



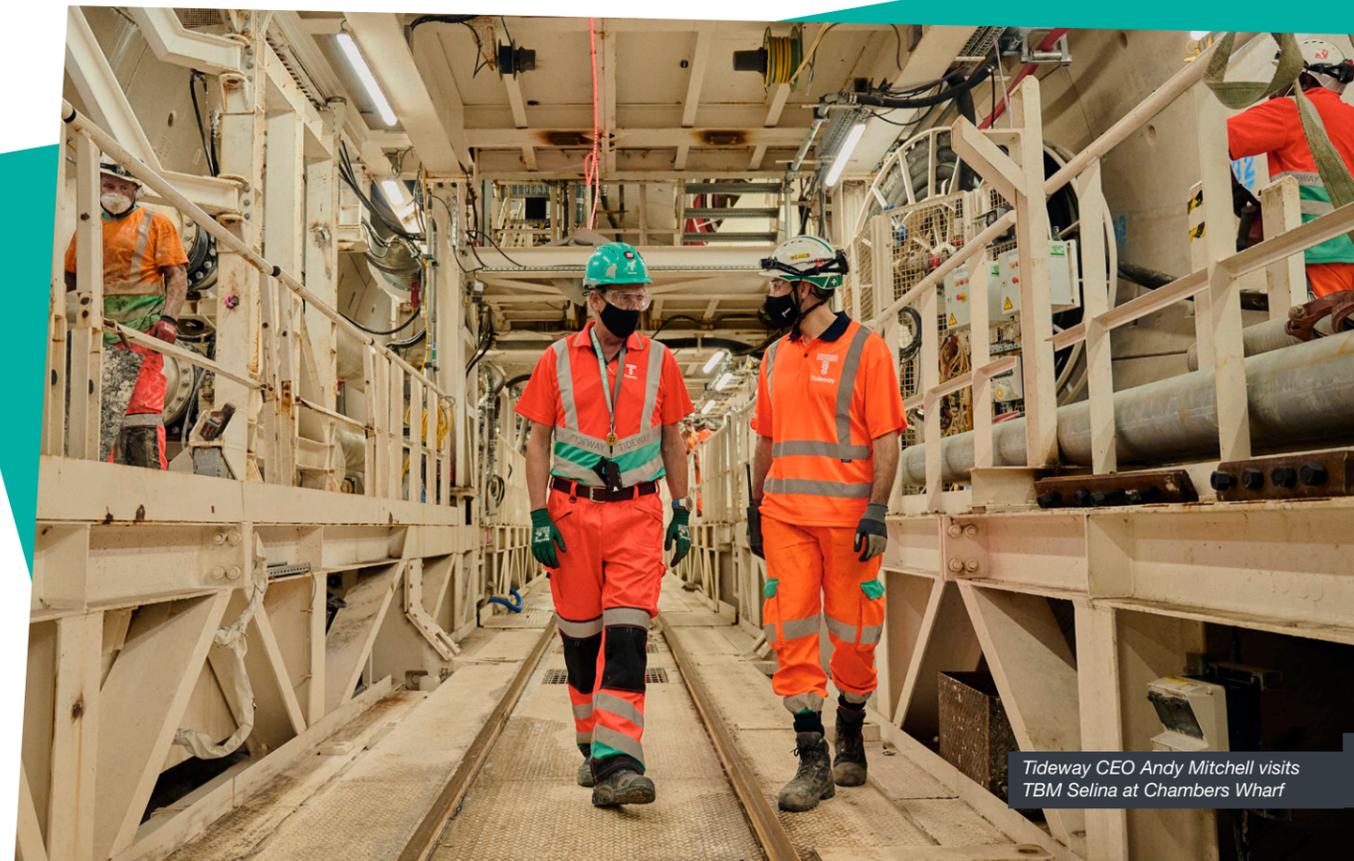
**Tideway**



**SUSTAINABLE  
FINANCE REPORT  
2020/2021**

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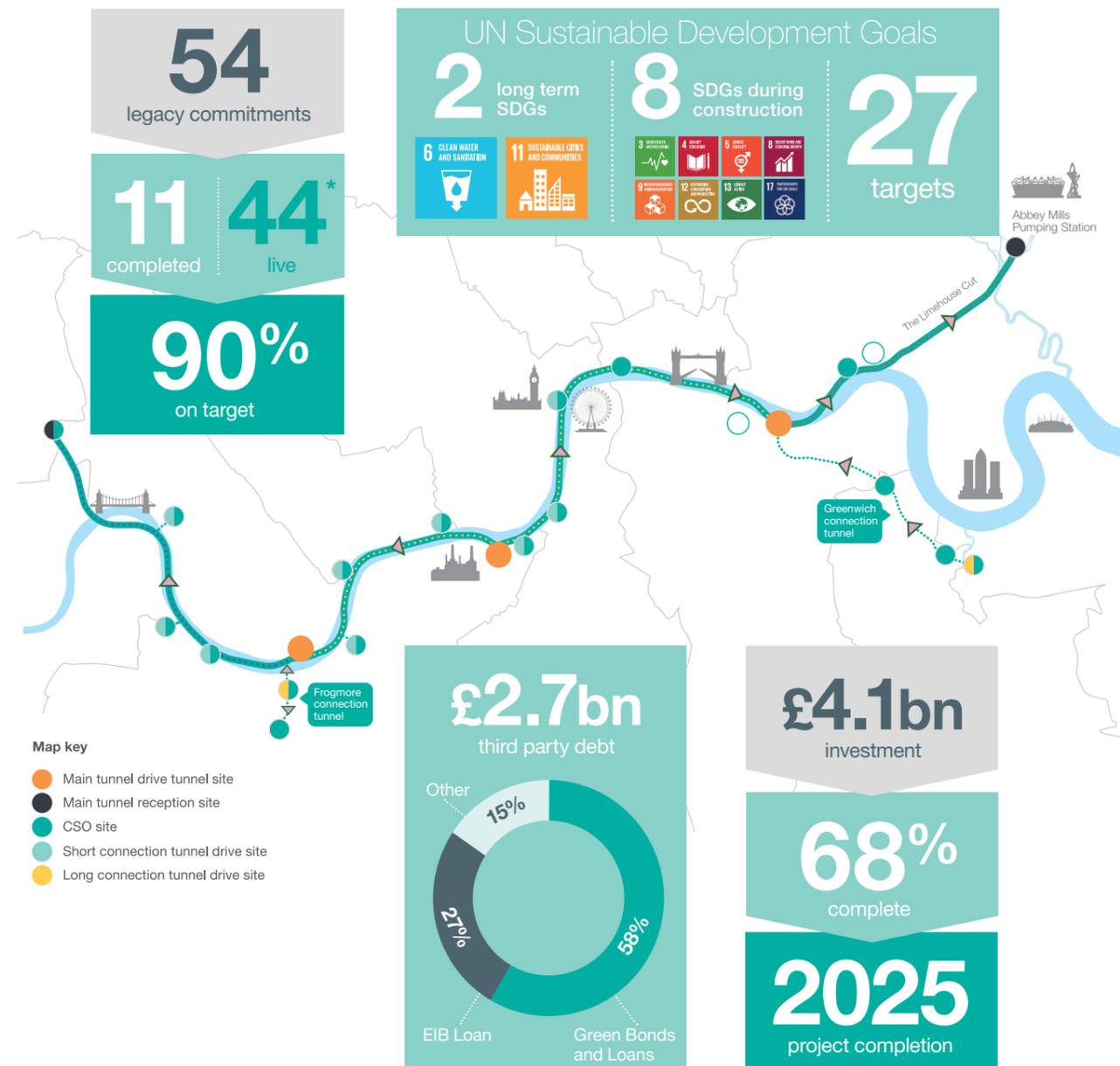


Cover photo TBM Ursula being lifted from site in 2021 after completing its 7.6km journey from Kirtling Street in Battersea.  
Photo credit: tobyhawkes.co.nz

Tideway CEO Andy Mitchell visits  
TBM Selina at Chambers Wharf

# 2020/21 HIGHLIGHTS

Tideway's green bond and loan proceeds are used solely to fund the construction of the Thames Tideway Tunnel, cleaning the river for generations to come.



# INTRODUCTION

Welcome to Tideway's third Sustainable Finance Report.

Tideway was founded in 2015 to build and maintain a major new sewer for London to intercept millions of tonnes of raw sewage that currently pollutes the River Thames every year. Sustainability is core to our mission, and this report sets out how we have aligned the financing of the project to our sustainability goals, and our progress towards meeting them.

Tideway's green and sustainable debt issuance seeks to demonstrate to investors that in addition to our core purpose to reduce pollution in the river, we also hope to reconnect London, and Londoners, with the river and how the financing of the project supports that vision. This wider legacy for London includes 54 commitments across five key themes: environment; health, safety and wellbeing; economy; people; and place.

Sustainable financing is central to delivering the UN Sustainable Development Goals (SDGs) and the Paris Climate Agreement and our reporting is aligned to relevant SDGs. Investors have an increased focus on integrating Environmental, Social and Governance (ESG) factors into the investment processes which is facilitated by funding a green project like Tideway. Through our reporting we hope to provide investors and other stakeholders with greater transparency into our use of debt proceeds, how the financing supports Tideway's programme delivery and legacy commitments and what the impact has been and is expected to be.

The UK green bond market was at an early stage of development when we started issuing green bonds in 2017. Tideway became the largest corporate issuer of green bonds in sterling with £450 million of issuance in November 2017, doubling the size of the UK corporate green bond market. We issued the first debut public green bond in the UK and the first green private placement; and in total, we have now issued £1.7bn of sustainable debt.

In our first report (2018/19), we discussed how our green bonds were aligned to our legacy strategy and the SDGs. Last year (2019/20) we expanded our Green Bond Framework into a Sustainable Finance Framework to encompass a wider array of funding instruments and have since arranged a sustainability-linked loan with a KPI linked to delivery of our legacy commitments.

We published targets and performance against those metrics for all our live legacy commitments. We expanded our work on the SDGs by mapping our legacy commitments to the SDGs at target level and developed further our SDG narrative on the goals where we expect to make a significant contribution during and/or after construction. Tideway's target mapping activity was undertaken as part of an academic research project in collaboration with private, public, professional bodies and not for profit entities.

Following on from the research project, we continue to improve our understanding of how we can effectively measure and assess SDG performance across the Tideway project. So this year, we have evolved our reporting once again to include a discussion about our negative impacts on some SDGs and actions that we are taking to minimise these.

Tideway is now at an advanced stage of construction and we continue to be active in many areas to deliver our legacy. This report covers many of those initiatives and the progress we have made to date.

Finally, we have now published our first Climate Disclosures Report following the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD), which we believe is a first for a project of this nature.

We hope you will find the report useful and informative; and we look forward to continuing to evolve the way we report on our sustainable finance programme as our project gets closer to completion.



Company of the Year



Responsible Business Champion for Outstanding Employment



Building/Infrastructure Project of the Year



for CSR/ESG 2020 in the Treasury4Good Awards

\* The other 10 commitments will become live at or near completion.

# OUR SUSTAINABLE FINANCING

In November 2017 we published a framework for the issuance of Green Bonds. In 2020 this framework was updated to a Sustainable Finance Framework (Framework) under which Tideway and Bazalgette Finance Plc (BFP) can raise debt to support the financing and/or refinancing of assets and expenditures of a sustainable nature across its activities.

BFP issued its inaugural Green Bond, which was also its debut public bond, on 30 November 2017 and a further six Green Bonds between December 2017 and August 2020 for a total amount of £850 million. In October 2019 the London Stock Exchange (LSEG) moved bond series 1 to 10 (issued before our inaugural green bond in November 2017) to the LSEG Green segment, which is part of LSEG’s Sustainable Bond Market. S&P Global Ratings updated its green evaluation, confirming that it applies to all bonds issued under the bond programme since June 2016.



**S&P Global Ratings**

All seventeen bonds issued by BFP are listed in LSEG’s Green Segment and received a second opinion from S&P Global Ratings, with the top score of E1/95 for the Green Evaluation.

The bond and loan proceeds are used to finance the construction of the Thames Tideway Tunnel (TTT), often referred to as London’s super sewer, a major infrastructure project that will tackle sewage pollution in the River Thames. Tunnelling of the 25km tunnel started in November 2018 and when complete will prevent tens of millions of tonnes of untreated sewage and thousands of tonnes of sewage derived litter polluting the river each year. Tideway is a ‘pure-play’ issuer, deriving all its revenues from green assets, i.e. the tunnel currently under construction. Tideway’s sustainable finance programme contributes to the lasting legacy of reconnecting London with the River Thames.

<b>Current framework</b>	Tideway’s Sustainable Finance Framework, January 2020
<b>Reporting period</b>	Fiscal year 2021 to 31 March 2021
<b>Date of publication</b>	July 2021
<b>Reporting frequency</b>	Annual
<b>Reporting approach</b>	ICMA Green Bond Impact Reporting - Handbook - Harmonized Framework for Impact Reporting, Sustainable Water and Wastewater Management, December 2020 APLMA, LMA and LSTA Sustainability Linked Loan Principles, May 2021
<b>Other reports</b>	Task Force on Climate-related Financial Disclosures (TCFD) report, July 2021

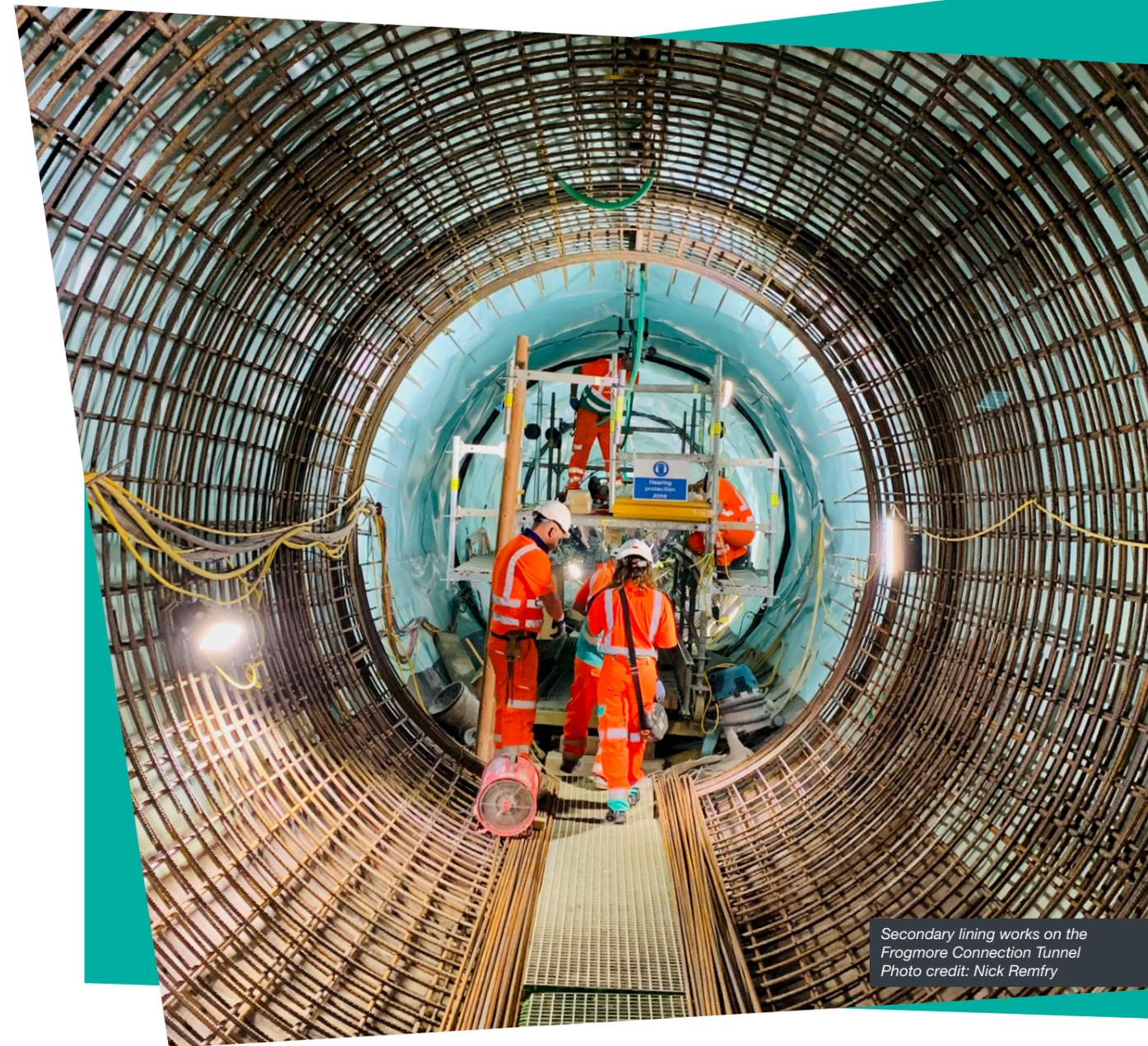
The Framework follows the International Capital Markets Association (ICMA) Green Bond Principles (GBP) and the Loan Market Association Green Loan Principles (GLP). The Framework is also aligned with the Loan Market Association (LMA) Sustainability Linked Loan Principles (SLLP).

A common principle to the various standards is the requirement to provide an annual update to investors of the:

- Allocation of proceeds in the case of green bonds and green loans
- Compliance with the agreed KPI in the case of sustainability-linked loans
- Impact of the project

This Sustainable Finance Report provides an update on these points. The report includes a review of our legacy commitment performance and how these link to the SDGs at target level.

The recent update to the Sustainability Linked Loan Principles requires post signing verification of performance against each KPI by a qualified external reviewer for loans signed from June 2021, which is not the case of our Sustainability-linked Revolving Credit Facility (RCF). However, we expect to meet this requirement next year with the completion of the Social Impact Assessment of Tideway’s Legacy programme by an external reviewer.



Secondary lining works on the Frogmore Connection Tunnel  
Photo credit: Nick Remfry

## ESG ratings and evaluations

In April 2020, S&P Global Ratings completed an Environmental, Social and Governance Evaluation of Tideway. Tideway achieved a 74/100 score. Our environmental and social (which includes safety, workforce and diversity, and community relations considerations) scores are above the industry average and our governance score is in line with the industry.

Our parent company, Bazalgette Equity Ltd continues to be rated Corporate ESG Prime by ISS with a C+ rating, in the top level for transparency (80-100%) and 1st decile ranking in the peer group.

# DEBT ISSUANCE

Please refer to the tables below with details of each bond series and green USPP.

**Table 1 – Settled green bonds**

Green Bonds	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6
<b>Issuer</b>	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc
<b>Size £ million</b>	25	25	25	25	100	100
<b>Issue Date</b>	15/06/2016	15/06/2016	15/06/2016	15/06/2016	27/06/2016	27/06/2016
<b>Interest Rate</b>	RPI	RPI	RPI	RPI	RPI	RPI
<b>Final Maturity Date</b>	15/06/2048	15/06/2048	15/06/2054	15/06/2054	27/06/2050	27/06/2051
<b>ISIN</b>	XS1430587433	XS1430584091	XS1430590221	XS1430589728	XS 1436288846	XS1436289141
<b>Listing</b>	LSE	LSE	LSE	LSE	LSE	LSE
<b>Deferred Purchase</b>	Yes, funded Jun 2020	Yes, funded Jun 2021	Yes, funded Jun 2020	Yes, funded Jun 2021	Yes, funded Jun 2018	Yes, funded Jun 2019
<b>Second Opinion</b>	S&P Global Ratings Green Evaluation					
<b>APS Allocation £ million</b>	25	25	25	25	100	100

Green Bonds	Series 7	Series 8	Series 9	Series 10	Series 11	Series 12
<b>Issuer</b>	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc
<b>Size £ million</b>	50	100	133	75	250	200
<b>Issue Date</b>	27/06/2016	05/12/2016	17/07/2017	25/08/2017	29/11/2017	30/11/2017
<b>Interest Rate</b>	RPI	RPI	RPI	CPI	Fixed	CPI with collar
<b>Final Maturity Date</b>	27/06/2052	05/12/2040	17/07/2049	25/08/2047	29/11/2027	30/11/2042
<b>ISIN</b>	XS1436289497	XS1525510027	XS1643813667	XS1662621603	XS1726309286	XS1726310961
<b>Listing</b>	LSE	LSE	LSE	LSE	LSE	LSE
<b>Deferred Purchase</b>	Yes, funded Jun 2020	Yes, funded Dec 2018	Yes, funded Jul 2019	No	No	No
<b>Second Opinion</b>	S&P Global Ratings Green Evaluation					
<b>APS Allocation £ million</b>	50	100	133	75	250	200

**Table 2 – Deferred green bonds and green USPP**

Green Bonds	Series 13	Series 14	Series 15	Series 16	Series 17	USPP
<b>Issuer</b>	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Finance Plc	Bazalgette Tunnel Limited
<b>Size £ million</b>	150	75	50	50	75	75
<b>Issue Date</b>	13/04/2018	16/05/2018	16/05/2018	16/05/2018	09/08/2019	06/09/2019
<b>Interest Rate</b>	RPI	CPI	RPI	RPI	RPI	Fixed
<b>Final Maturity Date</b>	13/04/2032	16/05/2052	16/05/2049	16/05/2049	05/08/2036	06/09/2041
<b>ISIN</b>	XS1802472891	XS1819532760	XS1821454912	XS1821455216	XS2034702824	N/A
<b>Listing</b>	LSE	LSE	LSE	LSE	LSE	N/A
<b>Deferred Purchase</b>	Yes, funding Apr 2022	Yes, funding May 2022	Yes, funding May 2022	Yes, funding May 2023	Yes, funding Aug 2021	Yes, funding Sep 2021
<b>Second Opinion</b>	S&P Global Ratings Green Evaluation					
<b>APS Allocation £ million</b>	N/A	N/A	N/A	N/A	N/A	N/A

Our £160 million RCF is structured as a sustainability-linked loan, in accordance with SLLP.

The credit margin is reduced if Tideway meets the agreed sustainable KPI, which is the meeting of at least 85% of the live Legacy Commitments. During the year Tideway achieved 90% of its live Legacy Commitments on track, so it has exceeded the 85% KPI. Tideway has now updated its corporate target from 75% to 85% which aligns with the KPI linked to the RCF.

This loan further aligns Tideway's financing, not only with the long-term target of cleaning the river, but also with the significant efforts during construction, which have been captured in Tideway's Legacy commitments.

## ALLOCATION OF PROCEEDS

The proceeds from the twelve Green Bonds that have funded (see Table 1) were on-loaned by BFP to BTL and deposited in BTL's sole operating bank account.

The funds were subsequently drawn to fund the design and construction of the tunnel. While in the operating account, the funds were managed by Tideway's Treasury team in accordance with the company's investment management policy that aims to preserve capital and liquidity. Funds were invested in deposits with Tideway's banks and in liquid money market funds.

Further to the Framework, funds were disbursed to pay for Allowable Project Spend, as defined in the Licence, which is the cumulative expenditure incurred for the Thames Tideway Tunnel, constituting the regulatory capital value.

The Allowable Project Spend is calculated by Tideway and verified on a monthly basis by Mott McDonald, the Independent Technical Assessor (ITA), appointed in connection with the Liaison Agreement, establishing a Liaison Committee with Tideway, Department for Environment, Food and Rural Affairs (Defra) and Thames Water Utilities Limited (Thames Water) as members and the Water Services Regulation Authority (Ofwat) and the Environment Agency (EA) as observers.

The ITA has certified £2,119 million of Allowable Project Spend during the period between August 2017 and March 2021, since the funding of our first green bond, as follows:

Quarterly Allowable Project Spend	£ million
2017/18 Q2	84.29
2017/18 Q3	167.59
2017/18 Q4	137.32
2018/19 Q1	92.87
2018/19 Q2	145.85
2018/19 Q3	190.99
2018/19 Q4	153.13
2019/20 Q1	119.86
2019/20 Q2	162.31
2019/20 Q3	176.35
2019/20 Q4	146.33
2020/21 Q1	80.94
2020/21 Q2	73.79
2020/21 Q3	230.29
2020/21 Q4	157.16
<b>Total</b>	<b>2119.07</b>

The £2,119 million of certified Allowable Project Spend is well in excess of the £1,108 million allocated to the green bond series 1-12, which funded between 25 August 2017 and 15 June 2021, confirming the use of proceeds of the drawn bonds in line with the requirements of the Green Bond Principles. The other green facilities issued on a deferred basis will fund between August 2021 and May 2023 and, in time, will be matched against our Allowable Project Spend. Please refer to the tables on the previous page.

## IMPACT REPORTING – CONSTRUCTION PHASE

### Environmental

The expected environmental and economic benefits of the project remain as per the original Development Consent Order, which provided the overall permissions for the project, until the TTT is built and starts operations:

- In a typical year, the tunnel will reduce polluting discharges to river by circa 16 million cubic metres (diverted and captured for treatment)
- The three components of the London Tideway Improvements work conjunctively to reduce discharges in a typical year by about 37 million cubic metres, as described in the Framework

Once the tunnel is operational, we will report the impact in accordance with the Handbook on Harmonized Framework for Impact Reporting published by the Green Bond Principles, in particular 'Core Indicator B. Wastewater Treatment Projects, #2) Annual amount of raw/untreated wastewater discharges avoided'.

<b>Wastewater</b>	Project name	Thames Tideway Tunnel
<b>Signed Amount</b>	GBP	1575m
<b>Share of Total Project Financing</b>	%	58
<b>Eligibility for green bonds/ loans</b>	% of signed amount	100
<b>Sustainable Wastewater Management Component</b>	% of signed amount	100
<b>Allocated Amount</b>	GBP	1108m
<b>Project lifetime</b>	In years	120
<b>#2) Annual amount of raw/untreated wastewater discharges avoided</b>		To start in 2025
<b>Other indicators</b>		To start in 2025

Construction is underway with handover planned for 2025. We are now over 68% through the project and getting closer to the end of the construction phase. Excavation of the main tunnel has been completed in both the West and Central areas with 21km of tunnel now constructed and all shafts now fully excavated. Covid-19 has impacted the project with an initial reduction of activities on our sites for between 6 to 8 weeks and decreased productivity arising from the

range of safety measures implemented. In August 2020, we announced a nine-month delay, moving completion to 2025 and we also announced an increase in our cost estimate of £233m, taking the total to £4.1bn. At the end of March 2021 we had moved 4.5m tonnes of material by river, avoiding over 550,000 two-way HGV movements.

Tideway has made good progress towards its ambition to safely deliver the TTT at the right quality and to best value. We continue to develop our approach to health, safety and wellbeing and are pleased to report that no life-changing injuries have occurred to date.

### Legacy

While the main benefit of the tunnel when built is to prevent pollution in the tidal River Thames, during the eight-year construction period the project is addressing several areas of environmental and social sustainability such as bringing more women into engineering and construction and utilising the river to transport at least 90% of construction and excavation material, thereby reducing the burden on London's road network. We are providing new jobs and opportunities for people living in the areas affected by the works and have set targets on employing apprentices and people with convictions.

Our commitments have evolved into 54 metrics within our Legacy Plan under five themes that capture the range of opportunities created by the project—Environment; Health, Safety and Wellbeing; Economy; People; and Place. We are maintaining a high standard of overall performance against the Legacy commitments, with 44 commitments live across the programme (out of the overall 54 to have been active by the end of the construction phase). Of the 44 live legacy commitments, 41 are on track (93%) with an average of 90% live legacy commitments on track at the end of FY 2020-21 against a target of 85%.

A Social Impact Assessment of Tideway's Legacy programme has commenced. The assessment will be a robust and comprehensive 3rd party evaluation of the social value being created by Tideway's Legacy programme.

### Tideway Legacy Dashboard

The table below details the Measure, Target and our Performance during 2020-21 and project to date for each Legacy commitment. Commitments that are not yet live have been greyed out.

Commitment not yet live
  Performance below target, mitigation agreed
  At or above target
  Exemplary performance (>20% over target)

	Legacy Commitment	Target	In Period On Track	Project Total					
				FY 2020-21		Project to date			
				Actual	RAG	Actual	RAG		
ENVIRONMENT	1	Improve water quality and reduce biochemical oxygen demands in the tidal Thames by dramatically reducing CSO discharges into the river	2.4million m3	2025					
			3 or 4	2026					
	2	Reduce adverse litter conditions	reduction	2025					
	3	Provide infrastructure that supports more resilient biodiversity	40	2022					
			TBC	2024					
			TBC	2024					
4	Undertake and support research to aid understanding of habitats and aquatic ecology of the River Thames	5	Complete	5 out of 5		Complete			
5	Minimise carbon footprint	<768,756	Y	94,429		351,152	46%		
HEALTH, SAFETY AND WELLBEING	6	Reduction in lorry movements on the project further than the reductions agreed in the DCO	<478,120 two way HGV movements	Y			294,428		
	7	Aspire to have no major incidents on the project	0	Y	0		0		
			2		2.23				
	8	Raise the standard of health, safety and wellbeing inductions	100%	Y	Complete		Complete		
			Received		Yes		Yes		
	9	All supervisors to be trained in health and safety to a level above industry norms	100% (MWC)	Y	On track		On track		
	10	Promote new industry occupational health standards and working practices	1 Standard	Complete	Complete		Complete		
	11	Introduce industry leading lorry and vulnerable road users initiatives	4	Y	4		On track		
	12	Introduce a health & safety communication standard across the Project	1 Standard	Complete	Complete		Complete		
	13	Improve Health & Safety on the river for Tideway River Transport Workers	100%	Y	100%		100%		
	ECONOMY	14	Provide London's essential Infrastructure through an enhanced sewerage system that supports growth	95%	2028				
		15	Remove the immediate risk of EU imposed infraction fines	Achieve	2024				
		16	Create more than 4,000 direct, sustainable jobs (at peak construction)	>4000	Complete	65		4295 (complete)	
17		Create a visible, informed and engaged supply chain that can compete for contract opportunities	100%	Y	100%		100%		
18		Demonstrate Tideway is supporting the London and UK economy	100%	Y	100%		100%		
19		Use river transport to remove the majority (90 per cent) of material excavated to create the main tunnel	90%	Y			83% (~2.8M)		
20		Support the development of river transport related skills through Thames Skills Academy	Sign up	Complete	Complete		Complete		
21		Encourage modernisation of marine equipment through our procurement process	1 standard	Complete	Complete		Complete		
22		Seek opportunities to support the continued use of river infrastructure such as enhanced river walls	2 assets	2022					
23		The promotion of procurement packages and support SMEs with their procurement process	1 quarterly	Y	On track		On track		
24	% Employees from other major projects	no target	Y	15%		19%			
		no target		99% (1859hrs)		94% (35528hrs)			
25	Level of engagement from Tideway to Tunneling and Underground construction academy (TUCA)	Support	Complete	100%		100%			
		No. of individuals completed TUCA courses	no target		17		873		
26	Establishment of I3P Innovation Platform	Established	Complete	Complete		Complete			
		MWCs provide Quarterly Innovation progress updates	no target						
27	Design a procurement approach that will encourage innovation	100%	Complete	Complete		Complete			
28	Create commercial arrangements that encourage innovation and shared risk	no target	Complete	Complete		Complete			
29	Fair payment charter throughout the supply chain	100%	Y	100%		100%			
		Audit compliance with Fair Payment Charter	100%		100%		100%		
30	Publish a procurement handbook	Complete	Y	Complete		Complete			
		Maintain Verification to Ethical Labour Standard	On Track		On track		On track		

	Legacy Commitment	Target	In Period On Track	Project Total				
				FY 2019-20		Project to date		
				Actual	RAG	Actual	RAG	
PEOPLE	31	MWC employees will live in the local Borough at each drive site	20%	N	16%		12%	
	32	MWC employees will live in the local Boroughs within each contract area	20%	Retired (no data)	Retired (no data)		Retired (no data)	
	33	Employees to live in 14 Boroughs which are directly affected by the works (Headcount)	25%	Y			26%	
	34	Employees to live in Greater London, Kent or Essex for river workers	30%	Y	87%		63%	
	35	Project to support the London Living Wage	98% (seek 100%)	Y	100%		99%	
	36	Appoint skills & employment managers to work with local jobs brokerages	1 manager each	Y	Complete		Complete	
			95% (seek 100%)		100%		98%	
	37	Promote job security through direct employment in our supply chain	75% (seek 100%)	Y	85% (MWC)		86% (MWC)	
	38	Create employment opportunities for the workless	10%	Y	26%		30%	
	39	Create an inclusive environment that will enhance diversity across Tideway and aim to set new standards for the industry	Established		Complete		Complete	
			Signed	Y	Complete		Complete	
			> industry average		On track		On track	
			Signed		Complete		Complete	
	40	Create apprenticeship opportunities	1 in 50 FTE	Y	1 in 43		1 in 45	
	41	Support the STEM programme	1 (hr/3FTE/annum)	Y	1.6 (1209hrs)		4.3 (12885hrs)	
42	Provide teaching & learning resources.	On Track	Y	On track		On track		
43	Work with charity partners to employ one person with convictions per 100 staff on the project	1 in 100 FTE	N	1 in 166		1 in 132		
44	A significant reduction in health risks from water borne pathogens	95%	2026					
45	Inspire people to engage in river activities and support events that will help people reconnect with the River Thames	On Track	Y	On track		On track		
PLACE	46	Design principles to increase number of trees	2 for 1	Y	On track		On track	
	47	Additional and enhanced public space available to the public		Y	On track		On track	
			8 Case Studies	Y	On track		On track	
	48	Enhance the Thames path		Y	On track		On track	
	49	Give people of reduced mobility the opportunity to connect with the River Thames		Y	On track		On track	
	50	Use a Heritage Interpretation Strategy and Public Art Strategy	24 sites	Y	100%		100%	
51	Collaborate with other developers to enhance local space, where our activities overlap with other local developments	12 areas	2022					
52	Develop sustainable strategies for the long term maintenance of new public realm	10 sites	2022					
53	Deliver and fund local community investment activities and where possible encourage members of that community to come together	Various (hrs)	N	1888hrs		10427hrs		
54	Deliver and fund pan-London community investment activities which bring communities together from across the capital	1 (hr/3FTE/annum)	Y	1.6 (2197hrs)		3.5 (5405)		

Fulfilling the ambitions of the SDGs to achieve a better future for all by 2030 will take an unprecedented effort by all sectors in society. In this Decade of Action, business has an important role to play in the process. In recognition of this need for action, we mapped our Legacy commitments against the SDGs at target level.

Tideway's target mapping activity was undertaken as part of academic research with University College London, South Bank University and Nathu Puri Institute for Engineering and Enterprise, and involved a number of partners, including the Institution of Civil Engineers (ICE), Environment Agency, Department for Business, Energy & Industrial Strategy, Cabinet Office (Infrastructure and Project Authority), UN Global Compact Network UK and World Wide Generation.



*Aerial image of King Edward Memorial Park Foreshore, where the final shaft on the project was excavated in the summer of 2021*

## OUR APPROACH TO DELIVERING THE SDGs

Tideway's Legacy commitments are mapped against 10 SDGs and 27 targets, confirming the purposeful nature of our business is closely aligned with many of the goals.

We have illustrated the linkages between our legacy commitments and the SDGs, showing the progress we have made during the period towards achieving the targets. Eleven of our 54 legacy commitments are complete, five of which were completed this financial year. One related to creating 4,000 sustainable jobs (4,295) (SDG 8). Another related to completion of our Thames ecology research programme (SDG 4 and SDG 13), further details can be found under SDG 6 below. The majority of our legacy commitments, 39, are in progress and will be delivered over the next few years as construction completes. Nine of our legacy commitments will be measured at completion. These relate to some of our long-term legacies like improved river water quality and reduction in sewage-derived litter that will be realised once the tunnel is operational.

We acknowledge that we have a negative impact on some of the SDGs, in particular SDG 13 Climate Action because of our carbon footprint, however we are actively seeking to minimise and mitigate this. One way we have done this is by seeking design decisions that use fewer materials, thereby lowering embodied carbon. Within the central section, our Main Works Contractors Ferrovial and Laing O'Rourke reduced the thickness of the secondary lining within the main tunnel by 15% over 12.5km. This saved 16,000 tonnes of concrete, 7,300 tCO<sub>2</sub>e, reducing the carbon footprint by 2.5% and making significant cost savings. We are also making carbon savings by substituting cement for industrial by-products like Ground Granulated Blast-furnace Slag (GGBS) and Pulverised Fuel Ash (PFA). Carbon reducing measures are further discussed in our Climate Related Financial Disclosure Report.

We are also having a temporary negative impact during construction on SDG 15 Life on Land. We have had to fell 156 trees to proceed

with construction, but we have committed to planting 2 trees for every 1 tree removed working in partnership with organisations like Trees for Cities. Depending on the maturity of the trees planted, the environmental benefits of our replanting scheme may not be realised for some years. We also have a temporary negative impact on SDG 6 Clean Water and Sanitation through the consumption of potable water during construction. To mitigate this impact, our Main Works Contractors sought opportunities to reduce potable water consumption by, for example, reusing water from dewatering operations and harvesting rainwater from some buildings on a small number of our sites, thus reducing requirements from the network. SDG 11 Sustainable Cities and Communities is also affected as we have had to temporarily close some green public spaces while we construct.

The next year will see the completion of some of our commitments under the People and Economy themes as we pass peak construction, delivering our contributions to SDG 4 Quality Education and SDG 8 Decent Work and Economic Growth. Our commitments under the Place theme, which relate to SDG 11 Sustainable Cities and Communities and SDG 17 Partnerships for the Goals, will be stepped up as our landscape and public realm, public arts and heritage commitments progress.

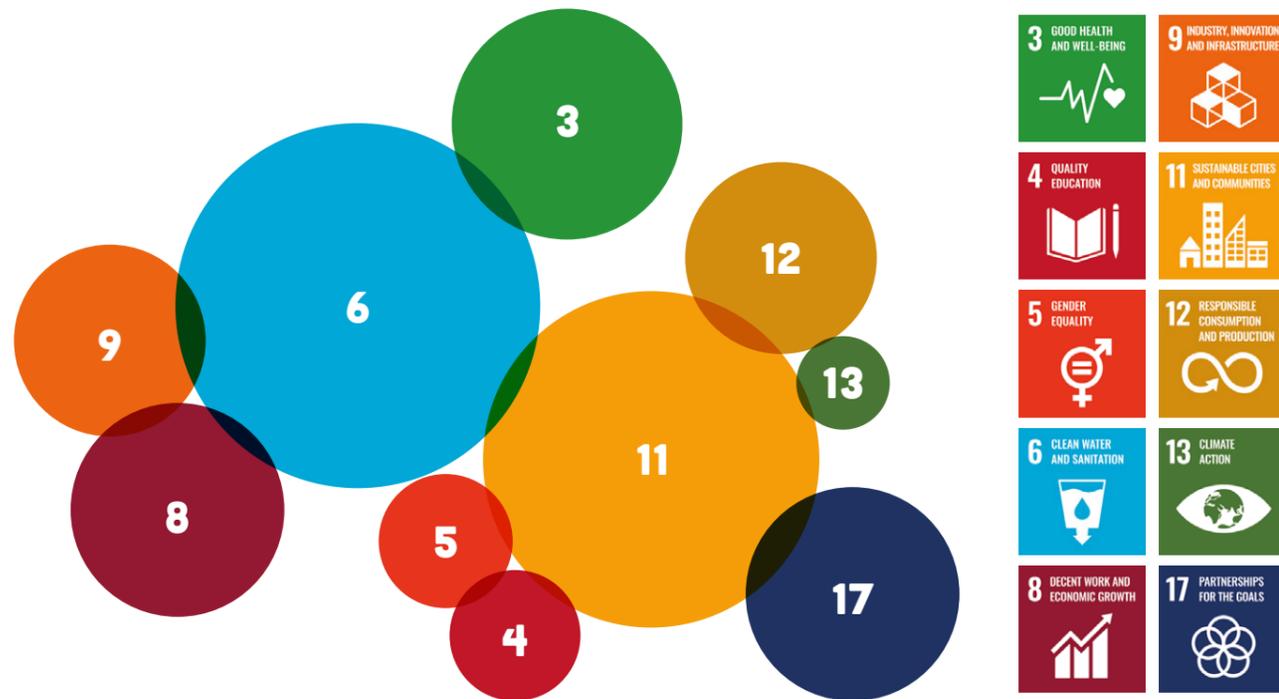
Third party evaluation of our Legacy performance data has commenced through the Social Impact Assessment being undertaken. The assessment will be a robust and comprehensive evaluation of the social impact being created by Tideway's Legacy programme. Although the assessment is not our only approach, it is the primary assurance method that we have chosen to measure how successful we are in delivering our wider project goals and our contribution to the ambitions of the SDGs.

During 2020-21 we continued to track our performance against the 10 SDGs and 27 targets to which we are actively contributing through delivery of our legacy commitments.

As illustrated in the graphic below, Tideway's core environmental benefits will make a long-term direct contribution to SDG 6 Clean Water and Sanitation and SDG 11 Sustainable Cities and Communities, as these will have a lasting impact in London for generations to come. During construction, Tideway is making a significant contribution to eight other SDGs, and some of these will have a lasting impact and will be handed over to other organisations.

**Bubble chart illustrates how we view our level of impact and contribution to 10 of the SDGs.**

## SUSTAINABLE DEVELOPMENT GOALS



*“The beauty of the UN Sustainable Development Goals is that they provide a framework to address all of these problems together in a consistent and coherent way maximising the effectiveness of action. I have been particularly interested in what Tideway has been doing around the areas of carbon, education and gender equality.”*

**Dr Ashok Sinha, Chief Executive, London Cycling Campaign and Chair, London Sustainable Development Commission (LSDC)**

<https://vimeo.com/473782525>

### Tideway's progress towards achieving the SDGs and associated targets

The graphic illustrates the progress we are making to deliver our 54 legacy commitments, which have been mapped against 10 SDGs and 27 targets. We have taken a matrix approach to mapping our legacy commitments and the majority of our commitments have been mapped to multiple SDG targets.

The outer circle of the graphic illustrates the number of legacy commitments that we have mapped to the specific SDG targets on the inner circle. Our commitments are shown as either currently In Progress, Complete or measurement against them will not commence until at or near completion.



The two main SDGs positively impacted for generations to come once the tunnel is operating are Goals 6 and 11:



### SDG 6 Clean Water & Sanitation

*Ensure availability and sustainable management of water and sanitation for all*

*Targets 6.3 (reduce water pollution); 6.6 (protect and restore rivers)*

The London Tideway Improvements projects, of which the Thames Tideway Tunnel is the last component, will work to reduce the number of sewage discharges from over 50 to four or fewer in a typical year. The Thames Tideway Tunnel will collect sewage before it enters the river, cleaning up the river and improving water quality for future generations of Londoners. Construction of the Thames Tideway Tunnel is over 63% complete as of March 2021.

There are six Legacy commitments that we have mapped to this SDG, none of which will be measured until the tunnel is complete as we will not realise the benefits until the system is operational. These commitments include our core long-term benefits including improved river water quality, reduction in sewage derived litter and reduction in health risks from water-borne pathogens.

During the period we completed our Thames ecology research programme. Completion of this research completes legacy commitment 4 – undertake and support research to aid understanding of habitats and aquatic ecology of the River Thames. We mapped this legacy commitment to targets under SDG 4 Quality Education and SDG 13 Climate Action, however, as the research is also linked to one of our core benefits to improve biodiversity in the river, we continue to report progress under SDG 6. The programme funded or contributed data to five research papers on: how smelt fish use the estuary as a breeding ground; the early life stages of fish within the Thames; investigating how habitat interventions could assist fish migration;



Children enjoy trawling the waterbed during low tide at Creekside



### SDG 11 Sustainable Cities and Communities

*Make cities and human settlements inclusive, safe, resilient and sustainable*

*Targets 11.2 (transport systems), 11.6 (environmental impact of cities), 11.7 (safe, inclusive, accessible green & public space)*

A modernised sewerage network underpins the capital's general economic prosperity. The economic benefits will be felt across many areas. A key economic legacy objective is to contribute to the rejuvenation of London's river economy, both recreationally and commercially, supporting the Mayor of London's environmental and transport strategies.

Our strategy to use the river to transport as much material as possible continues to deliver the predicted benefits. At the end of March 2021 our supply chain had moved 4.5 million tonnes of material by river which has avoided 275,000 HGV loads (over 550,000 two-way HGV movements) to date. Of this, 3.4 million tonnes were excavated material (shaft spoil, tunnel spoil and other excavated material) compared with 570,000 tonnes that has been moved by road. To move 4.5 million tonnes of our material by road would have required more than 14 million HGV road miles (23 million HGV km) producing in the region of 14,500 tCO<sub>2</sub>e. We calculate the air quality benefits to be in the region of 240 tonnes of NO<sub>x</sub> avoided compared to an 'all by road' scenario. The wider benefits of our river strategy can be found in the case study about our More by River strategy in FY 2020-21 on pages 32-33.

We continue to look for opportunities to green our public spaces. Tideway will create three acres of new public realm at seven foreshore sites along the route of the tunnel. These sites will provide more access for the capital's residents and visitors to get close to the river. The largest area of new public realm will be named Bazalgette Embankment after Sir Joseph Bazalgette, the visionary engineer who created London's first sewer network more than 150 years ago. Bazalgette Embankment will be located to the west of Blackfriars Bridge and will include a new City Walkway as well as open space for recreation and leisure activities.

Parts of the new spaces at Victoria and Chelsea Embankments and at King Edward Memorial Park will be 'floodable' at high tides, giving Londoners a rare opportunity to dip their toe in what will be a cleaner River Thames. We will also open up sections of the Thames Path currently closed to the public and make improvements to the existing route where we can.

At King George's Park in Wandsworth our first above-ground structure was created, an electrical control kiosk which incorporates a brown roof to reduce surface water run-off and promote biodiversity. Covering the roof with materials such as low nutrient rubble and gravels will promote natural colonisation by brownfield plants of particular value to insects and birds. In addition to promoting biodiversity on the kiosk structure, we will also visually enhance it with an artwork. Artist Yemi Awosile has been commissioned to create a sand cast bronze element that will be fixed to the kiosk on both elevations. The artwork will help to deliver our Public Arts Strategy and Heritage Interpretation Strategy, which brings to life the cultural heritage of the areas around our sites through above-ground art and other installations.

To provide people of reduced mobility the opportunity to connect with the River Thames in a way that has not previously been possible, accessibility audits continue to be undertaken on the plans for all public realm sites and paths. We are making accessibility possible by using ramps and slopes rather than steps. In King Edward Memorial Park, the play area has been designed for a range of ages, from toddlers onwards, and seating offers a comfortable environment for friends and families. In line with our commitment to improve accessibility and with the London Borough of Tower Hamlets' aspirations, many features cater particularly for children with disabilities, with a wheelchair-accessible ramping path, an inclusive roundabout, and a double slide and nest swing usable by less ambulant children and carers.

**In addition, and particularly during the construction period, Tideway will make a significant contribution to the following SDGs:**



### SDG 3 Good Health and Wellbeing

*Ensure healthy lives and promote well-being for all at all ages*

*Targets 3, 3.6 (road traffic accidents), 3.9 (hazardous chemicals; air and water pollution)*

Our commitment to Health, Safety and Wellbeing (HSW) does not neatly fit into the targets associated with SDG 3, but we wholly embrace the ethos of SDG 3, which is to ensure healthy lives and promote wellbeing.

Covid-19 led us to re-examine our approach to HSW in order to address unique challenges presented by the pandemic and to ensure traditional construction risks could be managed whilst implementing appropriate Covid-19 controls.

Through our 'More by River' initiative we are actively supporting target 3.6 by reducing the likelihood of causing a road traffic accident, removing over 550,000 two-way HGV movements to date. This strategy has avoided an estimated 11 serious collisions resulting in life-changing injuries, based on evidence obtained from previous large infrastructure projects. To date, the vehicles involved in transporting the remaining material by road have not caused a road traffic accident whilst working for the project. Further information regarding these benefits and the reduction in impacts to air quality, which contribute towards target 3.9, can be found in the case study about our More by River strategy in 2020-21 on pages 32-33.

Tideway staff continued to show support for each other during lockdown

A small conversation about mental health has the power to make a big difference.

Why not have a virtual coffee with someone this Time to Talk day?



I'M IN YOUR CORNER

**HETAL GANDHI**  
Mental Health First Aider and HR Generalist

We are pleased to report that we have had no major injuries or significant incidents relating to marine operations to date. Overall, the programme's over-three-day Accident Frequency Rate (AFR) has remained in the region of 0.1 which is broadly consistent with prior year performance, however, from October onwards an increase to above 0.2 was seen for the first time since the start of the project. The deterioration in AFR performance coincided with the second wave of Covid-19 although the link cannot be proved.

The programme's three-day Accident Frequency Rate (AFR-3), despite the additional challenges of the last year, has remained below the highs experienced during other large infrastructure projects. There were 24 lost-time incidents in the year, of which 10 resulted in RIDDOR reportable injuries.

We established our innovative Employer Project Induction Course (EPIC) in 2015-16 and it has been widely recognised as industry-leading, winning numerous industry awards. EPIC is a mandatory, one-day immersive induction course, using actors and a structured management training approach to help every individual understand what we want to achieve and how we can all work together to make Tideway the safest and healthiest project yet. To date over 21,000 people have attended the programme, which includes those working on Tideway but also other interested parties, supporting our aim to be transformational and to help improve health and safety across the construction sector. Now well established, the EPIC centre has been used by many of our partners and is available for external industry days to promote the experience to others in construction and engineering.

EPIC continues to evolve, and additional modules developed for road logistics and marine activity have been well received. EPIC Logistics is FORS Silver accredited, designed to provide HGV drivers with a visceral experience of a fatal incident. To date EPIC Logistics has been undertaken by about 1,000 drivers. This supports our More by River strategy, which has already significantly reduced vehicle movements.

The full EPIC and EPIC Logistics days have been affected by the pandemic throughout the whole year, however, the programmes were able to re-start in June. During this period, an Interim EPIC was created to ensure behavioural safety training continues across the project. The interim session is a 2-hour, socially distanced, reduced capacity version, that has been rolled out at our EPIC training centre and on site - over 750 people have attended to date.



**SDG 4 Quality Education**

*Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*

*Targets 4.1 (free equitable quality education), 4.3 (further education), 4.4 (skills for employment)*

Tideway has made a legacy commitment to engage with schools to encourage the next generation into Science, Technology, Engineering and Maths (STEM) subjects and to champion the promotion of careers in engineering and construction.

In the past year the Tideway project has engaged about 3,000 young people, taking its STEM programme online during the pandemic. Despite the challenging circumstances, project staff volunteered 1,209 STEM hours in the year, or 1.6 hours per 3 FTE per year, above the target of 1 hour per 3 FTE. For more details on our year of STEM engagement, as well as details of how Tideway partnered with the Construction Youth Trust on its Higher Level and Degree Apprenticeship (HLDA) programme, see the case study on pages 34-35.



**SDG 5 Gender equality**

*Achieve gender equality and empower all women and girls*

*Targets 5.1 (discrimination against women), 5.5 (equal opportunities for leadership)*

Gender diversity is a key performance indicator for us. We have remained focused on diversity and inclusion although we continue to be below our gender target for the project. Tideway, with our Programme Manager (Jacobs), ended the year with 36% women against a target of 40%. In a workplace environment that is still heavily male dominated we continue to look at ways that we can attract women to the industry.

**Gender and Ethnicity Pay Gap reporting**

As Tideway employs fewer than 250 people, we are not required to report our gender pay gap, however we took the decision to report in 2019, and this year we have added our Ethnicity Pay Gap data for the first time. This is in line with our principles of transparency. The Tideway median Gender Pay Gap to April 2020 was 32.87% (31.65% 2019). We recognise that this is significantly above the national pay gap of 15.5%. Our median Ethnicity Pay Gap is 24.7%. Both our gender and ethnicity pay gaps continue to exist because of the structure of our organisation. We have more white male employees in senior positions that are paid higher salaries and commensurate bonuses.

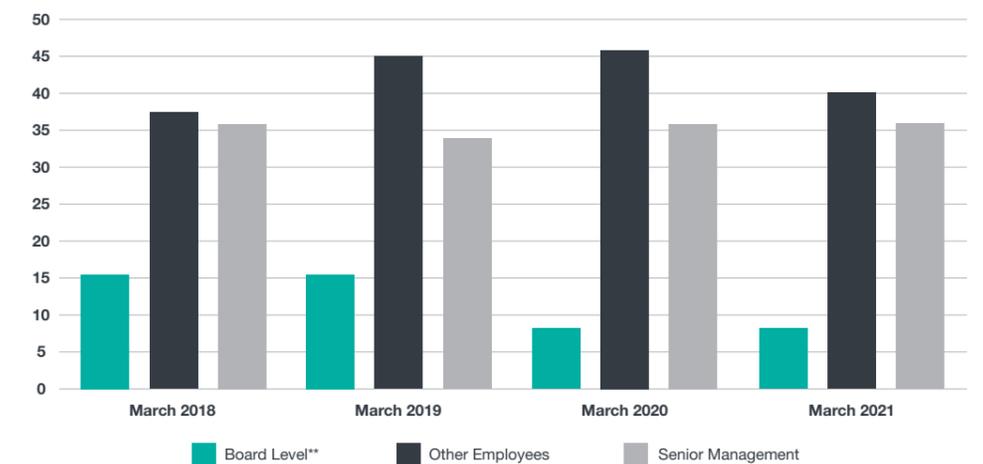
In a traditionally male dominated industry, we continue to look at ways to reverse this imbalance through measures such as inclusive recruitment, a focus on new talent in underrepresented groups in our succession planning activity, mentoring and promoting flexible working. However, we recognise that continued focus to improve diversity, particularly at the senior levels within the company, is required if there is to be any improvement.

We continually attempt to make the industry attractive to all members of the community through our STEM programme, which was virtual this year (refer to case study on pages 34-35), returnship programmes, flexible working, and gender-specific and maternity personal protective equipment.

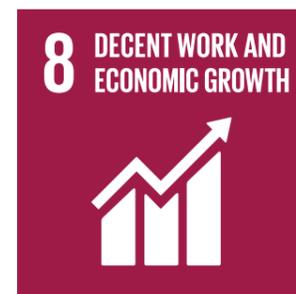
We support Women into Construction (WiC), a small not-for-profit organisation which promotes gender equality in the industry. WiC were hit hard, both financially and in terms of their operations, during the pandemic. Nevertheless, they were able to successfully overhaul their operations to support women into construction training and jobs. Tideway has mentored 10 women to date and has funded the development of a self-assessment tool to help further the gender diversity progress of smaller organisations. The tool is being piloted by HS2.

The bar chart below shows the roles held by female staff.

**Percentage of Female Staff\***



\*Headcount as at 31 March 2021. Includes Tideway employees and our project management contractors (Jacobs) and Shareholder Directors  
 \*\* Includes shareholder Directors



**SDG 8 Decent work and economic growth**

*Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all*

*Targets 8.1 (economic growth), 8.2 (innovation), 8.3 (job creation, SMEs), 8.4 (resource efficiency, sustainable production and consumption), 8.5 (decent work, equal pay), 8.6 (NEETs), 8.7 (Modern Slavery), 8.8 (labour rights, safe and secure working).*

The targets associated with SDG 8 map against a number of legacy commitments under our Economy and People themes. They also have linkages to SDG 9 and 12, illustrating the interconnected nature of the goals. In terms of economic growth, Tideway is committed to supporting the London and UK economy. Since Licence Award about 95% of our supply chain spend has been within the UK. Our supply chain spend to date has reached about 1,800 companies, across 12 UK regions and 19 London boroughs.

Through the use of supplier platform CompeteFor we enable businesses to gain access to smaller, direct contracts (below EU thresholds) with both Tideway and our Main Works Contractors. On our website we post current procurement opportunities along with pipeline opportunities.

Providing employment opportunities is a key component of the legacy commitments within Tideway's People theme. Some key highlights of Tideway's inclusive employment strategy include:

- 4,295 sustained jobs recorded by Main Works Contractors and Tideway (26 weeks employment) against a target of 4,000. As the target of 4,000 sustained jobs has been exceeded, at the end of FY 2020-21 we finished our formal reporting against this commitment.
- 26% of Full Time Employees (FTE) employed by Main Works Contractors lived within the 14 boroughs in which we work, against a 25% target;
- Accredited Living Wage Employer by the Living Wage Foundation. Excluding apprentices, an average of 99% of all staff employed on the project are paid at or above the London Living Wage and we have procedures in place to resolve cases of non-compliance;
- At the end of the year, 1 in 166 FTEs is a person with convictions, with the Project To Date figure at 1 in 132 against a target of 1 in 100. As previously reported, an independent Social Return on Investment analysis of our programme to employ people with convictions showed a social return of £6.86 per £1 spent, illustrating the value we are creating through our support. Tideway's commitment to fair employment practices was illustrated as a best practice case study by Business in the Community in their Ban the Box practical toolkit report in 2020.
- Tideway continues to support people with convictions on their journey back into the workplace and we have done this in a number of ways including providing a support package to Bounce Back, a charity that all Main Works Contractors work with, to provide tailored support to people leaving prison and raising funds for their 'Inner Thoughts' campaign, which provided notebooks to inmates to support their mental wellbeing, through our 2020 #makeadifference campaign.

*"It was a much-needed change of scenery for me in my life. It was great to take on a new challenge as I've never worked on a job like this before, so it's been very interesting. I didn't ever expect to work on a project of this scale, it was a big shock at first however it has enabled me to learn so much."*

**Connor Keeney, who was awarded one of the tunnelling apprenticeships for the central section of the project**

We continue to develop future talent through the recruitment of apprentices. Our target for 1 in 50 FTE to be an apprentice is being met and exceeded. At the end of FY 2020-21 we had achieved a yearly average of 1 in 43, with Project Total to Date 1 in 45. In FY 2020-21 the first cohort in our Tunnelling Operative Apprenticeship finished their programme, achieving an industry first. The scheme, launched in 2018 in a collaboration with training specialist TunnelSkills, is intended to attract a new generation of tunnellers by training them alongside some of the most highly skilled and experienced professionals in the industry. Having completed their apprenticeships, the group became fully-fledged tunnelling operatives, able to assist with the excavation, support and forming of tunnels and shafts.

In the year we became re-verified to the Building Research Establishment (BRE) Ethical Labour Sourcing Standard (ELS) (BES 6002) for a third year. We have achieved the highest level of performance in eight of the 12 categories. Tideway remain the only Client organisation to be verified to the ELS and members of our supply chain, like Danny Sullivan, VGC Group, Reliable Contractors Ltd, Tarmac and Aggregate Industries, are all verified to the ELS.

We are committed to supporting ethical sourcing practices in the supply chain, which is captured under Legacy commitment no. 30. To Tideway, ethical supply chain practices include making sure that: everyone on the project is paid the London Living Wage (LLW) as a minimum; our SMEs are paid within 30 days of invoice under the Fair Payment Charter; staff have job security by working under contracts; and our materials are responsibly sourced. To demonstrate our commitment to ethical sourcing practices, Tideway has developed a robust Modern Slavery and Human Trafficking Statement.

During the year Tideway hosted the second Modern Slavery and Ethical Procurement Working Group with the Main Works Contractors and their supply chain. The Working Group is chaired by Tideway's General Counsel, and is responsible for overseeing and providing strategic support and challenge on the approach by Tideway, our Main Works Contractors and our supply chain on the approach to mitigating risks of unethical labour supply and procurement practices (goods and materials) on the project.

We remain signatories to the Gangmasters and Labour Abuse Authorities (GLAA) Construction Protocol, the purpose of which is to eradicate the risk of slavery and labour exploitation from the construction industry. In addition, we remain on the UK Modern Slavery Registry, which hosts companies' Modern Slavery Statements if they are in line with the UK Modern Slavery Act 2015.

Details of our Innovation programme (target 8.2) can be found under SDG 9 and sustainable procurement of materials (target 8.4) under SDG 12.





**SDG 9 Industry, Innovation & Infrastructure**

*Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation*

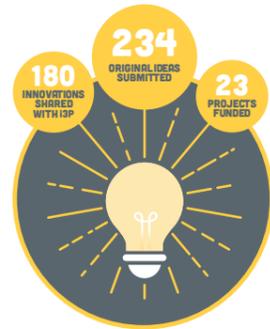
*Targets 9.4 (sustainable infrastructure – resource efficiency, clean and environmentally sound technology)*

Based on the original carbon footprint for both the construction and operation phase of the tunnel for 120 years, we have calculated that the operational carbon (OPEX) is less than 3% of the total, whereas the carbon from the construction (CAPEX) is 97% due to the high embodied carbon of the materials. This was done as part of the Development Consent Order and the results were published in the Energy and Carbon Footprint Report.

We continue to use cement replacement within the concrete mixes for the tunnel segments that contains between 27–40% cement replacement compared to the predicted average of 25% in the project’s Environmental Statement. In some instances, we have increased cement replacement with Pulverised Fuel Ash (PFA) by up to 75% in certain concrete mixes.

During the year Tideway, together with GPS Marine, the main marine contractor for the Central Delivery area, delivered materials via a tug that operates on a 100% renewable hydrogen-treated vegetable oil (HVO) called Green D+. The fuel is an ultra-low emission, sustainable fuel that does not use palm oil in its production. Further details can be found in our More by River strategy in FY 2020-21 case study on pages 32-33. This move by GPS Marine to a cleaner fuel represents an important step for the marine industry towards aligning with the UK Government Net Zero commitment. We are working closely with other operators to share lessons learnt.

Tideway’s Innovation Programme, “the Great Think” was launched in 2017 and encouraged and incentivised innovation through our supply chain. It has generated a return on investment (ROI) based on cost savings for the project of 4.8:1, exceeding the original 3:1 target and we forecast that the total ROI of the programme will be in excess of 8:1. With construction over 63% complete, we consider our Innovation Programme to be business as usual and from the end of FY 20-21 we do not require our Main Works Contractors to submit innovations. Legacy Commitment 26 Share our innovations with industry so they can benefit future projects, is now considered complete. We will continue to share and track the innovations we have invested in through the Infrastructure Industry Innovation Partnership (i3P). To date, Tideway has shared 180 innovations on the i3P site.



**edie sustainability leaders awards**

*“Despite its scale, Tideway has integrated environmental and social impacts into its core approach from day one, championing a number of innovative approaches which really push the boundaries and to show a positive way forward for future infrastructure projects.”*

**Edie Sustainability Leaders’ Awards Judges**



**SDG 12 Responsible consumption and production**

*Ensure sustainable consumption and production patterns*

*Target 12.2 (sustainable, efficient use of natural resources), 12.7 (sustainable procurement), 12.8 (information and awareness on sustainable development)*

In terms of responsible sourcing of materials, we have included a requirement within our Works Information that 100% of our key building materials (cement, aggregates, steel) must be certified to either BES6001 Responsible sourcing of construction products, CARES Sustainable Constructional Steel (SCS), or Eco-Reinforcement as applicable. All timber being used on site has to be certified to sustainable standards like FSC and/or PEFC. In FY 2020-21, procured materials that came from certified responsible sources (or otherwise agreed with the Project Manager) ranged from 99% to 100%, which has improved since the previous report where the range was between 97% and 100%.

Our virtual STEM programme this year featured aspects of sustainability including sustainable design and corporate responsibility (see the case study on pages 34-35). The completion of our Thames ecology research programme mentioned under SDG 6 Clean Water & Sanitation, will be disseminated through the academic community to increase technical understanding in these areas.

Our work to deliver a sustainable legacy received public recognition with a series of award wins:

- Global Good Awards 2020: Company of the Year
- Business In The Community Responsible Business Awards 2020 – Responsible Business Champion for Outstanding Employment.
- edie Sustainable Business Leaders’ Awards 2021: Building/Infrastructure Project of the Year
- Top Corporate Treasury Team of the Year for CSR/ESG 2020 in the Treasury4Good Awards

These awards recognise businesses that are excelling in sustainability within their business and sector.



*Our Sustainability and Treasury team celebrate awards and recognition in the UN Sustainable Development Goals colours*



## SDG 13 Climate action

*Take urgent action to combat climate change and its impacts*

*13.1 (resilience & adaptation), 13.3 (education and awareness on climate change)*

The Thames Tideway Tunnel project has a design life of 120 years. While there are many uncertainties, we know that on that timescale there will be significant changes in climate and population, amongst other factors, that will influence the performance of the Thames Tideway Tunnel (the 'main tunnel') and the whole system of London Tideway Improvements (LTI), which also include improvements at five sewage treatment works (STW) and the Lee Tunnel. It is therefore prudent to assemble the best available evidence about the scale of these future changes and examine their potential impact on the future performance of the main tunnel and the overall CSO control system. Given the scale of uncertainties it would be inappropriate and potentially excessively costly to design the main tunnel to be able to cope with all possible future conditions. Instead, we explored the possibilities for adapting the system to future changes and propose a strategy that could respond in a proportionate way to future risks to maintain the significantly improved water quality conditions that would be created by the implementation of the main tunnel. Further information on our approach to contribute to target 13.1 can be found within 'Resilience to Change' which was submitted as part of our Development Consent Order suite of documents and in our recent Climate Related Financial Disclosure Report.

### Carbon management

The Energy and Carbon Footprint Report that was produced for the Development Consent Order in 2013 estimated a total carbon footprint in the decarbonised scenario of approximately 838,000 tCO<sub>2</sub>e with the principal impact being the greenhouse gas (GHG) emissions arising from the construction of the infrastructure, in particular embodied carbon of materials we are using.

Through the procurement process, the forecast construction stage carbon footprint was reduced to ≤768,756 tCO<sub>2</sub>e, an expected reduction of 8%. On a quarterly basis our Main Works Contractors report performance against this anticipated carbon footprint.

We continue to align ourselves to the World Resources Institute and the World Business Council for Sustainable Development definitions of Scope 2 and 3 emissions. At the end of FY 2020–21 our Scope 3 construction carbon footprint was 351,152tCO<sub>2</sub>e, which was lower than forecast due to the impact of Covid-19 on site activities, however we remain on track to not exceed 768,756 tCO<sub>2</sub>e. The table opposite shows a breakdown of our emissions to date. As anticipated, embodied carbon within the construction materials makes up the highest proportion, equating to 83% of the carbon associated with construction of the tunnel so far.

	2020/21 tCO <sub>2</sub> e	Project to date tCO <sub>2</sub> e
<b>Scope 1 emissions</b>		
<b>Total scope 1 emissions</b>	<b>0</b>	<b>0</b>
<b>Scope 2 emissions</b>		
Grid electricity used by Tideway (Bazalgette Tunnel Ltd) controlled offices at Camelford House and the Cottons Centre	40.58	355,67
<b>Total scope 2 emissions</b>	<b>40.58</b>	<b>355,67</b>
<b>Scope 3 emissions</b>		
Construction materials	84,075	291,125
Site accommodation and welfare	1123	9,076
Material transport	1366	13,417
Waste disposal	659	2891
Plant and Machinery	7090	31,516
Personnel transport	116	3127
<b>Total scope 3 emissions</b>	<b>94,429</b>	<b>351,152</b>

*Greenhouse gas emissions are categorised into three groups or 'scopes' by the most widely used international accounting tool, the Greenhouse Gas (GHG) Protocol. Scope 1 covers direct emissions from owned or controlled sources. Scope 2 covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company. Scope 3 includes all other indirect emissions that occur in a company's value chain.*

The Scope 2 emissions are calculated from the electricity consumed by Tideway (Bazalgette Tunnel Ltd) controlled offices at Camelford House and the Cottons Centre in London. The 5tCO<sub>2</sub>e produced by Camelford House during the period have been procured from a certified Renewable Energy Guarantees of Origin (REGO) scheme, therefore have not been counted.

Whilst we can calculate the Scope 2 emissions from the two offices, the figure is not a true reflection of the emissions produced by the Tideway and Jacobs personnel that have been working from home since the beginning of lockdown. The data shown above is from the energy consumption in the offices which have been predominantly unoccupied and does not include any consumption data from employees' homes. However, the Scope 2 total is less than 0.05% of the total and therefore any discrepancy is considered to be insignificant.

We will continue to monitor benefits of carbon saving innovations like the use of telematic data from plant that records fuel consumption and operator behaviour on a single platform and maximising the use of low carbon cement replacements in our concrete mix designs. The lessons learnt from the telematics study have been shared with the industry via i3P. We are currently researching the possibility of using recycled plastic in concrete mixes instead of cement, which has now received funding from i3P. However, it is unlikely that this will be able to be used in critical assets.

During February and March of 2021, members of Tideway's Executive team took part in a series of internal carbon awareness training sessions. The sessions were well received and there are plans to deliver them throughout the organisation.



## SDG 17 Partnerships for the Goals

*Revitalize the global partnership for sustainable development*

*Target 17.17 (Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships)*

### Partnership leading to Licence Award

Tideway is the result of a successful partnership between public and private entities leading up to the award of the project licence in 2015, setting a benchmark for the development of future major UK infrastructure projects. Various financing and delivery mechanisms were considered before the Infrastructure Provider route and its adapted regulatory regime were selected. The mechanism that was assessed as likely to provide best value for money for Thames Water customers was a separate Infrastructure Provider company licensed by Ofwat, privately owned and responsible for the financing and delivery of the TTT.

This partnership approach has helped create the conditions for success, managed the risk and reduced the cost to the taxpayer. Parties included:

- Defra, the Government department responsible for the framework of policy and legislation relating to the impact of Combined Sewer Overflow (CSO) discharges into the River Thames
- Thames Water has a statutory duty to provide an effective and efficient public sewer in London
- Ofwat, the economic regulator of the water and sewerage industry in England and Wales
- The Environment Agency, the environmental regulator with principal responsibilities being to protect and improve the environment, and to promote sustainable development
- Private investors, a consortium of four infrastructure investors that bid successfully through a public tender to own, finance and deliver the TTT

This partnership continues through the construction phase as all parties come together under a Liaison Committee, as members or observers, that meets regularly to discuss delivery progress. The ITA appointed in connection with the Liaison Agreement is responsible for certifying allowable costs constituting the use of proceeds of our green bonds.

### Partnerships during delivery

Since the project began, Tideway has created and nurtured external partnerships in order to help us deliver our legacy and achieve our vision of reconnecting London with the River Thames.

The many collaborations already covered in this report illustrate this, such as our partnership with the Construction Youth Trust that has engaged more than 49,000 young people since 2018 (see the case study on pages 34-35); our collaboration with Thames operator GPS Marine on new biofuels to make river transport more sustainable (see the case study on pages 32-33); and our role in the Infrastructure Industry Innovation Partnership (i3P) which ensures that we can share our knowledge and innovations with other projects.

Partnerships are also fundamental to our legacy commitment to deliver investments that support local communities. In FY 2020-21 we gave:



Covid-19 emergency to a wide range of community partners including donations to the emergency appeals of our staff charity partners South London Cares, Single Homeless Project and Drive Forward Foundation; supporting our 'river reconnection' charity partners Thames21 and London Youth Rowing by bringing forward payments for the programmes that we fund; and helping self-employed and small business workers to improve their mental health through a £15,000 donation to construction charity partner Mates in Mind.

Across the year our community investment programme benefited a total of 180 organisations and more than 11,000 people.

Thames River Watch, our 'river reconnection' partnership with environmental charity Thames21, continued to engage volunteer groups to collect and count litter on the foreshore, when restrictions were lifted to allow outdoor volunteering. This activity, which was limited to summer and early autumn 2020, showed that the pandemic has appeared to drive an increase in single-use plastic pollution - more than 1,600 plastic cups were recovered from clean-ups between July and September, twice as many as the same period last year. The programme surveyed more than 1km of River Thames foreshore in September, with an average of 322 pieces of plastic found per 100m surveyed, with discarded plastic gloves and masks found on 70 per cent of the stretches monitored.

The programme was also highlighted in a report from the London Sustainable Development Commission on the capital's progress towards achieving the SDGs: "Thames River Watch, developed in partnership between Thames 21 and Tideway, and supported by local 'citizen scientists', contributes invaluable data on plastic pollution in the Thames (SDG target 14.1) in the absence of statutory monitoring."

The closure of, and restricted access to, schools during the pandemic meant that Active Row, our partnership with youth engagement charity London Youth Rowing, focussed on weekly workout videos and training packs for teachers so that they could run sessions themselves.

### Corporate Forum on Sustainable Finance

Tideway continues to be an active member of the Corporate Forum on Sustainable Finance. The forum aims to drive the sustainable finance agenda by working with rating agencies, investors and other national and international forums, as well as by leveraging the members' mutual expertise.



*"The flexibility and confidence that Tideway gave us at the start of lockdown allowed us to focus on what we would want and like to do after it was lifted, rather than 'how do we get through this?', which a lot of charities had to focus on. That shift of focus directly helped us to secure new funding for the next phase of Active Row and is hugely appreciated. This is what real partnership looks like."*

**Matt Rostron, CEO London Youth Rowing**

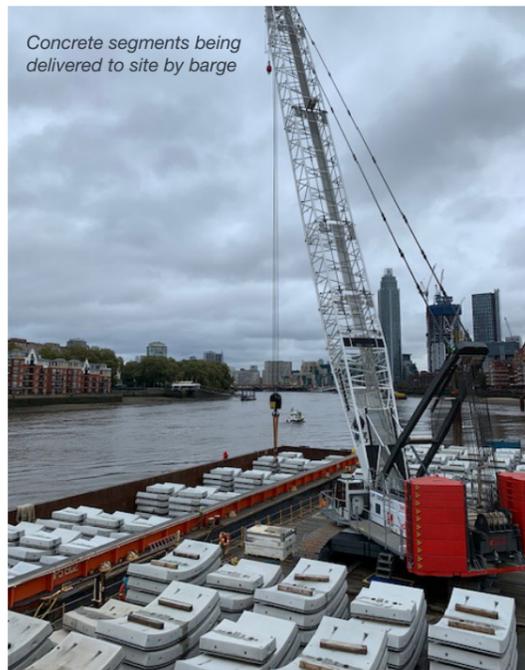
## CASE STUDY 1

# OUR MORE BY RIVER STRATEGY IN FY 2020–21

Delivering new solutions

More By River, Tideway's sustainable transport strategy, extended its positive impact in FY 2020-21 through the introduction of a biofuel for barge tugs that offers a 90% reduction in greenhouse emissions compared with traditional diesels.

The 100% renewable hydrogen-treated vegetable oil (HVO) fuel called Green D+ is used for the GPS Marine tugs transporting tunnel segments to our site at Kirtling Street in Battersea. It is an ultra-low emission, sustainable fuel that does not use palm oil in its production.



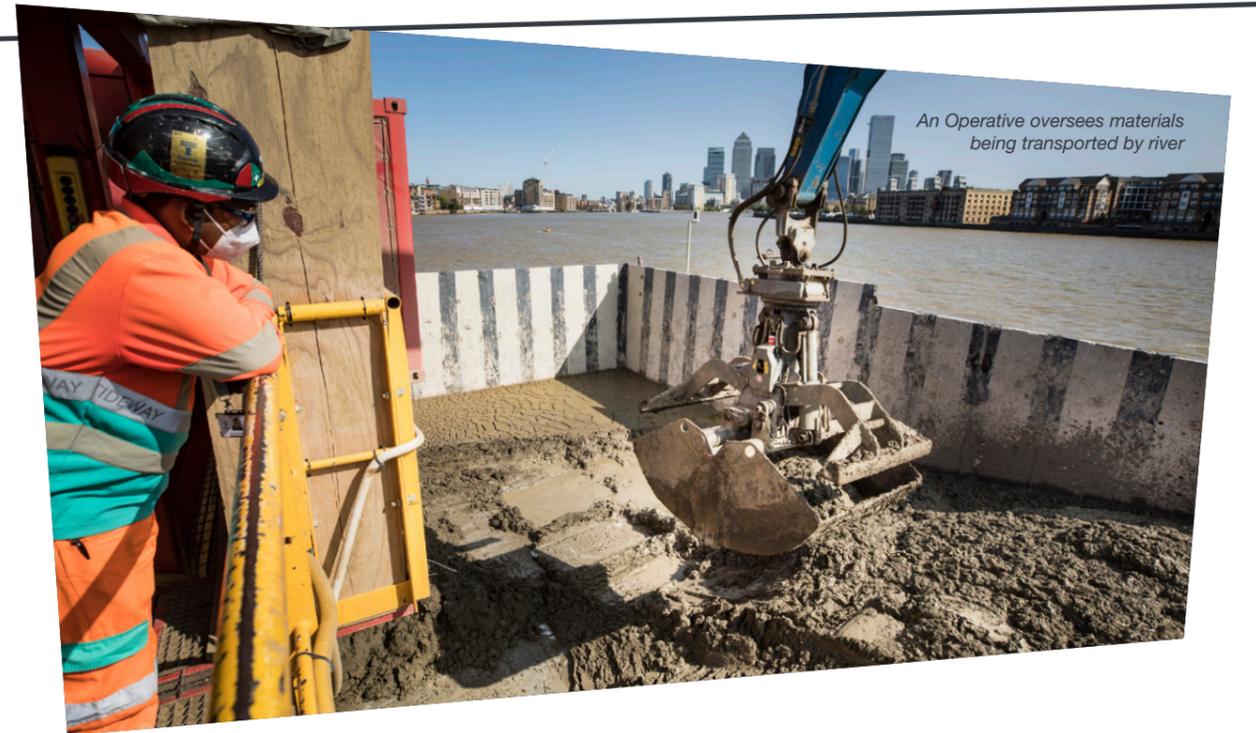
Its benefits include a NOx reduction of 30%, a particulates reduction of 70% and a reduction of greenhouse gases of around 90% compared with the equivalent in B7 diesel. It is also estimated to produce 2.82kg less CO<sub>2</sub>e (Carbon Dioxide Equivalent) for each litre of fuel compared with B7. By the end of March 2021, GPS had used more than 140,000 litres of the product which avoided more than 400,000kg or 400 tCO<sub>2</sub>e.

GPS also launched a re-fuelling barge to service their fleet with the new biofuel and the results of the Tideway project initiative have been shared with major river operator Cory Riverside Energy, which operates a fleet of similar tugs. This represents an important step for the marine industry towards aligning with the UK Government's Net Zero commitment.

John Spencer, Managing Director of GPS Marine, said: "By using Green D+ we are able to dramatically improve the sustainability of water freight with little or no effect on reliability or cost-effectiveness."

### Reducing emissions, improving air quality: the year in numbers

Our investment in river transport has reduced the number of HGVs needed to deliver the project - reducing our impact on the road network, on vulnerable road users and London's air quality. By the end of FY



2020-21 our supply chain had moved 4.5 million tonnes of material by river. This has avoided 275,000 HGV arrivals or more than 550,000 two-way lorry movements over more than 14 million miles, producing in the region of 14,500 tCO<sub>2</sub>e.

As well as reduced carbon, the strategy has benefits for air quality, an urgent issue for London. Tideway commissioned research which found that using river barges led to a 54% reduction in NOx (Nitrogen Oxides) and a 90% reduction in CO<sub>2</sub> (Carbon Dioxide) compared with modern standard HGVs. In addition, dispersion of the emissions from tugs was 2.3 times lower than the HGV equivalent. More By River has so far avoided 240 tonnes of NOx compared to an 'all by road' scenario.

### Supporting wildlife habitats

Using the material taken away by barge for beneficial use is a key 'end game' of our More By River strategy. This year transportation of London clay excavated from the West section of the project to develop a habitat creation scheme at the Rainham

Marshes on the estuary was completed, a total of more than 800,000 tonnes. Chalk and clay from the Chambers Wharf, Greenwich Pumping Station and King Edward Memorial Park Foreshore sites also began to be transported to Rainham. The scheme will ultimately create 110 hectares of valuable habitat for birds and wildlife, increasing biodiversity and enhancing the ecology of the Thames.

Tom Melhuish of project contractor Land & Water said: "This project is a truly great example of how the River Thames can be harnessed as a sustainable transport system, reducing both congestion and air pollution, whilst also championing the beneficial re-use of waste to design new habitats and foster biodiversity."

These operations are part of a wider commitment under our Development Consent Order to beneficially use at least 85% of the project's excavated material - this is currently at 99%.

## CASE STUDY 2 INSPIRING THE NEXT GENERATION - VIRTUALLY

With government statistics showing that more than half of the job losses during the pandemic have been among the under-25s, the need to encourage and inspire those starting their careers has never been greater.

With face-to-face events and work experience not possible, Tideway adapted its STEM engagement programme to offer a range of virtual opportunities for young people. We also promoted Tideway's free educational resources through our Tunnelworks website to support remote teaching and home schooling.

Partnerships with educational outreach organisations such as Uptree, Skills Builder, My Spiral and Urban Synergy were at the heart of our virtual STEM programme. Tideway funded and provided volunteers for events engaging young people from disadvantaged backgrounds, from London and beyond. Our MWCs

collaborated on these events, as well as running their own.

As well as STEM workshops, career talks and mentoring, online work experience gave young people a flavour of life on Tideway. Before a 'work taster' session in May, four per cent of the 35 students from 26 London schools who attended said they were thinking about an apprenticeship, by the end almost 90 per cent said they would seriously consider it.

A Virtual Careers Week event in August gave 17 to 18-year-old London students a project overview from the team at Tideway's King Edward Memorial Park site; a careers session with professionals

*"From the day-to-day support to the mock assessment centres, I was given assistance and feedback every step of the way."*

**Apprentice Muaaz UI-Haq**



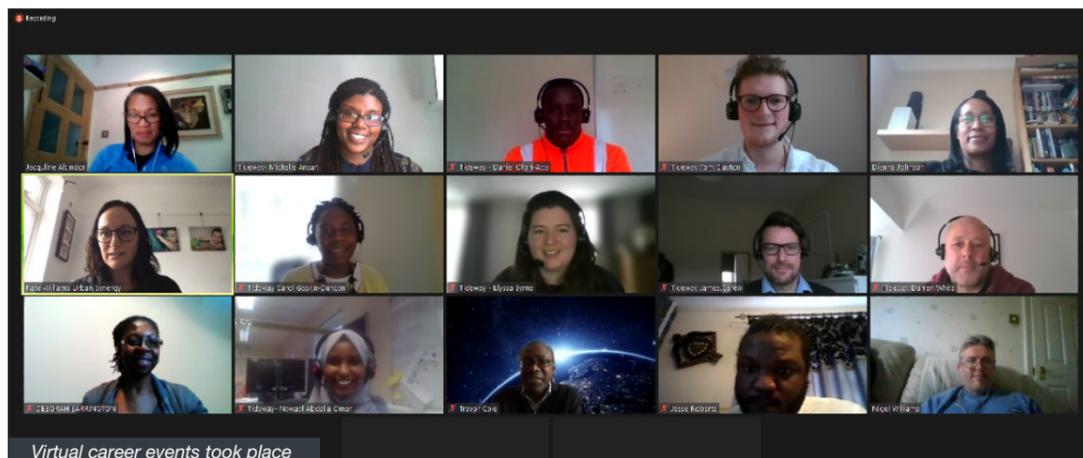
Apprentice Muaaz UI-Haq

working in sustainability, architecture, corporate responsibility and digital communications; and concluded with a sustainable design challenge.

The project engaged about 3,000 young people during the year. Our STEM partnerships also engaged diverse groups - for example, of 1,529 young people at the two schools (Rotherhithe Primary in Southwark and Sacred Heart High in Hammersmith) who took part in our Skills Builder Accelerator programme, 36.7 per cent had English as an additional language and 48 per cent came from ethnically diverse backgrounds.

Tideway also partnered with the Construction Youth Trust on its Higher Level and Degree Apprenticeship (HLDA) programme, which aims to raise the profile of the vocational route into construction and to enable young people from disadvantaged backgrounds to take up these opportunities.

The HLDA programme engaged more than 1,000 young people in 2020 and mentored 55. Of those mentored, 80 per cent were from ethnically diverse backgrounds, 15 were young women and 22 self-identified with an indicator of disadvantage such as being eligible for free school meals. One success story is Tideway project apprentice Muaaz UI-Haq, who joined the HLDA programme after attending a masterclass session and is now with BAM Nuttall.



Virtual career events took place throughout the year

*"Thank you for the most incredible few days of work experience. It was so beneficial to hear the Tideway team's journeys into their role as well as their day-to-day jobs".*

**Phoebe Anderson, 18**

Giant vortex installed at Hammersmith Pumping Station



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