Sustainable Financing and Green Bond Annual Impact Report 2021/22

Thames Water Impact Report 2021/22

Introduction

This report provides information to investors in Thames Water's Green Bonds issued under our 2018 Green Bond Framework, about the benefits delivered during 2021/22 from the projects funded by the proceeds of the debt issued under that framework.

The 2018 framework was superseded in 2021 by our Sustainable Financing Framework which is a broader framework and includes social or sustainable debt issues in addition to green bonds. As at 31 March 2022 we had only issued green bonds, with no social or sustainable debt issues outstanding. This report provides information to investors in Thames Water's Green Bonds issued under the 2021 Sustainable Financing Framework regarding the project categories funded by the proceeds of the bonds issued in January 2022 and the benefits delivered by those projects during 2021/22. DNV Business Assurance Services UK Limited ("DNV") assessment is published on our website alongside this report and sets out the metrics which they have verified.

Leading with Purpose

Our Purpose is to deliver life's essential service, so our customers, communities and the environment can thrive. Doing things in the right way is just as important as what we do. And, right across the business, from the Board to the frontline, we're focused on being Purpose-led.

This goes hand in hand with being more sustainable and delivering on Environment, Social and Governance ("ESG") metrics. Our Purpose directly focuses on ESG outcomes with its reference to enabling customers, communities and the environment to thrive.

We have a longstanding approach to sustainability and over the last few years we've been evolving to respond to the changing impacts on our business and the needs of our customers, communities and the environment.

UN Sustainable Development Goals

The United Nations Sustainable Development Goals ("SDGs") have been developed to make the world more sustainable by 2030. Supporting them isn't an additional task for our business – it's part of what we do every day to live our Purpose to deliver life's essential service, so our customers, communities and the environment can thrive. We fully support the aspiration of all 17 goals, but there are six specific goals where we believe we can make a real contribution.

We provide a clean and sanitary water supply to over 16 million customers. Our sustainable projects help us deliver this essential service.

In 2021/22, we self-generated 24% of our own electricity from sewage, wind, and solar to help power our operations.

We support customers in vulnerable circumstances through programmes such as our social tariffs, flexible payment schemes and Customer Assistance Fund.

We contribute to the circular economy through various initiatives, including putting 100% of sewage sludge to beneficial use.

Since we made our Net Zero pledge in 2019 there have been some significant changes to the original assumptions used by the water sector, that will significantly impact the size of the net zero challenge

In 2021/22, we improved 310 hectares and created over 200 biodiversity units. We enhanced 44 sites for biodiversity. We planted almost 20,000 trees on our sites and with local partners.

2018 Green Bond Framework

In January 2018, we issued our inaugural Green Bond and published our Green Bond Framework in line with International Capital Market Association ("ICMA") Green Bond Principles. For the life of the debt issued under this Framework we've committed to giving investors information about the environmental impact of the category of projects funded by our outstanding Green Bonds, until the maturity of the debt.

We chose Eligible Green Projects based on their strategic, social and environmental importance. These projects help to reduce water leaks, encourage customers to use water efficiently, reduce pollutions into rivers, and increase our wastewater treatment capacity.

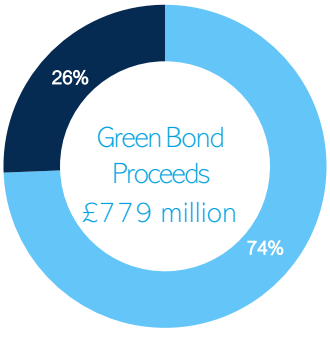
The Green Bonds issued under the 2018 framework are:

- $55 million due March 2023 (ISIN GB00BDC5BH76 dated 22 March 2018)
- $285 million due March 2025* (ISIN GB00BDC5BJ90 dated 22 March 2018)
- $40 million due December 2027* (ISIN XS2278588343 dated 22 March 2018))
- £216 million due April 2028* (ISIN GB00BDC5BK06 dated 22 March 2018))
- £210 million due March 2030* (ISIN GB00BDC5BL13 dated 22 March 2018))
- $57 million due November 2030* (ISIN XS2254339331 issued 12 November 2020)
- £40 million due March 2033* (ISIN GB00BDC5BM20 issued 23 December 2020)

*maturity date has since been extended by two years

Allocating the proceeds[1]

The total spend across the Eligible Green Projects from April 2015 to March 2020 was £1.32 billion. We used the c.£779m proceeds from the debt issued under the Framework to refinance existing debt for the selected projects for spend between April 2015 and March 2018 and the benefits are shown on a pro-rata basis. 100% of the proceeds of the debt issues were used for capital expenditure. Impacts from Green Bonds issued since March 2021 are reported under the section titled '2021 Sustainable Financing Framework'.



£580m

Networks projects

- Thames Tideway Tunnel interfacing works
- Mains rehabilitation
- Household metering

£199m

Treatment projects

- Deephams Sewage Treatment Works

[1] The allocated expenditure includes an element of over collateralisation (c.16%), which could be used should the projects require substitution during the life of the bonds. The reported benefits arise out of the total spend allocated, which is project spend up to March 2018.

2018 framework projects and benefits

Project[1]	Project description	KPI outputs for financial year 2021/22				Total AMP6 Spend (£m)	Total Project Deliverables
		Additional renewable energy generated (MWh)[2]	tCO_2e saved[3]	Water saved (Ml/day)	Effluent discharge prevented (Ml)[5]		
Deephams sewage treatment works (STW)	We have upgraded one of our largest sewage treatment works, which serves 880,000 people, to help accommodate population growth and meet higher environmental standards.	11,139	7,032[4]	-	218.9	216.7	Serves additional 100,000 customers Two new Combined Heat & Power (CHP) engines installed
Household metering	We're installing water meters across our region, helping to reduce water use.	-	175	28.3	-	511.3	301,313 meters installed 97,578 revenue meters maintained or replaced Reduction in water needing to be treated
Mains rehabilitation	We're replacing and repairing some of the oldest parts of our network to help reduce leaks.	-	433	70.0	-	290.1	246km of mains rehabilitated (including 26km of trunk mains)
Thames Tideway Tunnel interfacing works	This 25km tunnel will help to boost the capacity of London's existing sewerage system and prevent millions of tonnes of sewage from going into the Thames.					298.7	21 sites handed over to the Thames Tideway Tunnel delivery team as part of connecting and enabling works
Total		13,495	7,647,897	98.3	218.9	1,316.8	

[1] All projects deliver an ongoing annual benefit from commissioning. This was calculated in 2017/18 and independently reviewed by DNV.
[2] This is based on actual outputs from Deephams for 2021/22.
[3] We use carbon accounting multiples for water savings and reduced leakage (all for 2021/22): tonnes of CO_2e per mega-litre is 0.01696, energy generation is 0.00023 tonnes of CO_2e per KWh; CO_2e means carbon dioxide equivalent emissions.
[4] This figure includes any emissions reductions that have resulted from heat generated by our new CHP engines to heat the anaerobic digestors instead of fossil fuels and from avoiding the use of gasoil which was utilised in the old CHP units.
[5] Effluent prevented from flowing into the river during storm surges.

2021 Sustainable Financing Framework

In January 2022, we issued the first bonds under our 2021 Sustainable Financing Framework, which complies with ICMA Green Bond Principles. For the life of the debt issued under this Framework we've committed to giving investors information about the environmental impact for each category of projects funded by our outstanding bonds under that framework, until the maturity of the debt.

The Green Bonds issued under our 2021 Sustainable Financing Framework up to 31 March 2022 are:

- EUR 575 million due January 2028* (ISIN: XS2438026440 issued 31 January 2022)
- EUR 575 million due January 2032* (ISIN: XS2438026366 issued 31 January 2022)

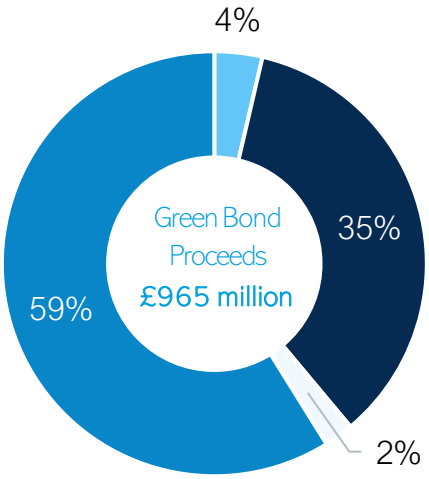
*maturity date has since been extended by two years

The bond proceeds were swapped to GBP and the net proceeds of £965 million were immediately allocated to approved Eligible Green Projects.

Note that Green Bonds issued since March 2022 are not included in this 2021/22 Impact Report.

Allocating the proceeds

Under our Sustainable Financing Framework, Eligible Project spend from up to three financial years prior to the debt issuance can be allocated as refinancing spend. The selected Eligible Green Projects had a total spend between April 2018 to March 2020 of £965 million, which matched the net proceeds of the Green Bonds issued in January 2022. 100% of the net proceeds were used for refinancing of capital expenditure. Due to the number and different durations of the project investments, we are unable to provide the total expected expenditure from start to completion of the Eligible Green Projects. The categories of expenditure of the Eligible Projects are shown below, along with examples of some of the projects which fall under each category.



Energy Efficiency

£35 million

- Thermal heat and power projects
- Combined heat and power projects

Pollution Prevention and Control

£341 million

- Flooding alleviation
- Waste infrastructure including storm tanks

Renewable Energy

£21 million

- Crossness sludge to energy project

Sustainable Water and Wastewater Management

- Mains rehabilitation
- Meter installations
- Leakage reduction
- Flooding resilience

2021 framework projects and benefits

The proceeds from the bonds issued in January 2022 were allocated to a significant number of Eligible Green Projects. The table on the pages below details allocation by category and projects where there have been environmental benefits delivered during 2021/22, which are shown on a pro rata basis of the funds allocated as a proportion of the total project spend. A large number of the funded projects are not yet complete and/or commissioned, with further investment ongoing, and therefore the environmental benefits of some funded projects are expected to emerge in future years. No estimate of future benefits are provided at this stage.

Projects	Project description	KPI outputs for financial year 2021/22			Funded Project Expenditure and Deliverables
		Additional renewable energy generated (MWh)[1]	tCO_2e saved[2]	Water saved (Ml/day)	
Sustainable Water and Wastewater Management					£568 million
Water mains rehabilitation	We're replacing and repairing our mains to improve resilience and help reduce leaks.	-	-	9	338km mains decommissioned 3km trunk mains replaced 5km trunk mains relined
Water mains monitoring	Monitoring enables us to identify and reduce leakage	-	-	82[3]	Investment in trunk main leakage monitors and pressure monitors.
Water meter installations	Meter installation and replacement delivers reductions in water usage and leakage	-	-	58	107,179 meters installed or replaced
Sewage discharge monitoring	Event duration and pass forward monitoring programmes ensure that we have full oversight of storm discharge events from our assets	-	-	-	237 monitors installed - a regulatory requirement as part of the Environment Agency's Water Industry National Environment Programme ("WINEP").

[1] This is based on actual outputs during 2021/22.

[2] We use carbon accounting multiples for water savings and reduced leakage (all for 2021/22): tonnes of CO2e per mega-litre is 0.01696, energy generation is 0.00023 tonnes of CO2e per KWh; CO2e means carbon dioxide equivalent emissions.

[3] Estimated prevention of future leakage (not reduction in historic leakage).

Projects	Project description	KPI outputs for financial year 2021/22			Funded Project Expenditure and Deliverables
		Additional renewable energy generated (MWh)[1]	tCO_2e saved[2]	Water saved (Ml/day)	
Investment in wastewater management sites	Planned and reactive site managed capital investment programmes deliver serviceability, mitigate health & safety risk and extend asset life in key risk areas.	-	-	-	4,072 activities carried out to maintain sites including 41 activities to make sites compliant. These programmes serve to protect the environment and ensure optimal service for our customers is maintained, is safe and reliable
Resilience and growth investment	We invest in our assets to increase resilience and capacity	-	-	-	354 properties protected Flood alleviation schemes protect customers from flooding as a result of rainfall 46,355 additional tonnes of dried solid Increased digestion sludge treatment capacity
Pollution Prevention and Control					£341 million
Chemical investigations programme	Capex investment relating to chemical investigation programmes	-	-	-	58 investigations and pilot processes capable of reducing trace contaminants from wastewater effluent, which is a regulatory requirement as part of the Environment Agency's WINEP.
Energy Efficiency					£35 million
Energy efficiency from wastewater operations	Changes in wastewater treatment processes to reduce energy consumption				Reduction in embodied carbon, operational and energy changes to improve energy efficiency.
Maple Lodge STW	Combined heat and power	7,229	5,209	-	Energy efficiency delivered emissions reductions
Basingstoke STW	Combined heat and power	10,162	2,729	-	Energy efficiency delivered emissions reductions
Early CHP replacement projects	Combined heat and power	26,377	6,096	-	Energy efficiency delivered emissions reductions
Crossness STW – sludge	Energy from waste	278	4,749	-	Energy efficiency delivered emissions reductions

Projects	Project description	KPI outputs for financial year 2021/22			Funded Project Expenditure and Deliverables
		Additional renewable energy generated (MWh)[1]	tCO_2e saved[2]	Water saved (Ml/day)	
Hogsmill STW	Energy from waste	4,972	1,149	-	Energy efficiency delivered emissions reductions
Renewable Energy					£21 million
Total		1,974	1,926	132	£965 million

[1] This is based on actual outputs during 2021/22.

[2] We use carbon accounting multiples for water savings and reduced leakage (all for 2021/22): tonnes of CO2e per mega-litre is 0.01696, energy generation is 0.00023 tonnes of CO2e per KWh; CO2e means carbon dioxide equivalent emissions.

It's everyone's water