

COMMERCIAL IN CONFIDENCE



Tideway updated revised Revenue Statement 2017

Allowed Revenue for Charging Year 2018/19

COMMERCIAL IN CONFIDENCE

RPI Updated IP Charge Notification - 2018/19

Submitted to Thames Water on 14 December 2017

IP Charge for 2018/19 (£)

49,235,940

November 2017 RPI

275.8

Source: RPI (All Items) index, Consumer Price Inflation Reference Tables, Table 36, 12 December 2017, Office for National Statistics

Inputs 2017

	Unit	Source/notes	2012/13	2013/14	2014/15	First Charging Year 2015/16	Second charging year 2016/17	Third Charging Year 2017/18	Fourth Charging Year 2018/19	Fifth Charging Year 2019/20	Sixth Charging Year 2020/21	Seventh Charging Year 2021/22
Year starts						01/04/2015	01/04/2016	01/04/2017	01/04/2018	01/04/2019	01/04/2020	01/04/2021
Year ends						31/03/2016	31/03/2017	31/03/2018	31/03/2019	31/03/2020	31/03/2021	31/03/2022
Year t-2						2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Year t-1						2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Year t						2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Year t+1						2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Year t+2						2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
1.1 2014/15 RPI Adjustment Factor												
Forecast RPI Adjustment Factor for the calendar year in which Charging Year commences	%	Source: Average independent new forecasts for RPI, Table M3, "Forecasts for the UK economy: a comparison of independent forecasts", HM Treasury, August 2017 Required by Project Licence Appendix 1, 1.1 (i), (ii)							3.5%	3.5%	3.0%	3.0%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year ends	%	Source: Average independent new forecasts for RPI, Table M3, "Forecasts for the UK economy: a comparison of independent forecasts", HM Treasury, August 2017 Required by Project Licence Appendix 1, 1.1 (i), (ii)							3.5%	3.0%	3.0%	3.0%
RPI, September of Charging Year		Source: RPI (All Items) index, Consumer Price Inflation Reference Tables, Table 36, 17 October 2017, Office for National Statistics. Required by Project Licence Appendix 1, 1.1 (iii)			257.6	259.6	264.9	275.1				
RPI, March of Charging Year		Source: RPI (All Items) index, Consumer Price Inflation Reference Tables, Table 36, 17 October 2017, Office for National Statistics Required by Project Licence Appendix 1, 1.1 (iii)	254.8	257.1	261.1	269.3						
Applicable Change in Revenue RPI												
RPI (RPI for November in Charging Year Yt-1)		Source: RPI (All Items) index, Consumer Price Inflation Reference Tables, Table 36, 12 December 2017, Office for National Statistics. Required by Project Licence Appendix 1, Part A 3, 4 and 6 Note: for both First and Second Charging years, stated RPI is for November 2015, as Allowed Revenue for both these years is being calculated together	245.6	252.1	259.8	259.8	265.5	275.8				
Year average RPI		Source: Calculated from RPI (All Items) index, Consumer Price Inflation Reference Tables, Table 36, 17 October 2017 Office for National Statistics Required by Project Licence Appendix 1, Part A 3, 4 and 6 and Appendix 1, 1.1 (iv)		256.7	259.4	265.0						
A.3. Return on Capital and A.4 Liquidity												
Water Services Regulation Authority Stated RCV (2014/15 Prices) at 31 March	2014/15 prices, £	Source: Regulatory Capital Values - Bazalgette Tunnel Limited (Tideway), Ofwat, 14 July 2017 Required by Project Licence Appendix 1, Part A 3	0	0	148,741,346	478,533,658						
Allowable Project Spend (actual and forecast) - as at October 2017												
Annual Actual Project Spend	Outturn prices, £	Source: "Allowable Project Spend Verification No 15.pdf" Required by Project Licence Appendix 1, Part A 3			0	150,344,662	340,489,147	168,451,729				
Estimated Allowable Project Spend	Outturn prices, £	Source: "Regulation Reporting Sep17" Required by Project Licence Appendix 1, Part A 3			0	0	44,803,438					
Forecast Allowable Project Spend	Outturn prices, £	Source: 2017 Revenue Statement - ITA Expenditure Forecast Review Addendum.pdf The 2017/18 figure is net of expenditure already realised (Annual Actual Project Spend and Estimated Allowable Project Spend). Required by Project Licence Appendix 1, Part A 3, 4			0	0	334,865,165	627,477,388	624,355,468			
Excluded Project Spend	Outturn prices, £	Source: 2015/16 and 2016/17: "Section 5 regulatory tables - calculation version - 2016-17" - table 5B to Ofwat Source: 2017/18 year to date at September 2017: "Tables for Interim Financial Performance Report 2017-18" - ref Output 1 Note: For information (not required for Allowed Revenue calculation), backward-looking only, 2015/16 figure updated to reflect prior year adjustment made in 2016/17 annual reporting.			64,394,743	87,615,825	36,581,373					
Alliance Agreement receipts - expenditure funded by these receipts is treated as Excluded Project Spend and therefore is excluded from the Allowable spend metrics set out above	Outturn prices, £	Source: Head of Commercial, Tideway Notes: Zero prior to Licence award. Required by Project Licence Appendix 2, 1.5			0	0	0	0	0			
BWACC	%	Source: Project Licence, Appendix 1, 1.18 Required by Project Licence Appendix 1, Part A 3, 4, 6, 7, 8				2.497%						
A.5. Opex												
Opex forecast as at October 2017	Outturn prices, £	Note: In line with the Project Licence, zero as all expenditure treated as capex. Required by Project Licence Appendix 1, Part A 5				0	0	0	0			
A.6. Financing Cost Adjustment												
Financing Cost Adjustment Index Yield - 12 months trailing average at 31 March	%	Source: "FCA yield calculator.xlsx" Calculated with reference to iBoxx BBB data and spot implied inflation rates for 10 year maturity from Bank of England. Required by Project Licence Appendix 1, Part A 6			1.30%	1.43%	0.35%					
Water Services Regulation Authority Adjusted RCV (Current Prices) at 31 March	Current prices at 31 March of Charging Year	Source: Regulatory Capital Values - Bazalgette Tunnel Limited (Tideway), Ofwat, 14 July 2017 Required by Project Licence Appendix 1, Part A 3	0	0	0	151,310,515	502,087,458					
Net Debt at 31 March	Current prices at 31 March of Charging Year	Source: Tideway financial statements as at 31 March 2017 Required by Project Licence Appendix 1, Part A 6	0	0	0	-130,376,913	-315,919,558					
Notional Debt to RCV ratio	%	Source: Project Licence Appendix 1, 1.42 Required by Project Licence Appendix 1, Part A 6				62.5%						
A 1.4. Tax												
Tax as at October 2017	Outturn prices, £	In line with the Project Licence, zero as the IP is not required to pay corporation tax or any other income-based tax. See Project Licence Appendix 1, Part A 1.4				0	0	0	0			
A.7. Under/Over Recovered Revenue Adjustment - as at October 2017												
Allowed Revenue (including building block reconciliation)	£	Source: 2015 and 2016 Updated Revised Revenue Statements					33,603,285	28,559,132				
Amount recovered in respect of 2016/17 Allowed Revenue (to end of September 2017)	Outturn prices, £	Source: Revenue Sep17.xls Note: Captures all 2016/17 revenue received from Thames Water prior to the end of September 2017- this is based on revenue collected by Thames Water up to and including July 2017.					31,009,138					
Amounts received from TWUL in Charging Year (all years of Allowed Revenue)	Outturn prices, £	Source: Revenue Sep17.xls Note: Captures all 2016/17 revenue received from Thames Water prior to the end of March 2017.					26,747,386					
A.8. Reconciliation adjustment												
Time since original calculation	Years	See Project Licence, Appendix 1, Part A 8 Represents the number of years since revenue was first calculated to feed into the NPV adjustment of the reconciliation adjustment. Revenue for a given Charging Year is subject to building block reconciliation adjustment where estimated or forecast expenditure or inflation inputs were used the last time that year's revenue was calculated. Defined as follows: 1 = yes, 0 = no				2	2	1	0			
Reconcile this year?						1	1	1	0			
Allowed Revenue as per most recently submitted Revenue Statement (excluding building block reconciliation)	£	Source: Calculated from 2016 Updated Revised Revenue Statement excluding building block reconciliation				8,669,904	19,763,649	33,974,208				
A.11. Additional Return on Capital Building Block												
Additional Allowable Project Spend		Not applicable at present. Inputs to be added if this building block becomes relevant (i.e. if Tideway makes an IAR Overrun Application to increase Allowable Project Spend above the Threshold Outturn). See Project Licence, Appendix 1, Part A 11										
A 1.6.4. Net Present Value Adjustment												
End of first charging year		Last day of the First Charging Year				31/03/2016						
Licence Award		Date of Licence award				24/08/2015						

BBRA Inputs 2016

Unit	Source/notes	2012/13	2013/14	2014/15	First Charging Year	Second charging year	Third Charging Year	Fourth Charging Year	Fifth Charging Year	Sixth Charging Year	
					2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Year starts					01/04/2015	01/04/2016	01/04/2017	01/04/2018	01/04/2019	01/04/2020	
Year ends					31/03/2016	31/03/2017	31/03/2018	31/03/2019	31/03/2020	31/03/2021	
Year t-2					2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Year t-1					2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	
Year t					2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Year t+1					2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	
Year t+2					2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	
1.1 2014/15 RPI Adjustment Factor											
Forecast RPI Adjustment Factor for the calendar year in which Charging Year commences	%							3.5%	3.5%	3.0%	3.0%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year ends	%							3.5%	3.0%	3.0%	3.0%
RPI, September of Charging Year				257.6	259.6	264.9	275.1				
RPI, March of Charging Year		254.8	257.1	261.1	269.3						
Applicable Change in Revenue RPI											
RPI (RPI for November in Charging Year Yt-1)		245.6	252.1	259.8	259.8	265.5					
Year average RPI			256.7	259.4	265.0						
A.3. Return on Capital and A.4 Liquidity											
Water Services Regulation Authority Stated RCV (2014/15 Prices) at 31 March	2014/15 prices, £			0	0	148,743,346					
Allowable Project Spend (actual and forecast) - as at October 2017											
Annual Actual Project Spend	Outturn prices, £			0	150,344,662	340,489,147	168,451,729				
Estimated Allowable Project Spend	Outturn prices, £			0	0	0	44,803,438				
Forecast Allowable Project Spend	Outturn prices, £			0	0	0	334,885,165	627,477,388			
Excluded Project Spend	Outturn prices, £										
Alliance Agreement receipts - expenditure funded by these receipts is treated as Excluded Project Spend and therefore is excluded from the Allowable spend metrics set out above	Outturn prices, £										
BWACC	%					2.497%					
A.5. Opex											
Opex forecast as at October 2017	Outturn prices, £				0	0	0				
A.6. Financing Cost Adjustment											
Financing Cost Adjustment Index Yield - 12 months trailing average at 31 March	%					1.30%	1.43%				
Water Services Regulation Authority Adjusted RCV (Current Prices) at 31 March	Current prices at 31 March of Charging Year			0	0	0	151,310,515				
Net Debt at 31 March	Current prices at 31 March of Charging Year			0	0	0	-130,376,913				
Notional Debt to RCV ratio	%						82.9%				
A 1.4. Tax											
Tax as at October 2017	Outturn prices, £						0	0	0		
A.7. Under/Over Recovered Revenue Adjustment - as at October 2016											
Allowed Revenue	£										
Amount recovered in respect of IP Charge as at end of [Charging Year T-3]	£										
Amount recovered in respect of IP Charge April - September accounting periods [Charging Year T-2]	£										
Amount recovered in respect of IP Charge as at end of [Charging Year T-2]	£										
Amount recovered in respect of IP Charge April - September accounting periods [Charging Year T-1]	£										
A.8. Reconciliation adjustment											
Time since most recent calculation	Years										
Reconcile this year?	£										
Allowed Revenue as per most recently submitted Revenue Statement	£										
A.11. Additional Return on Capital Building Block											
Additional Allowable Project Spend											
A 1.5.4. Net Present Value Adjustment											
End of first charging year Licence Award											

BBRA Calculation 2016

Building Block	Unit	Notes/description	2013/14	2014/15	First Charging	Second	Third Charging
					Year	Charging Year	Year
Year starts			2015/16	2016/17	2017/18		
Year ends			01/04/2015	01/04/2016	01/04/2017		
Year 2			31/03/2016	31/03/2017	31/03/2018		
Year+1			2013/14	2014/15	2015/16		
Year 1			2014/15	2015/16	2016/17		
Year+1			2015/16	2016/17	2017/18		
Year 2			2016/17	2017/18	2018/19		
Year+2			2017/18	2018/19	2019/20		
1.1 2014/15 RPI Adjustment Factor		A factor calculated for each Charging Year to express costs associated with that year in a 2014/15 price base. See Project Licence, Appendix 1, 1.1					
(a) for the purposes of calculating Forecast Allowable Project Spend for Charging Year Yn+1, estimated Allowable Project Spend for the said Charging Year shall be deflated from a price base in Charging Year Yn+1 to the Base RPI Index year ([2014/15]), using an adjustment factor derived from multiplying the factors set out below							
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yn+1 commences	%	Forecast RPI - see input sheet for description of source					3.0%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yn+1 ends	%	Forecast RPI - see input sheet for description of source					3.0%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yn commences	%	Forecast RPI - see input sheet for description of source					3.0%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yn ends	%	Forecast RPI - see input sheet for description of source					3.0%
Percentage movement in the RPI (All Items) index as published by Office for National Statistics for the period April to September in the calendar year in which Charging Year Yn+1 commenced	%	NOT USED FOR RECONCILIATION Calculated with reference to the index values for March and September to capture April to September inflation (see 'Statement of calculation 2017')					1.0%
Percentage movement in the RPI (All Items) index as published by Office for National Statistics for the period April to September in the calendar year in which Charging Year Yn commenced	%	NOT USED FOR RECONCILIATION Calculated with reference to the index values for March and September to capture April to September inflation (see 'Statement of calculation 2017')					2.2%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yn+1 commenced	%	NOT USED FOR RECONCILIATION Forecast RPI - see input sheet for description of source					0.0%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yn+1 ends	%	NOT USED FOR RECONCILIATION Forecast RPI - see input sheet for description of source					0.0%
Base RPI Charging Year Yn+2, or where this is on or before Base RPI Index year, 2014/15 Charging Year Yn+1		Year average RPI for 2014/15, used as base year RPI Year average RPI for Charging Year T-2 (or 2014/15 where this is later) NEW ROW ADDED FOR RECONCILIATION Year average RPI for Charging Year T-1	256.7	256.7	256.7		256.7
1.1 (i)		Factor used to adjust prices from Charging Year T+1 to Charging Year T					1.03
1.1 (ii)		CALCULATION ALLOWED FOR RECONCILIATION Factor used to adjust prices from Charging Year T to Charging Year T-1					1.04
1.1 (iii)		CALCULATION ALLOWED FOR RECONCILIATION Factor used to adjust prices from Charging Year T-1 to Charging Year T-2					1.02
1.1 (iv)		Factor used to adjust prices from Charging Year T-2 to Charging Year T-3					1.01
RPI Adjustment Factor Charging Year T+1		Combines factors (i), (ii), (iii) and (iv) above to calculate factor used to adjust prices from Charging Year T+1 to 2014/15 price base.					1.11
RPI Adjustment Factor Charging Year T		Combines factors (ii), (iii) and (iv) above to calculate factor used to adjust prices from Charging Year T to 2014/15 price base.					1.07
RPI Adjustment Factor Charging Year T-1		Combines factors (iii) and (iv) above to calculate factor used to adjust prices from Charging Year T-1 to 2014/15 price base.					1.03
RPI Adjustment Factor Charging Year T-2		Equal to factor (iv) above - used to adjust prices from Charging Year T-2 to 2014/15 price base.					1.01
Applicable Change in Revenue RPI		RPI in November of previous Charging Year relative to 2014/15 base year	0.96	0.98	1.01	1.01	1.03
RPI		RPI in November of Charging Year T-1	246.6	252.1	259.8	259.8	265.5
RPIbase (Base RPI Index)		Average RPI for 2014/15	256.7	256.7	256.7		256.7
A.1. Allowed Revenue	E	Total Allowed Revenue calculated as the total of the building blocks below, in accordance with Project Licence, Appendix 1, 1.4. See 'Statement of calculation 2017' for further detail.					32,865,395
A.3. Return on Capital	E	The Return on Capital building block allows the IP to earn a return on capital in relation to the forecast average RCV in the Charging Year in question. See Project Licence, Appendix 1, Part A 3					18,959,027
Ofwat Stated RCV for Y+2	E, 2014/15 prices	RCV at the end of Charging Year T-2 as published by Ofwat by 1 September following the end of the Charging Year					148,741,346
OPRCV Yn+1	E, 2014/15 prices	Ofwat RCV for Charging Year T-1					148,741,346
2014/15 RPI Adjustment Factor Yn+1	E, 2014/15 prices	Scalar to adjust forecast costs for Charging Year T-1 to 2014/15 price base					1.03
Annual Actual Project Spend Yn+1	E, 2014/15 prices	Allowable Project Spend (verified by the ITA) incurred in Charging Year T-1					329,792,312
Estimated Allowable Project Spend Yn+1	E, 2014/15 prices	Allowable Project Spend (not verified by the ITA) incurred in Charging Year T-1					0
Forecast Allowable Project Spend Yn+1	E, 2014/15 prices	Allowable Project Spend forecast to be incurred in Charging Year T-1					0
OPRCV Yn	E, 2014/15 prices	Opening RCV for Charging Year T - the sum of opening RCV for Charging Year T-1 and all Allowable Project Spend in that year					478,533,658
2014/15 RPI Adjustment Factor Yn	E, 2014/15 prices	Scalar to adjust forecast costs for Charging Year T to 2014/15 price base					1.03
Annual Actual Project Spend Yn	E, 2014/15 prices	Allowable Project Spend (verified by the ITA) incurred in Charging Year T					157,629,620
Estimated Allowable Project Spend Yn	E, 2014/15 prices	Allowable Project Spend (not verified by the ITA) incurred in Charging Year T					41,755,478
Forecast Allowable Project Spend Yn	E, 2014/15 prices	Allowable Project Spend forecast to be incurred in Charging Year T					312,159,157
OPRCV Yn	E, 2014/15 prices	Closing RCV for Charging Year T - the sum of opening RCV for Charging Year T and all Allowable Project Spend in that year					989,487,312
YARCV Yn	E, 2014/15 prices	Year average RCV for Charging Year T					734,010,785
A.4. Liquidity	E	The Liquidity building block allows the IP a liquidity allowance (return on capital) in relation to the incremental average RCV in the year following the Charging Year in question. See Project Licence, Appendix 1, Part A 4					13,906,368
OPRCV Yn+1	E, 2014/15 prices	Ofwat RCV for Charging Year T+1					989,487,312
2014/15 RPI Adjustment Factor Yn+1	E, 2014/15 prices	Scalar to adjust forecast costs for Charging Year T+1 to 2014/15 price base					1.11
Forecast Allowable Project Spend for year+1	E, 2014/15 prices	Allowable Project Spend forecast to be incurred in Charging Year T+1					565,833,511
OPRCV Yn+1	E, 2014/15 prices	Closing RCV for Charging Year T+1					1,555,321,043
FYARCV Yn+1	E, 2014/15 prices	Average RCV for Charging Year T+1					1,272,404,688
A.5. Opex		In line with the Project Licence, the Opex building block is zero as all costs are accounted for as capital expenditure. See Project Licence, Appendix 1, Part A 4					0
A.6. Financing Cost Adjustment building block		The Financing Cost Adjustment building block is intended to protect against movements in the market cost of debt, by comparing a measure of financing costs to an annual reference point to a base reference point of March 2015. See Project Licence, Appendix 1, Part A 6					0
Financing Cost Adjustment Yn							0
Financing Cost Adjustment Index Yield	%	See Project Licence Appendix 1, Part A 6.3	1.30%	1.43%			
Base Reference Point (BRP)	%	The historic 12 months' trailing average of the Financing Cost Adjustment Index Yield as at 31 March 2015	1.30%	1.30%			1.30%
Annual Reference Point (ARP)	%	The historic 12 months' trailing average of the Financing Cost Adjustment Index Yield as at 31 March of Charging Year Yn+2	1.30%	1.30%			1.43%
BRP-ARP	%	Difference between BRP and ARP	0.0%	0.0%			0.1%
Market Cost of Debt Adjustment Factor (absolute)	%	See Project Licence Appendix 1, Part A 6.7	0.0%	0.0%			0.0%
Market Cost of Debt Adjustment Factor (corrected sign)	%	NEW ROW FOR 2016 See Project Licence Appendix 1, Part A 6.7	0.0%	0.0%			0.0%
Net Debt in Charging Year Yn+2	E, current prices (March of Charging Year T-2)	Net Debt at the end of Charging Year T-2 as defined in Project Licence Appendix 1, 1.41					-130,376,913
Water Services Regulation Authority Adjusted RCV (Current Prices) in Charging Year Yn+2	E, current prices (March of Charging Year T-2)	RCV at the end of Charging Year T-2 in then current prices					151,310,515
Notional Debt to RCV Ratio	%	As defined in Project Licence Appendix 1, 1.42	62.5%	62.5%			62.5%
Notional Net Debt in Charging Year Yn+2	E, current prices (March of Charging Year T-2)	RCV multiplied by Notional Debt to RCV ratio. See Project Licence Appendix 1, Part A 6.9					84,969,672
Net Debt in Charging Year Yn+3	E, current prices (March of Charging Year T-3)	Net Debt at the end of Charging Year T-3 as defined in Project Licence Appendix 1, 1.41					0
Water Services Regulation Authority Adjusted RCV (Current Prices) in Charging Year Yn+3	E, current prices (March of Charging Year T-3)	RCV at the end of Charging Year T-3 in then current prices					0
Notional Debt to RCV Ratio	%	As defined in Project Licence Appendix 1, 1.42	62.5%	62.5%			62.5%
Notional Net Debt in Charging Year Yn+3	E, current prices (March of Charging Year T-3)	RCV multiplied by Notional Debt to RCV ratio. See Project Licence Appendix 1, Part A 6.9					0
Applicable Change in Revenue RPI for Charging Year Yn			1.01	1.01			1.03
Applicable Change in Revenue RPI for Charging Year Yn+2			0.96	0.98			1.01
A.1.4. Tax	E	In line with the Project Licence, zero as the IP is not required to pay corporation tax or any other income-based tax. See Project Licence Appendix 1, Part A 1.4					0
A.7. Under/Over Recovered Revenue Adjustment	E	The revenue adjustment building block is to reconcile for under/over recovered Allowed Revenue in previous Charging Years. Not applicable for 2015 and 2016 Revenue Statements as adjustment applies in respect of Charging Year T-2, and 2015 was the first year the Allowed Revenue calculation was made. See Project Licence, Appendix 1, Part A.7					0
A.8. Reconciliation adjustment	E	REMOVED FROM THIS RECONCILIATION SHEET AS RECONCILED SEPARATELY IN BBRA CALCULATION 2015 Reconciliation for updated expenditure and inflation data to reflect realised actuals and updated forecasts. See Project Licence, Appendix 1, Part A 8					0
Reconcile this year?	na	Revenue for a given Charging Year is subject to building block reconciliation adjustment where estimated or forecast expenditure or inflation inputs were used the last time that year's revenue was calculated. Defined as follows: 1 = yes, 0 = no					
Time since most recent calculation	years	Represents the number of years since revenue was most recently calculated to feed into the NPV adjustment of the reconciliation adjustment					
Allowed Revenue (as at October 2016)	E	Allowed Revenue recalculated using updated expenditure and inflation data. Excludes the under/over recovered revenue adjustment and the reconciliation adjustment building blocks, as these building blocks are not subject to reconciliation. See BBRA Calculation 2015					
Allowed Revenue (as at October 2015)	E	Allowed Revenue as submitted in 2015 global revised Revenue Statement. Excludes the under/over recovered revenue adjustment and the reconciliation adjustment building blocks, as these building blocks are not subject to reconciliation.					
Applicable Change in Revenue RPI (year in which original calculation was made)							
Applicable Change in Revenue RPI (current year)							
Reconciliation amounts (unadjusted)	E	Adjustment calculated as difference between updated calculation and previous year's calculation, prior to NPV adjustment					
Reconciliation amounts (NPV-adjusted)	E	Adjustment calculated as difference between updated calculation and previous year's calculation, post NPV-adjustment using BWACC and Applicable Change in Revenue RPI					
A.11. Additional Return on Capital Building Block	E	Not applicable. To be added to calculation if building block becomes relevant (i.e. if Tideway makes an IAR Overrun Application to increase Allowable Project Spend above the Threshold Outturn). See Project Licence, Appendix 1, Part A 11					
A.11. Additional Liquidity Building Block	E	Not applicable. To be added to calculation if building block becomes relevant (i.e. if Tideway makes an IAR Overrun Application to increase Allowable Project Spend above the Threshold Outturn). See Project Licence, Appendix 1, Part A 11					

BBRA Inputs 2015

	Unit	Source/notes	2012/13	2013/14	2014/15	First Charging Year 2015/16	Second charging year 2016/17	Third Charging Year 2017/18	Fourth Charging Year 2018/19	Fifth Charging Year 2019/20
Year starts						01/04/2015	01/04/2016	01/04/2017	01/04/2018	01/04/2019
Year ends						31/03/2016	31/03/2017	31/03/2018	31/03/2019	31/03/2020
Year t-2						2013/14	2014/15	2015/16	2016/17	2017/18
Year t-1						2014/15	2015/16	2016/17	2017/18	2018/19
Year t						2015/16	2016/17	2017/18	2018/19	2019/20
Year t+1						2016/17	2017/18	2018/19	2019/20	2020/21
Year t+2						2017/18	2018/19	2019/20	2020/21	2021/22
1.1 2014/15 RPI Adjustment Factor										
Forecast RPI Adjustment Factor for the calendar year in which Charging Year commences	%	UPDATED FOR RECONCILIATION Source: Average independent new forecasts for RPI, Table M3, "Forecasts for the UK economy: a comparison of independent forecasts", HM Treasury, August 2017 Required by Project Licence Appendix 1, 1.1 (i), (ii), (iii)							3.5%	3.0%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year ends	%	UPDATED FOR RECONCILIATION Source: Average independent new forecasts for RPI, Table M3, "Forecasts for the UK economy: a comparison of independent forecasts", HM Treasury, August 2017 Required by Project Licence Appendix 1, 1.1 (i), (ii), (iii)							3.5%	3.0%
RPI, September of Charging Year		UPDATED FOR RECONCILIATION Source: RPI (All Items) index, Consumer Price Inflation Reference Tables, Table 36, 17 October 2017, Office for National Statistics. Required by Project Licence Appendix 1, 1.1 (ii)			257.6	259.6	264.9	275.1		
RPI, March of Charging Year		UPDATED FOR RECONCILIATION Source: RPI (All Items) index, Consumer Price Inflation Reference Tables, Table 36, 13 June 2017, Office for National Statistics Required by Project Licence Appendix 1, 1.1 (iii)	254.8	257.1	261.1	269.3				
Applicable Change in Revenue RPI										
RPIr (RPI for November in Charging Year Yt-1)		Source: RPI (All Items) index, Consumer Price Inflation Reference Tables, Table 36, November 2015, Office for National Statistics. Required by Project Licence Appendix 1, Part A 3, 4 and 6 Note: for both First and Second Charging years, stated RPI is for November 2015, as Allowed Revenue for both these years is being calculated together	245.6	252.1	259.8	259.8				
Year average RPI		UPDATED FOR RECONCILIATION Source: Calculated from RPI (All Items) index, Consumer Price Inflation Reference Tables, Table 36, 17 October 2017 Office for National Statistics Required by Project Licence Appendix 1, Part A 3, 4 and 6 and Appendix 1, 1.1 (iv)			256.7	259.4	265.0			
A.3. Return on Capital and A.4 Liquidity										
Water Services Regulation Authority Stated RCV (2014/15 Prices) at 31 March	2014/15 prices, £	Source: Ofwat published figure, zero prior to licence award Required by Project Licence Appendix 1, Part A 3		0	0					
Allowable Project Spend (actual and forecast) - as at October 2017										
Annual Actual Project Spend	Outturn prices, £	UPDATED FOR RECONCILIATION Source: "Allowable Project Spend Verification No 15.pdf" Required by Project Licence Appendix 1, Part A 3			0	150,344,662	340,489,147	168,451,729		
Estimated Allowable Project Spend	Outturn prices, £	UPDATED FOR RECONCILIATION Source: "Regulation Reporting Sep17" Required by Project Licence Appendix 1, Part A 3			0	0	0	44,803,438		
Forecast Allowable Project Spend	Outturn prices, £	UPDATED FOR RECONCILIATION Source: "2017 Revenue Statement - ITA Expenditure Forecast Review Addendum.pdf" The 2017/18 figure is net of expenditure already realised (Annual Actual Project Spend and Estimated Allowable Project Spend). Required by Project Licence Appendix 1, Part A 3, 4			0	0	0	334,865,165		
Excluded Project Spend	Outturn prices, £	Data removed as not required for reconciliation purposes. See "Inputs 2017".								
Alliance Agreement receipts - expenditure funded by these receipts is treated as Excluded Project Spend and therefore is excluded from the Allowable spend metrics set out above	Outturn prices, £	Data removed as not required for reconciliation purposes. See "Inputs 2017".								
BWACC	%	Source: Project Licence, Appendix 1, 1.18 Required by Project Licence Appendix 1, Part A 3, 4, 6, 7, 8				2.497%				
A.5. Opex										
Opex forecast as at October 2017	Outturn prices, £	Note: In line with the Project Licence, zero as all expenditure treated as capex. Required by Project Licence Appendix 1, Part A 5				0	0			
A.6. Financing Cost Adjustment										
Financing Cost Adjustment Index Yield - 12 months trailing average at 31 March	%	UPDATED FOR REVISED BANK OF ENGLAND DATA Source: "FCA yield calculator.xlsx" Calculated with reference to iBoxx BBB data and spot implied inflation rates for 10 year maturity from Bank of England. Required by Project Licence Appendix 1, Part A 6					1.30%			
Water Services Regulation Authority Adjusted RCV (Current Prices) at 31 March	Current prices at 31 March of Charging Year	Source: Ofwat published figure, zero prior to Licence award Required by Project Licence Appendix 1, Part A 6	0	0	0					
Net Debt at 31 March	Current prices at 31 March of Charging Year	Source: IP regulatory accounts, zero prior to Licence award Required by Project Licence Appendix 1, Part A 6	0	0	0					
Notional Debt to RCV ratio	%	Source: Project Licence Appendix 1, 1.42 Required by Project Licence Appendix 1, Part A 6								62.5%
A 1.4. Tax										
Tax as at October 2017	Outturn prices, £	In line with the Project Licence, zero as the IP is not required to pay corporation tax or any other income-based tax. See Project Licence Appendix 1, Part A 1.4				0	0			
A.7. Under/Over Recovered Revenue Adjustment - as at October 2015										
Allowed Revenue	£	Not applicable for 2015 and 2016 Revenue Statements as adjustment applies in respect of Charging Year T-2, and 2015 is the first year the Allowed Revenue calculation has been made. In future years, source will be previous Revenue Statements.								
Amount recovered in respect of IP Charge as at end of [Charging Year T-3]	£	Not applicable for 2015 and 2016 Revenue Statements as adjustment applies in respect of Charging Year T-2, and 2015 is the first year the Allowed Revenue calculation has been made. In future years, source will be IP regulatory accounts.								
Amount recovered in respect of IP Charge April - September accounting periods [Charging Year T-2]	£	Not applicable for 2015 and 2016 Revenue Statements as adjustment applies in respect of Charging Year T-2, and 2015 is the first year the Allowed Revenue calculation has been made. In future years, source will be IP internal accounting records.								
Amount recovered in respect of IP Charge as at end of [Charging Year T-2]	£	Not applicable for 2015 and 2016 Revenue Statements as adjustment applies in respect of Charging Year T-2, and 2015 is the first year the Allowed Revenue calculation has been made. In future years, source will be IP regulatory accounts.								
Amount recovered in respect of IP Charge April - September accounting periods [Charging Year T-1]	£	Not applicable for 2015 and 2016 Revenue Statements as adjustment applies in respect of Charging Year T-2, and 2015 is the first year the Allowed Revenue calculation has been made. In future years, source will be IP internal accounting records.								
A.8. Reconciliation adjustment										
Time since first calculation	Years	See Project Licence, Appendix 1, Part A 8 Not applicable for 2015 Revenue Statement as reconciliation adjustment applies in respect of Charging Year T-1 and 2015 is the first year the Allowed Revenue calculation has been made. This input will represent the number of years since revenue was first calculated to feed into the NPV adjustment of the reconciliation adjustment.								
Reconcile this year?		Not applicable for 2015 Revenue Statement as reconciliation adjustment applies in respect of Charging Year T-1 and 2015 is the first year the Allowed Revenue calculation has been made. In future, this input will be defined as follows: 1 = yes, 0 = no								
A.11. Additional Return on Capital Building Block										
Additional Allowable Project Spend		Not applicable at present. Inputs to be added if this building block becomes relevant (i.e. if Tideway makes an IAR Overrun Application to increase Allowable Project Spend above the Threshold Outturn). See Project Licence, Appendix 1, Part A 11								
A 1.6.4. Net Present Value Adjustment										
End of first charging year		Last day of the First Charging Year				31/03/2016				
Licence Award		Date of Licence award				24/08/2015				

BBRA Calculation 2015

Building Block	Unit	Notes/description	2013/14	2014/15	First Charging	Second
					Year	Charging Year
Year starts					2015/16	2016/17
Year ends					01/04/2015	01/04/2016
Year t-2					31/03/2016	31/03/2017
Year t-1					2013/14	2014/15
Year t					2014/15	2015/16
Year t+1					2015/16	2016/17
Year t+2					2016/17	2017/18
					2017/18	2018/19
1.1 2014/15 RPI Adjustment Factor		<i>A factor calculated for each Charging Year to express costs associated with that year in a 2014/15 price base. See Project Licence, Appendix 1, 1.1</i>				
(a) for the purposes of calculating Forecast Allowable Project Spend for Charging Year Yt+1, estimated Allowable Project Spend for Charging Year Yt+1 to the Base RPI Index year ([2014/15]), using an adjustment						
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt+1 commences	%	Forecast RPI - see input sheet for description of source			3.5%	
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt+1 ends	%	Forecast RPI - see input sheet for description of source			3.5%	
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt commences	%	NOT USED FOR RECONCILIATION Forecast RPI - see input sheet for description of source			0.0%	
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt ends	%	NOT USED FOR RECONCILIATION Forecast RPI - see input sheet for description of source			0.0%	
Percentage movement in the RPI (All Items) index as published by Office for National Statistics for the period April to September in the calendar year in which Charging Year Yt-1 commenced	%	NOT USED FOR RECONCILIATION Calculated with reference to the index values for March and September to capture April to September inflation (see "Statement of calculation 2017")				1.0%
Percentage movement in the RPI (All Items) index as published by Office for National Statistics for the period April to September in the calendar year in which Charging Year Yt commenced	%	NOT USED FOR RECONCILIATION Calculated with reference to the index values for March and September to capture April to September inflation (see "Statement of calculation 2017")				1.5%
Percentage movement in the RPI (All Items) index as published by Office for National Statistics for the period April to September in the calendar year in which Charging Year Yt+1 commenced	%	NEW ROW ADDED FOR RECONCILIATION Calculated with reference to the index values for March and September to capture April to September inflation (see "Statement of calculation 2017")				2.2%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt-1 commenced	%	NOT USED FOR RECONCILIATION Forecast RPI - see input sheet for description of source				0.0%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt-1 ends	%	NOT USED FOR RECONCILIATION Forecast RPI - see input sheet for description of source				0.0%
Base RPI		Year average RPI for 2014/15, used as base year RPI				256.7
Charging Year Yt-2, or where this is on or before Base RPI Index year, 2014/15		Year average RPI for Charging year T-2 (or 2014/15 where this is later)				256.7
Charging Year Yt-1		NEW ROW ADDED FOR RECONCILIATION Year average RPI for Charging year T-1				259.4
Charging Year Yt		NEW ROW ADDED FOR RECONCILIATION Year average RPI for Charging year T				265.0
1.1 (i)						1.04
1.1 (ii)						1.02
1.1 (iii)						1.01
1.1 (iv)						1.00
RPI Adjustment Factor Charging Year T+1		Combines factors (i), (ii), (iii) and (iv) above to calculate factor used to adjust prices from Charging Year T+1 to 2014/15 price base. For First Charging Year, use calculations from Second Charging Year in relation to Charging Year T			1.03	1.07
RPI Adjustment Factor Charging Year T		Combines factors (ii), (iii) and (iv) above to calculate factor used to adjust prices from Charging Year T to 2014/15 price base. For First Charging Year, use calculations from Second Charging Year in relation to Charging Year T-1			1.01	1.03
RPI Adjustment Factor Charging Year T-1		Combines factors (iii) and (iv) above to calculate factor used to adjust prices from Charging Year T-1 to 2014/15 price base. For First Charging Year, use calculations from Second Charging Year in relation to Charging Year T-2			1.00	1.01
RPI Adjustment Factor Charging Year T-2		Equal to factor (iv) above - used to adjust prices from Charging Year T-2 to 2014/15 price base. Set equal to 1 for Second Charging Year as Year T-2 is equal to base year				1.00
Applicable Change in Revenue RPI		RPI in November of previous Charging Year relative to 2014/15 base year	0.96	0.98	1.01	1.01
RPIt		RPI in November of Charging Year T-1	245.6	252.1	259.8	259.8
RPIbase (Base RPI Index)		Average RPI for 2014/15	256.7	256.7	256.7	256.7
A.1. Allowed Revenue	£	Total Allowed Revenue calculated as the total of the building blocks below, in accordance with Project Licence, Appendix 1, 1.4. See Statement of calculation 2017 for further detail. Second Charging Year Allowed Revenue incorporates Allowed Revenue for First Charging Year.			7,927,134	26,637,473
A.3. Return on Capital	£	The Return on Capital building block allows the IP to earn a return on capital in relation to the forecast average RCV in the Charging Year in question. See Project Licence, Appendix 1, Part A 3			1,879,706	7,927,134
Ofwat Stated RCV for Yt-2	£, 2014/15 prices	RCV at the end of Charging Year T-2 as published by Ofwat by 1 September following the end of the Charging Year			0	0
OPRCV Yt-1	£, 2014/15 prices	Opening RCV for Charging Year T-1. Zero for both the First and Second Charging Years			0	0
2014/15 RPI Adjustment Factor Yt-1		Scalar to adjust forecast costs for Charging Year T-1 to 2014/15 price base			1.00	1.01
Annual Actual Project Spend Yt-1	£, 2014/15 prices	Allowable Project Spend (verified by the ITA) incurred in Charging Year T-1			0	148,741,346
Estimated Allowable Project Spend Yt-1	£, 2014/15 prices	Allowable Project Spend (not verified by the ITA) incurred in Charging Year T-1			0	0
Forecast Allowable Project Spend Yt-1	£, 2014/15 prices	Allowable Project Spend forecast to be incurred in Charging Year T-1			0	0
OPRCV Yt	£, 2014/15 prices	Opening RCV for Charging Year T - the sum of opening RCV for Charging year T-1 and all Allowable Project Spend in that year			0	148,741,346
2014/15 RPI Adjustment Factor Yt		Scalar to adjust forecast costs for Charging Year T to 2014/15 price base			1.01	1.03
Annual Actual Project Spend Yt	£, 2014/15 prices	Allowable Project Spend (verified by the ITA) incurred in Charging Year T			148,741,346	329,792,312
Estimated Allowable Project Spend Yt	£, 2014/15 prices	Allowable Project Spend (not verified by the ITA) incurred in Charging Year T			0	0
Forecast Allowable Project Spend Yt	£, 2014/15 prices	Allowable Project Spend forecast to be incurred in Charging Year T			0	0
CPRCV Yt	£, 2014/15 prices	Closing RCV for Charging Year T - the sum of opening RCV for Charging Year T and all Allowable Project Spend in that year			148,741,346	478,533,658
YARCV Yt	£, 2014/15 prices	Year average RCV for Charging Year T			74,370,673	313,637,502
A.4. Liquidity	£	The Liquidity building block allows the IP a liquidity allowance (return on capital) in relation to the incremental average RCV in the year following the Charging Year in question. See Project Licence, Appendix 1, Part A 4			6,047,428	10,624,863
OPRCV Yt+1	£, 2014/15 prices	Opening RCV for Charging Year T+1			148,741,346	478,533,658
2014/15 RPI Adjustment Factor Yt+1		Scalar to adjust forecast costs for Charging Year T+1 to 2014/15 price base			1.03	1.07
Annual Actual Project Spend for year t+1	£, 2014/15 prices	Allowable Project Spend (verified by the ITA) incurred in Charging Year T+1			329,792,312	157,029,620
Estimated Allowable Project Spend for year t+1	£, 2014/15 prices	Allowable Project Spend (not verified by the ITA) incurred in Charging Year T+1			0	41,765,478
Forecast Allowable Project Spend for year t+1	£, 2014/15 prices	Allowable Project Spend forecast to be incurred in Charging Year T+1			0	312,159,157
CPRCV Yt+1	£, 2014/15 prices	Closing RCV for Charging Year T+1			478,533,658	989,487,912
FYARCV Yt+1	£, 2014/15 prices	Average RCV for Charging Year T+1			313,637,502	734,010,785
A.5. Opex		In line with the Project Licence, the Opex building block is zero as all costs are accounted for as capital expenditure. See Project Licence, Appendix 1, Part A 5			0	0
A.6. Financing Cost Adjustment building block		The Financing Cost Adjustment building block is intended to protect against movements in the market cost of debt, by comparing a measure of financing costs at an annual reference point to a base reference point of March 2015. See Project Licence, Appendix 1, Part A 6			0	0
Financing Cost Adjustment Yt					0	0
Financing Cost Adjustment Index Yield	%	See Project Licence Appendix 1, Part A 6.3			1.30%	
Base Reference Point (BRP)	%	The historic 12 months' trailing average of the Financing Cost Adjustment Index Yield as at 31 March 2015			1.30%	1.30%
Annual Reference Point (ARP)	%	The historic 12 months' trailing average of the Financing Cost Adjustment Index Yield as at 31 March of Charging Year Yt-2			1.30%	1.30%
BRP-ABP	%	Difference between BRP and ARP			0.0%	0.0%
Market Cost of Debt Adjustment Factor	%	See Project Licence Appendix 1 Part A 6.7			0.0%	0.0%
Net Debt in Charging Year Yt-2	£, current prices (March of Charging Year T-2)	Net Debt at the end of Charging Year T-2 as defined in Project Licence Appendix 1, 1.41			0	0
Water Services Regulation Authority Adjusted RCV (Current Prices) in Charging Year Yt-2	£, current prices (March of Charging Year T-2)	RCV at the end of Charging Year T-2 in then current prices			0	0
Notional Debt to RCV Ratio	%	As defined in Project Licence Appendix 1, 1.42			62.5%	62.5%
Notional Net Debt in Charging Year Yt-2	£, current prices (March of Charging Year T-2)	RCV multiplied by Notional Debt to RCV ratio. See Project Licence Appendix 1 Part A 6.9			0	0
Net Debt in Charging Year Yt-3	£, current prices (March of Charging Year T-3)	Net Debt at the end of Charging Year T-3 as defined in Project Licence Appendix 1, 1.41			0	0
Water Services Regulation Authority Adjusted RCV (Current Prices) in Charging Year Yt-3	£, current prices (March of Charging Year T-3)	RCV at the end of Charging Year T-3 in then current prices			0	0
Notional Debt to RCV Ratio	%	As defined in Project Licence Appendix 1, 1.42			62.5%	62.5%
Notional Net Debt in Charging Year Yt-3	£, current prices (March of Charging Year T-3)	RCV multiplied by Notional Debt to RCV ratio. See Project Licence Appendix 1 Part A 6.9			0	0
Applicable Change in Revenue RPI for Charging Year Yt					1.01	1.01
Applicable Change in Revenue RPI for Charging Year Yt-2					0.96	0.98
A.1.4. Tax	£	In line with the Project Licence, zero as the IP is not required to pay corporation tax or any other income-based tax. See Project Licence Appendix 1, Part A 1.4			0	0
A.7. Under/Over Recovered Revenue Adjustment	£	The revenue adjustment building block is to reconcile for under/over recovered Allowed Revenue in previous Charging Years. Not applicable for 2015 and 2016 Revenue Statements as adjustment applies in respect of Charging Year T-2, and 2015 is the first year the Allowed Revenue calculation has been made. See Project Licence, Appendix 1, Part A.7			0	0
A.8. Reconciliation adjustment	£	Not applicable for 2015 Revenue Statement as reconciliation adjustment applies in respect of Charging Year T-1 and 2015 is the first year the Allowed Revenue calculation has been made. See Project Licence, Appendix 1, Part A 8			0	0

<p>A.11. Additional Return on Capital Building Block</p>	<p>£ <i>Not applicable. To be added to calculation if building block becomes relevant (i.e. if Tideway makes an IAR Overrun Application to increase Allowable Project Spend above the Threshold Outturn). See Project Licence, Appendix 1, Part A 11</i></p>	
<p>A.11. Additional Liquidity Building Block</p>	<p>£ <i>Not applicable. To be added to calculation if building block becomes relevant (i.e. if Tideway makes an IAR Overrun Application to increase Allowable Project Spend above the Threshold Outturn). See Project Licence, Appendix 1, Part A 11</i></p>	
<p>A.1.6.4. Net Present Value Adjustment</p>	<p>£ <i>Value adjustment using the BWACC to take account of the fact that Allowed Revenue for the First Charging Year (2015/16) was calculated and billed one year late.</i></p>	<p>8,085,476</p>
<p>PD End of first charging year Licence Award</p>	<p><i>Calculation of the proportion of a year between Licence award and the end of the First Charging Year</i></p>	<p>0.60 31/03/2016 24/08/2015</p>

Calculation 2017

Building Block	Unit	Notes/description	2013/14	2014/15	First Charging	Second	Third Charging	Fourth
					Year	Charging Year	Year	Charging Year
Year starts					2015/16	2016/17	2017/18	2018/19
Year ends					01/04/2015	01/04/2016	01/04/2017	01/04/2018
Year t-2					31/03/2016	31/03/2017	31/03/2018	31/03/2019
Year t-1					2013/14	2014/15	2015/16	2016/17
Year t					2014/15	2015/16	2016/17	2017/18
Year t+1					2015/16	2016/17	2017/18	2018/19
Year t+2					2016/17	2017/18	2018/19	2019/20
Year t+2					2017/18	2018/19	2019/20	2020/21
1.1 2014/15 RPI Adjustment Factor		A factor calculated for each Charging Year to express costs associated with that year in a 2014/15 price base. See Project Licence, Appendix 1, 1.1						
(a) for the purposes of calculating Forecast Allowable Project Spend for Charging Year Yt+1, estimated Allowable Project Spend for the said Charging Year shall be deflated from a price base in Charging Year Yt+1 to the Base RPI Index year ([2014/15]), using an adjustment factor derived from multiplying the factors set out								
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt+1 commences	%	Forecast RPI - see input sheet for description of source						3.0%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt+1 ends	%	Forecast RPI - see input sheet for description of source						3.0%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt commences	%	Forecast RPI - see input sheet for description of source						3.5%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt ends	%	Forecast RPI - see input sheet for description of source						3.0%
Percentage movement in the RPI (All Items) index as published by Office for National Statistics for the period April to September in the calendar year in which Charging Year Yt-1 commenced	%	Calculated with reference to the index values for March and September to capture April to September inflation (see detailed modelling assumptions in "Statement of calculation 2017")						2.2%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt-1 commenced	%	Forecast RPI - see input sheet for description of source						3.5%
Forecast RPI Adjustment Factor for the calendar year in which Charging Year Yt-1 ends	%	Forecast RPI - see input sheet for description of source						3.5%
Base RPI		Year average RPI for 2014/15, used as base year RPI						256.7
Charging Year Yt-2, or where this is on or before Base RPI Index year, 2014/15		Year average RPI for Charging Year T-2 (or 2014/15 where this is later)						265.0
1.1 (i)		Factor used to adjust prices from Charging Year T+1 to Charging Year T						1.03
1.1 (ii)		Factor used to adjust prices from Charging Year T to Charging Year T-1						1.03
1.1 (iii)		Factor used to adjust prices from Charging Year T-1 to Charging Year T-2						1.04
1.1 (iv)		Factor used to adjust prices from Charging Year T-2 to Base RPI Index year						1.03
RPI Adjustment Factor Charging Year T+1		Combines factors (i), (ii), (iii) and (iv) above to calculate factor used to adjust prices from Charging Year T+1 to 2014/15 price base.						1.14
RPI Adjustment Factor Charging Year T		Combines factors (ii), (iii) and (iv) above to calculate factor used to adjust prices from Charging Year T to 2014/15 price base.						1.11
RPI Adjustment Factor Charging Year T-1		Combines factors (iii) and (iv) above to calculate factor used to adjust prices from Charging Year T-1 to 2014/15 price base.						1.07
RPI Adjustment Factor Charging Year T-2		Equal to factor (iv) above - used to adjust prices from Charging Year T-2 to 2014/15 price base.						1.03
Applicable Change in Revenue RPI		RPI in November of previous Charging Year relative to 2014/15 base year	0.96	0.98	1.01	1.01	1.03	1.07
RPI		RPI in November of Charging Year T-1	245.6	252.1	259.8	259.8	265.5	275.8
RPIbase (Base RPI Index)		Average RPI for 2014/15	256.7	256.7	256.7	256.7	256.7	256.7
A.1. Allowed Revenue	£	Total Allowed Revenue calculated as the total of the building blocks below, in accordance with Project Licence, Appendix 1, 1.4. See Statement of calculation 2017 for further detail.						49,235,940
A.3. Return on Capital	£	The Return on Capital building block allows the IP to earn a return on capital in relation to the forecast average RCV in the Charging Year in question. See Project Licence, Appendix 1, Part A 3						34,140,399
Owat Stated RCV for Yt-2	£, 2014/15 prices	RCV at the end of Charging Year T-2 as published by Owat by 1 September following the end of the Charging Year						478,533,658
OPRCV Yt-1	£, 2014/15 prices	Opening RCV for Charging Year T-1.						478,533,658
2014/15 RPI Adjustment Factor Yt-1		Scalar to adjust forecast costs for Charging Year T-1 to 2014/15 price base						1.07
Annual Actual Project Spend Yt-1	£, 2014/15 prices	Allowable Project Spend (verified by the ITA) incurred in Charging Year T-1						157,029,520
Estimated Allowable Project Spend Yt-1	£, 2014/15 prices	Allowable Project Spend (not verified by the ITA) incurred in Charging Year T-1						41,785,178
Forecast Allowable Project Spend Yt-1	£, 2014/15 prices	Allowable Project Spend forecast to be incurred in Charging Year T-1						312,159,157
OPRCV Yt	£, 2014/15 prices	Opening RCV for Charging Year T - the sum of opening RCV for Charging year T-1 and all Allowable Project Spend in that year						989,487,912
2014/15 RPI Adjustment Factor Yt		Scalar to adjust forecast costs for Charging Year T to 2014/15 price base						1.11
Annual Actual Project Spend Yt	£, 2014/15 prices	Allowable Project Spend (verified by the ITA) incurred in Charging Year T						0
Estimated Allowable Project Spend Yt	£, 2014/15 prices	Allowable Project Spend (not verified by the ITA) incurred in Charging Year T						0
Forecast Allowable Project Spend Yt	£, 2014/15 prices	Allowable Project Spend forecast to be incurred in Charging Year T						565,833,511
CPRCV Yt	£, 2014/15 prices	Closing RCV for Charging Year T - the sum of opening RCV for Charging Year T and all Allowable Project Spend in that year						1,555,321,424
YARCV Yt	£, 2014/15 prices	Year average RCV for Charging Year T						1,272,404,668
A.4. Liquidity	£	The Liquidity building block allows the IP a liquidity allowance (return on capital) in relation to the incremental average RCV in the year following the Charging Year in question. See Project Licence, Appendix 1, Part A 4						14,924,339
OPRCV Yt+1	£, 2014/15 prices	Opening RCV for Charging Year T+1						1,555,321,424
2014/15 RPI Adjustment Factor Yt+1		Scalar to adjust forecast costs for Charging Year T+1 to 2014/15 price base						1.14
Forecast Allowable Project Spend for year t+1	£, 2014/15 prices	Allowable Project Spend forecast to be incurred in Charging Year T+1						546,619,709
CPRCV Yt+1	£, 2014/15 prices	Closing RCV for Charging Year T+1						2,101,941,124
FYARCV Yt+1	£, 2014/15 prices	Average RCV for Charging Year T+1						1,828,631,274
A.5. Opex		In line with the Project Licence, the Opex building block is zero as all costs are accounted for as capital expenditure. See Project Licence, Appendix 1, Part A 5						0
A.6. Financing Cost Adjustment building block		The Financing Cost Adjustment building block is intended to protect against movements in the market cost of debt, by comparing a measure of financing costs at an annual reference point to a base reference point of March 2015. See Project Licence, Appendix 1, Part A 6						0
Financing Cost Adjustment Yt								461,739
Financing Cost Adjustment Index Yield	%	See Project Licence Appendix 1, Part A 6.3			1.30%	1.43%	0.35%	
Base Reference Point (BRP)	%	The historic 12 months' trailing average of the Financing Cost Adjustment Index Yield as at 31 March 2015			1.30%	1.30%	1.30%	1.30%
Annual Reference Point (ARP)	%	The historic 12 months' trailing average of the Financing Cost Adjustment Index Yield as at 31 March of Charging Year Yt-2			1.30%	1.30%	1.43%	0.35%
BRP-ABP	%	Difference between BRP and ARP			0.0%	0.0%	-0.1%	0.9%
Market Cost of Debt Adjustment Factor (absolute)	%	See Project Licence Appendix 1 Part A 6.7			0.0%	0.0%	0.0%	0.2%
Market Cost of Debt Adjustment Factor (corrected sign)	%	See Project Licence Appendix 1 Part A 6.7			0.0%	0.0%	0.0%	-0.2%
Net Debt in Charging Year Yt-2	£, current prices (March of Charging Year T-2)	Net Debt at the end of Charging Year T-2 as defined in Project Licence Appendix 1, 1.41			0	0	-130,376,913	-315,919,558
Water Services Regulation Authority Adjusted RCV (Current Prices) in Charging Year Yt-2	£, current prices (March of Charging Year T-2)	RCV at the end of Charging Year T-2 in then current prices			0	0	151,310,515	502,087,458
Notional Debt to RCV Ratio	%	As defined in Project Licence Appendix 1, 1.42			62.5%	62.5%	62.5%	62.5%
Notional Net Debt in Charging Year Yt-2	£, current prices (March of Charging Year T-2)	RCV multiplied by Notional Debt to RCV ratio. See Project Licence Appendix 1 Part A 6.9			0	0	94,569,072	313,804,661
Net Debt in Charging Year Yt-3	£, current prices (March of Charging Year T-3)	Net Debt at the end of Charging Year T-3 as defined in Project Licence Appendix 1, 1.41			0	0	0	-130,376,913
Water Services Regulation Authority Adjusted RCV (Current Prices) in Charging Year Yt-3	£, current prices (March of Charging Year T-3)	RCV at the end of Charging Year T-3 in then current prices			0	0	0	151,310,515
Notional Debt to RCV Ratio	%	As defined in Project Licence Appendix 1, 1.42			62.5%	62.5%	62.5%	62.5%
Notional Net Debt in Charging Year Yt-3	£, current prices (March of Charging Year T-3)	RCV multiplied by Notional Debt to RCV ratio. See Project Licence Appendix 1 Part A 6.9			0	0	0	94,569,072
Applicable Change in Revenue RPI for Charging Year Yt					1.01	1.01	1.03	1.07
Applicable Change in Revenue RPI for Charging Year Yt-2					0.96	0.98	1.01	1.01
A.1.4. Tax	£	In line with the Project Licence, zero as the IP is not required to pay corporation tax or any other income-based tax. See Project Licence Appendix 1, Part A 1.4						0
A.7. Under/Over Recovered Revenue Adjustment	£	The revenue adjustment building block is to reconcile for under/over recovered Allowed Revenue in previous Charging Years. See Project Licence, Appendix 1, Part A.7						2,893,157
Allowed Revenue								33,603,285
Amount recovered in respect of 2016/17 Allowed Revenue (to end of September 2017)								31,009,138
Applicable Change in Revenue RPI (year in which original calculation was made)								1.01
Applicable Change in Revenue RPI (current year)								1.07
Reconciliation amounts (unadjusted)		Difference between Allowed Revenue for a Charging Year and the amount collected by Thames Water and received by Tideway in respect of that Allowed Revenue.						2,594,147
Reconciliation amounts (NPV-adjusted)		Reconciliation amount as calculated above, NPV-adjusted for the delay between the original Charging Year and the year of reconciliation using the BWACC and Applicable Change in Revenue RPI.						2,893,157
A.8. Reconciliation adjustment	£	Reconciliation for updated expenditure and inflation data to reflect realised actuals and updated forecasts. See Project Licence, Appendix 1, Part A 9						-3,183,693
Reconcile this year?	n/a	Revenue for a given Charging Year is subject to building block reconciliation adjustment where estimated or forecast expenditure or inflation inputs were used the last time that year's revenue was calculated. Defined as follows: 1 = yes, 0 = no			1	1	1	0
Time since original calculation	years	Represents the number of years since revenue was first calculated to feed into the NPV adjustment of the reconciliation adjustment.			2	2	1	0
Allowed Revenue (as at October 2017)	£	Allowed Revenue recalculated using updated expenditure and inflation data. Excludes the under/over recovered revenue adjustment and the reconciliation adjustment building blocks, as these building blocks are not subject to reconciliation. See BBRA Calculation 2015 and BBRA Calculation 2016			8,085,476	18,551,997	32,865,395	
Allowed Revenue (as at October 2016)	£	Allowed Revenue as submitted in 2016 updated revised Revenue Statement. Excludes the under/over recovered revenue adjustment and the reconciliation adjustment building blocks, as these building blocks are not subject to reconciliation.			8,869,904	19,763,649	33,974,208	
Applicable Change in Revenue RPI (year in which original calculation was made)					1.01	1.01	1.03	
Applicable Change in Revenue RPI (current year)								1.07
Reconciliation amounts (unadjusted)	£	Adjustment calculated as difference between updated calculation and previous year's calculation, prior to NPV adjustment.			-584,428	-1,211,652	-1,108,813	
Reconciliation amounts (NPV-adjusted)	£	Adjustment calculated as difference between updated calculation and previous year's calculation, post NPV-adjustment using BWACC and Applicable Change in Revenue RPI.			-651,791	-1,351,311	-1,180,591	
A.11. Additional Return on Capital Building Block	£	Not applicable. To be added to calculation if building block becomes relevant (i.e. if Tideway makes an IAR Overrun Application to increase Allowable Project Spend above the Threshold Outturn). See Project Licence, Appendix 1, Part A 11						
A.11. Additional Liquidity Building Block	£	Not applicable. To be added to calculation if building block becomes relevant (i.e. if Tideway makes an IAR Overrun Application to increase Allowable Project Spend above the Threshold Outturn). See Project Licence, Appendix 1, Part A 11						

Updated revised Revenue Statement - 2018/19

Submitted to Ofwat on 14 December 2017

<i>£, nominal</i>	Year preceding Prior Charging Year 2015/16	Prior Charging Year 2016/17	Current Charging Year 2017/18	Forthcoming Charging Year 2018/19
Allowed Revenue		33,603,285	28,559,132	49,235,940
Amounts received from TWUL	0	26,747,386		

Statement of calculation

Introduction

The following section sets out how Tideway's Allowed Revenue calculation has been made for the charging year 2018/19. It builds on Tideway's 2015 and 2016 Revenue Statements. The Licence has been written to provide the basis of a revenue submission in a typical year. A number of detailed modelling assumptions have been made in interpreting Appendix 1 of the Project Licence. The 2015 submission was atypical as it covered two years. As such, a number of assumptions were required to ensure the calculation was in line with the spirit and intent of the Licence, some of which continued to apply in the 2016 submission. For the 2017 Revenue Statement, a small number of additional clarifying assumptions have been made, for example in relation to the reconciliation of prior years' revenue for updated expenditure and inflation information and for under recovery of revenue (e.g. where the licence does not specify formulae). These assumptions, as set out in the table below, have been agreed with Ofwat prior to submission (email received from Martyn Andrews dated 31/10/17).

Sheet	Issue	Resolution
Revenue Statement 2017	How to present First and Second Charging Year Allowed Revenue on the Revenue Statement.	Both First and Second Year Allowed Revenue are added and shown as a single figure for the "Prior Charging Year" on the Revenue Statement. Both years of Allowed Revenue were billed by Thames Water in 2016/17, and need to be treated as a single year of Allowed Revenue for the purposes of revenue reconciliation in 2018/19 and overpayment provisions in the licence and Revenue Agreement.
BBRA Inputs 2015	Applying the definition of Applicable Change in Revenue RPI for the First Charging Year seems to suggest referring to November 2014 RPI. However, this revenue was billed in 2016/17.	Consistent with the financial model used as part of the IP procurement process and the 2015 Revenue Statement, apply November 2015 RPI for the Applicable Change in Revenue RPI for the First Charging Year.
BBRA Inputs 2015, BBRA Inputs 2016, Inputs 2017	The 2014/15 RPI Adjustment Factor refers to "the percentage movement in the RPI (All Items) index as published by ONS for the period April to September in the calendar year..." However, if the index values for April and September are taken, this only picks up 5 months of inflation. Together with the other elements of the formula, this results in an underestimate of inflation for the Charging Year.	Interpret the movement for the period April to September as the movement between the March and September index values, which ensures April inflation is also picked up.
BBRA Calculation 2015, BBRA Calculation 2016, Calculation 2017	Annual Actual Project Spend for the current Charging Year (Y1-1) feeds into the calculation of RCV, which is required for the calculation of the Return on Capital and Liquidity building blocks. The licence specifies that Annual Actual Project Spend should be deflated by the Applicable Change in Cost RPI for a Charging Year, rather than the 2014/15 RPI Adjustment Factor. However, the Applicable Change in Cost RPI can only be calculated following the publication of RPI for each month of the relevant Charging Year. This information is not available for the current Charging Year at the time the Revenue Statement is prepared.	Use the 2014/15 RPI Adjustment Factor to deflate the Annual Actual Project Spend in the current Charging Year. This will be true up in next year's Revenue Statement as part of the building block reconciliation adjustment.
BBRA Calculation 2015, BBRA Calculation 2016	In order to reconcile Allowed Revenue calculated in prior years for updated inflation, it is not appropriate to use the 2014/15 RPI Adjustment Factor defined in Tideway's licence as more up to date information is available (i.e. a further year of actual inflation data which can be used to replace the forecast).	Use approach consistent with definition of 2014/15 RPI Adjustment Factor but with actual inflation used up to September of Yt. This is equivalent to applying the 2014/15 RPI Adjustment Factor values as calculated for the Fourth Charging Year Allowed Revenue calculation, and ensures the latest actual RPI data is taken into account.
Calculation 2017	Appendix 1, Part A 8 of Tideway's licence requires a reconciliation adjustment of a number of building blocks for updated values. The licence requires that the adjustment is calculated on a net present value neutral basis using the BWACC, but it does not specify the adjustment formulaically or specify the means of adjusting for inflation.	Apply a net present value adjustment in nominal terms by using (1+BWACC) as the real discount factor and adjusting for inflation using RPI, taking into account the number of years since the Allowed Revenue for a given year was first calculated. This involves multiplying the reconciliation amount by (1+BWACC) raised to the power of the number of years since the Allowed Revenue for the relevant year was first calculated, and the ratio between the Applicable Change in Revenue RPI of the two Charging Years. The reconciliation amount is calculated relative to the value calculated in the prior year. The formulae used to perform this reconciliation are as set out in this statement of calculation.
Calculation 2017	Appendix 1, Part A 7 of Tideway's licence requires an under/over recovered revenue adjustment to be made to Allowed Revenue in the Third Charging Year and each Charging Year thereafter. However, as Tideway's Allowed Revenue for the First Charging Year was not billed until the Second Charging Year (due to the timing of licence award), this would have meant making a material reconciliation for revenue in the Third Charging Year that had been received during the course of the Second Charging Year.	In line with the spirit and intent of the licence, and as agreed with Ofwat for the 2016 Revenue Statement, an under/over recovered revenue adjustment to Allowed Revenue was not calculated for the Third Charging Year. The under/over recovered revenue adjustment will be calculated for the first time for the Fourth Charging Year and will cover Allowed Revenue from both the First and Second Charging Years, both billed in 2016/17 (see below).
Calculation 2017	The under/over recovered revenue adjustment is calculated with reference to Allowed Revenue for Charging Year t-2, as set out in Appendix 1, Part A 7 of Tideway's licence. If Allowed Revenue for Charging Year t-2 is interpreted as only 2016/17 Allowed Revenue, 2015/16 Allowed Revenue would be excluded from the reconciliation.	As per the first assumption in this table, treat Allowed Revenue for the First and Second Charging Years as a single year of Allowed Revenue for the purposes of revenue reconciliation and overpayment provisions in the licence and Revenue Agreement.
Calculation 2017	One of the terms in the formula for the under/over recovered revenue adjustment (as set out in Appendix 1, Part A 7 of Tideway's licence) is "the amount in respect of the IP Charge recovered by the Infrastructure Provider in respect of Charging Year t-2". However, the licence does not specify the time period to which this element of the calculation should relate.	Interpret "the amount in respect of the IP Charge recovered by the Infrastructure Provider in respect of Charging Year t-2" as the amount that has been paid by Thames Water and Tideway has received prior to the end of September of Charging Year t-1.
Calculation 2017	Appendix 1, Part A 7 of Tideway's licence requires that the under/over recovered revenue adjustment is calculated on a net present value neutral basis using the BWACC, but it does not specify the adjustment formulaically or specify the means of adjusting for inflation.	Apply a net present value adjustment in nominal terms by using (1+BWACC) as the real discount factor and adjusting for inflation using RPI. For 2018/19 Allowed Revenue, this involves multiplying the unadjusted reconciliation amount by (1+BWACC)^2 and the ratio between the Applicable Change in Revenue RPI of the two Charging years (to account for the two year delay in revenue receipts). For 2018/19, the reconciliation amount is calculated as the difference between 2016/17 Allowed Revenue and the amount recovered in respect of 2016/17 Allowed Revenue.
Calculation 2017	Additional Return on Capital and Additional Liquidity Building Blocks may never become relevant (i.e. these building blocks may only become relevant if Tideway applies for an Increase in Allowed Revenue (IAR)).	Exclude calculations for Additional Return on Capital and Additional Liquidity until there is a non-negligible probability that these will be required.
BBRA Calculation 2015, BBRA Calculation 2016	Reconciliation Adjustment (A 8) states that Financing Cost Adjustment should be subject to reconciliation, but none of the elements of this calculation are forecast.	Leave a placeholder for reconciliation of the Financing Cost Adjustment should this, for any reason, become relevant in future, but exclude from calculation at present.

Key to Charging Years

Year	Charging Year	Full description
2015/16	Y1	First Charging Year
2016/17	Y2	Second Charging Year
2017/18	Y3	Third Charging Year
2018/19	Y4	Fourth Charging Year
2019/20	Y5	Fifth Charging Year

Summary

The inputs to this calculation, and the sources of these inputs, are set out on the "Inputs 2017", "BBRA Inputs 2016" and "BBRA Inputs 2015" sheets of this workbook. The "BBRA Inputs 2015" sheet isolates the inputs required to reconcile the Allowed Revenue first calculated in 2015 (i.e. for the First and Second Charging Years), with the "BBRA Inputs 2016" sheet isolating the inputs required to reconcile the Allowed Revenue first calculated in 2016 (for the Third Charging Year). Both reconciliations are for updated cost and inflation data and the inputs are consistent with those set out on "Inputs 2017".

Tideway Allowed Revenue (t) =	Return on capital +	Liquidity +	Operating expenditure +	Financing cost adjustment +	Tax	+/- Revenue adjustment	+/- Building block for reconciliation adjustment	+ Additional return on capital	+ Additional liquidity
Tideway Allowed Revenue (Fourth Charging Year)	= 34.1 +	14.9 +	0	+ 0.5 +	0	+ 2.9	-3.2	+ 0	+ 0
	= 49.2	(£m)							

The calculation of each of these elements is described below.

Inputs

The inputs for the Allowed Revenue calculation are set out in "Inputs 2017", "BBRA Inputs 2016" and "BBRA Inputs 2015", along with source information and accompanying notes.

In line with Appendix 1 A8 of Tideway's licence, the Expenditure Forecast is that most recently verified by the Independent Technical Assessor (verified 29/10/17). It represents the company's latest forecast of cash expenditure over 2017/18, 2018/19 and 2019/20.

Return on Capital

The Return on Capital building block allows Tideway to earn a return on capital in relation to the forecast average RCV in the Charging Year in question. Average RCV is calculated using annual actual, estimated and forecast allowable project spend, as shown in the table below.

£m, 2014/15 prices	Y1	Y2	Y3	Y4	Y5
Opening RCV	0.0	148.7	478.5	989.5	1,555.3
Allowable Project Spend	148.7	329.8	511.0	565.8	546.6
Closing RCV	148.7	478.5	989.5	1,555.3	2,101.9
Average RCV	74.4	313.6	734.0	1,272.4	1,828.6

For the Fourth Charging Year, this building block is calculated as follows:

Return on Capital =	Average RCV in Y4	*	Bid WACC	*	Applicable Change in Revenue RPI for the Fourth Charging Year
=	1,272.4	*	2.497%	*	<u>275.8</u> 256.7
=	34.1	(£m)			

Liquidity

The Liquidity building block allows Tideway a liquidity allowance (return on capital) in relation to the incremental average RCV in the year following the Charging Year in question.

For the Fourth Charging Year, this building block is calculated as follows:

Liquidity =	(Forecast average RCV in year 5 - Average RCV in year 4) * Bid WACC * Applicable Change in Revenue RPI for the Fourth Charging Year
=	556.2 * 2.497% * <u>275.8</u> 256.7
=	14.9 (£m)

Operating Expenditure (opex)

In line with Tideway's licence, the Opex building block is currently zero as all costs are accounted for as capital expenditure.

Financing Cost Adjustment

The Financing Cost Adjustment building block is intended to protect against movements in the market cost of debt, recognising that Tideway's Bid WACC will apply for a much longer period than the standard five year control period for a WaSC or WoC.

The Financing Cost Adjustment for a given year is calculated as follows:

$$\text{Financing Cost Adjustment (t)} = \frac{(\text{Net Debt (t-2)} - \text{Net Debt (t-3)}) * \text{Market Cost of Debt Adjustment Factor (t)} * (1 + \text{BWACC})^2 * \text{Applicable Change in Revenue RPI (t)}}{\text{Applicable Change in Revenue RPI (t-2)}}$$

where Market Cost of Debt Adjustment Factor (t) =

i) if the difference between the BRP and the ARP on any ARP Calculation Date is +/- 50 bps, the market cost of debt adjustment will be 0
ii) if the difference between the BRP and the ARP is between +/- 51 bps and 100 bps, the market cost of debt adjustment factor will be equal to 50% of the amount by which such difference exceeds 50bps
iii) if the difference between the BRP and the ARP is greater than +/- 100 bps, the market cost of debt adjustment factor will be equal to the amount by which such difference exceeds 75 bps

BRP = the 12 months' trailing average of the Financing Cost Adjustment Index Yield as at 31 March 2015
ARP = the 12 months' trailing average of the Financing Cost Adjustment Index Yield as at 31 March of Charging Year t-2

where the Financing Cost Adjustment Index Yield = $\frac{(1 + \text{iBoxx BBB UK non-financials with 10+ year maturity})}{(1 + \text{spot implied inflation rates for 10 year maturity published by the Bank of England})} - 1$

Note that where the ratio between Net Debt and Ofwat-stated RCV (current prices) is higher than the notional debt to RCV ratio, Net Debt will be deemed to equal the notional debt to RCV ratio multiplied by the Ofwat-stated RCV in current prices.

The Financing Cost Adjustment Building Block for each Charging Year is the sum of the Financing Cost Adjustment for that Charging Year and all previous Charging Years, to reflect the build-up of the market cost of debt protection over time.

There was no Financing Cost Adjustment in respect of the Allowed Revenue for the First or Second Charging Years, as in both cases, Tideway did not exist in Charging Year t-2 and t-3, and so did not hold any Net Debt at this time. The Financing Cost Adjustment building block was zero in the Third Charging Year as the difference between the BRP and ARP was less than 50 bps, and therefore the Market Cost of Debt Adjustment Factor was zero.

In October 2017, the Bank of England published revised UK real yield estimates for 2015 and 2016, which affect the spot implied inflation rates for 10 year maturity used to calculate the Financing Cost Adjustment Index Yield. The revisions reflect a change in methodology related to the types of inflation-linked government bonds used to produce the data. These revisions affect the base reference point (BRP) and annual reference point (ARP) for 2016/17, which have been updated in the Revenue Statement and are set out below for completeness. As described above, there was no Financing Cost Adjustment in the First, Second or Third Charging Years, and so no adjustment to prior years' Allowed Revenue is required.

Charging Year	2015/16		2016/17	
	Original	Revised	Original	Revised
Base reference point	1.299%	1.298%	-	-
Annual reference point	-	-	1.464%	1.430%

For the Fourth Charging Year, this building block is calculated as follows:

$$\begin{aligned} \text{Financing Cost Adjustment (year 4)} &= \frac{(\text{Net Debt (year 2)} - \text{Net Debt (year 1)}) * \text{Market Cost of Debt Adjustment Factor (year 4)} * (1 + \text{BWACC})^2 * \text{Applicable Change in Revenue RPI (year 4)}}{\text{Applicable Change in Revenue RPI (year 2)}} \\ &= \frac{(-315.9 - (-130.4)) * (-0.22\%) * (1 + 0.02497)^2 * \frac{1.07}{1.01}}{1.01} \\ &= 0.5 \text{ (£m)} \end{aligned}$$

Where the Market Cost of Debt Adjustment Factor (year 4) results from the difference between the BRP and the ARP:

$$\text{BRP} - \text{ARP} = 1.30\% - 0.35\%$$

= 0.95%, a difference of 95 basis points, which falls in the greater than 50bps but less than 100 bps band.

This leads to a Market Cost of Debt Adjustment Factor (year 4) of 50% of the amount by which this difference exceeds 50bps, or $(50\% * (0.95\% - 0.50\%)) = -0.22\%$
(The Market Cost of Debt Adjustment Factor shall be expressed as a positive figure where the ARP exceeds the BRP, and as a negative figure where the BRP exceeds the ARP)

$$\begin{aligned} \text{Financing Cost Adjustment building block} &= \text{Financing Cost Adjustment (year 1)} + \text{Financing Cost Adjustment (year 2)} + \text{Financing Cost Adjustment (year 3)} + \text{Financing Cost Adjustment (year 4)} \\ &= 0 + 0 + 0 + 0.5 \\ &= 0.5 \text{ (£m)} \end{aligned}$$

Tax

In line with Tideway's licence, the tax building block is zero as Tideway is not currently required to pay corporation tax or any other income-based tax.

Revenue Adjustment

The revenue adjustment building block is to reconcile for under/over recovered Allowed Revenue in previous Charging Years.

In line with the assumptions set out above, there was no revenue adjustment for the Allowed Revenue in the Third Charging Year, as Thames Water only started billing Tideway's revenue in the Second Charging Year (2016/17).

Therefore, this building block applies for the first time in the Fourth Charging Year (2018/19).

The Revenue Adjustment for the Fourth Charging Year will be based on under recovery of revenue for the Second Charging Year. The table below sets out the amount in respect of the IP Charge recovered by Tideway in respect of the Second Charging Year at the time this Revenue Statement is being prepared. This is split between 2016/17 (as reported in our 2016/17 Annual Report) and the period April to September 2017 (consistent with the assumptions set out in the table at the beginning of this statement).

Charging Year	Allowed revenue	Payment received from Thames Water in period	
		2016/17 Full year	2017/18 Apr-Sep
2015/16	11.2	26.7	4.3
2016/17	22.4		

For the Fourth Charging Year, this building block is calculated as follows:

$$\begin{aligned} \text{Revenue Adjustment (Fourth Charging Year) (before NPV adjustment)} &= \text{Allowed Revenue for the Second Charging Year} - [\text{the amount in respect of the IP Charge recovered by the Infrastructure Provider in respect of the Second Charging Year} + \text{the amount in respect of the IP Charge recovered by the Infrastructure Provider in respect of any Charging Year falling prior to Second Charging Year that has not been included in any previous Revenue Adjustment calculation}] \\ &= 33.6 - [31.0 + 0] \\ &= 2.6 \text{ (£m)} \end{aligned}$$

The Revenue Adjustment is subject to a net present value adjustment as specified in Tideway's licence and calculated in line with the assumptions set out above.

$$\begin{aligned} \text{Revenue Adjustment (Fourth Charging Year) (after NPV adjustment)} &= \text{Revenue Adjustment (Fourth Charging Year) before NPV adjustment} * (1 + \text{Bid WACC})^2 * \frac{\text{Applicable Change in Revenue RPI (year 4)}}{\text{Applicable Change in Revenue RPI (year 2)}} \\ &= 2.6 * (1 + 0.02497)^2 * \frac{1.07}{1.01} \\ &= 2.9 \text{ (£m)} \end{aligned}$$

Building Block Reconciliation Adjustment (BBRA)

A reconciliation adjustment applies for the Return on Capital, Liquidity, Opex, Financing Cost Adjustment, Tax, Additional Return on Capital and Additional Liquidity building blocks.

The reconciliation is calculated on a net present value neutral basis, using the Bid WACC as the discount factor. It reconciles for actual values realised since the previous calculation of the Allowed Revenue for a particular year, and updated forecasts. In practice, this means reconciling for updated expenditure and inflation.

This building block was applied for the first time in the calculation of 2017/18 Allowed Revenue, and it reconciled the 2015/16 and 2016/17 Allowed Revenue, both of which were calculated in the 2015 Revenue Statement.

In the 2017 Revenue Statement, the building block includes a further reconciliation of 2015/16 and 2016/17 Allowed Revenue, and reconciles 2017/18 Allowed Revenue for the first time. The 2015/16 Allowed Revenue is being reconciled for the final time in this 2017 Revenue Statement. This is because actual values have now been realised for all inputs to this calculation, with no forecasts that would require further reconciliation.

The Building Block Reconciliation Adjustment uses the company's latest forecast of expenditure as described in the "Inputs" section above. The differences between 2016/17 actual expenditure and the inputs used for the 2016 Revenue Statement are due to delayed construction expenditure and the contingency provision not being incurred. Similar information will be provided for 2017/18 in the 2018 Revenue Statement, once the full year of actual expenditure has been realised.

	Allowed Revenue		
	2015/16	2016/17	2017/18
Allowed Revenue - as calculated in 2015 Revenue Statement	11.2	22.4	
Allowed Revenue - as calculated/re-calculated in 2016 Revenue Statement	8.7	19.8	34.0
Allowed Revenue - as recalculated for 2017 Revenue Statement	8.1	18.6	32.9

The table above shows the Allowed Revenue for 2015/16, 2016/17 and 2017/18 as calculated in the 2015 and 2016 Revenue Statements, and recalculated for this 2017 Revenue Statement.

The Allowed Revenue figures set out above exclude the building block reconciliation adjustment (BBRA) and revenue adjustment (RA) building blocks, which are not subject to reconciliation (and which were zero for 2015/16 and 2016/17 Allowed Revenue).

The building block reconciliation is made on a net present value neutral basis using the Bid WACC as a discount factor and adjusting for inflation using RPI, which takes into account the number of years since the Allowed Revenue for a given year was first calculated. This gives the following calculation:

$$\begin{aligned} \text{Building block reconciliation adjustment (Fourth Charging Year)} &= \frac{(\text{2015/16 Allowed Revenue [2017 calculation]} - \text{2015/16 Allowed Revenue [2016 calculation]}) * ((1 + \text{Bid WACC})^2 * \frac{\text{Applicable Change in Revenue RPI (year 4)}}{\text{Applicable Change in Revenue RPI (year 1)}}) + (\text{2016/17 Allowed Revenue [2017 calculation]} - \text{2016/17 Allowed Revenue [2016 calculation]}) * ((1 + \text{Bid WACC})^2 * \frac{\text{Applicable Change in Revenue RPI (year 4)}}{\text{Applicable Change in Revenue RPI (year 2)}}) + (\text{2017/18 Allowed Revenue [2017 calculation]} - \text{2017/18 Allowed Revenue [2016 calculation]}) * ((1 + \text{Bid WACC})^2 * \frac{\text{Applicable Change in Revenue RPI (year 4)}}{\text{Applicable Change in Revenue RPI (year 3)}})}{1.01} \\ &= \frac{(8.1 - 8.7) * ((1 + 0.02497)^2 * \frac{1.07}{1.01}) + (18.6 - 19.8) * ((1 + 0.02497)^2 * \frac{1.07}{1.01}) + (34.0 - 32.9) * ((1 + 0.02497)^2 * \frac{1.07}{1.01})}{1.01} \end{aligned}$$

$$= -0.7 + -1.4 + -1.2$$

$$= -3.2 \text{ (£m)}$$

The sections below set out the recalculation of the 2015/16, 2016/17 and 2017/18 Allowed Revenue.

Return on Capital

First Charging Year
Return on Capital = Average RCV in First Charging Year * Bid WACC * Applicable Change in Revenue RPI for the First Charging Year

$$= 74.4 * 2.497\% * \frac{259.8}{256.7}$$

$$= 1.9 \text{ (£m)}$$

Second Charging Year
Return on Capital = Average RCV in Second Charging Year * Bid WACC * Applicable Change in Revenue RPI for the Second Charging Year

$$= 313.6 * 2.497\% * \frac{259.8}{256.7}$$

$$= 7.9 \text{ (£m)}$$

Third Charging Year
Return on Capital = Average RCV in Third Charging Year * Bid WACC * Applicable Change in Revenue RPI for the Third Charging Year

$$= 734.0 * 2.497\% * \frac{265.5}{256.7}$$

$$= 19.0 \text{ (£m)}$$

Liquidity

First Charging Year
Liquidity = (Forecast average RCV in year 2 - Average RCV in year 1) * Bid WACC * Applicable Change in Revenue RPI for the First Charging Year

$$= 239.3 * 2.497\% * \frac{259.8}{256.7}$$

$$= 6.0 \text{ (£m)}$$

Second Charging Year
Liquidity = (Forecast average RCV in year 3 - Average RCV in year 2) * Bid WACC * Applicable Change in Revenue RPI for the Second Charging Year

$$= 420.4 * 2.497\% * \frac{259.8}{256.7}$$

$$= 10.6 \text{ (£m)}$$

Third Charging Year
Liquidity = (Forecast average RCV in year 4 - Average RCV in year 3) * Bid WACC * Applicable Change in Revenue RPI for the Third Charging Year

$$= 538.4 * 2.497\% * \frac{265.5}{256.7}$$

$$= 13.9 \text{ (£m)}$$

Opex
In line with Tideway's licence, the Opex building block is zero as all costs are accounted for as capital expenditure. Therefore, no reconciliation is required.

Financing Cost Adjustment
The Financing Cost Adjustment does not rely on any forecast inputs and therefore a reconciliation for actuals and updated forecasts is not required.

Tax
In line with Tideway's licence, the tax building block is zero as Tideway is not required to pay corporation tax or any other income-based tax.

Additional Return on Capital and Additional Liquidity
These building blocks will only apply if spend exceeds the Threshold Outturn and Tideway has made an IAR Overrun Application. Therefore this building block is zero for the purposes of this calculation.

Recalculated Allowed Revenue

Tideway Allowed Revenue (t) = Return on capital + Liquidity + Operating expenditure + Financing cost adjustment + Tax + Additional return on capital + Additional liquidity

(excludes the building block reconciliation adjustment and revenue adjustment building blocks, which are not subject to reconciliation)

The calculation of these building blocks is as described above. This results in the following recalculated Allowed Revenue for 2015/16, 2016/17 and 2017/18:

Tideway Allowed Revenue (First Charging Year)	=	1.9	+ 6	+ 0	0 +	0 +	0 +	0
	=	7.9	(£m)					
Tideway Allowed Revenue (Second Charging Year)	=	7.9	+ 10.6	+ 0	0 +	0 +	0 +	0
	=	18.6	(£m)					
Tideway Allowed Revenue (Third Charging Year)	=	19.0	+ 13.9	+ 0	0 +	0 +	0 +	0
	=	32.9	(£m)					

The Allowed Revenue for the First Charging Year is subject to an NPV adjustment as follows:

$$\text{Adjusted Allowed Revenue (First Charging Year)} = \text{Allowed Revenue (First Charging Year)} * (1 + \text{BWACC})^{(0.5 + \text{PD}/2)}$$

where PD is the proportion of the First Charging Year between Licence Award and the end of the First Year

$$= 7.9 * (1 + 0.02497)^{(0.5 + (221/366)/2)}$$

$$= 8.1 \text{ (£m)}$$

Additional Return on Capital

The Additional Return on Capital building block will only apply if spend exceeds the Threshold Outturn and Tideway has made an IAR Overrun Application. Therefore this building block is zero for the purposes of this calculation.

Additional Liquidity

The Additional Return on Capital building block will only apply if spend exceeds the Threshold Outturn and Tideway has made an IAR Overrun Application. Therefore this building block is zero for the purposes of this calculation.