

Scale of the challenge...

When it comes to contributing to emissions water plays a relatively small role (only 0.8% of the UK's footprint). But the effects that climate change will have on it will be extensive, affecting the availability of water resources and significantly increasing risk to water quality.

By 2050 steps will need to be taken, led by the water industry, to significantly reduce demand for water, reduce wastage and manage water resources in ways that eliminate emissions and protect them for the future.

Data shows that Dorset residents each use around **131 litres of water every day**. To reduce this demand we will need to change the way we use water, making use of the latest technologies and improving the county's water efficiency. There will also need to be a greater awareness amongst households and businesses of water issues.

The Council will need to take action to reduce its own water demand, which last year amounted to around 261,644 m³ of water resulting in the emission of 275 tonnes of CO₂e.

Along with our daily consumption of water we also need to take into account the vast amounts of water used to produce consumer goods - 1kg of beef uses 15,415 litres! Our total water footprint is therefore much greater than simply the water we use at home and work, and to reduce this we will need to carefully consider our purchasing options.

Another challenge for Dorset will be the significant effect on local flood risks as a result of increases in rainfall. As Lead Local Flood Authority and Coastal Management Authority, Dorset Council will have a

significant role to play in flood risk management, alleviation and mitigation work.



Hear more about this work from our [flood management team leader](#)

Dorset's progress so far...

-  A series of flood investigations & flood alleviation interventions have been developed over last decade. The most notable a £750k scheme installing resilience measures to 94 homes
-  A Local Flood Risk Management Strategy developed which sets the direction of Council's work
-  Substantial work is being done by water companies in Dorset to reduce leakage
-  Water companies have been supporting Dorset customers to reduce water use through services such as Wessex Water's 'home check service'.
-  Around 3/4 of Dorset households have a water meter installed
-  Dorset Wild Rivers project (2015-2020) funded by Wessex Water aims to achieve restoration of river habitats and enhance wetlands
-  Former County Council led ongoing programme to install water efficiency measures (such as waterless urinals, water saving taps & rainwater harvesting)



Find out more about Dorset's water suppliers and the work they are doing in the area...

[South West Water](#)

[Wessex Water](#)

Key Issues...

Nationally

- **Limited powers to enforce the installation of water conservation measures** in new developments or higher standards beyond Building Regulations
- **Many products produced by industry still use vast amounts of water**, including the food and farming industries
- **Most of the action is required at an industry level**
- **Around 3 billion litres of water a day is lost through leakage in UK** – approx. 22% of all water put into supply
- **Water availability is often a key controlling factor in biodiversity** with aquatic organisms and groundwater dependent terrestrial ecosystems at risk of being directly affected

In Dorset

- **Less than half of the rivers of Dorset are considered 'good' water quality** under current European standards
- **Despite greatly improved waste water treatment, diffuse nutrient pollution from agriculture remains a major problem** in the coastal and marine environment
- **Water reduction in Dorset is heavily reliant on behaviour change** by residents and businesses
- **Lots of old buildings in Dorset that may not have drainage systems that can accommodate increased rainfall** predicted with climate change
- **Climate change expected to affect availability of water and increase risk of water pollution and localised flooding** within Dorset

Key Opportunities...

- **Dorset Council can lead by example** by reducing water usage on own estate
- **Reduced water bills for residents & businesses** as a result of water efficiency
- **Partnership working with water companies and the Environment Agency** to encourage and support businesses to reduce water use and wastage
- **Share best practice in water resource management, protection and water ecology** through the development and promotion of case studies
- **Use of latest water conservation technologies in new builds** through Council's Planning & Building control functions
- **Reduce future surface water flood risk from future developments** through partnership working with developers, local planning authorities, highway authorities and water & sewage companies, by maximising uptake of Sustainable Urban Drainage (SuDS) solutions



Figure 31

© Nick Bowring
Showers are biggest water user in most UK homes

Areas for Action...

Water is a defining characteristic for Dorset and it is critical that Dorset Council takes action through its own operations, services and influence to encourage a reduction in Dorset's water demand and wastage, and the management of water resources.

Direct

-  Make Dorset Council buildings more water efficient, by installing technologies such as flow regulators, water efficient toilets and showerheads
-  Ensure procurement specification favours water efficient equipment
-  Reduce / replace demand on mains water within Dorset Council buildings by installing technologies such as rainwater harvesting and grey water systems
-  Carry out in-depth assessment of water leaks across Council's estate
-  Carry out audit of all Council sites holding materials hazardous to water quality to ensure correct storage is in place & ensure pollution prevention equipment is properly maintained

Indirect (through services)

-  Ensure water use is minimised and reuse is optimised in new developments
-  Work with County Farms and Green Spaces to ensure land management practices protect water supplies
-  Ensure Dorset Council land management practices prevent water pollution
-  Identify areas at risk from local sources of flooding and ensure these are considered in the future
-  Maintenance of ordinary water-courses by riparian owners to help reduce the risk of flooding

Influence & Partnership

-  Liaise with water companies to ensure water leaks are identified and eliminated in Dorset
-  Work with Environment Agency to ensure all high risk industrial and farming areas in Dorset have been identified and appropriate pollution prevention measures are in place
-  Work with partners to promote land management practices that prevent polluting water courses and ensure good water management
-  Work with partners to ensure climate resilience is being addressed and sufficient supplies of good quality water will be available for Dorset residents

Case Study: Dorset Wild Rivers Project

Dorset Council is a partner in the **Dorset Wild Rivers Project**; a major river and wetland restoration project that takes a collaborative catchment based approach.

It is led by Dorset Wildlife Trust and focuses on the Frome and Piddle Valleys and the chalk stream tributaries of the Dorset Stour Valley.

The project helps farmers and landowners identify opportunities for habitat restoration or creation, whilst delivering in-river habitat enhancements and water quality improvements. This can benefit both aquatic plants and animals and will deliver Water Framework Directive targets.

This collaborative approach aims to reduce the decline of wetland biodiversity with particular attention given to white clawed crayfish, water vole, otter, salmon and brown trout.

Since 2015, the project has supported the creation of 135 hectares of habitat, the restoration and enhancement of 14 ponds and 18km of river, and 1926m of hedge work in Dorset.



Case Study: Promotion of Sustainable Drainage Systems (SuDS) for new developments

Dorset Council's flood risk management team act as Statutory Planning Consultee in the management of surface water for major development proposals. The effects of climate change on rainfall patterns will see more extreme events becoming more common. And it is against this background that the use of sustainable drainage systems (SuDS) techniques need to be promoted, so as to mimic a more natural drainage system and deal with flooding issues as close as possible to the source. This can only be achieved by early engagement with developers.



In support of this, we have been developing flood risk and SuDS policies within the new Dorset Council Local Plan. This has involved researching similar policies across the South West to select the best for Dorset, setting up a SuDS working group and adopting pioneering constraint mapping to help inform decision making on development allocations / proposals.

SuDS techniques are generally more cost effective than below the ground traditional drainage systems and have a lower construction carbon footprint.