

Restoring pockets of heathland and chalk grassland for climate adaptation

Results of changes implemented to the 'Friston Forest' site by South East Water



Heathland at Lullington Heath National Nature Reserve, overlooking the Fore Down sub-site

UNDERSTANDING THE CATCHMENT

On the Eastbourne Chalk Block, a major groundwater chalk aquifer close to the town of Eastbourne (South East England), South East Water developed the Interreg 2 Seas PROWATER site 'Friston Forest' to demonstrate how the region can adapt to the consequences of climate change through Ecosystem-based Adaptation (EbA).

South East Water is a water supply company, providing drinking water to 2.3 million customers in the South East of England.

This water is abstracted from a mix of surface and groundwater resources and is distributed through a network of over 14,500 kilometres of pipework.

76 per cent of water South East Water supplies is from groundwater resources.

Friston Forest is the largest area of recently established forest in South East England. Before it was established in the 1930s, this area was dominated by chalk grassland.

IDENTIFYING & ENGAGING STAKEHOLDERS

The idea behind Payment for Ecosystem Services (PES) is that investments made by 'buyers' in climate change adaptation measures result in the targeted provision of ecosystem services provided by the 'sellers'.

Friston Forest is owned by the water-only company South East Water, which can be perceived as seller in this case.

However, South East Water also acts as intermediary and consultant for buyers (Natural England and the Forestry Commission - who each manage parts of the site), acting as broker at the same time.

It is important to note that water companies can act as anchors for other buyers to invest in EbA and promote change.

South East Water customers and European citizens (through co-funding by the European Regional Development Fund), can be considered as buyers of the targeted ecosystem services, namely increased infiltration to groundwater.

In return, customers receive a more resilient water supply through EbA measures.

PRIORITISING LOCATIONS FOR CLIMATE ADAPTATION MEASURES

By implementing Ecosystem-based Adaptation (EbA) measures, South East Water aims to help protect water quantity and quality in groundwater catchments. This is in line with the objectives of South East Water's 25 Environment Plan.

Ecosystem-based Adaptation, a nature-based approach to climate change adaptation, harnesses ecosystem services to increase resilience and reduce the vulnerability of human communities and natural systems to the effects of climate change.

These EbA measures can be integrated into adapted agriculture, forestry and environmental management.

The targeted ecosystem services increased infiltration capacity to promote groundwater recharge and enhanced biodiversity.

The water system map helps identify areas suitable for implementing EbA measures to enhance water infiltration at the demonstration sites.

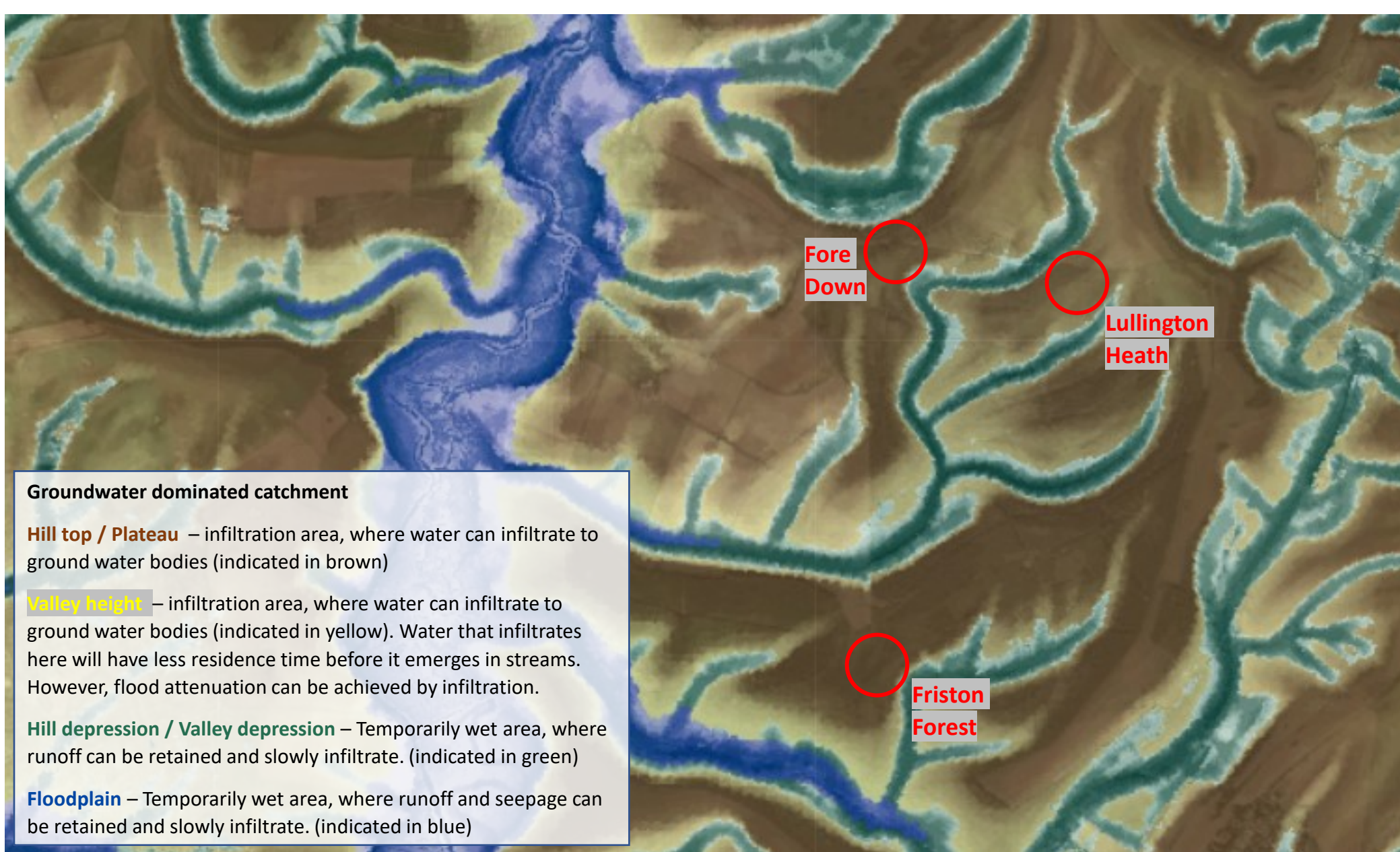
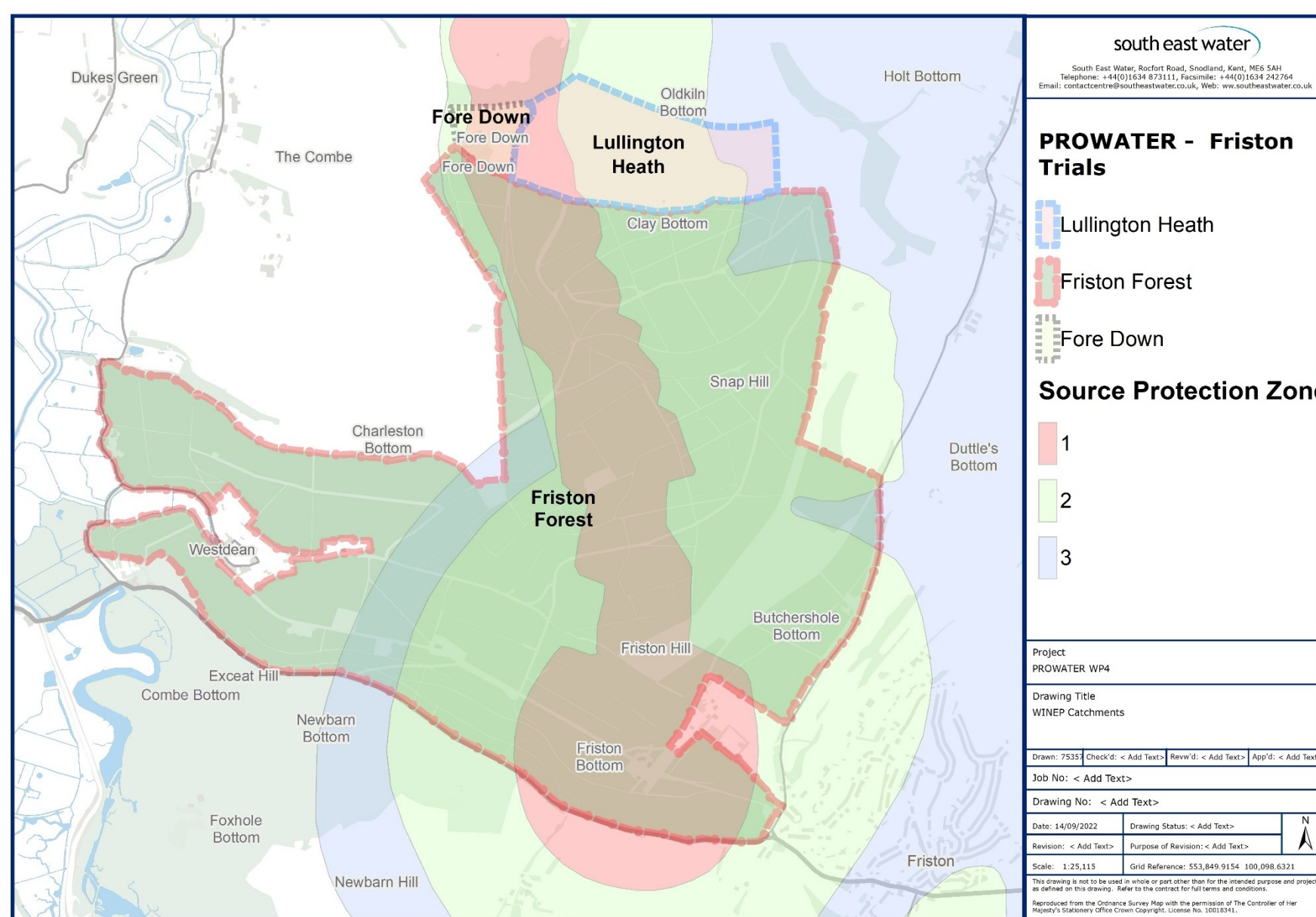
South East Water converted pockets of gorse (Lullington Heath), woodland (Friston Forest) and scrub (Fore Down) back to native chalk grassland and heathland in locations that would benefit groundwater recharge through increased infiltration.

MONITORING & EVALUATION

The EbA measures were monitored between 2020 and 2022 to understand the value of the different habitats for water resources.

Based on monitoring results, South East Water aims to maintain a balanced mix of (preferably deciduous) woodland to improve groundwater quality, and pockets of heathland and chalk grassland to increase groundwater recharge.

Map showing the three trial habitats (woodland, grassland and heathland), and source protection zones (red designation) linked to water sources



The red outlines indicates the location of the three sub-sites on the water system map. The map confirms the suitability to increase infiltration, e.g. through restored heathland and chalk grassland (with the potential for infiltration areas indicated in brown).

FOR MORE INFORMATION: www.pro-water.eu/output-library
<https://www.pro-water.eu/friston-forest-uk>

A cross-border cooperation

From November 2017 to March 2023, 10 partners from Flanders, the Netherlands and the United Kingdom work together on PROWATER. The project has a budget of more than 5.5 million euros. In each country, water production companies, governments and research institutes as well as land managers are involved in order to achieve a supported vision for Ecosystem-based Adaptation (EbA).

The project PROWATER receives 3.315.974 € through the Interreg 2 Seas fund, co-funded by the European Regional Development Fund (ERDF), to work on climate change adaptation and to increase resilience against droughts and extreme precipitation based on ecosystem services.

