

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

United Utilities Water Limited
Liverpool Wastewater Treatment Works
Sludge Treatment Installation
Sandon Dock
Regent Road
Liverpool
L3 0BE

Variation application number

EPR/HP3131LX/V008

Permit number

EPR/HP3131LX

Liverpool Wastewater Treatment Works Sludge Treatment Installation

Permit number EPR/HP3131LX

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. All the conditions of the permit have been varied and are subject to the right of appeal.

The changes to this permit are as follows:

- Increase in annual throughput to 6,192,720 wet tonnes
- Replace two existing CHP gas engines
- extend the existing installation boundary to accommodate the new engines

The installation is made up of an area located within Liverpool Wastewater Treatment Works (WwTW), Sandon, Dock, Regent Road, Liverpool, NGR – SJ 33439 92809. The process operates under certified environmental and quality management systems and consists of the storage, screening and dewatering of sewage sludge before gently heating the sludge in anaerobic digesters. Heat within the digesters encourages the biological breakdown of the sludge and produces a biogas consisting largely of methane. The biogas is captured, and stored in gas holders prior to being utilised in a combination of combustion plant which converts the gas into heat for the digesters and into electricity for the installation and WwTW.

The treated sludge is temporarily stored before being transported/pumped to the Mersey Valley Processing Centre for either disposal or recovery to land. Sludge liquors, emanating from the dewatering process and gas condensate collected from gas pipe work are returned to the off-installation on-site WwTW for further treatment and eventual return to the environment.

The surrounding area to the installation is made up of riverside docks and commercial properties. To the north lies Huskisson Dock and warehouse, to the south Wellington Dock and to the west Sandan Half Tide Dock and the River Mersey. Approximately 0.3km to the west across the river is located the significant residential area of Ferry Dock, while 0.2km to the east lies Regent Road and its associated commercial properties. Other significant human settlements are located approximately 0.7km to the south and east beginning with Commercial Road and Boundary Street. The closest statutory designated ecological site is the Mersey Narrows Site of Special Scientific Interest (SSSI), which is located 1.4km to the west and 4.2km north.

Other statutory designated sites within a 10km radius of the installation include: North Wirral Foreshore SSSI; Sefton Coast Special Area of Conservation; Ribble and Alt Estuaries and the Mersey Estuary.

The main emissions from the installation are exhaust gases from the combustion plant and to a lesser degree the venting of unburned biogas via Pressure Relief Valves (PRVs) serving the gas holders and primary digesters. Exhaust emissions from the combustion plant will be controlled by limits to be set within the permit. Excess biogas will be flared using a standby flare.

To combat instances of odour nuisance the installation will operate under an Odour Management Plan (OMP) which is compliant with DEFRA's Code of Practice for odour management at Sewage Treatment Works 2006 and is designed to periodically assess odour releases and to take appropriate actions in eliminating/reducing odour emissions and in responding to reports of odour nuisance.

There are no direct discharges to surface waters from the installation.

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
Application HP3131LX (EPR/HP3131LX/A001)	Duly made 30/06/06	
	26/09/07 draft permit	17/10/07 email amended Figs 6 (phase 2 Issue C) and Fig 12 (phase 2 Issue B) 19/10/07 email draft permit response and supplement
Permit determined	24/10/07	
Variation EPR/HP3131LX/V002 determined	15/10/09	
Variation EPR/HP3131LX/V003 determined	28/03/11	
Agency Variation Determined EPR/HP3131LX/V004	19/11/13	Agency variation to implement the changes introduced by IED
Variation determined EPR/HP3131LX/V005 (Billing Reference GP3431NZ)	05/11/14	Varied permit issued.
Notified of change of company name	10/11/14	Name changed to United Utilities Water Limited
Variation issued EPR/HP3131LX/V006	13/01/15	Varied permit issued to United Utilities Water Limited
Application for Variation EPR/HP3131LX/V007	Duly made 28/04/15	Application to vary site boundary and inclusion of a new Odour Control Unit (OCU) drain and process pipe.
Variation determined EPR/HP3131LX	20/05/15	Varied permit issued.
Application for Variation EPR/HP3131LX/V008	Duly made 30/01/17	Application to increase throughput, replace the two existing CHP gas engines, increase site boundary. We have updated the permit to modern conditions.
Variation determined EPR/HP3131LX	22/10/18	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

EPR/HP3131LX

Issued to

United Utilities Water Limited (“the operator”)

whose registered office is

**Haweswater House
Lingley Mere Business Park
Lingley Green Avenue
Great Sankey
Warrington
WA5 3LP**

company registration number **02366678**

to operate a regulated facility at

**Liverpool Wastewater Treatment Works Sludge Treatment Installation
Sandon Dock
Regent Road
Liverpool
L3 0BE**

to the extent set out in the schedules.

The notice shall take effect from 22/10/2018

Name	Date
Mark Barry	22/10/2018

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/HP3131LX

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/HP3131LX/V008 authorising,

United Utilities Water Limited (“the operator”),

whose registered office is

**Haweswater House
Lingley Mere Business Park
Lingley Green Avenue
Great Sankey
Warrington
WA5 3LP**

company registration number **02366678**

to operate an installation at

**Liverpool Wastewater Treatment Works Sludge Treatment Installation
Sandon Dock
Regent Road
Liverpool
L3 0BE**

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

Name	Date
Mark Barry	22/10/2018

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, closure 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.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Energy efficiency

- 1.2.1 For the following activities referenced in schedule 1, table S1.1 (AR3 to AR4.) The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

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 on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 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.
- 2.3.2 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.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 table S2.2; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.6 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2.

3.1.2 The limits given in schedule 3 shall not be exceeded.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.2.3 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 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

- 3.5.1 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 S3.2;
 - (b) process monitoring specified in table S3.3.
- 3.5.2 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.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, unless otherwise agreed in writing by the Environment Agency.

3.6 Pests

- 3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.6.2 The operator shall:
 - (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
 - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

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, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.

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 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production/treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 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 emission 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 S4.4; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, 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 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.

In any other case:

- (e) the death of any of the named operators (where the operator consists of more than one named individual);
- (f) any change in the operator's name(s) or address(es); and
- (g) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.4 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.5 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

- 4.3.6 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
- (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

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 “immediately” in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I A and II operations	Limits of specified activity and waste types
AR1	Section 5.4 A(1) a) (i) Disposal of non- hazardous waste in a facility with a capacity of more than 50 tonnes per day involving biological treatment.	D8: Biological treatment not specified in elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any operation numbered D1 to D12.	From receipt of waste to the storage, anaerobic treatment and transfer. Anaerobic treatment of waste within the following plant:- 4 X Primary digesters; 4 X Secondary digesters. Waste types and quantities as specified in table S2.2.
AR2	Section 5.4 Part A(1) a) (ii) Disposal of non - hazardous waste in a facility with a capacity of more than 50 tonnes per day involving physico-chemical treatment;	D9: Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any operations numbered D1 to D12.	From receipt of waste to the storage, physical and chemical treatment and transfer. Physical and chemical treatment of waste within the following plant:- 3 X Sludge screens; 6 X Rotating drum thickeners (including polymer make-up and dosing); 2 X Thickened sludge mixing tanks; 2 X Dissolved air flotation; 2 X Centrifuges for the purpose of disposal (contingency only). Waste types and quantities as specified in table S2.2.
Directly Associated Activity			
AR3	Combustion of waste gas	The combustion of biogas for the purpose of generating electricity and heat.	Burning of biogas produced from the anaerobic digestion of sewage sludge. From generation of biogas to the storage, combustion and delivery of heat and electricity to the Installation, Wastewater Treatment Works and National Electricity Grid. Combustion plant to consist of 2 CHP engines and 2 dual fuel boilers with a gross thermal input of approximately 7.98 MW.
AR4	Combustion of standby fuel.	Burning town gas as a standby energy fuel within dual fuel boilers	To burn town gas as a standby energy source within 2 dual fuel boilers. Standby fuel to be used only when there is either: <ul style="list-style-type: none"> insufficient biogas available for use; inadequate biogas being produced; or operational malfunction which prevents biogas usage.

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I A and II operations	Limits of specified activity and waste types
AR5	Gas flare.	Flaring of excess biogas.	From receipt of biogas to the flare to the combustion and discharge of resulting combustion products. Biogas only to be flared where it cannot be beneficially used for the production of heat and electricity.
AR6	Centrifugation of sludge.	Use of centrifuge for the recovery of sludge to land.	From receipt of sewage sludge to transfer, storage and dispatch off-site for recovery to land.
AR7	Storage of waste and raw materials.	Storage of waste sludge.	Storage and transfer of waste sludge before and after treatment.
		Storage of raw materials and associated waste	Storage of raw materials and associated wastes used/produced in the treatment of sewage sludge. From receipt to removal off site.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/HP3131LX	The response to sections 2.1 and 2.2 in the Application but excluding B2.2.34	30/06/06
Letter from United Utilities Water PLC dated 22/09/06 Re: Agency letter dated 23/08/06	Answers – 6,10 and 10	22/09/06
Letter from United Utilities Water PLC dated 22/09/06 Re: Agency letter dated 08/09/06	Answers – 12, and 13	22/09/06
Letter from United Utilities Water PLC dated 23/11/06 Re: Agency letter dated 07/10/06	Answers - All	23/11/06
Variation Application EPR/HP3131LX/V003	Responses to the questions in Parts C2 & C3 of the application form.	04/10/10
Additional information received via email	Revised drawings – Figures 2, 3, 6, 7, 10, 12, 13 and 14. Revised Liverpool WwTW Drainage Plan Sheet 1 & 2.	25/02/10
Variation Application EPR/HP3131LX/V005	Responses to questions in Parts C2 & C3 of the application form and the duly making responses	14/07/2014 & 01/09/2014
Additional information received via email	Response to a Request for further information Revised Figure 2. Revised Figure 6. Revised H1 Environmental Risk Assessment. Letter dated 10 September 2014	15/09/2014
Variation Application EPR/HP3131LX/V007	Environmental Permit Minor Technical Variation Application, Application Support Document, March 2015	28/04/2015
Variation Application EPR/HP3131LX/V007	Site plan – General Site Layout, Figure 1, Ref:6294/80019860/00/97/1106, Revision A dated 26.06.14	28/04/2015

Table S1.2 Operating techniques

Description	Parts	Date Received
Variation Application EPR/HP3131LX/V008	Supporting document - December 2016 Non –Technical Summary	08/12/2017

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
-	-

Table S2.2 Permitted waste types and quantities for storage and treatment	
Maximum quantity	The annual throughput for this facility shall not exceed 6,192,720 tonnes .
Waste code	Description
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 08	wastes from waste water treatment plants not otherwise specified
19 08 05	Sludges from treatment of urban waste water

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method (see Note 1)
A1. As shown on drawing no. 6294/80043871/00/97/10 001/E2 in Schedule 7	Oxides of Nitrogen expressed as NO ₂	No.1 Spark ignition CHP engine	No limit set	Hourly average taken over a minimum of one hour	Annually (unless otherwise agreed in writing by the Agency)	BS EN 14792
	Carbon Monoxide					BS EN 15058 / ISO 12039
	Volatile Organic Compounds					BS EN 13526 BS EN 13649: 2002
A2. As shown on drawing no. 6294/800 743871/00/97/10001/E2 in Schedule 7	Oxides of Nitrogen expressed as NO ₂	No.2 Spark ignition CHP engine	No limit set	Hourly average taken over a minimum of one hour	Annually (unless otherwise agreed in writing by the Agency)	BS EN 14792
	Carbon Monoxide					BS EN 15058 / ISO 12039
	Volatile Organic Compounds					BS EN 13526 BS EN 13649: 2002
A3. As shown on drawing no. 6294/80043871/00/97/10 001/E2 in Schedule 7	Oxides of Nitrogen expressed as NO ₂	No.3 Dual Fuel Boiler	No limit set	Hourly average taken over a minimum of one hour	Annually (unless otherwise agreed in writing by the Agency)	BS EN 14792
	Carbon Monoxide					BS EN 15058 / ISO 12039
	Volatile Organic Compounds					BS EN 13526 BS EN 13649: 2002
A4. As shown on drawing no. 6294/80043871/00/97/10 001/E2 in Schedule 7	Oxides of Nitrogen expressed as NO ₂	No.4 Dual Fuel Boiler	No limit set	Hourly average taken over a minimum of one hour	Annually (unless otherwise agreed in writing by the Agency)	BS EN 14792
	Carbon Monoxide					BS EN 15058 / ISO 12039
	Volatile Organic Compounds					BS EN 13526 BS EN 13649: 2002
A5. As shown on drawing no. 6294/80043871/00/97/10 001/E in Schedule 7	No parameters set	Flare	No Limit Set	-	-	-
A6, A7, A8, A9. As shown on drawing no. 6294/80043871/00/97/10 001/E2 in Schedule 7	No parameters set	PRVs on digesters	To vent gas in relation to safety requirements only	-	-	-

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method (see Note 1)
A10, A11. . As shown on drawing no. 6294/80043871/00/97/10 001/E2 in Schedule 7	No parameters set	PRVs on gasholders	To vent gas in relation to safety requirements only	-	-	-
O1. As shown on drawing no 6294/80043871/00/97/10 001/E2 in Schedule 7	No parameters set	Sludge Treatment - Odour control unit biological filter.	No limit set	-	-	-
O2. As shown on drawing no. 6294/80043871/00/97/10 001/E2 in Schedule 7	No parameters set	Secondary Digester - Odour control unit activated carbon filter.	No limit set	-	-	-

Note 1: Permanent access for sampling/monitoring is not required for sample points A1, A2, A3 and A4.

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements

Emission point	Source	Parameter	Reference period	Limit	Monitoring frequency	Monitoring standard or method
CD1, CD3 and CD4 as shown on Drawing No. 80043871_EWW_LIF_HP_DR_M_1 015 Rev A and CD2 as shown on Drawing No. 80043871_EWW_LIF_HP_DR_M_1 016 Rev A.	Condensation points to private drainage	No parameters set				

Table S3.3 Process monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Biogas	Hydrogen Sulphide content mg/m ³	Continuous	None specified	None
Boilers	Hours run on biogas	Cumulative to determine the annual number of hours run	None specified	None
Boilers	Hours run on standby fuel	Cumulative to determine the annual number of hours run	None specified	None

Table S3.3 Process monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Standby fuel (town gas)	Volume used m ³	Annual	None specified	None
Spark ignition CHP engines	Kilowatt Hours Run (kWh)	Weekly	Kilowatt Hours meter	None
Spark ignition CHP engines	Record heat (kWth)	Continuous	Heat meter	None
Standby Flare	Hours of operation	Cumulative to determine the annual number of hours run	None specified	None
Odour Control Unit Monitoring	Monitoring as specified in Section 1.9 and Table 6 of the Odour Management Plan dated February 2014 , version 4 and submitted in support of variation application EPR/HP3131LX/V005 and any subsequent Agency agreed Odour Management Plan ^{Note 1}			

Note 1: The operator shall notify the Agency of any changes to the process monitoring described.

Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	A1 to A5 as per site plan in Schedule 7	Every 12 months	1 January
Gas quality (hydrogen sulphide)	Biogas	quarterly	

Parameter	Units
Heat generated	KWh
Power generated	GWhrs
Quantity of sewage sludge treated	Wet tonnes

Parameter	Frequency of assessment	Units
Energy usage	Annually	MWh
CHP engine efficiency	Annually	kWth input kWth (equivalent) output
Dual fuel boiler efficiency	Annually	kWth output m3 town gas used

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

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	27/09/2018
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency	27/09/2018
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	27/09/2018
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	27/09/2018

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	
Best estimate of the quantity or rate of release of substances	
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	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

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	
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	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“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.

“anaerobic digestion” means a process of controlled decomposition of biodegradable materials under managed conditions where free oxygen is absent, at temperatures suitable for naturally occurring mesophilic or thermophilic anaerobes and facultative anaerobe bacteria species, which convert the inputs to a methane-rich biogas and whole digestate.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“building” means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

“emissions to land” includes emissions to groundwater.

“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 meaning as those in the regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

“ground water” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“Hazardous property” has the meaning in Annex III of the Waste Framework Directive.

“Hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

“Industrial Emissions Directive” means Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions.

“List of Wastes” means the list of wastes established by Commission Decision replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“Pests” means Birds, Vermin and Insects.

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

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“sealed drainage system” in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

- no liquids will run off the surface otherwise than via the system;
- all liquids entering the system are collected in a sealed sump, except where liquids may be lawfully discharged to foul sewer.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid fuels, 3% or 5% for gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

“year” means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Schedule 7 – Site plan



END OF PERMIT

Reporting Forms

Permit Number: HP3131LX **Operator:** UU
Liverpool

Facility: Liverpool WwTW **Form Number:** Air1 / 27/09/2018

Reporting of emissions to air for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
A3	VOC as Total Organic Carbon (TOC)	20 mg/m ³	1 hour period		BS EN 12619		
A2	Carbon monoxide	100 mg/m ³	(average of ½-hour averages) over minimum 4 hour period		BS EN 15058		
A1	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	400 mg/m ³	(average of ½-hour averages) over minimum 4 hour period		BS EN 14792		

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

**Permit
Number:**

HP3131LX

**Operator: UU
water Ltd**

Facility:

**Form Number: Water1 /
DD/MM/YY**

**Reporting of emissions to water (other than to sewer) and land for the
period from DD/MM/YYYY to DD/MM/YYYY**

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

- 4.
5. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

**Permit
Number:**

Operator: [Operator
name]

Facility:

**Form
Number:** WaterUsage1 /
DD/MM/YY

Reporting of Water Usage for the year

Water Source	Usage (m ³ /year)	Specific Usage (m ³ /unit output)
Mains water		
Site borehole		
River abstraction		
TOTAL WATER USAGE		

Operator's comments:

Signed

Date.....

(authorised to sign as representative of Operator)

Drafting note: if the operator is required to submit Resource Efficiency Physical Index (REPI) data to the Pollution Inventory, please ensure that no metrics are repeated in this reporting form.

**Permit
Number:**

HP3131LX

Operator:

**[Operator
name]**

Form Number:

Facility:

**Energy1 /
DD/MM/YY**

Reporting of Energy Usage for the year

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity *	MWh		
Natural Gas	MWh		
Gas Oil	tonnes		
Recovered Fuel Oil	tonnes		
TOTAL	-		

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments:

Signed

Date.....

(Authorised to sign as representative of Operator)

Drafting note: if the operator is required to submit Resource Efficiency Physical Index (REPI) data to the Pollution Inventory, please ensure that no metrics are repeated in this reporting form.

