

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Severn Trent Water Limited
Kimcote Sewage Treatment Works
Poultney Lane
Kimcote
Lutterworth
Leicestershire
LE17 5RX

Variation number

S/10/26413/R/V002

Permit number

S/10/26413/R

Kimcote Sewage Treatment Works

Permit number S/10/26413/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.

This permit variation and consolidation is to reflect asset improvements that have been agreed between the Environment Agency and Severn Trent Water Limited as part of the National Environment Programme. This permit requires the operator to install event duration monitoring (EDM) with telemetry on the storm overflow.

This permit variation also incorporates the new Dry Weather Flow (DWF) conditions, the new conditions are referred to as the DWF 3 in 5 year and data quality conditions.

We consider that in reaching our decision to vary the permit we have taken into account all relevant considerations and legal requirements. We are satisfied that the permit will ensure that a high level of protection is provided for the environment and human health and that the activities will not give rise to any significant pollution of the environment or harm to human health.

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/10/26413/R	22/12/2004	Permit issued to Severn Trent Water Limited.
Permit modified S/10/26413/R	14/10/2008	Notice of modification to add Operator Self-Monitoring (OSM) requirements to the permit.
Permit modified S/10/26413/R	26/03/2010	Notice of modification to increase dry weather flow and incorporate new dry weather flow conditions, incorporate MCERTS flow measurement condition and tighten the sanitary permit conditions as from 31/03/2015.
Application S/10/26413/R/V001 (variation and consolidation)	Duly made 09/10/2017	Application to vary and update the permit to modern conditions, include first time total iron and total phosphorus limits.
Additional information received	28/11/2017	Confirmation of pH condition and inclusion of an agreed improvement condition for telemetry alarm to notify the Operator when emergency overflow operates.
Variation determined S/10/26413/R	14/12/2017	Varied and consolidated permit issued in modern condition format.
Environment Agency initiated variation S/10/26413/R/V002	30/03/2020	Variation of permit initiated under PR14 review programme to incorporate improvements to be delivered under AMP6 and to incorporate the DWF 3 in 5 year and data quality conditions.

Status log of the permit		
Description	Date	Comments
Variation determined S/10/26413/R	15/12/2021	Varied 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/10/26413/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 water discharge activities at

**Kimcote Sewage Treatment Works
Poultney Lane
Kimcote
Lutterworth
Leicestershire
LE17 5RX**

to the extent set out in the schedules.

The notice shall take effect from 15/12/2021

Name	Date
Roger Horton	15/12/2021

Authorised on behalf of the Environment Agency

Schedule 1

Only conditions 2.2.1, 2.3.3 (b), 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5, 3.1.6, 3.3.1, 3.3.4, 3.3.7, 3.3.8, 4.3.1(b), 4.3.5, 4.3.6, Table S1.1, Table S1.2, Table S1.3, Table S3.1, Table S3.2, Table S3.3, Table S3.4, Schedule 3D, Table S4.1, Table S4.2, Schedule 5 Part A(b), Schedule 6 and Schedule 7 have been varied by the consolidated permit S/10/26413/R as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

S/10/26413/R

This is the consolidated permit referred to in the variation and consolidation notice for variation S/10/26413/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 water discharge activities at

Kimcote Sewage Treatment Works

Poultney Lane

Kimcote

Lutterworth

Leicestershire

LE17 5RX

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

Name	Date
Roger Horton	15/12/2021

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 point 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 A3 referenced in schedule 1, table S1.1 the activity 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.
- 2.3.2 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.
- 2.3.3 For the discharge(s) 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) Event duration monitoring telemetry equipment shall be installed and maintained, as far as reasonably practicable, so as to give the operator notification as soon as reasonably practicable, of a failure of the event duration monitoring equipment, unless otherwise agreed in writing by the Environment Agency. The operator shall take all appropriate measures to return event duration monitoring equipment to normal operation as soon as reasonably practicable after receipt of notification of the failure.

- 2.3.4 For the activities A2 and A3 referenced in schedule 1, table S1.1 where the discharge results in unsatisfactory solid matter being visible in the receiving waters or on the banks or shoreline, in the vicinity of the outfall, the operator shall take all reasonable steps to collect and remove such matter as soon as reasonably practicable.

2.4 Improvement programme

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

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 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.
- 3.1.3
- (a) For the emission limits in schedule 3 table S3.1 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 The permitted Dry Weather Flow limit in schedule 3 table S3.1 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.

3.1.5 The limits in schedule 3 table S3.1 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.

3.1.6 The emission limits in schedule 3 table S3.1 to which this condition applies shall have been complied with if the lower bound 90% confidence interval calculated in accordance with schedule 3D is less than or equal to that emission limit.

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 S3.1 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 For the activity A2 referenced in schedule 1, table S1.1 an event duration monitoring telemetry system shall be installed and maintained, as far as reasonably practicable so as to give the operator data available of discharge occurrence (start and stop) at the frequency defined in table S3.1.

3.3.8

- (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 failures of the flow measurement system and any other breaks in the flow record and the reasons for all issues, failures and breaks 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 table S3.1 (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 schedule 3B, 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 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 table S3.1 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 Storm Outfall Emergency Sewage Outfall	N/A
A2	Discharge of storm sewage via Final Effluent Outfall Storm Outfall Emergency Sewage Outfall	(i) All storm sewage effluent flows shall pass through a storm & emergency reed bed treatment facility of no less than 700 m ² total surface area prior to discharge to the receiving watercourse. (ii) Maceration shall only take place when the reed bed treatment facility outlined in (i) above is being utilised.
A3	Discharge of sewage in an emergency via Final Effluent Outfall Storm Outfall Emergency Sewage Outfall	(i) An emergency shall be defined as the period when the sewage pumping station is inoperative as a result of one or more of the following, which is not due to the act or default of the operator, its agents, representatives, officers, employees or servants; • electrical power failure; • mechanical breakdown of duty and standby pumps; • rising main failure; • blockage of the downstream sewer. (ii) All flows of sewage in an emergency shall pass through a storm & emergency reed bed treatment facility of no less than 700 m ² total surface area prior to discharge to the receiving watercourse. (iii) Maceration shall only take place when the reed bed treatment facility outlined in (ii) above is being utilised.

Table S1.2 Operating techniques			
Activity reference	Description of documentation	Parts	Date Received
A3	OT1– Pumping station Emergency Key Protection Measures – Version 2	All	15/01/2021

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IP1	For Activity A3, the Operator shall submit an updated version of the 'OT1-Pumping Station Emergency Key Protection Measures' document to confirm that a maintained 24 hour response telemetry alarm system has been installed to notify the Operator of the overflow operation. The final document should be sent to SWWM_LandAndWater@environment-agency.gov.uk	Installation and an updated OT1 document to be completed and received by the Agency on or before 15/12/2022

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						
Effluent(s) and discharge point(s)	Parameter	Limit (including unit)	Reference Period	Limit of effective range	Monitoring frequency	Compliance Statistic
A1 Secondary treated sewage effluent with nutrient removal via Final Effluent Outfall Storm Outfall Emergency Sewage Outfall	Dry weather flow	410 m ³ /day	Total daily volume	N/A	Continuous	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	23 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)	6 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.3 apply)
	Suspended solids (measured after drying at 105°C)	45 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	2 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Rolling 12 month mean (Conditions 3.1.3, 3.1.5, 3.1.6 and schedule 3D 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 S3.1 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Effluent(s) and discharge point(s)	Parameter	Limit (including unit)	Reference Period	Limit of effective range	Monitoring frequency	Compliance Statistic
	pH	6 to 9	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Minimum and Maximum (Condition 3.1.3 applies)
	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)
A2 Storm sewage via Final Effluent Outfall Storm Outfall Emergency Sewage Outfall	Storm sewage discharge event duration monitoring (discharge / no discharge)	N/A	N/A	Condition 3.3.3 does not apply	15 minute	N/A
	Storm sewage discharge start and end times	N/A	N/A	Condition 3.3.3 does not apply	Whenever a discharge occurs	N/A
	Storm sewage discharge event duration monitoring status (operational / not operational)	N/A	N/A	Condition 3.3.3 does not apply	15 minute	N/A

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 Storm Outfall Emergency Sewage Outfall	SP 58375 85775	River Swift
A2 Storm sewage	Final Effluent Outfall Storm Outfall Emergency Sewage Outfall	SP 58375 85775	River Swift
A3 Sewage in an emergency	Final Effluent Outfall Storm Outfall Emergency Sewage Outfall	SP 58375 85775	River Swift

Table S3.3 Storm sewage discharge settings			
Effluent(s) and discharge point(s)	Description of discharge	Overflow setting l/s	Minimum storage capacity m³
A2 Storm sewage via Final Effluent Outfall Storm Outfall Emergency Sewage Outfall	Storm sewage	17.7	N/A

Table S3.4 Monitoring points			
Effluent(s) and discharge point(s)	Monitoring type	Monitoring point NGR	Monitoring point reference
A1 Secondary treated sewage effluent with nutrient removal via Final Effluent Outfall Storm Outfall Emergency Sewage Outfall	Effluent sampling	SP 58316 85793	OSM Sampling Point Monitoring point to be appropriately labelled.
	MCERTS flow monitoring	SP 58297 85841	MCERTS Flow Meter Monitoring point to be appropriately labelled.
A2 Storm sewage via Final Effluent Outfall Storm Outfall Emergency Sewage Outfall	Effluent sampling	SP 58311 85799	Storm Sampling Point Emergency Sewage Sampling Point Monitoring point to be appropriately labelled.
	Event duration monitoring	SP 58280 85800	Event Duration Monitor Monitoring point to be appropriately labelled.
A3 Sewage in an emergency via Final Effluent Outfall Storm Outfall Emergency Sewage Outfall	Effluent sampling	SP 58311 85799	Storm Sampling Point Emergency Sewage Sampling 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 - 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 3D – Rolling 12 month mean assessment methodology and t-values

Rolling 12 month mean compliance assessment method for site specific phosphorus limits (not UWWTR)

Use concentrations from the pre-scheduled samples taken in any period of 12 consecutive months unless a fixed 12-month period is specified by the permit.

1. Take the log₁₀ value of all P concentrations in the data set. For a zero value, take the log₁₀ value of the minimum detection limit of the analytical method used. Treat less thans or greater thans as face value.
2. Calculate the mean of the log₁₀ values.
3. Calculate the standard deviation of the log₁₀ values.
4. Calculate the lower confidence interval using the formula lower confidence interval = mean – (t x standard error of mean).

Where:

- t is derived from the values of t table for n-1 degrees of freedom, where n is the number of samples
- the standard error of the mean is the standard deviation of the dataset ÷ $\sqrt{n}$.

5. Antilog the lower confidence interval.

If the lower bound confidence interval exceeds the permit limit, then we are 95% confident that the limit has been exceeded and a failure is recorded.

Values of t	
Degrees of freedom	t for 90% confidence interval
2	2.920
3	2.353
4	2.132
5	2.015
6	1.943
7	1.895
8	1.860
9	1.833
10	1.813
11	1.796
12	1.782
13	1.771
14	1.761
15	1.753
16	1.746

Values of t	
Degrees of freedom	t for 90% confidence interval
17	1.740
18	1.734
19	1.729
20	1.725
25	1.708
30	1.697
35	1.690
40	1.684
50	1.676
60	1.671
70	1.667
80	1.664
90	1.662
100	1.660
1,000	1.646

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 Dry Weather Flow (daily flows total)	MCERTS Flow Meter	Annually Report to be submitted within 2 months of the end of the calendar year	1 st January
A1 15-minute flow	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
A1 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, total iron as Fe, pH	OSM Sampling Point	Quarterly Report to be submitted within 28 days	1 st of month
A1 Operator Self Monitoring summary report	OSM Sampling Point	Annually Report to be submitted within 2 months of the end of the calendar year	1 st January
A2 Storm sewage discharge start and end times	Event Duration Monitor	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

Table S4.1 Reporting of monitoring data			
Parameter	Monitoring point reference	Reporting period	Period begins
A2 Storm sewage discharge start and end times	Event Duration Monitor	Annually Report to be submitted within 2 months	1 st January
A2 Storm sewage discharge event duration monitoring status (operational / not operational)	Event Duration Monitor	Annually Report to be submitted within 2 months	1 st January

Table S4.2 Reporting forms	
Parameter	Reporting format
A1 Dry Weather Flow (daily flows total)	WISKI electronic format specified by the Environment Agency
A1 15-minute flow	WISKI electronic format specified by the Environment Agency
A1 OSM - ATU-BOD as O ₂ , ammoniacal nitrogen (expressed as N), suspended solids (measured after drying at 105°C), total phosphorus as P, total iron as Fe, pH	Quarterly - Electronic format specified by the Environment Agency
A1 Operator Self Monitoring summary report	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
A2 Storm sewage discharge start and end times	Form as agreed in writing by the Environment Agency
A2 Storm sewage discharge start and end times	Annual summary report or other form as agreed in writing by the Environment Agency Number of and total duration of counted spills for all spills.
A2 Storm sewage discharge event duration monitoring status (operational / not operational)	Annual summary report or other form as agreed in writing by the Environment Agency Percentage of time in the reporting period that the event duration monitoring equipment was operational.

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 table S3.1 (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
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

“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 O₂” means the biochemical oxygen demand (measured after 5 days at 20°C with nitrification suppressed by the addition of allylthiourea).

“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.

“monitoring frequency” as used in Table S3.1 in the context of Event Duration Monitoring is the temporal interval at which a change of state between no discharge and discharge is to be detected.

“overflow” for the purposes of schedule 7, means any weir or orifice or other means via which flow in excess of its overflow setting is diverted from the continuation sewer when it is caused by 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).

“spill” one or more overflow events within a period of 12 hours or less will be considered to be one spill, one or more overflow events extending over a period of greater than 12 hours up to 36 hours will be considered to be 2 spills. Each subsequent 24 hour duration counts as 1 additional spill and the whole of the 24 hour block is included.

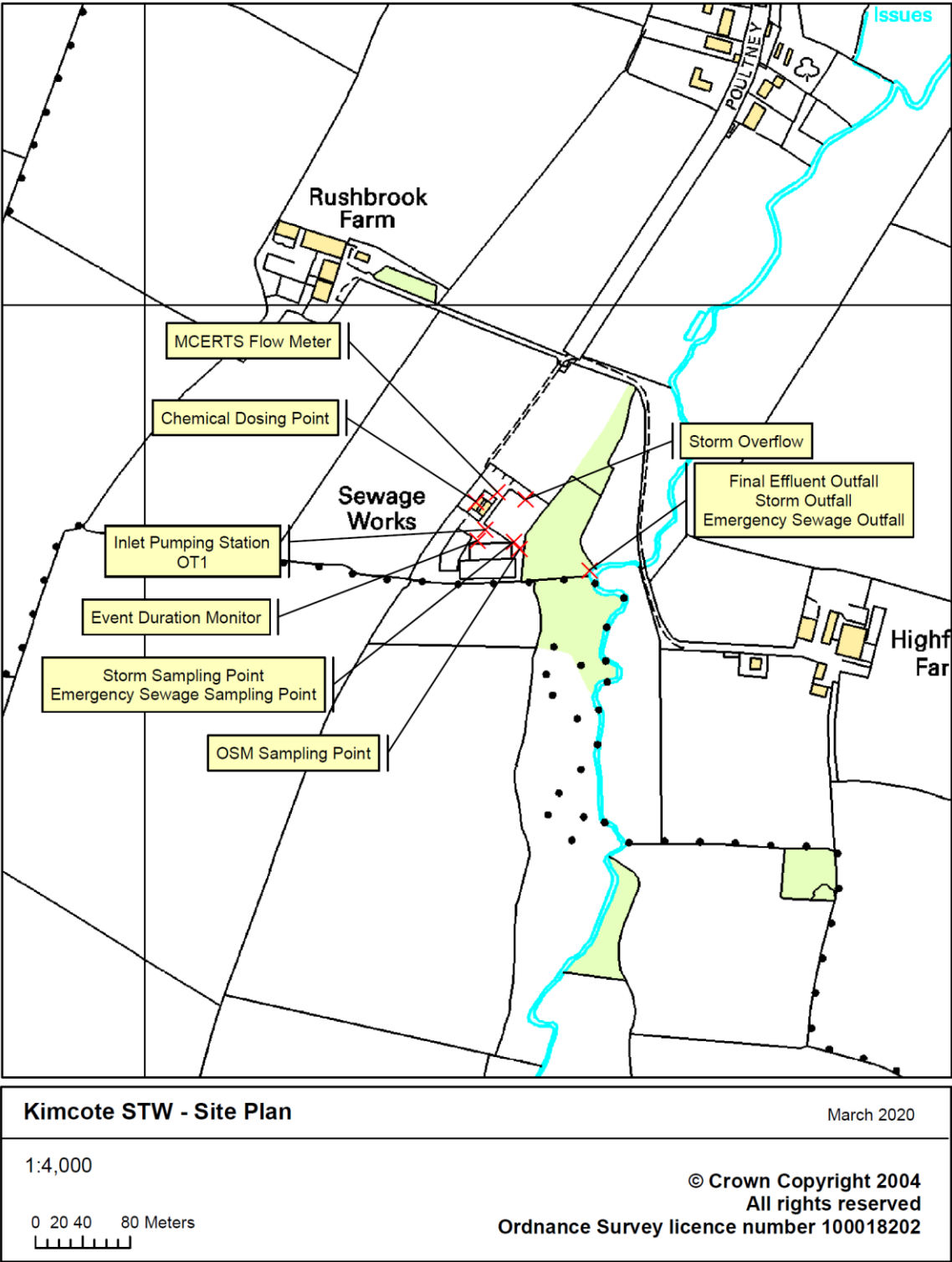
“unusual weather conditions” includes, but is not limited to:

- 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 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



END OF PERMIT