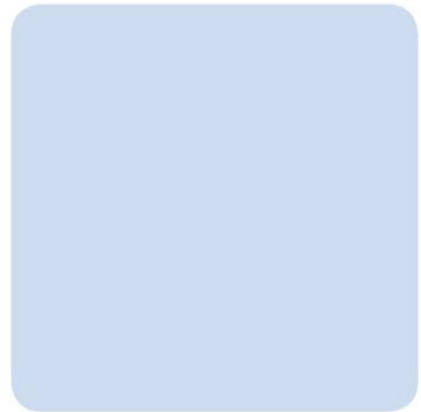
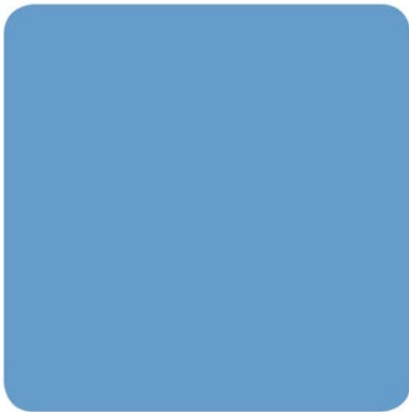




Improvement Conditions IC6 and IC7

Sims Group UK Limited, Rabone Lane. Permit Number EPR/ZP3691ET.

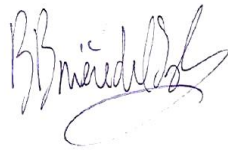



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DELIVERING QUALITY

Quality Management

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Amendment Record

Revision No.	Date	Reason for Change	Authors Initials
1	07/02/2018	Comments from Client	BBI

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1 Introduction

1.1 Background

1.1.1 Sims Group UK Limited commissioned RPS Planning and Development to undertake the necessary work to discharge Improvement Condition IC 6 and IC 7 on the Environmental Permit for the Rabone Lane facility in Smethwick (Permit Ref. EPR/ZP3691ET/V002, dated 29th June 2016).

1.1.2 The Rabone Lane facility is permitted to undertake a variety of ferrous and non-ferrous metal recycling processes and the temporary storage of waste pending those operations (as outlined in Table S1.1 of the Permit). The site is permitted to discharge runoff from the treatment and storage areas of the site to foul sewer and Sims Group UK Limited have obtained a Trade Effluent Consent from Severn Trent Water for that discharge (Consent No. 008675V).

1.1.3 The two ICs are presented in Table S1.4 of the Environmental Permit. IC 7 requires the operator of the Rabone Lane facility to:

“submit a written report to the Environment Agency for approval that includes:

(a) the results of an assessment of the impact of the emissions of surface water from the site using the Environment Agency’s ‘H1 Environmental Risk Assessment’ tool (or equivalent as agreed with the Environment Agency) based on the parameters monitored in IC6 above; and

(b) proposals for appropriate measures to mitigate the impact of any emissions where the assessment determines they have the potential to be significant, including dates for implementation of individual measures.

The operator shall implement the measures in (i) and (ii) as approved, and from the dates stipulated by the Environment Agency.”

1.1.4 Improvement Condition 6 requires the operator of the Rabone Lane facility to:

“submit a written monitoring plan to the Environment Agency for approval that includes:

(a) proposals to undertake representative monitoring of the surface water discharged from points S1 and S2 shown on the plan in Schedule 7 including the parameters to be monitored, frequencies of monitoring and methods to be used;

The operator shall carry out the monitoring in accordance with the Environment Agency’s written approval”

1.2 General Approach

1.2.1 This report first addresses IC 7 through consideration of the permitted discharge, consented limits and evaluates this using the H1 Environmental Risk Assessment tool approach. On the

basis of this assessment an appropriate monitoring strategy is proposed that is consistent with Sims Group UK Limited internal protocols for monitoring and sampling discharges to sewer.

1.3 Report Structure

1.3.1 The subsequent report structure is as follows:

- Section 2: Improvement Condition 6 – Monitoring Plan Results
- Section 3: Improvement Condition 7 – H1 Assessment of Discharge to Sewer

2 IC6 – Monitoring Plan

2.1 Overview

2.1.1 Improvement Condition IC 6 of Permit EPR/ZP3691ET/V002 requires the operator of the Rabone Lane facility to:

“submit a written monitoring plan to the Environment Agency for approval that includes:

(a) proposals to undertake representative monitoring of the surface water discharged from points S1 and S2 shown on the plan in Schedule 7 including the parameters to be monitored, frequencies of monitoring and methods to be used;

The operator shall carry out the monitoring in accordance with the Environment Agency’s written approval”

2.1.2 A monitoring plan was submitted to and accepted by the Environment Agency (submitted on 29/12/2016 and accepted by email on 05/01/2017). This monitoring strategy has been implemented for a year and the resulting dataset underpins the H1 Assessment presented herein.

2.2 Monitoring Location

2.2.1 The site operator monitored effluent quality at location S2 shown in *Figure 2.1*. Sample point S2 is a dedicated sample chamber situated immediately down flow of the oil interceptor that receives runoff from the storage, treatment and process areas on the site.

2.3 Monitoring Frequency

2.3.1 It was proposed to undertake quarterly monitoring in January, April, July & October.

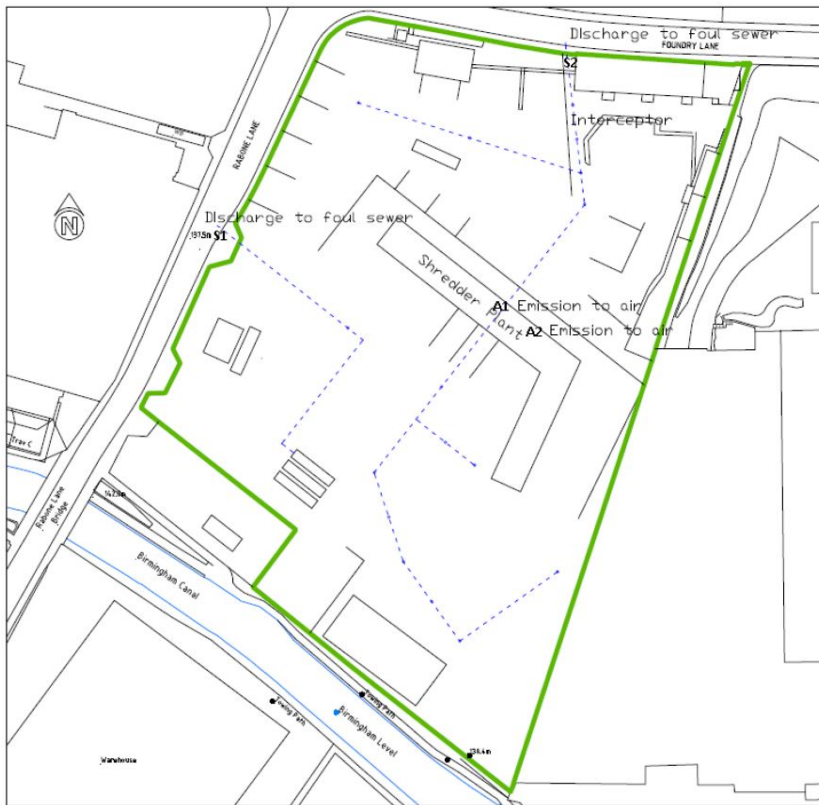
2.3.2 Monitoring took place on 8/2/2016, 20/03/17, 06/06/17, 20/07/17, 03/08/17, 06/09/17, 07/11/17 and 07/12/17 and comprises the quarterly monitoring and voluntary sampling by Sims undertaken at the time the water company took their samples for compliance with the site Trade Effluent Consent (TEC).

2.3.3 Certificates of Analysis are provided in Appendix 4. Summary table providing data statistics taken into account within the H1 risk assessment tools are presented in *Table 2.1*.

2.4 Monitoring Suite

2.4.1 The proposed monitoring suite is summarised in *Table 2.1*. The monitoring suite includes all parameters with limits on the TEC with additional analysis for dissolved metals. An indication of the limits of detection achievable is also provided in *Table 2.1*.

Figure 2.1 Discharge Point to Sewer



2.5 Sampling Approach and Record Keeping

- 2.5.1 Sampling was taken in accordance with Sims Metals Management Protocol for Sampling Site Drainage Discharges to Foul Sewer provided in *Appendix 7*.
- 2.5.2 A grab sample was taken from the sample chamber using an extendable sampling pole. During sampling all endeavours were made to ensure a representative effluent sample was obtained by minimising the potential for disturbance of sediments that may be present within the chamber. Each sample container/bottle was labelled with the Company name, site name, sample location reference, unique sample reference, date and time of sample and initials of sampler.
- 2.5.3 The sample was taken using a clean container attached to the extendable sampling pole. Water was transferred directly in clean / sterile sample containers provided by the laboratory. Samples were returned to the laboratory in temperature controlled cool boxes on the day of sampling. Samples were kept cool. The chain of custody form provided by the labs was completed and sent with the samples.
- 2.5.4 Sample records & laboratory results were filed in site records along with any correspondence relating to the sampling.

Table 2.1 Monitoring Suite and Results for Dissolved Phase Metals

Parameter	Units	Limit of Detection	Method	8/2/2016	20/03/17	06/06/17	20/07/17	03/08/17	06/09/17	07/11/17	07/12/17
pH	pH Units	0.1	GLpH pH Meter	7.7	7.4	6.9	6.9	7	7.4	7.1	7.1
COD	mg/l	7	Spectrophotometric	463	435	334	308	308	211	505	503
Total Suspended Solids	mg/l	2	Gravimetric	406	184	204	104	240	95	290	236
Aluminium (dissolved)	µg/l	2.9	ICP-MS		<0.1	<0.1	<0.1	<0.1		<0.1	<0.1
Antimony (dissolved)	µg/l	0.16	ICP-MS		0.004	0.006	0.002	0.057		0.074	0.005
Cadmium (dissolved)	µg/l	0.1	ICP-MS	<0.6	<0.6	<0.6	<0.6	<0.6		<0.6	<0.6
Chromium (dissolved)	µg/l	0.22	ICP-MS	<2.0	<2	<2	3.4	<2		<2	2.3
Copper (dissolved)	µg/l	0.85	ICP-MS	<9.0	<9	10.8	<9	17.3		<9	<9
Iron (dissolved)	mg/l	0.019	ICP-MS	<230	1370	2830	254	391		702	867
Lead (dissolved)	µg/l	0.02	ICP-MS	10.9	<6	13.2	<6	6.9		8.3	<6
Nickel (dissolved)	µg/l	0.15	ICP-MS	23	32.6	29.5	22.6	24.8		25.4	18.3
Tin (dissolved)	µg/l	0.36	ICP-MS		0.008	<0.007	0.011	<0.007		<0.007	0.015
Zinc (dissolved)	µg/l	0.41	ICP-MS	171	90.3	940	<18	103		206	<18
Ammoniacal Nitrogen as N	mg/l	0.2	Spectrophotometric	13	30.7	4.53	21.1	18.7	23.7	13	30.4
Phosphorous (as PO ₄)	mg/l	0.05	Spectrophotometric		2.33	1.46	1.36	2.94	2.48	2.24	2.32
Total non-volatile matter	mg/l	2	Gravimetric	0.95	7.29	3.94	16	12.4	7.27	27.8	6.65

3 IC 7 – H1 Assessment of Discharge to Sewer

3.1 Site Operations

Overview

- 3.1.1 The principle activities undertaken on the Rabone Lane site are the processing and recovery of ferrous metals, non-ferrous metals, non-metallics from fragmentising and other process residues from the mechanical treatment of waste. The on-site dense media plant involves a process which enables separation of mixed materials by apparent density.
- 3.1.2 Recovered secondary metals are sold for re-smelting into new materials. Wastes from the process that are currently incapable of further viable treatment for metals recovery are transported from site for authorised disposal or further recovery.
- 3.1.3 Treatment includes manual sorting (including hand sorting), separation (including ECS and magnetic separation), grading, screening, flotation, compacting, crushing and hot cutting. These activities are carried out with the aid of mechanical plant.

Permitted Waste Types

- 3.1.4 The waste types permitted on the site are summarised in Schedule 2 of the Permit (Waste types, raw materials and fuels) and include:
- Copper, bronze, brass from construction and demolition waste;
 - Aluminium from construction and demolition;
 - Lead from construction and demolition;
 - Zinc from C&D wastes;
 - Iron & steel from construction and demolition;
 - Tin from construction and demolition;
 - Mixed metal from construction and demolition;
 - Cables;
 - Iron & steel from shredding;
 - Non-ferrous from shredding;
 - Fluff-light fraction and dust (from shredding of metal containing waste);
 - Other fractions (from shredding of metal containing waste);
 - Ferrous metal from other waste facilities (mechanical treatment);
 - Non-ferrous metal from other waste facilities (mechanical treatment);
 - Other wastes (including mixtures of materials) from mechanical treatment.

Potential Contaminants of Concern

3.1.5 On a basis of permitted waste types and process the principal contaminants of concern associated with process areas on the Rabone Lane facility include the following:

- Heavy metals;
- Suspended solids;
- Dissolved phase petroleum hydrocarbons and discrete phase oils and greases;
- Other organic compounds that may be present in minor quantities (e.g. solvents, PAHs etc)
- Reduced forms of nitrogen (measured as ammoniacal nitrogen) associated with any organic material entrained in the site runoff.

3.2 Trade Effluent Consent

Overview

3.2.1 A Trade Effluent Consent (Ref. 008675V) was issued to Sims Group UK Ltd by Severn Trent Water (STW) on 11th May 2016 and is provided in *Appendix 1*. The TEC authorises the discharge of trade effluent to foul sewer in Foundry Lane via authorised discharge point S2 shown in Figure 2.1.

3.2.2 The two authorised discharge points (S1 and S2) are shown in ***Error! Reference source not found.*** Discharge point S1 receives foul sewage from buildings associated with the facility and on this basis STW have confirmed that it does not require a TEC. There is no associated process contribution to this discharge and therefore the environmental effects have not been considered within this assessment. The principal processing areas on the site drain to northwest, through a large oil interceptor before discharging to point S2. It is this drainage that is monitored by STW for compliance with respect to the TEC. *Appendix 1* of the TEC defines the quality controls applicable to the discharge. These water quality limits include the following:

- Total Suspended Solids – 1000 mg/l
- Temperature – 43°C
- pH – To be between 6 to 10
- Chemical Oxygen Demand – 1000 mg/l
- Total Iron – 50 mg/l
- Total Aluminium – 50 mg/l
- Total Antimony – 0.1 mg/l
- Total Cadmium – 0.05 mg/l
- Total Chromium – 1 mg/l
- Total Copper – 3 mg/l
- Total Lead – 4 mg/l
- Total Nickel – 1 mg/l
- Total Zinc – 10 mg/l
- Total Tin – 1 mg/l

- Total Ammoniacal Nitrogen – 50 mg/l
- Total Phosphorous – 25 mg/l
- Total non-volatile matter extractable by light petroleum – 25 mg/l
- No physically separable oil.

3.2.3 The parameters for which limits have been specified on the TEC reflect the potential contaminants of concern identified previously that can be expected in association with the permitted operations on the facility. It is important to note the majority of prescribed limits on the TEC refer to total concentrations, measured on unfiltered samples.

Minworth Water Treatment Works

3.2.4 The foul sewer conveys water to Minworth WasteWater Treatment Works (WwTW) in northeast Birmingham. The Minworth WwTW is permitted to discharge of treated effluent to the River Tame close to Water Orton gauging site, under the control of Permit Ref. T/10/36212/R/V002 provided in *Appendix 2*.

3.2.5 River flow data for the River Tame at Water Orton has been obtained from the national River Flow Archive (<http://nrfa.ceh.ac.uk/data/station/meanflow/28003>) and is provided in *Appendix 3*. The Q95 and mean flow for the River Tame at Water Orton is 2.194 m³/s and 5.373 m³/s respectively.

3.3 H1 Assessment

Overview

3.3.1 The releases of site drainage to sewer, and ultimately into the River Tame, have been assessed using the Environment Agency H1 software tool approach. The H1 methodology applies a sequence of screening tests to establish the environmental effect of whether a discharge is considered insignificant. For discharges to water there are four screenings tests as follows:

- Test 1 screens out any substances as insignificant where the release concentration is less than 10% of the Environmental Quality Standard (EQS).
- Test 2 screens out any substances as insignificant where the Process Contribution (PC) is less than 4% of the EQS.
- Test 3 and Test 4 are only required where substances have not been screened out in Test 2.

3.3.2 For releases where the screening criterion in Test 2 is exceeded, the Predicted Environmental Concentration (PEC) shall be determined. To identify which releases may need more detailed modelling, the PEC shall be assessed in relation to the background pollutant levels and the Annual Average EQS (EQS-AA) and the Maximum Allowable Concentration (EQS-MACs). The EQSs used in this assessment are described below.

3.3.3 For those potential contaminants of concern not included on the H1 Assessment Tool a comparison of prescribed limits and limits for the Treatment works has been undertaken, most notably TSS.

Environmental Quality Standards

3.3.4 The freshwater Environmental Quality Standards (EQS) used within the inventory of the H1 Assessment Tool have been used in this assessment. These principally relate to priority substances or specific pollutants as summarised in The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. For the majority of the contaminants of concern identified in *paragraph 3.1.5* (i.e. metals) the freshwater EQSs relate to dissolved phased concentrations (i.e. sample filtered through a 45µm filter) measured as annual averages:

- Cadmium (dissolved) – 0.09 µg/l (50 - <100mg/l CaCO₃)
- Chromium (dissolved) – 4.7 µg/l (Chromium III – 95%ile)
- Copper (dissolved) – 1 µg/l
- Iron (dissolved) – 1000 µg/l
- Lead (dissolved) – 1.2 µg/l
- Nickel (dissolved) – 4 µg/l
- Zinc (dissolved) – 10.9 µg/l
- Ammoniacal Nitrogen - 200 µg/l (>50mg/l CaCO₃ – 90%ile)

3.3.5 The limits for chromium, copper and zinc are considered particularly conservative. The EQS for chromium relates to a single form of chromium (i.e. Chromium III) in the dissolved phase. The EQS for copper and zinc are also highly conservative as they related to the “bioavailable” fraction of the dissolved concentration which is dependent on the water quality in the receiving watercourse.

3.3.6 In addition the H1 tool also includes Maximum Allowable Concentration (MAC) for the following parameters that can be screened against the maximum flows:

- Cadmium (dissolved) – 0.6 µg/l
- Chromium (dissolved) – 32 µg/l
- Lead (dissolved) – 14 µg/l
- Nickel (dissolved) – 34 µg/l

River Flow

3.3.7 The Q95 flow for the River Thames at Water Orton of 2.194 m³/s has been used in the H1 Assessment.

Effluent Discharge Rate

3.3.8 The H1 Assessment Tool requires an estimate of the mean and maximum flow “Effluent Discharge Rate (EDR)” to the on-site point of entry to the sewer (S2 in **Error! Reference source not found.**). For the purpose of this assessment the following flow rates have been used:

- Mean Effluent Discharge Rate - 0.0005 m³/sec
- Maximum Effluent Discharge Rate - 0.0105 m³/sec

3.3.9 The mean EDR has been calculated on the basis of the average daily rainfall for the site (annual rainfall of 725 mm/annum equating to c. 2 mm/d), over the entire site area (20,700 m²). The predicted mean discharge rate does not take any account of any potential losses that can be expected on the site (e.g. evaporative loss). The maximum EDR represents the maximum rate of discharge authorised on the TEC (i.e. 10.5 l/s).

Effluent Water Quality

3.3.10 The water quality limits prescribed on the TEC and summarised in Section 3.2 cannot be used in the H1 Assessment as they relate to “Total Concentrations”. This includes the entire contaminant load in the discharge, the majority of which is likely to be associated with the suspended sediment load entrained with site run-off. In contrast, the EQSs included in the H1 software and used in this assessment relate to the dissolved phase concentration of each contaminant, which is relevant to their respective eco-toxicity in the receiving watercourse.

3.3.11 Actual water quality data available for the site has therefore been used in this assessment to determine the likely acceptability of the site discharge against Annual Average (AA) and Maximum Allowable Concentration (MAC). This assessment is based on the water quality analysis provided in *Appendix 4*. This data provides both dissolved phase and total concentrations and clearly demonstrates that the majority of the contaminant load is associated with the suspended load that does not pass through a 45 µm filter.

3.3.12 The effluent quality used in the assessment is as follows:

- Cadmium (dissolved) – 0.6 µg/l (LoD) for AA and MAC
- Chromium (dissolved) – 2.2 µg/l (AA) and 3.4 µg/l (MAC)
- Copper (dissolved) – 10.4 µg/l (AA) and 17.3 µg/l (MAC)
- Iron (dissolved) – 949 µg/l (AA)
- Lead (dissolved) – 8.2 µg/l (AA) and 13.2 µg/l (MAC)
- Nickel (dissolved) – 25.2 µg/l (AA) and 32.6 µg/l (MAC)
- Zinc (dissolved) – 221 µg/l (AA)
- Ammoniacal Nitrogen – 19.4 mg/l (AA)

3.3.13 Where the dissolved phase concentration measured in runoff is less than the analytical Limit of Detection (LoD) the LoD has been used as the input concentration.

Contaminants Assessed

- 3.3.14 The contaminants of concern used in the assessment represent those for which effluent quality data exists and freshwater EQS are available. The assessment is summarised in Table 3.1.
- 3.3.15 . In addition TSS and COD, which are not included on the H1 Assessment Tool, have been evaluated on the basis of a comparison of prescribed limits on the TEC for the Rabone Lane facility and the limits for the Minworth WwTW.

3.4 Assessment Results

Emissions Screening

Test 1

- 3.4.1 None of the pollutants in the treated process wastewaters are released at <10% of the EQS. Therefore, no pollutants are screened out by Test 1.

Test 2

- 3.4.2 For Test 2 the Process Contribution (PCs) is calculated, which is the concentration of a discharged substance in the receiving water after dilution. The resulting diluted concentrations are screened against the relevant EQS. If the PC exceeds 4 percent of the EQS, it is not screened as insignificant and should be carried forward to Test 3.

Table 3.1 Results Pollutant Screening for Annual Average EQS (Test 2)

Contaminant of Concern	EQS (µg/l)	PC (µg/l)	Reduction Factor	% (PC * RF) of EQS	PC < 4% EQS
Ammoniacal Nitrogen	200	4.42	0.92	2.21%	Pass
Cadmium	0.09	0.0001	0.37	0.15%	Pass
Chromium	4.7	0.0005	n/a	0.01%	Pass
Copper	1	0.0024	0.21	0.24%	Pass
Iron	1000	0.2162	0.48	0.02%	Pass
Lead	1.2	0.0019	0.17	0.16%	Pass
Nickel	4	0.0057	n/a	0.14%	Pass
Zinc	10.9	0.0504	0.33	0.46%	Pass

- 3.4.3 For the purpose of Test 2 screening Sewage Treatment Reduction Factors can be applied, to incorporate a degree of pollutant reduction that will occur in a treatment plant. The reduction factors used in the assessment are summarised in Table 3.1 (and provided in Appendix 5). The results of the Test 2 summarised in Table 3.1 confirm that all contaminants of concern pass.
- 3.4.4 The Test 2 screening assessment against MAC, that uses the maximum flow, confirms that all contaminants of concern pass.

Test 3 & 4

- 3.4.5 The Test 3 & 4 is not required as all Contaminants of Concern pass Test 2.

Trade Effluent Consent Compliance

- 3.4.6 The analytical data provided in *Appendix 4* demonstrates that the majority of the contaminant load associated with the discharge from the Rabone Lane is associated with the suspended sediment load (average of 220 mg/l). The Sims TEC provides a limit for TSS of 1000 mg/l, compared with the prescribed limit of 25 mg/l on the environmental permit for Minworth WWTW.
- 3.4.7 Regular monitoring of effluent by Sims and Severn Trent Water indicates consistent compliance with Trade Effluent Consent. One results for Non-Volatile Matter (NVM) in November 2017 (27.8 mg/l when compared to the limit of 25 mg/l) is exceeding the limit although the analytical method assessing this parameter is now quoted as "Oil and Grease".

3.5 Conclusions

- 3.5.1 On the basis of this assessment the potential contaminants of concern identified in the surface water discharge to sewer on the Rabone Lane facility have been screened when using annual average EQS and the mean EDR. This demonstrates the risk to the receiving water is insignificant. This outcome shall be further strengthened through the collection of additional quarterly monitoring data.

Glossary

COD	Chemical Oxygen Demand
DRO	Diesel Range Organics
EA	Environment Agency
EDR	Effluent Discharge Rate
EPH	Extractable Petroleum Hydrocarbons
EQS	Environmental Quality Standard
GRO	Gasoline Range Organics
IC	Improvement Condition
MAC	Maximum Allowable Concentration
PC	Process Contribution
STW	Severn Trent Water
TEC	Trade Effluent Consent
TSS	Total Suspended Solids
WwTW	WasteWater Treatment Works

Appendices

Trade Effluent Consent



11 May 2016

RPS
St Paul's House
Enterprise Way
Jubilee Business Park
Stores Road
Derby
DE21 4BB

For the attention of David De Rosa

Severn Trent Water Limited
Commercial Waste
PO Box 51
Raynesway
Derby
DE21 7JA

Tel: 01332 683369
www.stwater.co.uk

Contact: Shirley Downer-Russell
Direct line: 07771 938750
commercial.waste@severntrent.co.uk

Your ref:
Our ref: 008675V

Dear Sirs

Water Industry Act 1991 – Trade Effluent Consent

Please find enclosed your consent to discharge trade effluent.

The Consent contains conditions designed to protect sewers, sewage treatment processes and the people working in these areas. These conditions apply at all times. They are also necessary to ensure that we meet our environmental obligations with regard to the discharge limits from our sewage treatment works set by the Environment Agency and for the safe disposal of sewage sludge without harm to the environment.

A number of appendices are attached to the Consent:

- | | |
|---------------------|---|
| Appendix I | Lists the quality conditions. |
| Appendix II | Gives the requirements for quality and volume measurement and the sampling point. We should also be pleased if you would advise us of any particular health and safety requirements that staff should follow when visiting your premises. |
| Appendix III | Shows how the trade effluent charge is calculated. |
| Appendix IV | Explains the nitrification charge calculation. |
| Appendix V | Explains offences under the Water Industry Act 1991. |

You should by now have installed the required metering equipment. If not, this must be done within 1 calendar month of the date of this letter.

Please note your obligations under section 8 of your consent to discharge, to keep records of meter readings and discharge volumes.

Registered in England & Wales
Registration No. 2366686
Registered Office:
Severn Trent Centre,
2 St John's Street,
Coventry CV1 2LZ

The chargeable volumes for trade effluent and other used water will be determined as follows:

Trade effluent: $TE = \text{Site Area (20700 m}^2\text{)} \times \text{Rainfall}$

Other used water: $OUW = \text{SSW WS Meter}$

It is your responsibility to provide documented evidence to support any claims for allowances or non-returns.

Failure to provide any information or readings used for allowances will result in a 'zero' allowance being applied.

Any allowances agreed will be periodically reviewed to ensure that they still represent the current situation at your premises.

If you have any questions, please do not hesitate to contact me.

Yours faithfully



 Shirley Downer-Russell
Commercial Waste Team

Consent to the discharge of trade effluent to the public foul water sewer

To: The Company Secretary
Sims Group UK Limited
Long Marston
Stratford Upon Avon
Warwickshire
CV37 8AQ

WHEREAS

On the **1 April 2016** a trade effluent notice was, in pursuance of the provisions of the Water Industry Act 1991, served by you on Severn Trent Water Limited in respect of the premises known as **Sims Group UK Limited** and situated at **Shredder Site, Rabone Lane, Smethwick, West Midlands B66 2LF**.

NOW THEREFORE Severn Trent Water Limited (hereinafter called "The Sewerage Undertaker") HEREBY CONSENT to the discharge of trade effluent from the above-mentioned premises into the public foul water sewers subject to the following conditions and not otherwise.

- Sewer Affected** 1. The public sewer into which the trade effluent may be discharged is the foul water sewer situated in **Foundry Lane**.
- Nature or Composition** 2. The trade effluent to be discharged shall consist solely of waste waters specified in the trade effluent notice served in respect of the premises and derived from **rainfall dependant site runoff only**.
- Maximum volume** 3. The maximum volume of trade effluent to be discharged in any continuous period of 24 hours shall not exceed **60** cubic metres.
- Maximum rate** 4. The highest rate at which the trade effluent may be discharged shall not exceed **10.5** litres per second.
- Period of discharge** 5. The trade effluent shall only be discharged into the public sewer between **00:00** and **23:59** hours.
- Quality Conditions** 6. a. The trade effluent to be discharged shall not contain any of the substances or properties listed in Appendix I in amounts or proportions other than those which comply with the limits there stated and shall not contain any substances or properties not listed in Appendix I except with the prior written permission of the Sewerage Undertaker and on such terms and conditions as are set out therein.
- b. The trade effluent to be discharged shall not contain any special category effluent (as defined in Section 138 of the Water Industry Act 1991) in a concentration greater than background concentration (as defined in the Trade Effluents (Prescribed Processes and Substances) Regulations 1989).
- c. Where the trade effluent derives from a prescribed process mentioned in Schedule 2 to the Trade Effluents (Prescribed Processes and Substances) Regulations 1989, it shall not contain asbestos (as defined in the said Regulations) and chloroform in a concentration greater than the background concentration (as defined in the said Regulations);

Inspection chamber 7. An inspection chamber or manhole shall be provided and maintained in connection with each pipe through which the trade effluent is to be discharged into the public sewer, and such inspection chamber or manhole shall be so constructed and maintained as to enable a person to readily obtain samples at any time, of the trade effluent so discharged.

Quality and volume measurement 8. a. Apparatus adequate for measuring and automatically recording the volume, rate and composition of trade effluent so discharged shall be provided with every such pipe and such measurement apparatus shall be maintained and tested to the satisfaction of the Sewerage Undertaker.

b. If the measuring and recording apparatus ceases to record or is suspected of not measuring correctly, then the Sewerage Undertaker shall have the right to make estimates of the volume and composition of the trade effluent until such time as the said apparatus is again operating to the satisfaction of the Sewerage Undertaker.

c. The foregoing provisions of this condition shall be of no effect so long as there is provided and maintained to the satisfaction of the Sewerage Undertaker some other method approved by the Sewerage Undertaker of sampling the trade effluent or determining, measuring and recording the volume and composition of the trade effluent so discharged.

d. Records of the volume and composition of the trade effluent discharged into the sewer shall be kept available at all times for inspection by any authorised representative of the Sewerage Undertaker and copies of such records shall be sent to the Sewerage Undertaker on demand.

Payment 9. Payment shall be made to the Sewerage Undertaker for the reception, treatment and disposal of the trade effluent discharged into the public foul water sewer in accordance with the Sewerage Undertaker's Charging Scheme in force from time to time.

All sums payable to the Sewerage Undertaker under this condition shall become due and payable on demand.

Dated the eleventh day of May 2016
For and on behalf of the Sewerage Undertaker



G Batty
Regulatory Performance Lead

Address of the Sewerage Undertaker

Severn Trent Water Limited
Severn Trent Centre
2 St Johns Street
Coventry
CV1 2LZ

NOTE: Your attention is drawn to the right of appeal to OFWAT conferred by Section 126 of the Water Industry Act 1991.

QUALITY CONDITIONS

1. The total of Suspended Solids in the trade effluent shall not exceed 1000 milligrams per litre.
2. The temperature of the trade effluent shall not exceed 43 degrees C (110 degrees F).
3. The pH value of the trade effluent shall not be less than 6 nor greater than 10 in the recognised scale.
4. The Chemical Oxygen Demand from acidified dichromate (C.O.D.) of the trade effluent shall not exceed 1000 milligrams per litre expressed as O.
5. The total of Iron in the trade effluent shall not exceed 50 milligrams per litre.
6. The total of Aluminium in the trade effluent shall not exceed 50 milligrams per litre.
7. The total of Chromium in the trade effluent shall not exceed 1 milligram per litre.
8. The total of Copper in the trade effluent shall not exceed 3 milligrams per litre.
9. The total of Lead in the trade effluent shall not exceed 4 milligrams per litre.
10. The total of Nickel in the trade effluent shall not exceed 1 milligram per litre.
11. The total of Zinc in the trade effluent shall not exceed 10 milligrams per litre.
12. The total of Tin in the trade effluent shall not exceed 1 milligram per litre.
13. The total of Ammoniacal Nitrogen in the trade effluent shall not exceed 50 milligrams per litre expressed as N.
14. The total of non-volatile matter extractable by light petroleum (40-60 degrees Centigrade petroleum ether) in the trade effluent shall not exceed 25 milligrams per litre.
15. The total of Phosphorus in the trade effluent shall not exceed 25 milligrams per litre expressed as Phosphorus (P).
16. The total of Antimony in the trade effluent shall not exceed 0.1 milligram per litre expressed as Antimony (Sb).
17. The total of Cadmium in the trade effluent shall not exceed 0.05 milligram per litre
18. The trade effluent shall not contain any substance or substances which either alone, or in combination with any matter in any sewers or receiving sewage treatment works vested in and/or under the control of Severn Trent Water Limited, would give rise to obnoxious, poisonous or inflammable gases, or otherwise a statutory nuisance as defined by the Environmental Protection Act 1990 in such sewers or works, would be deleterious to such sewers or to the processes in use at such works or to the disposal of effluents and sludges produced by such works.
19. The trade effluent shall be free from physically separable oil.
20. The trade effluent shall not contain any substance or substances which either alone, or in combination with any matter in any sewers or receiving sewage treatment works vested in and/or under the control of Severn Trent Water Limited, would give rise to obnoxious, poisonous or inflammable gases, or otherwise a statutory nuisance as defined by the Environmental Protection Act 1990 in such sewers or works, would be deleterious to such sewers or to the processes in use at such works or to the disposal of effluents and sludges produced by such works.

A shaken sample is to be used except for C.O.D., where the sample shall be supernatant after 1 hour settlement

QUALITY AND VOLUME MEASUREMENT**1. Quality measurement**

None required

1.1 Sampling point

To enable a representative sample of trade effluent to be taken a suitable sampling point shall be provided to the satisfaction of the Sewerage Undertaker at a point marked SAMPLE POINT as shown on the Plan No. 008675V/00 attached hereto.

The Sample Point is located at the Last manhole after the interceptor.

Safe access to and exit from this point for inspection and monitoring purposes by authorised representatives of the Sewerage Undertaker shall be provided.

2. Volume measurement

The volume of trade effluent discharged to the foul water sewer will be calculated from the area of the site draining to the foul water sewer (m^2) multiplied by rainfall (mm/1000). (Area of the site draining to the foul water sewer 20,700 m^2)

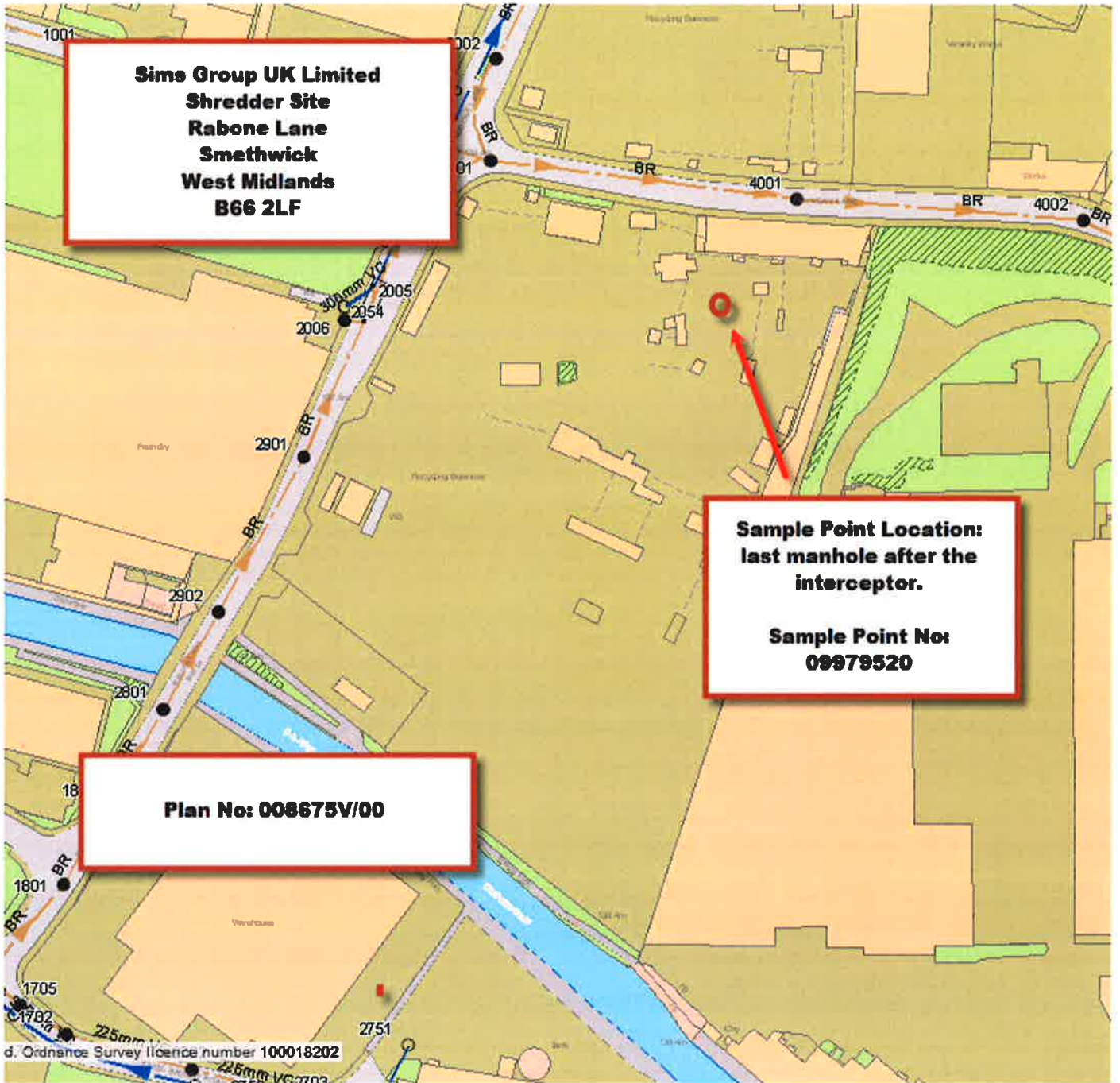
**Sims Group UK Limited
Shredder Site
Rabone Lane
Smethwick
West Midlands
B66 2LF**

**Sample Point Location:
last manhole after the
interceptor.**

**Sample Point No:
09979520**

Plan No: 008675V/00

Ordnance Survey licence number 100018202



TRADE EFFLUENT CHARGE CALCULATION

The payment to be made by the occupier of the premises from which the trade effluent is discharged for the whole or any part of any period of twelve calendar months commencing on 1 April in any year shall be calculated as follows:

1. The volume of trade effluent discharged in cubic metres multiplied by C, where

$$C = R + V + \frac{O_t}{O_s} \times B + \frac{S_t}{S_s} \times S$$

C = Total charge per cubic metre of trade effluent.

R = One third of the amount determined by the Sewerage Undertaker as the average cost to the Sewerage Undertaker for the year of charge of receiving into its sewers (other than those used solely for surface water) and conveying one cubic metre of sewage to the Sewerage Undertaker's sewage treatment works.

V = The amount determined by the Sewerage Undertaker as the average cost for the year of charge of primary treatment and other volumetric treatment costs in the treatment of one cubic metre of sewage at the Sewerage Undertaker's sewage treatment works.

O_t = The Chemical Oxygen Demand (COD) of the trade effluent in milligrams per litre (mg/l) after one hour quiescent settlement.

O_s = The estimated average Chemical Oxygen Demand (COD) of settled sewage in milligrams per litre (mg/l) at the Sewerage Undertaker's works as determined by the Sewerage Undertaker for the purposes of the year of charge.

B = The amount determined by the Sewerage Undertaker as the average cost to the Sewerage Undertaker for the year of charge of biological treatment of one cubic metre of sewage at the Sewerage Undertaker's sewage treatment works.

S_t = The total suspended solids in the trade effluent in milligrams per litre (mg/l) at the pH of the trade effluent.

S_s = The estimated average amount of suspended solids in milligrams per litre (mg/l) determined on a shaken sample, in sewage received for treatment at the Sewerage Undertaker's works as determined by the Sewerage Undertaker for the purposes of the year of charge.

S = The amount determined by the Sewerage Undertaker as the average cost to the Sewerage Undertaker for the year of charge, of primary sludge treatment and disposal of one cubic metre of sewage at the Sewerage Undertaker's sewage treatment works.

2. Minimum charge for small volumes:

Where the product of the volume of trade effluent in cubic metres and the unit charge calculated from the above formula is less than the minimum charge determined by the Sewerage Undertaker for the year of charge, then that minimum charge shall be paid.

3. The Sewerage Undertaker will notify the occupier of the premises from which trade effluent is discharged of the factors in the above formula, on which the Sewerage Undertaker's trade effluent charges will be based for each year of charge, prior to 1 April in any year.

NITRIFICATION CHARGE CALCULATION

This is for effluents controlled by a consent where the average ammonia concentration is greater than 5% of the average settled COD concentration.

Where the average ammonia concentration exceeds 5% of the average settled COD concentration, a revised Chargeable COD value (O_t) will be used in the standard trade effluent charge calculation (Appendix III). This revised O_t value will be calculated as follows:

$$\text{Chargeable COD } (O_t) = \text{average COD} + 4.57(\text{Nt} - 5\% \text{ average COD})$$

Nt = The average total ammoniacal nitrogen concentration in milligrams per litre (mg/l) of the trade effluent determined on a sample or samples, expressed as Nitrogen

APPENDIX V

OFFENCES

Water Industry Act 1991

Your attention is drawn to the provisions of the following Sections:-

Section 121 of the Water Industry Act 1991, which provides interalia that the occupier of the premises from which trade effluent is discharged in contravention of any condition imposed on a consent shall be guilty of an offence and be liable on summary conviction to a fine not exceeding the statutory maximum or on conviction on indictment, to a fine.

Section 111 of the Water Industry Act 1991, the effect of which is given here below, in relation to a discharge of trade effluent which may not comply with either the description stated by the occupier in the trade effluent notice or with any condition in a consent or direction issued under the Act:-

1. No person shall throw, empty or turn, or suffer or permit to be thrown or emptied or to pass, into any public sewer, or into any drain or sewer communicating with a public sewer:
 - (a) Any matter likely to injure the sewer or drain, or to interfere with the free flow of its contents, or to affect prejudicially the treatment and disposal of its contents; or
 - (b) Any chemical refuse or waste steam, or any liquid of a temperature higher than one hundred and ten degrees Fahrenheit, being refuse or steam which, or a liquid which when so heated, is, either alone or in combination with the contents of the sewer or drain, dangerous, or the cause of a nuisance, or prejudicial to health; or
 - (c) Any petroleum spirit, or carbide of calcium.
2. A person who contravenes any of the provisions of this Section shall be liable:
 - (a) On summary conviction to a fine not exceeding the Statutory maximum and to a further fine not exceeding £50 for each day on which the offence continues after conviction;
 - (b) On conviction on indictment, to imprisonment for a term not exceeding two years or a fine or both.
3. In respect of the imposition of a daily penalty;
 - (a) the Court may fix a reasonable date from the date of conviction for compliance with any directions given by the Court; and
 - (b) where a Court has fixed such a period, the daily penalty shall not be imposed in respect of any day before the end of that period.
4. In this section the expression "petroleum spirit" means any such:
 - (a) Crude petroleum
 - (b) Oil made from petroleum, or from coal, shale, peat or other bituminous substances; or
 - (c) Product of petroleum or mixture containing petroleum, as, when tested in the manner prescribed by or under the Petroleum (Consolidation) Act, 1928, gives off an inflammable vapour at a temperature of less than seventy three degrees Fahrenheit.

Environmental Permit Ref. T/10/36212/R/V002 (Minworth WwTW)

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Severn Trent Water Limited

Minworth Wastewater Treatment Works
Kingsbury Road
Minworth
Sutton Coldfield
West Midlands
B76 9DP

Variation application number

T/10/36212/R/V002

Permit number

T/10/36212/R

Minworth Wastewater Treatment Works

Permit number T/10/36212/R

Introductory note

This introductory note does not form a part of the notice.

The following notice gives notice of the variation and consolidation of an environmental permit.

This variation is made to bring forward the date for first-time phosphorus removal following designation as Sensitive Area (Eutrophic) under the Urban Wastewater (England & Wales) Treatment Regulations 1994. The date to meet this obligation has been brought forward from 30th September 2014 to 31st March 2014. The Regulations require the Works to meet a 1mg/l total phosphorus limit (as an annual average) or a minimum percentage reduction of total phosphorus of 80%. Chemical dosing using iron salts will be the primary method for achieving the phosphorus requirements so first-time iron limits have been applied to the permit. A 95th percentile and look-up table limit has been included together with an absolute maximum concentration (Upper Tier). The permit has been updated to the Environmental Permitting (England and Wales) Regulations 2010 format.

The schedules specify the changes made to the permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number. It is not backdated before 06 April 2010.

Status log of the permit		
Description	Date	Comments
Application T/10/36212/R/V001 (variation with no consolidation)	Duly made 30/04/2012	Application to vary flow distribution of final effluent.
Variation determined T/10/36212/R	02/07/2012	Varied permit issued.
Application T/10/36212/R/V002 (variation and consolidation)	Duly made 12/12/2013	Application to review the iron limit and to bring forward the effective date to meet the phosphorus obligation.
Variation determined T/10/36212/R	27/2/2014	Varied and consolidated permit issued in modern condition format.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

Permit number
T/10/36212/R

issued to:
Severn Trent Water Limited ("the operator")

whose registered office is

Severn Trent Centre
2 St John's Street
Coventry
CV1 2LZ

company registration number **02366686**

to operate a regulated facility at

Minworth Wastewater Treatment Works
Kingsbury Road
Minworth
Sutton Coldfield
West Midlands
B76 9DP

to the extent set out in the schedules.

The notice shall take effect from 31/03/2014

Name	Date
Daniel Timney	27/2/2014

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit

T/10/36212/R

The following conditions were varied as a result of the application made by the operator:

Table S3.1 – New total iron limits set, for both the 95th percentile (look up table) concentration and maximum concentration

The following conditions were varied as a result of an Environment Agency initiated variation:

All other conditions

Schedule 2 – consolidated permit

Consolidated permit T/10/36212/R issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

T/10/36212/R

This is the consolidated permit referred to in the variation and consolidation notice for application T/10/36212/R/V002 authorising,

Severn Trent Water Limited ("the operator")

whose registered office is

Severn Trent Centre

2 St John's Street

Coventry

CV1 2LZ

company registration number **02366686**

to operate a water discharge activity at

Minworth Wastewater Treatment Works

Kingsbury Road

Minworth

Sutton Coldfield

West Midlands

B76 9DP

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Daniel Timney	27/2/2014

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green and the discharges shall be made at the points marked on the site plan at schedule 7 to this permit and as listed in table S3.2 (discharge points).

2.3 Operating techniques

- 2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

- (b) If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 For the activities (A1 and A2) referenced in schedule 1, table S1.1 the operator shall comply with the relevant requirements of the Urban Waste Water Treatment (England and Wales) Regulations 1994.
- 2.3.3 For the discharges specified in table S3.3:
- (a) The discharge shall only occur when and only for as long as the flow passed forward is equal to or greater than the overflow setting indicated due to rainfall and/or snow melt.
 - (b) The off-line storm tank storage capacity indicated must be fully utilised before a discharge occurs. It shall only fill when the flow passed forward is equal to or greater than the overflow setting indicated due to rainfall and/or snow melt and shall be emptied and its contents returned to the continuation sewer as soon as practicable.
 - (c) The discharge shall not be comminuted or macerated.
 - (d) The discharge shall have passed through screens as specified and shall not contain a significant quantity of solid matter with a particle size greater than any indicated. All screenings shall be removed from the discharge.
 - (e) Where a mechanically raked screen is installed a telemetry alarm system shall be installed and maintained so as to give the operator immediate notification of a failure of the screen raking mechanism, unless otherwise agreed in writing by the Environment Agency. The operator shall take all appropriate measures to return the screen raking mechanism to normal operation as soon as reasonably practicable after receipt of notification of the failure.
- 2.3.4 (a) The use of any chemical for treatment of the effluent must be agreed in writing with the Environment Agency prior to use.
- (b) The chemical dosing material shall at all times conform to the British Standards specification(s) relating to potable products or other equivalent specification as agreed in writing with the Environment Agency prior to use.

3 Emissions and monitoring

3.1 Emissions to water

- 3.1.1 The limits given in schedule 3 table S3.1 shall not be exceeded.

- 3.1.2 For the emission limits in schedule 3 table S3.1 to which this condition applies, if (a) unusual weather conditions were adversely affecting the operation of the sewage treatment works and (b) the operator has used appropriate measures to mitigate that adverse effect, no result of any sample of the discharge taken during that time shall be used in deciding whether or not the emission limit has been complied with.
- 3.1.3 For the emission limits in schedule 3 table S3.1 to which this condition applies, if (a) abnormal operating conditions were adversely affecting the operation of the sewage treatment works and (b) the operator has used appropriate measures to mitigate that adverse effect, no result of any sample of the discharge taken during that time shall be taken into account in deciding whether or not the emission limit has been complied with.
- 3.1.4 (a) If the measured Dry Weather Flow exceeds the permitted Dry Weather Flow limit then the operator shall, as soon as is practicable, investigate the reasons for the exceedance. The operator shall report the reasons for the exceedance to the Environment Agency and the steps that it proposes to take to restore compliance. An exceedance of the Dry Weather Flow limit shall not be recorded as a failure if the operator takes appropriate steps to restore compliance;
- (b) If the measured Dry Weather Flow exceeds the permitted Dry Weather Flow limit because of unusual rainfall during the 12-month period, then it will not be recorded as a failure of the Dry Weather Flow limit. For the purposes of this condition, unusual rainfall shall mean rainfall that causes significantly higher sewage flows during the three-month period that normally records the lowest flows;
- (c) The permitted Dry Weather Flow limit is set at the operator's planned annual 80% exceeded flow;
- (d) For compliance with this permit, the measured Dry Weather Flow is that total daily volume that is exceeded by 90% of the recorded measured total daily volume values in any period of 12 months; and
- (e) For unusual rainfall to be considered, the operator shall notify the Environment Agency and provide supporting evidence as part of the normal specified data returns.
- 3.1.5 The limits in schedule 3 table S3.1 to which this condition applies may be exceeded where: in any series of samples of the discharge taken at regular but randomised intervals in any period of twelve consecutive months as listed in column 1 of schedule 3A, no more than the relevant number of samples, as listed in column 2 of schedule 3A, exceed the applicable limit for that relevant parameter. For relevant parameters subject to schedule 3C the assessment is based on a fixed calendar year from 1 January to 31 December inclusive.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 For the activities (A1 and A2) referenced in schedule 1, table S1.1 the operator shall take appropriate measures to minimise so far as reasonably practicable the polluting effects of the emissions of substances not controlled by emission limits (excluding odour).
- 3.2.2 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Monitoring

- 3.3.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1 and S3.4;
 - (b) inlet quality specified in tables S3.1 and S3.4
- 3.3.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.3.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.3.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out at the monitoring points specified in schedule 3 table S3.4 unless otherwise agreed in writing by the Environment Agency.
- 3.3.5 The monitoring programme for the parameters subject to schedule 3B shall be:
- (a) pre-scheduled to cover a calendar year and the programme recorded before the start of a calendar year sample period; and
 - (b) spot samples collected at approximately equal intervals during the year, including samples from different days of the week and different times. Approximately 10% of samples should be outside the normal sampling window which is 9am-3pm, Monday to Friday.
- 3.3.6 After becoming aware, or following a notification that a sample has not been taken on the schedule 3B Monitoring Programme pre-scheduled date, or is lost, or a result for that sample can not be reported, the operator shall record the details and reschedule the sample.
- 3.3.7 The monitoring programme for the parameters subject to schedule 3C shall be pre-scheduled before each calendar year. Samples must be collected at approximately equal intervals during the year from different days of the week and approximately 10% of samples should be taken at weekends.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

- (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and monitoring points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.2; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.3 Notifications

4.3.1 The Environment Agency shall be notified without delay following the detection of:

- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
- (b) the breach of a limit specified in schedule 3 table S3.1 (including individual exceedances of limits which are covered by condition 3.1.5); or
- (c) any significant adverse environmental effects.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and

- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

4.3.5 For the activities (A1 and A2) referenced in Schedule 1, table S1.1 where the operator proposes to make a change in the nature of the activity by increasing the concentration of, or the addition of, or allowing the introduction of, a pollutant to the activity to an extent that the activity may be liable to cause pollution and the change is not permitted by emission limits specified within schedule 3 table S3.1 or the subject of an application for approval under the EP Regulations or this permit:

- (a) the Environment Agency shall be notified in writing at least 14 days before the increase or addition or allowing the introduction; and
- (b) the notification shall contain a description of the proposed change.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 Activities

Activity reference	Description of activity	Limits of specified activity
A1	Discharge of final effluent via Outlet 1	<p>Flows up to and including 7,000 litres per second (604,800 m³ d⁻¹) shall be split in a ratio of 50:50 between Activity A1 and Activity A2. The overflow weir shall be designed and constructed to ensure that no more than 3,500 litres per second of final effluent shall be discharged via Outlet 1 under these flow conditions.</p> <p>Flows in excess of 7,000 litres per second (604,800 m³ d⁻¹) shall be split in a ratio of 30:70 between Activity A1 and Activity A2. The overflow weir shall be designed and constructed to ensure that no more than 4,000 litres per second of final effluent shall be discharged via Outlet 1 under these flow conditions.</p> <p>The total combined flow of final effluent discharged via Outlet 1 and Outlet 2 shall be measured at the agreed Flow Monitoring Point stated in Table S3.4.</p>
A2	Discharge of final effluent via Outlet 2	<p>Flows up to and including 7,000 litres per second (604,800 m³ d⁻¹) shall be split in a ratio of 50:50 between Activity A1 and Activity A2. The overflow weir shall be designed and constructed to ensure that no more than 3,500 litres per second of final effluent shall be discharged via Outlet 2 under these flow conditions.</p> <p>Flows in excess of 7,000 litres per second (604,800 m³ d⁻¹) shall be split in a ratio of 30:70 between Activity A1 and Activity A2. The overflow weir shall be designed and constructed to ensure that no more than 8,400 litres per second of final effluent shall be discharged via Outlet 2 under these flow conditions.</p> <p>The total combined flow of final effluent discharged via Outlet 1 and Outlet 2 shall be measured at the agreed Flow Monitoring Point stated in Table S3.4.</p>
A3	Discharge of settled storm sewage via Outlet 3	N/A

Table S1.2 Operating techniques			
Activity reference	Description of documentation	Parts	Date Received
A1	OT1: Chemical Dosing and Telemetry	All of document	12/12/2013
A2	OT1: Chemical Dosing and Telemetry	All of document	12/12/2013

Schedule 2 - Waste types, raw materials and fuels

Schedule 2 not in use.

Schedule 3 – Emissions and monitoring

Table S3.1 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Effluents and discharge points	Parameter	Limit (including unit)	Reference Period	Limit of effective range	Monitoring frequency	Compliance Statistic
A1: Final effluent via Outlet 1	Dry weather flow	225,000 m ³ /day	Total daily volume	N/A	Continuous	Combined DWF of Activities A1 and A2 shall not exceed 450,000m ³ /day as a maximum Condition 3.1.4 applies
	15-minute instantaneous or averaged flow	No limit set. Record as l/s	15 minute	N/A	Continuous	N/A
	ATU-BOD as O ₂	15 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.5 apply)
	ATU-BOD as O ₂	50 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
	Ammoniacal nitrogen (expressed as N)	3 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.5 apply)
	Ammoniacal nitrogen (expressed as N)	12 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
	Suspended solids (measured after drying at 105° C)	25 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.5 apply)
	Total iron as Fe	3,500 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.5 apply)
	Total iron as Fe	8,000 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
	Antimony as Sb	5 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)

Arsenic as As	12 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Cadmium as Cd	1 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Chloroform as CHCl ₃	8 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Mercury as Hg	0.1 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Nickel as Ni	300 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Trichloroethylene as C ₂ HCl ₃	4 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Visible oil or grease	No significant trace present	Instantaneous (spot sample)	N/A	N/A	No significant trace (Condition 3.1.2 applies)
ATU-BOD as O ₂ (UWWTD)	Minimum of 70 % removal compared to influent	24 hour composite	To be compliant a sample has to meet the 70% removal standard or the 25 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.3 and 3.1.5 apply)
ATU-BOD as O ₂ (UWWTD)	25 mg/l	24 hour composite	To be compliant a sample has to meet the 70% removal standard or the 25 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.3 and 3.1.5 apply)

ATU-BOD as O ₂ (UWWTD)	50 mg/l	24 hour composite	This limit does not apply if a sample has met the 70% removal standard	As specified in schedule 3C	Maximum (Condition 3.1.3 applies)
COD as O ₂ (UWWTD)	Minimum of 75 % removal compared to influent	24 hour composite	To be compliant a sample has to meet the 75% removal standard or the 125 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.3 and 3.1.5 apply)
COD as O ₂ (UWWTD)	125 mg/l	24 hour composite	To be compliant a sample has to meet the 75% removal standard or the 125 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.3 and 3.1.5 apply)
COD as O ₂ (UWWTD)	250 mg/l	24 hour composite	This limit does not apply if a sample has met the 75% removal standard	As specified in schedule 3C	Maximum (Condition 3.1.3 applies)

	Total Phosphorus as P (UWWTD)	1 mg/l	24 hour composite	To be compliant a sample has to meet the 80% removal standard or the 1 mg/l limit not both	As specified in schedule 3C	Annual mean (Condition 3.1.3 applies)
	Total Phosphorus as P (UWWTD)	Minimum of 80% removal compared to influent	24 hour composite	To be compliant a sample has to meet the 80% removal standard or the 1 mg/l limit not both	As specified in schedule 3C	Annual mean (Condition 3.1.3 applies)
A2: Final effluent via Outlet 1	Dry weather flow	225,000 m ³ /day	Total daily volume	N/A	Continuous	Combined DWF of Activities A1 and A2 shall not exceed 450,000m ³ /day as a maximum Condition 3.1.4 applies
	15-minute instantaneous or averaged flow	No limit set. Record as l/s	15 minute	N/A	Continuous	N/A
	ATU-BOD as O ₂	15 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.5 apply)
	ATU-BOD as O ₂	50 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
	Ammoniacal nitrogen (expressed as N)	3 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.5 apply)
	Ammoniacal nitrogen (expressed as N)	12 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)

Suspended solids (measured after drying at 105° C)	25 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.5 apply)
Total iron as Fe	3,500 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.5 apply)
Total iron as Fe	8,000 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Antimony as Sb	5 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Arsenic as As	12 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Cadmium as Cd	1 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Chloroform as CHCl ₃	8 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Mercury as Hg	0.1 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Nickel as Ni	300 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Trichloroethylene as C ₂ HCl ₃	4 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.2 applies)
Visible oil or grease	No significant trace present	Instantaneous (spot sample)	N/A	N/A	No significant trace (Condition 3.1.2 applies)
ATU-BOD as O ₂ (UWWTD)	Minimum of 70 % removal compared to influent	24 hour composite	To be compliant a sample has to meet the 70% removal standard or the 25 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.3 and 3.1.5 apply)

	ATU-BOD as O ₂ (UWWTD)	25 mg/l	24 hour composite	To be compliant a sample has to meet the 70% removal standard or the 25 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.3 and 3.1.5 apply)
	ATU-BOD as O ₂ (UWWTD)	50 mg/l	24 hour composite	This limit does not apply if a sample has met the 70% removal standard	As specified in schedule 3C	Maximum (Condition 3.1.3 applies)
	COD as O ₂ (UWWTD)	Minimum of 75 % removal compared to influent	24 hour composite	To be compliant a sample has to meet the 75% removal standard or the 125 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.3 and 3.1.5 apply)
	COD as O ₂ (UWWTD)	125 mg/l	24 hour composite	To be compliant a sample has to meet the 75% removal standard or the 125 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.3 and 3.1.5 apply)

	COD as O ₂ (UWWTD)	250 mg/l	24 hour composite	This limit does not apply if a sample has met the 75% removal standard	As specified in schedule 3C	Maximum (Condition 3.1.3 applies)
	Total Phosphorus as P (UWWTD)	1 mg/l	24 hour composite	To be compliant a sample has to meet the 80% removal standard or the 1 mg/l limit not both	As specified in schedule 3C	Annual mean (Condition 3.1.3 applies)
	Total Phosphorus as P (UWWTD)	Minimum of 80% removal compared to influent	24 hour composite	To be compliant a sample has to meet the 80% removal standard or the 1 mg/l limit not both	As specified in schedule 3C	Annual mean (Condition 3.1.3 applies)

Table S3.2 Discharge points

Effluent Name	Discharge Point	Discharge point NGR	Receiving water/Environment
A1: Final effluent	Final Effluent Outlet 1	SP 17420 91420	River Tame
A2: Final effluent	Final Effluent Outlet 2	SP 20020 91360	River Tame
A3: Settled storm sewage	Settled Storm Sewage Outlet 3	SP 16480 91530	River Tame

Table S3.3 Storm sewage discharge settings

Emission	Description of discharge	Overflow setting l/s	Maximum size of solid matter	Screen aperture size	Minimum screen capacity flow l/s	Storm tank/storage capacity m³ (off-line)
A3: Settled storm sewage via Outlet 3	Settled storm sewage	12,400	No greater than 10 mm in more than 2 dimensions	10mm (Bar)	The screen shall be designed to cope with all flows up to and including the 1 in 5 year storm return period, as a minimum.	127,264

Table S3.4 Monitoring points

Effluents and discharge points	Monitoring type	Monitoring point NGR	Monitoring point reference
A1: Final effluent via Outlet 1	UWWTD inlet sampling	SP 16130 92280	UWWTD Inlet Sampling Point . Monitoring point to be appropriately labelled.
	Final effluent sampling	SP 17150 91950	OSM Sample Point. Monitoring point to be appropriately labelled.
	UWWTD effluent sampling	SP 17140 91960	UWWTD Final Effluent Sample Point. Monitoring point to be appropriately labelled.
	Flow Monitoring	SP 16196 92358	Flow Monitoring Point. Monitoring point to be appropriately labelled.
A2: Final Effluent via Outlet 2	UWWTD Inlet sampling	SP 16130 92280	UWWTD Inlet Sampling Point . Monitoring point to be appropriately labelled.
	Final effluent sampling	SP 17150 91950	OSM Sample Point. Monitoring point to be appropriately labelled.
	UWWTD effluent sampling	SP 17140 91960	UWWTD Final Effluent Sample Point. Monitoring point to be appropriately labelled.
	Flow Monitoring	SP 16196 92358	Flow Monitoring Point. Monitoring point to be appropriately labelled.
A3: Settled storm sewage via Outlet 3	Effluent sampling	SP 16250 91790	Settled Storm Sewage Sample Point. Monitoring point to be appropriately labelled.

Schedule 3A - Look up table

Look up table	
Number of samples taken in any period of 12 months	Maximum number of samples permitted to exceed limit for given parameter
4-7	1
8-16	2
17-28	3
29-40	4
41-53	5
54-67	6
68-81	7
82-95	8
96-110	9
111-125	10
126-140	11
141-155	12
156-171	13
172-187	14
188-203	15
204-219	16
220-235	17
236-251	18
252-268	19
269-284	20
285-300	21
301-317	22
318-334	23
335-350	24
351-365	25

Schedule 3B – Opra tier 3 sampling frequency

Parameter	'Normal frequency' of samples per year	Reduced Sampling frequency after 12 consecutive months of numeric permit compliance, samples per year or pro rata over the remainder of a year	On numeric permit failure return to normal frequency as soon as reasonably practicable, samples per 12 months	Out of hours samples
Sanitary	24	12	24	For 24 samples 2 out of hours samples per annum
Non sanitary	12	12	12	For 12 samples 1 out of hours sample per annum

Schedule 3C – Urban Waste Water Treatment Directive sampling frequency

Population equivalent	Samples per year	Reduced sampling frequency after a year of compliance with the UWWTD numeric limits, samples per year	On UWWTD numeric limit failure return to the higher frequency in the year that follows, samples per year
2,000 to 9,999	12	4	12
10,000 to 49,999	12	N/A	N/A
50,000 or over	24	N/A	N/A

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data			
Parameter	Monitoring point reference	Reporting period	Period begins
A1 and A2: Dry Weather Flow	Flow Monitoring Point	Annually	1 st January
A1 and A2: UWWTD - BOD, COD, phosphorus	UWWTD Inlet Sampling Point / UWWTD Final Effluent Sample Point	Monthly	1 st of month
A1 and A2: OSM - BOD, ammonia, suspended solids, iron, antimony, arsenic, cadmium, chloroform, mercury, nickel, trichloroethylene	OSM Sample Point	Quarterly	1 st of month
A1 and A2: OSM - BOD, ammonia, suspended solids, iron, antimony, arsenic, cadmium, chloroform, mercury, nickel, trichloroethylene	OSM Sample Point	Annually	1 st January

Table S4.2 Reporting forms	
Parameter	Reporting format
Dry Weather Flow	WISKI electronic format specified by the Environment Agency
15-minute flow	WISKI electronic format specified by the Environment Agency
UWWTD – BOD, COD, phosphorus	Electronic format specified by the Environment Agency
OSM - BOD, ammonia, suspended solids, iron, antimony, arsenic, cadmium, chloroform, mercury, nickel, trichloroethylene	Quarterly - Electronic format specified by the Environment Agency
OSM - BOD, ammonia, suspended solids, iron, antimony, arsenic, cadmium, chloroform, mercury, nickel, trichloroethylene	Annually - Summary report of compliance with the monitoring programme specified in table S3.1 and Schedule 3B in a format specified by the Environment Agency

Schedule 5 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released/type or nature of sewage released	
Best estimate of the quantity or rate of release of substances and/or duration of discharge	
Best estimate of the environmental impact of the discharge	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit specified in schedule 3 table S3.1 (including individual exceedances of limits which are covered by condition 3.1.5)	
To be notified as soon as practicable following detection by a reporting system and format specified by the Environment Agency	
Monitoring point reference/ source	

Self monitoring regime (where relevant)	eg OSM/UWWTD
Type of failure	eg LUT failure/LUT exceedance/upper tier/other
Date of sample/event	
Parameter	
Result and units	
Limit and units	

Part B - to be submitted as soon as practicable unless otherwise agreed in writing by the Environment Agency

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident/breach/exceedance	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

"accident" means an accident that may result in pollution.

"annually" means once every year.

"application" means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

"ATU-BOD as O₂" means the biochemical oxygen demand (measured after 5 days at 20° C with nitrification suppressed by the addition of allylthiourea).

"COD as O₂" means the chemical oxygen demand (measured using the standard dichromate procedure).

"emissions of substances not controlled by emission limits" means emissions of substances to air, water or land from the activities (A1 and A2) referenced in schedule 1, table S1.1, which are not controlled by an emission or background concentration limit.

"EP Regulations" means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

"Overflow setting" means the minimum flow passed forward to the continuation sewer when the overflow operates.

"quarter" means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

"significant pollution" means a category 1 or category 2 incident indicated by the Common Incident Classification Scheme (CICS).

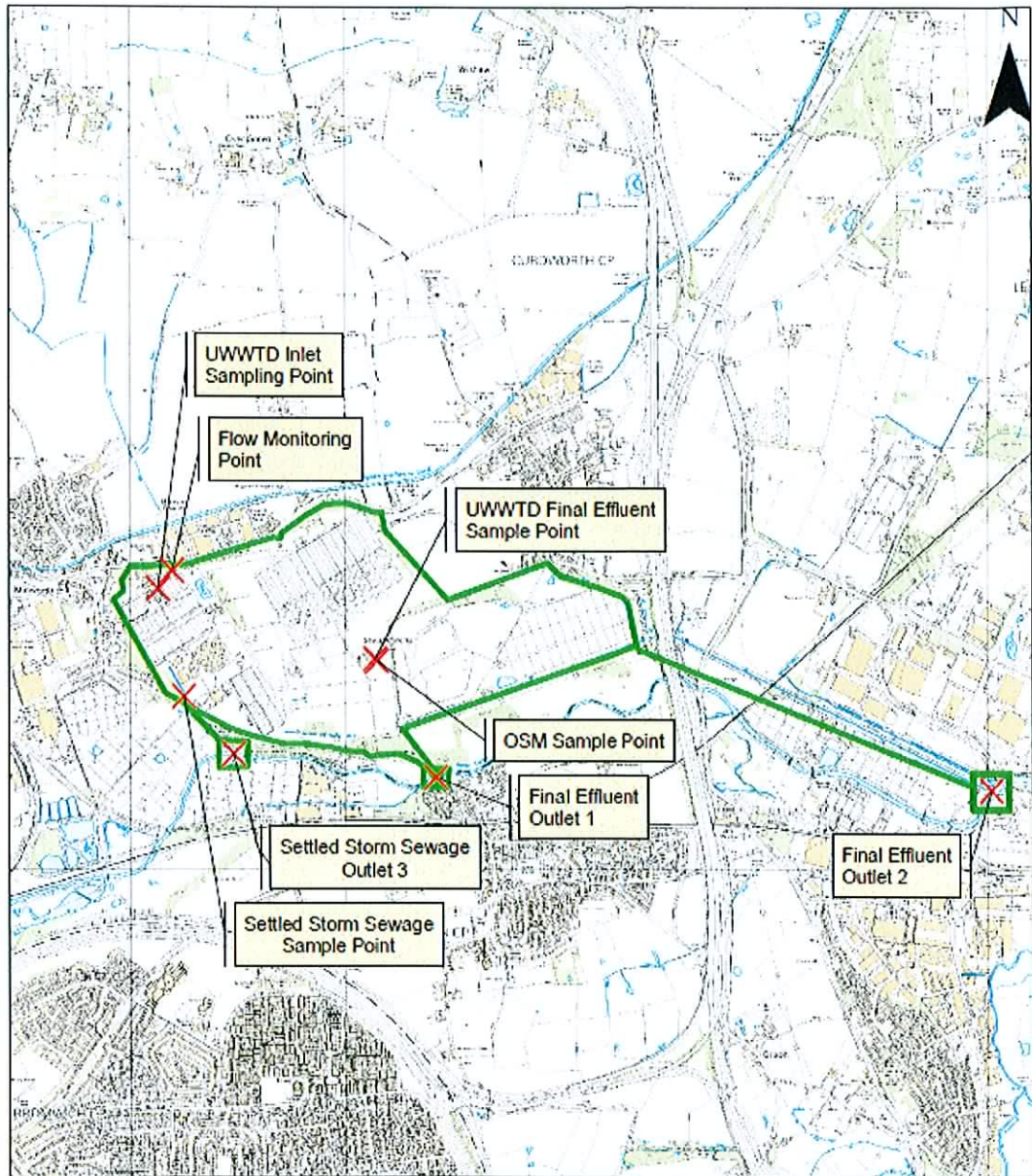
"Unusual weather conditions" means, but is not limited to:

- low ambient temperatures as evidenced by effluent temperatures of 5 degrees centigrade or less, or by the freezing of mechanical equipment in the works;
- significant snow deposits;
- tidal or fluvial flooding;
- weather conditions causing unforeseen loss of power supply to the sewage treatment works.

"Urban Waste Water Treatment (England and Wales) Regulations 1994" means Urban Waste Water Treatment (England and Wales) Regulations 1994 SI 2841 and the words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"year" means calendar year ending 31 December.

Schedule 7 - Site plan



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END OF PERMIT

Ref OT1

Permit Reference: T/10/36212/R

Site Name: Minworth Wastewater Treatment Works

Operating Technique: Chemical Dosing and Telemetry

Dosing materials

The chemical dosing material employed in the phosphorus removal process shall be of either an iron salt or aluminium salt formulation or both as notified to the Environment Agency in writing prior to use.

The chemical dosing material employed shall conform to the British Standards specifications relating to potable products or other equivalent specification as agreed in writing with the Environment Agency prior to use. Copies of the documentation of the quality assurance system shall be made available for inspection by the officers of the Environment Agency at all reasonable times.

The chemical formulation of the chemical dosing materials shall not be changed without the prior written agreement of the Environment Agency.

Telemetry

A telemetry alarm system connected to a 24-hour response system shall be provided and maintained to provide notification of failure or breakdown of the chemical dosing plant.

Flow Data for River Tame at Water Orton

28003 - Tame at Water Orton

Station Info | **Daily Flow Data** | Peak Flow Data | Catchment Info

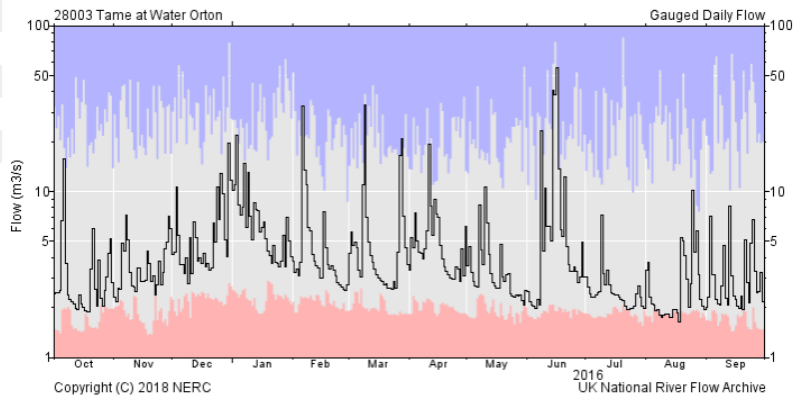
Data Series: **Gauged Daily Flow**

Period of Record:	1955 - 2016	Graph Type:	Annual Hydrograph	Year:	< 2016 > Refresh
Percent Complete:	81 %				
Base Flow Index:	0.61				
Mean Flow:	5.373 m ³ /s				
95% Exceedance (Q95):	2.194 m ³ /s				
70% Exceedance (Q70):	3.176 m ³ /s				
50% Exceedance (Q50):	3.908 m ³ /s				
10% Exceedance (Q10):	9.515 m ³ /s				

Download Data

River flow time series data are available for this station for download.

[Download flow data](#)



Key: Red and blue envelopes represent lowest and highest flows on each day over the period of record.
Underlying data supplied by the Environment Agency

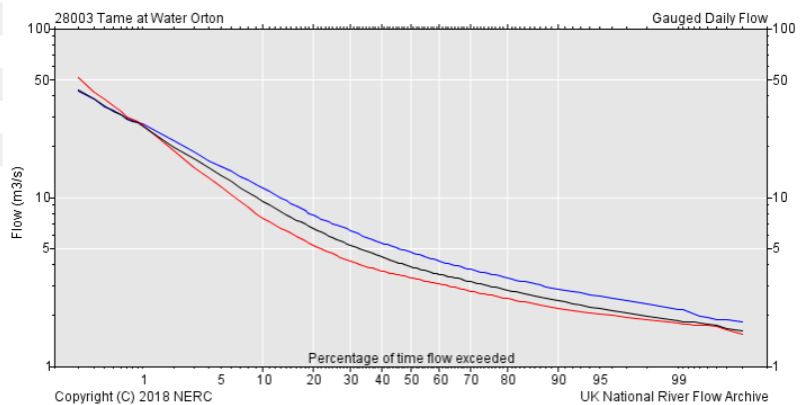
Data Series: **Gauged Daily Flow**

Period of Record:	1955 - 2016	Graph Type:	Flow Duration Curve
Percent Complete:	81 %		
Base Flow Index:	0.61		
Mean Flow:	5.373 m ³ /s		
95% Exceedance (Q95):	2.194 m ³ /s		
70% Exceedance (Q70):	3.176 m ³ /s		
50% Exceedance (Q50):	3.908 m ³ /s		
10% Exceedance (Q10):	9.515 m ³ /s		

Download Data

River flow time series data are available for this station for download.

[Download flow data](#)



Key: Black line - annual; blue line - December to March; red line - June to September.
Underlying data supplied by the Environment Agency

Water Quality Data for Sims Rabone Lane Facility

**Ms Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon CV37 8AQ
Warwickshire**

ALS Environmental Ltd
Torrington Avenue
Coventry
CV4 9GU

T: +44 (0)24 7642 1213
F: +44 (0)24 7685 6575
www.alsenvironmental.co.uk

26 April 2017

Test Report: COV/1373672/2017

Dear Ms Sidney

Analysis of your sample(s) submitted on 21 March 2017 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

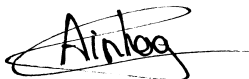
Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

Signed:



Name: A. Zunzunegui

Title: Organic Team Leader



Report Summary

**Ms Georgina Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon
Warwickshire
CV37 8AQ**



ANALYSED BY



Date of Issue: **26 April 2017**

Report Number: COV/1373672/2017

Issue 1

This issue replaces
all previous issues

Job Description: Rabone Lane Shredder

Job Location: Rabone Lane Shredder

Number of Samples
included in this report **1**

Job Received: **21 March 2017**

Number of Test Results
included in this report **26**

Analysis Commenced: **22 March 2017**

Signed:

Name: **A. Zunzunegui**

Date: **26 April 2017**

Title: **Organic Team Leader**

ALS Environmental Ltd was not responsible for sampling unless otherwise stated. Sampling is not covered by our UKAS accreditation.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.

Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory.

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Certificate of Analysis

ANALYSED BY



Report Number: **COV/1373672/2017**

Laboratory Number: **15964809**

Sample Source: **Sims Group UK Ltd**

Sample Point Description: **Sims Group UK Ltd**

Sample Description: **Radbone Lane**

Sample Matrix: **Trade Effluent**

Sample Date/Time: **20 March 2017 10:30**

Sample Received: **21 March 2017**

Analysis Complete: **29 March 2017**

Issue **1**

Sample **1** of **1**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Antimony, trace filtered as Sb	0.0038	mg/l	29/03/2017	Y Cov	WAS060
Antimony Ultra Low Total as Sb	0.020	mg/l	28/03/2017	Y Cov	WAS060
Oil and Grease	7.29	mg/l	29/03/2017	Y S	SUBCON
Aluminium, Total as Al	3.6	mg/l	26/03/2017	Y Cov	WAS049
Aluminium, Filtered as Al	<0.1	mg/l	27/03/2017	Y Cov	WAS049
Cadmium , Total as Cd	11.5	ug/l	26/03/2017	Y Cov	WAS049
Cadmium, Filtered as Cd	<0.6	ug/l	27/03/2017	Y Cov	WAS049
Chromium , Total as Cr	32.4	ug/l	26/03/2017	Y Cov	WAS049
Chromium, Filtered as Cr	<2.00	ug/l	27/03/2017	Y Cov	WAS049
Copper , Total as Cu	347	ug/l	26/03/2017	Y Cov	WAS049
Copper, Filtered as Cu	<9.00	ug/l	27/03/2017	Y Cov	WAS049
Iron, Total as Fe	6700	ug/l	26/03/2017	Y Cov	WAS049
Iron, Filtered as Fe	1370	ug/l	27/03/2017	Y Cov	WAS049
Lead , Total as Pb	567	ug/l	26/03/2017	Y Cov	WAS049
Lead, Filtered as Pb	<6.00	ug/l	27/03/2017	Y Cov	WAS049
Nickel , Total as Ni	64.6	ug/l	26/03/2017	Y Cov	WAS049
Nickel, Filtered as Ni	32.6	ug/l	27/03/2017	Y Cov	WAS049
Tin , Total as Sn	0.041	mg/l	26/03/2017	Y Cov	WAS049
Tin, Filtered as Sn	0.008	mg/l	27/03/2017	Y Cov	WAS049
Zinc , Total as Zn	3230	ug/l	26/03/2017	Y Cov	WAS049
Zinc, Filtered as Zn	90.3	ug/l	27/03/2017	Y Cov	WAS049
pH	7.4	pH units	22/03/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	30.7	mg/l	22/03/2017	Y Cov	WAS036
Phosphorus , Total as P	2.33	mg/l	26/03/2017	Y Cov	WAS049
Total Suspended Solids	184	mg/l	27/03/2017	Y Cov	WAS006
COD (Total)	435	mg/l	24/03/2017	Y Cov	WAS040

Analyst Comments for 15964809:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

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Page 2 of 5

Signed:

A handwritten signature in black ink, appearing to read 'A. Zunzunegui', enclosed within a rectangular box.

Name: **A. Zunzunegui**

Date: **26 April 2017**

Title: **Organic Team Leader**

ANALYST COMMENTS FOR REPORT

COV/1373672/2017

Issue 1

Date of Issue: **26 April 2017**

Sample No

15964809

Analysis Comments

Signed:



Name: **A. Zunzunegui**

Date: **26 April 2017**

Title: **Organic Team Leader**

DETERMINAND COMMENTS FOR REPORT COV/1373672/2017

ISSUE 1

Date of Issue : 26 April 2017

Sample No	Description	Determinand	Comments

Signed:



Name: **A. Zunzunegui**

Date: **26 April 2017**

Title: **Organic Team Leader**

**Ms Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon CV37 8AQ
Warwickshire**

ALS Environmental Ltd
Torrington Avenue
Coventry
CV4 9GU

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F: +44 (0)24 7685 6575
www.alsenvironmental.co.uk

20 June 2017

Test Report: COV/1397069/2017

Dear Ms Sidney

Analysis of your sample(s) submitted on 07 June 2017 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

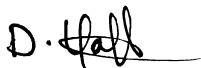
Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

Signed:



Name: D. Hoffman

Title: Inorganic Team Leader



Report Summary

ANALYSED BY

**Ms Georgina Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon
Warwickshire
CV37 8AQ**



Date of Issue: **20 June 2017**

Report Number: **COV/1397069/2017**

Issue **1**

This issue replaces
all previous issues

Job Description: Rabone Lane Shredder

Job Location: Rabone Lane Shredder

Number of Samples
included in this report **1**

Job Received: **07 June 2017**

Number of Test Results
included in this report **26**

Analysis Commenced: **09 June 2017**

Signed:

Name: **D. Hoffman**

Date: **20 June 2017**

Title: **Inorganic Team Leader**

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.

Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory.

This communication has been sent to you by ALS Environmental Ltd. Registered in England and Wales. Registration No. 02148934. Registered Office: ALS Environmental Limited, Torrington Avenue, Coventry, CV4 9GU.

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Certificate of Analysis

ANALYSED BY



Report Number: **COV/1397069/2017**

Issue **1**

Laboratory Number: **16139709**

Sample **1** of **1**

Sample Source: **Sims Group UK Ltd**

Sample Point Description: **Sims Group UK Ltd**

Sample Description: **1**

Sample Matrix: **Not Specified**

Sample Date/Time: **06 June 2017 13:00**

Sample Received: **07 June 2017**

Analysis Complete: **20 June 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Antimony, trace filtered as Sb	0.0064	mg/l	20/06/2017	N Cov	WAS060
Antimony Ultra Low Total as Sb	0.017	mg/l	19/06/2017	N Cov	WAS060
Oil and Grease	3.94	mg/l	16/06/2017	N S	SUBCON
Aluminium, Total as Al	5.1	mg/l	16/06/2017	N Cov	WAS049
Aluminium, Filtered as Al	<0.1	mg/l	16/06/2017	N Cov	WAS049
Cadmium , Total as Cd	8.90	ug/l	16/06/2017	N Cov	WAS049
Cadmium, Filtered as Cd	<0.6	ug/l	16/06/2017	N Cov	WAS049
Chromium , Total as Cr	41.6	ug/l	16/06/2017	N Cov	WAS049
Chromium, Filtered as Cr	<2.00	ug/l	16/06/2017	N Cov	WAS049
Copper , Total as Cu	415	ug/l	16/06/2017	N Cov	WAS049
Copper, Filtered as Cu	10.8	ug/l	16/06/2017	N Cov	WAS049
Iron, Total as Fe	14000	ug/l	16/06/2017	N Cov	WAS049
Iron, Filtered as Fe	2830	ug/l	16/06/2017	N Cov	WAS049
Lead , Total as Pb	621	ug/l	16/06/2017	N Cov	WAS049
Lead, Filtered as Pb	13.2	ug/l	16/06/2017	N Cov	WAS049
Nickel , Total as Ni	65.5	ug/l	16/06/2017	N Cov	WAS049
Nickel, Filtered as Ni	29.5	ug/l	16/06/2017	N Cov	WAS049
Tin , Total as Sn	0.037	mg/l	16/06/2017	N Cov	WAS049
Tin, Filtered as Sn	<0.007	mg/l	16/06/2017	N Cov	WAS049
Zinc , Total as Zn	4650	ug/l	16/06/2017	N Cov	WAS049
Zinc, Filtered as Zn	940	ug/l	16/06/2017	N Cov	WAS049
pH	6.9	pH units	16/06/2017	N Cov	WAS039
Ammoniacal Nitrogen as N	4.53	mg/l	09/06/2017	N Cov	WAS036
Phosphorus , Total as P	1.46	mg/l	16/06/2017	N Cov	WAS049
Total Suspended Solids	204	mg/l	12/06/2017	N Cov	WAS006
COD (Total)	334	mg/l	12/06/2017	N Cov	WAS040

Analyst Comments for 16139709:

This sample has been analysed for pH, Tin Total as Sn, Tin, Filtered as Sn outside recommended stability times. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

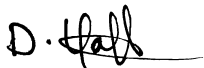
Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

ALS Environmental Ltd

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Signed:



Name: **D. Hoffman**

Date: **20 June 2017**

Title: **Inorganic Team Leader**

ANALYST COMMENTS FOR REPORT

COV/1397069/2017

Issue 1

Date of Issue: **20 June 2017**

Sample No	Analysis Comments
16139709	This sample has been analysed for pH, Tin Total as Sn, Tin, Filtered as Sn outside recommended stability times. It is therefore possible that the results provided may be compromised.

Signed:



Name: **D. Hoffman**

Date: **20 June 2017**

Title: **Inorganic Team Leader**

DETERMINAND COMMENTS FOR REPORT COV/1397069/2017

ISSUE 1

Date of Issue : 20 June 2017

Sample No	Description	Determinand	Comments

Signed:



Name: D. Hoffman

Date: 20 June 2017

Title: Inorganic Team Leader

ALS Environmental Ltd
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www.alsenvironmental.co.uk

Ms Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon CV37 8AQ
Warwickshire

11 August 2017

Test Report: COV/1414808/2017

Dear Ms Sidney

Analysis of your sample(s) submitted on 24 July 2017 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

Signed:



Name: C. Law

Title: Inorganics Operations Manager



Report Summary

**Ms Georgina Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon
Warwickshire
CV37 8AQ**



ANALYSED BY



Date of Issue: **11 August 2017**

Report Number: **COV/1414808/2017**

Issue **2**

This issue replaces
all previous issues

Job Description: Rabone Lane Shredder

Job Location: Smethwick Shredder Site

Number of Samples
included in this report **2**

Job Received: **24 July 2017**

Number of Test Results
included in this report **26**

Analysis Commenced: **26 July 2017**

Signed:

Name: **C. Law**

Date: **11 August 2017**

Title: **Inorganics Operations Manager**

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.

Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory.

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Certificate of Analysis

ANALYSED BY



Report Number: **COV/1414808/2017**
Laboratory Number: **16257544**
Sample Source: **Sims Group UK Ltd**
Sample Point Description: **Sims Group UK Ltd**
Sample Description: **Rabone Lane Shredder**
Sample Matrix: **Trade Effluent**
Sample Date/Time: **20 July 2017 12:15**
Sample Received: **24 July 2017**
Analysis Complete: **11 August 2017**

Issue **2**
Sample **1** of **2**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Antimony Ultra Low Total as Sb	0.0096	mg/l	31/07/2017	Y Cov	WAS060
Oil and Grease	16.0	mg/l	02/08/2017	Y S	SUBCON
Aluminium, Total as Al	4.1	mg/l	02/08/2017	Y Cov	WAS049
Cadmium , Total as Cd	6.00	ug/l	02/08/2017	Y Cov	WAS049
Chromium , Total as Cr	22.6	ug/l	02/08/2017	Y Cov	WAS049
Copper , Total as Cu	112	ug/l	02/08/2017	Y Cov	WAS049
Iron, Total as Fe	6700	ug/l	02/08/2017	Y Cov	WAS049
Lead , Total as Pb	411	ug/l	02/08/2017	Y Cov	WAS049
Nickel , Total as Ni	60.8	ug/l	02/08/2017	Y Cov	WAS049
Tin , Total as Sn	0.015	mg/l	02/08/2017	Y Cov	WAS049
Zinc , Total as Zn	1850	ug/l	02/08/2017	Y Cov	WAS049
pH	6.9	pH units	26/07/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	21.1	mg/l	02/08/2017	Y Cov	WAS036
Phosphorus , Total as P	1.36	mg/l	02/08/2017	Y Cov	WAS049
Total Suspended Solids	104	mg/l	07/08/2017	Y Cov	WAS006
COD (Total)	308	mg/l	06/08/2017	Y Cov	WAS040

Analyst Comments for 16257544:

This sample has been analysed for pH, Total Suspended Solids, Ammoniacal Nitrogen as N, COD (Total) outside recommended stability times. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **C. Law**

Date: **11 August 2017**

Title: **Inorganics Operations Manager**

ALS Environmental Ltd

Torrington Avenue, Coventry, CV4 9GU
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Certificate of Analysis

ANALYSED BY



Report Number: **COV/1414808/2017**
Laboratory Number: **16257545**
Sample Source: **Sims Group UK Ltd**
Sample Point Description: **Sims Group UK Ltd**
Sample Description: **Rabone Lane Shredder**
Sample Matrix: **Trade Effluent**
Sample Date/Time: **20 July 2017** **12:20**
Sample Received: **24 July 2017**
Analysis Complete: **11 August 2017**

Issue **2**
Sample **2** of **2**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Antimony, trace filtered as Sb	0.0017	mg/l	02/08/2017	Y Cov	WAS060
Aluminium, Filtered as Al	<0.1	mg/l	02/08/2017	Y Cov	WAS049
Cadmium, Filtered as Cd	<0.6	ug/l	02/08/2017	Y Cov	WAS049
Chromium, Filtered as Cr	3.40	ug/l	02/08/2017	Y Cov	WAS049
Copper, Filtered as Cu	<9.00	ug/l	02/08/2017	Y Cov	WAS049
Iron, Filtered as Fe	254	ug/l	02/08/2017	Y Cov	WAS049
Lead, Filtered as Pb	<6.00	ug/l	02/08/2017	Y Cov	WAS049
Nickel, Filtered as Ni	22.6	ug/l	02/08/2017	Y Cov	WAS049
Tin, Filtered as Sn	0.011	mg/l	02/08/2017	Y Cov	WAS049
Zinc, Filtered as Zn	<18.0	ug/l	02/08/2017	Y Cov	WAS049

Analyst Comments for 16257545:

This sample has been analysed for Tin, Filtered as Sn outside recommended stability times. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **C. Law**

Date: **11 August 2017**

Title: **Inorganics Operations Manager**

ALS Environmental Ltd

Torrington Avenue, Coventry, CV4 9GU
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ANALYST COMMENTS FOR REPORT

COV/1414808/2017

Issue 2

Date of Issue: **11 August 2017**

Sample No	Analysis Comments
16257544	This sample has been analysed for pH, Total Suspended Solids, Ammoniacal Nitrogen as N, COD (Total) outside recommended stability times. It is therefore possible that the results provided may be compromised.
16257545	This sample has been analysed for Tin, Filtered as Sn outside recommended stability times. It is therefore possible that the results provided may be compromised.

Signed:



Name: **C. Law**

Date: **11 August 2017**

Title: **Inorganics Operations Manager**

DETERMINAND COMMENTS FOR REPORT COV/1414808/2017

ISSUE 2

Date of Issue : 11 August 2017

Sample No	Description	Determinand	Comments

Signed:



Name: **C. Law**

Date: **11 August 2017**

Title: **Inorganics Operations Manager**

**Ms Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon CV37 8AQ
Warwickshire**

ALS Environmental Ltd
Torrington Avenue
Coventry
CV4 9GU

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F: +44 (0)24 7685 6575
www.alsenvironmental.co.uk

04 September 2017

Test Report: COV/1423049/2017

Dear Ms Sidney

Analysis of your sample(s) submitted on 10 August 2017 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

Signed: 

Name: A. Horobin

Title: Organic Operations Manager



Report Summary

**Ms Georgina Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon
Warwickshire
CV37 8AQ**



ANALYSED BY



Date of Issue: **04 September 2017**

Report Number: COV/1423049/2017

Issue 1

This issue replaces
all previous issues

Job Description: Rabone Lane Shredder

Job Location: Rabone Lane Shredder

Number of Samples
included in this report **2**

Job Received: **10 August 2017**

Number of Test Results
included in this report **26**

Analysis Commenced: **13 August 2017**

Signed: *A Horobin*

Name: **A. Horobin**

Date: **04 September 2017**

Title: **Organic Operations Manager**

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.

Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory.

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Certificate of Analysis

ANALYSED BY



Report Number: **COV/1423049/2017**
Laboratory Number: **16312921**
Sample Source: **Sims Group UK Ltd**
Sample Point Description: **Sims Group UK Ltd**
Sample Description: **Rabone Lane Shredder**
Sample Matrix: **Trade Effluent**
Sample Date/Time: **09 August 2017 11:00**
Sample Received: **10 August 2017**
Analysis Complete: **25 August 2017**

Issue **1**
Sample **1** of **2**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Antimony Ultra Low Total as Sb	0.024	mg/l	24/08/2017	Y Cov	WAS060
Oil and Grease	12.4	mg/l	17/08/2017	Y S	SUBCON
Aluminium, Total as Al	8.2	mg/l	21/08/2017	Y Cov	WAS049
Cadmium , Total as Cd	23.9	ug/l	21/08/2017	Y Cov	WAS049
Chromium , Total as Cr	44.7	ug/l	21/08/2017	Y Cov	WAS049
Copper , Total as Cu	712	ug/l	21/08/2017	Y Cov	WAS049
Iron, Total as Fe	17200	ug/l	21/08/2017	Y Cov	WAS049
Lead , Total as Pb	964	ug/l	21/08/2017	Y Cov	WAS049
Nickel , Total as Ni	99.4	ug/l	21/08/2017	Y Cov	WAS049
Tin , Total as Sn	0.081	mg/l	21/08/2017	Y Cov	WAS049
Zinc , Total as Zn	4700	ug/l	21/08/2017	Y Cov	WAS049
pH	7.0	pH units	19/08/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	18.7	mg/l	13/08/2017	Y Cov	WAS036
Phosphorus , Total as P	2.94	mg/l	21/08/2017	Y Cov	WAS049
Total Suspended Solids	240	mg/l	24/08/2017	Y Cov	WAS006
COD (Total)	308	mg/l	24/08/2017	Y Cov	WAS040

Analyst Comments for 16312921:

This sample has been analysed for pH, Total Suspended Solids, COD (Total), Tin Total as Sn outside recommended stability times. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed: *A I Horobin*

Name: **A. Horobin**

Date: **04 September 2017**

Title: **Organic Operations Manager**

ALS Environmental Ltd

Torrington Avenue, Coventry, CV4 9GU
Tel:+44 (0)24 7642 1213 Fax:+44 (0)24 7685 6575

Certificate of Analysis

ANALYSED BY



Report Number: **COV/1423049/2017**
Laboratory Number: **16312922**
Sample Source: **Sims Group UK Ltd**
Sample Point Description: **Sims Group UK Ltd**
Sample Description: **Rabone Lane Shredder Filtered**
Sample Matrix: **Trade Effluent**
Sample Date/Time: **09 August 2017 11:00**
Sample Received: **10 August 2017**
Analysis Complete: **25 August 2017**

Issue **1**
Sample **2** of **2**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Antimony, trace filtered as Sb	0.0057	mg/l	25/08/2017	Y Cov	WAS060
Aluminium, Filtered as Al	<0.1	mg/l	21/08/2017	Y Cov	WAS049
Cadmium, Filtered as Cd	<0.6	ug/l	21/08/2017	Y Cov	WAS049
Chromium, Filtered as Cr	<2.00	ug/l	21/08/2017	Y Cov	WAS049
Copper, Filtered as Cu	17.3	ug/l	21/08/2017	Y Cov	WAS049
Iron, Filtered as Fe	391	ug/l	21/08/2017	Y Cov	WAS049
Lead, Filtered as Pb	6.90	ug/l	21/08/2017	Y Cov	WAS049
Nickel, Filtered as Ni	24.8	ug/l	21/08/2017	Y Cov	WAS049
Tin, Filtered as Sn	<0.007	mg/l	21/08/2017	Y Cov	WAS049
Zinc, Filtered as Zn	103	ug/l	21/08/2017	Y Cov	WAS049

Analyst Comments for 16312922:

This sample has been analysed for Tin, Filtered as Sn outside recommended stability times. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed: *A I Horobin*

Name: **A. Horobin**

Date: **04 September 2017**

Title: **Organic Operations Manager**

ALS Environmental Ltd

Torrington Avenue, Coventry, CV4 9GU
Tel:+44 (0)24 7642 1213 Fax:+44 (0)24 7685 6575

ANALYST COMMENTS FOR REPORT

COV/1423049/2017

Issue 1

Date of Issue: 04 September 2017

Sample No	Analysis Comments
16312921	This sample has been analysed for pH, Total Suspended Solids, COD (Total), Tin Total as Sn outside recommended stability times. It is therefore possible that the results provided may be compromised.
16312922	This sample has been analysed for Tin, Filtered as Sn outside recommended stability times. It is therefore possible that the results provided may be compromised.

Signed: *A Horobin*

Name: **A. Horobin**

Date: **04 September 2017**

Title: **Organic Operations Manager**

DETERMINAND COMMENTS FOR REPORT COV/1423049/2017

ISSUE 1

Date of Issue : 04 September 2017

Sample No	Description	Determinand	Comments

Signed: *A. Horobin*

Name: **A. Horobin**

Date: **04 September 2017**

Title: **Organic Operations Manager**

**Ms Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon CV37 8AQ
Warwickshire**

ALS Environmental Ltd
Torrington Avenue
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CV4 9GU

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F: +44 (0)24 7685 6575
www.alsenvironmental.co.uk

20 September 2017

Test Report: COV/1434372/2017

Dear Ms Sidney

Analysis of your sample(s) submitted on 06 September 2017 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

Signed:



Name: A. Zunzunegui

Title: Organic Team Leader



Report Summary

**Ms Georgina Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon
Warwickshire
CV37 8AQ**

ANALYSED BY



Date of Issue: **20 September 2017**

Report Number: **COV/1434372/2017**

Issue **1**

This issue replaces
all previous issues

Job Description: Rabone Lane Shredder

Job Location: Rabone Lane Shredder

Number of Samples
included in this report **1**

Job Received: **06 September 2017**

Number of Test Results
included in this report **16**

Analysis Commenced: **08 September 2017**

Signed:

Name: **A. Zunzunegui**

Date: **20 September 2017**

Title: **Organic Team Leader**

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.

Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory.

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Certificate of Analysis

ANALYSED BY



Report Number: **COV/1434372/2017**
Laboratory Number: **16388934**
Sample Source: **Sims Group UK Ltd**
Sample Point Description: **Sims Group UK Ltd**
Sample Description: **Rabone Lane Shredder**
Sample Matrix: **Trade Effluent**
Sample Date/Time: **06 September 2017 10:00**
Sample Received: **06 September 2017**
Analysis Complete: **20 September 2017**

Issue **1**
Sample **1** of **1**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Antimony Ultra Low Total as Sb	0.011	mg/l	18/09/2017	Y Cov	WAS060
Oil and Grease	7.27	mg/l	18/09/2017	Y S	SUBCON
Aluminium, Total as Al	2.6	mg/l	18/09/2017	Y Cov	WAS049
Cadmium , Total as Cd	6.50	ug/l	18/09/2017	Y Cov	WAS049
Chromium , Total as Cr	14.0	ug/l	18/09/2017	Y Cov	WAS049
Copper , Total as Cu	262	ug/l	18/09/2017	Y Cov	WAS049
Iron, Total as Fe	5200	ug/l	18/09/2017	Y Cov	WAS049
Lead , Total as Pb	265	ug/l	18/09/2017	Y Cov	WAS049
Nickel , Total as Ni	43.6	ug/l	18/09/2017	Y Cov	WAS049
Tin , Total as Sn	0.028	mg/l	18/09/2017	Y Cov	WAS049
Zinc , Total as Zn	1480	ug/l	18/09/2017	Y Cov	WAS049
pH	7.4	pH units	08/09/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	23.7	mg/l	10/09/2017	Y Cov	WAS036
Phosphorus , Total as P	2.48	mg/l	18/09/2017	Y Cov	WAS049
Total Suspended Solids	95.0	mg/l	20/09/2017	Y Cov	WAS006
COD (Total)	211	mg/l	12/09/2017	Y Cov	WAS040

Analyst Comments for 16388934:

This sample has been analysed for Total Suspended Solids, Tin Total as Sn outside recommended stability times. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **A. Zunzunegui**

Date: **20 September 2017**

Title: **Organic Team Leader**

ALS Environmental Ltd

Torrington Avenue, Coventry, CV4 9GU
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ANALYST COMMENTS FOR REPORT

COV/1434372/2017

Issue 1

Date of Issue: **20 September 2017**

Sample No	Analysis Comments
16388934	This sample has been analysed for Total Suspended Solids, Tin Total as Sn outside recommended stability times. It is therefore possible that the results provided may be compromised.

Signed:



Name: **A. Zunzunegui**

Date: **20 September 2017**

Title: **Organic Team Leader**

DETERMINAND COMMENTS FOR REPORT COV/1434372/2017

ISSUE 1

Date of Issue : 20 September 2017

Sample No	Description	Determinand	Comments

Signed:



Name: **A. Zunzunegui**

Date: **20 September 2017**

Title: **Organic Team Leader**

Ms Sidney
Sims Group UK Ltd
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Warwickshire

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www.alsenvironmental.co.uk

23 November 2017

Test Report: COV/1463051/2017

Dear Ms Sidney

Analysis of your sample(s) submitted on 09 November 2017 is now complete and we have pleasure in enclosing the appropriate test report(s).


An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

Signed: 

Name: P. Patel

Title: Inorganic Team Leader



Report Summary

**Ms Georgina Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon
Warwickshire
CV37 8AQ**



ANALYSED BY



Date of Issue: **23 November 2017**

Report Number: **COV/1463051/2017**

Issue **1**

This issue replaces
all previous issues

Job Description: Rabone Lane Shredder

Job Location: Rabone Lane Shredder

Number of Samples
included in this report **2**

Job Received: **09 November 2017**

Number of Test Results
included in this report **36**

Analysis Commenced: **13 November 2017**

Signed:

Name: **P. Patel**

Date: **23 November 2017**

Title: **Inorganic Team Leader**

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.

Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory.

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Certificate of Analysis

ANALYSED BY



Report Number: **COV/1463051/2017**
 Laboratory Number: **16572403**
 Sample Source: **Sims Group UK Ltd**
 Sample Point Description: **Sims Group UK Ltd**
 Sample Description: **Shredder Discharge**
 Sample Matrix: **Trade Effluent**
 Sample Date/Time: **07 November 2017**
 Sample Received: **09 November 2017**
 Analysis Complete: **23 November 2017**

Issue **1**
 Sample **1** of **2**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Antimony, trace filtered as Sb	0.0074	mg/l	17/11/2017	Y Cov	WAS060
Antimony Ultra Low Total as Sb	0.019	mg/l	17/11/2017	Y Cov	WAS060
Oil and Grease	27.8	mg/l	16/11/2017	Y S	SUBCON
Aluminium, Total as Al	11.6	mg/l	15/11/2017	Y Cov	WAS049
Aluminium, Filtered as Al	<0.1	mg/l	14/11/2017	Y Cov	WAS049
Cadmium , Total as Cd	15.9	ug/l	15/11/2017	Y Cov	WAS049
Cadmium, Filtered as Cd	<0.6	ug/l	14/11/2017	Y Cov	WAS049
Chromium , Total as Cr	62.7	ug/l	15/11/2017	Y Cov	WAS049
Chromium, Filtered as Cr	<2.00	ug/l	14/11/2017	Y Cov	WAS049
Copper , Total as Cu	725	ug/l	15/11/2017	Y Cov	WAS049
Copper, Filtered as Cu	<9.00	ug/l	14/11/2017	Y Cov	WAS049
Iron, Total as Fe	18600	ug/l	15/11/2017	Y Cov	WAS049
Iron, Filtered as Fe	702	ug/l	14/11/2017	Y Cov	WAS049
Lead , Total as Pb	1150	ug/l	15/11/2017	Y Cov	WAS049
Lead, Filtered as Pb	8.30	ug/l	14/11/2017	Y Cov	WAS049
Nickel , Total as Ni	107	ug/l	15/11/2017	Y Cov	WAS049
Nickel, Filtered as Ni	25.4	ug/l	14/11/2017	Y Cov	WAS049
Tin , Total as Sn	0.075	mg/l	15/11/2017	Y Cov	WAS049
Tin, Filtered as Sn	<0.007	mg/l	14/11/2017	Y Cov	WAS049
Zinc , Total as Zn	8190	ug/l	15/11/2017	Y Cov	WAS049
Zinc, Filtered as Zn	206	ug/l	14/11/2017	Y Cov	WAS049
pH	7.1	pH units	22/11/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	13.0	mg/l	13/11/2017	Y Cov	WAS036
Phosphorus , Total as P	2.24	mg/l	15/11/2017	Y Cov	WAS049
Total Suspended Solids	290	mg/l	23/11/2017	Y Cov	WAS006
COD (Total)	505	mg/l	13/11/2017	Y Cov	WAS040

Analyst Comments for 16572403:

This sample has been analysed for pH, Total Suspended Solids outside recommended stability times. It is therefore possible that the results provided may be compromised.

ALS Environmental Ltd

Torrington Avenue, Coventry, CV4 9GU
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This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Che = Chester(CH4 9EP), Ctd = Coatbridge(ML5 4FR), Cov = Coventry(CV4 9GU), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:



Name: **P. Patel**

Date: **23 November 2017**

Title: **Inorganic Team Leader**

Certificate of Analysis

ANALYSED BY



Report Number: **COV/1463051/2017**
Laboratory Number: **16572404**
Sample Source: **Sims Group UK Ltd**
Sample Point Description: **Sims Group UK Ltd**
Sample Description: **Shredder Discharge Filtered**
Sample Matrix: **Trade Effluent**
Sample Date/Time: **07 November 2017**
Sample Received: **09 November 2017**
Analysis Complete: **23 November 2017**

Issue **1**
Sample **2** of **2**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Antimony, trace filtered as Sb	0.0091	mg/l	17/11/2017	Y Cov	WAS060
Aluminium, Filtered as Al	<0.1	mg/l	14/11/2017	Y Cov	WAS049
Cadmium, Filtered as Cd	<0.6	ug/l	14/11/2017	Y Cov	WAS049
Chromium, Filtered as Cr	<2.00	ug/l	14/11/2017	Y Cov	WAS049
Copper, Filtered as Cu	<9.00	ug/l	14/11/2017	Y Cov	WAS049
Iron, Filtered as Fe	<230	ug/l	14/11/2017	Y Cov	WAS049
Lead, Filtered as Pb	<6.00	ug/l	14/11/2017	Y Cov	WAS049
Nickel, Filtered as Ni	20.6	ug/l	14/11/2017	Y Cov	WAS049
Tin, Filtered as Sn	<0.007	mg/l	14/11/2017	Y Cov	WAS049
Zinc, Filtered as Zn	185	ug/l	14/11/2017	Y Cov	WAS049

Analyst Comments for 16572404: No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Che = Chester(CH4 9EP), Ctd = Coatbridge(ML5 4FR), Cov = Coventry(CV4 9GU), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected. For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **P. Patel**

Date: **23 November 2017**

Title: **Inorganic Team Leader**

ALS Environmental Ltd

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ANALYST COMMENTS FOR REPORT COV/1463051/2017

Issue 1 This issue replaces all previous issues

Date of Issue: **23 November 2017**

Sample No	Analysis Comments
16572403	This sample has been analysed for pH, Total Suspended Solids outside recommended stability times. It is therefore possible that the results provided may be compromised.
16572404	

Signed: 

Name: **P. Patel**

Date: **23 November 2017**

Title: **Inorganic Team Leader**


DETERMINAND COMMENTS FOR REPORT COV/1463051/2017

ISSUE 1

Date of Issue: 23 November 2017

This issue replaces
all previous issues

Sample No	Description	Determinand	Comments

Signed: 	Name: P. Patel	Date: 23 November 2017
	Title: Inorganic Team Leader	

**Ms Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon CV37 8AQ
Warwickshire**

ALS Environmental Ltd
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www.alsenvironmental.co.uk

22 December 2017

Test Report: COV/1478855/2017

Dear Ms Sidney

Analysis of your sample(s) submitted on 08 December 2017 is now complete and we have pleasure in enclosing the appropriate test report(s).


An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

Signed: 

Name: P. Patel

Title: Inorganic Team Leader



Report Summary

**Ms Georgina Sidney
Sims Group UK Ltd
Long Marston
Stratford-upon-Avon
Warwickshire
CV37 8AQ**



ANALYSED BY



Date of Issue: **22 December 2017**

Report Number: COV/1478855/2017

Issue 1

This issue replaces
all previous issues

Job Description: Rabone Lane Shredder

Job Location: Rabone Lane Shredder

Number of Samples
included in this report **1**

Job Received: **08 December 2017**

Number of Test Results
included in this report **26**

Analysis Commenced: **13 December 2017**

Signed:

Name: **P. Patel**

Date: **22 December 2017**

Title: **Inorganic Team Leader**

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.

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Certificate of Analysis

ANALYSED BY



Report Number: **COV/1478855/2017**
Laboratory Number: **16668059**
Sample Source: **Sims Group UK Ltd**
Sample Point Description: **Sims Group UK Ltd**
Sample Description: **Rabone Lane Shredder Site**
Sample Matrix: **Trade Effluent**
Sample Date/Time: **07 December 2017**
Sample Received: **08 December 2017**
Analysis Complete: **22 December 2017**

Issue **1**
Sample **1** of **1**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Antimony, trace filtered as Sb	0.0051	mg/l	18/12/2017	Y Cov	WAS060
Antimony Ultra Low Total as Sb	0.016	mg/l	14/12/2017	Y Cov	WAS060
Oil and Grease	6.65	mg/l	19/12/2017	Y S	SUBCON
Aluminium, Total as Al	5.9	mg/l	14/12/2017	Y Cov	WAS049
Aluminium, Filtered as Al	<0.1	mg/l	18/12/2017	Y Cov	WAS049
Cadmium , Total as Cd	8.20	ug/l	14/12/2017	Y Cov	WAS049
Cadmium, Filtered as Cd	<0.6	ug/l	18/12/2017	Y Cov	WAS049
Chromium , Total as Cr	43.8	ug/l	14/12/2017	Y Cov	WAS049
Chromium, Filtered as Cr	2.30	ug/l	18/12/2017	Y Cov	WAS049
Copper , Total as Cu	358	ug/l	14/12/2017	Y Cov	WAS049
Copper, Filtered as Cu	<9.00	ug/l	18/12/2017	Y Cov	WAS049
Iron, Total as Fe	7400	ug/l	14/12/2017	Y Cov	WAS049
Iron, Filtered as Fe	867	ug/l	18/12/2017	Y Cov	WAS049
Lead , Total as Pb	520	ug/l	14/12/2017	Y Cov	WAS049
Lead, Filtered as Pb	<6.00	ug/l	18/12/2017	Y Cov	WAS049
Nickel , Total as Ni	66.3	ug/l	14/12/2017	Y Cov	WAS049
Nickel, Filtered as Ni	18.3	ug/l	19/12/2017	Y Cov	WAS049
Tin , Total as Sn	0.048	mg/l	14/12/2017	Y Cov	WAS049
Tin, Filtered as Sn	0.015	mg/l	18/12/2017	Y Cov	WAS049
Zinc , Total as Zn	2800	ug/l	14/12/2017	Y Cov	WAS049
Zinc, Filtered as Zn	<18.0	ug/l	18/12/2017	Y Cov	WAS049
pH	7.1	pH units	22/12/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	30.4	mg/l	13/12/2017	Y Cov	WAS036
Phosphorus , Total as P	2.32	mg/l	14/12/2017	Y Cov	WAS049
Total Suspended Solids	236	mg/l	22/12/2017	Y Cov	WAS006
COD (Total)	503	mg/l	22/12/2017	Y Cov	WAS040

Analyst Comments for 16668059:

This sample has been analysed for pH, Total Suspended Solids, COD (Total) outside recommended stability times. It is therefore possible that the results provided may be compromised.

ALS Environmental Ltd

Torrington Avenue, Coventry, CV4 9GU
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This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: CHE = Chester(CH4 9EP), CTD = Coatbridge(ML5 4FR), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2SW), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:



Name: **P. Patel**

Date: **22 December 2017**

Title: **Inorganic Team Leader**



ANALYST COMMENTS FOR REPORT COV/1478855/2017

Issue 1 This issue replaces all previous issues

Date of Issue: **22 December 2017**

Sample No	Analysis Comments
16668059	This sample has been analysed for pH, Total Suspended Solids, COD (Total) outside recommended stability times. It is therefore possible that the results provided may be compromised.

Signed: 

Name: **P. Patel**

Date: **22 December 2017**

Title: **Inorganic Team Leader**


DETERMINAND COMMENTS FOR REPORT COV/1478855/2017

ISSUE 1

Date of Issue: 22 December 2017

This issue replaces
all previous issues

Sample No	Description	Determinand	Comments

Signed: 	Name: P. Patel	Date: 22 December 2017
	Title: Inorganic Team Leader	

Sewage Treatment Reduction Factors for H1 Assessments

Multiply the concentration of the substance in your effluent by the sewage treatment reduction factor (STRF) to work out the concentration remaining in the sewage effluent after treatment.

Substance	Percentage	Percentage	Percentage	Percentage volatilised	STRF (proportion remaining) in activated sludge plant	STRF (proportion remaining) for water filter	STRF (proportion remaining) after volatilisation
Acetaldehyde (ethanal)	-	-	3.14	-	-	-	0.9686
Acrolein	-	-	5.81	-	-	-	0.9419
Acrylamide (2-propenamamide)	-	-	0	-	-	-	1
Acrylonitrile (2-propenenitrile)	-	-	6.46	-	-	-	0.9354
Alachlor	25	25	-	-	0.75	0.75	-
Aldrin	99.94	99.94	-	-	0.0006	0.0006	-
Allyl alcohol (2-propen-1-ol)	-	-	0.28	-	-	-	0.9972
Aluminium (reactive)	0	0	-	-	1	1	-
Amitrole (aminotriazole)	-	-	0	-	-	-	1
Ammonia	92	92	-	-	0.08	0.08	-
Aniline (benzeneamine)	95	95	-	-	0.05	0.05	-
Anthracene	12	12	-	-	0.88	0.88	-
Antimony and compounds - as Sb	-	-	0	-	-	-	1
Arsenic and compounds - as As	11	11	-	-	0.89	0.89	-
Asbestos	80	80	-	-	0.2	0.2	-
Atrazine	99.8	3.67	-	-	0.002	0.9633	-
Azamethiphos	8.9	8.9	-	-	0.911	0.911	-
Azinphos-methyl	99.86	99.86	-	-	0.0014	0.0014	-
Benzene	100	98	-	-	0	0.02	-
Benzo(a)pyrene	0	0	0	-	1	1	1
Benzo(b)fluoranthene	-	-	0	-	-	-	1
Benzo(g,h,i)perylene	39	39	-	-	0.61	0.61	-
Benzo(k)fluoranthene	-	-	0	-	-	-	1
Benzyl butyl phthalate (BBP)	96	80	-	-	0.04	0.2	-
Benzyl chloride (chloromethylbenzene)	-	-	15.49	-	-	-	0.8451
Beryllium and compounds - as Be	-	-	0	-	-	-	1
Bisphenol-a (BP)	63	63	-	-	0.37	0.37	-
Boron and compounds - as B	-	-	0	-	-	-	1
Brominated diphenylethers (BDE) - penta-, t	54	54	-	-	0.46	0.46	-
Bromoethene	-	-	82.19	-	-	-	0.1781
Butadiene (1,3-butadiene)	-	-	96.06	-	-	-	0.0394
Butene - all isomers	-	-	98.03	-	-	-	0.0197
Cadmium (dissolved)	11	11	-	-	0.89	0.89	-
Cadmium (total)	63	63	-	-	0.37	0.37	-
Carbon disulphide	-	-	0	-	-	-	1
Carbon tetrachloride (tetrachloromethane)	95	96	-	-	0.05	0.04	-
Chlordane	92.9	92.9	-	-	0.071	0.071	-
Chlordecone	87	87	-	-	0.13	0.13	-
Chlorfenvinphos	90	90	-	-	0.1	0.1	-
Chlorides - as Cl	0	0	-	-	1	1	-
Chloroethane	-	-	90.03	-	-	-	0.0997
Chlorofluorocarbons (CFCs)	-	-	96.31	-	-	-	0.0369
Chloroform (trichloromethane)	91	99	-	-	0.09	0.01	-
Chloroprene	-	-	94.47	-	-	-	0.0553
Chlorpyrifos	93	90	-	-	0.07	0.1	-
Chromium and compounds - as Cr	84	48	-	-	0.16	0.52	-
Chrysene	-	-	0.01	-	-	-	0.9999
Clotrimazole	97.2	97.2	-	-	0.028	0.028	-
Copper (dissolved)	42	42	-	-	0.58	0.58	-
Copper (total)	79	79	-	-	0.21	0.21	-

Substance	Percentage	Percentage	Percentage volatilised	STRF (proportion remaining) in activated sludge plant	STRF (proportion remaining) for water filter	STRF (proportion remaining) after volatilisation
Crotonaldehyde	-	-	1.07	-	-	0.9893
Cumene hydroperoxide	-	-	0.01	-	-	0.9999
Cyanides - as CN	68	68 -	-	0.32	0.32 -	-
Cypermethrin	98	95 -	-	0.02	0.05 -	-
Di(2-ethylhexyl)phthalate (DEHP)	90	90 -	-	0.1	0.1 -	-
Diazinon	99.84	93.56 -	-	0.0016	0.0644 -	-
Dibutyl phthalate (DBP)	99.8	99.8 -	-	0.002	0.002 -	-
Dichlorodiphenyltrichloroethane (DDT) - all	99.95	99.95 -	-	0.0005	0.0005 -	-
2,4-dichlorophenoxyacetic acid (2,4-D) - est	0	0 -	-	1	1 -	-
Dichlorvos	89.97	89.97 -	-	0.1003	0.1003 -	-
Diclofenac	18	18	-	0.82	0.82	-
Dieldrin	99.94	99.94 -	-	0.0006	0.0006 -	-
Diethyl aniline (N,N-diethyl benzenamine)	-	-	7.83	-	-	0.9217
Diethyl ether	-	-	33.5	-	-	0.665
Diisopropyl ether	-	-	47.4	-	-	0.526
Dimethyl-o-toluidine	-	-	4.51	-	-	0.9549
Dimethyl-p-toluidine	-	-	2.48	-	-	0.9752
Dimethyl sulphate	-	-	0.23	-	-	0.9977
Dimethylaniline (N,N-dimethylbenzenamine)	-	-	2.91	-	-	0.9709
1-ethyl-3,5-dimethylbenzene	-	-	44.88	-	-	0.5512
Dimethylformamide	-	-	0	-	-	1
Dioxane	-	-	0	-	-	1
Diphenylamine	-	-	0.17	-	-	0.9983
Diuron	40	20 -	-	0.6	0.8 -	-
Dodecylphenol	76.2	76.2 -	-	0.238	0.238 -	-
EDTA	37	37	-	0.63	0.63	-
Emamectin benzoate	94.1	94.1 -	-	0.059	0.059 -	-
Endosulfan	99.99	99.99 -	-	0.0001	0.0001 -	-
Endrin	99.94	99.94 -	-	0.0006	0.0006 -	-
Erythromycin	32	32	-	0.68	0.68	-
Ethinylestradiol (17?)	36	36	-	0.64	0.64	-
2-ethoxyethanol	-	-	0	-	-	1
2-ethoxyethylacetate	-	-	0.18	-	-	0.9982
Ethyl acrylate	-	-	13.44	-	-	0.8656
Ethyl benzene	87.1	85 -	-	0.129	0.15 -	-
Ethyl bromide	-	-	73.99	-	-	0.2601
Ethylene (ethene)	-	-	98.57	-	-	0.0143
Ethylene dichloride (1,2-dichloroethane)	34.04	34.04 -	-	0.6596	0.6596 -	-
Ethylene oxide (1,2-epoxyethane)	92.2	92.2 -	-	0.078	0.078 -	-
Ethyltoluene - all isomers	-	-	61.62	-	-	0.3838
Fenitrothion	99.86	99.86 -	-	0.0014	0.0014 -	-
Fluoranthene	27	27	-	0.73	0.73 -	-
Fluorides - as F	50	50 -	-	0.5	0.5 -	-
Fluorine and inorganic compounds - as HF	-	-	0	-	-	1
Fluoxetine	28	28	-	0.72	0.72	-
Formaldehyde (methanal)	-	-	0.02	-	-	0.9998
Halogenated organic compounds - as Cl	24	24 -	-	0.76	0.76 -	-
Halons	-	-	98.64	-	-	0.0136
Heptachlor	92.6	92.6 -	-	0.074	0.074 -	-
Hexabromobiphenyl	94.1	94.1 -	-	0.059	0.059 -	-
Hexabromocyclododecane	60	60 -	-	0.4	0.4 -	-
Hexachlorobenzene	97	74 -	-	0.03	0.26 -	-

Substance	Percentage	Percentage	Percentage volatilised	STRF (proportion remaining) in activated sludge plant	STRF (proportion remaining) for water filter	STRF (proportion remaining) after volatilisation
Hexachlorobutadiene	100	83 -		0	0.17 -	
1,2,3,4,5,6-hexachlorocyclohexane (HCH)	65	37 -		0.35	0.63 -	
Hexane	-	-	85.3	-	-	0.147
1-hexene	-	-	93.81	-	-	0.0619
Hydrobromofluorocarbons (HBFCs)	-	-	96.06	-	-	0.0394
Hydrochlorofluorocarbons (HCFCs)	-	-	52.83	-	-	0.4717
Hydrofluorocarbons (HFCs)	-	-	88.32	-	-	0.1168
Ibuprofen	93	93		0.07	0.07	
Indeno (1,2,3-c,d) pyrene	41	41	0	0.59	0.59	1
Iodomethane	-	-	66.87	-	-	0.3313
Iron (dissolved)	23	23		0.77	0.77	
Iron (total)	52	52		0.48	0.48	
Isodrin	93.5	93.5 -		0.065	0.065 -	
Isophorone	-	-	0.37	-	-	0.9963
Isophorone di-isocyanate	-	-	0.95	-	-	0.9905
Isoprene	-	-	95.81	-	-	0.0419
Isoproturon	55	55 -		0.45	0.45 -	
Lead (dissolved)	33	33		0.67	0.67	
Lead (total)	83	83 -		0.17	0.17 -	
Lindane	37	37 -		0.63	0.63 -	
Linuron	99.99	99.99 -		0.0001	0.0001 -	
Long chain (C18-28) chlorinated paraffins (L)	93	93 -		0.07	0.07 -	
Malathion	99.99	99.99 -		0.0001	0.0001 -	
Maleic anhydride	-	-	0	-	-	1
Manganese and compounds - as Mn	-	-	0	-	-	1
Mecoprop	0	0 -		1	1 -	
Medium chain (C14-17) chlorinated paraffin	93	93 -		0.07	0.07 -	
Mercury (dissolved)	0	0		1	1	
Mercury (total)	33	33 -		0.67	0.67 -	
Methane	-	-	100	-	-	0
Methanol	99	99 -		0.01	0.01 -	
2-methoxyethanol	-	-	0	-	-	1
2-(methoxyethoxy)ethanol	-	-	0.18	-	-	0.9982
2-methoxyethyl acetate	-	-	0.01	-	-	0.9999
2-methyl-2-butene	-	-	97.49	-	-	0.0251
3-methyl-1-butene	-	-	98.35	-	-	0.0165
Methyl bromide (bromomethane)	-	-	70.48	-	-	0.2952
Methyl chloride (chloromethane)	-	-	77.01	-	-	0.2299
Methyl chloroform (1,1,1-trichloroethane)	-	-	85.84	-	-	0.1416
Methyl chlorophenoxy acetic acid (MCPA)	3	3 -		0.97	0.97 -	
Methyl isocyanate	-	-	27.91	-	-	0.7209
Methylene chloride (dichloromethane)	94.5	90 -		0.055	0.1 -	
4,4'-methylene dianiline	-	-	0	-	-	1
4,4'-methylene diphenyl diisocyanate	-	-	0.01	-	-	0.9999
4,4'-methylenebis(2-chloroaniline)	-	-	0	-	-	1
Mirex	80	80 -		0.2	0.2 -	
Naphthalene	0.02	0.02 -		0.98	0.98 -	
Nickel (dissolved)	0	0		1	1	
Nickel (total)	24	24 -		0.76	0.76 -	
Nitrobenzene	-	-		-	-	
Nitrogen - total	52	52 -		0.48	0.48 -	
2-nitropropane	-	-	5.69	-	-	0.9431

Substance	Percentage	Percentage	Percentage volatilised	STRF (proportion remaining) in activated sludge plant	STRF (proportion remaining) for water filter	STRF (proportion remaining) after volatilisation
Non-methane volatile organic compounds (-	-	-	50	-	-	0.5
4-nonylphenol	83	83	-	0.17	0.17	-
Nonylphenol ethoxylates	79	79	-	0.21	0.21	-
Nonylphenols	71	71	-	0.29	0.29	-
Octylphenol ethoxylates	79	79	-	0.21	0.21	-
Octylphenols	73	73	-	0.27	0.27	-
Oestradiol (17 ?)	77	77	-	0.23	0.23	-
Oestrone	44	44	-	0.56	0.56	-
Ofloxacin	33	33	-	0.67	0.67	-
Organotin compounds - as Sn	90	90	-	0.1	0.1	-
Oxytetracycline	75	75	-	0.25	0.25	-
Para-dichlorobenzene (1,4-dichlorobenzene -	-	-	44.42	-	-	0.5558
Particulate matter - PM10	-	-	0	-	-	1
Particulate matter - PM2.5	-	-	0	-	-	1
Particulate matter - total	-	-	0	-	-	1
Pentachlorobenzene	83.6	83.6	-	0.164	0.164	-
Pentachlorophenol	96	76	-	0.04	0.24	-
Pentane	-	-	94.24	-	-	0.0576
Pentene - all isomers	-	-	97.77	-	-	0.0223
Perfluoro octanyl sulphate (PFOS)	96	96	-	0.04	0.04	-
Perfluorocarbons (PFCs)	-	-	0	-	-	1
Permethrin	80	80	-	0.2	0.2	-
Phenols - phenols and simple substituted ph	83	83	-	0.17	0.17	-
Phosgene	-	-	77.22	-	-	0.2278
Phosphorus containing compounds - as P	20	20	-	0.8	0.8	-
Polychlorinated biphenyls (PCBs)	98	84.47	-	0.02	0.1553	-
Polychlorinated biphenyls (PCBs) - as WHO	-	-	0.01	-	-	0.9999
Polychlorinated dibenzodioxins and dibenzoc	82	82	-	0.18	0.18	-
Polycyclic aromatic hydrocarbons (PAHs)	80	80	-	0.2	0.2	-
Propranolol	15	15	-	0.85	0.85	-
Propetamphos	13	13	-	0.87	0.87	-
Propylbenzene	-	-	70.55	-	-	0.2945
Propylene	-	-	98.27	-	-	0.0173
Propylene oxide	5	5	-	0.95	0.95	-
Selenium and compounds - as Se	-	-	0	-	-	1
Short chain (C10-13) chlorinated paraffins (C	93	93	-	0.07	0.07	-
Simazine	99.74	99.74	-	0.0026	0.0026	-
Styrene	-	-	50.32	-	-	0.4968
Sulphur hexafluoride	-	-	99.57	-	-	0.0043
Sulphur oxides (SO2 and SO3 as SO2)	-	-	0	-	-	1
Teflubenzuron	59.2	59.2	-	0.408	0.408	-
Tert-butyl methyl ether (MTBE)	99	99	-	0.01	0.01	-
4-tert-butyltoluene	97.2	97.2	-	0.028	0.028	-
Tetrabromo-bisphenol A (TBBPA)	98	98	-	0.02	0.02	-
Tetrachloroethane (1,1,2,2-tetrachloroethyl-	-	-	14.15	-	-	0.8585
Tetrachloroethylene	96	95	-	0.04	0.05	-
Tetrafluoroethylene	-	-	99.28	-	-	0.0072
Toluene	100	96	-	0	0.04	-
Toluene diisocyanate - all isomers	-	-	0.5	-	-	0.995
Total organic carbon (TOC)	-	-	100	-	-	0
Toxaphene	91	91	-	0.09	0.09	-
Tributyltin and compounds - as TBT	85	85	-	0.15	0.15	-

Substance	Percentage	Percentage	Percentage volatilised	STRF (proportion remaining) in activated sludge plant	STRF (proportion remaining) for water filter	STRF (proportion remaining) after volatilisation
Trichlorobenzene - all isomers	100	88 -		0	0.12 -	
Trichloroethylene	79.58	79.58 -		0.2042	0.2042 -	
Trichlorotoluene	-	-	8.15	-		0.9185
Triclosan	89	89 -		0.11	0.11 -	
Trifluralin	99.91	80.59 -		0.0009	0.1941 -	
Trimellitic anhydride	-	-	0	-		1
Trimethylbenzene - all isomers	-	-	54.88	-		0.4512
Triphenyltin and compounds - as TPT	90	90 -		0.1	0.1 -	
Vanadium and compounds - as V	-	-	0	-		1
Vinyl acetate	-	-	18.36	-		0.8164
Vinyl chloride	96.6	96.6 -		0.034	0.034 -	
Xylene - all isomers	100	93.5 -		0	0.065 -	
Zinc (dissolved)	0	0 -		1	1 -	
Zinc (total)	67	67		0.33	0.33	

H1 Assessment Tool – Summary Files

Sims Metals Management – Protocol for Sampling Site Drainage

Smethwick_Protocol for Monitoring Point Source Emissions to Foul Sewer at points S1 & S2.

This protocol is a written monitoring plan to meet the requirements of EPR/ZP3691ET IC6 and details proposals to undertake representative monitoring of the surface water discharged from points S1 and S2 shown on the plan in Schedule 7 including the parameters to be monitored, frequencies of monitoring and methods to be used.

Once approved by the Environment Agency, this protocol will be used to train nominated employees involved with the sampling of site drainage discharges to foul sewer. It will be available as a reference document / work instruction for all employees involved with the sampling of site drainage discharge to foul sewer. A copy will be provided to these employees as well as all Site Managers and Supervisors and will form an integral part of the sites Environment Management System.

The objective is to facilitate the gathering of representative water quality data for the surface water discharged to foul sewer for the purpose of assessing compliance with the trade effluent consent limits and environment permit.

This Work Instruction has been written with due regard to Environment Agency Guidance and Environment Agency Technical Guidance Note M18 (Monitoring) Monitoring of discharges to Water and Sewer, Version 5, October 2015.

The site drainage

The discharges from the site are to foul sewer and are shown on the Site plan in schedule 7 of the environment permit and extract below.

Schedule 7 – Site plan



S1 will consist of foul drainage from welfare facilities (kitchen, toilets) discharging to foul sewer on Rabone Lane. This discharge will be of domestic sewage and Severn Trent Water (STW) has confirmed this does not require a Trade Effluent Consent (TEC).

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Authorised by	EA Approval by email 05.01.17	Issue date	December 2016

S2 will consist of rainfall dependant surface water drainage run-off from the site surfacing, via an interceptor to foul sewer on Foundry Lane and is consented by STW as a Trade Effluent Consent Reference 008675V.

The Protocol.

The site drainage will be sampled in accordance with the following methodology:

a) **Sampling Frequency**

Samples will be taken quarterly in January, April, July & October.

The discharge from the site will be rainfall dependant and therefore there may be occasions when a sample is due to be taken, but it has not rained and it will not be possible to collect a sample as there is insufficient flow. In this event, the sample will be collected as soon as is practicable after the scheduled date.

b) **Sample Records**

A sampling record sheet will be completed at the time of sampling to record the following information: Date & time of sampling, name of sampler, flow conditions during sampling and a description of the sample (colour, odour, appearance etc). An example and a blank form are provided in Appendix 1. Copies of completed records will be available on site. Laboratory Reports will be kept on site.

c) **Sampling locations**

S2 – Manhole covered sample chamber located immediately downstream of the interceptor prior to discharge from site to foul sewer on Foundry Lane.

S1 – domestic sewage from toilets and washing facilities only and does not include site drainage. This will not be sampled.

d) **Monitoring Strategy**

Periodic monitoring will consist of discrete spot samples of effluent collected and preserved in accordance with the recommendation of the contracted laboratory. A spot sample is a discrete sample of the discharge and assesses the quality at that particular moment in time. This method of sampling is the most appropriate method for sampling intermittent discharges to assess compliance with trade effluent consents or permit conditions. The methodology detailed below will be adhered to.

e) **Employee Training & Responsibility**

All relevant employees will receive instruction and training in respect of this Monitoring protocol.

The nominated employee will be responsible for collecting, recording and dispatching samples to the laboratory in accordance with this protocol.

The Site Manager will have overall responsibility for ensuring that the nominated employee is monitoring in accordance with the protocol. The competency of the nominated employee will be reviewed by observations e.g. Safety Conversations and Job Cycle Checks.

The Site Manager will have overall responsibility for review of results, non-conformities, actions taken, record keeping and reporting.

f) **Health & Safety Considerations**

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Sampling will be undertaken with due regard for Health and Safety considerations, such as manual handling, PPE and safe access to monitoring location etc. Advice will be sought from Health & Safety advisor and a risk assessment will be undertaken.

Employees responsible for sampling will inform a supervisor or line manager when they are going to take a sample and when they expect to be back.

Employees will never enter into the sample chamber to be sampled. They will never leave an open manhole or chamber unguarded or unattended.

g) Sampling Equipment

The sample bottles and storage crates/cool boxes will be provided by the laboratory. Appropriate sampling equipment will be utilised e.g. dedicated sample rod & container.

h) Quality Control

Laboratories will have appropriate ISO, UKAS and MCERTS accreditation. UKAS accreditation to MCERTS for ISO 17025 available for sampling and analysis and MCERTS Laboratory equipment use covered by ISO 17025.

Only sample bottles provided by the laboratory will be used to contain the samples. The laboratory will be called in advance to arrange for the required number of sets of sample bottles and chain of custody forms to be delivered and a collection time arranged. Employees will check they have all the required equipment before commencing sampling.

Employees will ensure that the seal on the plastic bottle is not broken prior to use. If the seal is not intact the bottle will not be used. Glass bottles may not be sealed as they are reusable. Please ensure the glass bottles do not contain residue before use. NB. Some bottles will contain preservatives but this will be clearly marked on the bottle. Employees will always read the labels and instructions on the bottles.

Samples will be stored appropriately and sent to the laboratory within the designated stability periods as advised by the Laboratory.

Duplicate samples, sometimes referred to as split samples will be submitted for laboratory analysis as a method of assessing sampling uncertainty.

i) Sampling Methodology

Courier collection will be arranged in advance so the samples will not be retained unnecessarily on site pending collection.

A spot sample will only be collected when there is a flow. Samples will not be taken of standing water. The discharge from site will be weather dependant, spot samples will be collected during or after rain fall events.

Samples will only be taken from the identified sampling location S2.

A dedicated sampling rod with container attachment will be used for the purpose of collecting a sample. Employees will ensure it is clean before use and rinse it several times in the discharge to be sampled before collecting the sample.

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Samples will be collected away from the sides and bottom of the channel to avoid contamination of the sample with any sediment and biological growths.

Care will be taken when lifting manhole lids to avoid contamination of the sample by the disturbance of deposits from the cover when the cover is lifted and prevent contamination of the sample from the chamber walls and any bottom deposits.

Laboratory provided sample bottles should not be rinsed before filling unless specified by the laboratory. Bottles containing preservatives will not be rinsed. Bottles containing preservatives will be marked for example 'Contains Sodium Thiosulphate' and will have the necessary hazard warning stickers such as 'Corrosive' or 'Irritant' on the bottle. These bottles will also be accompanied by COSHH data or Material Safety Data Sheets (MSDS).

Sample container(s) will be filled in accordance with laboratory instructions. It may be necessary in some cases to fill the bottle completely (to avoid loss of volatile compounds) or to leave space for preservatives etc. If there is no laboratory guidance or instructions on the bottle, the bottles will be filled completely. The bottle will be tightly sealed so that the sample will not leak in transit and in order that it cannot be contaminated or alter significantly prior to analysis.

Collecting a duplicate sample will involve filling two sets of sample bottles simultaneously so that it has the effect of one spot sample being split over two separate samples for analysis. These will be labelled as separate samples so the laboratory is not aware of their duplicate nature. Duplicate samples will be collected for 25% of samples i.e. one quarter each year.

A check will be made that the sample is of a sufficient size – i.e. the correct number & type of sample containers have been filled.

Each sample container/bottle will be labelled with the Company name, site name, sample location reference, unique sample reference, date and time of sample and initials of sampler. For example Sims Group, Rabone Lane, S2, 10.10.16 @ 10.00hrs, CH. A description of the sample will be completed on the Sampling Record Form, Appendix 1.

Samples will be packaged in a way to avoid damage or spillage in transit in the cool boxes and packaging provided by the laboratory.

The necessary paperwork will be included with the samples – the laboratory chain of custody form will be completed and the site will keep a copy for their records. Sample matrix will be specified to enable the Laboratory to select the appropriate MCERTS UKAS accredited analysis.

The sample(s) will be kept cool, in the dark and submitted to the laboratory as soon as possible, within 24hrs of sampling or as specified by the laboratory sample stability requirements. If overnight storage is required, the samples will be kept in designated cool boxes or refrigerated. They will not be stored alongside food or drinks.

j) Sample Analysis

Samples will be sent to laboratory for analysis. Analysis will be undertaken for the parameters specified in the trade effluent consent and repeated below in section I), with additional analysis for dissolved metals. Limits of detection will be adequate to enable comparison with consent limits.

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The laboratory will send a receipt confirming the samples have been received and the analysis to be undertaken. This will have a reference/ job number. The details will be checked and the laboratory contacted immediately if any errors are detected.

k) Sample Results

Sample results should normally be received within 10 working days. The laboratory will be contacted quoting reference/job number if the results are not received within these timescales.

Results will be reviewed versus Trade Effluent Consent Limits upon receipt and where necessary actions taken as required.

l) Trade Effluent Consent 008675V Quality Conditions/ consent limits

Parameter	unit	Quality Conditions
Suspended Solids	mg/l	1000
pH	Unit	>6 <10
COD	mg/l	1000
Iron	mg/l	50
Aluminium	mg/l	50
Chromium	mg/l	1
Copper	mg/l	3
Lead	mg/l	4
Nickel	mg/l	1
Zinc	mg/l	10
Tin	mg/l	1
Ammoniacal Nitrogen	mg/l	50
NVM	mg/l	25
Phosphorus	mg/l	25
Antimony	mg/l	0.1
Cadmium	mg/l	0.05

m) Actions in the event of a breach of Quality Conditions/ Consent limit

In the event of a consent limit being exceeded the following action will be taken.

Senior Management and the Environment Advisors will be informed.

The source of the exceeded trigger level will be investigated and identified and remedial action will be taken, if required, to prevent reoccurrence.

Where required, further samples will be collected to monitor the situation or confirm effectiveness of maintenance/ improvement.

The EA will be notified using the appropriate agreed method.

n) Site Records

Sample records & laboratory results will be filed in site records along with any correspondence relating to the sampling. These records will be available on site for the life of the site.

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APPENDIX 1 - SAMPLE RECORD SHEET EXAMPLE

SITE NAME: Smethwick Rabone Lane

Unique sample reference	Date and time	Sample location	Flow conditions	Colour	Odour	Appearance	Visual oil or grease	Comments & observations	Weather conditions	Sampler initials
n/a	05.10.16 @ 11:00	S2	No flow visible	N/A	N/A	N/A	N/A	Insufficient flow to sample	Showers, previous week dry.	CH
SRL001	10.10.16 @ 09:30	S2	Moderate	None - Clear	Slightly earthy odour	Some particles suspended but otherwise clear	None	None	Heavy rain, persistent for days	CH
SRL002	08.01.17 @ 10:30	S2	Low	Light Grey tinge	None	Slightly cloudy	Yes – slight rainbow sheen on surface	Visual monitoring pending results	Showers, previous week dry.	CH
SRL003										
SRL004										
SRL005										

Notes on completing the sample record sheet.

- 'Unique sample reference' – please give each of your samples a unique reference number.
- 'Flow conditions' – please use your judgement to best describe the flow as either No flow, very low, low, moderate, high or very high.
- 'Odour' - odours are subjective but describe to the best of your ability – for example smells muddy, smells like rotten eggs or smells like wet dogs.
- 'Appearance' - describe the appearance of the sample from clear & transparent to cloudy & opaque. Please describe the sample using words such as clear, cloudy or opaque.
- Visual oil or grease' – Yes or None. If 'Yes' please provide detail. For example slight rainbow sheen on surface or oily residue present in sample etc.
- 'Comments and Observations' please note any actions taken – for example no sample taken.
- 'Weather condition' - Please detail conditions prior to and at the time of sampling.

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APPENDIX 1 - SAMPLE RECORD SHEET

SITE NAME: Smethwick Rabone Lane

Unique sample reference	Date and time	Sample location	Flow conditions	Colour	Odour	Appearance	Visual oil or grease	Comments & observations	Weather conditions	Sampler initials

Notes on completing the sample record sheet.

- 'Unique sample reference' – please give each of your samples a unique reference number.
- 'Flow conditions' – please use your judgement to best describe the flow as either No flow, very low, low, moderate, high or very high.
- 'Odour' - odours are subjective but describe to the best of your ability – for example smells muddy, smells like rotten eggs or smells like wet dogs.
- 'Appearance' - describe the appearance of the sample from clear & transparent to cloudy & opaque. Please describe the sample using words such as clear, cloudy or opaque.
- Visual oil or grease' – Yes or None. If 'Yes' please provide detail. For example slight rainbow sheen on surface or oily residue present in sample etc.
- 'Comments and Observations' please note any actions taken – for example no sample taken.
- 'Weather condition' - Please detail conditions prior to and at the time of sampling.

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