

# Annex H: Wastewater – supplementary material



## H.1 PREVIOUS QUANTIFIED ASSESSMENTS

The principal quantitative analyses of wastewater collection and treatment infrastructure are the annual reports of the 11 private companies providing sewage services across Great Britain. These indicate a total of over 6000 sewage treatment works operating in England and Wales, over 4500 wastewater treatment assets in Scotland, and almost 600,000 km of sewers and drains, providing an aggregate capacity equivalent to in excess of 5000 tonnes of biochemical oxygen demand per day (Scottish Executive, 2003; Defra, 2008; Ofwat, 2011).

There is significant regional variability in treatment capacity in England and Wales: the largest provider has nearly 8 times the wastewater treatment capacity of the smallest; however, capacity exceeds demand by 17% in the case of the latter, but only 7% in the case of the former (Ofwat, 2011).

The distribution of large works also varies. In Scotland, very small schemes, equivalent to less than 10 tBOD per day or fewer than 200,000 people, provide around 50% of treatment capacity; large works in the South East account for only 10% of the national wastewater treatment capacity (Scottish Water, 2011). The average population served by works of capacity in excess of 1.5 tBOD per day is around 150,000 people, while the maximum approached 1 million. Across England and Wales, around two-thirds of large works serve populations equivalent to less than 100,000 people, with an average of 130,000 people and a maximum of over 3 million people (Ofwat, 2011).

These data suggest that the mean population supported by a single large wastewater treatment works in Great Britain is approximately 130,000 people.

Population growth, urban sprawl and customer behaviour typically drive investment planned via these studies: for the period 2010–2015, the sewerage service providers of England and Wales have estimated capital costs in excess of £12 billion, with a distinct focus on infrastructure asset management rather than increasing treatment capacity (Ofwat, 2011).

## REFERENCES

Defra (2008). Future water - the Government's water strategy for England. Department for Environment, Food and Rural Affairs. London, UK, TSO.

Ofwat (2011). June return.

Scottish Executive (2003). Public water supplies in Scotland: water resources survey 2001–2002. Edinburgh, UK.

Scottish Water (2011). Delivery Plan 2010–2015.