Water and Sewerage Service Price Control 2013-15

PC13 Final Determination Annex J
PC10 Capex Out-turn Report

December 2012

Water and Sewerage Price Control 2010-2013

PC13 Final Determination
Annex J – PC10 Capex Out-turn

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1 Introduction

1.1.1 This annex sets out our assessment of capital expenditure in the PC10 period (2010-2013) and 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 PC10.

1.1.2 We presented an initial assessment of capital expenditure in the PC10 period in our draft determination for PC13 (2013-15). This assessment was based on the company's Business Plan in May 2012 which included projected expenditure for 2012-13. In its response to the draft determination the company stated that it understood the assessment of logging up and logging down in the draft determination but noted the need to reassess this following recent adjustments to PE funding availability.

1.1.3 For this final determination, we have reviewed our assessment of capital expenditure in the PC10 period to take account of:

- The most recent information available on construction output price inflation.
- A revised capital expenditure profile submitted by the company in response to the draft determination which took account of:
    - A change in public expenditure funding which required NI Water to invest an additional £12m in 2012-13 at the expense of an equal reduction in planned expenditure in the PC13 period;
    - a revised capital expenditure profile in PC13; and,
    - more up to date information on actual and planned expenditure which takes account of recent project estimates delivery programme.

1.1.4 On 21st Nov 2012, the Department for Regional Development asked NI Water to invest an additional £5m investment in 2012-13 to utilise funding which had become available through the public expenditure monitoring round. We understand that the company is working to accommodate this. We were able to take it into account when assessing the opening balance of the RCV for PC13. We will consider this in the next Price Control (PC15) when the company will be able to confirm the quantum of the additional investment in PC10 and demonstrate the additional outputs this additional investment has delivered. We will amend the opening RCV for PC15 to take account of the efficient delivery of additional outputs in PC10 related to this additional investment.

1.1.5 Our assessment of capital investment in PC10 takes account of two key issues:

- Capital cost inflation was lower than we assumed in the PC10 final determination. As a result, the company should have been able to deliver more outputs for the same level of nominal expenditure.

- During the PC10 period NI Water has spent less capital than we allowed in the PC10 final determination. A combination of under-spend in 2010-11 and a reduced budget in 2012-13 resulted in the company spending £60.9 m less in nominal terms than the funding allowed in the PC10 final determination (£41.4 m in 2007-08 prices). As a result, fewer outputs were delivered.

1.1.6 We have made two adjustments to the regulatory capital value (RCV) at the start of PC13 to reflect these changes:

- A 'notified index' adjustment has been applied to the RCV to reflect the actual level of inflation relative to the inflation assumptions made in PC10 final determination. This is described in Annex F.

- 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 effect is a reduction in the RCV at the start of PC13 of £54.9 m in 2007-08 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 7-1 at the end of this annex.

1.1.7 These adjustments ensure that consumers will only pay for the outputs which have been delivered. It also ensures the company is adequately funded for the outputs is has delivered and does not benefit from work which has not been carried out.

1.1.8 The following sections of this annex provide more detailed information of our assessment of logging up and logging down for PC10:

Section 2: describes the treatment of inflation when assessing logging up and logging down.

Section 3: summarises the change in capital expenditure from the PC10 final determination in real and nominal terms.

Section 4: describes our approach to logging up and logging down expenditure.

Section 5: provides summary information on our assessment of logging up and logging down by capital sub-programme.

Section 6: describes a final adjustment to take account of the return on capital included in the PC10 final determination on investment which was not subsequently made.

Table 1-1 – PC10 Logging up and logging down (2007-08 prices)

Item description	RCV Adjustment (£m)	
	PC13 draft Determination	PC13 final Determination
Outputs logged up	39.5	41.7
Outputs logged down	-109.5	-109.5
SBP carry over expenditure	11.1	11.7
Base maintenance adjustment	-0.9	4.2
Return on capital adjustment	-3.3	-3.0
Total RCV adjustment	-63.1	-54.9

1. All costs in 2007-08 prices, consistent with the PC10 final determination base year.

2 Adjusting logging up and logging down for inflation

2.1.1 When assessing logging up and logging down it is necessary to compare and report figures in a common price base. In this annex we have used a common price base of 2007-08 average (consistent with the PC10 final determination). Unless stated otherwise, figures in this annex are presented in this common 2007-08 price base. We have applied the Construction Output Price Index (COPI) to account for inflation.

2.1.2 The inflation indices used in the assessment are shown in Table 2-1.

Table 2-1 – COPI indices

	2007-08		2010-11	2011-12	2012-13
PC10 FD assumed indices	162.500		162.562	166.301	170.126
Current actual and projected indices	111.300		107.375	109.925	112.673

3 Capital expenditure variance over PC10

3.1.1 The capital expenditure variance from the PC10 final determination is summarised in Table 3-1.

Table 3-1 – Capital expenditure variance in PC10

	2010-11	2011-12	2012-13	PC10 total
PC10 FD (real)	193.3	183.7	187.3	564.3
PC10 final determination (nominal) applying FD COPI assumptions	193.4	188.0	196.1	577.5
PC10 out-turn (real 2007-08 prices)	168.2	194.4	160.3	522.9
PC10 out-turn (nominal)	162.3	192.0	162.3	516.6
PC10 variance (real)	-25.1	10.7	-27.0	-41.4
PC10 variance (nominal)	-31.1	4.0	-33.8	-60.9

3.1.2 During PC10, the company spent £60.9m less in nominal terms than the funding assumptions of the final determination. This is equivalent to £41.4 m in 2007-08 prices. Two key factors contributed to the under-spend:

- In 2010-11 the company did not achieve the planned level of investment. The lack of year end flexibility prevented the company from investing this money in subsequent years.
- The Comprehensive Spending Review completed in 2011 resulted in a reduction in the public expenditure capital budget for 2012-13 which has now been off-set in part by additional funding becoming available.

3.1.3 The potential to deliver outputs is also affected by inflation. Construction price inflation in PC10 was lower than the assumptions we made for the PC10 final determination. As a result, the real value of the nominal capital expenditure funded in the final determination would have increased to £585 m. Had the same level of nominal investment been made, the company should have been able to deliver £20m of additional outputs. We have applied a ‘notified index’ adjustment to the opening RCV for PC13 to account for actual inflation experienced in PC10. This adjustment, which takes account of the movement in both COPI and RPI, is described in Annex F.

3.1.4 We assess the outcome of the price control in terms of the outputs delivered for consumers rather than 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 PC10 period – a process commonly known as logging up and logging down.

4 Our approach to logging up and logging down

4.1.1 The process of logging up and logging down investment reflects the value of the outputs delivered:

- where an additional output must be delivered, the efficient cost of delivery is ‘logged up’ by adding the value of the output to the RCV;
- 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.

4.1.2 Logging up and logging down is a simple process when there are few changes of outputs and discrete changes can be assessed individually. This has not been possible for PC10 for two reasons:

- The significant reduction in investment has resulted in wide ranging changes to the outputs delivered or outputs delayed;
- Poor definition of some types of output, such as improvements needed to unsatisfactory intermittent discharges (UIDs), resulted in a large number of changes during the Price Control as the programme was developed in detail. Since the initial baseline is uncertain, it is difficult to make a robust assessment of these changes.

4.1.3 Taking account of the extent of the change of outputs in PC10 we have assessed logging up and logging down at a capital sub-programme level in the first instance. Where practical we have undertaken a more detailed assessment of change to individual outputs or groups of outputs within a sub-programme.

4.1.4 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 SBP period (2007-2010).
- Logging up of an additional output.
- Logging down of an output deferred.
- Performance of NI Water where the same output has been delivered for less (out-performance) or more (under-performance).

4.1.5 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 PC10	Under-spend in PC10
SBP carry over	Higher than planned expenditure in PC10 due to lower than planned spend in the SBP period	Lower than planned expenditure in PC10 due to higher than planned spend in the SBP period
Logging up and logging down	Value of additional output logged up	Value of additional output logged down
Performance	Higher than planned spend in PC10 to deliver the same output	Lower than planned spend in PC10 to deliver the same output

4.1.6 We have assessed the variance in base maintenance expenditure as a single category and not undertaken a detailed assessment by capital sub-programme. The level of expenditure on base maintenance is in line with the PC10 final determination. The company has maintained serviceability over the PC10 period. It is a matter for the company to decide how best to maintain its assets and this may require it to redirect investment to deal with emerging issues over the period of a Price Control. 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. 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.

4.1.7 We have considered base maintenance as a whole and we have not assessed infrastructure and non-infrastructure base maintenance separately. As a result, the treatment of infrastructure base maintenance may replicate the balance sheet adjustment for the difference in infrastructure renewals charge and actual infrastructure renewals expenditure. We will consider this further when we determine how any infrastructure accrual or prepayment will be unwound for PC15 (2015-2021).

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 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 PC10 out-turn in its Business Plan submission. We have taken account of any detailed changes in outputs which the company has highlighted in its report. We asked the Reporter to audit and provide commentary on the changes identified by the company. The Reporter has not highlighted any material issues with the company's submission.

4.1.10 Our determination for PC10 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 PC10 periods for the value of logging up and logging down. Our approach to this is described in Section 6.

4.1.11 We have identified a net increase in expenditure in the PC10 period in projects which carried over from the SBP period. Within a fixed expenditure budget this reduces the outputs delivered in PC10. However, despite the lack of a clear baseline for nominated projects in the SBP period, we have concluded that the company broadly delivered the investment programme in the SBP period. While some expenditure was delayed into PC10, other outputs were delivered or accelerated by the company at the end of the SBP period to work within a fixed nominal budget set by the public expenditure regime. In light of this, we have concluded that this work should be recognised by logging up the additional carryover of expenditure into PC10. Having applied logging up and logging down to the PC10 outcome and established a clear baseline for PC13, we do not intend to log up any additional carry over from PC10 into PC13 in our determination for PC15.

4.1.12 We have also concluded that it would be appropriate to log up or log down any variance in base maintenance expenditure over PC10. NI Water must work within annual budget constraints. The lack of year end flexibility, changes to budget in year and the level of change in budget between years can makes it difficult to deliver against each annual budget. One way the company can manage these pressures is to accelerate base maintenance projects, which tend to be smaller and are less likely to be disrupted by third party impacts. In view of this, we have concluded that it would be appropriate to log up or log down any variance in base maintenance expenditure over PC10.

5 Logging up and logging down by sub-programme

Introduction

5.1.1 The outcome of our assessment is summarised in Table 7-1 at the end of this annex.

5.1.2 The following sub-sections describe our assessment of logging up and logging down by capital sub-programme.

Sub-programme 00 – Capitalised salaries and on-costs

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
00 – Capitalised salaries and on-costs	18.3	15.0	-3.3	1.9	-6.4	1.1

5.1.3 The company reports capitalised salaries and on-costs as a single investment line, allowing expenditure to be monitored against the allowance included in the final determination.

5.1.4 To ensure a direct comparison, the PC10 FD allowance has been adjusted to include £1.9m for the additional outputs programme (Sub-Programme 21) and the base line for the additional outputs programme reduced by the same amount.

5.1.5 The value of logging up and logging down was calculated by applying the capitalised salary and on-costs used by the company in its PC10 Business Plan to the value of logging up and logging down for each sub-programme.

Sub-programme 01 – Base maintenance (water)

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
01 – Base maintenance (water)	0.0	2.6	2.6	2.8	0.0	-0.2

5.1.6 The company has included investment to enhance the security of sites and service reservoirs under this base maintenance sub-programme. PC10 funding was provided for limited survey work only. We have logged up the additional investment.

Sub-programme 02 – Base maintenance (sewerage)

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
02 – Base maintenance (sewerage)	0.0	1.1	1.1	0.7	0.0	0.4

5.1.7 The company has identified some quality and growth investment in wastewater treatment works and sewage pumping stations for projects carried out under this base maintenance sub-programme. This includes carry over expenditure on projects which the company planned to complete in the SBP period. We have logged up investment associated with new outputs in the PC10 period.

Sub-programme 03 – Water resources

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
03 – Water Resources	1.8	5.2	3.4	0.0	0.0	3.4

5.1.8 The variance relates to changes in a water abstraction project. The company has redesigned the works to increase the rate of abstraction and a pumping station has been relocated for planning and environmental reasons. However, there has been no change in the output delivered and we have not logged up the variance in expenditure.

Sub-programme 04 – Water treatment works

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
04 – Water treatment works	2.9	1.9	-1.0	0.0	0.0	-1.0

5.1.9 The company plans delivered the PC10 outputs for a lower level of expenditure than planned. We have not logged down the out-performance. Further work may be required to commission one project but this has been allowed in the logging up and logging down process which takes account of the company's current estimate to complete the works.

Sub-programme 05 – Trunk mains

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
05 – Trunk mains	14.6	21.3	6.7	6.3	-4.3	4.7

5.1.10 The current sub-programme includes 15 schemes compared to the four trunk main schemes identified in the PC10 Business Plan. We allocated these schemes to seven categories (either individual schemes or groups of schemes) and allocated the variance as follows:

- **Category 1 – Base maintenance schemes**. Four schemes are allocated 100% to base maintenance. These are already covered in the overall base maintenance allocation.

- **Category 2 – Ballydougan to Newry Phases 1 and 2**. The PC10 funding covered Phase 1 of the scheme. Work on Phase 2 is now underway. We have logged up Phase 2 of the scheme based on company's revised expenditure profile (£5.0m). We took account of the change in Base allocation for Phase 2 of the scheme. To do this we considered the two phases of the scheme separately. This resulted in a £0.9 m reduction in the base allocation which was allocated to 'Base' and included in the rolled up Base adjustment. The balance of the variance is explained in part by a higher than planned level of spend in 2009-10 (-£1.1m) and under performance on Phase 1 against the original PC10 budget (£1.5 m).

- **Category 3 – Castor Bay to Dungannon trunk main**. The enhancement expenditure on the project increased by £4.8m in PC10. This is mainly due to delays to the project which reduced the planned level of enhancement investment in 2009-10 by £7.0m. The company has identified additional work valued at £1.4m to link the new supply to the Blacklough Resource Zone following the 2010-11 freeze thaw. We have logged up this additional work with the balance of the variance allocated to SBP carry over and performance in the PC10 period.

- **Category 4 – Cross Town Main extension**. The cost of the scheme has increased from PC10, in part due to delay which increased the carry over expenditure from PC10. We have not logged up the overspend.

- **Category 5 – Castor Bay to Belfast**. The scheme, which was planned to start at the end of PC10, has been delayed to PC13. We have logged down the funding allowed in the PC10 final determination (-£4.4m). The full cost of the scheme will be included in the PC13 determination.

- **Category 6 – Future projects**. The company has identified expenditure in PC10 on four schemes which may be completed sometime in the future but do not form part of the PC13 programme. We have not logged up this expenditure.

- **Category 7 – SBP carry-over**. Three schemes which were expected to be complete in the SBP period had expenditure in PC10. These have been allocated to SBP carry over.

Sub-programme 06 – Service reservoirs

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
06 – Service reservoirs and CWTs	11.8	7.5	-4.3	2.0	-5.7	-0.5

5.1.11 The PC10 final determination included 13 service reservoir and clearwater tank outputs. The company's current programme identifies 18 schemes in this sub-programme. We allocated these schemes to six categories (either individual schemes or groups of schemes) and allocated the variance as follows:

- **Category 1 – Additional outputs not included in the PC10 FD.** The company has identified two additional outputs associated with service reservoir outputs which were delivered in PC10. The investment has been logged up (£1.0m).

- **Category 2 – Outputs planned for the PC10 period and delivered in the PC10 period**. Eight service reservoir outputs planned for PC10 were delivered in PC10. Overall expenditure was in line with that planned. The company spent less in 2009-10 than planned, out-performing the overall budget. As the outputs were delivered, the saving has not been logged down.

- **Category 3 – Additional output brought forward into PC10**. The company delivered Tully SR in PC10 (initially planned for PC13). Investment in the additional output in PC10 has been logged up (£1.1m).
- **Category 4 – PC10 outputs delayed to a future Price Control.** Three clear water tank extensions planned for PC10 have been delayed until PC15 or later. We have logged down the planned expenditure less expenditure incurred in developing the projects (-£5.3m). The cost of delivery will be included in a subsequent Price Control if the company demonstrates the need for these outputs.
- **Category 5 – PC10 output delayed to PC13**. Crieve Service Reservoir originally planned for PC10 will be delivered in PC13. The cost of completing the project in PC13 has been logged down and reinstated in the PC13 expenditure allowance (-£0.4m).

Sub-programme 07 – Service reservoir refurbishment

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
07 – Service reservoir rehabilitation	0.0	0.5	0.5	0.5	0.0	0.0

5.1.12 The programme is planned to deliver base maintenance only. The company has included enhancement expenditure on service reservoir security in this sub-programme. The PC10 determination included limited survey work only. We have logged the additional output (£0.5m).

Sub-programme 08 – Water mains rehabilitation

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
08 – Water mains rehabilitation	47.7	47.5	-0.2	0.0	0.0	-0.2

5.1.13 Sub-programme 23 (new and renew water-mains) was introduced for PC13. We have combined this into the analysis of water mains rehabilitation to maintain consistency with the PC10 final determination.

5.1.14 The company plans to deliver improvements to a greater length of water main in PC10 than the 900 km target. However, the company was unable to identify specific outputs for PC10 and it is not possible to demonstrate whether the out-performance is delivery of efficiency or delivery of lower cost outputs (for example more mains laid in rural areas) and the company has not asked for any expenditure to be logged up. In the absence of more specific information, we have allocated the small saving in enhancement expenditure to performance.

5.1.15 The PC13 determination assumes that 50% of the water-mains rehabilitation will be in rural areas and 50% in urban areas. This may provide a basis for logging up and logging down changes of activity in a subsequent price control.

Sub-programme 09 – Leakage

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
09 – Leakage	2.5	3.6	1.2	0.0	0.0	1.2

5.1.16 The company has not identified any change in requirement over the PC10 period. In view of this, we have not logged up the variance in expenditure.

Sub-programme 10 – Ops capital (water)

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
10 – Ops capital (water)	2.9	12.9	9.9	1.2	0.0	8.7

5.1.17 The company has asked that the additional expenditure be logged up for the following reasons:

- The omission of service connection costs from the company's Business Plan for PC10 (£5.7m).
- Expenditure on lead pipe replacement which it believes was not included in the final determination (£1.2m).
- Higher than planned expenditure on water mains in new housing developments (£3.0m).

5.1.18 We have not logged up the omission of service connection costs from the Business Plan. We recognise that the work is an obligation which must be delivered in response to consumer demand. However, logging up and logging down is not used to correct errors in the Business Plan submission.

5.1.19 We agree with the company that the PC10 final determination for water main rehabilitation did not allow for lead pipe replacement other than that carried out as part of the planned water-mains rehabilitation work. We have logged up the investment identified by the company (£1.2m).

5.1.20 We have not logged up additional expenditure to lay water mains in new developments. The number of connections made in PC10 was lower than that planned although the company's submission indicates a cost per connection higher than planned. However, logging up and logging down is not used to correct errors in the Business Plan submission. We expect the company to bear the risk of variances in unit rates within the overall determination.

Sub-programme 11 – Named sewerage schemes

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
11 – Named sewerage projects	2.8	6.2	3.5	0.0	0.0	3.5

5.1.21 The company has not identified any additional outputs delivered through these schemes. The increased cost has been attributed to low estimates in the PC10 Business Plan. However, logging up and logging down is not used to correct errors in the Business Plan submission. We expect the company to bear this risk within the overall determination.

Sub-programme 12 to 14 – Sewerage

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
12 – Sewerage (inc. UIDs and DG5)	58.7	47.1	-11.6	0.0	-19.9	8.3

5.1.22 The sub-programme includes expenditure in the PC10 period to resolve contractual disputes on projects completed in the SBP period. We have not logged up this additional expenditure which does not deliver an additional output. The dispute may be resolved for less than currently allowed by the company in its expenditure projections for PC13. In these circumstances, we would log up the efficient delivery of additional outputs which are delivered by the funding released.

5.1.23 The remainder of this Sub-programme covers most of the sewerage work in carried out in PC10 including improvements to unsatisfactory intermittent discharges and alleviation of sewer flooding. The company has noted and we accept that the definitions of outputs and costs for PC10 were not robust. As the company completed its assessment of risk and possible solutions there have been significant changes to the prioritisation and delivery of outputs and the associated costs. Given the extent of these changes we have concluded that it is impractical to undertake a detailed assessment of logging up or logging down. Given the information available and the stage of development of NI Water at the time the PC10 Business Plan was prepared, we have concluded that it is not appropriate to penalise NI Water for this uncertainty. In view of this we have adopted a pragmatic approach and logging down the variance.

Sub-programme 15 – WwTW carry over projects

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	**CAP**	**Var**	**Logged up**	**Logged down**	**Other**
15 – WwTW (Carry over projects)	42.6	42.9	0.3	8.2	-2.5	-5.5

5.1.24 This sub-programme consisted of 30 WwTW schemes which began in the SBP period and complete in PC10. This has now increased to 42 schemes, including some which had been planned to complete in PC10. We allocated these schemes to six categories (either individual schemes or groups of schemes) and allocated the variance as follows:

- **Category 1 – SBP completions**. The sub-programme now includes 12 schemes which were planned to complete in the SBP period but carried over to PC10. Enhancement expenditure of £3.4m in the PC10 period. This is as a result of a lower level of spend than planned in 2009-10 (£1.9m allocated to SBP Carry over) and an overspend on the projects as a whole (£1.5m allocated to performance).

- **Category 2 – Planned completions**. The company has completed 26 of the planned outputs in the PC10 period. These were delivered for £6.9m less than allowed in the final determination. A higher level of planned expenditure in 2009-10 (£2.5m) contributed to the under-spend in PC10. Since the outputs have been delivered as planned we have not logged down the net out-performance delivered. The company identified two works where NIEA required greater storm tank capacity than was allowed in the PC10 final determination. The cost of these additional outputs (£0.6m) has been logged up.

- **Category 3 – PC10 outputs not completed.** Two projects identified for PC10 will require additional work in PC13. Ballywalter WwTW Interim Solution has been delivered but requires continued capital payments for land in PC13. The delivery of Ardglass WwTW has been delayed to PC13. The company plans to deliver these schemes for £1.6m less than the PC10 determination allowed and this saving has been allocated to out-performance. We have logged down the estimated cost of completion of Ardglass in PC13 (£2.5m) and have included this investment in the PC13 investment programme.

- **Category 4 – Ballyhalbert and Portavogie.** The PC10 determination allowed for interim solutions at Ballyhalbert and Portavogie pending procurement of a site for a permanent solution. The company has been able to procure land and plans to deliver permanent upgrades to these treatment works in PC10, incurring increased expenditure of £7.4m. There was a higher than planned level of spend on these schemes in the SBP period, reducing the additional cost in PC10. Taking account of the SBP carry over, we have logged up £7.6m.

Sub-programme 16 – WwTW new starts

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
16 – WwTW (New starts)	28.3	30.6	2.3	13.6	-8.2	-3.2

5.1.25 This sub-programme originally consisted of 13 wastewater treatment works schemes planned to start in PC10 and complete in PC10. The sub-programme has expanded to cover 69 schemes. It includes projects initially identified under the additional outputs sub-programme (Sub-programme 21). It also includes schemes which will be carried out in PC13 or later, some of which incur minor preparatory investment in PC10.

5.1.26 We allocated these schemes to three categories (either individual schemes or groups of schemes) and allocated the variance as follows:

- **Category 1 – Additional projects**, including projects which will deliver outputs in PC13. Some are projects originally included under the PC10 Additional Outputs programme. In principle these lower priority outputs would be removed from the programme in face of a reduced budget. However, we accept that it was necessary to continue with part of the additional output programme for PC10 for practical reasons. For example, where a project has been committed, or its priority has changed or the development stage is necessary to support continuity of investment into PC13. This category also includes preparatory expenditure on projects which will deliver in PC13. Some of these projects continue from the SBP period. Actual spend in 2009-

10 was £2.5m lower than planned. In view of the additional outputs being delivered, we have logged up £13.6m and allocated the remainder of the variance to SBP carry over.

- **Category 2 – PC10 outputs completed in PC10**. Six of the planned outputs were delivered in PC10. These projects were delivered at a significantly lower cost than planned for PC10, due in part to the use of package plant at two treatment works to remove nutrients. We have not logged down the out-performance where outputs were delivered.

- **Category 3 – Planned schemes delayed to PC13.** Six schemes planned for the PC10 have been delayed to PC13. We have logged down the planned expenditure in PC13 (£5.3m) and reinstated the same expenditure in the PC13 determination. The company identified £2.9m of additional investment which will be required to complete the transfer of a treatment works which has been logged down.

Sub-programme 17 – Small WwTW

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
17 – Small WwTW	12.6	11.8	-0.8	4.0	-5.5	0.8

5.1.27 The company has changed the purpose allocation from 100% base in the PC10 Business Plan to 60/40 enhancement/base. As a result, while total expenditure on this sub-programme is £7.1m higher, the enhancement expenditure is £0.8m lower.

5.1.28 In its Business Plan submission, the company planned to deliver improvements to 47 small WwTW in the period, marginally less than the target of 50. The company has also used the small WwTW programme to deliver 7 works greater than 250pe using the same process solution. These works have a significantly higher unit cost.

5.1.29 We have treated the variance identified by the company in its Business Plan as follows:

- We logged down the change in purpose allocation which has not reduced the investment required but reallocated it to the base maintenance programme (£5.0m).

- We logged up the investment in 7 works >250pe (£3.2m) and logged down the value of 3 small WwTW using the average cost of deliver advised by the company (£0.5m).

5.1.30 Since its Business Plan submission, the company has opted to accelerate expenditure on the small WWTW programme as part of the additional £12m investment in 2012-13. In view of this, we have logged up the additional £0.8m of enhancement investment.

Sub-programme 18 – Ops capital (sewerage)

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
18 – Ops capital (water	1.0	2.1	1.1	0.0	0.0	1.1

5.1.31 The company has asked that the omission of service connection costs from the company's Business Plan for PC10 (£2.1m) should be logged up. We recognise that the work is an obligation which must be delivered in response to consumer demand. However, logging up and logging down is not used to correct errors in the Business Plan submission.

Sub-programme 19 – Miscellaneous

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
19 – Miscellaneous	3.4	0.7	-2.7	0.0	-1.5	-1.3

5.1.32 The company has attributed a reduction of £1.5m to lower than planned levels of meter installation in the PC10 period due to a fall off in development. We have logged this value down.

Sub-programme 20 – Management and general

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
20 – Management & General	26.0	6.0	-20.0	0.0	-20.0	0.0

5.1.33 The PC10 programme included a substantial investment in management and general assets to allow the company to deliver improved performance and enhance capability. This investment was curtailed following the reduction in available budget. Given the scale of change and the potential disruption to the programme this has caused, we have concluded that it would be impractical to undertake a detailed logging up and logging down of the changes made. We have adopted a pragmatic approach of logging down the variance.

Sub-programme 21 – Additional outputs

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
21 – Additional outputs	35.6	0.0	-35.6	0.0	-35.6	0.0

5.1.34 The PC10 final determination included an allowance of £37.5m to invest in additional enhancement outputs which had not been included in the company's PC10 Business Plan submission.

5.1.35 The additional outputs allowance in PC10 included the capitalised salaries and on-costs necessary to deliver the additional work. We have estimated this as £1.9m and reallocated it to the base line of for Sub-programme 00 for the purpose of this comparison.

5.1.36 For the purpose of developing a baseline for PC13, the company has reallocated any additional outputs to an appropriate sub-programme and we have considered then within the sub-programmes described above. Therefore we have logged down the total planned value of the sub-programme net of the allocation to capitalised salaries an on-costs described above.

Sub-programme 25 – PC13 Additional Outputs

	PC10 variance (£m)			Variance allocation (£m)		
	PC10 FD	CAP	Var	Logged up	Logged down	Other
25 – PC13 Additional outputs	0.0	0.4	0.4	0.4	0.0	0.0

5.1.37 In our draft determination, we asked that the company identify a programme of additional outputs which could be delivered in PC13. The outputs identified by the company included a small element of expenditure already committed in PC10. We have logged up this preparatory work.

6 Adjustment for return on capital

6.1.1 We have made a further adjustment to the RCV to recover the return on capital over the PC10 period included in the PC10 final determination to support capital investment subsequently logged down.

6.1.2 In principle we would apply an asymmetric adjustment which:

- recovers the return on capital on the value of outputs logged; but,
- does not fund a return on capital over the PC10 period for additional outputs which were logged up.

6.1.3 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 PC10 given the constraints on the company risks an unreasonable outcome. Therefore we have adopted a pragmatic approach to adjusting the RCV for return on capital based on change in investment over the PC10 period. The benefit of a compound return on capital to the 1st April 2013 was calculated on the net change in investment from the PC10 final determination. Net investment was assumed to be incurred at the half year point. The weighted average cost of capital for PC10 of 4.78% was applied. The calculation is summarised in Table 6-1.

Table 6-1 – Return on capital adjustment (2007-08 prices)

	2010-11	2011-12	2012-13
PC10 final determination gross capital investment (£m)	193.3	183.7	187.3
PC10 gross actual and projected investment (£m)	168.2	194.4	160.3
Change in investment from the PC10 FD (£m)	-25.1	10.7	-27.0
Annualised return on capital factor	4.78%	4.78%	2.36%
Compounded return on capital factor	1.124	1.073	1.024
Return on capital adjustment (£m)	-3.1	0.8	-0.6
Total return on capital adjustment (£m)		-3.0	

6.1.4 A total of £3.0 m in 2007-08 prices has been logged down to account for the return on capital investment in PC10.

7 Logging up and logging down summary

Table 7-1 – PC10 Out-turn allocation (£m 2007-08 prices)

	Variance in enhancement expenditure (£m)			Out-turn variance allocation (£m)				
	PC10 FD	CAP	Var	Logged up	Logged down	Base allocation	SBP carry over	Perform-ance
Base maintenance (total)	250.9	256.0	5.1	0.0	0.0	5.1	0.0	0.0
00 – Capitalised salaries and on-costs	18.3	15.0	-3.3	1.9	-6.4	0.0	0.6	0.5
01 – Base maintenance (water)	0.0	2.6	2.6	2.8	0.0	0.0	-0.2	0.0
02 – Base maintenance (sewerage)	0.0	1.1	1.1	0.7	0.0	0.0	0.4	0.0
03 – Water resources	1.8	5.2	3.4	0.0	0.0	0.0	-0.1	3.5
04 – Water treatment works	2.9	1.9	-1.0	0.0	0.0	0.0	0.1	-1.0
05 – Water trunk mains	14.6	21.3	6.7	6.3	-4.3	-0.9	6.6	-1.0
06 – Service reservoirs and CWTs	11.8	7.5	-4.3	2.0	-5.7	0.0	2.3	-2.8
07 – Service reservoir rehabilitation	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0
08 – Water mains rehabilitation	47.7	47.5	-0.2	0.0	0.0	0.0	0.0	-0.2
09 – Leakage	2.5	3.6	1.2	0.0	0.0	0.0	0.0	1.2
10 – Ops capital (water)	2.9	12.9	9.9	1.2	0.0	0.0	0.0	8.7
11 – Named sewerage projects	2.8	6.2	3.5	0.0	0.0	0.0	0.1	3.3

	Variance in enhancement expenditure (£m)			Out-turn variance allocation (£m)				
	PC10 FD	**CAP**	**Var**	**Logged up**	**Logged down**	**Base allocation**	**SBP carry over**	**Perform-ance**
12 – Sewerage (inc. UIDs and DG5)	58.7	47.1	-11.6	0.0	-19.9	0.0	0.0	8.3
15 – WWTW (Carry over projects)	42.6	42.9	0.3	8.2	-2.5	0.0	-0.3	-5.2
16 – WWTW (new starts)	28.3	30.6	2.3	13.6	-8.2	0.0	2.1	-5.2
17 – Small WWTW	12.6	11.8	-0.8	4.0	-5.5	0.0	0.0	0.8
18 – Ops capital (Sewerage)	1.0	2.1	1.1	0.0	0.0	0.0	0.0	1.1
19 – Miscellaneous	3.4	0.7	-2.7	0.0	-1.5	0.0	0.0	-1.3
20 – Management & General	26.0	6.0	-20.0	0.0	-20.0	0.0	0.0	0.0
21 – Additional outputs programme	35.6	0.0	-35.6	0.0	-35.6	0.0	0.0	0.0
25 – PC13 Additional outputs	0.0	0.4	0.4	0.4	0.0	0.0	0.0	0.0
Totals	564.3	522.9	-41.4	41.7	-109.5	4.2	11.7	10.5

8 Assessing the Outcome of PC13

8.1.1 We will apply the general approach developed in PC10 to reflect changes to the outputs delivered by the PC13 capital programme.

8.1.2 Changes in inflation will be addressed through a ‘notified index’ adjustment which will adjust the RCV for changes in capital investment inflation as measured by the Construction Output Prices Index. Where inflation is lower than we assumed in the final determination for PC13 we would expect the company to deliver additional outputs. Where inflation is higher than we assumed in the final determination for PC13 we would expect the company to deliver less outputs.

8.1.3 Where there are agreed changes to outputs, either because there is a change to the available funding or there is a change in priority, we will adjust the RCV by logging up the efficient delivery of additional outputs or log down the expected cost of outputs which are not delivered. Where an output has been deferred to a subsequent price control will log down the planned cost of completing the delivery of the output and allow the planned cost of completing delivery in the subsequent price control.

8.1.4 Because we have completed a detailed assessment of the out-turn for the PC10 period and adjusted the RCV to correct this, we do not intend to log up additional carry over from PC10 to PC13. We will consider whether it is appropriate to log up or log down any variance in base maintenance expenditure taking account of serviceability and the constraints on the company at the time.

8.1.5 Where the company has been able to make additional investment in the remainder of the PC10 period which we have not been able to take account of in our final determination for PC13, we will log up the efficient delivery of additional outputs in our determination for PC15.