



Scottish Water Solutions  
Discharge Consent Application for Braidwood/Crossford  
WwTW  
Document Number: 5000005443-WW-FOR-99002716-v5

## FORM B

### Complete this form for point source discharges other than fish farm effluent

#### Contents

**Section 1 General discharge information**

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**Section 3 'Other' effluents (including trade)**

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#### **The Data Protection Act 1998**

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The information provided will be processed by the Scottish Environment Protection Agency to deal with your application, to monitor compliance with the licence/permit/registration conditions, to process renewals, and for maintaining the relevant public register(s).

We may also process and/or disclose it in connection with the following:

- offering/providing you with our literature/services relating to environmental affairs
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, Local Authorities, Emergency Services, Scottish Executive) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving our service.

We may pass it on to our agents/representatives to do these things on our behalf.

**You should ensure that any persons named on this form are informed of the contents of this Data Protection Notice**

## FORM B Point Source Discharges other than fish farm effluent

## SECTION 1: GENERAL DISCHARGE INFORMATION

### 1.1 If not already included on your 'Site Plan' (see Form A), please provide a "Drainage Plan" showing:

- The site drainage layout (if applicable)
- All discharge point(s) locations
- The location of any treatment facilities and sample chamber(s)
- Identify pollution risk areas/chemical and oil stores

Reference the Plan "Drainage Plan" and attach it to your application

### 1.2 Will the effluent come from (tick box)

an existing development or discharge

a new development or discharge?

an alteration to an existing development or discharge?

### 1.4 About the outlet(s)

B1.4.1 Please give the National Grid Reference for the discharge outlet (10 Character e.g. XY 1234 5678)

NS 8280 4667

B1.4.2 Will the discharge(s) be made through: *(please tick)*

\*a new outlet\*?

\*an alteration to an existing outlet?

an existing outlet?

B1.4.3 \*If a new outlet or alteration to existing outlet: submit outlet design so that SEPA can agree your engineering proposals, prior to licensing

Where applicable, please provide a method statement detailing working practices and environmental protection during construction of the outlet.

What provision will be made for samples to be taken of the effluent discharged? *(eg sampling chamber, automatic sampler)*

Existing sampling chamber at treatment works, on outlet of tertiary clarifiers.

Note - if you claim **Environmental Service** for any of your activities then your reasoning/justification must be set out on a separate sheet referenced "Environmental Service Claims". Information on Environmental Service is available from the Charging Scheme guidance.

1.5 Please indicate which of the following discharges you will be applying to undertake. For multiple discharges of the same type, please list within the appropriate boxes.

Discharge	Detail	Registration (R)  State Number	Simple Licence (SL)  State Number	Complex Licence (CL)  State Number	National reference for outlet (i.e. 10 characters XY 1234 5678)	Grid for each 1234	Outlet Diameter mm	Receiving environment for each discharge <ul style="list-style-type: none"> <li>• River</li> <li>• Freshwater Loch</li> <li>• Coastal/Estuary</li> <li>• Land no soakaway</li> <li>• Land via soakaway</li> <li>• Land via groundwater</li> </ul>	Partial Soakaway (Y or N)	Name of receiving environment (if unknown please state "tributary of" name of major water)
	Storm tank overflow		1	0	NS 8328 4668		As existing – 300mm fireclay	River	N	Mashock Burn
	EO		0	1	NS 8314 4661		300mm fireclay	River	N	Mashock Burn
	Untreated									
	Primary (includes septic tank)									
	Secondary									
	Tertiary	0	0	1	NS 8280 4667		300mm uPVC until the final manhole on the river bank and then 250mm ductile iron from there into the river	River	N	River Clyde
<b>Sewage (private)</b>	CSO									
	EO									
	Untreated									
	Primary									
	Secondary									
	Tertiary									
<b>Other Effluent<sup>1</sup></b>	Potable water supply									
	Other organic effluent									
	Cooling Water									
	Other effluent									
<b>Surface Water (Public)</b>	Housing									

	Commercial, Industrial & other								
<b>Surface Water (Private)</b>	Motorways & major roads								
	Housing Commercial, Industrial & other								

**FORM B SPECIFIC DISCHARGES** Please complete relevant sections only

**SECTION 2: SEWAGE EFFLUENT (>15 pe)**

**2.1 SEWAGE EFFLUENT GENERAL QUESTIONS**

<b>2.1.1 How many people will the sewage system serve?</b> <i>(both current population and projected design population)</i>	Total current pe 1237 Design pe 1355
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<b>2.1.2 For new private sewage treatment plants please give reasons that connection to sewer for sewage effluent is not practicable.</b>	N/A
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<b>2.1.3 What is the anticipated flow of domestic sewage or mean flow of effluent?</b> <i>(in cubic metres per day)</i>	213 m <sup>3</sup> /d
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<i>Note: Please explain how the flows have been derived. In particular you should specify the details of any flow monitoring programmes.</i>	P x G with G = 157 litres/hd/d for population of 1355
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<b>2.1.4 What is the anticipated flow of trade effluent?</b> <i>(in cubic metres per day)</i>	0 m <sup>3</sup> /d
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<i>Note: Please explain how the flows have been derived. In particular you should specify the details of any flow monitoring programmes.</i>	N/A – There are no known trade effluent discharges to the sewer.
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<b>2.1.5 What is the average infiltration rate?</b> <i>(in cubic metres per day)</i>	779 m <sup>3</sup> /d
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<i>Note: Please explain how the flows have been derived. In particular specify the details of any flow monitoring programmes carried out to estimate the infiltration rate. Details of seasonal variations in infiltration flow should be provided if possible.</i>	Infiltration calculated as part of Headroom Determination Report 33083-SW-160-RT-EN-2017, with additional allowance for growth
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<b>2.1.6 What is the current and design dry weather flow?</b> <i>(in cubic metres per day)</i>	Current 925 m <sup>3</sup> /d Design 992 m <sup>3</sup> /d
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<i>Note: Please explain how the flows have been derived.</i>	Current based on Headroom Report (see ref. above). Design DWF based on PG + I + E.
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<b>2.1.7 Please provide a description of any significant trade discharges to the sewer.</b>	N/A - There are no known trade discharges to the sewer
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**2.2 SEWAGE TREATMENT WORKS**

<b>2.2.1. What will be the mean daily flow of effluent?</b> <i>(in cubic metres per day)</i>	1055 m <sup>3</sup> /d
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<i>Note: Please explain how the flows provided have been derived. In particular you should specify the details of any flow monitoring programmes.</i>	1.3PG + I + E
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<b>2.2.2. What will be the maximum flow rate to full treatment?</b> <i>(in litres per second and as a multiple of DWF)</i>	16.4 l/s                      1.4 x DWF This is the strict arithmetic multiple. The value conforms to the generally accepted formula for 3DWF (3PG+I+3E)
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**2.2.3. How will the sewage be treated before it is discharged and what is the anticipated quality of the discharge?**

<i>Primary treatment details:</i> <i>Secondary Treatment details:</i> <i>Tertiary Treatment details:</i> <i>Other treatment:</i>  <i>Anticipated effluent quality:</i>	6mm screening, grit removal, primary sedimentation tanks. Percolating filters, Humus tanks. Tertiary solids removal using 'Lockertex' filter.  BOD 15mg/l; SS 30mg/l;
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*Note: Please enclose supporting documents as necessary which should include*

- 2.2.4. How will mechanical failures of the treatment facilities be detected (e.g. telemetry, alarms)?
- 2.2.5. Describe the maintenance arrangements for the system e.g. contracted to whom, regularity of checks and availability of spare parts etc

Via alarms relayed via telemetry.

Maintenance to be undertaken by Scottish Water staff in accordance with written procedures.

## 2.3 COMBINED SEWER OVERFLOWS (CSOs)

- 2.3.1. At what rate of flow will the overflow start operating? (litres per second and as a multiple of DWF)

13.1l/s from the Braidwood catchment.  
17.5l/s from the Crossford and Riverside catchments.  
Combined this represents a 2.6 multiple of DWF. This is the strict arithmetic multiple.

Note: Please explain the choice of overflow setting

There will be no change to the existing CSO setting. The effluent from the Braidwood catchment shall overflow at 13.1 l/s. The design flow figure (pass forward flow) at the CSO is 13l/s. The effluent from Crossford is received downstream of the storm weir at a pumped flow rate of 17.5l/s.

- 2.3.2. What will the maximum rate of discharge be? (litres per second and as a multiple of DWF)

The maximum rate of discharge is unknown. However, there will be no change from the existing. There is no model for the catchment, so the flow through the screen has been estimated based on an equivalent impermeable area in the catchment and a 5 year return period, summer storm of 30 minute duration. This gives an estimated flow of 260 l/s. A 20% factor of safety has been applied, giving a screen sized for 312 l/s.

- 2.3.3. What treatment will be provided?

**Treatment to be provided for storm tank overflow:**  
A hand raked bar screen on the inlet CSO overflow, then to the storm tank, the overflow of which will be fitted with a 6mm aperture static screen (Hydrok Peak Screen Panels).

Note: Please enclose supporting documentation covering detailed plans and design criteria

- 2.3.4 What storage volume in excess of DWF will be provided within the sewerage system which will delay the operation of the overflow (in cubic metres)

67m3 in the storm tank

- 2.3.5 What is the predicted spill frequency per year? (number and duration)

The frequency and duration of spills is unknown. However, there will be no change from the existing.

Note: Please provide an explanation of how the predicted spill frequency of the overflow was derived.

Based on anecdotal evidence.

### 2.3.6 CSO ASSESSMENT DETAILS

The following information is required to assist SEPA in reaching licence decisions for intermittent discharges. Groups of CSOs discharging into bodies of water where there is likely to be a degree of interaction should be considered together. The form should be completed by the Water Authority or their agent after consultation with the relevant SEPA officers.

#### 2.3.7 CSO location for each outfall (further detail required for CSOs)

10 character Grid Reference(s) of CSO(s)

10 character Grid Reference(s) of outfall point(s)

As existing - NS 8328 4668

As existing - NS 8328 4668

#### 2.3.8 DRIVERS – Known or potential impacts

Bathing Waters...	N	Flooding upstream...	N
Shellfish Waters	N	Visual or aesthetic impact...	N
Urban Wastewater...	Y	Justified public complaint...	N
Recreational water...	N	Deterioration in river class...	N

Dangerous Substances	Y	Operates in dry weather...	N
Also, Freshwater Fish Directive	Y		

2.3.9 CONTRIBUTING AREA(S) Enter data where available/ appropriate			
<b>Existing</b>		<b>Future Design</b> [from L.A. structure plans]	
Catchment area (Ha)*	Unknown	Catchment area (Ha)*	Unknown
Percentage catchment on combined sewer	Unknown	Percentage catchment on combined sewer	Unknown
Existing Population P	1237	Future Design pop P	1355
Infiltration I	738 m <sup>3</sup> /d	Infiltration I	779 m <sup>3</sup> /d
Trade Flow E	0	Trade Flow E	0
Measured dry weather flow	Unknown	Dry weather flow at inlet(s)	992 m <sup>3</sup> /d
Calculated dry weather flow	925 m <sup>3</sup> /d	Continuation flow(s)	13.1 l/s

**2.3.10 INDUSTRIAL EFFLUENT INFORMATION** - List main trades contributing > 20% of DWF loading for any of the chemicals listed in Annex 1. For organic discharges please give p.e.

Name	Sector	Chemical	Peak Conc	Annual Ave. Conc.	% of DWF	P.E. (if applicable)?
None						

\* from Drainage Area Studies

2.3.11 PROPOSED DISCHARGE		
Formula A flow	(l/d)	Not known
Spill rate with one year return period.....	(l/s)	Not known
Spill volume with one year return period...	(m <sup>3</sup> )	Not known
Duration of spills per year.....	(h)	Not known
Number of spills per bathing season and per year.....		Not known
Screen aperture	(mm)	6mm
Spill/weir setting	(l/s)	13.1 l/s (for the Braidwood Catchment)
Volume of storage .....	(m <sup>3</sup> )	Not known
Largest inlet pipe diameter.....	(mm)	Not known

2.3.12 SEWERAGE MODELLING	
Modelling software used including version  n/a This is an existing CSO with no change to the settings, therefore no modelling was carried out.	Location of key pumping installations  n/a
Specification for model assembled, give an indication of degree of simplification.  n/a	
<b>MODEL INPUTS</b>	
<b>Rainfall events used for verification.</b> SEPA is particularly concerned to ensure that the most valid model inputs available are used in the modelling exercises.	

Time series rainfall used n/a	Location of series n/a
Software used to produce time series n/a	Recorded data used (location, date) n/a
	Last revision of time series n/a
<b>MODEL OUTPUTS</b> This information is to assist SEPA with evaluation of model verification	
<b>Graphs</b> Give details of graphical information supporting the application.  n/a	<b>Summary tables</b> Give details of tabular information supporting the application.  n/a

<b>2.3.13 WATER QUALITY MODELLING</b>
This is an existing CSO with no change to the settings, therefore no modelling was carried out.
95%ile river flow/initial dilution at discharge point(s)  n/a

<b>2.3.14 PAST OR PROPOSED MONITORING</b>
An ultrasonic level transducer will monitor the spills to the storm tank.

## 2.4 STORM TANKS

<b>2.4.1. What storm tank volume will be available?</b> <i>(in cubic metres) Please show by calculation how this size is justified as a means of preventing polluting releases to the environment</i>	Existing storm tank. Volume = 67 m <sup>3</sup>
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<b>2.4.2. How will the return of storm tank contents be achieved?</b> <i>(describe whether manual/automatic return, and pump rates)</i>
Manual valve operation will allow contents to gravitate to Crossford pump well, where it will mix with incoming flow from Crossford and be pumped up to head of the works, immediately downstream of storm overflow.

## 2.5 EMERGENCY OVERFLOWS

<b>2.5.1 Please state the justification for the emergency overflow</b>
In case of pump breakdown. There is an overflow weir into a channel. The outlet of which is a 150mm diameter pipe. At present, the flow from the overflow joins with the final effluent at the manhole after the tertiary clarifiers. However, we are proposing to split these flows when the new outfall is constructed, so that the EO will go down the old outfall.

<b>2.5.2. Describe the pump rates</b>
17.5l/s  The pumps are duty/standby. The standby pump would start immediately on failure of the duty pump.

**2.5.3. What sort of warning system will you use to identify pump failure/operation of overflow?**  
(eg alarms, telemetry connections)

The level in the wet well is linked to telemetry, and a high level alarm will be generated. The response time to Crossford WwTW for a pass forward pump fail alarm is 30 - 45 minutes.

**2.5.4. How will you deal with power failures?**

There is provision for standby generation to be brought to site.

**2.5.5. What storage capacity will be provided which will delay the operation of the overflow?(in cubic metres)**

Storage capacity in the wet well is 4.5m<sup>3</sup>

**Section 3 DISCHARGES OF OTHER EFFLUENTS INCLUDING TRADE EFFLUENT**

**3.1. About the Effluent** Please describe the type of process you plan to carry out on the site. E.g. type of operations giving rise to each effluent to be discharged.

N/A

**3.2 What will each effluent be composed of?** Please list the content of the effluent. Also check the Annex to this fom and complete the table for any Annex substances within your treated effluent, giving the maximum and mean annual concentrations. *You should include information on the daily, weekly and/or seasonal patterns, if these are likely to be significant.*

For discharges to groundwater with a high loading factor (see associated guidance notes) please detail Maximum, Minimum and Mean Annual concentrations within the treated effluent to be discharged.

**TREATED EFFLUENT COMPOSITION (INC. ANNEX SUBSTANCES)**

Substance:	Concentration	Units
	Maximum: Min: Mean annual:	
	Maximum: Min: Mean annual:	
	Maximum: Min: Mean annual:	
	Maximum: Min: Mean annual:	
	Maximum: Min: Mean annual:	
	Maximum: Min: Mean annual:	
	Maximum: Min: Mean annual:	

**3.3 Does the untreated effluent( ie pre treated influent) contain any compound listed in the Annex to this form? If so, please give the mean annual and maximum concentration of each substance in the influent flow,** ensuring that the maximum concentration and mean annual concentration in the treated effluent is given above. You should include information on the daily, weekly and/or seasonal patterns, if these are likely to be significant.

**ANNEX SUBSTANCES IN INFLUENT**

Substance:	Concentration	Units
	Maximum: Mean annual:	
	Maximum: Mean annual:	
	Maximum: Mean annual:	
	Maximum: Mean annual:	
	Maximum: Mean annual:	
	Maximum: Mean annual:	
	Maximum: Mean annual:	
	Maximum: Mean annual:	

**3.4 List bulk and hazardous chemicals and wastes held on site and explain how these will be contained.**

<b>3.5 How will the effluent be treated before it is discharged?</b>	
Primary treatment details: Secondary treatment details: Tertiary treatment details: Other treatment:	

Note: Please enclose supporting documents which should include detailed plans, design criteria, and treatment process description

<b>3.7 What will be the mean and maximum daily volume of treated effluent discharged?</b> (in cubic metres per day)	Mean	m <sup>3</sup> /d
	Maximum	m <sup>3</sup> /d
Note: You should include information on the weekly and/or seasonal patterns, if these are likely to be significant.		

<b>3.8 Please provide the maximum rate of flow of the treated effluent</b> (in litres per second)	l/s
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<b>3.9 If the discharge temperature is changed by heating or cooling please provide the mean and expected temperature range of the discharge.</b> (in degrees centigrade)	Mean:	°C
	Range:	°C

<b>3.10 How will mechanical failures of the treatment facilities be detected</b> (e.g. telemetry, alarms)?  <b>3.11 Describe the maintenance arrangements for the treatment system</b> e.g. contracted to whom, regularity of checks and availability of spare parts etc.	
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<b>3.12. If sewage is included in this discharge, how many people will the system serve?</b> (or give population equivalent)	No. Residents: No. day workers : Total p.e.:
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<b>3.13. What impermeable surface area will drain rainfall to the treatment system?</b> (in square metres)	m <sup>2</sup>
Note: Uncontaminated surface water should be excluded from the effluent treatment plant where possible.	

<b>3.14 How will any remaining surface water be treated?</b> Note: If you will be making a separate discharge of surface water, you should discuss with SEPA whether it will be necessary to fill in Section 4 of this form	
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**Section 4 DISCHARGE OF LICENSABLE SURFACE WATER INCLUDING SUDS (see applicant guide for thresholds of when a licence is required for surface water discharges)**

**4.1. Please describe the area to be drained (e.g. a 1000 house development or industrial estate areas) and state the previous land use (e.g. industry type, housing, greenfield etc.)**

N/A

*Note: Your plans should include: (1) the area draining to the discharge - detailing the drainage system proposed, as well as existing natural drainage features; (2) planned development features including roads, parking areas and buildings.*

**4.2. Will there be any high pollution risk areas?**  
*(This refers to areas such as re-fuelling/ wash bays, material storage or unloading areas)*

*Note: Your plans should detail the relevant areas and a description of the preventative measures taken (e.g. oil interceptor, diversion to foul sewer, bunding)*

**4.3 What will be the total impervious area which will drain rainfall to the outfall?** *(in square metres and as a proportion of the total drainage area)*

m<sup>2</sup>  
%

**4.4. Please provide a brief description of the surface water management train (e.g. prevention, source control, site control, regional control)**

**4.4.1 What provision will be made for source control SUDS measures including those which direct rainfall to land?**

**4.4.2. If infiltration systems are to be installed please provide information on soil type and porosity** (include percolation test results). *Note: This refers to the use of permeable surfaces, swales, filter drains, infiltration trenches, soakaways etc which limit the direct access of rainfall to surface water drains. Please provide drawings of the structure used and documentation covering the design.*

**4.4.3. Please detail any additional SUDS treatment measures after the source control measures.**  
*Note: This refers to structures such as ponds, basins and wetlands. Please provide drawings of the structure used and documentation covering the design (including treatment volume Vt (m3)).*

**4.5 Please demonstrate (by providing calculations ) how the SUDS measures will provide attenuation and restrict flow to the pre-development (i.e. greenfield) run off rates?**

*(This question is inserted to cover the sustainable flood management duties in WEWS and to protect ecological status by maintaining natural river flows. )*

**4.6. Please provide details of the SUDS adoption and maintenance agreements.**

## SECTION 5 DISCHARGE OF EFFLUENT TO AN INFILTRATION SYSTEM, ONTO/INTO LAND OR DIRECTLY TO GROUNDWATER

### The Prior Investigation Information

Part I of the form is to be completed for all discharges. Part II of the form is only to be filled out for trade effluent discharges with a high loading classification(see guidance notes) and sewage effluent discharges of >50pe.

N/A

#### THE PRIOR INVESTIGATION FORM

PART 1 (to be completed for all discharges)							
a) Nature of discharge point	Direct to groundwater (e.g. down a borehole) <sup>1</sup> <input type="checkbox"/>	Infiltration system (e.g. soakaway) <input type="checkbox"/>	Land (e.g. spreading on soil surface) <input type="checkbox"/>				
b) Loading Classification <sup>2</sup> (This is required for trade effluent discharges only)	Low-Medium <input type="checkbox"/> Provide calculations and justification..... ..... .....	High <input type="checkbox"/> Provide calculations and justification..... ..... .....					
c) Depth to groundwater <sup>3</sup>	.....metres below ground level Date (s) measured .....						
d) Location of groundwater abstractions within 500m <sup>4</sup>	Location Description (e.g. Bog Farm)	NGR (e.g. NO1234 5678)	Type of supply (e.g. well used for drinking)				
	1.						
	2.						
	3.						
e) Location of nearby surface waters e.g. rivers, ditches, wetlands etc within 200m. <sup>5</sup>	Description (e.g. The Blue River)	NGR (NO 1234 5678)	Type (e.g. burn/river/ditch)				
	1.						
	2.						
	3.						
f) Distance to field drains within 10m <sup>6</sup>	..... metres						
g) Slope <sup>7</sup>	Steep (>1:5) <input type="checkbox"/>	Shallow (1:5-1:20) <input type="checkbox"/>	Relatively Flat (<1:20) <input type="checkbox"/>				
h) Vp Values (mm/seconds) <sup>8</sup>	1.	2.	3.				
i) Subsoil type <sup>9</sup> (trial pit logs should be provided)	Sands and gravels		<input type="checkbox"/>				
	SAND		<input type="checkbox"/>				
	Silty, SAND or silty clayey SAND		<input type="checkbox"/>				
	Sandy SILT		<input type="checkbox"/>				

	Peat	<input type="checkbox"/>	
	Clay	<input type="checkbox"/>	
	Other	Please specify:.....	
j) Thickness of superficial deposits <sup>10</sup>	..... metres from ground surface		
k) Area of Infiltration system <sup>11</sup>	.....square metres (m <sup>2</sup> )		
l) Length of Soakaway <sup>12</sup>	.....metres (m)		
m) Type of treatment proposed (if applicable)	.....		
n) Depth of base of discharge pipes from ground surface (m) <sup>13</sup>	.....metres (m)		
<b>PART 2<sup>14</sup></b> (to be completed for trade effluent discharges which have a high loading classification and for sewage effluent discharges >50pe			
o) Groundwater Flow Direction e.g. NNW <sup>15</sup>	.....		
p) Hydraulic gradient <sup>16</sup>	.....		
q) Permeability <sup>17</sup>	..... metres/day		
r) Background Groundwater Quality <sup>18</sup>	Contaminant	Concentration	Units
	1.	Max: Min: Mean:	
	2.	Max: Min: Mean:	
	3.	Max: Min: Mean:	
	4.	Max: Min: Mean:	
	5.	Max: Min: Mean:	
s) Ongoing monitoring <sup>19</sup>	..... ..... .....		
t) Has a quantitative risk assessment been carried out? (attach assessment) <sup>20</sup>	..... ..... .....		

**MAP**

A scale map of the site should be provided and include the following information:

- > Location and layout of the infiltration system
- > The location of the trial pits, boreholes/peizometres & percolation test holes
- > The location of any well, springs or boreholes (mark with 'W', 'S' or 'B' for **Well**, **Spring**, or **Borehole**) within 500m of the discharge
- > The location of surface water features within 200m of the discharge.
- > The location of any field drains
- > The boundary of the plot
- > North point should be indicated by an arrow labelled 'N'.
- > A scale bar.

**TRIAL PIT DETAILS**

The Hole should be at least 1.5m deep below the bottom of the proposed depth of the discharge pipe.

<b>Depth of Trial Hole (m):</b>		<b>Date and time of excavation:</b>	<b>Date and time of examination:</b>
<b>Depth from ground surface to bedrock (m):</b>			
<b>Depth from ground surface to water table (m):</b>			
	<b>Subsoil description</b>	<b>Colour*</b>	<b>Preferential flow paths</b>
0.1m			
0.2m			
0.3m			
0.4m			
0.5m			
0.6m			
0.7m			
0.8m			
0.9m			
1.0m			
1.1m			
1.2m			
1.3m			
1.4m			
1.5m			
1.6m			
1.7m			
1.8m			
1.9m			
2.0m			
2.1m			
2.2m			
2.3m			
2.4m			
2.5m			

\*All signs of mottling should be recorded

X ADDITIONAL INFORMATION SUBMITTED		
	Document name:	Wastewater Treatment Works Layout
	Document reference:	5000004703-WW-DRA-99002722-0B
	Document name:	Outfall Plan
	Document reference:	5000004703-WW-DRA-99002723-0B
	Document name:	Outfall Construction Details
	Document reference:	5000004703-WW-DRA-99001211-0C
	Document name:	Method Statement
	Document reference:	MS01 Outfall River Crossing
	Document name:	Method Statement
	Document reference:	MS02 Mashock Burn Crossing
	Document name:	Headroom Determination Report
	Document reference:	33083-SW-160-RT-EN-2017

**APPENDIX 1 – substances**

Table 1 below details substances which must be highlighted within your application if they are contained within your discharge.

**Table 1 Substances**

<b>Substance</b>	
Alachlor	PS
Aldrin	LIST I
Aluminium	SP
Anthracene	PSR
Arsenic	SP, LIST II
Atrazine	PSR, LIST II
Azinphos-methyl	LIST II
Bentazone	LIST II
Benzene	PS, LIST II
Biphenyl	LIST II
Boron	LIST II
Brominated diphenylether (only	PHS
Cadmium	PHS, LIST I
Carbon tetrachloride	LIST I
Chlorfenvinphos	PS
Chlorine	SP
Chloroalkanes, (C10-13)	PHS
Chloroform	LIST I
Chloronitrotoluenes	LIST II
2-Chlorophenol	LIST II
4-Chloro-3-methylphenol	LIST II
Chlorpyrifos	PSR
Chromium	SP, LIST II
Copper	SP, LIST II
Cyanide	SP
Cyfluthrin	LIST II
2,4 –D (ester)	LIST II
2,4-D (non-ester)	LIST II
DDT	LIST I
Demeton	LIST II
Di(2-ethylhexyl)phthalate (DEHP)	PSR
Diazinon	SP
1, 2 Dichloroethane	PS, LIST I
Dichloromethane	PS
2,4-Dichlorophenol	LIST II
Dichlorvos	LIST II
Dieldrin	LIST I
Dimethoate	LIST II
Diuron	PSR
Endosulphan	PSR, LIST II
Endrin	LIST I
Fenitrothion	LIST II
Fluocifuron	LIST II
Fluoranthene	PS
Hexachlorobenzene	PHS, LIST I
Hexachlorobutadiene	PHS, LIST I
Hexachlorocyclohexane (Lindane)	PHS, LIST I
Iron	SP, LIST II
Isodrin	LIST I
Isoproturon	PSR

Lead and its compounds	PSR, LIST II
<b>Substance</b>	
Linuron	LIST II
Malathion	LIST II
Manganese	SP
Mecoprop	LIST II
Mercury and its compounds	PHS, LIST I
Mevinphos	LIST II
Naphthalene	PSR, LIST II
Nickel and its compounds	PS, LIST II
Nonylphenols	PHS
Octylphenols	PSR
Omethoate	LIST II
PCSDS	LIST II
pentabromodiphenylether (PBDE)	PHS
Pentachlorobenzene	PHS
Pentachlorophenol	PSR, LIST I
Perchloroethylene	LIST I
Permethrin	SP, LIST II
Phenol	SP
Poly Aromatic Hydrocarbons	PHS
pp-DDT	LIST I
Simazine	PSR, LIST II
Sulcofuron	LIST II
Tetrachloroethane	SP
Toluene	SP, LIST II
Triazophos	LIST II
Tributyltin compounds	PHS, LIST II
Trichlorobenzene	PSR, LIST I
1,1,1-Trichloroethane	LIST II
1,1,2-Trichloroethane	LIST II
Trichloroethylene	LIST I
Trichloromethane	PS
Trifluralin	PSR, LIST II
Triphenyltins	LIST II
Vanadium	LIST II
Xylene	LIST II
Zinc	SP, LIST II

KEY: PHS – Annex X priority hazardous substance  
PS – Annex X priority substance  
PSR – Priority Substance Review  
SP - Annex VIII substance covered by points 1 to 9 - termed as Specific Pollutant  
List I - Dangerous Substances Directive List I substance, also listed in annex IX of WFD  
List II - Dangerous Substances Directive List II substance (as agreed by UK, statutory EQS applies)