

**Southern Water
position statement for
Arun Valley Vision group
May 2017**

Introduction

This document provides a summary of Southern Water's position on / approach to catchment management, including activities already underway in the Arun Valley and surrounding areas.

It also sets out an overview of Southern Water's water and wastewater operations / infrastructure serving the Arun Valley. This includes assets located further upstream of the lower Arun, the performance of which is connected to the river environment further downstream.

It is important to note that changes to land and water management in this area have the potential to impact on Southern Water's infrastructure and operations. The company's key concerns are around the following potential impacts:

- ***Increased saline intrusion affecting ground and surface drinking water supplies***
- ***Changes to flow regimes affecting discharges from our wastewater treatment works***
- ***Any changes which affect our ability to service our own assets***
- ***Water Framework Directive status changes and implications for stakeholders, such as Southern Water.***

Background on Integrated water cycle management (IWCM)

Southern Water faces a range of long-term challenges, including water stress, stringent environmental standards, population growth, the risk of drought or flooding and climate change. As a result, the company recognises the need to develop a more integrated approach to managing the water environment. It is looking at how it can work across the whole water cycle, rather than individual solutions that only address specific environmental aspects in certain geographical areas.

To take this forward, it is piloting its approach to Integrated Water Cycle Management (IWCM) by focusing on two catchments - the Arun & Western Streams and the Medway in Kent. This will allow us to start exploring what the benefits of IWCM could be for the environment, Southern Water's customers, wider stakeholders and the company itself. Southern Water is open to exploring any opportunities for it to align its IWCM work with wider stakeholder ambitions for the Arun Valley.

Catchment management (how Southern Water works with landowners and farmers to achieve improvements to the water environment through changes to land management) forms an important part of IWCM. This year, Southern Water has launched a partnership programme with Catchment Sensitive Farming in the Western Rother and upper River Arun aimed at helping farmers to reduce diffuse water pollution and increase on-farm efficiency.

In the first year, the programme is focusing on slug control and the management of metaldehyde, the active ingredient of many slug pellets. Metaldehyde is an effective chemical against slugs, but it is difficult to remove from drinking water sources, such as rivers and groundwater aquifers.

Looking to the future, it will be necessary to consider where catchment management initiatives might offer a more efficient and effective means for managing pollutants such as nitrates, phosphates and sediment at source. Payments for Ecosystem Services (PES) are incentives offered to farmers or landowners in exchange for managing their land to provide some sort of ecological service. These programmes promote the conservation of natural resources in the marketplace.

Southern Water is working in partnership with South Downs National Park Authority, the Environment Agency, the Arun & Rother Rivers Trust and the University of Chichester to explore a pilot trial using PES to target sediment loads and water quality issues on the Western Rother.



Southern Water is keen to work in partnership with others to help it develop this work and deliver effective outcomes.

Southern Water local water supply operations / infrastructure

The Lower Arun area lies on the western edge of Southern Water's Sussex North and Sussex Coast water supply areas. It is served by an extensive network of over 360km of water mains, with a number of water supply works (WSW) providing high-quality drinking water to Southern Water customers.

NOTE: Properties located to the west of Southern Water's Sussex North and Sussex Coast supply areas are provided with drinking water by Portsmouth Water.

Southern Water local wastewater operations / infrastructure

Wastewater network

The Lower Arun area is served by a sewer network totalling around 255 kilometres in length, with 35 wastewater pumping stations (WPS) of varying sizes in place to help pass sewage flows for treatment at eight local wastewater treatment works, namely Amberley, Burpham, Bury, Coldwaltham, Fittleworth, Ford, Lidsey and Pulborough.

Under its 2015-20 Business Plan, Southern Water is continuing to invest to improve and expand its wastewater network across the Arun and Western Streams catchment area, in particular to provide the capacity needed to cater for population growth and local development.

Wastewater Treatment Works

Overall, Southern Water has more than 40 wastewater treatment works (WTWs) of varying sizes serving the Arun and Western Streams catchment area.

In the Lower Arun area, Ford WTW, which serves a population of over 130,000, is the major works, with the remaining seven local WTWs (listed above) serving between 140 and 25,000 customers. Upstream of the Lower Arun, in the north-east sector of the Arun and Western Streams catchment, is Horsham WTW. This is a key site which serves a population of 72,000.

In the five years to 2020, Southern Water is investing millions of pounds in its WTWs across the Arun and Western Streams catchment - this is to further improve the quality of treated wastewater returned to the environment from the various works. For example, investment in technology to remove higher amounts of phosphates during the treatment process. The investment will also help make sure there is sufficient capacity to meet the demand created by population growth and local development for wastewater services.