

**P-WAT-A3**

**The Environmental Authorisations (Scotland) Regulations 2018 (EASR)**

**Water Permit Activity:**

**Discharge of sewage from an overflow or discharges from a sewage treatment works with overflows**

Version 1.0

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Contents

[How to use this activity form 3](#_Toc202284133)

[Before you apply 4](#_Toc202284134)

[Multiple activities under a single permit 4](#_Toc202284135)

[How to apply 5](#_Toc202284136)

[Section 1 - Location of the activity 6](#_Toc202284137)

[1.1 Location description 6](#_Toc202284138)

[1.2 Discharge locations 7](#_Toc202284139)

[1.3 Sampling 8](#_Toc202284140)

[1.4 Schematic plan 9](#_Toc202284141)

[Section 2 - About your proposed activities 11](#_Toc202284142)

[2.1 Non-technical summary 11](#_Toc202284143)

[Section 3 - Flow of sewage 12](#_Toc202284144)

[3.1 Dry weather flows (DWF) 12](#_Toc202284145)

[3.2 Population equivalent 12](#_Toc202284146)

[Section 4 - Type of sewage discharge 13](#_Toc202284147)

[Section 5 - Discharge of treated effluent or from overflows 14](#_Toc202284148)

[5.1 Discharge of treated effluent 14](#_Toc202284149)

[5.2 Combined sewer overflow (CSO) 18](#_Toc202284150)

[5.3 Emergency overflow (EO) 22](#_Toc202284151)

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## How to use this activity form

Use this form to apply for:

* A **new permit** for the discharge of sewage from an overflow or discharges from a sewage treatment works with overflows.
* A **variation of an existing permit** that authorises the discharge of sewage from an overflow or discharges from a sewage treatment works with overflows.
* The **variation of an existing permit** to add the discharge of sewage from an overflow or discharges from a sewage treatment works with overflows.

This includes the following types of sewage discharges:

1. Discharges to the water environment of treated sewage effluent and one of the following discharges:
* Screened storm sewage
* Screened settled storm sewage, or
* Sewage from an emergency overflow

from a sewage treatment works (STW).

1. Discharges of storm sewage from a combined sewer overflow (CSO)
2. Discharges of sewage from an emergency overflow (EO)

You can use this form to apply for:

* Discharges from a single STW, or
* Discharges from single or multiple CSOs or EOs

Note: If your application is for a new sewer network, or for a variation of an existing authorisation for a sewer network, please use this activity form to apply for a discharge from an EO or CSO.

## Before you apply

* Read the guidance for the water activity you are applying for on the relevant activity specific page on our [website](https://www.sepa.org.uk/easr).
* Where you see the term ‘document reference’, enter the document reference(s) for the information you have provided. These must be submitted along with the completed form.
* For applications made with insufficient or inadequate information; we will return these to the applicant with an explanation of what additional information is required and may retain part of the application fee in accordance with our published charging scheme.

## Multiple activities under a single permit

We may authorise multiple activities under a single permit, but only if the activities are connected. Activities may be considered connected if they are:

* located at the same geographical location,
* part of the same project, or
* operationally linked.

If the activities are connected, you may submit a single application for multiple activitiesunder one permit.

If the activities are not connected, you must submit a separate application for each activity.

## How to apply

**Digital application service:**

The quickest and easiest way to [apply is via our digital application service](https://www.sepa.org.uk/easr) on our website.

You will need to upload:

1. Completed activity form(s)
2. Any required supporting information

**Email/Post application:**

If you cannot apply using our digital application service, you can complete and submit an application via email or by post.

* For **a new permit**, your application must include:
1. A completed APP-GEN1 form
2. Completed activity form(s)
3. Any required supporting information
* For **a variation of a permit**, your application must include:
1. A completed APP-GEN1 form
2. Completed variation form(s)
3. Completed activity form(s) if required
4. Any required supporting information

Email and postal addresses for submitting your application are included in the APP-GEN1 form.

You can download [APP-GEN1, activity forms and variation forms](https://www.sepa.org.uk/easr) from our website.

## Section 1 - Location of the activity

### 1.1 Location description

Please provide the following information about the location.

**Table 1: Location description**

| **Question** | **Answer** |
| --- | --- |
| **Location description** (e.g. New Town sewage treatment works) |  |
| **Address** |  |
| **Postcode** |  |
| **National Grid Reference (NGR)**(At least 2 letters followed by 8 digits, e.g. AB 1234 6789. You can use our [SEPA NGR Tool](https://map.sepa.org.uk/ngrtool/) to find your NGR.) |  |

### 1.2 Discharge locations

For each discharge location, please provide the following information:

* A description of the type of discharge (e.g. treated sewage effluent, screened storm sewage).
* The NGR of the outfall location and a unique reference for the outfall (e.g. outfall 1, outfall 2).
* A description of the receiving environment (i.e. where the discharge goes).
* If the discharge is to surface water, provide the name of the watercourse, loch, sea or estuary (e.g. River Clean).
* If the discharge is to a full soakaway, please insert ‘full soakaway’.

You can use our [SEPA NGR Tool](https://map.sepa.org.uk/ngrtool/) to find the NGR. The NGR should be in one of these formats:

* 2 letters followed by 10 digits (e.g. AB 12345 67890)
* 2 letters followed by 8 digits (e.g. AB 1234 6789)

Add additional rows as needed.

**Table 2: Discharge description and outfall location**

| **Description of discharge**  | **NGR and reference of the outfall location**  | **Description of receiving environment**  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

### 1.3 Sampling

#### 1.3.1 Sample point location(s)

Please provide a description of the type of sewage (e.g. influent sewage) and a NGR of the corresponding sample point location.

You can use our [SEPA NGR Tool](https://map.sepa.org.uk/ngrtool/) to find the NGR. The NGR should be in one of these formats:

* 2 letters followed by 10 digits (e.g. AB 12345 67890)
* 2 letters followed by 8 digits (e.g. AB 1234 6789)

Add additional rows as needed.

**Table 3: Description of the type of sewage and sample point location**

| **Description of the type of sewage** | **NGR of sample point location**  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

#### 1.3.2 Type of sampling facilities

Please provide a description of the sample facilities that will be used (e.g. sample chamber, automatic sampling facilities).

For automatic sampling facilities, please include details on the type of automatic sampling facility and sampling procedures.

| **Document reference** |
| --- |
|  |

### 1.4 Schematic plan

Please provide a schematic plan showing the key features of the site.

If you are applying to change the existing drainage layout, please provide:

* A plan showing the existing layout, and
* A plan showing the proposed changes.

The plan(s) must:

1. be based on an Ordnance Survey (OS) map.
2. be clear and easy to read on an A4 page, avoiding unnecessary details.
3. include a defined scale, the date it was created, and a north direction indicator.

#### 1.4.1 Sewage treatment works (STW)

If the discharges are from a sewage treatment works (STW), the schematic plan must cover the whole works and clearly show labelled location, description and reference of each of the following key features:

* Sampling facility
* Each sample location
* Pumping station
* Screens
* Each storage tank and its volume
* Flow monitoring equipment
* Event monitoring equipment
* Combined sewer overflow weir
* Each overflow outfall location
* Treated sewage effluent outfall location, including the location of any partial soakaway (where applicable)

| **Document reference(s)** |
| --- |
|  |

#### 1.4.2 Combined sewer overflow (CSO) or an emergency overflow (EO)

If the discharge is from a CSO or EO that is not part of an STW, the schematic plan must clearly show labelled location, description and reference of each of the following key features:

* Each sample location
* Pumping station
* Screens
* Each storage tank and its volume
* Flow monitoring equipment
* Event monitoring equipment
* Combined sewer overflow weir
* Each overflow outfall location

| **Document reference(s)** |
| --- |
|  |

#### 1.4.3 Variation to an authorisation for a sewer network

If you are applying for a variation to an authorisation for a sewer network, please provide an amended ‘Map of Drainage Area’.

| **Document reference(s)** |
| --- |
|  |

## Section 2 - About your proposed activities

### 2.1 Non-technical summary

Please provide a non-technical summary of your application, including a brief overview of the proposed activity.

This summary may be published on our website as part of the public consultation process.

Ensure it is written in simple and plain language so that all members of the public can clearly understand the details of your application.

| **Document reference** |
| --- |
|  |

## Section 3 - Flow of sewage

### 3.1 Dry weather flows (DWF)

#### 3.1.1 Proposed dry weather flow

Please provide details on the proposed dry weather flow (DWF) in cubic metres per day.

| **Dry weather flow** (m3/day) |
| --- |
|  |

#### 3.1.2 Components of the DWF calculation

You should provide a breakdown of the components used to calculate the proposed DWF, along with an explanation of how each component has been derived. This includes:

* Population equivalent
* Water consumption (litres per head per day)
* Trade effluent flow (m³/day)
* Dry weather infiltration (IDWF) (m³/day), including details of any seasonal variation in infiltration flow where available
* Maximum possible infiltration (IMax) (m³/day)

| **Document reference** |
| --- |
|  |

### 3.2 Population equivalent

Please provide the population equivalent (p.e.) that each STW, CSO or EO is designed for.

| **Population equivalent**  |
| --- |
|  |

## Section 4 - Type of sewage discharge

Please select one box to indicate which type of sewage discharge you are applying for.

#### The discharge of treated sewage effluent and [ ]  one of the following discharges:

#### screened storm sewage

#### screened settled storm sewage, or

#### sewage from an emergency overflow

**from a sewage treatment works (STW)**

#### The discharge of storm sewage from a combined sewer overflow (CSO) [ ]

#### The discharge of sewage from an emergency overflow (EO) [ ]

## Section 5 - Discharge of treated effluent or from overflows

### 5.1 Discharge of treated effluent

Complete Section 5.1 if you are applying for:

* A new discharge of treated effluent, or
* A change to an existing discharge of treated effluent.

#### 5.1.1 Trade effluent information

Please provide information for each trade effluent that discharges to the sewer system and may lead to the presence of substances in the influent of the sewage treatment works at concentrations:

* exceeding Environmental Quality Standards (EQS), or
* for priority hazardous substances exceeding one tenth of the EQS.

The information you must include is:

* A description of each trade effluent.
* The concentration of each substance in the influent, and how this was calculated.
* The potential concentration of each substance in the treated effluent, using the relevant sewage treatment reduction factors

| **Document reference** |
| --- |
|  |

Read our guidance [WAT-G-072: EASR Guidance: Environmental standards for discharges to surface waters](http://www.sepa.org.uk/easr) for information on EQS.

#### 5.1.2 Chemicals added

If you are using chemicals, please provide the following information:

* A justification for their use in the treatment process
* The name of each chemical to be used
* The dosage rate
* Where each chemical will be added
* The anticipated concentration of each chemical in the treated effluent

| **Document reference** |
| --- |
|  |

Please also submit a separate Material Safety Data Sheet (MSDS) for each chemical or product added. Include the corresponding MSDS document reference below.

**Table 4: Material Safety Data Sheet (MSDS)**

| **Chemical or product name** | **Document reference MSDS** |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |

#### 5.1.3 Discharge effluent quality

If you have determined discharge standards by modelling, you mustsubmit a discharge modelling report including details of the model used, assumptions and inputs.

Please also provide the following:

* The proposed treated effluent quality, specifying whether the values represent a 95th percentile or other, for the following parameters:
* Biochemical Oxygen Demand (BOD)
* Ammoniacal nitrogen
* Phosphorus (total or reactive) (where relevant)
* Dissolved inorganic nitrogen (DIN) (where relevant)
* Escherichia coli (E. coli) (where relevant)
* Intestinal enterococci (where relevant)
* For substances identified in Section 5.1.1, where concentrations in the effluent may exceed the EQS and/or one tenth of EQS (for priority hazardous substances), provide the treated effluent quality required to meet environmental standards.

| **Document reference** |
| --- |
|  |

#### 5.1.4 Treated effluent flows

#### 5.1.4.1 Mean daily flow of treated effluent

Please provide the mean daily flow of treated effluent (cubic metres per day).

| **Flow of treated effluent** (m3/day) |
| --- |
|  |

#### 5.1.4.2 Standard deviation of the treated effluent

Please provide the standard deviation of the treated effluent (cubic metres per day).

| **Standard deviation of treated effluent** (m3/day) |
| --- |
|  |

#### 5.1.4.3 Flow derivation

Please provide details as to how the mean daily flow and standard deviation have been derived.

| **Document reference** |
| --- |
|  |

### 5.2 Combined sewer overflow (CSO)

Complete Section 5.2 if you are applying for:

* A new discharge from a CSO, or
* A change to an existing discharge from a CSO.

If you are proposing the discharge of sewage from a new or modified CSO, you should refer to our guidance and the Urban Pollution Manual (UPM).

#### 5.2.1 Sewer modelling

You must carry out sewer modelling and submit a supporting report. The report should include, where relevant:

* The modelling software used and its version number
* Time series rainfall data
* The rainfall data location
* Information of rainfall recording locations

The sewer modelling report may include a Drainage Area Study and may involve flow or event monitoring to verify the model.

The report should provide details of spill rates, volumes, number and duration of spills. This includes information on how the change of flows may impact on the operation of other assets. For example, the impact on an upstream or downstream CSO or sewage treatment works (STW).

If you are applying for a new CSO, you must provide justification for the proposal.

| **Document reference** |
| --- |
|  |

#### 5.2.2 Water quality impact modelling

* **Using Formula A**

If you are using Formula A, please provide the completed calculation.

| **Document reference** |
| --- |
|  |

* **Not using Formula A**

If you are not using Formula A, please submit a modelling report to determine the impact of the discharge on the water environment. This should include details of the model used, all relevant assumptions, input data and model outputs.

The outputs must include:

* pass forward flow settings, and
* for discharges to Bathing Waters or Shellfish Waters, details of spill rates, volumes, number and duration of spills.

| **Document reference** |
| --- |
|  |

#### 5.2.3 Operation of combined sewer overflow (CSO)

**5.2.3.1 Pass forward flow rate**

For each referenced Combined Sewer Overflow (CSO), please provide the pass forward flow rate in litres per second when the corresponding overflow weir will start operating.

**Table 5: Pass forward flow rate at overflow weir**

| **Description of discharge and** **CSO reference**  | **Pass forward flow rate at overflow weir** (l/s)  |
| --- | --- |
| e.g. screened storm sewage (CSO number 1) | e.g. 10 l/s  |
|  |  |
|  |  |
|  |  |

**5.2.3.2 Screen details**

For each referenced CSO, please provide details of the corresponding screen type and its maximum gap size in millimetres.

**Table 6: Screen details**

| **Description of discharge and** **CSO reference** | **Type of screen**  | **Maximum gap size** (mm) |
| --- | --- | --- |
| e.g. screened storm sewage (CSO number 1)  | e.g. 3D, bar screen  | e.g. 6 mm  |
|  |  |  |
|  |  |  |
|  |  |  |

#### 5.2.4 Storm storage facilities

**5.2.4.1 Storage volume**

For each referenced CSO, please provide the total storm storage volume in cubic metres.

**Table 7: Total storm storage volume**

| **Description of discharge and CSO reference**  | **Total storm storage volume** (m3) |
| --- | --- |
| e.g. screened storm sewage (Number 1) | e.g. 1000m3 |
|  |  |
|  |  |
|  |  |

#### 5.2.4.2 Design and calculations

Provide detailed information on the design of the storm storage facilities, including:

* the volume of each individual storm tank
* The method used to calculate each volume
* The configuration of the tanks (e.g. blind tanks, flow-through tanks)

|  **Document reference** |
| --- |
|  |

#### 5.2.4.3 Return of storm tank contents

Please provide details on how storm tank contents will be returned for full treatment, including whether the storm tanks are emptied manually or automatically, and the associated maximum pump rates.

| **Document reference** |
| --- |
|  |

### 5.3 Emergency overflow (EO)

Complete Section 5.3 if you are applying for:

* A new discharge from an EO, or
* A change to an existing discharge from an EO.

#### 5.3.1 Emergency overflow justification

Please provide a justification for the emergency overflow(s).

| **Document reference** |
| --- |
|  |

#### 5.3.2 Emergency overflow report

For each emergency overflow, please provide a report setting out your pumping arrangements and the mitigation measures that will be in place in the event of pump failure.

The report should include:

* A description of the pumping arrangements, including the capacity of each pump and whether the pumps are duty, standby or assist.
* A description of the warning system that will be used to identify pump failure or operation of overflow (e.g. alarms, telemetry connections).
* A description of how you will deal with power failures. Describe any facilities for mobile generators, tanker access and automatic pump reactivation.
* Details of the storage capacity (in cubic metres) that will be provided and how you have calculated this.
* A description of the maximum response time and your justification for this.

| **Document reference** |
| --- |
|  |

**5.3.3 Screen details**

For each referenced EO, please provide details of the corresponding screen type and its maximum gap size in millimetres.

**Table 8: Screen details**

| **EO reference** | **Type of screen**  | **Maximum gap size** (mm) |
| --- | --- | --- |
| e.g. EO number 1  | e.g. 3D, bar screen  | e.g. 6 mm  |
|  |  |  |
|  |  |  |
|  |  |  |