The challenges facing our water environment in the Solway Tweed

19 December 2019



Working together to protect and improve our water environment

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http://contactscotland-bsl.org/

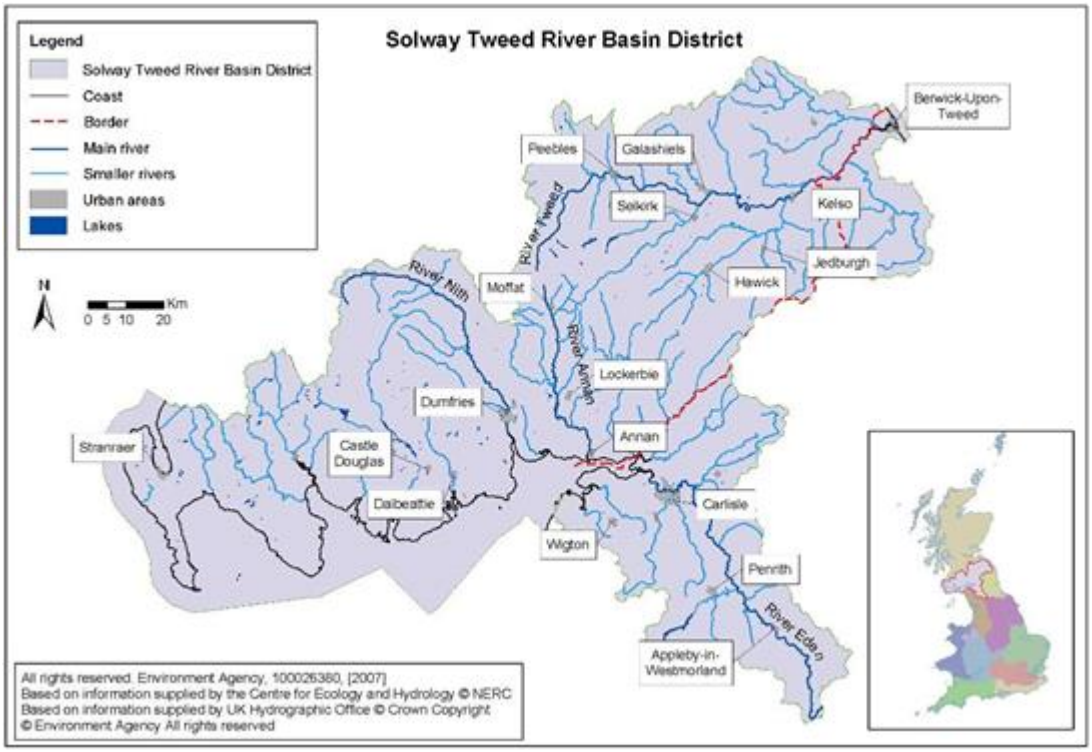
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1. Introduction

A review and update of the river basin management plan for the Solway Tweed river basin district is required by 22 December 2020. As part of that review, SEPA and the Environment Agency have undertaken an assessment of the current state of the water environment and the significant challenges preventing the rivers, lochs/lakes, estuaries, coastal waters and groundwaters from being as healthy and as productive as is possible.



Map 1: Solway Tweed river basin district.

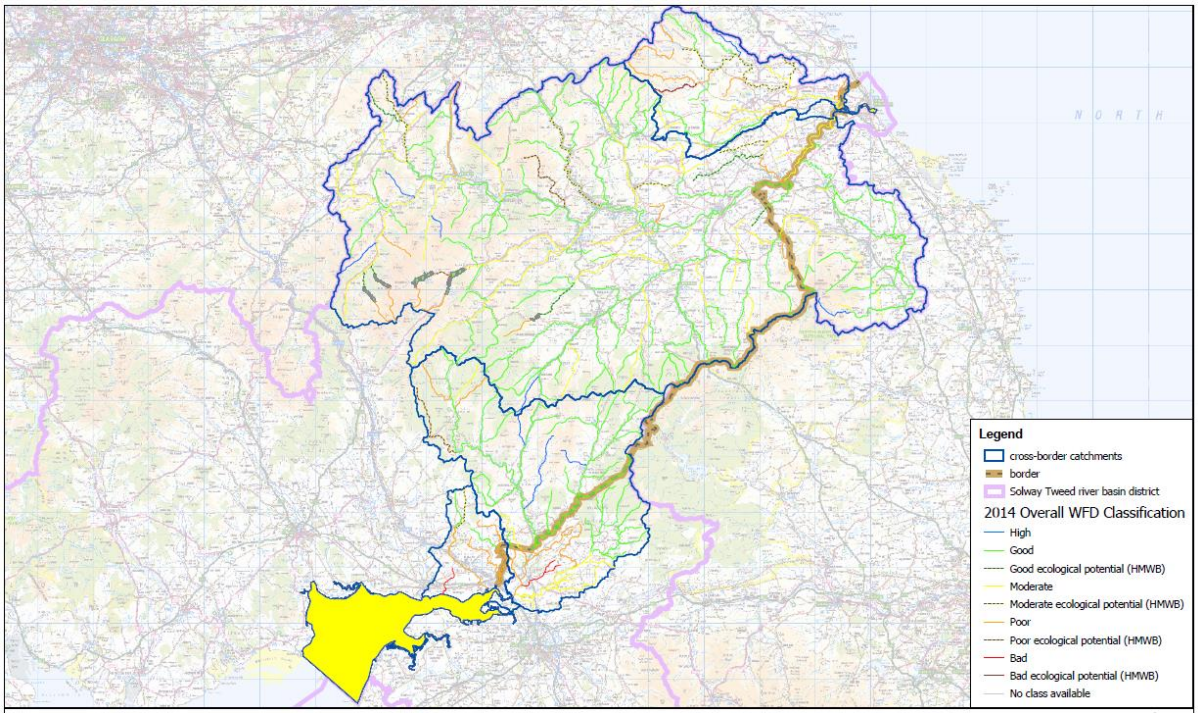
The background information on all of the catchments and water bodies within the district can be found on the catchment data explorer, https://environment.data.gov.uk/catchment-planning/RiverBasinDistrict/2 which holds the English information and in Scotland is available on our website. Details on how to submit your comments on this summary are in Section 4.

This report focuses on the challenges to the water environment in the catchments that include the border between Scotland and England and are shown on Map 2. In these catchments SEPA and the Environment Agency work closely together and with

our partners to achieve improvements within the framework of our individual regulations.

The catchments are:

- Border Esk
- Tweed
- Solway Estuary



Map 2: catchments containing cross border waterbodies

2. What are the significant challenges to the water environment?

Collaborative catchment management and targeted actions to alleviate specific issues have ensured that the condition of our water environment continues to improve. This section sets out the main challenges that we have identified as still affecting the water environment in the Border Esk, Tweed and Solway estuary. Climate change and water use are a challenge to our wellbeing and the state of our water environment. Nine of the 10 warmest years for the UK have occurred since 2002, and seven of the 10 wettest since 1998. Our population is also growing. This leads to more demands on land and water, as we build more homes and infrastructure, increase water demand, grow more food and produce more waste

Biodiversity is in decline and parts of our freshwater environment and oceans are polluted with waste materials, including plastics. Only by working together[1] can we increase resilience of our natural environment to these threats.

SEPA's and the Environment Agency's environmental monitoring continues to improve our understanding of the pressures and impacts on the water environment and the effectiveness of the actions that have been undertaken.

Taking account of climate change, monitoring results and progress made in the last river basin management plan, the following issues continue to prevent water bodies in the Border Esk, Tweed and Solway Estuary reaching good condition:

- manmade barriers to fish movement;
- restoring resilience in physically modified rivers;
- pollution from rural land use;
- invasive non-native species.

Manmade barriers to fish movement

The water environment hosts a wide range of structures that people have built for navigation, water abstraction, road and rail crossing, and water storage. These provide important functions and support economic development but do not always allow migratory fish such as salmon and sea trout to travel freely to and from their breeding and rearing grounds. The affected fish, in particular Atlantic salmon and sea trout, are important for the local economies in the Border Esk and Tweed, bringing in valuable income from fisheries. In many urban areas, where water quality has greatly improved in recent decades, barriers to fish migration are now the main factor preventing fisheries fulfilling their potential.

[1] SEPA is changing its approach to help communities and business proper within the ecological capacities of our planet, see https://www.sepa.org.uk/media/219427/one-planet-prosperity-our-regulatory-strategy.pdf

There were 63 artificial barriers to fish migration in the Esk and Tweed identified in the second river basin plan. However, since 2014, we have been made aware of an additional 28 barriers in these catchments and we expect to continue to find and assess barriers. This means that the scale of the task has not substantially reduced. We are also working to understand more about the extent of habitat above barriers, and using this information to make sure that the benefits justify the costs involved, and that projects are suitably prioritised.

Where a barrier has been identified for easement or removal it takes time to work with partners and landowners to scope the options and agree the design. Larger barrier projects (such as the Wamphray Weir in the Annan catchment) can involve major civil engineering challenges and require specialist technical expertise.

Restoring resilience in physically modified rivers

Rivers, estuaries, lakes and the coastline make our country unique. But for thousands of years we have modified them physically to support farming, industry, transport, including shipping, and by building places to live. Some of those physical changes are still essential. They help to protect us from flooding and support the production of the food we eat. However, where we can restore an affected water course, this creates opportunities to provide benefits for wildlife and local communities, including space for recreation and amenity, reducing flood risk and active travel. Where there are multiple benefits from river restoration, it is important we identify and take advantage of funding available to support delivery of those benefits. Eddleston Water Project in the Tweed catchment demonstrates how re-meandering, tree planting and wetland creation can help mitigate flooding and improve river ecology.

Pollution from rural land use

A range of different sources can contribute to rural diffuse pollution. The main cause is typically when rainwater run-off from land picks up soil, bacteria and nutrients from livestock excreta, or fertilisers and pesticides used in agriculture. Inputs from other rural land uses such as forestry, recreation (example golf courses) and discharges from septic tanks can also contribute and are significant sources in some rural

catchments. Protecting water and soils will contribute towards a more sustainable farming industry.

SEPA has developed a 'priority catchment initiative[2]' to help tackle rural diffuse pollution and this has begun in parts of the Tweed catchment and will be extended to include parts of the Border Esk. Catchment Sensitive Farming taking place in the Till, managed by Natural England.

Invasive Non Native Species

Invasive non-native species (INNS) impact our ecosystems by out-competing native species, which diminishes biodiversity and reduces the resilience of systems to adapt to change. In a number of places, INNS are a significant cause of damage to river banks, and prevent communities benefitting from, and connecting with, their local environment. Climate change will further shift the balance, and will mean that a wider range of non-native species become invasive in future.

Most actions to address INNS focus on preventing the introduction and further spread of high risk species. This is more cost effective and less environmentally damaging than attempting to control the species once they have become established. Eradication of INNS is usually expensive and complex, with a high risk of failure. Early detection and targeted removal of smaller, isolated outbreaks is most likely to be successful. However, in order to succeed, actions have to be delivered at the catchment scale with a strategic approach, clear leadership and effective partnerships between those involved.

SEPA and the Environment Agency are committed to working with groups such as Galloway Fisheries Trust, Tweed Forum, Solway Firth Partnership and on the Border Esk and Liddel to ensure there is a catchment wide assessment and targeted management.

[2] Rural Diffuse Pollution Plan for Scotland

3 Next Steps

We will use this consultation and the national consultation to make sure that we have identified the main challenges to the water environment in the Border Esk, Tweed and Solway. We will then identify with our partners the most appropriate actions to help address these issues. We will set out these actions in the consultation on the draft river basin management plan for the Solway Tweed, which must be published by 22 December 2020.

4 Consultation opportunity

Do you think we have identified the most important issues that are impacting on the water environment in the Border Esk, Tweed and Solway estuary?

You can respond to this consultation online or by sending your comments on the proposal to:

SEPA RBMP Unit,
Strathallan House,
Castle Business Park,
Stirling,
FK9 4TZ.

Responding online will help us collate and analyse the information you provide and we would prefer responses to be submitted in this format.

Alternatively, if you are unable to access the online tool, you can respond by email to rbmp@sepa.org.uk

This consultation runs from 19 December 2019 to 19 June 2020