Drivers and causes	Impact on business (risk consequences)	Mitigations and opportunities
PHYSICAL RISKS AND OPPORTUNITIES		
Key Risk 4: **We do not provide a safe and secure supply of drinking water to our customers** **Demand for water will increase as a result of population growth and changing weather conditions** Short, medium and long term (focused)		
– Hotter, drier summers will reduce water availability and increase demand – Acute physical risks such as storms and floods may impact upon our infrastructure, or increase the risk of water contamination – A reduction in the water available in the environment, caused by increasing temperatures, will restrict the amount we can abstract and supply – Performance of pipes is threatened by extreme weather	– Hot weather causes an increase in short-term peak demand and impacts our ability to supply enough water – Additional operational costs could be required to ensure delivery – Additional infrastructure investment could be required to adapt to a changing climate and to secure supply	– We use strategic modelling to assess potential changes to supply and demand on our water network and to model the known impacts of climate change – Comprehensive resilience plans that consider climate change in scenario modelling, such as our WRMP and DWMP, feed into our capital investment programme and business plan – Investment in early leak detection technologies and effective response processes will reduce leakage levels – Increased investment to increase headroom will help us meet increased water demand – By increasing resilience and flexibility of our supply network and better preparing for incidents, we are constantly working to ensure continuous supply to our customers – Increased awareness of the value of water in an increasingly resource-stretched world may improve the effectiveness of customer engagement programmes to reduce water usage
Key Risk 5: **We do not transport and treat waste water effectively, impacting our ability to return clean water to the environment** Short, medium and long term (modelled)		
– Extreme rainfall and wetter weather will increase the risk of flooding – Increased population and land cover will increase run-off – Extended dry periods and extreme rainfall events affect the capacity of our sewers – for example, more intense bursts of heavy rainfall increase the volumes of water entering our waste water systems	– Damage could be caused to infrastructure, increasing the risk of flooding to our waste water treatment works – Alternative reactive steps will be required to ensure the safety of waste water removal – Additional infrastructure investment will be required to ensure adequate systems and resilience – Environmental penalties could increase – Failure to safely treat waste water impacts our financial penalty/reward position	– Comprehensive resilience plans, such as our DWMP, feed into our capital investment programme and business plan. Targeted investment will increase waste water network resilience – We use strategic modelling to assess potential changes to population and climate change on our waste water network – We have a strong compliance culture and effective management systems – Increased awareness of the value of water in an increasingly resource-stretched world may improve the effectiveness of customer engagement programmes to promote the safe use of the waste water system, including reduced use of wet wipes and non-flushables – The implementation of new technologies and innovation to improve our waste water treatment processes and network operations will enable us to meet or exceed targets – Increasing the use of nature-based solutions to build resilience provides the advantage of additional co-benefits – Wider surface water management options such as SuDS have associated co-benefits and increase future flexibility for capacity
Key Risk 6: **We fail to positively influence natural capital in our region** Medium and long term (focused)		
– Hotter, drier summers cause changes to habitat composition and distribution, along with biodiversity loss on land and in rivers – Increased urbanisation, which extends hard impermeable surfaces against the backdrop of increasing rainfall, increases the risk and speed of urban run-off and sewer overflows, leading to pollution of waterways – A growing population and per capita consumption, and increased pressure on natural resources, negatively impact upon biodiversity and our ability to manage natural resources effectively	– Resilience to climate change and extreme weather events decreases – Raw water quality deteriorates – Failure to manage pollutions impacts our financial penalty/reward position – Changes to the valuation of natural capital may have financial impacts in future – Delaying the investment required for climate resilient or adaptation solutions may increase future costs	– We have made public commitments to protect our local environment – for example, targeting 15% biodiversity net gain for our capital projects – We use modelling to estimate the impact of increasing pressures on nature, such as water abstraction and environmental pollution, as part of our WRMP and DWMP – We are investing in habitat restoration which can help reduce pressure on our assets and lower asset failure rates – Management plans and controls mitigate damage to SSSIs and enhance them through our operations – Our Green Recovery Programme consists of six schemes that will deliver a host of benefits for customers, communities and the environment – Adopting a catchment management approach in partnership with landowners in our region will mitigate the effect of pesticides, fertilisers and organic nutrients, will be more inclusive, will reduce costs, and will reduce the need for additional investment – We have strong engagement from both our supply chain and our customers to promote biodiversity via our Commonwealth Games targets (72 Tiny Forests and Legacy Forest), our Great Big Nature Boost for Biodiversity (enhancing it on 5,000 ha of land) and by restoring 2,000 acres of peatland in England and Wales. This will enhance ecosystems, improving resilience through decreased flood risk and improving water quality – Our reputation will benefit from acting as a steward of natural capital and taking this responsibility seriously