

**WBPSG8****PAPER 1**Swansea, 8<sup>th</sup> July 2009**Dwr Cymru Welsh Water's Surface Water Management Strategy*****Background/Progress***

Surface water is the rainwater that runs from roofs, highways and paved areas into the public sewerage system. For a number of reasons, including more frequent severe storms and the growth of built-up areas, Welsh Water's sewer network has to deal with increasing flows of surface water. Occasionally, the capacity of the network is exceeded in some areas and results in incidents of sewage flooding of homes, gardens and roadways and pollution incidents in streams and rivers, causing widespread damage to sensitive ecosystems.

In addition, surface water entering the sewers increases the amount of energy needed to pump it to the sewage works and to treat it, causing further environmental impact through higher carbon emissions. Welsh Water is a large energy user and need to reduce their carbon footprint. Tackling the issue of surface water runoff will therefore produce a dual environmental benefit, by protecting local environments and biodiversity and reducing carbon emissions.

Welsh Water has developed a Surface Water Management Strategy to address the problem. It aims to raise awareness of the issue and enable engagement with interested bodies, such as the Wales Biodiversity Partnership, in order to work together to deliver a solution.

***Plan/Proposals***

Through the application of sustainable urban drainage, the Surface Water Management Strategy will aim to:

- Reduce predicted future flooding,
- Reduce predicted future incidents of pollution,
- Decrease energy costs,
- Support conservation and recreation opportunities,
- Counter impermeable area creep,
- Be instrumental in minimising the impacts of climate change.

The first step is to promote a greater understanding of the causes and consequences of surface water runoff and how organisations and individuals can help to take preventative action. Replacing existing sewers with even larger ones would be extremely disruptive, prohibitively expensive to customers, and would be unlikely to provide a sustainable long-term solution. Therefore, a number of alternative and innovative solutions are required. Welsh Water and other organisations in Wales are taking a leading role in addressing this problem, which affects the whole of the UK.

The long term objective is to have drainage systems in developed areas that, as far as practical, mimic the original natural greenfield situation. Thereby most surface water is returned to the ground or open water courses at the earliest opportunity.

The initiatives being developed at present for implementation in the future are:

**Engagement:** Effective engagement with all parties is essential to achieve significant flow reduction - to offset the adverse impact on the sewerage network of climate change and increasing urbanisation. As well as the Wales Biodiversity Partnership, some of the other audiences to be engaged are Welsh Assembly Government, Consumer Council for Water, Environment Agency Wales, Asset Management

Alliance, developers and builders, professional forums, local authorities, UK Government, schools, the public and Ofwat.

In October 2008, Welsh Water launched their 'Green Space Wales' campaign which aims to encourage the use of green spaces in urban environments and sustainable drainage practices to help to reduce flooding and pollution whilst increasing biodiversity, amenity and recreation and lessening the impacts of climate change and the 'heat island effect' in urban areas.

**Legislative:** The Surface Water Management Strategy fits well with Government Environment Strategy policies on sustainability and climate change, the recommendations of the Pitt Review (2008) and the themes in the Floods and Water Management Bill published in April 2009.

**Technical:** Long-term flow monitoring will be explored to identify the benefits this approach can bring, and where it should be delivered. Retrofitted, cost-effective rainwater harvesting equipment is currently being trialled at three locations across the UK, including at Welsh Water's education centre in Cilfynydd, South Wales. This will be rolled out to domestic properties in the near future.

'SuDS' (Sustainable Drainage Systems) help to deal with excesses of water by mimicking natural drainage patterns and can provide amenity and environmental enhancement in urban areas. Via engagement with relevant organisations, a 'SuDS Showcase Site' will be delivered so that others can see, first hand, the application and availability of these sustainable techniques to manage surface water.

### ***The strategy and biodiversity***

Welsh Water has statutory duty with regard to the protection and enhancement of biodiversity. Apart from the NERC Act 2006, a main piece of legislation that sets out our biodiversity duty is the Water Industry Act 1991.

We believe that the strategy will bring greater opportunity for us to enhance biodiversity at local level. We welcome views from external stakeholders on how best such opportunity can be maximised and how best we can enhance biodiversity as part of the delivery of the strategy.

### ***Decision Points***

- a) To endorse Welsh Water's Surface Water Management Strategy as far as it relates to biodiversity and support the initiatives that are being undertaken.
- b) To support a strategic approach to the widespread use of SuDS across Wales.
- c) To consider how biodiversity benefits should be incorporated into the strategy.
- d) To consider providing input to publicity material on the strategy that is being produced by the consultant team, such as news articles, briefing notes, newsletters and DVD's.