

Green Transaction Evaluation

**Bazalgette Finance PLC's £10 Billion Multicurrency Bond Program**

Feb. 16, 2022

In May 2016, Bazalgette Tunnel Ltd. (trading as Tideway) established a £10 billion, multicurrency bond program to raise proceeds to design, build, commission, and maintain the Thames Tideway Tunnel (TTT) in London. The TTT is a 25-kilometer (16 mile) tunnel that aims to manage the amount of sewage discharged into the River Thames and the growth in water and sewerage-treatment demand from London's growing population. The construction of the TTT is part of the broader London Tideway Improvements (LTI) plan, which supports the U.K.'s effort to comply with the 1991 EU Urban Waste Water Treatment Directive. Tideway was incorporated in 2015 as a regulated infrastructure provider, currently deriving all its revenues from the construction of TTT.

Our green transaction evaluation applies to all bond series issued under this program, including all bonds issued since June 2016. At the issuer's request and following TTT's updated framework, we have conducted a review of our initial green transaction evaluation on Bazalgette Tunnel's £10 billion bond program completed in November 2017 and refreshed in 2019. The revised environmental benefit score is 95 (down slightly from 97 previously) with an advanced governance and reporting opinion.

In our view, Bazalgette Tunnel Ltd.'s multicurrency bond program is aligned with:

-  Green Bond Principles, ICMA, 2021

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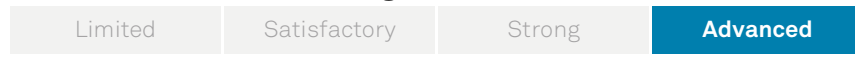
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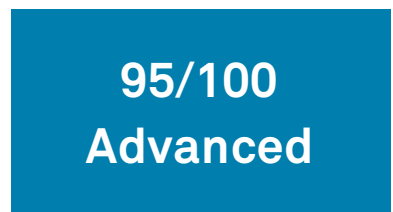
**Environmental benefit score**



**Governance and reporting opinion**



**Transaction Evaluation**



A higher score indicates greater environmental benefit

## Project Description

The construction of the TTT is part of the broader LTI plan. This plan includes the construction of the 25-kilometer (16 mile) TTT, the construction of the Lee Tunnel to connect the TTT to the Beckton wastewater treatment works, and the upgrade of five sewage treatment works: Mogden, Crossness, Beckton, Riverside, and Long Reach.

The LTI plan is part of the U.K.'s efforts to comply with the 1991 EU Urban Waste Water Treatment Directive (UWWTD), of which it was found in breach by the European Court of Justice in 2012. The plan aims to manage the amount of sewage discharged into the Thames and the growth in water and sewerage-treatment demand from London's growing population, which is set to increase to 9.4 million by 2030 and pass 10 million by 2050, from approximately 8.8 million in 2016, according to the Greater London Authority. It was also designed to ensure the resilience of the infrastructure to changing weather patterns associated with climate change, especially warmer and wetter winters that will likely result in more frequent combined sewer overflows (CSOs).

The TTT is the component of the LTI plan delivered by Bazalgette Tunnel. The construction of the tunnel aims to increase sewage storage capacity and reduce the amount of CSOs discharged into the Thames. The installation will capture 16 million cubic meters of untreated wastewater annually and reduce 90% of CSO discharge, in conjunction with the other infrastructure improvements within the LTI plan. Wastewater will be redirected to the Beckton sewage treatment works where it will be treated. The positive environmental impacts from TTT include more available freshwater in the tidal Thames from wastewater treatment, as well as carbon savings. Other positive environmental effects currently outside the scope of our evaluation include reducing water pollution and supporting local biodiversity.

Bazalgette Tunnel has assessed the resilience of the new sewage system to population growth and climate change by 2080, including the impact of changing rainfall patterns, CSO spills, and water quality. The assessment is based on population projections from the Greater London Authority, and the high, medium, and low emissions scenarios from the U.K. Climate Projections 2009.

## Summary of environmental benefit score

Location	Environmental sector	Environmental project type	KPI(s)	Benefit ranking	Hierarchy score and tier	Benefit score	Use of proceeds (bil. GBP)
London, U.K.	Water	Wastewater treatment	Water stress, carbon intensity	81	Score: 100 Tier: 2	95	10
<b>Weighted average benefit score and total use of proceeds</b>						95	10

Note: To disaggregate the score breakdown, please refer to "[Analytical Approach: Sustainable Financing Opinions](#)," published Aug. 25, 2021.

# Transaction Evaluation Summary

## Environmental benefit

**Score** 95/100

The high environmental benefit score reflects the tunnel's favorable environmental impact and its position at the top of our water hierarchy. In our view, system enhancement projects such as this increase the availability of freshwater in the Thames and do not result in any significant byproducts with negative impacts. The score also considers the net water, and, to a small extent, carbon benefits based on the tunnel's placement in London, with its high water stress and local grid with medium-high carbon intensity.


## Use of proceeds

**Alignment**  Bazalgette Tunnel's green bond transaction is aligned with this component of the Green Bond Principles.

**Commitments score** Limited Satisfactory Strong **Advanced**

We expect the proceeds of Bazalgette Tunnel's notes to be allocated exclusively through Bazalgette Tunnel to the TTT project. In our view, the pure play and regulated nature of Bazalgette Tunnel along with the contractual provisions that ring-fence proceeds raised by Bazalgette ensures that all proceeds are restricted for use solely in the project.


## Process for project evaluation and selection

**Alignment**  Bazalgette Tunnel's green bond transaction is aligned with this component of the Green Bond Principles.

**Commitments score** Limited Satisfactory Strong **Advanced**

The process for evaluating and selecting the TTT occurred under the LTI plan, which followed an interagency Thames Tideway strategic study and government approval. It involved a detailed approach to identifying and mitigating environmental and social risks, including the development of KPIs to monitor and manage key risks, which in our view enhanced the project's due diligence.

## Management of proceeds

**Alignment**  Bazalgette Tunnel's green bond transaction is aligned with this component of the Green Bond Principles.

The proceeds from the issuances will be tracked by Bazalgette Tunnel and used for project construction activities. As a project finance transaction, the defined cash waterfall ensures proceeds are used solely for the defined purposes. Any unallocated funds will be managed per internal policies with a focus on maintaining the capital and liquidity requirements of the project.

## Reporting

**Alignment**  Bazalgette Tunnel's green bond transaction is aligned with this component of the Green Bond Principles.

**Disclosure score** Limited Satisfactory Strong **Advanced**

Bazalgette Tunnel's reporting requirements are robust, in large part due to the regulated nature the project. Bazalgette Tunnel reports annually on the allocation of proceeds and on the expected and actual impact of the project through the construction and operational stages, with the latter to be verified by independent authorities.

# Transaction Evaluation Assessment

## Environmental benefit

The environmental benefit score provides a relative ranking of the environmental benefits of projects financed by a given financial transaction. The score is a weighted average of the project's benefit ranking based on project type and location, and the project's placement within our environmental contribution hierarchy.


**Score** 95/100

The high environmental benefit score reflects the tunnel's favorable environmental impact and its position at the top of our water hierarchy. In our view, water-related mitigation projects focus on using water resources and networks more efficiently and improving the quality of water treatment for various end-uses and the environment. The key environmental impact of Bazalgette Tunnel's debt-financing program is improved water treatment compared with a baseline scenario. Importantly, most projects in this sector incorporate regional water stress, which is a relative measure of supply and demand for potable water uses. Water stress is different from scarcity and can be high in places that are dry but where there is little or no demand. We rank the water stress for London as high due to the city's high population density, exposure to changing weather patterns, and strict regulation of water withdrawals. This results in a benefit ranking of 81. The medium-high carbon intensity of the U.K. grid also factors into our evaluation of the power generation component of the Beckton sewage treatment works, which is being supplied with wastewater by the TTT. These factors, when combined with the large systemwide nature of the project and its position at the top end of our water hierarchy, result in a final environmental benefit score of 95.

Since our last green transaction evaluation in 2019, the project's environmental benefit has marginally declined to 95 from 97. This is due to progress decarbonizing the U.K. power grid and, as a result, the lower carbon net benefit than the original baseline, as well as allocating greater weight to the relative carbon benefits of wastewater treatment projects in our analytical approach.

## Use of proceeds

Our alignment opinion focuses on the commitments and clarity on how the proceeds are used. We provide an opinion on the level of commitment made in the documentation as weak, satisfactory, strong, or advanced.

 The transaction is aligned with this component of the GBP.

## Commitments score

Limited

Satisfactory

Strong

**Advanced**


We consider Tideway's overall use-of-proceeds commitments to be advanced compared to standard market practice for sustainable debt. We expect proceeds of Bazalgette Tunnel's notes to be allocated exclusively through Bazalgette Tunnel to the TTT project. In our view, the pure play and regulated nature of Bazalgette Tunnel along with the contractual provisions that ring-fence proceeds raised by the entity ensures that all proceeds are restricted for use in the project; further, Bazalgette Tunnel commits to using all its proceeds to finance or refinance the TTT.

The financing documentation states that the project contributes to the sustainability objectives of pollution prevention and control as identified by the GBP and outlines the expected objectives and benefits of the project. The documentation identifies positive benefits including improved water quality, improved citizen health, and the preservation of the Thames estuary ecology.

As all of the proceeds will be used for the TTT, the lookback period for any refinancing will go as far back as 2016, when the project started. As all refinancing will be to a single project with considerable ring-fencing, we believe that further disclosure of the proportion of refinancing used is not needed in this case.

## Process for project selection and evaluation

Our alignment opinion focuses on the commitments and clarity on the process used to evaluate and select eligible projects to fund with the proceeds of the sustainable finance. We provide an opinion on the level of commitment made in the documentation as 'weak', 'satisfactory', 'strong', or 'advanced'.

 The transaction is aligned with this component of the GBP.

### Commitments score

Limited

Satisfactory

Strong

**Advanced**


We consider Tideway's overall process for project selection and evaluation commitments to be advanced compared to standard market practice for sustainable debt.

The TTT is related to the Thames Tideway Strategic Study. Per the documentation, the study was conducted by the Thames Water Utilities, the Environment Agency (EA), the Greater London Authority, Department for Environment, Food and Rural Affairs (DEFRA), and Water Services Regulation Authority (Ofwat, as an observer) and chaired independently by an engineering consultant. The government finalized the TTT project based on the study's recommendation, consideration of alternatives, and public consultations. EA representatives contributed to the selection of the eligible project, which indicates a thorough process for project selection and evaluation.

Tideway maintains a dashboard with set targets for several environmental and social metrics. This is reviewed internally by the board twice a year and suggests strong commitment to risk assessment and mitigation measures. The project plan includes significant steps to mitigate negative environmental and social impacts include the use of biofuel-based marine transportation during the construction phase of TTT, which helped reduce carbon emissions significantly and avoids increasing road-traffic congestion. While Tideway's current operations are not covered under any current taxonomies, the company has committed to review and update its framework as the environment evolves.

## Management of proceeds

Our opinion focuses on how clear in the documentation is the issuer's commitment to ensure that the funds raised will continue to be dedicated to eligible sustainability projects throughout the life of the sustainable finance funding.


 The transaction is aligned with this component of the GBP.

Bazalgette Tunnel operates under a specific regulatory framework defined by DEFRA, Ofwat, and the EA. Under this framework, proceeds raised by Bazalgette are ring-fenced for the design, construction, and operation of the TTT, through Bazalgette Tunnel, ensuring effective management of proceeds. The proceeds from issuance under the program will be deposited into Bazalgette Tunnel's account and withdrawn per the allowable project spend by Bazalgette Tunnel. The allowable project spend relates to spending on the TTT and will be verified monthly and quarterly by an independent technical assessor (ITA). The ITA is appointed by a committee comprising representatives from DEFRA, the EA, and Thames Water. Tideway's treasury team will be responsible for managing the accounts and deposits.

Any unallocated amounts will be maintained as cash or cash equivalent investments agreed between the Bazalgette Finance and Bazalgette Tunnel. The financing documentation states that funds will likely be invested in bank deposits or money market funds to ensure available liquidity and capital for the project. We view this as standard practice for ring-fenced transactions such as Tideway's.

## Reporting

Our opinion focuses on how clearly the financing documentation describes the issuer’s level of disclosure and reporting practices. We provide an opinion on the level of commitment made in the documentation as weak, satisfactory, strong, or advanced.

 The transaction is aligned with this component of the GBP.

### Disclosure score

Limited

Satisfactory

Strong

**Advanced**

We consider Tideway’s overall reporting commitments to be advanced compared to standard market practice for sustainable debt.

Tideway commits to public reporting annually on the allocation of proceeds until all proceeds are allocated. Allocation is done as per the allowable project spend, which is verified by the ITA.

In addition, Tideway must monitor and measure the expected and actual environmental impacts of the project during the construction and operational phases. The company has also published an environmental statement describing the project’s expected environmental impacts, in accordance with the U.K. Infrastructure Planning Regulations 2009, as well as an energy and carbon footprint report. These provide a detailed assessment of the water, waste, carbon, and energy impacts of the project’s construction and operational phases. In particular, for the operational phase, the key indicator measured will be the annual amount of raw/untreated wastewater discharges avoided and captured by treatment by the tunnel. The data will be calculated by Thames Water and shared with Tideway, per the operation and maintenance agreement. The metric will be monitored and verified by the EA. Both Thames Water and the EA operate independently of Tideway.

Tideway commits to use ICMA’s handbook for impact reporting, namely focusing on the annual amount of raw/untreated wastewater discharges avoided. The methodology for the calculation of the main impact indicator metric is available in the Operating Techniques document between Thames Water and the EA. Given the independent verification and calculation of the impact indicator, we consider the reporting commitments of Tideway to be best practice in the market.



















Further, Tideway commits to reporting in accordance with the Handbook on Harmonized Frameworks, wherever applicable, which is a strong feature given prevailing market practices.

## Mapping To The U.N.'s Sustainable Development Goals

The Sustainable Development Goals (SDGs), set up by the United Nations (U.N.) in 2015, form an agenda for achieving sustainable development by 2030.

We use the International Capital Market Association's (ICMA's) SDG mapping for this part of the report. We acknowledge that ICMA's mapping does not provide an exhaustive list of SDGs and that ICMA recommends each project category be reviewed individually to map it to the relevant SDGs.

Tideway's Green Bond transaction intends to contribute to the following SDGs:

Use of proceeds	SDGs				
Pollution prevention and control	 <b>6. Clean water and sanitation</b>	 <b>11. Sustainable cities and communities*</b>	 <b>3. Good health and well-being*</b>	 <b>4. Quality education</b>	 <b>8. Decent work and economic growth</b>
	 <b>9. Industry, innovation and infrastructure</b>	 <b>12. Responsible consumption and production*</b>	 <b>13. Climate action</b>	 <b>5. Gender equality</b>	
Sustainable water and wastewater management	 <b>6. Clean water and sanitation*</b>	 <b>11. Sustainable cities and communities*</b>	 <b>3. Good health and well-being</b>	 <b>4. Quality education</b>	 <b>8. Decent work and economic growth</b>
	 <b>9. Industry, innovation and infrastructure</b>	 <b>12. Responsible consumption and production*</b>	 <b>13. Climate action</b>	 <b>5. Gender equality</b>	

\*The eligible project categories link to these SDGs in the ICMA mapping.

**Water Contribution Hierarchy**

	<b>Project</b>
Tier 2: System enhancements	Recycling wastewater to supply potable municipal water Recycling wastewater to supply non-potable water for agricultural uses Recycling wastewater to supply non-potable water for agricultural uses Wastewater treatment with no energy recovery <b>Wastewater treatment with energy recovery</b>
Tier 5: Marginal system enhancements	Reducing water losses in the water distribution network
Tier 6: Marginal system enhancements with material negative environmental consequences	Water desalination to supply potable municipal water
Tier 7: Demand-side improvements	Conservation measure in residential buildings Conservation measure in commercial buildings Conservation measure in industrial buildings Smart metering in residential buildings



## Green Transaction Evaluation

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