg	TM74/PM32	
Zinc ^{#M}	142	51	119	74	47	-	-	-	-	-	<5	mg/kg	TM30/PM15	
PAH MS														
Naphthalene ^{#M}	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	-	-	-	<0.04	mg/kg	TM4/PM8	
Acenaphthylene	<0.03	<0.03	<0.03	0.03	<0.03	-	-	-	-	-	<0.03	mg/kg	TM4/PM8	
Acenaphthene ^{#M}	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	<0.05	mg/kg	TM4/PM8	
Fluorene ^{#M}	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	-	-	-	<0.04	mg/kg	TM4/PM8	
Phenanthrene ^{#M}	0.05	0.08	0.12	0.47	0.75	-	-	-	-	-	<0.03	mg/kg	TM4/PM8	
Anthracene [#]	<0.04	<0.04	0.05	0.15	0.15	-	-	-	-	-	<0.04	mg/kg	TM4/PM8	
Fluoranthene ^{#M}	0.06	0.09	0.27	0.91	1.35	-	-	-	-	-	<0.03	mg/kg	TM4/PM8	
Pyrene [#]	0.06	0.07	0.25	0.79	1.14	-	-	-	-	-	<0.03	mg/kg	TM4/PM8	
Benzo(a)anthracene [#]	0.07	<0.06	0.12	0.45	0.64	-	-	-	-	-	<0.06	mg/kg	TM4/PM8	
Chrysene ^{#M}	0.04	0.05	0.18	0.54	0.66	-	-	-	-	-	<0.02	mg/kg	TM4/PM8	
Benzo(k)fluoranthene ^{#M}	<0.07	<0.07	0.28	0.91	0.95	-	-	-	-	-	<0.07	mg/kg	TM4/PM8	
Benzo(a)pyrene [#]	<0.04	<0.04	0.18	0.58	0.60	-	-	-	-	-	<0.04	mg/kg	TM4/PM8	
Indeno(123cd)pyrene ^{#M}	<0.04	<0.04	0.11	0.36	0.39	-	-	-	-	-	<0.04	mg/kg	TM4/PM8	
Dibenzo(ah)anthracene [#]	<0.04	<0.04	<0.04	0.09	0.08	-	-	-	-	-	<0.04	mg/kg	TM4/PM8	
Benzo(ghi)perylene [#]	<0.04	<0.04	0.08	0.28	0.28	-	-	-	-	-	<0.04	mg/kg	TM4/PM8	
PAH 16 Total	<0.6	<0.6	1.6	5.6	7.0	-	-	-	-	-	<0.6	mg/kg	TM4/PM8	
Benzo(b)fluoranthene	<0.05	<0.05	0.20	0.66	0.68	-	-	-	-	-	<0.05	mg/kg	TM4/PM8	
Benzo(k)fluoranthene	<0.02	<0.02	0.08	0.25	0.27	-	-	-	-	-	<0.02	mg/kg	TM4/PM8	
PAH Surrogate % Recovery	97	100	102	97	103	-	-	-	-	-	<0	%	TM4/PM8	

Client Name: Smith Grant LLP
Reference: R1742B (Dorchester)
Location: Upper Hayford
Contact: Dan Wayland
JE Job No.: 14/9695

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-W-AGG1	D1B-W-AGG2	D1B-W-AGG3	D1B-NW-AGG1	D1B-NW-AGG2	UST16-20-AGGA1	UST16-20-AGGA2	UST16-20-AGGA3	UST16-20-AGGB1	UST16-20-AGGB2			
Depth													
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014	26/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	27/08/2014	LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	<7	<7	23	<7	<7	19	13	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	21	29	35	<7	10	<7	<7	177	128	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	21	29	35	<19	33	<19	<19	196	141	<19	mg/kg	TM5/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21	<7	<7	12	<7	<7	<7	<7	<7	32	<7	<7	mg/kg	TM5/PM16
>EC21-EC35	<7	<7	58	123	69	<7	<7	<7	160	58	<7	mg/kg	TM5/PM16
Total aromatics C5-35	<19	<19	70	123	69	<19	<19	<19	192	58	<19	mg/kg	TM5/PM16
Total aliphatics and aromatics(C5-35)	<38	<38	99	158	69	<38	<38	<38	388	199	<38	mg/kg	TM5/PM16
MTBE [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	<10	-	-	-	-	-	<10	ug/kg	TM16/PM8
Natural Moisture Content	15.1	14.3	15.7	9.3	13.3	13.0	14.8	12.1	16.0	14.7	<0.1	%	PM4/PM0
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	-	-	-	-	-	<0.3	mg/kg	TM38/PM76
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	mg/kg	TM89/PM45
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	mg/kg	TM89/PM45
Organic Matter	0.7	0.6	1.2	0.3	0.2	-	-	-	-	-	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)	1992	2251	2458	2605	1434	-	-	-	-	-	<100	uS/cm	TM76/PM58
pH ^{#M}	10.21	8.98	9.15	11.82	11.95	-	-	-	-	-	<0.01	pH units	TM73/PM11
Sample Type	Sand	Sand	Sand	Sand	Sand	-	-	-	-	-		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Light Brown	-	-	-	-	-		None	PM13/PM0
Other Items	stones and brick fragment	stones and brick fragment	stones and wood	stones	stones	-	-	-	-	-		None	PM13/PM0

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/9695

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range

JE Job No: 14/9695

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
PM13	Soil Typing for MCERTS	PM0	No preparation is required.			AR	
TM16	In-House method based on USEPA 8270. Determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS. Accredited to ISO 17025 for waters. All accreditation is matrix specific. Quantification by Internal Standard method.	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes

JE Job No: 14/9695

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	TOC and TC by Combustion	PM24	Eltra preparation			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM76	As received samples are extracted using Sodium Hydroxide			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	

JE Job No: 14/9695

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No
TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes
TM76	Electrical Conductivity by Metrohm	PM58	Preparation of sample for Electrical Conductivity			AD	Yes
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes



Jones Environmental Laboratory

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Attention : Dan Wayland
Date : 2nd September, 2014
Your reference : R1742B
Our reference : Test Report 14/9392 Batch 1
Location : Heyford(Dorchester)
Date samples received : 19th August, 2014
Status : Final report
Issue : 2

Forty samples were received for analysis on 19th August, 2014. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Client Name: Smith Grant LLP
 Reference: R1742B
 Location: Heyford(Dorchester)
 Contact: Dan Wayland
 JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-NE-AGG1	D1B-NE-AGG2	D1B-NE-AGG3	D1B-SE-AGG1	D1B-SE-AGG2	D1B-SS1	D1B-SS2	D1B-SS3	D1B-SS4	D1B-SS5			
Depth						0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	LOD/LOR	Units	Method No.
Antimony	-	<1	<1	<1	<1	<1	2	1	1	<1	<1	mg/kg	TM30/PM15
Antimony	1	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Arsenic ^{#M}	-	16.8	27.2	16.1	9.6	19.8	27.5	48.6	17.0	16.1	<0.5	mg/kg	TM30/PM15
Arsenic	17.7	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Barium ^{#M}	-	64	79	45	83	47	31	34	42	66	<1	mg/kg	TM30/PM15
Barium	144	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Beryllium	-	0.7	0.5	<0.5	<0.5	0.6	1.6	1.3	0.9	0.8	<0.5	mg/kg	TM30/PM15
Beryllium	1.1	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium ^{#M}	-	0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Cadmium	<0.1	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium ^{#M}	-	18.1	18.2	14.3	17.7	16.4	61.4	59.5	19.7	27.7	<0.5	mg/kg	TM30/PM15
Chromium	26.3	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cobalt ^{#M}	-	4.7	4.7	4.3	3.8	4.9	8.6	5.5	5.4	4.6	<0.5	mg/kg	TM30/PM15
Cobalt	7.5	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper ^{#M}	-	6	7	6	7	9	3	4	<1	<1	<1	mg/kg	TM30/PM15
Copper	13	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead ^{#M}	-	6	14	8	13	11	10	11	12	8	<5	mg/kg	TM30/PM15
Lead	48	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury ^{#M}	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	0.5	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Molybdenum ^{#M}	-	1.0	1.0	0.8	0.9	1.6	1.4	0.6	0.7	0.7	<0.1	mg/kg	TM30/PM15
Molybdenum	1.5	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel ^{#M}	-	14.9	12.8	11.2	11.7	11.2	29.1	20.6	14.7	15.5	<0.7	mg/kg	TM30/PM15
Nickel	18.7	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium ^{#M}	-	1	1	<1	1	1	1	1	<1	<1	<1	mg/kg	TM30/PM15
Selenium	<1	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Vanadium	-	31	38	30	27	53	142	133	47	62	<1	mg/kg	TM30/PM15
Vanadium	54	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron ^{#M}	-	1.9	3.4	0.9	1.7	1.0	1.7	1.1	1.1	0.8	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	3.7	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc ^{#M}	-	41	58	40	43	40	83	56	54	46	<5	mg/kg	TM30/PM15
Zinc	205	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B
Location: Heyford(Dorchester)
Contact: Dan Wayland
JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-NE-AGG1	D1B-NE-AGG2	D1B-NE-AGG3	D1B-SE-AGG1	D1B-SE-AGG2	D1B-SS1	D1B-SS2	D1B-SS3	D1B-SS4	D1B-SS5			
Depth						0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	LOD/LOR	Units	Method No.
PAH MS													
Naphthalene ^{#M}	<0.04	0.32	0.82	0.13	<0.04	<0.04	0.05	<0.04	<0.40 _A	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.09	0.06	0.19	0.13	0.03	<0.03	0.12	0.06	0.82 _A	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	0.09	0.46	1.02	0.31	0.05	<0.05	0.13	<0.05	0.71 _A	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	0.04	0.31	0.79	0.19	<0.04	<0.04	0.14	<0.04	0.60 _A	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	0.94	3.04	7.77	2.51	0.48	0.06	1.15	0.35	10.19 _A	0.07	<0.03	mg/kg	TM4/PM8
Anthracene [#]	0.29	0.87	2.26	0.67	0.13	<0.04	0.51	0.14	3.71 _A	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	2.58	2.99	8.44	4.28	0.85	0.11	3.17	0.93	19.90 _A	0.20	<0.03	mg/kg	TM4/PM8
Pyrene [#]	2.18	2.31	7.01	3.31	0.68	0.09	3.15	0.82	17.90 _A	0.18	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	1.01	1.12	3.63	2.26	0.32	0.08	1.56	0.50	9.79 _A	0.14	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	1.19	0.92	3.28	2.16	0.35	0.06	1.62	0.44	10.24 _A	0.14	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	1.69	1.40	5.18	3.48	0.43	0.10	2.77	0.75	17.64 _A	0.24	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	0.95	0.91	3.41	1.63	0.22	0.06	1.53	0.44	10.97 _A	0.11	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.65	0.56	1.77	1.17	0.14	0.04	1.03	0.28	6.49 _A	0.09	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	0.11	0.07	0.37	0.26	0.04	<0.04	0.12	0.08	1.05 _A	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.58	0.46	1.64	1.13	0.14	0.04	1.04	0.29	6.01 _A	0.09	<0.04	mg/kg	TM4/PM8
PAH 16 Total	12.4	15.8	47.6	23.6	3.9	0.6	18.1	5.1	116.0 _A	1.3	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.22	1.01	3.73	2.51	0.31	0.07	1.99	0.54	12.70 _A	0.17	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.47	0.39	1.45	0.97	0.12	0.03	0.78	0.21	4.94 _A	0.07	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	99	101	102	94	103	100	100	100	103 _A	106	<0	%	TM4/PM8
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	<7	<7	<7	29	<7	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	46	14	36	<7	<7	43	41	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	46	<19	36	<19	<19	72	41	<19	<19	<19	mg/kg	TM5/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	6	10	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21	16	49	67	13	<7	<7	21	<7	51	<7	<7	mg/kg	TM5/PM16
>EC21-EC35	76	152	163	108	<7	<7	76	62	228	<7	<7	mg/kg	TM5/PM16
Total aromatics C5-35	92	207	240	121	<19	<19	97	62	279	<19	<19	mg/kg	TM5/PM16
Total aliphatics and aromatics(C5-35)	92	253	240	157	<38	<38	169	103	279	<38	<38	mg/kg	TM5/PM16
MTBE [#]													
	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene [#]													
	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12

Please include all sections of this report if it is reproduced

Client Name: Smith Grant LLP
Reference: R1742B
Location: Heyford(Dorchester)
Contact: Dan Wayland
JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-NE-AGG1	D1B-NE-AGG2	D1B-NE-AGG3	D1B-SE-AGG1	D1B-SE-AGG2	D1B-SS1	D1B-SS2	D1B-SS3	D1B-SS4	D1B-SS5			
Depth						0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	LOD/LOR	Units	Method No.
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Natural Moisture Content	1.9	2.4	2.6	0.9	5.2	11.9	7.9	10.4	9.3	10.2	<0.1	%	PM4/PM0
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM76
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Organic Matter	-	<0.2	0.3	0.2	0.3	0.7	0.3	0.2	0.7	0.3	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)	-	1393	1303	2215	2749	396	416	335	241	307	<100	uS/cm	TM76/PM58
pH #M	8.65	8.25	9.64	8.96	8.49	8.42	10.07	9.12	8.67	8.68	<0.01	pH units	TM73/PM11
Sample Type	Clay	Other	Other	Silt	Sand	Clay	Loamy Sand	Clay	Sand	Clay		None	PM13/PM0
Sample Colour	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Medium Brown	Light Brown	Light Brown	Light Brown	Light Brown		None	PM13/PM0
Other Items	<small>dry clay, stones and brick fragments</small>	<small>stones and brick fragments</small>	<small>stones and brick fragments</small>	<small>stones and brick fragments</small>	<small>stones, brick fragments and other</small>	<small>stones and sand</small>	<small>stones</small>	<small>stones and sand</small>	<small>stones and clinker</small>	<small>stones and sand</small>		None	PM13/PM0
Mass of Dry Sample	72.9	-	-	-	-	-	-	-	-	-	<0.1	g	PM4/PM0

Client Name: Smith Grant LLP
 Reference: R1742B
 Location: Heyford(Dorchester)
 Contact: Dan Wayland
 JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	21-22	23-24	25-26	27-28	29-30	31-32	33-34	35-36	37-38	39-40	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS6	D1B-SS7	D1B-SS8	D1B-SS9	D1B-SS10	D1B-SS11	D1B-SS12	D1B-SS13	D1B-SS14	D1B-SS15	LOD/LOR	Units	Method No.
Depth	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014			
Antimony	2	1	1	<1	1	1	3	2	7	1	<1	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Arsenic ^{#M}	30.6	21.6	23.9	15.0	16.1	21.9	86.4	22.9	23.5	27.0	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Barium ^{#M}	55	85	48	25	73	55	120	52	500	27	<1	mg/kg	TM30/PM15
Barium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Beryllium	2.0	1.5	1.0	0.5	1.0	0.7	1.5	0.9	1.8	1.0	<0.5	mg/kg	TM30/PM15
Beryllium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium ^{#M}	<0.1	<0.1	<0.1	<0.1	0.2	0.5	<0.1	<0.1	1.1	<0.1	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium ^{#M}	69.3	38.2	33.6	14.9	34.0	22.3	39.4	23.7	27.4	21.1	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cobalt ^{#M}	11.1	11.0	5.8	4.8	7.8	5.8	11.9	7.2	13.2	6.1	<0.5	mg/kg	TM30/PM15
Cobalt	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper ^{#M}	<1	<1	<1	<1	<1	<1	<1	<1	16	<1	<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead ^{#M}	2035	13	15	9	54	19	41	11	76	10	<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury ^{#M}	<0.1	<0.1	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Molybdenum ^{#M}	0.6	0.8	0.9	1.2	1.9	0.8	0.9	1.2	5.2	0.5	<0.1	mg/kg	TM30/PM15
Molybdenum	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel ^{#M}	39.1	24.8	18.0	13.0	18.3	16.2	31.0	17.2	33.8	15.9	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium ^{#M}	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Vanadium	144	104	77	47	58	48	104	67	64	47	<1	mg/kg	TM30/PM15
Vanadium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron ^{#M}	1.2	0.8	1.0	1.1	4.2	1.4	1.9	0.6	0.9	0.1	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc ^{#M}	80	52	52	46	98	56	115	53	172	51	<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B
Location: Heyford(Dorchester)
Contact: Dan Wayland
JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	21-22	23-24	25-26	27-28	29-30	31-32	33-34	35-36	37-38	39-40	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS6	D1B-SS7	D1B-SS8	D1B-SS9	D1B-SS10	D1B-SS11	D1B-SS12	D1B-SS13	D1B-SS14	D1B-SS15	LOD/LOR	Units	Method No.
Depth	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014			
PAH MS													
Naphthalene ^{#M}	<0.04	<0.04	<0.04	<0.04	<0.40 _A	<0.04	<0.04	0.06	0.10	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.03	<0.03	<0.03	0.07	<0.30 _A	<0.03	<0.03	<0.03	0.13	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	<0.05	<0.05	<0.05	<0.50 _A	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	<0.04	<0.04	<0.04	<0.40 _A	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	0.36	0.23	0.07	0.24	<0.30 _A	0.22	0.46	0.04	0.31	<0.03	<0.03	mg/kg	TM4/PM8
Anthracene [#]	0.10	<0.04	<0.04	0.09	<0.40 _A	0.05	0.09	<0.04	0.11	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	1.07	0.54	0.40	0.95	0.76 _A	0.31	0.49	0.06	0.46	<0.03	<0.03	mg/kg	TM4/PM8
Pyrene [#]	0.91	0.44	0.38	0.79	0.72 _A	0.25	0.42	0.06	0.40	<0.03	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.56	0.25	0.22	0.75	0.78 _A	0.18	0.26	<0.06	0.36	<0.06	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	0.57	0.29	0.25	0.94	0.79 _A	0.18	0.25	0.04	0.39	0.02	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	0.87	0.46	0.39	1.76	1.12 _A	0.28	0.39	0.09	0.86	<0.07	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	0.52	0.25	0.21	0.85	0.56 _A	0.15	0.22	0.06	0.55	<0.04	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.33	0.18	0.17	0.61	0.53 _A	0.11	0.14	0.04	0.47	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	0.06	<0.04	<0.04	0.14	<0.40 _A	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.31	0.16	0.15	0.57	0.54 _A	0.10	0.13	0.06	0.49	0.04	<0.04	mg/kg	TM4/PM8
PAH 16 Total	5.7	2.8	2.2	7.8	<6.0 _A	1.8	2.9	<0.6	4.7	<0.6	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.63	0.33	0.28	1.27	0.81 _A	0.20	0.28	0.06	0.62	<0.05	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.24	0.13	0.11	0.49	0.31 _A	0.08	0.11	0.03	0.24	<0.02	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	103	102	106	107	98 _A	104	104	105	101	100	<0	%	TM4/PM8
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	<7	<7	<7	121	12	66	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	<19	<19	<19	121	<19	66	<19	<19	<19	<19	mg/kg	TM5/TPH36/PM12/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>EC21-EC35	<7	<7	<7	<7	264	<7	165	<7	55	<7	<7	mg/kg	TM5/PM16
Total aromatics C5-35	<19	<19	<19	<19	264	<19	165	<19	55	<19	<19	mg/kg	TM5/TPH36/PM12/PM16
Total aliphatics and aromatics(C5-35)	<38	<38	<38	<38	385	<38	231	<38	55	<38	<38	mg/kg	TM5/TPH36/PM12/PM16
MTBE [#]													
	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene [#]													
	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12

Please include all sections of this report if it is reproduced

Client Name: Smith Grant LLP
Reference: R1742B
Location: Heyford(Dorchester)
Contact: Dan Wayland
JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	21-22	23-24	25-26	27-28	29-30	31-32	33-34	35-36	37-38	39-40	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS6	D1B-SS7	D1B-SS8	D1B-SS9	D1B-SS10	D1B-SS11	D1B-SS12	D1B-SS13	D1B-SS14	D1B-SS15	LOD/LOR	Units	Method No.
Depth	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014			
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	<200 _p	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Natural Moisture Content	13.6	16.9	11.7	10.0	20.2	8.2	14.5	10.6	10.4	5.5	<0.1	%	PM4/PM0
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM76
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Organic Matter	0.9	1.0	0.6	0.4	5.5	2.8	1.2	0.9	22.8	0.2	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)	227	148	407	312	816	214	235	153	138	106	<100	uS/cm	TM76/PM58
pH #M	8.57	8.50	8.91	8.07	9.41	8.97	8.49	8.54	8.54	8.89	<0.01	pH units	TM73/PM11
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Loamy Sand	Sand		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Light Brown		None	PM13/PM0
Other Items	stones and sand	stones and roots	stones	stones and sand	stones, sand and clinker	stones and sand	stones	stones and sand	stones and clinker	stones		None	PM13/PM0
Mass of Dry Sample	-	-	-	-	-	-	-	-	-	-	<0.1	g	PM4/PM0

Client Name: Smith Grant LLP
 Reference: R1742B
 Location: Heyford(Dorchester)
 Contact: Dan Wayland
 JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	41-42	43-44	45-46	47-48	49-50	51-52	53-54	55-56	57-58	59-60	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS16	D1B-SS17	D1B-SS18	D1B-SS19	D1B-SS20	D1B-SS21	D1B-SS22	D1B-SS23	D1B-SS24	D1B-SS25			
Depth	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	LOD/LOR	Units	Method No.
Antimony	1	<1	<1	1	1	2	1	<1	<1	<1	<1	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Arsenic ^{#M}	16.2	7.8	13.2	17.6	19.8	28.0	27.1	14.5	14.9	14.5	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Barium ^{#M}	94	14	42	56	66	107	31	25	26	62	<1	mg/kg	TM30/PM15
Barium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Beryllium	0.7	<0.5	0.7	0.8	0.8	1.9	0.9	<0.5	0.6	0.7	<0.5	mg/kg	TM30/PM15
Beryllium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium ^{#M}	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium ^{#M}	22.2	6.8	18.2	21.4	20.7	50.7	22.1	12.6	16.7	18.8	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cobalt ^{#M}	6.6	3.6	5.7	8.1	7.6	14.4	6.9	3.9	4.9	5.5	<0.5	mg/kg	TM30/PM15
Cobalt	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper ^{#M}	<1	<1	<1	<1	<1	<1	<1	7	8	9	<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead ^{#M}	40	6	13	20	14	16	9	9	41	19	<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Molybdenum ^{#M}	0.8	1.0	0.7	0.9	1.1	1.3	0.9	1.4	1.6	0.6	<0.1	mg/kg	TM30/PM15
Molybdenum	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel ^{#M}	14.0	7.6	13.7	16.4	16.4	30.5	17.9	10.7	12.3	13.0	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium ^{#M}	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Vanadium	55	20	46	56	52	124	52	41	45	46	<1	mg/kg	TM30/PM15
Vanadium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron ^{#M}	1.4	0.4	1.1	1.4	1.4	1.7	1.3	0.7	0.5	1.5	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc ^{#M}	59	14	52	54	44	67	52	27	24	55	<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B
Location: Heyford(Dorchester)
Contact: Dan Wayland
JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	41-42	43-44	45-46	47-48	49-50	51-52	53-54	55-56	57-58	59-60	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS16	D1B-SS17	D1B-SS18	D1B-SS19	D1B-SS20	D1B-SS21	D1B-SS22	D1B-SS23	D1B-SS24	D1B-SS25			
Depth	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	LOD/LOR	Units	Method No.
PAH MS													
Naphthalene ^{#M}	0.33	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.11	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	0.67	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	0.46	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	4.53	<0.03	0.30	0.53	<0.03	<0.03	0.03	0.03	0.08	0.14	<0.03	mg/kg	TM4/PM8
Anthracene [#]	1.37	<0.04	0.08	0.19	<0.04	<0.04	<0.04	<0.04	<0.04	0.06	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	5.22	<0.03	0.40	1.09	0.05	<0.03	0.07	0.07	0.29	0.47	<0.03	mg/kg	TM4/PM8
Pyrene [#]	3.98	<0.03	0.33	0.94	0.05	<0.03	0.07	0.06	0.25	0.40	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	2.35	<0.06	0.25	0.52	<0.06	<0.06	0.06	0.08	0.14	0.23	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	2.22	<0.02	0.25	0.55	0.03	<0.02	0.05	0.04	0.14	0.26	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	3.25	<0.07	0.40	0.89	<0.07	<0.07	0.10	0.09	0.18	0.39	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	1.93	<0.04	0.23	0.59	<0.04	<0.04	0.05	0.06	0.11	0.27	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.95	<0.04	0.13	0.36	<0.04	<0.04	0.04	0.04	0.07	0.14	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	0.15	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.86	<0.04	0.13	0.35	<0.04	<0.04	0.04	0.06	0.07	0.16	<0.04	mg/kg	TM4/PM8
PAH 16 Total	28.4	<0.6	2.5	6.1	<0.6	<0.6	<0.6	<0.6	1.3	2.5	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	2.34	<0.05	0.29	0.64	<0.05	<0.05	0.07	0.06	0.13	0.28	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.91	<0.02	0.11	0.25	<0.02	<0.02	0.03	0.03	0.05	0.11	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	102	102	98	100	90	89	95	98	94	96	<0	%	TM4/PM8
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	34	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	34	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21	47	<7	<7	<7	<7	<7	16	<7	<7	<7	<7	mg/kg	TM5/PM16
>EC21-EC35	182	<7	<7	<7	<7	<7	38	<7	94	<7	<7	mg/kg	TM5/PM16
Total aromatics C5-35	233	<19	<19	<19	<19	<19	54	<19	94	<19	<19	mg/kg	TM5/PM16
Total aliphatics and aromatics(C5-35)	267	<38	<38	<38	<38	<38	54	<38	94	<38	<38	mg/kg	TM5/PM16
MTBE [#]													
	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene [#]													
	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12

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Client Name: Smith Grant LLP
Reference: R1742B
Location: Heyford(Dorchester)
Contact: Dan Wayland
JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	41-42	43-44	45-46	47-48	49-50	51-52	53-54	55-56	57-58	59-60	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS16	D1B-SS17	D1B-SS18	D1B-SS19	D1B-SS20	D1B-SS21	D1B-SS22	D1B-SS23	D1B-SS24	D1B-SS25	LOD/LOR	Units	Method No.
Depth	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014			
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Natural Moisture Content	10.3	6.9	11.5	9.6	13.0	16.8	6.9	10.0	14.2	11.1	<0.1	%	PM4/PM0
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM76
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Organic Matter	1.3	0.4	0.9	1.6	1.7	1.3	1.2	1.9	0.3	1.2	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)	530	496	231	406	367	128	449	136	116	344	<100	uS/cm	TM76/PM58
pH #M	8.22	8.15	8.45	8.16	8.10	8.33	8.82	8.57	9.05	8.21	<0.01	pH units	TM73/PM11
Sample Type	Clay	Clay	Clay	Clayey Sand	Clay	Clay	Sand	Clay	Clay	Clay		None	PM13/PM0
Sample Colour	Medium Brown	Light Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Light Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones and brick fragment	dry clay and stones	stones and sand	stones	stones	stones and roots	stones	stones, sand and roots	stones and sand	stones and sand		None	PM13/PM0
Mass of Dry Sample	-	-	-	-	-	-	-	-	-	-	<0.1	g	PM4/PM0

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B
Location: Heyford(Dorchester)
Contact: Dan Wayland
JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	61-62	63-64	65-66	67-68	69-70	71-72	73-74	75-76	77-78	79-80	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS26	D1B-SS27	D1B-SS28	D1B-SS29	D1B-SS30	D1B-SS31	D1B-SS32	D1B-SS33	D1B-SS34	D1B-SS35	LOD/LOR	Units	Method No.
Depth	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014			
Antimony	<1	<1	<1	<1	1	<1	<1	2	1	<1	<1	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Arsenic ^{#M}	15.9	14.7	10.5	9.8	26.0	12.8	16.8	24.7	24.4	17.7	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Barium ^{#M}	58	43	32	21	77	33	93	89	84	55	<1	mg/kg	TM30/PM15
Barium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Beryllium	0.8	0.6	0.6	<0.5	1.2	<0.5	0.8	1.5	1.4	0.9	<0.5	mg/kg	TM30/PM15
Beryllium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium ^{#M}	0.1	<0.1	<0.1	0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium ^{#M}	19.6	16.8	14.9	11.8	34.5	13.1	23.9	44.0	36.9	24.5	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cobalt ^{#M}	6.7	5.4	4.4	3.1	10.2	3.4	6.9	12.9	11.4	7.3	<0.5	mg/kg	TM30/PM15
Cobalt	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper ^{#M}	10	42	8	5	22	6	12	14	14	9	<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead ^{#M}	19	10	14	<5	28	10	26	17	19	11	<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Molybdenum ^{#M}	0.7	1.0	0.8	0.7	1.9	0.7	1.1	1.3	1.2	1.0	<0.1	mg/kg	TM30/PM15
Molybdenum	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel ^{#M}	14.7	13.7	10.3	8.6	28.6	9.0	16.6	28.9	25.6	17.1	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium ^{#M}	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Vanadium	50	43	37	32	76	30	52	101	85	58	<1	mg/kg	TM30/PM15
Vanadium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron ^{#M}	1.2	0.9	1.1	0.3	1.3	0.8	1.6	2.3	2.7	1.4	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc ^{#M}	49	37	25	62	70	44	64	64	66	45	<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742B
Location: Heyford(Dorchester)
Contact: Dan Wayland
JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	61-62	63-64	65-66	67-68	69-70	71-72	73-74	75-76	77-78	79-80	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS26	D1B-SS27	D1B-SS28	D1B-SS29	D1B-SS30	D1B-SS31	D1B-SS32	D1B-SS33	D1B-SS34	D1B-SS35			
Depth	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	LOD/LOR	Units	Method No.
PAH MS													
Naphthalene ^{#M}	<0.04	0.25	<0.04	<0.04	0.09	<0.80 _D	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.07	<0.03	<0.03	0.03	<0.60 _D	0.06	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	0.81	<0.05	<0.05	<0.05	<1.00 _D	0.07	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	0.74	<0.04	<0.04	<0.04	<0.80 _D	0.06	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	0.17	6.74	0.04	<0.03	0.22	4.29 _D	0.73	<0.03	<0.03	0.05	<0.03	mg/kg	TM4/PM8
Anthracene [#]	0.04	1.98	<0.04	<0.04	0.07	<0.80 _D	0.22	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	0.48	8.23	0.10	<0.03	0.62	4.16 _D	1.33	<0.03	0.05	0.09	<0.03	mg/kg	TM4/PM8
Pyrene [#]	0.42	6.67	0.09	<0.03	0.54	2.95 _D	1.06	<0.03	0.05	0.08	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.23	2.91	0.09	<0.06	0.29	2.05 _D	0.82	<0.06	<0.06	<0.06	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	0.26	2.76	0.07	<0.02	0.32	1.41 _D	0.74	<0.02	0.03	0.06	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	0.41	4.04	0.10	<0.07	0.58	<1.40 _D	1.26	<0.07	<0.07	<0.07	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	0.23	2.8	0.05	<0.04	0.39	<0.80 _D	0.67	<0.04	<0.04	0.05	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	0.15	1.39	0.04	<0.04	0.22	<0.80 _D	0.47	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	0.14	<0.04	<0.04	<0.04	<0.80 _D	0.07	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	0.15	1.32	0.05	<0.04	0.23	<0.80 _D	0.44	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
PAH 16 Total	2.5	40.9	0.6	<0.6	3.6	14.9 _D	8.0	<0.6	<0.6	<0.6	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.30	2.91	0.07	<0.05	0.42	<1.00 _D	0.91	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.11	1.13	0.03	<0.02	0.16	<0.40 _D	0.35	<0.02	<0.02	<0.02	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	99	98	95	93	95	95 _D	92	91	93	91	<0	%	TM4/PM8
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	<7	8	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21	<7	26	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>EC21-EC35	<7	23	<7	<7	<7	31	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aromatics C5-35	<19	49	<19	<19	<19	31	<19	<19	<19	<19	<19	mg/kg	TM5/PM16
Total aliphatics and aromatics(C5-35)	<38	49	<38	<38	<38	<38	<38	<38	<38	<38	<38	mg/kg	TM5/PM16
MTBE [#]													
	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene [#]													
	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12

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Client Name: Smith Grant LLP
 Reference: R1742B
 Location: Heyford(Dorchester)
 Contact: Dan Wayland
 JE Job No.: 14/9392

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	61-62	63-64	65-66	67-68	69-70	71-72	73-74	75-76	77-78	79-80	Please see attached notes for all abbreviations and acronyms		
Sample ID	D1B-SS26	D1B-SS27	D1B-SS28	D1B-SS29	D1B-SS30	D1B-SS31	D1B-SS32	D1B-SS33	D1B-SS34	D1B-SS35	LOD/LOR	Units	Method No.
Depth	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4	0-0.4			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014	18/08/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014	19/08/2014			
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Natural Moisture Content	11.7	14.0	9.5	8.1	11.5	8.0	10.9	14.2	14.2	13.5	<0.1	%	PM4/PM0
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM76
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Organic Matter	2.5	0.7	1.3	0.5	3.0	0.6	1.0	1.3	1.6	0.8	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)	229	156	498	<100	142	837	416	253	136	183	<100	uS/cm	TM76/PM58
pH #M	8.44	8.62	8.00	8.62	8.51	8.81	8.80	8.10	8.52	8.85	<0.01	pH units	TM73/PM11
Sample Type	Clay	Clay	Clay	Clay	Clay	Clayey Sand	Clay	Clay	Clay	Clay		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Light Brown	Light Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones	stones	stones, sand and clinker	stones and sand	stones	stones	stones	stones	stones	stones		None	PM13/PM0
Mass of Dry Sample	-	-	-	-	-	-	-	-	-	-	<0.1	g	PM4/PM0

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/9392

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range
A	x10 Dilution
D	x20 Dilution

JE Job No: 14/9392

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
PM13	Soil Typing for MCERTS	PM0	No preparation is required.			AR	
TM16	In-House method based on USEPA 8270. Determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS. Accredited to ISO 17025 for waters. All accreditation is matrix specific. Quantification by Internal Standard method.	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes

JE Job No: 14/9392

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	TOC and TC by Combustion	PM24	Eltra preparation			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM62	Aqua Regia extraction (Soils) (as received sample)			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM76	As received samples are extracted using Sodium Hydroxide			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	

JE Job No: 14/9392

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No
TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes
TM74	Water Soluble Boron by ICP-OES	PM61	Preparation of soils for WSB (as received sample)			AR	Yes
TM76	Electrical Conductivity by Metrohm	PM58	Preparation of sample for Electrical Conductivity			AD	Yes
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes



Jones Environmental Laboratory

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Attention : Gareth Carroll
Date : 20th December, 2013
Your reference : R1742
Our reference : Test Report 13/11463 Batch 1
Location : Upper Heyford
Date samples received : 6th December, 2013
Status : Final report
Issue : 1

Seventeen samples were received for analysis on 6th December, 2013. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Heyford
Contact: Gareth Carroll
JE Job No.: 13/11463

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1	2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	Please see attached notes for all abbreviations and acronyms		
Sample ID	STONE 1	STONE 2	PLOT 51-SS1	PLOT 51-SS2	PLOT 51-SS3	PLOT 70-SS1	PLOT 70-SS2	PLOT 46-SS1	PLOT 149-SS1	PLOT 149-SS2			
Depth			0.43	0.5	0.4	0.35	0.4	0.5	0.45	0.4			
COC No / misc													
Containers	T	T	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013			
Sample Type	Solid	Solid	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	LOD	Units	Method No.
Arsenic ^{#M}	-	-	21.8	38.4	-	22.1	23.1	19.0	20.1	-	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	16.3	-	-	-	-	27.4	<0.5	mg/kg	TM30/PM62
Barium ^{#M}	-	-	226	74	-	97	93	71	87	-	<1	mg/kg	TM30/PM15
Barium	-	-	-	-	140	-	-	-	-	104	<1	mg/kg	TM30/PM62
Beryllium	-	-	1.6	1.5	-	1.4	1.5	1.2	1.3	-	<0.5	mg/kg	TM30/PM15
Beryllium	-	-	-	-	1.1	-	-	-	-	1.5	<0.5	mg/kg	TM30/PM62
Cadmium ^{#M}	-	-	0.2	0.2	-	0.3	0.3	0.3	0.3	-	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	0.2	-	-	-	-	0.2	<0.1	mg/kg	TM30/PM62
Chromium ^{#M}	-	-	28.2	34.9	-	37.6	37.3	29.4	36.9	-	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	19.5	-	-	-	-	33.0	<0.5	mg/kg	TM30/PM62
Cobalt ^{#M}	-	-	11.6	13.0	-	12.6	12.5	9.5	12.2	-	<0.5	mg/kg	TM30/PM15
Cobalt	-	-	-	-	8.4	-	-	-	-	12.5	<0.5	mg/kg	TM30/PM62
Copper ^{#M}	-	-	209	2	-	6	5	4	6	-	<1	mg/kg	TM30/PM15
Copper	-	-	-	-	32	-	-	-	-	14	<1	mg/kg	TM30/PM62
Lead ^{#M}	-	-	18	15	-	27	21	15	26	-	<5	mg/kg	TM30/PM15
Lead	-	-	-	-	38	-	-	-	-	31	<5	mg/kg	TM30/PM62
Mercury ^{#M}	-	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	<0.1	-	-	-	-	<0.1	<0.1	mg/kg	TM30/PM62
Molybdenum ^{#M}	-	-	2.8	3.7	-	1.8	1.7	1.5	1.5	-	<0.1	mg/kg	TM30/PM15
Molybdenum	-	-	-	-	1.7	-	-	-	-	1.4	<0.1	mg/kg	TM30/PM62
Nickel ^{#M}	-	-	25.6	29.2	-	25.6	26.7	21.1	24.5	-	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	17.6	-	-	-	-	26.0	<0.7	mg/kg	TM30/PM62
Selenium ^{#M}	-	-	<1	<1	-	<1	<1	<1	<1	-	<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	<1	-	-	-	-	<1	<1	mg/kg	TM30/PM62
Vanadium	-	-	69	79	-	77	81	68	74	-	<1	mg/kg	TM30/PM15
Vanadium	-	-	-	-	58	-	-	-	-	79	<1	mg/kg	TM30/PM62
Water Soluble Boron ^{#M}	-	-	1.8	1.7	-	2.3	1.8	1.6	1.8	-	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	1.6	-	-	-	-	2.6	<0.1	mg/kg	TM74/PM61
Zinc ^{#M}	-	-	54	60	-	78	70	53	63	-	<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	67	-	-	-	-	87	<5	mg/kg	TM30/PM62

Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Heyford
Contact: Gareth Carroll
JE Job No.: 13/11463

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1	2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	Please see attached notes for all abbreviations and acronyms		
Sample ID	STONE 1	STONE 2	PLOT 51-SS1	PLOT 51-SS2	PLOT 51-SS3	PLOT 70-SS1	PLOT 70-SS2	PLOT 46-SS1	PLOT 149-SS1	PLOT 149-SS2			
Depth			0.43	0.5	0.4	0.35	0.4	0.5	0.45	0.4			
COC No / misc													
Containers	T	T	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013			
Sample Type	Solid	Solid	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	LOD	Units	Method No.
PAH MS													
Naphthalene ^{#M}	-	-	0.09	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	-	-	0.13	<0.03	0.12	<0.03	0.15	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	-	-	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	-	-	0.13	<0.04	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	-	-	4.25	<0.03	2.07	0.34	0.14	0.20	0.14	0.31	<0.03	mg/kg	TM4/PM8
Anthracene [#]	-	-	1.09	<0.04	0.62	0.07	0.12	0.07	0.06	0.07	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	-	-	4.74	0.03	5.35	0.81	0.59	0.36	0.40	0.81	<0.03	mg/kg	TM4/PM8
Pyrene [#]	-	-	3.60	<0.03	4.60	0.67	0.68	0.30	0.34	0.71	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	-	-	0.96	<0.06	1.66	0.21	0.26	0.10	0.14	0.30	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	-	-	0.98	<0.02	1.76	0.23	0.28	0.10	0.14	0.36	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	-	-	1.40	<0.07	2.81	0.40	0.65	0.15	0.23	0.51	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	-	-	0.96	<0.04	1.90	0.23	0.48	0.09	0.13	0.31	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	-	-	0.46	<0.04	0.91	0.16	0.33	0.07	0.11	0.18	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	-	-	0.09	<0.04	0.21	<0.04	0.05	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	-	-	0.44	<0.04	0.94	0.14	0.30	0.05	0.12	0.17	<0.04	mg/kg	TM4/PM8
PAH 16 Total	-	-	19.4	<0.6	23.1	3.3	4.0	1.5	1.8	3.7	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	-	-	1.01	<0.05	2.02	0.29	0.47	0.11	0.17	0.37	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	-	-	0.39	<0.02	0.79	0.11	0.18	0.04	0.06	0.14	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	-	-	104	106	106	87	106	99	103	104	<0	%	TM4/PM8
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	-	-	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	-	-	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	-	-	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	<19	<19	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/PM16
Aromatics													
>C5-EC7	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 ^{#M}	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16 ^{#M}	-	-	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21 ^{#M}	-	-	14	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>EC21-EC35 ^{#M}	-	-	25	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aromatics C5-35	-	-	39	<19	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/PM16
Total aliphatics and aromatics(C5-35)	-	-	39	<38	<38	<38	<38	<38	<38	<38	<38	mg/kg	TM5/PM16
MTBE [#]													
MTBE [#]	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene [#]													
Benzene [#]	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12

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Jones Environmental Laboratory

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Heyford
Contact: Gareth Carroll
JE Job No.: 13/11463

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1	2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	Please see attached notes for all abbreviations and acronyms		
Sample ID	STONE 1	STONE 2	PLOT 51-SS1	PLOT 51-SS2	PLOT 51-SS3	PLOT 70-SS1	PLOT 70-SS2	PLOT 46-SS1	PLOT 149-SS1	PLOT 149-SS2			
Depth			0.43	0.5	0.4	0.35	0.4	0.5	0.45	0.4			
COC No / misc													
Containers	T	T	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013	05/12/2013			
Sample Type	Solid	Solid	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	LOD	Units	Method No.
Toluene #	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene #	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene #	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene #	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
PCBs (Total vs Aroclor 1254)	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Natural Moisture Content	-	-	14.7	16.3	NDP	14.7	13.5	15.0	17.5	NDP	<0.1	%	PM4/PM0
Hexavalent Chromium	-	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Chromium III	-	-	28.2	34.9	19.5	37.6	37.3	29.4	36.9	33.0	<0.5	mg/kg	NONE/NONE
Free Cyanide	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Complex Cyanide	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Organic Matter	-	-	9.7	1.0	NDP	2.1	1.2	1.2	1.6	NDP	<0.2	%	TM21/PM24
pH #M	-	-	8.18	8.01	8.45	7.60	7.79	7.89	7.89	7.88	<0.01	pH units	TM73/PM11
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clayey Sand	Clayey Sand	Clayey Sand	Clay	Clayey Sand		None	PM13/PM0
Sample Colour	Medium Grey	Medium Grey	Medium Brown	Orange	Medium Brown	Orange	Orange	Orange	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	MOSTLY STONES	MOSTLY STONES	stones	stones	stones	vegetation	stones	stones	sand, stones	roots, stones		None	PM13/PM0

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Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Heyford
Contact: Gareth Carroll

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:



Gemma Newsome
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
13/11463	1	STONE 1		1	09/12/13	Soil-Silt/Brick/Stone	None	NAD	NAD	
13/11463	1	STONE 2		2	09/12/13	Soil-Silt/Clay/Brick/Stone	Free Fibres	Chrysotile	Trace	
13/11463	1	PLOT 51-SS1	0.43	4	17/12/13	Soil-Silt/Clay/Brick/Stone/Veg/MMMF	None	NAD	NAD	
13/11463	1	PLOT 51-SS2	0.5	6	17/12/13	soil/stones	None	NAD	NAD	
13/11463	1	PLOT 51-SS3	0.4	8	17/12/13	soil/stones	Free Fibres	Chrysotile, Crocidolite	Quantifiable	
13/11463	1	PLOT 70-SS1	0.35	10	17/12/13	Soil-Silt/Clay/Brick/Stone/Veg	None	NAD	NAD	
13/11463	1	PLOT 70-SS2	0.4	12	17/12/13	soil/stones	None	NAD	NAD	
13/11463	1	PLOT 46-SS1	0.5	14	17/12/13	Soil-Silt/Clay/Brick/Stone/Veg	None	NAD	NAD	
13/11463	1	PLOT 149-SS1	0.45	16	17/12/13	Soil-Silt/Clay/Brick/Stone/Veg	None	NAD	NAD	
13/11463	1	PLOT 149-SS2	0.4	18	17/12/13	Soil-Silt/Clay/Brick/Stone/Veg	Asbestos Insulating Board	Chrysotile	Quantifiable	
13/11463	1	PLOT 149-SS3	0.3	20	17/12/13	Soil-Silt/Clay/Brick/Stone/Veg	Asbestos Insulating Board	Chrysotile	Quantifiable	
13/11463	1	PLOT 459-SS1	0.4	22	17/12/13	Soil-Silt/Clay/Brick/Stone/Veg/MMMF	None	NAD	NAD	
13/11463	1	PLOT 459-SS2	0.4	24	17/12/13	soil/stones	None	NAD	NAD	
13/11463	1	PLOT 459-SS3	0.4	26	17/12/13	Soil-Silt/Clay/Brick/Stone/Veg/MMMF	None	NAD	NAD	

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 13/11463

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory. It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

NOTE

Data is only accredited when all the requirements of our Quality System have been met. In certain circumstances where the requirements have not been met, the laboratory may issue the data in an interim report but will remove the accreditation, in this instance results should be considered indicative only. Where possible samples will be re-extracted and a final report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance.
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
OC	Outside Calibration Range
NFD	No Fibres Detected

JE Job No: 13/11463

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
PM13	Soil Typing for MCERTS	PM0	No preparation is required.			AR	
TM16	In-House method based on USEPA 8270. Determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS. Accredited to ISO 17025 for waters. All accreditation is matrix specific. Quantification by Internal Standard method.	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM21	TOC and TC by Combustion	PM24	Eltra preparation			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of water samples and analysis by ICP-OES as per method TM030S. ISO 17025 and MCERTS accredited extraction method. All accreditation is matrix specific			AD	Yes

JE Job No: 13/11463

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of water samples and analysis by ICP-OES as per method TM030S. ISO 17025 and MCERTS accredited extraction method. All accreditation is matrix specific	Yes	Yes	AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM62	Aqua Regia extraction (Soils) (as received sample)			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM20	in-house method based on USEPA 1311 (TCLP). Solid samples are extracted with two parts de-ionised water to one part solid material for analysis of the extract for various parameters.			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No

JE Job No: 13/11463

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes
TM74	Water Soluble Boron by ICP-OES	PM61	Preparation of soils for WSB (as received sample)			AR	Yes
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes
NONE	No Method Code	NONE	No Method Code				Yes

APPENDIX D

Statistical Analysis

Job name	Heyford: Dorchester D1B:Area 2
Job no.	R1742
Date:	29.11.15
Author:	DW
Laboratory:	Jones
Lab. Reference:	14-9392, 14-11667, 14-12168, 14-12802



PAH concentrations

sample identity	SS9	SS16	SS27	SS37	SS38	SS41	SS62	SS64	SS66	SS68	SS69								
phenanthrene	0.24	4.53	6.74	42.64	0.63	1.59	1.91	2.02	1.73	9.42	0.67								
anthracene	0.09	1.37	1.98	14.49	0.27	0.56	0.7	0.71	0.5	2.72	0.17								
fluoranthene	0.95	5.22	8.23	77.02	2.21	3.02	4.21	4.03	4.19	9.21	1.91								
pyrene	0.79	3.98	6.67	59.42	1.93	2.42	3.34	3.36	3.26	7.1	1.5								
benz(a)anthracene	0.75	2.35	2.91	29.44	1.35	1.33	1.81	1.79	1.69	2.79	0.84								
chrysene	0.94	2.22	2.76	25.32	1.33	1.11	1.7	1.65	1.63	3.04	0.92								

PAH units mg/kg

PAH ratios

phe/ant	2.667	3.307	3.404	2.943	2.333	2.839	2.729	2.845	3.460	3.463	3.941								
flu/pyr	1.203	1.312	1.234	1.296	1.145	1.248	1.260	1.199	1.285	1.297	1.273								
baa/chr	0.798	1.059	1.054	1.163	1.015	1.198	1.065	1.085	1.037	0.918	0.913								

