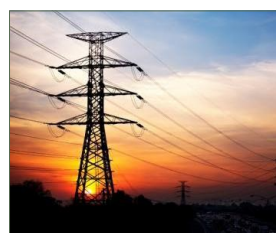


# Water & Sewerage Services Price Control 2015-21

Final Determination – Annex I  
PC13 Out-turn Report  
December 2014



## Contents page

# Water and Sewerage Services Price Control 2015-21 Final Determination Annex I PC13 Out-turn Report

<b>1.0</b>	<b>Introduction.....</b>	<b>1</b>
<b>2.0</b>	<b>Adjusting for Inflation .....</b>	<b>3</b>
<b>3.0</b>	<b>Capital Expenditure Variance over PC13 .....</b>	<b>4</b>
<b>4.0</b>	<b>Our Approach to Logging Up and Logging Down ....</b>	<b>5</b>
<b>5.0</b>	<b>Logging Up and Logging Down by Sub-programme</b>	<b>8</b>
5.1.	Introduction.....	8
5.2.	Base maintenance investment.....	8
5.3.	Capital enhancement investment by sub-programme .....	9
5.4.	Logging up and logging down summary.....	19
<b>6.0</b>	<b>Adjustment for Return on Capital.....</b>	<b>21</b>

# 1.0 Introduction

- 1.1.1 This annex sets out the Utility Regulator's (UR) assessment of capital expenditure in the two year PC13 price control period (2013-14 & 2014-15). It describes the action we have taken to protect both consumers and NI Water in respect of changes in capital investment and delivery of outputs relative to our final determination for PC13.
- 1.1.2 Our assessment is based on the capital expenditure and outputs profile reported in the company's 2014-15Q2 Capital Investment Monitoring (CIM) submission. It takes account of the supporting evidence provided in the 'DD Response Q2 CIM Commentary and PC13 Outturn Report' update submitted on 27 October 2014. This updates the assessment made for the draft determination with the company's latest best estimates for the completion of the PC13 programme.
- 1.1.3 Our assessment of capital investment in PC13 takes account of three key issues:
- Any difference in capital cost inflation relative to the assumptions which were applied in the PC13 final determination;
  - Any change in budget relative to the allowances in the PC13 final determination; and
  - Any change to the outputs which will be delivered in the PC13 period relative to those included in the PC13 final determination.
- 1.1.4 We have made two adjustments to the Regulatory Capital Value (RCV) at the start of PC15 to reflect these changes:
- We updated the RCV to reflect actual levels of inflation relative to the inflation assumptions made in the PC13 final determination. This work is described in Annex A; and
  - The value of additional outputs delivered by the company has been added to the RCV and the value of outputs the company has not delivered has been deducted from the RCV – a process commonly known as logging up and logging down. The net change in the RCV at the start of PC15 due to logging up and logging down is -£19.9m in 2010-11 prices. The build up of this figure is summarised in Table 1.1. More detailed information on the allocation of variance by Capex sub-programme is given in Table 5.1.
- 1.1.5 The figures in this report are expressed in real terms in 2010-11 prices unless stated otherwise. This is consistent with the 2010-11 base year used for the PC13 final determination. The Construction Output Price Index (COPI) has been used to adjust for inflation using a base year index of 107.375.

- 1.1.6 We have summarised our analysis under 21 capital sub-programmes. These sub-programmes group together similar types of work taking account of the type of asset, the purpose of the investment and the procurement route. They are a practical grouping used to facilitate understanding of a substantial and wide ranging investment programme.
- 1.1.7 The following sections provide more detailed information on our assessment of logging up and logging down for PC13:
- Section 2 Adjusting for inflation;
  - Section 3 Capital expenditure variance over PC13;
  - Section 4 Our Approach to logging up and logging down;
  - Section 5 Logging up and logging down by sub-programme; and
  - Section 6 Adjustment for return on capital.
- 1.1.8 A summary of the analysis is provided in Table 1.1.

**Table 1.1 – PC13 Logging up and logging down (2010-11 prices)**

Item description	RCV adjustment (£m)
Outputs logged up	7.8
Outputs logged down	-27.0
Return on capital adjustment	-0.8
Total RCV adjustment	-19.9
Note 1. In 2010-11 prices consistent with the base year for the PC13 final determination.	

## 2.0 Adjusting for Inflation

- 2.1.1 This section describes how PC13 out-turn has been adjusted for the impact of inflation.
- 2.1.2 When assessing logging up and logging down it is necessary to compare and report figures in a common price base. We have used a common price base of 2010-11 consistent with the base year for the PC13 final determination.
- 2.1.3 In the PC13 final determination we noted that we would monitor compliance with the final determination using COPI. The COPI indices used in this assessment are shown in Table 2.1.

**Table 2.1 – COPI indices**

	2010-11		2013-14	2014-15
PC13 assumed indices	107.375		115.490	118.377
Current actual and projected indices	107.375		118.375	124.886
Note 1. Assumes that COPI will increase by 5.5% in 2014-15				

## 3.0 Capital Expenditure Variance over PC13

- 3.1.1 This section summarises the change in capital expenditure from the PC13 final determination in nominal and real terms.
- 3.1.2 The funding available to NI Water is constrained by public expenditure budgets which are set in nominal terms. Because the budget is constrained in nominal terms, NI Water might find it necessary to adjust the outputs delivered to reflect inflationary pressures. We assess NI Water's performance in real terms using a constant price base to ensure that the impact of inflation on the delivery of outputs is taken account of. If capital inflation moves in favour of the company we expect the company to deliver additional outputs. If capital inflation increases by more than assumed in the determination, the company may have to reduce the outputs delivered.
- 3.1.3 The variance in capital expenditure from the PC13 final determination is summarised in Table 3.1.

**Table 3.1 – Capital expenditure variance in PC13**

	2013-14	2014-15	PC13 Total
PC13 final determination (real)	156.2	141.4	297.6
PC13 final determination (nominal)	168.0	155.9	323.8
PC13 out-turn (real)	152.0	133.1	285.1
PC13 out-turn (nominal)	167.5	154.9	322.4
PC13 variance (real)	-4.2	-8.2	-12.4
PC13 variance (nominal)	-0.4	-1.0	-1.4
Note 1. Figures may not sum due to rounding.			
Note 2. Real in 2010-11 prices consistent with the base year for the PC13 final determination.			

- 3.1.4 The company's latest best estimate is that it will spend £1.4m less than budget in nominal terms. This equates to an under-spend in real terms of £12.4m.
- 3.1.5 The variances are small when compared with the nominal and real (2007-08 prices) variances of expenditure which occurred in PC10 (-£41.4m real and -£60.9m nominal). The company has continued to demonstrate its ability to manage its investment within the nominal budget available to it through the public expenditure regime.

## 4.0 Our Approach to Logging Up and Logging Down

- 4.1.1 This section describes our approach to logging up and logging down capital investment taking account of the outputs delivered.
- 4.1.2 We assess the outcome of the price control in terms of the outputs delivered for consumers rather than the amount of money spent. In principle, we would expect a reduction in real expenditure to result in an equivalent reduction in the value of the outputs delivered. However, the company may still out-perform and deliver more outputs than expected, or under-perform and deliver fewer outputs than expected. To ensure that any adjustment made to the RCV properly reflects the delivery of outputs, we have assessed the change in outputs delivered over the PC13 period, a process commonly known as logging up and logging down.
- 4.1.3 The process of logging up and logging down investment reflects the value of the outputs delivered:
- Where an additional output is delivered, the post efficiency cost of delivery is 'logged up' by adding the value of the output to the RCV; and
  - Where an agreed output is not delivered, the value of the output is 'logged down' by deducting the value of the output from the RCV.
- 4.1.4 We have assessed logging up and logging down at a capital sub-programme level in the first instance. Where more analysis of expenditure and outputs adds value, we have undertaken a detailed assessment of change to individual outputs, or groups of outputs, within a sub-programme.
- 4.1.5 Logging up and logging down is not intended to benefit the company by correcting errors or omissions in the company's business plan. Nor is it intended to adjust the RCV for differences between the final determination and the cost of delivery. Therefore, when explaining the change in a sub-programme of work, it is necessary to separate the impact of changes in outputs from other changes in the programme. To achieve this we have explained the variance in each capital sub-programme in five categories:
- Change in base maintenance expenditure or allocation;
  - Change in the level of expenditure carried over from the last year of the PC10 period (2012-13);
  - Logging up of an additional output;
  - Logging down of an output deferred; and

- Performance of NI Water where the same output has been delivered for less (out-performance) or more (under-performance).

4.1.6 To maintain a clear reconciliation of changes to the programme it is necessary to adopt a consistent approach for stating adjustments as either positive or negative. In our analysis, increased expenditure is classed as positive and reduced expenditure is classed as negative. The application of this approach to each category of change considered is set out in Table 4.1.

**Table 4.1 – Consistent allocation of adjustments**

Category	Positive adjustment	Negative adjustment
Base maintenance	Over-spend in PC13	Under-spend in PC13
PC10 carry over	Higher than planned expenditure in PC13 due to lower than planned spend in the PC10 period	Lower than planned expenditure in PC13 due to higher than planned spend in the PC10 period
Logging up and logging down	Value of additional output logged up	Value of additional output logged down
Performance	Higher than planned spend in PC13 to deliver the same output	Lower than planned spend in PC13 to deliver the same output

4.1.7 We have assessed the variance in base maintenance expenditure as a single category and not undertaken a detailed assessment by capital sub-programme. While we monitor changes in base maintenance to inform future price controls, we have concluded that it would not be proportionate to challenge these changes unless there is a compelling reason to do so. Consistent with our approach at the draft determination, we have concluded that it would not be appropriate to adjust the RCV to reflect changes in base maintenance investment. If the company did not continue to invest at planned levels or serviceability had not been maintained, we would then seek further information on the application of base maintenance investment.

4.1.8 Having considered base maintenance as a single item, the detailed assessment of logging up and logging down considers investment to enhance the assets. To arrive at a baseline for assessing variance, we applied the efficiency assumptions of the PC13 final determination to the individual capital sub-programmes taking account of the allocation of expenditure by sub-service (water infrastructure, water non-infrastructure, sewerage infrastructure and sewerage non-infrastructure).



- 4.1.9 We asked the company to provide a detailed report on PC13 out-turn in its business plan submission. For this final determination, we asked the company to update this report using the most up to date information available. This was provided in the detailed 2014-15Q2 CIM submission. This included an update on actual and projected expenditure and the delivery of outputs over the PC13 and PC15 periods. We have taken account of this revised information in our assessment.
- 4.1.10 Our determination for PC13 allowed the company to recover a return on capital on planned investment. To account for this, we have made a further adjustment to the RCV to reflect the return on capital funded in the PC13 period for the value of logging up and logging down. Our approach to this is described in Section 6.0 of this document.
- 4.1.11 We have identified a net increase in expenditure in the PC13 period in projects which carried over from the PC10 period. In our PC13 final determination we noted that, having applied logging up and logging down to the PC10 outcome and established a clear baseline for PC13, we did not intend to log up any additional carry over from PC10 into PC13 in our determination for PC15. Some delay and acceleration at the transition between Price Controls is inevitable. But this is an issue to be managed by the company and it is not necessary for the Regulator to re-assess this transition when considering logging up and logging down.
- 4.1.12 Where the investment in the PC15 period to complete an output included in the PC13 determination has increased, we have logged down the increased investment and then allowed the planned cost for completing the investment in the PC15 final determination. This ensures that consumers only pay once for the planned cost of the output while ensuring that the PC15 investment plan properly reflects the cost envisaged to complete the work.

## 5.0 Logging Up and Logging Down by Sub-programme

### 5.1. Introduction

- 5.1.1 This section provides summary information on our assessment of logging up and logging down by sub-programme.
- 5.1.2 We have summarised our analysis of investment in PC13 by 21 capital sub-programmes. These sub-programmes group together similar types of work taking account of the type of asset, the purpose of the investment and the procurement route. They are a practical grouping used to facilitate understanding of a substantial and wide ranging investment programme.
- 5.1.3 Our assessment of variance by individual sub-programme is reported in 2010-11 prices consistent with the base year for the PC13 final determination. Base maintenance is treated as a single block of expenditure. The assessment of the individual sub-programmes reflects the enhancement element of investment only.

### 5.2. Base maintenance investment

- 5.2.1 Base maintenance investment is the capital investment necessary to maintain the existing assets and the service they deliver. The key outcome of base maintenance investment in any price control is to maintain serviceability and the company must decide how to prioritise investment to best achieve this.
- 5.2.2 In view of this, when we assess the outcome of a price control we generally consider base maintenance investment as a block. We would only consider a more granular assessment if there was a significant variance in expenditure or serviceability had not been maintained.
- 5.2.3 The variance in base maintenance investment is shown below.

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
Base maintenance	145.7	150.9	5.3	0.0	0.0	5.3

- 5.2.4 The company projects an over-spend of 4% against the original base maintenance budget. Expenditure is broadly in line with expectations and serviceability has been maintained. In view of this we have decided not to log up

the variance. This is consistent with our approach for the draft determination. It ensures that our decision is not based on short term considerations such as the need for the company to spend within its nominal budget in the final year of a price control. The company continues to have the ability to balance capital maintenance and enhancement investment in subsequent years to achieve the best overall outcome for consumers.

### 5.3. Capital enhancement investment by sub-programme

#### Sub-programme 00 – Capitalised salaries and on-costs

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
00 – Capitalised salaries and on-costs	9.4	9.2	-0.2	0.5	-1.9	1.1

5.3.1 There has been an overall increase in capitalised salaries and on-costs relative to the PC13 final determination of £2.5m with -£0.2m attributed to enhancement.

5.3.2 We have not taken account of the overall reallocation of capitalised salaries and on-costs or the change in allocation between base maintenance and enhancement in our assessment. A proportion of expenditure on capitalised salaries and on-costs has been logged up and logged down to reflect the delivery of outputs and the associated logging up and logging down which is described below.

#### Sub-programme 01 – Base maintenance (water)

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
01 – Base maintenance (water)	0.2	0.9	0.7	0.7	-0.5	0.5

5.3.3 For the final determination, we have logged up additional investment on enhancement schemes reported under base maintenance (water) where a specific additional output was identified by the company as follows.

5.3.4 Service Reservoir By-pass schemes arising from the Freeze Thaw Action Plan, investment at Killyhevlin WTW sludge settlement system and investment in water supply on Rathlin Island covered under Change Control Protocol (CCP).

Work on security enhancements at water treatment works allocated to base maintenance has been reallocated to enhancement and logged up. Investment in Glenlough Pumping Station and Pumping main which will carry over into PC15 has been logged down.

### Sub-programme 02 – Base maintenance (sewerage)

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
02 – Base maintenance (sewerage)	1.2	3.1	1.9	1.8	0.0	0.1

- 5.3.5 The PC13 final determination included an allowance for minor enhancement improvements when base maintenance work was being undertaken. The company asked for an increase in this expenditure to be logged up.
- 5.3.6 The company identified three examples where changes to scope have delivered an enhancement element. We have logged up investment for the following.
- 5.3.7 Removal of Inlet Screens and Installation of Solid Handling Pumps, Carrickmore WWPS Upgrade Including Replacement of Pumping Main and Hilltown WWTW Phase 2. We also logged up the enhancement element of an additional project to improve the performance of Sydenham WWPS.
- 5.3.8 We have logged up investment in seven projects which are covered under the CCP. These are improvements to overflows at sewage pumping stations which were substituted into the programme when delays occurred to the delivery of the nominated Unsatisfactory Intermittent Discharge (UID) programme.
- 5.3.9 The remainder of the variance in this sub-programme has been allocated to 'other'.

### Sub-programme 03 – Water resources

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
03 – Water resources	0.1	0.7	0.6	0.1	-0.4	0.9

- 5.3.10 For the final determination, we have logged up the value of work undertaken by NI Water to prepare Water Resource Management Plan requirements. An over-run on the Strule Derg abstraction project has been allocated to performance.

- 5.3.11 Additional work required to improve chemical dosing at Derg WTW to treat water from the Strule is now planned for PC15 and the value of this work has been logged down.

### Sub-programme 04 – Water treatment works

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
04 – Water treatment works	8.1	8.9	0.8	0.0	-0.4	1.2

- 5.3.12 The enhancement baseline expenditure has been adjusted to correct the allocation of Killyhevlin WTW in the PC13 baseline and add the baseline expenditure from Dorisland GAC which was added through the CCP. A projected over-run of expenditure into PC15 on Killyhevlin WTW has been logged down. The remainder of the variance has been allocated to performance and PC10 carry over, this includes additional expenditure on water treatment works security carried over from PC10.

### Sub-programme 05 – Trunk mains

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
05 – Trunk mains	17.2	14.4	-2.8	0.1	-3.5	0.6

- 5.3.13 The trunk-main investment planned for PC13 will under-spend with some projects running into PC15.
- 5.3.14 Work on the Ballydougan to Newry trunk main has been delayed to PC15 with £3.0m logged down to reflect the carry over. The Castor Bay to Belfast trunk main is still expected to reach beneficial use in PC13 but investment of £0.6m which will carry over into PC15 has been logged down. Feasibility work for the Carmoney to Strabane Strategic Link Watermain has been logged up by £0.1m.

**Sub-programme 06 – Service reservoirs**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
06 – Service reservoirs	0.9	0.5	-0.4	0.0	-0.4	0.0

5.3.15 The project to deliver Crieve Service Reservoir is delayed into PC15 and £0.4m which carries over has been logged down.

**Sub-programme 07 – Service reservoir refurbishment**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
07 – Service reservoir refurbishment	3.1	0.8	-2.2	0.0	-2.3	0.0
Note 1. Variation due to rounding						

5.3.16 The variation in expenditure relates to a planned Service Reservoir Enhanced Security project which has been delayed until PC15. The value of the delayed work has been logged down.

**Sub-programme 08 – Water mains rehabilitation**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
08 – Water mains rehabilitation	24.7	25.5	0.8	0.0	0.0	0.8

5.3.17 In its revised submission, the company reported that it expects to deliver the full water mains activity output included in the PC13 determination. The variation of expenditure has been allocated to other.

**Sub-programme 09 – Leakage**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
09 – Leakage	2.0	1.4	-0.7	0.0	0.0	-0.7

5.3.18 The overall investment in leakage is at the level planned in PC13. The enhancement variance arises from a change in the allocation of investment between base and enhancement. In its business plan submission, the company highlighted a concern that the allocation may be unrepresentative. As the company is on track to deliver against its PC13 leakage targets, we have not logged down the variance.

**Sub-programme 10 – Ops capital (water)**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
10 – Ops capital (water)	7.6	6.3	-1.3	0.0	0.0	-1.3

5.3.19 The company has attributed the reduced level of enhancement investment to lower than expected levels of activity in the housing market. We have not logged down the saving associated with the change in this reactive activity. It is one of a number of activities we expect the company to estimate at the start of a price control and then manage its activities and investment within the overall price control settlement. In the case of development work, the reduction in expenditure is off-set in part by a reduction in capital income from connections.

**Sub-programme 12 – Sewerage**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
12 – Sewerage	26.7	18.2	-8.6	2.4	-8.9	-2.1

5.3.20 This sub-programme covers a range of activities related to the sewerage network including general maintenance of the sewerage system, upgrading unsatisfactory intermittent discharges and addressing the risk of property flooding. The latter activities contribute to enhancement investment.

5.3.21 The PC13 final determination included investment to deliver a defined programme of improvements to UID's. This programme of work has been

subject to delay and the company has identified investment of £7.5m which will carry over to PC15 to deliver these outputs. This carry over expenditure has been logged down with the funding necessary to deliver the outputs reinstated in the PC15 period.

- 5.3.22 The PC15 business plan submission identified investment in improvements to additional UIDs which were not included in the PC13 determination. Following a recent change control submission, we have logged up £2.0m for these additional outputs.
- 5.3.23 The recent change control submission also identified investment in a pumping stormwater station at Beragh in conjunction with work to improve river flood defences. The additional investment of £0.4m was logged up.
- 5.3.24 The company does not expect to provide solutions at a number of properties at risk of repeat flooding (44 now planned compared to 67 outputs allowed in the PC13 final determination). The company has attributed this to the outcome of feasibility studies carried out in PC13 to confirm the risk of flooding and identify solutions. The company has reported that these studies revealed that significant numbers of properties placed on the at-risk flooding register using preliminary information were not at risk of flooding due to hydraulic incapacity of the sewerage system. The expenditure on solutions to flooding problems is £1.3m lower than the PC13 final determination allowance. Allowing for the change in outputs delivered due to improved information, we have logged down this amount for the final determination.

### Sub-programme 15 – WwTW carry over projects

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
15 – WwTW carry over projects	2.4	2.9	0.5	0.0	0.0	0.5

- 5.3.25 This programme of work related to one WwTW output initially planned for PC10 but delayed to PC13. The company plans to deliver the output in PC13 and the variance in expenditure is attributed to performance and PC10 carry over.



### Sub-programme 16 – WwTW new starts

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
16 – WwTW new starts	24.4	24.5	0.1	2.2	-3.4	1.3

5.3.26 This sub-programme covers the delivery of a defined programme of upgrades to wastewater treatment works to meet new consent standards or cater for historic and future growth.

5.3.27 We assessed the variation of this programme in four categories and allocated the variance as follows:

- Category 1 – Planned outputs**, covering delivery of the 38 WwTW outputs included in the PC13 final determination. The company intend to deliver most outputs planned with a number of changes subject to the CCP. Investment of £3.4m which will carry over to PC15 has been logged down. This includes work on Robinstown WWTW deferred to the end of PC15 under the CCP. Additional investment on PC13 projects of £2.2m has been logged up, covering storage at Newcastle WWTW, additional outputs for Annacloy and additional scope of flow measurement at wastewater treatment works.
- Category 2 – Preparatory work**, covering £1.2m of work in the PC13 period to plan investment in PC15. Funding for this work was included in PC13 final determination under Sub-programme 02. The investment has not been logged up.
- Category 3 – Additional outputs**, covering the additional outputs at Aghagallon MBBR trial and Castlarchdale Wetland. The additional sum of £0.2m has been logged up.
- Category 4 – Other**, other work included in the PC13 final determination not associated with a nominated output. The variance of this category has been allocated to other.

**Sub-programme 17 – Small WwTW programme**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
17 – Small WwTW programme	4.1	3.1	-1.0	0.0	0.0	-1.0

5.3.28 The company estimates that it will deliver all 25 targeted upgrades of small wastewater treatment works in PC13. We have allocated the variance to performance to reflect the expected saving on the programme of work.

**Sub-programme 18 – Ops capital (sewerage)**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
18 – Ops capital (sewerage)	0.9	2.0	1.0	0.0	0.0	1.0

5.3.29 The company has attributed the increase in enhancement investment to higher than expected levels of activity on sewerage connections. We have not logged up the additional cost associated with the change in this reactive activity. It is one of a number of activities we expect the company to estimate at the start of a price control and then manage its activities and investment within the overall price control settlement. In the case of development work, the increase in expenditure is off-set in part by an increase in capital income through connection charges, infrastructure charges and requisition receipts.

**Sub-programme 19 – Metering**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
19 – Metering	0.5	0.4	0.0	0.0	0.0	0.0
Note 1. Variation due to rounding						

5.3.30 The planned level of expenditure has been delivered and the company has continued to provide metered connections on new properties as required. No adjustment has been necessary.

**Sub-programme 20 – Management & general**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
20 – Management & general	9.2	6.0	-3.2	0.0	-3.2	0.0

5.3.31 The company has broadly maintained its services and continued to invest to enhance its management and general capability within the available budget. We have not investigated the programme in detail and have taken the pragmatic approach of logging down the variance. The company agreed with this approach in its response to the draft determination.

**Sub-programme 23 – New and renew water mains**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
23 – New and renew water mains	2.4	1.3	-1.0	0.0	0.0	-1.0

5.3.32 The company has attributed the decrease in enhancement investment to lower than expected levels of development activity. We have not logged down the reduction in cost associated with the change in this reactive activity. It is one of a number of activities we expect the company to estimate at the start of a price control and then manage its activities and investment within the overall price control settlement. In the case of development work, the decrease in expenditure should be off-set in part by a decrease in capital income through connection charges, infrastructure charges and requisition receipts.

**Sub-programme 24 – New and renew sewerage**

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
24 – New and renew sewerage	5.3	4.0	-1.2	0.0	0.0	-1.2

5.3.33 The company has attributed the reduction in enhancement investment to lower than expected levels of development activity. We have not logged down the reduction in cost associated with the change in this reactive activity. It is one of a number of activities we expect the company to estimate at the start of a price control and then manage its activities and investment within the overall price

control settlement. In the case of development work, the reduction in expenditure should be off-set in part by a reduction in capital income.

### Sub-programme 98 – Additional outputs

	PC13 variance (£m)			Variance allocation (£m)		
	PC13 FD	CAP	Var	Logged up	Logged down	Other
98 – Additional outputs	1.4	0.0	-1.4	0.0	-2.1	0.7

- 5.3.34 The PC13 final determination included an allowance of £6.1m to invest in additional outputs which had not been included in the company's PC13 business plan submission. This included a 19% allocation to base maintenance to allow for accelerated maintenance which might be associated with quality enhancement schemes. From this budget £3.6m was reallocated to Sub-programme 04 following PC13 Change Control Protocol 001, which added an additional water treatment works output for the provision of GAC at Dorisland WTW to remove pesticides.
- 5.3.35 The balance of the budget of £2.6m has been retained in Sub-programme 98 with a base maintenance allocation of 19%. In the absence of a clear plan for this investment, the enhancement element has been logged down.

## 5.4. Logging up and logging down summary

Table 5.1 – PC13 Out-turn allocation (£m 2010-11 prices)

	Variance in enhancement expenditure (£m)			Out-turn variance allocation (£m)				
	PC13 FD	CAP	Var	Logged up	Logged down	Base allocation	PC10 carry over	Performance
Base maintenance (total)	145.7	150.9	5.3	0.0	0.0	5.3	0.0	0.0
00 – Capitalised salaries and on-costs	9.4	9.2	-0.2	0.5	-1.9	0.0	0.0	1.1
01 – Base maintenance (water)	0.2	0.9	0.7	0.7	-0.5	0.0	0.0	0.5
02 – Base maintenance (sewerage)	1.2	3.1	1.9	1.8	0.0	0.0	0.0	0.1
03 – Water resources	0.1	0.7	0.6	0.1	-0.4	0.0	0.1	0.7
04 – Water treatment works	8.1	8.9	0.8	0.0	-0.4	0.0	0.6	0.6
05 – Trunk mains	17.2	14.4	-2.8	0.1	-3.5	0.0	-1.0	1.6
06 – Service reservoirs	0.9	0.5	-0.4	0.0	-0.4	0.0	0.0	0.0
07 – Service reservoir rehabilitation	3.1	0.8	-2.2	0.0	-2.3	0.0	0.0	0.0
08 – Water mains rehabilitation	24.7	25.5	0.8	0.0	0.0	0.0	-0.1	1.0
09 – Leakage	2.0	1.4	-0.7	0.0	0.0	0.0	0.0	-0.7
10 – Ops capital (water)	7.6	6.3	-1.3	0.0	0.0	0.0	0.0	-1.3
12 – Sewerage	26.7	18.2	-8.6	2.4	-8.9	0.0	4.3	-6.4
15 – WwTW carry over projects	2.4	2.9	0.5	0.0	0.0	0.0	-0.3	0.8
16 – WwTW new starts	24.4	24.5	0.1	2.2	-3.4	0.0	-0.9	2.2
17 – Small WwTW	4.1	3.1	-1.0	0.0	0.0	0.0	-0.5	-0.4

UTILITY REGULATOR WATER

18 – Ops capital (sewerage)	0.9	2.0	1.0	0.0	0.0	0.0	0.0	1.0
19 – Metering	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
20 – Management & general	9.2	6.0	-3.2	0.0	-3.2	0.0	0.0	0.0
23 - New and renew water mains	2.4	1.3	-1.0	0.0	0.0	0.0	0.0	-1.0
24 - New and renew sewerage	5.3	4.0	-1.2	0.0	0.0	0.0	0.0	-1.2
98 - Additional outputs	1.4	0.0	-1.4	0.0	-2.1	0.7	0.0	0.0
Totals	297.6	285.1	-12.4	7.8	-27.0	5.9	2.2	-1.4

## 6.0 Adjustment for Return on Capital

- 6.1.1 This section describes a final adjustment to take account of the return on capital included in the PC13 final determination for investment logged up and logged down.
- 6.1.2 We have made a further adjustment to the RCV to recover the return on capital over the PC13 period included in the PC13 final determination to support capital investment subsequently logged down.
- 6.1.3 In principle we would apply an asymmetric adjustment which:
- Recovers the return on capital on the value of outputs logged down; but
  - Does not fund a return on capital over the PC13 period for additional outputs which were logged up.
- 6.1.4 This asymmetric approach would act as an incentive for the company to identify a complete set of outputs at the start of a price control allowing the outputs to be planned and delivered efficiently. It is also an incentive to delay delivery of additional outputs to a subsequent price control when they can be properly scrutinised and assessed in a subsequent determination. However, applying this principle to the variation in outputs seen in PC13 given the constraints on the company risks an unreasonable outcome. Therefore we have adopted a pragmatic approach to adjusting the RCV for the net position of logging up and logging down.
- 6.1.5 The benefit of a compound return on capital to the 1st April 2015 was calculated on the net change in investment from the PC13 final determination. Net investment was assumed to be incurred at the half year point. The weighted average cost of capital for PC13 of 4.09% was applied. The calculation is summarised in Table 6.1.

**Table 6.1 – Return on capital adjustment (2010-11 prices)**

	<b>2014-15</b>
Logging up	7.8
Logging down	-27.0
Net position over PC13	-19.2
Return on capital	4.09%
Total return on capital adjustment (£m)	-0.8
Note 1. Return on capital applied to the net position from the midpoint of PC13 (31-03-14) to the opening position for PC15 (01-04-15) = 1 year RoC.	

- 6.1.6 A total of £0.8m in 2010-11 prices has been logged down to account for the return on capital investment in PC13.