

# EPA Application Form

## 7.3.2 - Equivalent Level of Protection (Sewer) - Attachment

**Organisation Name:**

Anglo Beef Processors Ireland Unlimited

**Application I.D.:**

P0040-03

*Authorisation Application Form*

**Amendments to this Application Form Attachment**

<b>Version No.</b>	<b>Date</b>	<b>Amendment since previous version</b>	<b>Reason</b>
V.1.0	July 2017	N/A	Online application form attachment

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### **7.3.1 Equivalent Level of Protection (Emissions to Sewer)**

#### **Background information**

In relation to emissions to sewer, Article 15 of the Industrial Emissions Directive (Directive 2010/75/EU) states:

*With regard to indirect releases of polluting substances into water, the effect of a water treatment plant may be taken into account when determining the emission limit values of the installation concerned, provided that an equivalent level of protection of the environment as a whole is guaranteed and provided this does not lead to higher levels of pollution in the environment.*

Furthermore, emission limit values (ELV's) applied by the Agency for an installation's emissions to sewer must satisfy the consent conditions (ELVs and other requirements) specified by Irish Water, as required by Section 99E of the EPA Act 1992 as amended.

(Note: To avoid unnecessary delays in the application assessment process, it is important that the applicant licensee liaises with Irish Water (or other water services authority responsible for the sewer network) at the earliest available opportunity, with a view to establishing consent conditions.)

#### **Assessment of 'equivalent level of protection'**

To comply with Article 15 above, the following must be demonstrated:

It must be demonstrated that the level of treatment of an installation's effluent, on and off site, is collectively equivalent to BAT and environmental quality standards will be observed in the receiving water (i.e., 'equivalent level of protection').

- (1) Consider the parameters relevant to the installation's emissions to sewer (i.e., characteristics of discharge).
- (2) Do sectoral BAT associated emission levels (BAT-AELs) exist for these parameters? These are the relevant sectoral BAT-AELs.
- (3) Do the emission limits proposed for installation comply with all the relevant sectoral BAT-AELs? If Yes, ok; if not proceed to (4) below.
- (4) If not, does the licence for the relevant Irish Water agglomeration discharge specify limits which comply with all/the remainder of the relevant sectoral BAT-AELs for the installation? If Yes, ok; if not proceed to (5) below.
- (5) If no to (3) and (4) above, the applicant/licensee needs to otherwise determine whether the level of treatment in the sewer network is sufficient to treat the installation's discharges to comply with relevant sectoral BAT-AELs.

#### **Assessment of 'levels of pollution in the environment'**

To comply with Article 15 above, the following must be demonstrated:

In granting a licence for an installation, and in accordance with Section 83(5)(a)(iii) of the EPA Act 1992 as amended, as well as in accordance with Articles 5 and 7 of S.I. 272 of 2009, the Agency must ensure that the quality of any relevant receiving water is not impaired or that the relevant Environmental Quality standards are not exceeded. It must be demonstrated whether or not, upon discharge from the Irish Water WWTP, the

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environmental quality standards<sup>1</sup> (EQSs) for the receiving water will be breached as a result of the installation's discharges. (i.e. 'does not lead to higher levels of pollution in the environment')

### Details on level of protection provided (on and off-site)

Please provide details in the table below on the installation emissions to the sewer; the processes which contribute to the emissions, the type of on-site treatment (if any), off-site treatment (if any) and the proposed maximum daily flows.

Table 1: On-site treatment – abatement at installation				
Emission Reference	Proposed / Existing	Process Description	Abatement	Proposed max. flow (m <sup>3</sup> /day)
<b>SEP1</b>	<b>Existing</b>	<b>Process water, washdown and wastewater from on-site operations. Surface water from external process areas.</b>	-	<b>300</b>
<b>Total:</b>				<b>300</b>
Off-site treatment –Waste water treatment plant (WWTP)				
Name of sewer network/agglomeration: <b>ABP Waterford WWTP</b>				
Normal daily flow rate in network (m <sup>3</sup> /day): <b>2,000 m<sup>3</sup>/day</b>				
Responsible authority for network: <b>ABP Waterford WWTP</b>				
Type of treatment: <b>Preliminary (screening, dissolved air flotation (DAF), and balancing), secondary (aeration basin) treatment, denitrification and phosphorus removal by chemical precipitation.</b>				
Receiving water name (and waterbody type): <b>Middle Suir Estuary (IE_SE_100_0550) - Transitional Waterbody</b>				
No. of dilutions available in the receiving water: <b>&gt;500 dilutions available in the receiving water (computed from salinity measurements and freshwater inflow from the Suir River @ 95%ile flow).</b>				
Waste water discharge authorisation: <b>(Y/N) IEL Reg No. P0205-02</b>				
<p>The maximum discharge volumes from the installation represent about <b>10%</b> of effluent discharge volumes from the ABP Waterford wastewater treatment plant (WWTP). ABP Waterford's most recent AER indicates that this WWTP is:</p> <p>in compliance with the discharge limits for the following parameters: <b>Flow, Temperature, pH, Chemical Oxygen Demand, Biochemical Oxygen Demand, Suspended Solids, Total Nitrogen, Ammonia, Total Phosphorus.</b></p> <p>not in compliance with the discharge limits for the following parameters: <b>n/a.</b></p>				

<sup>1</sup> EQSs as specified in Schedule 5 of *European Communities Environmental Objectives (Surface Waters) Regulations 2009* as amended.

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### Assessment details

Please enter the required details in the assessment table below.

Edit the parameters in column 1 in accordance with the installation's characteristics of emissions to sewer.

Enter any limits specified by Irish Water (or other water service authority) in column 3.

In column 4 determine, if necessary for any parameter, the concentration of the installation's discharges after having received any treatment at the installation prior to discharge, and after having received any treatment in the sewer network/agglomeration prior to discharge.

Specify the relevant the BAT-AELs in Column 5.

Specify the relevant the EQSs in Column 6.

Table 2				
Parameter	Irish Water/ EPA	After on and off site treatment	BAT-AEL	EQS
Temperature	<35 °C	≤25 °C	-	Not greater than a 1.5°C rise in ambient temperature outside the mixing zone.
pH	6-9	6-9	6-9	≥ 6 ≤ 9 not exceeded ±0.5 change in the receiving water (95% of monthly samples, 100% when less frequently monitored) <sup>3</sup>
	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>
Biological Oxygen Demand <sub>5</sub>	6,500	40	>90% removal <sup>2</sup> , or 20 – 40 mg/l	≤4.0 mg/l O <sub>2</sub> (95%ile)
Suspended Solids	2,000	60	50 mg/l	≤25 mg/l (Annual Average) <sup>3</sup>

<sup>2</sup> Reduction in relation to influent load.

<sup>3</sup> European Communities (Quality of Salmonid Waters) Regulations 1988

**Table 3: Please include any other information you consider relevant in the (free text) box below:**

Process wastewater from the Waterford Proteins facility mainly consists of process water, washdown and rainwater from external, potentially contaminated hardstanding areas.

All process wastewater is sent to the adjacent ABP Waterford wastewater treatment plant (WWTP) for treatment.

Process effluent monitoring infrastructure is located on the Waterford Proteins site. There is continuous flow and pH monitoring, and weekly Temperature monitoring of process effluent discharged to the ABP Waterford WWTP. Composite sampling is undertaken for both BOD and Suspended Solids analysis.

Waterford Proteins will adhere to IE licence emissions limits which will regulate the quantity and quality of effluent discharged to the ABP Waterford WWTP. Waterford Proteins will carry out all required monitoring of effluent on the Waterford Proteins site.

Emissions from the ABP Waterford WWTP will be regulated under the ABP Waterford IE licence.

The ABP Waterford WWTP will provide an equivalent level of protection for the receiving waters.

Waterford Proteins has made significant reduction with respect to water usage on site as part of their water stewardship programme. This has had a number of consequences to the discharge to sewer.

It has reduced the volume of wastewater going for treatment. The current IE licence permits 400 cubic meters per day but the company is confident that a reduced volume to 300 cubic meters per day will suffice.

As a result, the company requests to increase the concentration limits of licensed parameters in this wastewater as reduced wastewater volume will increase the concentration of contaminants. Overall, the same mass loading will be generated from the facility albeit with a lower water consumption.

The company requests that daily loadings are conditioned within the licence to permit the facility to further reduce water usage on site through their water stewardship programme.