Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Severn Trent Water Limited

Finham Sewage Treatment Works
St. Martin's Road
Coventry
Warwickshire
CV3 6PR

Variation application number

S/11/26637/R/V003

Permit number

S/11/26637/R

Finham Sewage Treatment Works
Permit number S/11/26637/R

Introductory note

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

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. Only the variations specified in schedule 1 are subject to a right of appeal.

Finham Sewage Treatment Works (STW) currently comprises 2 inlet works (for the Sherbourne and Sowe inlets), 2 streams of primary settlement tanks (each consisting of 3 tanks), 3 activated sludge plants (ASP) (each consisting of 4 lanes) and 4 final settlement tanks (FST) per ASP stream (12 FSTs in total). Final effluent is discharged to the River Sowe at SP 33602 73782.

Screened flows at the Sherbourne inlet in excess of 1527 l/s are directed to 1 circular storm tank and 6 rectangular storm tanks depending upon the season. From 16 October to 14 May inclusive, only the rectangular tanks are used (with a working capacity of 27,172 m^3) but at all other times the circular tank is also utilised (bringing the total storm capacity up to 33,525 m^3). Storm flows are then directed to the Finham Brook at SP 33267 74232. Screening at the Sherbourne inlet works comprises 10mm mesh screening.

Screened flows at the Sowe inlet in excess of 1061 l/s are directed storm tanks with a total capacity of 17,948 m^3. Storm flows are then directed to the River Sowe at SP 33801 73877. Screening at the Sowe inlet works comprises 10mm mesh screening.

There is a Water Framework Directive (WFD) requirement to improve the status of the River Sowe from a phosphorus (P) perspective within the waterbody GB109054044540 – River Sowe from Confluence of Smite Brook to Confluence with River Avon

Catchment P modelling indicates that the required WFD P standard for Finham STW would be an annual average of 0.22 mg/l.

Finham STW already undertakes P removal in line with its obligation to meet an Urban Waste Water Treatment Regulations 1994 (UWWTR) standard of 1 mg/l annual average (AA). This is achieved through chemical dosing using ferric sulphate into the distribution chamber for the 3 activated sludge plants.

To meet the new 0.22 mg/l (AA) WFD P standard, the following modifications are being introduced:

- Integrated fixed film activated sludge (IFAS)
- two-stage chemical dosing
- Pre-ASP chemical dosing will use ferrous chloride (as a substitute for ferric sulphate
- Pre- tertiary solids removal (TSR) dosing using ferric sulphate
- A new TSR utilising magnetite dosing to improve settlement

River water quality modelling has indicated that the existing two-tier limits for total iron of 4,000 µg/l (95%ile & Look up table limit) and 8,000 µg/l (Upper Tier) will provide adequate protection to the receiving watercourse.

A hazardous pollutants review was completed for this site using the trade effluent data returns. This permit variation requires additional monitoring to be undertaken on the final effluent to enable an assessment of silver, cyanide, nickel and zinc to be carried out.

Given that the WFD obligations will not be required until the end of AMP6 (March 2020), the new P standard will not be introduced until such time as the new treatment and chemical dosing arrangements are fully optimised and compliance with the new standard is assured. Accordingly, this variation of permit S/11/26637/R introduces the new WFD P standard of 0.22 mg/l (AA) with effect from 31st March 2020.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Permit determined S/11/26637/R	04/04/2006	Original permit issued to Severn Trent Water Limited.
Application received S/11/26637/R/V001	Duly made 28/08/2012	Application to vary the seasonal storm tank capacity.
Variation determined S/11/26637/R	03/10/2012	Variation Notice issued.
Application S/11/26637/R/V002 (variation and consolidation)	Duly made 16/01/2014	Application to review the iron limit.
Variation determined S/11/26637/R	02/04/2014	Varied and consolidated permit issued in modern condition format.
Application S/11/26637/R/V003 (variation and consolidation)	Duly made 15/10/2019	Application to tighten the P limit under WFD.
Variation determined S/11/26637/R	20/01/2020	Varied and consolidated permit issued.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies and consolidates

Permit number

S/11/26637/R

Issued to

Severn Trent Water Limited ("the operator")

whose registered office is

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

company registration number **02366686**

to operate water discharge activities at

Finham Sewage Treatment Works
St. Martin's Road
Coventry
Warwickshire
CV3 6PR

to the extent set out in the schedules.

The notice shall take effect from 20/01/2020

Name	Date
Roger Horton	**20/01/2020**

Authorised on behalf of the Environment Agency

Schedule 1

Note: The conditions numbers used in this schedule refer to those in the consolidated permit.

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

2.1.1, 2.2.1, 2.3.2, 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5, 3.1.6, 3.2.1, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.3.7, 3.3.8, 3.3.9, 4.3.1, 4.3.2, 4.3.3, 4.3.5, 4.3.6, 4.4.2, Table S1.1, Table S3.1a, Table S3.1b, Table S3.2, Table S3.4, Table S4.1, Table S4.2, Schedule 5, Schedule 6 and Schedule 7.

Schedule 2 – consolidated permit

Consolidated permit S/11/26637/R issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

S/11/26637/R

This is the consolidated permit referred to in the variation and consolidation notice for application S/11/26637/R/V003 authorising,

Severn Trent Water Limited ("the operator"),

whose registered office is

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

company registration number **02366686**

to operate water discharge activities at

Finham Sewage Treatment Works
St. Martin's Road
Coventry
Warwickshire
CV3 6PR

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

Name	Date
Roger Horton	**20/01/2020**

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 so far as is reasonably practicable, including those risks 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 the permit.

2 Operations

2.1 Permitted activities

2.1.1 The only activities authorised by the permit are the activities specified in schedule 1 table S1.1.

2.2 The site

2.2.1 The discharge activities shall take place at the discharge points marked on the site plan at schedule 7 to this permit, and as listed in table S3.2; and, the operating techniques that are the subject of conditions prefixed by 2.3 shall be applied at the locations shown, or otherwise described, in schedule 7.

2.3 Operating techniques

2.3.1 For the activity A1 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.

2.3.2 For the discharge 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) Off-line storm storage 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 flow as soon as reasonably practicable. The minimum off-line storm storage required is specified in table S3.3

(c) The discharge shall not be comminuted or macerated and 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.

(d) Where a mechanically cleaned screen is installed, a telemetry alarm system shall be installed and maintained, as far as reasonably practicable, so as to give the operator immediate notification of a failure of the screen cleaning mechanism, unless otherwise agreed in writing by the Environment Agency. The operator shall take all appropriate measures to return the screen cleaning mechanism to normal operation as soon as reasonably practicable after receipt of notification of the failure.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.2 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

3 Emissions and monitoring

3.1 Emissions to water

3.1.1 The limits given in schedule 3, tables S3.1a and S3.1b shall not be exceeded.

3.1.2 The limits in schedule 3 tables S3.1a and S3.1b 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.

3.1.3

(a) For the emission limits in schedule 3 tables S3.1a and S3.1b to which this condition applies, no sample of the discharge taken at a time when unusual weather conditions are adversely affecting the operation of the waste water treatment works, shall be taken into account in deciding whether or not the emission limit has been complied with.

(b) On any occasion where unusual weather conditions adversely affect the operation of the waste water treatment works, the operator shall use its best endeavours to mitigate that adverse effect.

(c) For any sample of the discharge taken to be considered for the purposes of (a) above, the operator shall notify the Environment Agency in writing within 14 days of becoming aware that an emission limit has been exceeded. That notification shall include a full description of the unusual weather conditions and their impact on the operation of the works.

3.1.4

(a) For the emission limits in schedule 3 tables S3.1a and S3.1b to which this condition applies, no sample of the discharge taken at a time when abnormal operating conditions are adversely affecting the operation of the waste water treatment works, shall be taken into account in deciding whether or not the emission limit has been complied with.

(b) On any occasion where abnormal operating conditions adversely affect the operation of the waste water treatment works, the Operator shall use its best endeavours to mitigate that adverse effect.

(c) For any sample of the discharge taken to be considered for the purposes of (a) above, the Operator shall notify the Environment Agency in writing within 14 days of becoming aware that an emission limit has been exceeded. That notification shall include a full description of the abnormal operating conditions and their impact on the operation of the works.

3.1.5 The permitted Dry Weather Flow limit in schedule 3 tables S3.1a and S3.1b is set at the operator's planned annual 80% exceeded daily volume discharged.

(a) For compliance purposes an exceedance shall be recorded for a calendar year only when the limit in effect on 31 December of that calendar year is exceeded by 90% or more of the 'good' recorded Total Daily Volumes in that calendar year.

(b) Up to and including 31 December 2025:

(i) If an exceedance of the Dry Weather Flow limit is recorded in a calendar year then the operator shall, as soon as is reasonably practicable, investigate the reasons for the exceedance.

(ii) The operator shall report the reasons for the exceedance to the Environment Agency and the steps that it proposes to take to restore compliance.

(iii) An exceedance of the Dry Weather Flow limit shall not be recorded as a failure of the Dry Weather Flow limit in that calendar year if the operator takes appropriate steps to restore compliance.

(c) From the 1 January 2026 the limit has been complied with in an assessment calendar year unless;

(i) the limit was exceeded in the compliance assessment calendar year, and;

(ii) two or more exceedances have occurred in the preceding 4 calendar years.

3.1.6 The limits in schedule 3 tables S3.1a and S3.1b to which this condition applies are assessed using any series of samples of the discharge taken at regular but randomised intervals in any period of twelve consecutive months.

3.2 Emissions of substances not controlled by emission limits

3.2.1 For the activity A1 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 in the discharge not controlled by emission limits (excluding odour).

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 S3.1a, S3.1b and S3.4;

(b) inlet quality specified in tables S3.1a, S3.1b and S3.4.

3.3.2 The operator shall maintain records of all monitoring required by this permit.

3.3.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme 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 Accessible monitoring points shall be provided and maintained to enable the emissions monitoring programme and/or other monitoring to be carried out at the monitoring points specified in table S3.4 of schedule 3 and shown marked on the site plan in schedule 7.

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 cannot 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:

(a) pre-scheduled before each calendar year;

(b) Unless otherwise agreed in writing by the Environment Agency, the operator shall submit the monitoring programme for the following calendar year to the Environment Agency before the 1st of December; and

(c) 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.

3.3.8 Unless otherwise agreed in writing by the Environment Agency, after becoming aware, or following notification that a sample has not been taken on the schedule 3C Monitoring Programme pre-scheduled date, or is lost, or a result for that sample cannot be reported, the operator shall notify the Environment Agency of the missed event and the reschedule date as soon as reasonably practicable.

3.3.9

(a) Total Daily volumes shall be calculated from the average of the available 'good' 15 minute flow readings taken from midnight to midnight where;

Total Daily Volume (m3) = {Sum of 'good' readings (l/s) / number of 'good' readings} x {86,400 (s) / 1000}.

Where there are 87 or more 'good' 15 minute flow readings the Total Daily Volume shall be reported as 'good', where there are 1 – 86 'good' readings it shall be reported as 'suspect' and where there are no 'good' readings as 'missing'.

(b) The operator shall record all failure of the flow measurement system and any other breaks in the flow record and the reasons for all issues, failure and break that lead to missing or suspect Total Daily Volume records and all steps taken to prevent a re-occurrence.

(c) There shall be no more than 37 days and/or no more than 14 consecutive days with 'suspect' or 'missing' Total Daily Volumes in a calendar year, unless otherwise agreed in writing by the Environment Agency.

(d) All 15 minute flow readings shall be flagged as 'good', 'suspect' or 'missing' using an appropriate methodology set out in the operator's flow monitoring quality management system.

4 Information

4.1 Records

4.1.1 All records required to be made by schedule 3, 4 and 5 to 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 maintain convenient access, in either electronic or hard copy, to the records, plan and management system required to be maintained by this permit.

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 the time period after the end of the reporting period specified in schedule 4 table S4.1 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 as soon as reasonably practicable following detection, within the site of the regulated facility 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; and

(b) any breach of a limit specified in schedule 3 tables S3.1a and S3.1b (including individual exceedances of limits which are covered by condition 3.1.2).

Any other significant adverse environmental effects, which may have been caused by the activity, shall also be notified to the Environment Agency as soon as reasonably practicable following detection.

4.3.2 The information provided under condition 4.3.1 shall be supported 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 specified in schedules 3B and 3C, 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:

(c) any change in the operator's name or address; and

(d) any steps taken with a view to the dissolution of the operator.

4.3.5 For the activity A1 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 substance to the activity to an extent that the operator considers could have a significant adverse environmental effect on the receiving waters, and the change is not permitted by emission limits specified within schedule 3 tables S3.1a and S3.1b or the subject of an application for approval under the EP Regulations or under the terms of 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.

4.3.6 For the activity A1 referenced in schedule 1, table S1.1 the operator shall inform the Environment Agency in writing of any change, or proposed change, to the population equivalent such as would make a material change to the application of the Urban Waste Water Treatment (England and Wales) Regulations 1994 and shall, on request, inform the Environment Agency in writing of the actual population equivalent.

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 “as soon as reasonably practicable”, 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 secondary treated sewage effluent with nutrient removal via Final Effluent Outfall	N/A
A2	Discharge of settled storm sewage via Settled Storm Outfall (Sherbourne Inlet)	N/A
A3	Discharge of settled storm sewage via Settled Storm Outfall (Sowe Inlet)	N/A

Table S1.2 Improvement programme requirements		
Reference	**Requirement**	**Date**
IP1	From the date of issue of this permit, monitoring shall be done to obtain a minimum of 12 sample data sets for each substance. Results from the additional monitoring identified for Total Cyanide, Total and Dissolved Silver, Dissolved Nickel, Dissolved Zinc pH, Dissolved Organic Carbon and Calcium as Ca, (covering 12 monthly spot samples for each substance) shall be submitted to the National Permitting Team (WQ). Using the sample data, the permitting team shall undertake a revised H1 Hazardous Pollutants screening assessment. A permit variation shall be undertaken to incorporate new limits if required.	The sample data shall be submitted within 15 months from the date of issue of this permit

Schedule 2 – Waste types, raw materials and fuels

Schedule 2 not in use.

Schedule 3 – Emissions and monitoring

Table S3.1a Point Source emissions to water (other than sewer) – emission limits and monitoring requirements

Effective up to and including 30th March 2020

Effluent(s) and discharge point(s)	Parameter	Limit (including unit)	Reference Period	Limit of effective range	Monitoring frequency	Compliance Statistic
A1 Discharge of secondary treated sewage effluent with nutrient removal via Final Effluent Outfall	Dry weather flow	115,000 m3/day	Total daily volume	N/A	Continuous	Condition 3.1.5 applies
	15-minute instantaneous or averaged flow	No limit set. Record as l/s	15 minute	N/A	Continuous	N/A
	ATU-BOD as O2	15 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.3 apply)
	ATU-BOD as O2	50 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.3 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 3.1.3 apply)
	Ammoniacal nitrogen (expressed as N)	12 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.3 applies)
	Suspended solids (measured after drying at 105°C)	20 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.3 apply)
	Total iron as Fe	4,000 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.3 apply)
	Total iron as Fe	8,000 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.3 applies)

Table S3.1a Point Source emissions to water (other than sewer) – emission limits and monitoring requirements **Effective up to and including 30th March 2020**						
Effluent(s) and discharge point(s)	Parameter	Limit (including unit)	Reference Period	Limit of effective range	Monitoring frequency	Compliance Statistic
	Total cyanide	No limit set (record as µg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Total silver	No limit set (record as µg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Dissolved silver	No limit set (record as µg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Dissolved nickel as Ni	No limit set (record as µg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Dissolved zinc as Zn	No limit set (record as µg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	pH	No limit set	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Dissolved Organic Carbon	No limit set (record as mg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A

Table S3.1a Point Source emissions to water (other than sewer) – emission limits and monitoring requirements **Effective up to and including 30th March 2020**						
Effluent(s) and discharge point(s)	Parameter	Limit (including unit)	Reference Period	Limit of effective range	Monitoring frequency	Compliance Statistic
	Calcium as Ca	No limit set (record as mg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Visible oil or grease	No significant trace present so far as is reasonably practicable	Instantaneous (visual examination)	N/A	N/A	No significant trace (Condition 3.1.3 applies)
	ATU-BOD as O2 (UWWTR)	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 3.1.2 and 3.1.4 apply)
	ATU-BOD as O2 (UWWTR)	25 mg/l				
	ATU-BOD as O2 (UWWTR)	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 3.1.4 applies)
	COD as O2 (UWWTR)	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 3.1.2 and 3.1.4 apply)
	COD as O2 (UWWTR)	125 mg/l				
	COD as O2 (UWWTR)	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 3.1.4 applies)
	Total phosphorus as P (UWWTR)	1 mg/l	24 hour composite	To be compliant the discharge has to meet the 80% removal standard or the 1 mg/l limit not	As specified in schedule 3C	Annual mean (Condition 3.1.4 applies)
	Total phosphorus as P (UWWTR)	Minimum of 80% removal compared to influent				

Table S3.1b Point Source emissions to water (other than sewer) – emission limits and monitoring requirements **Effective from 31st March 2020**						
Effluent(s) and discharge point(s)	Parameter	Limit (including unit)	Reference Period	Limit of effective range	Monitoring frequency	Compliance Statistic
A1 Discharge of secondary treated sewage effluent with nutrient removal via Final Effluent Outfall	Dry weather flow	115,000 m3/day	Total daily volume	N/A	Continuous	Condition 3.1.5 applies
	15-minute instantaneous or averaged flow	No limit set. Record as l/s	15 minute	N/A	Continuous	N/A
	ATU-BOD as O2	15 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.3 apply)
	ATU-BOD as O2	50 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.3 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 3.1.3 apply)
	Ammoniacal nitrogen (expressed as N)	12 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.3 applies)
	Suspended solids (measured after drying at 105°C)	20 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.3 apply)
	Total phosphorus as P	0.22 mg/l	24 hour composite	N/A	As specified in schedule 3B	Annual mean (Conditions 3.1.3 and 3.1.6 apply)
	Total iron as Fe	4,000 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.3 apply)
	Total iron as Fe	8,000 µg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.3 applies)

Table S3.1b Point Source emissions to water (other than sewer) – emission limits and monitoring requirements **Effective from 31st March 2020**						
Effluent(s) and discharge point(s)	Parameter	Limit (including unit)	Reference Period	Limit of effective range	Monitoring frequency	Compliance Statistic
	Total cyanide	No limit set (record as µg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Total silver	No limit set (record as µg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Dissolved silver	No limit set (record as µg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Dissolved nickel as Ni	No limit set (record as µg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Dissolved zinc as Zn	No limit set (record as µg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	pH	No limit set	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Dissolved Organic Carbon	No limit set (record as mg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A

Table S3.1b Point Source emissions to water (other than sewer) – emission limits and monitoring requirements **Effective from 31st March 2020**						
Effluent(s) and discharge point(s)	Parameter	Limit (including unit)	Reference Period	Limit of effective range	Monitoring frequency	Compliance Statistic
	Calcium as Ca	No limit set (record as mg/l)	Instantaneous (spot sample)	N/A	Monthly (for 12 months from the date of issue of this permit)	N/A
	Visible oil or grease	No significant trace present so far as is reasonably practicable	Instantaneous (visual examination)	N/A	N/A	No significant trace (Condition 3.1.3 applies)
	ATU-BOD as O2 (UWWTR)	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 3.1.2 and 3.1.4 apply)
	ATU-BOD as O2 (UWWTR)	25 mg/l				
	ATU-BOD as O2 (UWWTR)	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 3.1.4 applies)
	COD as O2 (UWWTR)	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 3.1.2 and 3.1.4 apply)
	COD as O2 (UWWTR)	125 mg/l				
	COD as O2 (UWWTR)	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 3.1.4 applies)
	Total phosphorus as P (UWWTR)	1 mg/l	24 hour composite	To be compliant the discharge has to meet the 80% removal standard or the 1 mg/l limit not	As specified in schedule 3C	Annual mean (Condition 3.1.4 applies)
	Total phosphorus as P (UWWTR)	Minimum of 80% removal compared to influent				

Table S3.2 Discharge points			
Effluent Name	**Discharge Point**	**Discharge point NGR**	**Receiving water/Environment**
A1 Secondary treated sewage effluent with nutrient removal	Final Effluent Outfall	SP 33602 73782	River Sowe
A2 Settled storm sewage	Settled Storm Outfall (Sherbourne Inlet)	SP 33267 74232	Finham Brook
A3 Settled storm sewage	Settled Storm Outfall (Sowe Inlet)	SP 33801 73877	River Sowe

Table S3.3 Storm sewage discharge settings						
Effluent(s) and discharge point(s)	**Description of discharge**	**Overflow setting l/s**	**Maximum size of solid matter**	**Screen aperture size**	**Minimum screen capacity flow l/s**	**Minimum storage capacity m^3 (off-line)**
A2 Discharge of settled storm sewage via Settled Storm Outfall (Sherbourne Inlet)	Settled storm sewage	1,527	No greater than 10 mm in more than 1 dimension	10 mm x 10 mm	All flows shall be screened	27,172 (16th October to 14th May inclusive) 33,525 (15th May to 15th October inclusive)
A3 Discharge of settled storm sewage via Settled Storm Outfall (Sowe Inlet)	Settled storm sewage	1,061	No greater than 10 mm in more than 1 dimension	10 mm x 10 mm	All flows shall be screened	17,948

Table S3.4 Monitoring points			
Effluent(s) and discharge point(s)	**Monitoring type**	**Monitoring point NGR**	**Monitoring point reference**
A1 Discharge of secondary treated sewage effluent with nutrient removal via Final Effluent Outfall	UWWTR influent sampling	SP 33371 74292	UWWTR Crude Sampling Point (Sherbourne Inlet) Monitoring point to be appropriately labelled.
A1 Discharge of secondary treated sewage effluent with nutrient removal via Final Effluent Outfall	UWWTR influent sampling	SP 33869 73979	UWWTR Crude Sampling Point (Sowe Inlet) Monitoring point to be appropriately labelled.

Table S3.4 Monitoring points			
Effluent(s) and discharge point(s)	**Monitoring type**	**Monitoring point NGR**	**Monitoring point reference**
A1 Discharge of secondary treated sewage effluent with nutrient removal via Final Effluent Outfall	UWWTR effluent sampling	SP 33602 73814	OSM Sampling Point UWWTR Final Effluent Sampling Point MCERTS Flow Meter Monitoring point to be appropriately labelled
A1 Discharge of secondary treated sewage effluent with nutrient removal via Final Effluent Outfall	Effluent sampling	SP 33602 73814	OSM Sampling Point UWWTR Final Effluent Sampling Point MCERTS Flow Meter Monitoring point to be appropriately labelled
A1 Discharge of secondary treated sewage effluent with nutrient removal via Final Effluent Outfall	MCERTS flow monitoring	SP 33602 73814	OSM Sampling Point UWWTR Final Effluent Sampling Point MCERTS Flow Meter Monitoring point to be appropriately labelled
A2 Discharge of settled storm sewage via Settled Storm Outfall (Sherbourne Inlet)	Effluent sampling	SP 33254 74243	Settled Storm Sampling Point (Sherbourne Inlet) Monitoring point to be appropriately labelled
A3 Discharge of settled storm sewage via Settled Storm Outfall (Sowe Inlet)	Effluent sampling	SP 33784 73889	Settled Storm Sampling Point (Sowe Inlet) 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 - OSM 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 limit 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 Regulations sampling frequency

Population equivalent	Samples per year	Reduced sampling frequency after a year without an UWWTR exceedance or failure, samples per year	Following an UWWTR exceedance or 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**
Dry Weather Flow (daily flows total)	OSM Sampling Point UWWTR Final Effluent Sampling Point MCERTS Flow Meter	Annually Report to be submitted within 2 months of the end of the calendar year	1st January
15-minute flow	OSM Sampling Point UWWTR Final Effluent Sampling Point MCERTS Flow Meter	Reports to be provided to the Environment Agency upon request Report to be submitted within 28 days unless otherwise specified in writing by the Environment Agency	Upon request by the Environment Agency
UWWTR - ATU-BOD as O_2, COD as O_2, total phosphorus as P	UWWTR Crude Sampling Point (Sherbourne Inlet) and OSM Sampling Point UWWTR Final Effluent Sampling Point MCERTS Flow Meter	Monthly Report to be submitted within 28 days	1st of month
UWWTR - ATU-BOD as O_2, COD as O_2, total phosphorus as P	UWWTR Crude Sampling Point (Sowe Inlet) and OSM Sampling Point UWWTR Final Effluent Sampling Point MCERTS Flow Meter	Monthly Report to be submitted within 28 days	1st of month
Operator Self Monitoring - ATU-BOD as O_2, ammoniacal nitrogen (expressed as N), suspended solids (measured after drying at 105°C), total phosphorus as P (effective from 31st March 2020), total iron as Fe	OSM Sampling Point UWWTR Final Effluent Sampling Point MCERTS Flow Meter	Quarterly Report to be submitted within 28 days	1st of month

Table S4.1 Reporting of monitoring data			
Parameter	**Monitoring point reference**	**Reporting period**	**Period begins**
Chemical Sampling – Total Cyanide, Total & Dissolved silver, Dissolved nickel as Ni, Dissolved zinc as Zn, pH, Dissolved Organic Carbon and Calcium as Ca (for 12 months from the date of issue of this permit)	Final Effluent Outfall OSM Sampling Point	Sample results for each substance to be submitted within 15 months from the date of issue of the permit unless otherwise specified in writing by the Environment Agency.	From date of issue of Permit
Operator Self Monitoring summary report	OSM Sampling Point UWWTR Final Effluent Sampling Point MCERTS Flow Meter	Annually Report to be submitted within 2 months of the end of the calendar year	1st January

Table S4.2 Reporting forms	
Parameter	**Reporting format**
Dry Weather Flow (daily flows total)	WISKI electronic format specified by the Environment Agency
15-minute flow	WISKI electronic format specified by the Environment Agency
UWWTR – ATU-BOD as O_2, COD as O_2, total phosphorus as P	Electronic format specified by the Environment Agency
OSM - ATU-BOD as O_2, ammoniacal nitrogen (expressed as N), suspended solids (measured after drying at 105°C), total phosphorus as P (effective from 31st March 2020), total iron as Fe	Quarterly - Electronic format specified by the Environment Agency
Chemical Sampling - Total Cyanide, Total & Dissolved silver, Dissolved nickel as Ni, Dissolved zinc as Zn, pH, Dissolved Organic Carbon and Calcium as Ca (for 12 months from the date of issue of this permit)	Electronic format specified by the Environment Agency
Operator Self Monitoring summary report	Annually - Summary report of compliance with the monitoring programme specified in tables S3.1a, S3.1b 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 unless otherwise agreed in writing by the Environment Agency	
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 tables S3.1a and S3.1b (including individual exceedances of limits which are covered by condition 3.1.2)	
The information specified below is to be notified to the Environment Agency as soon as reasonably practicable following detection.	
Monitoring point reference/ source	
Self monitoring regime (where relevant)	e.g. OSM/UWWTR
Type of failure	e.g. 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 reasonably 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

“abnormal operating conditions” include but are not limited to, the circumstances described in Regulation 40(1) of, or paragraph 6(5) of Schedule 21 to, the Environmental Permitting Regulations 2016 (illegal discharge to sewer), unusual weather, or during a defined period where the permit authorising the permitted activity has been varied for reasons such as capital works construction.

“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.

For the activity A1 referenced in schedule 1, table S1.1 “appropriate measures” for the purposes of the emission of substances not controlled by emission limits condition (condition 3.2.1) do not require the operator to undertake treatment to a level beyond that specified in schedule 1 table S1.1, or to carry out routine monitoring for substances not controlled by emission limits.

“ATU-BOD as O_2” means the biochemical oxygen demand (measured after 5 days at 20°C with nitrification suppressed by the addition of allylthiourea).

“COD as O_2” 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 permitted activities, which are not controlled by an emission limit.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 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.

“minimum screen capacity flow” means the minimum flow passed through the screens to the outfall when the screen bypass operates.

“overflow” for the purposes of schedule 7, overflow means the weir or orifice or other control which directs excess flow away from the continuation sewer when the flow exceeds the overflow setting due to rainfall and/or snowmelt.

“overflow setting” means the minimum flow passed forward to the continuation flow 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).

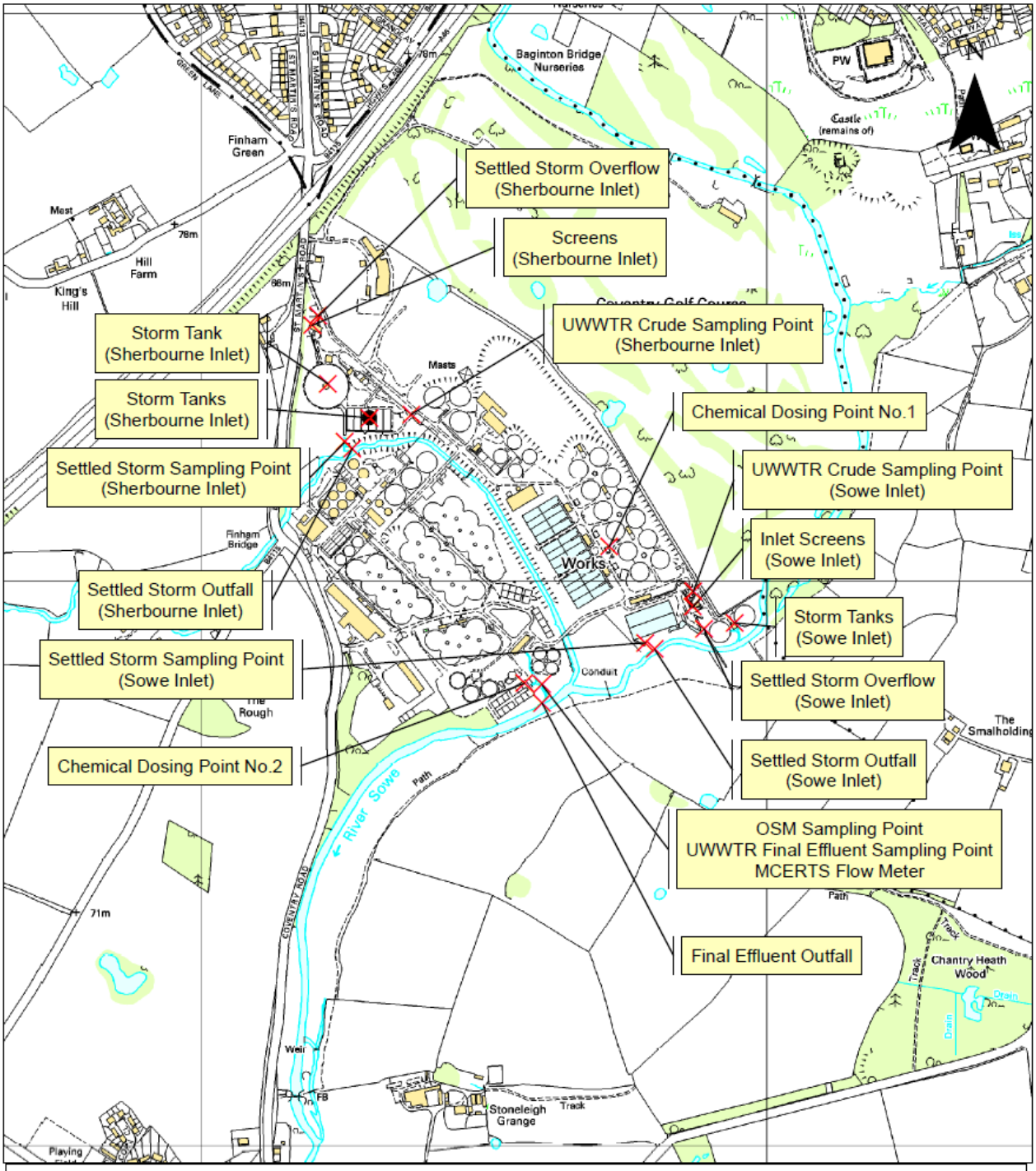
“unusual weather conditions” includes, but is not limited to:

- low ambient temperatures, or 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 that could not be ameliorated by the reasonable provision and operation of standby generation facilities.

“Urban Waste Water Treatment (England and Wales) Regulations 1994 (UWWTR)” means Urban Waste Water Treatment (England and Wales) Regulations 1994 SI 2841and 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



END OF PERMIT