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19 August 2013
Our reference: 321453 (H) L01 (00)

Monckton Coke & Chemical Co Ltd
Lund Hill Lane
Royston
Barnsley
South Yorkshire
S71 4BE

For the attention of: Mr S Walsh

Dear Steve

GROUNDWATER SAMPLING AT MONCKTON COKE AND CHEMICAL CO LTD, ROYSTON

RSK Environment Ltd (RSK) was commissioned by Hargreaves Services plc in June 2013 to carry out groundwater monitoring at Monckton Coke & Chemical works, Royston. This work was undertaken as a repeat of a similar monitoring event carried out in 2011, to assess whether conditions in the groundwater below the site remain unchanged.

1. BACKGROUND

In 2011 RSK (at that time operating under the name of RSK STATS Geoconsult Limited) was commissioned by Hargreaves Services plc to undertake an intrusive environmental assessment of the Monckton Coke and Chemical Limited site in Royston, Yorkshire. The purpose of that work was to investigate the contamination status of soil and groundwater at the site and to identify any associated liabilities. The site comprises a coal carbonisation facility undertaking the manufacture of coke, with a number of by-products also produced, and these activities have taken place on site since the 19th century. Coal mining has also previously been undertaken at the site.

As part of the assessment by RSK in 2011 a number of shallow and deep groundwater monitoring boreholes were installed. Of these, all five of the deep and one of the shallower boreholes were subsequently found to make water, and water samples were recovered from them. Laboratory analyses



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of those samples indicated the presence of a number of contaminants in the groundwater beneath the site, likely to be resulting from historic and ongoing site activities. It was concluded that although levels of contamination of groundwater beneath the site were significant, controlled water receptors that may be affected were of relatively low sensitivity. This previous work was presented in the following report:

- Environmental Assessment; Monckton Coke and Chemicals Limited, Royston, South Yorkshire. Reference 16492-R1 (00), Dated May 2011.

This letter presents the findings of the groundwater monitoring event undertaken in July 2013 and assesses any identified changes to the groundwater situation. This letter is subject to RSK's service constraints, a copy of which is included as Appendix A.

2. SCOPE OF WORK

The scope of work for the groundwater monitoring was set out in RSK's letter reference 321453T (H) L01, dated 21 June 2013, and comprised the following:

- groundwater gauging and sampling of the same monitoring wells as previously sampled
- laboratory analyses of recovered samples
- comparison of contaminants identified in groundwater during the present monitoring round with results from the sampling in 2011 to assess any change in groundwater quality
- presentation of results and findings in this letter report.

3. GROUNDWATER MONITORING

An engineer from RSK attended the site on 9 and 10 July 2013 to undertake the sampling of the five deep monitoring wells (BH201, BH202, BH203, BH204 and BH205) and one of the shallow monitoring wells (PH108). These being the wells that were sampled by RSK in 2011. The wells were dipped with an oil-water interface probe to assess the depth of water and the presence of free-phase product (FPP) (both light and dense non-aqueous phase liquids (LNAPL and DNAPL)). Before sampling, groundwater in the monitoring wells was purged using a dedicated disposable bailer for each well. Wells were either purged of three times their volume of water, or until dry, to ensure that water subsequently sampled was representative of the groundwater beneath the site.

One monitoring well (BH203) was found to contain several metres thickness of DNAPL FPP at the base, with only a small quantity of water above. As a result, FPP was bailed from this well so that the speed of recharge could be recorded, and a sample of the product was collected for laboratory analysis.

Following purging, with recovery taking place overnight, the groundwater samples were obtained from the other five monitoring wells using disposable bailers, and collected in a variety of containers appropriate to the laboratory testing suite. The containers were filled to capacity and placed in a cool box to minimise volatilisation. Samples were transported to the testing laboratory in a cool box under Chain of Custody

documentation. The sample of FPP from BH203 was scheduled for product identification. All other samples were scheduled for testing for the following:

- speciated TPH (total petroleum hydrocarbons) with BTEX
- speciated PAH (polycyclic aromatic hydrocarbons)
- VOC (volatile organic carbon)
- SVOC (semi-volatile organic carbon) including phenol
- sulphate
- chloride
- ammoniacal nitrogen
- metals (including free cyanide)
- pH
- alkalinity (only BH201, BH202, BH205)

All analysis was undertaken by UKAS and MCERTS certified laboratories. The results of the groundwater chemical testing are presented in the laboratory certificates in Appendix B.

The locations of the monitoring wells are shown on Figure 1.

4. RESULTS AND DISCUSSION

Groundwater monitoring data from the July 2013 monitoring round is summarised in the table below.

Monitoring well	FPP thickness (m)	Depth to water (mbTOC)	Depth to base (mbTOC)	Description of water
BH201	ND	6.82	12.58	Slightly silty and white with no odour and immediate recharge.
BH202	ND	11.88	20.19	Clear with no odour and immediate recharge.
BH203	3.40m (DNAPL)	10.11	14.19	Orange silty water with strong hydrocarbon odour and orange/brown sticky FPP. Fast recharge.
BH204	ND	6.60	14.35	Orange-brown slightly silty water with a hydrocarbon odour. Fast recharge.
BH205	ND	8.74	22.79	Silty brown water with hydrocarbon odour and oily sheen. Fast recharge.
PH108	ND	1.05	1.71	Very silty brown water with strong hydrocarbon odour and oily sheen. Very slow recharge.
Note: mbTOC is metres below top of casing, ND is none detected				

The measured water levels in the six monitored wells are similar to those recorded in 2011, except for BH204 where the water level was found to be some 2.3m higher than previously (6.6mbTOC in 2013 compared to 8.9mbTOC in 2011). This may have been as a result of different weather conditions to those

occurring prior to the previous monitoring, and suggests that the groundwater beneath the site is not a single continuous body.

Although groundwater samples recovered during the sampling in 2011 were generally noted to be odorous and occasionally with a hydrocarbon sheen, no FPP was identified at any of the six monitoring wells sampled. During the sampling in July 2013, DNAPL with a thickness of 3.4m was encountered in borehole BH203. Furthermore, following the removal of approximately 25 litres of FPP and water, the level of DNAPL had returned to a similar thickness 24 hours later. It should be noted that although the FPP was recorded as DNAPL when it was found to lie at the base of the monitoring well with water above, when the water and FPP was bailed and placed in a container it was observed that there was some floating product (LNAPL) present.

Borehole records provided in the report of the work undertaken in 2011 indicate that BH203 was installed with a response zone targeting mudstone bedrock at a depth of between 12.0m and 15.0m bgl, and that whilst drilling through this depth range hydrocarbon contamination was not suspected. The monitoring well was installed with a bentonite annulus seal above the response zone.

Product identification was undertaken on a sample of the DNAPL from BH203, and the results indicate the material to be composed of hydrocarbon molecules in the range of C₁₂ to C₃₀, described as 'Possible PAH'. This may be consistent with coal tar, which is a contaminant often encountered on coal carbonisation sites.

Comparison of groundwater sample laboratory analytical results from the recent work in 2013 with those from the sampling in 2011 show generally similar concentrations of many of the determinants tested for. The results presented in Appendix B include a smaller number of determinants for which the concentrations are recorded as 'greater than' a particular concentration. This is a result of the high concentrations of the determinants in question being above the range of the analytical technique, even after two dilutions. The reason that this had not occurred when the samples from 2011 were analysed was because at that time the analyst had anticipated the high concentrations and undertook additional dilution before undertaking the test.

Inorganic compound concentrations show a little variation, but with no consistent patterns evident. TPH and BTEX concentrations are consistent in boreholes BH204, BH205 and PH108 across the two sampling events, and none have been detected in boreholes BH201 and BH202 on either event. Concentrations of some phenol compounds were reported to be slightly higher in recent samples from BH201 and BH202 than in the samples from 2011. The reason for this is unknown, but the concentrations remain relatively low.

5. CONCLUSIONS

With the exception of the DNAPL recorded in monitoring well BH203, groundwater conditions at the site have generally been found to remain consistent between the sampling event undertaken in 2011 and the



recent work in July 2013. In addition, no evidence has been noted that circumstances at or around the site have changed in such a way as to necessitate alteration of the conceptual site model that was presented by RSK in the report of 2011. As such, in respect of the contamination status of groundwater beneath the site, the conclusions presented in the previous RSK report remain unchanged.

The presence of a significant thickness of DNAPL in monitoring well BH203 is a marked change from the previously recorded conditions at that location. Such product represents a significant potential source of groundwater contamination. RSK did not observe and is not aware of any changes having occurred at the site since 2011 that would have lead to a marked increase in the volume of FPP in the subsurface.

It is considered likely therefore that in the time elapsed since the sampling of 2011, DNAPL within the mudstone bedrock (penetrated by the monitoring well response zone) has accumulated in the monitoring well. As monitoring has not taken place in the intervening period it is not possible know when or how quickly this has happened. Although a relatively rapid recharge of the DNAPL was observed during the recent monitoring round, it is possible that this was as a result of recharge from the filter pack of the monitoring well and the surrounding material, rather than from the bedrock.

To further investigate the presence of this DNAPL additional work would be required. As such it is recommended that a programme of regular removal (and appropriate disposal) of the DNAPL be undertaken, with the recharge monitored. This may initially comprise bailing the DNAPL from the well on a weekly basis, and it would be expected that over time the rate of recharge would fall. It would also be worthwhile to obtain another sample of the DNAPL and schedule it for more detailed diagnostic laboratory analyses, as it may be possible to gain information on the age and source of the product.

Please do not hesitate to contact either of the undersigned should you have any queries in relation to the above.

Yours sincerely

For RSK Environment Limited

Richard park
Senior Environmental Scientist

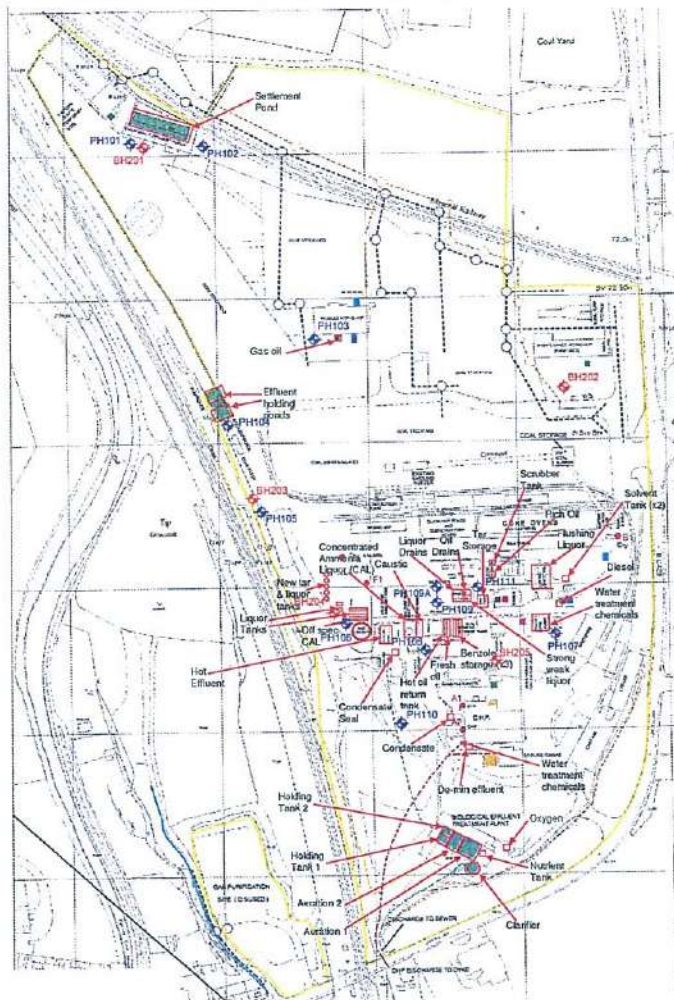
Gary McGuicken
Director

Enc

Figure 1	Borehole Location Plan
Appendix A	RSK Service Constraints
Appendix B	Certificates of Laboratory Analysis



FIGURES



LEGEND:

- PH101-110 Proberhole location
- PH101-110 Rotary borehole location



A	14.08.13	FIRST ISSUE	HD	GAJ	GAJ
REV	DATE	DESCRIPTION	BY	CHK	APP
1		Revised	NTS		A3
HARGREAVES SERVICES Plc MONKTON COKE AND CHEMICAL COMPANY Ltd					
SITE LAYOUT AND BOREHOLE LOCATION PLAN					
JOB No:			DRAWING FILE:		
321453			321453-L01(00)D001A		
BY	DATE	CONTRACT NO	REV.		
HD	14.08.13		FIGURE 1 A		



APPENDIX A

RSK SERVICE CONSTRAINTS

RSK GROUP TERMS AND CONDITIONS FOR PROFESSIONAL AND CONTRACTING SERVICES

These terms and conditions ("**Conditions**") are to be read in conjunction with the RSK **Proposal**.

Definitions and interpretation

1. In these **Conditions**:

- "**RSK**" means any company within the RSK Group of companies identified in the **Proposal**;
- "**Client**" means the contracting party for whom **Work** is performed by **RSK** and the party responsible for payment of the **Fee**;
- "**Dispute**" means any dispute or claim arising out of or in connection with the **Contract** or its subject matter;
- "**Fee**" means the amount payable by the **Client** to **RSK** for the **Work** in accordance with the **Proposal** or as otherwise agreed in writing between **RSK** and the **Client**;
- "**Work**" means the scope of work detailed in the **Proposal**;
- "**Proposal**" means the written **Proposal** prepared as an offer by **RSK** for carrying out the **Work** for the **Client** on the basis of the scope of work, set of rates and associated budget estimate or lump sum price, and the time frame for undertaking that work, all as detailed in the proposal, and includes any amendments to the original proposal that **RSK** may propose or accept in writing prior to commencement of the **Work**;
- "**Deliverable**" means any advice, document, report, map, plan, system, data or software produced or provided pursuant to the **Work**;
- "**Act**" means the Housing Grants, Construction and Regeneration Act 1996 (as amended in particular by the Local Democracy, Economic Development and Construction Act 2009);
- "**Payee**" means **RSK**;
- "**Payer**" means the **Client**;
- "**Indirect Loss**" means loss of profits; loss of business; depletion of goodwill and/or similar losses; loss of anticipated savings; loss of goods; loss of contract; loss of use; loss or corruption of data or information; or any other special, indirect, consequential or purely economic loss, costs, damages, charges or expenses;
- "**Notice of Adjudication**" means a notice served by either party on the other to refer a dispute to adjudication;
- "**Scheme**" means the Scheme for Construction Contracts (England and Wales) Regulations 1998 (as amended in particular by the Scheme for Construction Contracts (England and Wales) Regulations 1998 (Amendment) (England) 2011).

Headings in these **Conditions** shall not affect their interpretation. A reference to a "person" includes a natural person, corporate or unincorporated body (whether or not having separate legal personality). A reference to a statute or statutory provision is a reference to it as it is in force for the time being, taking account of any amendment, extension, or re-enactment, and includes any subordinate legislation for the time being in force made under it. Where the words "include(s)", "including" or "in particular" are used in these **Conditions**, they are deemed to have the words "without limitation" following them. The singular includes the plural, unless the context otherwise requires.

Contract

2. The **Client's** purchase order or the **Client's** acceptance of the **Proposal** constitutes acceptance by the **Client** to purchase the delivery of the **Work** by **RSK**, as specified in the **Proposal** on these **Conditions**, or (if earlier) by **RSK** starting to perform the **Work**, when a contract for the supply and purchase of the **Work** on these **Conditions** will be established (the "**Contract**"). No counter-offer placed by the **Client** shall be accepted by **RSK** other than by a written acknowledgement issued and executed by **RSK**. The **Client's** standard terms and conditions (if any) attached to, enclosed with or referred to in any purchase order or other document shall not govern the **Contract**. In the event of any conflict between the provisions of these **Conditions** and the provisions of the **Proposal**, the provisions of the **Proposal** shall prevail.
3. The **Proposal** is given on the basis that no contract shall come into existence except in accordance with Condition 2.



RSK obligations

4. **RSK** will exercise reasonable skill, care and diligence in the performance of the **Work** and in accordance with the provisions of the **Proposal**. **RSK** will undertake the **Work** in accordance with current health, safety and environmental legislation available at the time the **Contract** is agreed.

Insurance

5. **RSK** will maintain adequate insurance cover for statutory insurances and professional indemnity to the value of £1 million during the course of the **Work**, and for one year after completion, providing such insurance is available at commercially reasonable rates. If such insurance ceases to be available at commercially reasonable rates then **RSK** will promptly notify the **Client**.

Liability limitation

6. This Condition 6 sets out the entire financial liability of **RSK** (including any liability for the acts or omissions of its employees, agents, consultants and subcontractors) to the **Client** in respect of any breach of the **Contract**; any use made by the **Client** of the **Work**, the **Deliverables** or any part of them; and any representation, statement or tortious act or omission (including negligence) arising under or in connection with the **Contract**.
 - 6.1. All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the **Contract**.
 - 6.2. Nothing in these **Conditions** limits or excludes **RSK's** liability for death or personal injury resulting from negligence, or for any damage or liability incurred by the **Client** as a result of fraud or fraudulent misrepresentation by **RSK**.
 - 6.3. Subject to Conditions 6.1 and 6.2:
 - (a) **RSK** shall not be liable for **Indirect Loss**;
 - (b) The total liability of **RSK** under or in connection with the **Contract** for all claims, whether in contract, tort (including negligence), breach of statutory duty or otherwise, will be limited to the lesser of (i) £1 million; or (ii) the amount recoverable by **RSK** under professional indemnity insurance maintained in accordance with these **Conditions** and in force at the time the claim, or (if earlier) circumstances that may give rise to the claim is, or are, reported to the insurers in question;
 - (c) **RSK's** liability to the **Client** shall be limited to such proportion of the **Client's** loss and damage as it would be just and equitable for **RSK** to pay having regard to the extent of its responsibility for the loss and damage and on the assumption that (i) all other consultants, contractors, subcontractors, project managers and advisers engaged in connection with the project have provided contractual undertakings on terms no less onerous than those set out in this **Contract** to the **Client** in respect to their obligations in connection with the project; and (ii) all the parties referred to in this clause have paid to the **Client** such proportion of the loss or damage that it would be just and equitable for them to pay, having regard to the extent of their responsibility for the loss or damage;
 - (d) Subject to the other limitations contained in this Condition 6, if **RSK** is in breach of its obligation under Condition 4 to exercise reasonable skill, care and diligence in the performance of the **Work**, **RSK's** liability will be limited to the reasonable cost of correcting or completing the relevant part of the **Work** or, if necessary, the cost of obtaining replacement work of equivalent standard as that provided for in the scope of the **Work**.
 - 6.4. No action or proceeding for any breach of this **Contract** will be commenced against **RSK** after the expiry of six years from the date of the completion of the **Work**, as indicated by the provision of the final **Deliverable**.

Client obligations

7. The **Client** must ensure that **RSK** is fully briefed and provided with all necessary documentation and equipment to be able to perform the **Work** as detailed in the **Proposal**. In accordance with the Construction Design and Management Regulations ("CDM"), the **Client** shall provide all existing information, including any health and safety files, service location drawings and contact details for all other companies involved with the project, especially the CDM coordinator and principal contractor.
8. The **Client** will give written confirmation to **RSK** of all variations or instructions. **RSK** will confirm in writing as soon as practicable any variation to the cost of the **Work** arising from variations or instructions issued



by the **Client**. **RSK** will not materially alter the scope of the **Work** without the written agreement of the **Client**.

9. To the extent (if any) which **RSK** is required to act as agent for the **Client** in the course of the proper performance of the **Work**, the **Client** shall indemnify **RSK** against all claims in respect of, or arising out of, such agency except where and to the extent that the loss or damage claimed, results from **RSK's** negligence.

Remuneration and payment

10. When consultancy services are included in the **Proposal**, the fees charged will cover all consultant time spent on the project, whether at the premises of the **Client** or elsewhere, including travelling. Unless otherwise stated in the **Proposal** or agreed in writing with the **Client**, disbursements and out-of-pocket expenses will be charged at cost plus a 10% handling charge.
11. The **Client** will be responsible for paying all the relevant taxes, including VAT or equivalent where applicable. Any amount expressed as payable to **RSK** under the **Contract** is exclusive of VAT, unless stated otherwise.
12. The **Fee** shall be calculated and paid in instalments in accordance with the **Proposal**. If not set out in the **Proposal**, the **Fee** shall be invoiced at intervals of not more than one month, beginning no more than one month after **RSK** begins performing the **Work**.
13. **RSK** will forward an invoice to the **Client** for each instalment of the **Fee**. The invoice will specify the sum that **RSK** considers will become due on the **Payment Due Date** and the basis on which that sum is calculated. The "**Payment Due Date**" is the date of issue of the invoice and will be the tax point date. The invoice will constitute the "**Payee Notice**" and the invoice value shall be the "**Notified Sum**". The final date for payment ("**Final Payment Date**") will be 28 calendar days after the **Payment Due Date**. If the **Client** fails to pay an amount due to **RSK** by the **Final Payment Date** and fails to give a **Pay Less Notice**, interest shall be added to the unpaid amount from the **Final Payment Date** until the actual date of payment, which will be calculated on a daily basis at the annual rate of 8% over the annual base rate of HSBC Bank Plc or at the statutory interest rate, whichever is the greater. Compensation for late payment of each debt will also be due at the following fixed sums £40 (for debts up to £999.99), £70 (for debts £1,000-£9,999.99) or £100 (for debts over £10,000) in accordance with the Late Payment of Commercial Debts Regulations 2013 or as stated in any revisions of these regulations. Except as expressly, or by necessary implication, provided otherwise in these **Conditions** (and in particular in these conditions 12 and 13) or in the **Proposal**, the payment procedure under Part II of the **Scheme** shall be deemed incorporated into this **Contract**, even if the **Contract** is not a "construction contract" for the purposes of the **Act**.
14. Unless the **Client** has served a **Pay Less Notice**, it shall pay the **Notified Sum** on or before the **Final Payment Date**. Not less than 14 days before the **Final Payment Date**, the **Payer** may give to the **Payee** notice of the **Payer's** intention to pay less than the **Notified Sum** ("**Pay Less Notice**"). A **Pay Less Notice** must specify the sum the **Payer** considers to be due on the date the **Pay Less Notice** is served and the basis on which that sum is calculated.
15. If the **Client** fails to pay in full a **Notified Sum** by the **Final Payment Date** and the **Client** has not given a **Pay Less Notice**, **RSK** has the right (without prejudice to any other right or remedy) to suspend performance of all or part of the **Work** by giving not less than seven days' notice to the **Client** of its intention to do so and stating the ground(s) on which it intends to suspend performance ("**Notice of Suspension**"). Performance will be resumed when the **Notified Sum** (together with any interest payable thereon) has been received. **RSK** shall be entitled to claim payment of its reasonable costs and expenses in accordance with Section 112(3A) of the **Act** and the provisions of Section 112(4) of the **Act** shall apply to any relevant time limits for the performance of the **Work**. No liability will be accepted by **RSK** for any loss, damage or consequential loss, delay or disruption, however suffered, by virtue of the suspension of the **Work** in accordance with this **Condition**.

Material default and termination

16. The **Client** may notify **RSK** of a material default at any time during the **Work**. **RSK** shall, within 30 days of receiving written notification, investigate the complaint, determine if a material default has occurred and agree any remedy with the **Client**.
17. **RSK** may terminate the **Work** in the event of a material default by the **Client**. The material default must have continued without remedy for seven days after written notification by **RSK**.
18. In the event of a material default by the **Client**, the **Client** will be liable for fees up to the date of termination. An additional charge will be made by agreement with the **Client** as compensation for the



recovery of costs for the demobilisation, reassignment of personnel and equipment, and any associated loss of profit.

19. On termination of the **Contract** for any reason, the accrued rights and liabilities of the parties as at termination and the continuation of any provision expressly stated to survive or implicitly surviving termination shall not be affected.

Dispute resolution

20. Subject to either party's right to adjudicate a **Dispute** at any time, the parties shall use their reasonable endeavours to resolve any **Dispute** through negotiation or mediation, and if the same cannot be settled amicably within 28 days of the **Dispute** arising and either party notifies the other that it desires this next step, the **Dispute** will be referred to the managing director in the case of **RSK**, and, in the case of the **Client**, the managing director or equivalent of the relevant division of the **Client**, who will attempt to resolve the **Dispute** within 28 days of the **Dispute** being referred to them.
21. Notwithstanding any other provision in the **Contract**, either **RSK** or the **Client** may, by giving to the other a **Notice of Adjudication**, refer a **Dispute** to adjudication at any time under Part 1 of the **Scheme**, and such Part 1 shall take effect as if it were incorporated into this **Condition**. The adjudicator will be a member of the Association of Independent Construction Adjudicators ("**AICA**") selected by the parties or, if they are unable to agree within 7 days of the **Notice of Adjudication** or their selected person is unable or unwilling to act, by nomination by the **AICA**.

Sub-contracting

22. **RSK** will be entitled to subcontract any part of the **Work** to another consultant, adviser or contractor (the subcontractor). **RSK** will remain responsible for the performance of any services performed by the subcontractor.

Confidentiality and data protection

23. The details of the **Proposal** and any supporting information shall remain confidential and not be shared with any third party. During the **Work**, **RSK** shall not publish any articles, photographs or other illustrations relating to the project without the written agreement of the **Client**.
24. All information provided to **RSK** by a client and not already in the public domain will remain confidential unless the **Client** authorises its release in writing to specifically named parties in conjunction with assignments, collateral warranties or requirements of a regulatory body.
25. Where **RSK** or the **Client** receives any personal or financial data as defined by the Data Protection Act 1998, ("**DPA**") they both shall ensure that they fully comply with the provisions of the **DPA** and only deal with the data to fulfil their obligations under the **Contract**.

Copyright and ownership of documents

26. Any document prepared for the **Client**, on acceptance, can be used by the **Client** solely for the purposes of the **Work** ("**Permitted Purpose**"). Unrestricted reproduction and use for the **Permitted Purpose** is granted to the **Client** but copyright of all documents and drawings remains with **RSK**. Without prejudice to the generality of Condition 29, **RSK** accepts no liability for claims from third parties to whom the **Client** has made known document contents. The **Client** will indemnify **RSK** against any such claims arising from such third parties.
27. **RSK** will retain all intellectual property rights and proprietary rights it may have in all information and data reproduced in any **Deliverable**.

Assignment and third parties

28. The **Client** shall not without the prior written consent of **RSK** assign, transfer, charge, mortgage, subcontract or deal in any other manner with all or any of its rights or obligations under the **Contract**. Without prejudice to the foregoing, if the **Client** requests **RSK** to consent to an assignment of some or all of the **Client**'s rights, or requests **RSK** to provide a collateral warranty or letter of benefit, the **Client** acknowledges that **RSK** is free to give or withhold on reasonable grounds its consent, and that **RSK** shall be entitled to charge an additional fee, if not specifically identified in the **Proposal**, for such assignment, collateral warranty or letter of benefit.
29. Nothing in this **Contract** confers or purports to confer on any third party any benefit or any right to enforce any term of this **Contract** under the Contracts (Rights of Third Parties) Act 1999.



Waste

30. **RSK** will hold any hazardous substances or wastes, including samples and contaminated equipment, arising from the **Work** as agent for the **Client**, whose property such materials will remain. **RSK** will make all reasonable efforts to assist the **Client** with the safe handling and disposal of such material; however, the **Client** will be responsible for this disposal and all associated costs if not included in the **Proposal**.

Force Majeure

31. **RSK** will not be liable to the **Client** if the provision of the **Work** is delayed or prevented by force majeure, meaning any one or more circumstance beyond the reasonable control of **RSK**, including, but not restricted to, a failure of the **Client** to provide facilities, access or information; acts or omissions of the **Client's** other suppliers or contractors; fire, flood or storm; unavailability of labour, materials or services; process shutdown; breakdown of plant or machinery; acts of God or the public enemy; riot or civil commotion or war; malicious damage; strikes or labour disputes or industrial action; act or regulations of any government or other agency; failure of a utility service, communications network, or transport network; and the presence of unusually high levels of ionising radiation or radioactive substances.
32. If force majeure continues for more than 90 days, either **RSK** or the **Client** may terminate the **Work** by notice to the other. **RSK** will be entitled to charge the **Client** for work done prior to the force majeure on the basis provided in the **Contract**. Work done and reasonable and proper fees and disbursements accruing during the force majeure event will be charged at the standard rates for **RSK**, unless agreed otherwise in writing.

Notices

33. Any notice to be given under the **Contract** must be in writing and shall be delivered by hand or sent by pre-paid first class (or airmail) post or recorded delivery post to the business address of the party, as stated in the **Contract** or as otherwise last notified in writing by the other party. A notice delivered by hand is deemed to have been received when delivered (or if delivery is not in business hours, 9.00 am on the first business day following delivery). A notice sent by post will be deemed to have been received on the next business day following that on which the notice was posted to an address in the United Kingdom and after five days in the case of an overseas letter sent by air mail.

RSK personnel

34. The **Client** agrees not to solicit, either directly or indirectly (including by way of head hunter, employment agency, press advertisement or through related companies), any employee of **RSK** for the purpose of offering them full-time, part-time, temporary or contract employment of any kind. In the event the **Client** offers employment to any member of staff at **RSK** and that employee chooses to leave **RSK** as a result of the offer received, the **Client** agrees to pay to **RSK** a sum which is the greater of £50,000 or 20% of the total employment cost of that member of staff. This condition shall remain in full force both during and for a period of six months after the end of the most recent contract with the **Client**, and applies to all **RSK** staff whether involved in contracts with the **Client** or not. Upon receipt of the employee's resignation, **RSK** will issue an invoice to the **Client** and that invoice will be due and payable upon receipt.

General

35. If any provision in these **Conditions** is or becomes invalid, illegal or unenforceable in any respect, the remaining parts will remain in force and will not in any way be impaired.
36. The **Contract** and any **Dispute** will be governed by and construed in accordance with English law and the parties irrevocably agree that the English Courts shall have exclusive jurisdiction to settle any **Dispute** (subject to the parties having first attempted resolution under conditions 20 and/or 21, if relevant).
37. No variation of the **Contract** or these **Conditions** or of any of the documents referred to in them shall be valid unless it is in writing and signed by or on behalf of each of the parties.
38. The **Contract** constitutes the whole agreement between the parties and supersedes all previous agreements between the parties relating to its subject matter. Each party acknowledges that, in entering into the **Contract**, it has not relied on and shall have no right or remedy in respect of any statement, representation, assurance or warranty (whether made negligently or innocently) that is not set out in this **Contract**.
39. A waiver of any right under the **Contract** is only effective if it is in writing and it applies only to the circumstances for which it is given. No failure or delay by a party in exercising any right or remedy under the **Contract** or by law shall constitute a waiver of that (or any other) right or remedy, nor preclude or restrict its further exercise. No single or partial exercise of such right or remedy shall preclude or restrict



the further exercise of that (or any other) right or remedy. Unless specifically provided otherwise, rights arising under the **Contract** are cumulative and do not exclude rights provided by law.

40. The **Client** shall permit **RSK** to undertake a credit assessment following acceptance of the **Proposal** and vary the payment terms, should the result be insufficient for the payment sums required. In certain circumstances, payment may be required before commencement of the **Work**.



APPENDIX B

CERTIFICATES OF LABORATORY ANALYSIS

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number:
Issue Number:

13/03213
1

Date: 29 July, 2013

Client:

RSK STATS Helsby
Spring Lodge
172 Chester Road
Helsby
Cheshire
UK
WA6 0AR

Project Manager:

Richard Park / Emily Jones

Project Name:

Monckton, Hargreaves

Project Ref:

321453

Order No:

Not specified

Date Samples Received:

11/07/13

Date Instructions Received:

11/07/13

Date Analysis Completed:

29/07/13

Prepared by:

A handwritten signature in blue ink that reads "M Marshall".

Melanie Marshall
Laboratory Coordinator

Approved by:

A handwritten signature in blue ink that reads "L Oliver".

Liz Oliver
Client Service Manager

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
pH (w) _A [#]	6.80	6.92	-	8.51	6.73	7.37			pH	A-T-031w
Alkalinity (total) (w) _A [#]	254	278	-	-	390	-			mg/l Ca CO ₃	A-T-038
Ammoniacal nitrogen (w) _A [#]	114.77	1.87	-	1189.03	52.16	71.59			mg/l	A-T-033w
Chloride (w) _A [#]	971	1226	-	1756	437	297			mg/l	A-T-026w
Sulphate (w) _A [#]	999	777	-	1757	592	346			mg/l	A-T-026w
Cyanide (free) (w) _A [#]	0.034	0.003	-	0.039	0.051	0.024			mg/l	A-T-942wFCN
Arsenic (dissolved) _A [#]	3	<1	-	42	12	25			µg/l	A-T-025
Cadmium (dissolved) _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-025
Copper (dissolved) _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-025
Chromium (dissolved) _A [#]	2	12	-	10	2	3			µg/l	A-T-025
Lead (dissolved) _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-025
Mercury (dissolved) _A [#]	0.1	0.1	-	0.1	<0.1	<0.1			µg/l	A-T-025
Nickel (dissolved) _A [#]	7	26	-	21	7	7			µg/l	A-T-025
Selenium (dissolved) _A [#]	<1	<1	-	20	1	<1			µg/l	A-T-025
Zinc (dissolved) _A [#]	17	22	-	3	8	3			µg/l	A-T-025
Product (Oil) ID (for FID characterisations) _A	-	-	Possible PAH	-	-	-				A-T-027w
Carbon range _A	-	-	C12-C30	-	-	-				A-T-027w
Product (Oil) Density _A	-	-	N/A	-	-	-				A-T-018

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
PAH 16MS (w)										
Acenaphthene (w) _A [#]	1.12	1.15	-	334.89	206.36	314.47			µg/l	A-T-019w
Acenaphthylene (w) _A [#]	0.03	0.02	-	17.18	10.06	19.41			µg/l	A-T-019w
Anthracene (w) _A [#]	0.04	0.02	-	14.40	67.43	47.81			µg/l	A-T-019w
Benzo(a)anthracene (w) _A [#]	<0.01	0.01	-	0.72	3.25	5.19			µg/l	A-T-019w
Benzo(a)pyrene (w) _A [#]	<0.01	<0.01	-	0.18	1.14	1.28			µg/l	A-T-019w
Benzo(b)fluoranthene (w) _A [#]	<0.01	0.01	-	0.16	0.98	1.21			µg/l	A-T-019w
Benzo(ghi)perylene (w) _A [#]	<0.01	<0.01	-	0.06	0.50	0.38			µg/l	A-T-019w
Benzo(k)fluoranthene (w) _A [#]	<0.01	<0.01	-	0.12	0.46	0.62			µg/l	A-T-019w
Chrysene (w) _A [#]	<0.01	<0.01	-	0.59	2.56	4.03			µg/l	A-T-019w
Dibenzo(ah)anthracene (w) _A [#]	<0.01	<0.01	-	<0.01	0.16	0.13			µg/l	A-T-019w
Fluoranthene (w) _A [#]	0.03	0.03	-	5.44	31.82	30.28			µg/l	A-T-019w
Fluorene (w) _A [#]	0.42	0.32	-	31.69	77.33	42.17			µg/l	A-T-019w
Indeno(123-cd)pyrene (w) _A [#]	<0.01	<0.01	-	0.05	0.58	0.44			µg/l	A-T-019w
Naphthalene (w) _A [#]	1.39	17.00	-	>400	>400	>400			µg/l	A-T-019w
Phenanthrene (w) _A [#]	0.19	0.12	-	72.58	35.13	137.50			µg/l	A-T-019w
Pyrene (w) _A [#]	0.02	0.02	-	3.40	22.26	20.56			µg/l	A-T-019w
PAH (total 16) (w) _A [#]	3.24	18.70	-	>900	>900	>900			µg/l	A-T-019w

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6				
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
SVOC (w)										
2,4-Trichlorobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
1,2-Dichlorobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
1,3-Dichlorobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
1,4-Dichlorobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,4,5-Trichlorophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,4,6-Trichlorophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,4-Dichlorophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,4-Dimethylphenol _A	<1	3	-	5822	1362	<1			µg/l	A-T-052
2,4-Dinitrotoluene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,6-Dinitrotoluene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2-Chloronaphthalene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2-Chlorophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2-Methylnaphthalene _A	<1	<1	-	1582	1094	1545			µg/l	A-T-052
2-Methylphenol _A	9	104	-	11402	1285	187			µg/l	A-T-052
3-Nitrophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
4-Bromophenyl phenyl ether _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
4-Chloro-3-methylphenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
4-Methylphenol _A	24	307	-	499	1667	67			µg/l	A-T-052
4-Nitrophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Acenaphthene _A	1	<1	-	1477	687	854			µg/l	A-T-052
Acenaphthylene _A	<1	<1	-	31	<1	18			µg/l	A-T-052
Anthracene _A	<1	<1	-	15	68	13			µg/l	A-T-052
Bis(2-chloroethyl)ether _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Bis(2-chloroethoxy)methane _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Bis(2-ethylhexyl)phthalate _A	<2	<2	-	<2	<2	<2			µg/l	A-T-052
Benzo(a)anthracene _A	<1	<1	-	1	7	7			µg/l	A-T-052
Butylbenzyl phthalate _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Benzo(b)fluoranthene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Benzo(k)fluoranthene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
Benzo(a)pyrene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Benzo(ghi)perylene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Carbazole _A	<1	<1	-	181	70	46			µg/l	A-T-052
Chrysene _A	<1	<1	-	1	9	6			µg/l	A-T-052
Dibenzofuran _A	<1	<1	-	814	569	534			µg/l	A-T-052
n-Dibutylphthalate _A	<1	<1	-	<1	15	7			µg/l	A-T-052
n-Dioctylphthalate _A	<5	<5	-	<5	<5	<5			µg/l	A-T-052
n-Nitroso-n-dipropylamine _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Diethyl phthalate _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Dimethyl phthalate _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Dibenzo(ah)anthracene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Fluorene _A	<1	<1	-	362	256	235			µg/l	A-T-052
Fluoranthene _A	<1	<1	-	5	36	7			µg/l	A-T-052
Hexachlorobutadiene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Hexachlorobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Pentachlorophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Phenol _A	44	240	-	749	557	172			µg/l	A-T-052
Hexachloroethane _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Nitrobenzene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Naphthalene _A	<1	4	-	7928	3440	4375			µg/l	A-T-052
Isophorone _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Hexachlorocyclopentadiene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Phenanthrene _A	<1	<1	-	66	363	51			µg/l	A-T-052
Pyrene _A	<1	<1	-	3	28	7			µg/l	A-T-052
Indeno(1,2,3-cd)pyrene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Bis(2-chloroisopropyl)ether _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
2,4-Dinitrophenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
4,6-Dinitro-2-methylphenol _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052
Perylene _A	<1	<1	-	<1	<1	<1			µg/l	A-T-052

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
VOC (w)										
1,1-Dichlorodifluoromethane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Chloromethane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Vinyl Chloride [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Bromomethane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Chloroethane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Trichlorofluoromethane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
trans 1,2-Dichloroethene [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Dichloromethane _A	<100	<100	-	<100	<100	<100			µg/l	A-T-005
Carbon Disulphide [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,1-Dichloroethene [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,1-Dichloroethane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
cis 1,2-Dichloroethene [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Bromochloromethane [#]	<5	<5	-	<5	<5	<5			µg/l	A-T-005
Chloroform [#]	<25	<25	-	<25	<25	<25			µg/l	A-T-005
1,2-Dichloropropane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,2-Dichloroethane [#]	<2	<2	-	<2	<2	<2			µg/l	A-T-005
1,1,1-Trichloroethane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,1-Dichloropropene [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Benzene VOC _A [#]	<1	<1	-	>4500	>7500	30			µg/l	A-T-005
Carbon Tetrachloride [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Dibromomethane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,2-Dichloropropane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Bromodichloromethane [#]	<10	<10	-	<10	<10	<10			µg/l	A-T-005
Trichloroethene [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
cis 1,3-Dichloropropene [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
trans 1,3-Dichloropropene [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,1,2-Trichloroethane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Toluene VOC _A [#]	<1	<1	-	334	>3500	25			µg/l	A-T-005
1,3-Dichloropropane [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
Dibromochloromethane _A [#]	<3	<3	-	<3	<3	<3			µg/l	A-T-005
2-Dibromoethane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Tetrachloroethene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,1,1,2-Tetrachloroethane _A	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Chlorobenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Ethylbenzene _A [#]	<1	<1	-	63	174	28			µg/l	A-T-005
m & p Xylene _A [#]	<1	<1	-	901	1894	65			µg/l	A-T-005
Bromoform _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Styrene _A [#]	<1	<1	-	<1	185	<1			µg/l	A-T-005
1,1,2,2-Tetrachloroethane _A	<1	<1	-	<1	<1	<1			µg/l	A-T-005
o-Xylene _A [#]	<1	<1	-	364	646	43			µg/l	A-T-005
1,2,3-Trichloropropane _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
Isopropylbenzene _A [#]	<1	<1	-	<1	12	3			µg/l	A-T-005
Bromobenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
2-Chlorotoluene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
n-propylbenzene _A [#]	<1	<1	-	<1	7	<1			µg/l	A-T-005
4-Chlorotoluene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,2,4-Trimethylbenzene _A [#]	<1	<1	-	128	470	183			µg/l	A-T-005
4-Isopropyltoluene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,3,5-Trimethylbenzene _A [#]	<1	<1	-	48	199	54			µg/l	A-T-005
1,2-Dichlorobenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,4-Dichlorobenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
sec-Butylbenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
tert-Butylbenzene _A [#]	<2	<2	-	<2	<2	<2			µg/l	A-T-005
1,3-Dichlorobenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
n-butylbenzene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005
1,2-Dibromo-3-chloropropane _A [#]	<2	<2	-	<2	<2	<2			µg/l	A-T-005
1,2,4-Trichlorobenzene _A [#]	<3	<3	-	<3	<3	<3			µg/l	A-T-005
1,2,3-Trichlorobenzene _A [#]	<3	<3	-	<3	<3	<3			µg/l	A-T-005
Hexachlorobutadiene _A [#]	<1	<1	-	<1	<1	<1			µg/l	A-T-005

Envirolab Job Number: 13/03213

Client Project Name: Monckton, Hargreaves

Client Project Ref: 321453

Lab Sample ID	13/03213/1	13/03213/2	13/03213/3	13/03213/4	13/03213/5	13/03213/6			Units	Method ref
Client Sample No										
Client Sample ID	BH201	BH202	BH203	BH204	BH205	PH108				
Depth to Top										
Depth To Bottom										
Date Sampled	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13	10-Jul-13				
Sample Type	Water - EW	Water - EW	Liquid - Product / Oil	Water - EW	Water - EW	Water - EW				
Sample Matrix Code										
PH CWG										
Ali >C5-C6 (w) _A [#]	<1	<1	-	<5	<5	<5			µg/l	A-T-022w
Ali >C6-C8 (w) _A [#]	<1	<1	-	7	95	<5			µg/l	A-T-022w
Ali >C8-C10 (w) _A [#]	<1	<1	-	<5	7	<5			µg/l	A-T-022w
Ali >C10-C12 (w) _A [#]	<5	<5	-	<5	49	25			µg/l	A-T-022w
Ali >C12-C16 (w) _A [#]	<5	<5	-	<5	7	9			µg/l	A-T-022w
Ali >C16-C21 (w) _A [#]	<5	<5	-	<5	<5	<5			µg/l	A-T-022w
Ali >C21-C35 (w) _A [#]	<5	<5	-	<5	<5	<5			µg/l	A-T-022w
Total Aliphatics (w) _A	<5	<5	-	7	159	34			µg/l	A-T-022+23w
Aro >C5-C7 (w) _A [#]	<1	<1	-	5760	>13000	40			µg/l	A-T-022w
Aro >C7-C8 (w) _A [#]	<1	<1	-	342	5410	35			µg/l	A-T-022w
Aro >C8-C9 (w) _A [#]	<1	<1	-	1260	2080	125			µg/l	A-T-022w
Aro >C9-C10 (w) _A [#]	<1	<1	-	270	611	318			µg/l	A-T-022w
Aro >C10-C12 (w) _A [#]	<5	<5	-	5912	7852	3690			µg/l	A-T-023w
Aro >C12-C16 (w) _A [#]	<5	<5	-	3564	6480	4796			µg/l	A-T-023w
Aro >C16-C21 (w) _A [#]	<5	<5	-	191	575	729			µg/l	A-T-023w
Aro >C21-C35 (w) _A [#]	<5	<5	-	<5	23	104			µg/l	A-T-023w
Total Aromatics (w) _A	<5	<5	-	17297	>36000	9837			µg/l	A-T-022+23w
TPH (Ali & Aro) (w) _A	<5	<5	-	17304	>36000	9871			µg/l	A-T-022+23w
Mineral Oil (>C10-C35) (w) _A [#]	<5	<5	-	<5	56	34			µg/l	A-T-023w
BTEX - Benzene (w) _A [#]	<1	<1	-	5760	>13000	40			µg/l	A-T-022w
BTEX - Toluene (w) _A [#]	<1	<1	-	342	5410	35			µg/l	A-T-022w
BTEX - Ethyl Benzene (w) _A [#]	<1	<1	-	60	131	27			µg/l	A-T-022w
BTEX - m & p Xylene (w) _A [#]	<1	<1	-	941	1600	61			µg/l	A-T-022w
BTEX - o Xylene (w) _A [#]	<1	<1	-	342	476	42			µg/l	A-T-022w
MTBE (w) _A [#]	<1	<1	-	<5	<5	<5			µg/l	A-T-022w

REPORT NOTES

Notes - Soil analysis

All results are reported as dry weight (<40 °C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis. For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

Subscript "A" indicates analysis performed on the sample as received, "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

Superscript "M" indicates method accredited to MCERTS.

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations. If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling.

TPH analysis of water by method A-T-007

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER.

Samples with Matrix Code 7 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our MCERTS accreditation.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

IS indicates Insufficient sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

Superscript # indicates method accredited to ISO 17025.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.