

Unpermitted storm overflows

Guidance note

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What is this document about?

This guidance note should be used in conjunction with GN066 How To Classify Storm Overflow Performance. It outlines the steps a Water and Sewerage Company should take when a storm overflow does not have an environmental permit. The pre-application requirements may depend on the agreed SO classification.

Who is this document for?

Water and Sewerage Companies that operate wholly or completely in Wales.

Contact for queries and feedback

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Version History

Document version	Date published	Summary of changes
1.0	26 October 2023	Document published
2.0	29 July 2026	<p>Some minor changes (e.g. grammar, spelling and layout) have been made throughout the document. More significant changes to the guidance have been made to:</p> <ul style="list-style-type: none">• Chapter 2 – reference to GN018 made on newly identified unpermitted storm overflows.• Chapter 2 – included reference to GN066 and SO master dataset tracker.• Chapter 2 – removal of hyperlink that appeared twice.• Chapter 3 – added information on SO master data and referenced GN066.

Document version	Date published	Summary of changes
		<ul style="list-style-type: none"> Chapter 3 – ‘Decommission a storm overflow’ – added further detail to ensure there as clarity for water companies, including the data required and how they supply it to us. <p>Chapter 4 – ‘Unsatisfactory storm overflows’ – added reference to GN066</p>

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1. Introduction

We expect Water and Sewerage Companies to design, construct and maintain sewerage systems to minimise pollution of the environment and provide long-term sustainability in accordance with the Well-being of Future Generations (Wales) Act 2015 and other applicable legislation.

All storm overflows (SOs) are required to have an Environmental Permitting Regulations 2016 (EPR) permit to authorise water discharge activities. However, some SOs may not benefit from an EPR permit. This may be because some discharges were unknown at the time of privatisation. Since then, they may have been identified during water company survey work, regulatory compliance activity or brought to our attention by the public. They may also be identified for example, where a pumping station that has a permit to discharge during emergency conditions only, has been found to be responsive to rainfall.

Unpermitted SO discharges must either be brought into regulation (benefit from an EPR permit) within timescales specified in this guidance or be decommissioned.

This guidance note sets out the steps that you must take when you intend to apply for an EPR permit. The information submitted with a permit application is dependent on the classification of the SO performance and whether the SO discharges directly or indirectly into a protected site.

Guidance to classify a SO is provided in GN066 How To Classify Storm Overflow Performance.

This document uses the following terminology throughout:

‘Must’ indicates a statutory requirement. If you do not follow a ‘must’ you may not be legally compliant.

‘Should’ indicates an action recommended to meet a ‘must’. If you decide to take a different approach you should consider showing how this meets your obligations.

‘Could’ indicates approaches or actions that could be considered depending on your priorities.

‘You/your’ refers collectively to all water companies.

‘We/us/our’ refers to Natural Resources Wales (NRW)

2. Newly identified unpermitted storm overflows

When you identify a previously unknown SO that does not benefit from an EPR permit you should report this to us, via our Incident Communication Centre (ICC) as soon as is reasonably practical. For more information on this, please see GN018 Water Company Pollution Incidents (chapter 19). Following the self-report, you should log the unpermitted SO and the date it was identified, on the SO master dataset tracker, in the agreed location

on your SharePoint. Please see GN066 How To Classify A Storm Overflow for more information.

Water discharges that may contain polluting matter, from an asset that does not benefit from an EPR permit are considered unlawful. As such, we will follow our normal regulatory response and consider enforcement options in accordance with our Enforcement and Sanctions Policy.

If you are already aware of an unpermitted SO, you should confirm that it is recorded on the SO master dataset tracker.

If you become aware of a pumping station emergency overflow that is responsive to rainfall and is not permitted as a storm overflow, you should carry out the steps in Sewage pumping station discharges. We normally refuse permit applications for existing emergency overflows to operate as storm overflows that were not originally designed to include a SO.

3. Process overview

You will need to classify the SO as satisfactory, substandard, or unsatisfactory using the process described in GN066 How To Classify Storm Overflow Performance. This does not apply if it is your intention from the out-set to decommission it.

The environmental impact assessment may take up to 24 months to complete. This timeframe allows sufficient time to carry out seasonal invertebrate sampling and complete sewer and river impact modelling.

The supporting information that determines the classification should be submitted to us for agreement within 24 months of it being identified. The information we need to be able to agree the classification and how we access the information, is specified in GN066 How To Classify Storm Overflow Performance.

Where an SO is classified as substandard or unsatisfactory, an appropriate level of investigation must be undertaken to define the requirements necessary to bring the SO in line with satisfactory status.

Where a full Urban Pollution Management (UPM) study is required to identify a solution to a hydraulic issue, the investigation must be completed within 24 months from agreement of the classification status. If the root cause is not a hydraulic issue, we expect a solution to be identified no later than 12 months following agreement of the classification status. If these timeframes cannot be met, they must be agreed in writing with us.

Where an SO has been classified as substandard or unsatisfactory the permit application must contain details about how the SO will be brought into satisfactory condition. You are required to agree the timescale for delivery of the improvement scheme with us, as this will be incorporated into an improvement condition, when a permit is issued. A tracking system to monitor progress with the improvement condition, should be agreed with us.

After the classification has been agreed with us, you should apply for an EPR permit.

Habitat Regulations Assessment (HRA)

A permit application should include a Habitat Regulations Assessment (HRA) if the SO discharges into a European protected site, namely a Special Area of Conservation (SAC), Special Protection Area (SPA) or a Ramsar site.

You should consult with us for the purposes of the HRA before submitting a permit application.

A HRA should be carried out in accordance with the Conservation of Habitats and Species Regulations 2017 and Welsh Government Guidance on HRAs.

A HRA may be required irrespective of whether the SO discharges directly into a SAC, SPA, Ramsar designated waters or indirectly. Check with our permitting department to clarify if there is a need to carry out an HRA as early as possible.

We will review the HRA as part of the application in the permit determination process and will only grant one, if we are satisfied that adverse effects will be avoided to protected sites.

Decommissioning a storm overflow

If a SO is identified which is no longer required, you will not need to apply for a permit. You should still notify us when it has been identified.

Information about the proposals to decommission a SO should be supplied to us. We will need to agree them. A completion date must be provided, and proof of decommissioning supplied.

You should also advise us if the SO should have been removed during a previous Asset Management Programme (AMP) round, as part of a National Environment Programme (NEP) funded scheme.

Notify the relevant NRW Environment Team using their Team email address about decommissioning Storm Overflows.

4. Permit application requirements

Satisfactory storm overflows

Where the SO meets the satisfactory criteria set out in GN066 How To Classify Storm Overflow Performance, you should upload the SO classification supporting information to the master dataset tracker on your SharePoint for our agreement. The master dataset must always be accessible to us.

Important A permit application should be made no later than one month following agreement of the classification. You can apply for an EPR permit without further work required upfront.

The application should include an [HRA](#) where applicable. It should demonstrate that the continued operation of the SO will not have any adverse effects on a protected site. You should always consult with us for the purposes of the HRA.

You will need to carry out regular maintenance to ensure that the SO does not become substandard or unsatisfactory in the future.

Substandard storm overflows

When you have classified the SO as substandard, the following steps will need to be undertaken:

- Log the SO classification with us for agreement. For more information on this, please see GN066 How To Classify A Storm Overflow.
- If the overflow is substandard due to insufficient hydraulic capacity, a further 24-month period will be allotted following agreement of classification. You must carry out a study to define the requirements which will bring the SO in line with satisfactory status.
- If the overflow is substandard due to reasons other than insufficient hydraulic capacity, a further 12 months will be allotted following agreement of the classification. You must carry out a study to define the requirements which will bring the SO in line with satisfactory status.
- Consult with us if an HRA is required
- Apply for a permit
- If applicable, include the HRA in the application, provide evidence to demonstrate there will be no adverse effects
- Provide details in the application about how the SO will be brought into satisfactory condition, including timescales.
- Agree timescales for delivery with us as they will be included in the permit as part of an improvement condition.
- Agree in advance with us, in writing, if there is likely to be any deviation from the above steps.

Unsatisfactory storm overflows

When you have classified the SO as unsatisfactory, using the criteria set out in GN066 How To Classify Storm Overflow Performance, the following steps will need to be undertaken:

- Log the SO classification with us for agreement. For more information on this, please see GN066 How To Classify A Storm Overflow.
- Investigate and identify an improvement scheme within 24 months of agreeing the classification with us.
- Undertake a suitable [urban pollution management](#) (UPM) investigation to define the required solution.
- Agree the scope of the investigation with us in advance.
- Ensure there are no knock-on impacts at other SOs or terminal Wastewater Treatment Works (WwTW) unless this has been agreed as part of a wider catchment solution.
- Consult with us if an HRA is required.

- Apply for a permit after the UPM investigation.
- Include details in the permit application on how the SO will be improved to satisfactory condition.
- If applicable, include the HRA in the application, provide evidence to demonstrate there will be no adverse effects.
- The timescale for delivery must be agreed with us, as it will be included in the permit as part of an improvement condition.
- Confirm that the delivery of the scheme will be no more than 3 years from the date of permit issue.
- Agree in advance with us, in writing, if there is likely to be any deviation from the above steps.

Derogation requirements

If the SO is classified as unsatisfactory either wholly or partly because the [HRA](#) appropriate assessment is unable to rule out adverse effects on a SAC, SPA or Ramsar site, we may issue the permit as a derogation. We will only do this if we are satisfied that there are no alternative solutions and if there are imperative reasons of overriding public interest (IROPI) for the continued operation of the SO.

Permit applications for SOs classed as unsatisfactory wholly or partly due to impacts on a SAC, SPA, or Ramsar site, must also include the following information:

- Evidence to demonstrate that there are no alternative solutions to the continued operation of the SO.
- The reasons why decommissioning the SO is not an option.
- Evidence to show that the continued operation of the SO is necessary for IROPI.
- Information about how and when the proposed improvement plan (when implemented), will ensure that the SO will not adversely affect the SAC, SPA, or Ramsar site.

As part of the permit determination, we will review the HRA along with the information you provide, in support of a derogation. Before we can issue a permit of this nature, we are required to notify Welsh Government. They will either confirm that they have no objections to granting the permit or they may direct us, not to issue the permit pending further consideration. A decision will be made within 21 days.

Urban Pollution Management (UPM)

All work affecting storm overflows should be planned using the UPM procedure outlined in [section 3 of the Urban Pollution Manual](#). The UPM procedure is used to ensure that wastewater discharges from sewer and sewage treatment systems in wet weather meet the ecological requirements of the receiving water in a cost-effective way.

The water sector's good practice guides such as the [guidance notes and codes of practice](#) published by the CIWEM Urban Drainage Group, should be used to inform the detail of how to build, verify and apply UPM modelling techniques.

Further details on the UPM requirements are included in [Annex 1](#).

Solutions for unsatisfactory SOs

Traditionally, solutions to SOs classed as unsatisfactory comprise one or more of the following elements:

- separation from combined system of sewers and drains carrying surface water flows only
- aesthetic controls (such as screens and scum boards)
- additional storm storage near the overflow (such as on-line, or off-line storage, upsized sewers)
- increased sewer capacity downstream (gravity sewer or pumped sewer)
- re-direction of upstream flows
- raising overflow levels or controlling flows through chamber to reduce spills
- reducing overflow outlet throttles
- preventing reverse flow from receiving water (non-return valves, relocated outfall)
- relocating point of discharge to less sensitive location
- green solutions to increase attenuation or as storage
- real time control of sewers to utilise more in sewer storage capacity

The option(s) selection should pay due regard to sustainability and to whole life carbon dioxide emissions.

5. Sewage pumping station discharges

You must notify us when you become aware that an emergency overflow is responsive to rainfall and operates as a storm overflow. Refer to NRW guidance GN018 Water Company Pollution Incidents (chapter 17) for guidance about how to self-report. If you do not intend to remove the hydraulic response to storms you must submit a report within 12 months of the notification, detailing the steps below. You must state the reason for retaining the storm overflow.

If a discharge from an emergency overflow indicates a hydraulic response to rainfall which is not covered by the conditions in the environmental permit, the following steps must be carried out:

- Provide details of the catchment's sewerage history and development.
- Provide the permitting history of the pumping station and the history of storm discharges.
- Provide evidence if the original design intent of the discharge was as an SO.
- Investigate the catchment to identify and quantify the cause of the storm discharges (such as connected to an impermeable area, infiltration, land drainage connections, shortfalls in pumping capacity, network deterioration, cross connections or growth).
- Provide the reason for any deterioration in performance.
- Construct a verified hydraulic model that predicts the observed storm discharges.
- Assess whether the sewerage system, including the pumping station, has been designed, constructed, and maintained according to best technical knowledge not entailing excessive costs (BTKNEEC)
- Develop a costed plan to deal with any shortfalls contributing to storm

discharges for which you are responsible.

- Develop a plan to resolve inflows for which you are not directly responsible.
- Produce an action plan to implement this work together with relevant interested groups such as local authorities, householders, and landowners.
- Use the verified hydraulic model to predict the wet weather performance of the pumping station following the BTKNEEC improvements.
- Appraise options to resolve the need for residual storm discharges following the BTKNEEC improvements, including alternatives to a new SO.
- Provide evidence that pollution from the overflow will be limited according to BTKNEEC by following UPM procedure. You must meet all relevant water quality and aesthetic standards and minimise any deterioration in quality.

Where storm discharges are predicted to continue, we may consider permitting a new SO together with the BTKNEEC improvements.

We will normally refuse permits for existing emergency overflows to operate during storms where sewage pumping stations were not originally designed to include a SO.

If we accept there is no alternative following the steps carried out above, the SO must be classified and assessed against the criteria set out in GN066 How To Classify Storm Overflow Performance.

Annex 1 – Urban Pollution Management (UPM) requirements

A permit application for an unsatisfactory storm overflow must include a report summarising the UPM procedure undertaken. This procedure must be directed at achieving the relevant environmental quality targets. The objective of no deterioration at point of mixing, must be met by all schemes.

Relevant details of the study undertaken should include:

- environmental standards
- requirements for no deterioration of WFD water body status
- no deterioration in wet weather of the quality of receiving water (any percentile including percentiles higher than 99 and, or fundamental intermittent standards)
- emission standards
- design standards
- the modelling approach used
- the solution

The modelling undertaken should include:

- type of model(s) used
- statements about each model's purpose
- its limitations and range of use
- its reliability
- types of sensitivity testing required
- method for using model(s)
- statement of fitness for purpose of the overall modelling plan
- scope and source of data used
- other discharges included in the assessment and length of stretch or area extent used in assessment

The solution summary should include but is not limited to:

- modelling results
- solutions investigation optimisation analysis
- solution conceptual design
- solution compliance results
- solution audits
- assessment of risk of non-compliance through sensitivity analysis

You must carry out modelling work according to the following modelling codes of practice. These codes supplement the UPM procedure and provide specific guidance on modelling and data collection:

- Chartered Institute of Water and Environmental Management (CIWEM) Urban Drainage Group (UDG) code of practice for the hydraulic modelling of urban drainage systems

- Wastewater Planning Users Group (WaPUG) guide to quality modelling of sewer systems
- WaPUG river data collection guide
- WaPUG river modelling guide
- WaPUG integrated urban drainage modelling guide
- CIWEM UDG rainfall modelling guide

These [modelling codes of practice](#) (and any updates) are published by the CIWEM UDG.

Where permit applications are based on the outline or conceptual design you may need to agree subsequent changes that are proposed during the detailed design, by applying for a variation of your permit if it has already been issued.

Improvement condition(s) with the agreed scheme delivery date, shall be included in the permit, based on the conceptual solution.

Abbreviations

AMP	Asset management programme
BTKNEEC	Best technical knowledge not entailing excessive costs
CIWEM	Chartered Institution of Water and Environmental Management
EPR	Environmental permitting regulations
GN	Guidance note
HRA	Habitats regulations assessment
IROPI	Imperative reasons of overriding public interest
MCERTS	Monitoring certificate scheme
NEP	National environment programme
SAC	Special area of conservation
SO	Storm overflow
SPA	Special protection area
UDG	Urban drainage group
UPM	Urban pollution management
UWWTR	Urban wastewater treatment regulations

WaPUG	Wastewater planning users group
WFD	Water framework directive