

Scottish Government

Water, wastewater and drainage policy: consultation

Background to CIWEM

CIWEM is the leading independent Chartered professional body for water and environmental professionals, promoting excellence within the sector. Established in 1895 and with over 10,000 members globally, the Institution provides independent commentary on a wide range of issues related to water and environmental management, environmental resilience and sustainable development. CIWEM welcomes the opportunity to respond to the Scottish Government's consultation on Water, wastewater and drainage policy.

In drafting this response, we received input from our specialist panels and policy groups.

Consultation questions

2. Water Resource Planning

1. Do you agree that Scotland needs to set out a plan to manage our water resources, for now and into the future?

Yes

2. To what extent do you agree that taking a national view of catchment risks will help better protect drinking water sources from pollutants?

Strongly agree

3. Drinking Water

3.1 Water Availability

3. To what extent do you agree or disagree that everyone in Scotland needs to use less drinking water?

Strongly agree

4. How do you think people and businesses could use less drinking water?

The Scottish Government should ensure the implementation of [UK Water Efficiency Strategy to 2030](#), developed by Waterwise and to enable people and business to control and reduce their water consumption. This entails :

Access to information on consumption and potential savings:

- Increase the metering coverage (to reduce the unmetered consumption) and install smart meters that give consumers real time information on their water usage. This is especially the case in areas affected by water scarcity.
- Introduce water labelling for household products to allow consumers to make more informed decisions in the marketplace.
- Promote installation/use of water efficient appliances.
- Introduce a strategy/system to reduce household water leaks
- Improve communication to harness the growing awareness of the climate and ecological emergency and the public desire to combat it. It is important that people understand what habits they can change to reduce their water consumption.
- Develop examples, case studies and demonstrations of water efficient or water neutral systems to increase public awareness and understanding.

Regulations and incentives for individuals and businesses to lower their consumption:

- Introduce minimum fittings standards regulations.
- Improve data sharing and audit practices. It will allow better targeting of audits, during which repairs and improvements can be made.
- Strengthen and implement planning policies. Planning officers should have the ability to refuse permission if proposed water efficiency is insufficient.
- End the sale and installation of leak-prone dual-flush toilets.
- Develop fair charging for water, which makes necessary water consumption affordable but increases the cost of superfluous or wasteful consumption, such as creating a free or discounted water allocation per person and increasing tariff once this "water budget" is consumed.

5. Would you like to know how much water you use in your home?

N/A

6. Would you seek to reduce your water usage if this avoids building expensive new reservoirs and water treatment works?

N/A

7. Would you know where to find information on using less water?

N/A

8. To what extent do you agree or disagree that the process for responding to water shortages should be changed so that appropriate action can be taken as soon as it is needed?

Strongly agree

3.2 Water Quality

9. To what extent do you agree or disagree that all of Scotland's plumbing should be made lead-free?

Agree

10. Would you know where to get information on how to ensure that your pipes are not affecting your drinking water?

N/A

3.3 Private Water Supplies

11. Do you agree that all drinking water supplies, regardless of size or ownership, should be tested and inspected to ensure that drinking water is safe?

Agree

12. What support do owners and users of private water supplies require to ensure that drinking water is safe?

Owners and users of private water supplies need to be able to access affordable, proportionate and frequent monitoring and, if necessary, treatment to ensure the quality of their water. They need access to straightforward guidance and advice on quality and treatment. In addition, more needs to be done to ensure the appropriate handover of responsibilities and information when there is a change of ownership of properties that have private water supplies.

- The cost of treatment, especially to single dwellings and small supplies, maybe a hindrance to bringing the water quality of private supplies up to the level of compliance seen in public supplies. Many owners and their families have not experienced illnesses linked to the water supply and can see no reason to assess the risk of contamination or to pay for water quality testing and subsequently installing treatment equipment. Owners should be better informed of the risks and made aware of grants available to install treatment.
- Advice to owners of private supplies to help them obtain and operate equipment for treating or testing water at a reasonable cost should be more readily available from non-commercial bodies such as the local authority.
- Source protection is very important for private supplies as well as public supplies. Treatment of private water supplies is often inadequate or absent and the monitoring frequency is very unlikely to detect deterioration in time to prevent ill health. A proper assessment of the risk of contamination followed by mitigation of any

unacceptable risks is essential. This could be done by a trained person or the owner, with clear guidance from the regulatory authority. The risk assessment should include the intrinsic nature of the source, the likelihood of pollution – including during droughts, flooding and heatwaves – and the suitability of all materials in contact with water between the source and the point of use.

A CIWEM briefing note on monitoring the quality of private water supplies in the UK is available here:

<https://www.ciwem.org/assets/pdf/Policy/Networks/202305%20Briefing%20Note%20-%20Monitoring%20the%20quality%20of%20private%20water%20supplies%20in%20the%20UK.pdf>

13. Do you have any further views on public and private drinking water supplies?

Private water supply risk assessments should consider all possible factors that could affect the safety of the supply under all conditions. Sampling only verifies water quality at the time and location of sampling, providing a 'snap shot' of the quality. Owners and users should also note that clarity, odour and taste are insufficient to judge the wholesomeness of the supply.

Obtaining any type of equipment for treating or testing water is not easy, and rarely cheap, for a small home owner with no knowledge of the subject. CIWEM see this as an impediment to widespread installation of treatment in privately owned supplies.

4. Drainage of rainwater

14. Who do you think has a role in changing how we manage rainwater in Scotland to adapt to the impacts of climate change? (Please select all that apply)

Individuals, Homeowners, Businesses, Scottish Government, Scottish Water, Local Authorities, Scottish Environment Protection Agency (SEPA), Land owners, Farmers, House builders, Community groups

15. To what extent do you agree that you/your organisation have/has a role in changing how we manage rainwater in communities to adapt to the impacts of climate change?

Agree

16. What would you/your organisation be willing to do in your home/property to manage rainwater differently? For example, disconnect your down pipes from the sewer, have permeable driveways, install water butts and/or rain gardens.

CIWEM encourages Sustainable Drainage Systems (SuDS) in new developments as well as retrofitting. These may include any of the examples mentioned, but related to the relevant

context. We urge all governments to more proactively incorporate and incentivise SuDS and other blue-green infrastructure into built environments. Drivers, site/building characteristics, location, cost, contamination risk, and maintenance requirements need to be considered when designing SuDS.

CIWEM also recognises that there may be a skills or capacity shortage to support the retrofitting of SuDS. This needs to be addressed through training and appropriate resourcing for local authorities, developers and their consultants.

17. Would you know where to find information on how to best manage rainwater in your property?

N/A

18. To what extent do you agree that there is a need to plan, build, maintain and make room for drainage infrastructure to better manage rainwater in our villages, towns and cities?

Strongly agree

19. What should Scotland's drainage systems look like in the future?

A combination of both grey and blue-green infrastructure will be necessary.

20. Do you have any further views on how Scotland should manage rainwater in the future?

As set out in the consultation document, Scotland faces increasing pressures from surface water flooding, road runoff pollution and sewage pollution of rivers from storm overflows that are exacerbated by climate change and development. Well-delivered Sustainable Drainage Systems (SuDS) and Natural Flood Management (NFM) can help respond to these challenges, build climate resilience, improve air quality, human health and wellbeing and contribute to nature recovery.

SuDS

The Water Environment and Water Services (Scotland) Act 2003 require all surface water from new development to be treated by a sustainable drainage system (SUDS) before it is discharged into the water environment, except for single houses or where the discharge will be into coastal water.

CIWEM recommends to direct and enable extensive retrofit of SuDS as a means to manage local surface water flood risk, highway runoff pollution and storm overflow discharges. Retrofit SuDS, strategically distributed across drainage catchments, can have significant positive impacts on reducing surface water flood risk and contribute to climate resilience. In combined sewer catchments this has additional benefit in reducing storm overflows. These

measures can also capture and treat extensive road runoff pollution if designed appropriately.

NFM

Natural flood management (NFM) is described as “an approach to managing flood risk that aims to create, restore or alter landscape features to reduce flooding”. NFM measures increase infiltration, and slow and store water entering water courses which reduces the peak flows that cause flooding. In contrast to large traditional engineering solutions, NFM approaches often require multiple interventions throughout a catchment to be effective. CIWEM is supportive of the use of Natural Flood Management (NFM) techniques wherever appropriate, and alongside hard engineering solutions where needed, to deliver flood resilience as well as provide environmental co-benefits which help to address the climate and ecological emergencies.

Given the catchment approach necessary for effective implementation of NFM, engagement with landowners is essential for success. However, some landowners may be reluctant to engage for several reasons that require careful consideration to overcome. Scotland’s ‘Agri-Environment Climate Scheme’ plays a role in supporting the development of NFM. It can ensure there is sufficient funding for hosting and maintaining schemes, and that landowner are not being dissuaded from NFM due to increased exposure to financial risks. Innovation in liability sharing mechanisms between stakeholders is also necessary.

Finally, all the stakeholders listed in question 14 need to work collaboratively on climate change adaptation and to develop integrated water management that address these complex challenges efficiently. The roles and responsibilities need to be made clear to the appropriate stakeholders if this collaboration is to be successful.

5. Wastewater collection and treatment

5.1 Overflows

21. Should investment be prioritised to address overflows that have a negative impact in the environment?

Yes.

5.2 Substances / matter not to be discharged into a sewer or drain

22. To what extent do you agree or disagree that more should be done to stop items being disposed of down toilets or drains?

Strongly agree

23. How do you think we can change behaviours to avoid the disposal of substances or matter in the toilet/sewer (e.g. wet wipes, cotton buds, nappies and hygiene products etc.)?

Products commonly discarded into sewers such as those listed should be labelled more clearly. Their producers should better enable source control, and carry part of the responsibility or financial burden caused by their products.

It would be useful to understand whether the general public aware of the negative consequences of flushing such products or if there is a different barrier to a change in behaviour.

24. It is already an offence for non-household properties to discharge fats, oils and greases to the sewer. Do you agree that offences should be extended to:

- include other pollutants, and specifically plastic? Yes
- extend the offence to household premises? No
- Please give us your views:

Enforcing extended rules on inappropriate discharge into sewers would be costly and complex. Developing better awareness and sets of solutions to allow people and businesses to safely dispose of such waste may be more impactful and cost effective long-term.

A large proportion of microplastics in the wastewater systems originates from washing synthetic fabrics. The development and incentivisation of microplastic filters for washing machines may be necessary to reduce plastic contamination of water at source. However, these would need to be affordable and easy to use to ensure a real uptake and the disposal of the residue or soiled filters would need to be done safely to avoid microplastics ending back in the water system.

5.3 Treatment

5.3.1 Wastewater monitoring

25. We currently undertake some monitoring of pollutants, do you agree that we should extend our monitoring of wastewater to look for new pollutants, and monitor pathogens in the community?

Strongly agree

5.3.2 Resource recovery

26. Do you agree that resource recovery is something that Scottish Water should be undertaking?

Yes

27. To what extent do you agree that Scottish Water should be able to use the money it receives from customer charges to invest in resource recovery hubs? This could include use of scarce resources and increase recycling of reusable materials that might otherwise be sent to landfill.

Agree

5.4 Private wastewater systems

28. Do you agree that all wastewater treatment systems, regardless of size or ownership, should be tested and inspected to ensure that they do not impact negatively on the environment?

Yes

29. What support do owners and users of private wastewater systems require to best protect the environment?

Owners and users of private wastewater systems require access to information, resources and training to ensure they understand their responsibilities, key issues and technical solutions. They should also have access to monitoring tools or services. There also needs more to be done to ensure the appropriate handover of responsibilities and information when there is a change of ownership of properties that have private wastewater systems.

30. Do you think that owners of existing private wastewater systems should be required to connect to the public system where connection is possible, beneficial and not expensive?

Agree

31. Do you have any further views on public and private wastewater systems?

Rainwater separation from sewage is a crucial part of the solution to both support water resources regeneration and limit capacity challenges and the load on wastewater treatment systems. It can save resources, energy and budget, as well as limit the risk of river pollution events due to storm overflow.

Better monitoring and investment on maintenance and update of the wastewater infrastructure are long-term solutions and that will improve efficiency. We do not have a clear picture of pressures of wastewater on the environment that can enable properly targeted, prioritised and efficient solutions across catchments. A lack of clarity fuels a lack of accountability for action. We advocate a national environmental monitoring strategy to create this picture.

Many current water challenges are also exacerbated by chronic under-investment in infrastructure maintenance. Considerably more investment in ongoing maintenance is necessary to ensure adequate upgrade and replacement of sewers and other existing water assets.

6. Paying for services

32. To what extent do you agree that changing our behaviours is essential to limit charge rises?

Agree

33. Do you agree that we should recognise that there are three services (water, wastewater and drainage)?

Yes

34. Do you agree that using Council Tax Bands is the fairest way to charge for services used by households?

No

Council Tax Bands charging is not the fairest way to charge for water and wastewater services. It does not reflect individual consumption and does not help consumer be mindful of water use.

Fair charging for water should make necessary water consumption affordable but increases the cost of superfluous or wasteful consumption. This could be a case of creating a free or discounted water allocation and increasing tariff once this "water budget" is consumed.

35. In your view, how do we incentivise households/businesses to reduce water usage to levels that are sustainable for Scotland? (See question 4)

- Introduce minimum fittings standards regulations.
- Strengthen and implement planning policies. Planning officers should have the ability to refuse permission if proposed water efficiency is insufficient.
- Limit or end the sale and installation of products that are not water efficient (in real use) such as leak-prone dual-flush toilets.
- Charging mechanisms could better reflect the characteristics of the property and the occupants, and their behaviours (particularly if they have smart meters).
- Develop fair charging for water, which makes necessary water consumption affordable but increases the cost of superfluous or wasteful consumption, such as creating a free or discounted water allocation and increasing tariff once this "water budget" is consumed.

36. In your view, how could we incentivise households/businesses to manage rainwater differently to reduce rainwater entering the sewer system to levels that are sustainable for Scotland?

SuDS are already mandatory for all new builds except for single houses or where the discharge will be into coastal water. However retrofitting of existing urban surfaces, developments and buildings is key to managing rainwater in existing urban areas. SuDS retrofitting could become mandatory when applying for permits for extending or changing the use of buildings, modifying the drainage, roofs, gutters, hard surfaces (driveways, parking areas) or other related aspects of a building. A similar approach could be considered to highway authorities, and local government when they change the surfacing/design of highways and public realm areas.

37. To what extent do you agree that all households and businesses should pay for roads to be drained?

Agree