

MITIGATING CONSENTED DISCHARGES



To mitigate the impact and potential ecological impacts of consented discharges originating from multiple sources.

BACKGROUND

There is the potential to develop projects to mitigate the impacts of consented discharges through engagement with homeowners, watercress growers, fish farms and water companies throughout the catchment. Whilst any discharge activity undertaken in compliance with the conditions of a permit issued by the Environment Agency under Environmental Permitting Regulations is lawful, it is accepted that these human activities may influence or negatively impact upon natural aquatic systems. Identification and mitigation of these negative impacts would be beneficial to riverine, groundwater and transitional/coastal water protected sites, including WFD surface waterbodies, Transitional and Coastal (TRaC) waters, Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC).

Water companies hold a substantial number of consented discharges within the Test and Itchen catchment, including for Waste Water/Sewage Treatment Works (WWTW/STW) and Combined Sewer Overflows (CSO). Potential issues associated with waste water discharges are Ammonia, nutrient enrichment, increased Biological Oxygen Demand (BOD), fine sediment and 'rags' or litter. Within many rural areas within the catchment, domestic waste water generated by homeowners is treated by means of a septic tank or small sewage treatment plant. In some instances, these systems discharge directly to watercourses and may require an environmental permit. Elevated Phosphate is a continued concern within the catchment and the waterbodies within the Test and Itchen are failing to achieve targets set under the EU Water Framework Directive, which requires us to protect and restore the ecological status of our rivers, lakes, estuaries and coastal waters. The headwaters of the Test and Itchen are famous for their watercress production which is predominantly undertaken using a high-intensity conventional summer cropping approach. Silt/sediment and Phosphate levels within consented discharges from watercress farms are often higher than those of the natural headwater watercourses and there is further evidence of elevated levels of pesticides and other compounds within discharges. The catchment is also host to a significant number of online and offline fish farms, varying in scale and design and there are concerns surrounding the levels of sediment, nutrients, ammonia and BOD within consented discharges associated with these operations.

OBJECTIVES

1. Identification of 'problematic' consented discharges.
2. Mitigation of 'problematic' consented discharges.
3. Engagement with local communities.

ACTIONS

There is an opportunity for partner organisations and volunteers to undertake walkover surveys and sampling to identify discharges resulting in visible organic pollution and litter, allowing identification of potential improvements through co-ordination with water companies and regulators. Development of a local 'Outfall Safari' group to train volunteers to map and record the impact of polluted surface water outfalls in a river would engage the local community in protecting and improving their local water environment, whilst developing new skills.



CROSS-PROJECT WORKING

There is also opportunity for the survey aspect of this project to be linked to the 'eyes and ears' community survey aspect of the partnerships 'Unflushables' project. Creation of sediment traps and Integrated Constructed Wetlands (ICW) may be explored to improve quality of discharged waste water, and in-stream habitat enhancement or restoration may be implemented to mitigate ecological impacts through provision of additional habitat heterogeneity and increased oxygenation. Partnership stakeholder Vitacress are evaluating the potential to install an ICW in a headwater tributary of the River Test to mitigate the impacts of a current consented discharge. In-stream habitat enhancement/restoration measures have been undertaken across the catchment by various partners including the EA, HIWWT, WCSRT, WTT, and landowners, and examples of these project successes can be used to demonstrate the benefits of these activities to consent owners.