Northern Ireland Water Ltd
Annual Information Return 2013

Part 6 of 9 containing:
Financial Measures - commentaries for tables 32 to 36a and 40

Public Domain Submission
23 October 2013

Halcrow

Table 32 – Analysis of fixed asset additions and asset maintenance by asset type (current costing accounting)

Commentary by REPORTER

1. Background

This table facilitates analysis by asset type of fixed asset additions for enhancement and the renewal or replacement of assets for the purpose of maintaining base service.

2. Key Findings

- NI Water's proportional allocation procedures are now well established and consistently applied and we are finding fewer instances where the allocation of expenditure between purpose categories requires adjustment. However, during the course of our AIR13 audits we did query the allocation of expenditure applied to KL350 – Benone Area Sewerage, KR389 – Ballyhalbert WwTW and KL468 – Strathfoyle Syphon Inlet Screen.

- Notwithstanding the above, we continue to see evidence that the CIDA allocation of schemes are regularly critiqued by the NI Water Finance and Regulation Team and that Project Managers liaise with the same team to ensure consistency of approach.

3. Audit Approach

As part of our review of NI Water's AIR13 submission, we completed a number of 'Capex' audits, weighted towards those involving greater capital expenditure in the Report Year. For AIR13, the water related schemes reviewed included; 2 x strategic trunk main schemes, 1 x WTW scheme and 4 x water main rehabilitation schemes, whilst the wastewater schemes included; 2 x sewerage schemes, 3 x WwTW schemes, 1 x sewerage/WwTW scheme and 1 x UID scheme.

At year-end we undertook a review of the contents of the Capital Investment Driver Allocation (CIDA) spreadsheet systems and CIM template, which collates the expenditure information by project for the Report Year. During this review, we tested the collation systems to ensure that the proportional allocations exposed in the scheme specific audits are correctly stated at the summary level for entry into the AIR Tables.

We also met with the system holder to confirm the reported data for each line and review progress against the various programmes.

4. Audit Findings

4.1 General

NI Water's proportional allocation procedures are now well established and consistently applied. Whilst NI Water still reviews projects to confirm the

appropriateness of the proportional allocation of expenditure for all projects that have had the CIDA allocation updated on CAPTRAX, we are finding fewer instances where the allocation of expenditure between purpose categories requires adjustment.

As reported previously, the capital scheme approvals process is formalised, with all schemes >£25k, but <£500k, requiring formal approval by the BICC Panel and all schemes >£500k requiring CIP approval. The Strategic Investment team (within the Asset Management Directorate) review the CIDA on all projects as they seek approval and advise the above panels of any challenges.

At year-end we reviewed a sample of schemes to specifically test allocation methodologies for AIR13. As summarised below, whilst the CIDA allocations applied by the Company for the selection of schemes reviewed, were generally in line with the Reporter's expectations, particularly on the water schemes, we did query the allocation of expenditure applied to KL350 – Benone Area Sewerage, KR389 – Ballyhalbert WwTW and KL468 – Strathfoyle Syphon Inlet Screen. Between the preparation of our draft Reporter Commentary and submission to NIAUR, the Company advised the following, which should be read in conjunction with our summary findings below:

- For KL350, the Company advised that 'Base Maintenance has been allocated based on the existing assets which are summarised as follows
    - Benone – a RBC plant with a sand soakaway.
    - Drumavalley – Septic tank type plant with outfall into local stream <10m.
    - Aughil – Biological filter works with outfall to local stream.

  The solution to included MOD and the prison sites did not affect the base allocation as these were never NIW sites so we were not replacing anything. The new project also included costs for sea outfall which will not replace any existing asset.'
- For KR389, the Company advised that 'the CIDA allocation for this project did consider base maintenance taking account of the assets on the existing site. The former Ballyhalbert WwTW consisted of a 'Retention Tank' which was estimated to cost £40k to replace in today's costs. This taken as a % of the total project cost is less than 0.5% so was reported as 0% Base'.
- For KL468, the Company accepted our recommendations to complete a full CIDA review on this project

Project Reference	Project Name	PC10 Budget (£m)	Spend to date (£m)	Latest Best Estimate (£m)	QBEG Allocation on CIM				Reporter Agreement (✓/×)
					Q	B	E	G	
JB687	Cookstown Phase 2 Watermain Improvements	[x]	[x]	[x]	3	62	21	14	✓
JG035	Ballydougan to Newry Main Link Reinforcement	[x]	[x]	[x]	0	6	0	94	✓
JI025	MIMP South (Major Incident Mitigation Project South Region) Freeze Thaw Improvements	[x]	[x]	[x]	0	91	0	9	✓
JN226	Strule Intake For Derg WTW	[x] [x]	[x]	[x]	0	2	0	98	✓*
JR440	Newtownabbey Zone Watermain Improvements Phase 2	[x]	[x]	[x]	92	5	1	2	✓
JV844	WP101 Newry Phase2	[x]	[x]	[x]	32	49	0	19	✓
JA271	Killylane WTW	[x]	[x]	[x]	0	100	0	0	✓
KL350	Benone Area Sewerage	[x]	[x]	[x]	46	18	0	36	**
KL451	Londonderry DAP: Strathfoyle & Drumahoe Work package: CSO Abandonments	[x]	[x]	[x]	61	17	18	4	✓
KL468	Strathfoyle, Londonderry Siphon Inlet Screen	[x]	[x]	[x]	0	100	0	0	✓*
KL475	Lone Moor Road, Londonderry Storm Sewer Extension	[x]	[x]	[x]	0	0	0	100	✓
KR389	Ballyhalbert WwTW Interim Solution	[x]	[x]	[x]	53	0	0	47	**
KV105	Newry WwTW Extension	[x]	[x]	[x]	0	8	0	92	✓
KV125	Forkhill WwTW	[x]	[x]	[x]	46	39	0	15	✓

*See comments below
** Recommend further review

A summary of our findings is detailed below:

For **JB687 – Cookstown Ph 2 Watermain Improvements**, the Company proposes to replace 69km of main and abandon a further 11km of main in the Cookstown area. At the time of review, circa 96% of the work had been completed. Proportional allocation of expenditure is based on the works required in each street, the principal reason why the work is necessary, lengths, diameters and materials of existing and proposed assets, and the technique for rehabilitation/replacement, which we consider to be an excellent methodology. On this basis, a QBEG of 3/ 64/ 24 / 11 was initially determined. When compared to the QBEG reported on the CIM we noted a slight discrepancy (3 / 62 / 21 / 14), which NI Water confirms was due to subsequent revisions to the scheme which have resulted in the slight movements in QBEG.

For **JG035 – Ballydougan to Newry Main Link Reinforcement**, the purpose of this trunk main link and pumping station scheme is to supplement supply to the Newry and Lough Ross Resource Zones, by providing a link with Castor Bay WTW, as the existing water treatment works (Foffany and Carran Hill), and trunk main supply from Castor Bay are of insufficient capacity to meet future demands. The scheme, which was initially split into 3 phases and planned to be delivered over PC10 and PC13, is now on target for delivery in 2014, with the final phase due to commence on site in November 2013. We have reviewed this scheme previously and concur with the QBEG allocation reported in the CIM.

For **JI025 - MIMP South Freeze Thaw Improvements**, the Company proposes to replace 23km of main and abandon a further 2km of main that burst during the previous freeze/thaw events across the southern part of the province. At the time of review, circa 51% of the work had been completed. Proportional allocation of expenditure is based on the works required in each street, the principal reason why the work is necessary, lengths, diameters and materials of existing and proposed assets, and the technique for rehabilitation/replacement. On this basis, a QBEG of 0 / 91 / 0 / 9 is appropriate, given the fact that the structural condition of the mains in question is the primary driver for the renewals.

For **JN226 – Strule Intake for Derg WTW**, the scheme has been subject to significant change since it was initially proposed in the WRS 2002, when a new regulating reservoir (Glendargan Dam) was part of the proposal (hence the high initial estimate) to reduce the raw water supply deficit in the Derg supply zone. The scope which is currently being delivered includes a 6.8km x 450mm pumping main and 26Ml/d WPS. Work is forecast for completion in 2013/14. The QBEG has been subject to regular review, to reflect the changing scope, and a recent bottom up assessment completed by the PM has resulted in a QBEG of 0 / 1 / 0 / 99.This is slightly different to the QBEG currently on CIM, but we anticipate this to be updated shortly.

As per the other WMRP schemes reviewed for AIR13, **JR440 - Newtownabbey Zone Watermain Improvements Phase 2**, proportional allocation of expenditure is based on the works required in each street, the principal reason why the work is necessary, lengths, diameters and materials of existing and proposed assets, and the technique for rehabilitation/replacement. On this basis, the scheme to deliver 35km of new main has been proportionally allocated 92 / 5 / 1 / 2, which we consider to be appropriate. At the time of review the scheme was 62% complete, which is consistent with the spend to date.

For **JV844 - WP101 Newry Phase2**, the Company proposes to replace 41km of main and abandon a further 6km of main in rural areas to the east of Newry, in order to reduce unplanned interruptions to supply. At the time of review, circa 78% of the work had been completed. Proportional allocation of expenditure is based on the works required in each street, the principal reason why the work is necessary, lengths, diameters and materials of existing and proposed assets, and the technique for rehabilitation/replacement. On this basis, a QBEG of 32 / 49 / 0 / 19 is appropriate.

The proposed upgrade to **JA271 – Killylane WTW**, was initially a PC10 Q scheme; however, we note that it has subsequently been reallocated to B. We reviewed the Business Case for Killylane and confirm the maintenance nature of the work proposed.

Wastewater Schemes

The **KL350 – Benone WwTW extension**, was initially driven by the fact Benone WwTW was regularly overloaded and non-compliant. Due to the fact the existing WwTW is sited in a Special Area of Conservation, it was proposed to construct a new works on a MOD site near Magilligan Strand, some distance from Benone. In developing the scheme, the scope was subsequently increased to enable the transfer of flows and closure of 4 additional WwTWs at Drumavalley, Aughil, MOD camp and the local prison, which accounts for the increase in expenditure. The scheme, which is due for completion in September 2013, has been allocated 46% Q, 18%B, 0%E and 36%G. We queried the allocation of expenditure, as the allocation to B seemed quite low and the allocation to G quite high. We based our view on the fact 5 existing WwTW and associated outfalls will be de-commissioned and transferred to a single site. On this basis, we would have expected a larger proportion of expenditure to be allocated to base maintenance. Additionally, NI Water has based the design of the scheme on the assumption PE will increase by 50% (circa 3000 PE) by 2030. Based on the fact the 5 communities are located in a special area of conservation, we would expect limited permitted development in the future, and as such NI Water may be providing additional treatment capacity that may not be required.

KL451 - Londonderry DAP: Strathfoyle & Drumahoe Work package: CSO Abandonments, involves the closure of 3 x UIDs, resolution of 2 x DG5 properties and upsize of the network to provide additional in-system storage, as identified in the Londonderry DAP. We concur with the QBEG of 61 / 17 / 18 / 4, which we consider has been assessed appropriately. Work was completed in 2012, with an outturn cost, circa 25% higher than initially forecast.

For **KL468 - Londonderry DAP: Strathfoyle Londonderry Syphon Inlet Screen,** the Strathfoyle syphon which enables the transfer of sewerage across the River Foyle, has been subject to ongoing partial blockage. In order to reduce the frequency of blockage and keep the siphon clear, NI Water has constructed an inlet screen structure within a separate building. Whilst we concur with the 100% allocation to B, we note that the expenditure has also been allocated 100% to IRE. As the screen is to be located within a separate, purpose built building we would expect a proportion of expenditure to be allocated to MNI.

KL475 – Lone Moor Road Sewer Extension, is a Developer driven scheme to provide additional network capacity to enable the connection of 4 new residential developments. Expenditure, which is slightly higher than initially budgeted due to unforeseen ground conditions, has been allocated 100% to G

KR389 – Ballyhalbert WwTW Interim Solution, was initially proposed as part of the larger Ards South scheme (KS111), to address issues at Portavogie, Ballyhalbert, Cloughey and Kirkistown. Due to the lack of a permanent site to construct a new works, interim solutions on rented land were proposed, of which KR389 was one of those schemes. During the development of the scheme a permanent site became available for Ballyhalbert. The scheme was re-scoped to construct a secondary-treatment WwTW and long sea outfall, to provide a permanent solution. It was also proposed to transfer flow from Portavogie and abandon Portavogie WwTW. The

significant but prudent change in scope explains the 100% increase in reported expenditure. The scheme has been allocated 53% Q, 0%B, 0%E and 47%G. We queried the 0% allocation of expenditure to B, as the scheme involves the abandonment of 2 WwTW sites.

For **KV105 – Newry WwTW Extension**, high industrial loading within the Newry catchment means the WwTW was significantly overloaded. An upgrade to the WwTW to provide additional treatment capacity, supports the QBEG allocation of - 0 / 8 / 0 / 92. At the time of review, Phase 1 had been completed and commissioning is currently ongoing.

KV125 – Forkhill WwTW, involves the construction of a new RBC plant at Forkhill and the transfer pumping station to enable the transfer of flow from Mullaghbane. This will ensure both sites achieve proposed discharge consents, whilst also enabling the decommissioning of Mullaghbane WwTW. A QBEG allocation of 46 / 39 / 0 / 15 is appropriate for the scope delivered, which includes an increase in capacity to meet future forecast demand.

4.2 Proportional Allocation

NI Water maintains a Capital Investment Driver Allocation (CIDA) Manual, which includes:

- An explanation of the need for proportionally allocating capital investment;
- the occasions (generally formal approval stages) in the life of a capital scheme when the analysis should be considered or re-appraised;
- the thresholds for which CIDA is required;
- the procedures for undertaking the allocation;
- a comprehensive series of worked examples;
- definitions of purpose categories and investment drivers;
- descriptions of purpose categories and investment drivers
- descriptions of asset types and examples of assets;
- non-infrastructure asset life categories, lists of typical asset types in each category and the range of asset lives covered; and
- NIW asset categories

This manual appears to fully conform to the NIAUR Reporting Requirements and the Regulatory Accounting Guidelines and forms a sound basis for compliant reporting in Tables 32, 34, 35, 36 and 40.

The Reporting Requirements indicate that, for a company with capital investment greater than £100m per annum, proportional allocation should be applied to all schemes/projects expending over £100k in the Report Year.

As highlighted above, NI Water's proportional allocation procedures are now well established and generally consistently applied. This consistent performance is founded on the following governance processes:

- CIDA master classes were rolled out to Engineering Consultants responsible for delivery of the Capital Works Programme.
- For all schemes with Report Year spend above the £100k threshold, approvals go through the Asset Management Approvals Panel where the CIDA allocation is checked and challenged.
- NI Water reviews all projects to confirm the appropriateness of the proportional allocation of expenditure for all projects that have had the CIDA allocation updated on CAPTRAX.
- A procedure has been implemented to ensure CIDA is updated on CAPTRAX prior to CIP approval.
- Operating Capital expenditure will be subject to the same governance and approvals processes as the Capital Works Programme expenditure.

During the course of our AIR13 audits, we continue to see evidence that the CIDA allocation of schemes are regularly critiqued by the NI Water Finance and Regulation Team and that Project Managers liaise with the same team to ensure consistency of approach.

4.3 Data Reconciliation

As previously reported, data in T32, T35 & T36 of AIR13 did not quite reconcile with equivalent data in the CIM, as AIR13 data is taken from CIDA, which has greater levels of granularity for each purpose/driver code. As summarised below, a +/-0.3% variance in water and wastewater related capex between CIM and CIDA was identified.

Table 35 line descripton		T35 £m	CIM £m	Variance £m	Variance %
3	MNI (gross of grants and contibutions)	15.909	16.259	0.350	**2.15**
6	Infrastructure renewals expenditure (gross)	22.593	22.593	0.000	**0.00**
7	Capex: Total quality enhancement programme	9.972	10.207	0.235	**2.30**
9	Capital expenditure:customer service	3.126	2.868	-0.258	**-8.99**
11	Capital expenditure supply demand balance	8.568			
16	Capital expenditure - security of supply	9.214	17.691	0.091	**0.51**
	Totals	69.382	69.618	0.236	**0.34**

Table 36 - Sewerage service nominal expenditure

Table 36 line descripton		T36 £m	CIM £m	variance £m	Variance %
3	MNI (gross of grants and contibutions)	41.258	41.119	-0.139	**-0.34**
6	Infrastructure renewals expenditure (gross)	8.775	9.340	0.566	**6.06**
7	Capex: Total quality enhancement programme	21.626	21.242	-0.384	**-1.81**
9	Capital expenditure:customer service	2.899	2.533	-0.366	**-14.43**
11	Capital expenditure supply demand balance	18.318	18.418	0.100	**0.54**
	Totals	92.875	92.652	-0.224	**-0.24**

Although the variance was negligible for AIR13, we sought to better understand the nature of the variances, and the Company advised that expenditure reported on CIM

is allocated between WI – Q,B,E & G and WNI – Q,B,E & G on a percentage basis, whereas expenditure reported in AIR13 is derived directly from CIDA. Project expenditure in the CIM is reported in an 8 box format (WI – QBEG and WNI – QBEG) which introduces inaccuracies when back calculated for Table 35, which is effectively a 4 box format (QBEG). To demonstrate this, we reviewed how the expenditure for JG035 was allocated into T35. JG035 is a trunk main scheme that includes Water infra and Water non-infra items. The water infra item is associated with Growth (as reported on AIR Tables) but when examining the CIM and back calculating this results in infra being allocated to B and G which is incorrect. It is however the case that at a project level both the service indicators and purpose allocations reported on the CIM are correct. On this basis, projects with a mix of Water/Sewerage and infra/non-infra provide an incorrect answer when generating the comparisons from the CIM.

Additionally, capitalised salaries and overheads are separately reported on CIM as a consolidated line item, however they are then applied to each project on a pro rata basis, which generates rounding errors. For AIR13, a [x] adjustment was required to all lines on a pro rata basis to account for the rounding error identified.

4.4 Additions – New assets (enhancement)

Enhancement expenditure reported in Table 32 has been derived from Captrax (CPMR) for Capital Works Programme expenditure and the Oracle AICC database for Operating Capital and M & G.

We note a 10% reduction in expenditure against both infrastructure and non-infrastructure assets at NI Water. This is consistent with both the PE profile for Year 3 of PC10 and the fact NI Water is nearing completion of the PC10 programme. As before, there has been a strong emphasis on base service provision expenditure for 2012/13, as NI Water focuses on the WMRP and WwTW maintenance programme.

We found that NI Water has continued to report a large number of assets adopted at nil cost (reported in Line 7 Column 4) as:

- Significant levels of social housing are being built
- Developers try and reduce their liability on completed developments, resulting in increased levels of notional expenditure;
- NI Water Developer Services team pro-actively deal with backlog/mature developments in (a) reviewing old sites and (b) working with DRD Roads Service to clear a number of outstanding sites; and
- there has been a higher than usual number of sewerage pumping stations within the sites adopted.

For AIR13, enhancement related M&G expenditure has been allocated on a project by project basis rather than an assumed proportional allocation between water and sewerage. For 2012/13, M&G expenditure has been allocated 48%W:52%S.

We confirm that enhancement expenditure reported in Table 32 is consistent with that reported elsewhere in the AIR and our specific comments are included in our commentaries for Tables 35 and 36.

4.5 Base Service Provision

We confirm that the base maintenance expenditure reported in Table 32 is consistent with that reported elsewhere in the AIR and our specific comments are included in our commentaries for Tables 35 and 36.

When compared to the overall levels of cumulative expenditure forecast for Year 3 of PC10, as summarised in Table 32.1 below, NI Water is significantly ahead of water IRE forecasts, reflecting a focus on watermain renewals over PC10, whereby, NI Water has outperformed the PC10 WMRP by 141km. Against an overall PC10 programme of 900km of water mains activity, NI Water has out-turned 1040km of new and replacement main. We consider the reported outperformance of the WMRP reflects the relative uncertainty of funding, due to revisions in PE. When additional funding is made available at short notice, (as was the case in 2011/12 and 2012/13) well established, rolling programmes of work such as the WMRP will benefit from any additional funding.

In terms of MNI expenditure, the Company is significantly ahead on the level of MNI expenditure forecast for Year 3 of PC10. It is evident that the PC10 programme is heavily focussed on WwTW capital maintenance schemes and there was also an increase in Operational Capital MNI spend to match the increased PE allowance when made available by the DRD.

Table 32.1 – Asset Maintenance Expenditure

		Water Infrastructure (£m)		Water Non-Infrastructure (£m)		Sewerage Infrastructure (£m)		Sewerage Non-Infrastructure (£m)	
		Actual	SBP/ PC10	Actual	SBP/ PC10	Actual	SBP/ PC10	Actual	SBP/ PC10
SBP	2007/08	18.257	[x]	17.867	[x]	5.718	[x]	21.505	[x]
	2008/09	37.632	[x]	19.769	[x]	6.188	[x]	26.098	[x]
	2009/10	26.904	[x]	12.305	[x]	11.494	[x]	30.115	[x]
PC10	2010/11	18.810	[x]	14.447	[x]	6.053	[x]	21.229	[x]
	2011/12	26.45	[x]	20.31	[x]	9.37	[x]	47.05	[x]
	2012/13	22.50	[x]	15.90	[x]	8.61	[x]	41.26	[x]

Overall report year maintenance expenditure is £5m above the PC10 forecast, reflecting the re-profiling of Public Expenditure allowances.

We provide further comment on the nature and reasons for this variance in our commentaries to Tables 35 and 36.

4.6 Grants and contributions

As stated in NI Water's commentary to Table 32, non-infrastructure additions are shown net of grants, contributions and asset adoptions. Assets adopted are included in gross MEAV terms as described in our table 36 commentaries

Infrastructure renewals expenditure is shown net of Infrastructure Charge Receipts.

4.7 Reconciliations

We confirm the following consistencies:

- Table 32(Total)/32/3 = Table 35(incl. PPP)/2
- Table 32(Total)/33/3 = Table 35(incl. PPP)/3
- Table 32(Total)/32/3 = Table 35(incl. PPP)/25
- Table 32(Total)/17/3 = Table 35(incl. PPP)/26
- Table 32(Total)/32/6 = Table 36(incl. PPP)/2
- Table 32(Total)/33/6 = Table 36(incl. PPP)/3
- Table 32(Total)/32/6 = Table 36(incl. PPP)/22
- Table 32(Total)/17/6 + 32/33/6 = Table 36(incl. PPP)/23

Date: 29 July 2013
Prepared By: HMS

Table 33- Depreciation Charge by Asset Type

Commentary by REPORTER

1. Background

Information in this table assists with the understanding of the accounting charges applied by the Company. Current Cost Depreciation (CCD) charges are split by service and by period of commissioning and further by whether the related capital expenditure was on the provision of enhancement assets or on maintaining existing 'base' assets.

The table also reports on Infrastructure Renewals Charges (IRC) for Water and for Sewerage services separately. It compares IRC against IR Expenditure (IRE) and tracks the prepayment/accrual position.

2. Key findings

- We have commented on proportional allocation between base and enhancements and by asset lives in our commentaries to Tables 32, 35 and 36.
- We note significant accelerated depreciation in the year, which follows similar levels of acceleration reported in AIR12 and AIR11. We suggest that NI Water should get to a stable accelerated depreciation position.
- NI Water seems to make a one way downward adjustment for impaired assets which could impact on the value of the GMEAV. They advised that they have taken advice from their external financial auditors and this approach is consistent with UKGAAP.
- The Company is putting through accelerated depreciation on infrastructure assets. This seems to be at odds with RAB and IRC type financing. They advised that the financial auditors are content with this approach.
- Historically the IRC was based on a 10 year average. However for PC10 and now PC13 the IRC calculation is based on the Final Determination. The Company advised that the Utility Regulator has determined that the IRC and IRE would be the same for the years covered by PC13.
- Overall the Company has a relatively small prepayment balance of £3.341m. We note however that there is a significant variance between water and sewerage. For Water the Company has a prepayment of £13.653 million, whilst for Sewerage, they have an accrual of £10.3 million. This suggests that planning could be improved to avoid such significant variances.

3. Depreciation

The total depreciation charge for the year is reported in Table 33 Line 5. The Company's approach remains unchanged from previous years.

Confirm whether the systems and processes described in the Company's methodology statement are those currently in operation. Where this is not the case identify and explain areas where the methodology statement is incorrect or incomplete.

During our audit we were provided with the Company commentary and their process notes that relate to the Company approach.

There has been no fundamental shift in the way that the Company reports data in this table. The data for this table has been populated using the same method as that used to populate Table 25. Table 25 is based on actual asset lives and not simplified assets as those used historically in Table 34.

The Company advised that it is not able to automatically assign depreciation to either base or enhancement expenditure. It uses a split based on CIDA analysis which identifies whether an asset relates to Quality, Base, Enhancement or Growth. We have commented on the correctness of the CIDA approach in our audits of the capital expenditure tables.

Data from Table 25 is already split between water and sewerage services. Many management and general assets are assigned to either water or sewerage or a mixture based on the CIDA assessment by the project manager.

Depreciation Policy
Assets are depreciated on a monthly basis from the date they are commissioned for beneficial use. The Company has a de-minimus figure for capitalisation. This approach is unchanged from previous years.

Revised MEAV valuation
The previous asset revaluation was undertaken in 2001-02 by [x]. The Company advised that the next revaluation would be undertaken during price control 2015. It has not therefore undertaken any asset revaluation.

Depreciation Calculations
As data already exists related to water and sewerage the Company has used splits derived from Table 34 in order to report depreciation for the current year. These data in Table 34 on asset live splits we believe would have been useful to maintain in order to sense check that the average financial asset life is consistent with the average engineering asset life.

NI Water advised that it is depreciating assets for the Kinnegar PFI as this is an 'on-balance sheet' transaction although it is being built and operated by the private sector. Further questions in relation to how Kinnegar is being depreciated should be referred to the financial auditors.

Perform tests of the Company's systems and processes described by the Company's method statement to ensure that it has been followed by the Company in the calculation of the CCD and population of table 33.

Correctness of split of assets between water and sewerage and base and enhancement

We have commented on the robustness of expenditure allocation to asset lives in our commentaries to Tables 32, 34 and 35-36. We undertake sample checks of this data routinely as part of our proportional allocation audits. Based on these audits we believe the approach is appropriate for splitting assets between base and enhancement expenditure. We will undertake a more detailed audit of a sample of schemes focusing specifically on asset lives for AIR14.

Correctness of information entered into Investment system

NI Water is required to complete a template for new investments including a split by asset life of the scheme. Based on our sample audit this information is currently not being completed consistently across different investment proposals.

Review the Company's assessment of a confidence grade by line to assess the robustness of how this table has been completed. Comment on whether you agree with the confidence grade assigned.

For AIR13 the Company reported confidence grades of B3, which are consistent with previous years and appropriate.

Consider and comment on any changes that the Company could make to its analysis, which would give a more robust answer. You should consider feasibility and costs associated with making suggested changes, and explain whether you have brought your suggested improvements to the Company's attention and whether it is considering implementing them.

We have made some comments below under the Company's explanation of movements.

Compare the Company's rules on proportional allocation between services (specifically between base and all enhancements) and allocation of expenditure to depreciable life categories given in Table 33. Confirm whether the charge stated has been calculated in accordance with the Company's rules. Comment on any exceptions.

As part of our audit we have undertaken a review of the Company's approach to proportional allocation between base and enhancement and asset lives. Our findings are included in our commentaries to Tables 32, 35 and 36.

The Company has historically reported the following asset lives in Table 34.

Asset category	Asset life
Very Short	4
Short	10
Medium	20
Long	60

In 2011 we undertook an independent assessment of the average asset lives contained in the Company asset register for the various asset lives. We used the following categories of assets in our assessment, informed by discussions with NI Water:

Asset type	Associated Asset Life
BUILDING	Long
CAPITAL STUDIES	Medium
CGR CIVILS	Long
CIVILS	Long
COMPUTERS	very short
COMPUTERS LLA	Short
DIGITISATION	Medium
FIXED PLANT	Medium
FURN&OFFICE	Short
ICA	Medium
INF ACC DEPN	Infra
INFRASTRUCT	Infra
LAB EQUIP	Short
LAND	Land
LAND MGMT	Medium
LL Computers	Short
LL MOB PLANT	Short
LORRIES	very short
RADIO &MONIT	Medium
SL MOB PLANT	very short
TELEMETRY	Short
VANS	very short

The table below shows the results of our analysis:

Asset category	Asset life
Very Short	6.1
Short	10.5
Medium	25.2
Long	58.4

These figures highlighted a difference to the data reported in Table 34.

We believe that the comparison would be useful to consider the variance between data submitted in the PR process and the outturn average asset life data.

Review and comment on the Company's explanation of the movement in the total CCD between the current year and prior year.

Approach to Accelerated Depreciation

For the current year the Company has applied accelerated depreciation of £65 million. This is more than 70% of the total depreciation charge. They have applied a significant accelerated depreciation charge now for a number of years. We challenged the Company in relation to why this is the case. They advised that it is reviewing all assets and those that are no longer used are simply being removed by means of accelerated depreciation. It advised that this process should complete itself over the following few years.

The Company continues to push through accelerated depreciation on infrastructure assets. For AIR13 they have identified £57.8 million of accelerated depreciation. This is in addition to the significant other accelerated depreciation in recent years. For AIR12 the total accelerated depreciation was £64.5 million. For AIR13, a significant portion related to infrastructure assets (> 70%).

We challenged NI Water as to why such a high level of accelerated depreciation has being reported for the last three years. They advised that the accelerated depreciation is being incurred because they are proactively trying to get consistency between the Fixed Asset Register (FAR) and the Current Cost Asset Register (CAR).

We note that the level of accelerated depreciation may question whether assets are in fact being sold too soon, and whether a mismatch exists between the financial and economic asset life. A specific review should be undertaken in AIR14 to determine if this is an issue for NI Water.

The Regulator should review whether this is acceptable from a regulatory model perspective, given that the RAB model is not in general designed to be used for depreciation on infrastructure assets. The regulatory model is designed so as to allow sufficient replacement of infrastructure through the IRC and IRE. The consequences of depreciating infrastructure assets on an accelerated basis through the RAB are that it will result in an accelerated drawdown on Regulatory Asset Base which is unsustainable in the long term. It may also provide a snapshot of NI Water financial performance.

Impairment of Assets

NI Water continues to impair assets. This is based on advice from independent consultants [x]. We challenged NI Water in 2012 and they advised that it only made a downward adjustment as required by UKGAAP and not an upward adjustment where the consultants advised that there has been an increase in an asset's values. This does seem that it could result in a mismatch of asset values. We do note that a revised GMEAV asset base should provide a central view of the value of assets. We also note that a GMEAV may be undertaken in the middle of the next price control period.

Review and confirm whether NI Water's explanation of the impact of an MEA revaluation on its CCD charge is adequate and reasonable

There has been no MEA revaluation for the current year. In previous years NI Water has provided an explanation on why it is depreciating infrastructure assets and the impact on the GMEAV of the application of its impairment policy. They advised that in both respects the financial auditors are content with their approach.

Review and confirm whether NI Water's explanation of the link between HCA and CCA depreciation, including what systems are used to derive both depreciation charges, is adequate and reasonable.

The Company's fixed asset register holds details related to both HCA and CCA. Asset values reflect those of the previous revaluation in 2001, plus new assets that have been commissioned and continue to have useful life. HCA data is indexed on

an annual basis to present it as CCA data. Since the incorporation of the Company, they have used RPI to index data.

The Company has on-balance sheet additions to the Alpha PPP assets. This also incurs depreciation.

4. Infrastructure renewals charge

Consider whether NI Water's policy for infrastructure renewals charge is consistent with the calculation of the infrastructure renewals charge

Historically the IRC was based on a 10 year average. However since PC10 the IRC calculation is based on the final determination for PC10. The Company advised that the Utility Regulator has determined that the IRC and IRE would be the same for the three years covered by PC10. It appears that it will also be the same for the following two years of investments.

We have previously audited the IRE and commented on this as part of the Business Plan audits for PC13. The difference between the actual out-turn IRE and the IRC is treated as an accrual or prepayment.

Consider whether NI Water's policy is reflective of NI Water's medium to long-term view of infrastructure renewals expenditure. The reporter should consider what IRE projections are available to NI Water and if these projections are medium to long term;

The IRE projections used by NI Water are based on the IRE allowed for in the final determination post PC13. In as much as the allowed IRE is reflective of a long term view of infrastructure renewals expenditure the IRC will also be reflective of the long term view.

Review and comment on NI Water's explanation of the period over which it expects any infrastructure renewals accrual/prepayment to be wound out and whether this is reasonable.

The Company has a relatively small prepayment balance of £3.341m compared. We note however that there is a significant variance between water and sewerage. For Water NI Water has a prepayment of £13.653 million, whilst for Sewerage, they have an accrual of £10.3 million. This suggests that planning could be improved to avoid such significant variances.

Date: 29 July 2013
Prepared By: HMS

Table 34 – Analysis of non-infrastructure fixed asset additions by life categories

Commentary by REPORTER

1. Background

This table provides a breakdown of the non-infrastructure fixed asset additions in each Report Year, split by:

- Service area (water or sewerage service)
- Purpose category (Enhancement or Base Maintenance) and
- Asset life category

2. Key Findings and Recommendations

- Although NI Water has 3 year plans, its new status means that all budgets have to be spent with the year allocated, resulting in potential inefficient expenditure.
- The appropriateness of the average asset lives was reviewed in our audits of the PC10 submissions in 2009. In general, these were deemed to be satisfactory and in line with assumptions employed elsewhere. We do believe however that the overall asset lives available should be extended to ensure that the economic life of an asset is consistent with its financial life.
- The audit trail for the basis of the split of assets is not transparent.
- We reviewed the allocation of expenditure contained in business cases submitted to the Investment Board. We noted that in some cases the asset allocation section of that document was not populated, whilst in other cases incorrect asset lives where being assigned.

3. Audit Approach

We undertook an audit of the systems and data generated by those systems for the purposes of reporting data within this table. We interviewed the table owner to understand the processes used to populate this table.

4. Audit Findings

4.1 *Confirm whether the systems and processes described in NI Water's methodology statement are those currently in operation. Where this is not the case the Reporter should identify and explain where the methodology statement is incorrect or incomplete*

The Company methodology is contained in the commentary submitted. The Company installed the capital investment driver allocation (CIDA) approach in 2007/08 in order to improve the allocation of costs primarily between base and the various enhancement categories. The CIDA manual was updated in November 2009. It was further improved in 2010/11 and is now quite comprehensive. Nevertheless we could not find a robust chapter on the allocation of expenditure by

asset lives.

The Company used the project control system (Captrax) and Oracle in order to report data in this table. The Company advised that the CAPTRAX system is reconciled on a monthly basis with the general ledger. The CAPTRAX system allows the generation of reports that can be used directly for the population of data in Table 34.

We have undertaken a broad consistency check of the data between the different capital expenditure tables for AIR13. Our analysis and tests of the data sources and the NI Water's systems show no material concerns.

In allocating their fixed assets to life categories within their various systems, NI Water uses a simplistic view of assets and asset lives. In recent years they have added further assets to the list of assets it has on its system, further to advice from the Reporter.

The current list of asset lives is shown below:

Fixed Asset Register and CIDA	**Asset Life**	**Table 34**	**Statutory/Regulatory Accounting Reporting (Oracle coding)**
Infrastructure	n/a	-	0113
Buildings	60	long	0111
Civils	60	long	0112
Fences - All fences around sites	40		
Steel Tanks - All Steel tanks for storage and processes	40		
Filter Media - Media in Biological filters, Sand filters etc.	20		
Rotating Biological Filters - RBC package plants	20		
Kiosks - All kiosk type structures including small control kiosks and prefabricated control buildings	20		
Fixed plant	20	medium	0115
Digitisation	20	medium	0115
Capital studies	20	medium	0115
Land management	20	medium	0115
Radio and monitoring	20	medium	0115
Long life mobile plant	10	short	0114
Short life mobile plant	5	short	0114
Lorries	10	short	0114
Computer equipment	6-10	short	0116
Meters Domestic Water Meters	8		
ICA	7	short	0115
Telemetry	7	short	0115
Furniture and office	10	short	0116
Batteries - Batteries for loggers, toughbooks etc.	4		
MBR Membranes	5		

Fixed Asset Register and CIDA	Asset Life	Table 34	Statutory/Regulatory Accounting Reporting (Oracle coding)
Lab equipment	5	short	0115
Vans	5	v. short	0114
Computers (stand alone)	3	v. short	0116

This does now provide a better list of asset lives and the Company may wish to review these again prior to the next business plan submission for completeness.

Further comments are provided in relation to the systems and processed used by NI Water in our commentaries on Tables 35 to 36.

4.2 ***Perform tests of NI Water's systems and processes described by NI Water's methodology statement to confirm that it has been followed by NI Water in the calculation of the CCD and population of table 34***

During our sample audits of capital schemes across purpose categories and asset types, we reviewed the CIDA data, inter alia, to test the allocation of values to assets and the allocation of these values to asset lives for depreciation purposes. We did not find any shortcomings. We noted that NIAUR has now removed the requirement to report the assumed average asset lives in the necessary categories.

The Company has provided flowcharts related to completion of the data within CAPTRAX, through to reporting data in the Annual Information Return. The processes depicted in these flowcharts are consistent with the methodologies in use and we observed.

4.3 ***Review and comment on reasonableness and consistency of the rules adopted by NI Water for allocation of expenditure to life categories***

We undertook a review of the allocation of expenditure across life categories on a sample basis for the SBP submission. We did not find any material areas of concern during this audit. We also checked the allocation between CIDA categories as part of the PC13 process.

We reviewed the allocation of expenditure contained in business cases submitted to the Investment Board. We noted that in some cases the asset allocation of that document was not populated. In some instance an average asset life of 15 years was used which is not an option for the allocation of average asset lives. This does suggest that there is a lack of understanding at project management level in relation to the allocation of assets to average asset lives.

4.4 ***Review NI Water's procedures and consider whether or not they are reasonable, and whether they are followed by staff involved in allocation decisions***

The large part of the data reported in this table is based on the CIDA analysis. NI Water themselves perform a series of checks on CIDA data as each project passes

through its life. The Project Managers (most of whom have now received CIDA training) enter the data, initially based upon their knowledge of the purpose(s) and scope of the work involved. At 'A1' stage, this allocation is checked by Asset Management and approved prior to uploading to CIDA. The project data is similarly reviewed and approved at 'A3' stage, then again at 'A4', when the CIDA information is once again updated. All new updates to CIDA are again specifically checked as responsibility is passed to the Finance and Regulation directorate.

This level of training, approvals and checks appears to have generated a sound data set as the tests we have performed on the CIDA information falls well within acceptable limits for the subjective nature of the assumptions required.

We note however that there is an absence of an audit trail in the CIDA system in relation to the basis of allocated assets between life categories. We would expect this to be resolved in the future. We reviewed an executive approval for capital expenditure and found little justification for the split of asset lives used, and concluded that the split used for a scheme by asset life is not subject to the same scrutiny by the investment board as the investment business cases are. During our review this year we made further observations in relation to the quality of data related to asset splits, see comments above in section 4.3.

4.5 ***Review and comment upon any differences from rules and procedures adopted in previous years, and consistency of asset lives with those used for depreciation of assets***

There has been no significant change in the methods used for reporting this data between AIR12 and AIR13. The Company has sought to implement some changes in related to how information in business cases is presented for approval by being more explicit about CIDA splits. However, we noted some inconsistency and varying quality of this information. It is clear a further push is required in relation to this information. Ideally NI Water should provide a justification of the split of asset lives in the business cases it presents for approval and be transparent about the methods used to assign asset lives and to open their assessment of asset life splits to scrutiny.

The Company advises in its commentary that the last comprehensive review of asset lives was completed as part of the NIAMP in 2001 although as noted above it has added some additional asset lives to the analysis.

4.6 ***Consider the appropriateness of the current cost depreciation charge in the year and in particular:***

- ***confirm when NI Water last reviewed or amended its asset life and apportionment policy;***
- ***comment on whether, in the Reporter's view, the financial asset lives reflect the operational lives of the assets and the reason for that opinion;***
- ***comment on the appropriateness of both asset lives and the apportionment of expenditure across asset lives used by NI Water***

As noted in the sections above, NI Water has added several new asset life categories to their standard list. This will improve the apportionment of CCD as there is greater granularity and clarity for allocation. The Company added some new asset lives during the previous report year so the asset base is gradually becoming better allocated to asset lives.

The Company's approach to apportionment is being improved continually. The apportionment and asset life policy remains broadly as previous years. We have made some recommendations about audit trails related to apportionments between asset lives and opening these judgements up to scrutiny by the investment board. These have been taken up to some extent but more work is required in order to further improve the allocation of costs.

It should be noted that the total current cost depreciation charge has been reviewed by the financial auditors. We have commented on this in our commentary to Table 33. We note however that as so much accelerated depreciation is occurring it is necessary to be certain that assets are not being replaced within their financial asset life and that a clear case exists that replacement rather than some refurbishment is not the optimal solution.

The apportionment across average asset lives has been done on the basis of the CIDA allocations. The CIDA split had an average asset life for medium life assets at 15 years. This is consistent with some of the Executive Approval reports we reviewed for individual schemes but not all.

Our previous audits of capital schemes have confirmed that the Company's approach to allocation of expenditure in CIDA is improving. A sample audit of the split of asset lives across categories should be undertaken during AIR14 audit.

4.7 ***Review and comment on inconsistencies between engineering and financial judgements on asset lives and investment allocation***

Our reviews of asset lives remain as reported on the SBP document. We have not revisited this analysis for the AIR. This should be reviewed in AIR14.

4.8 ***Review and comment, on an exception basis, where NI Water has not provided commentary on inconsistencies in asset lives and investment allocation between those used in previous years***

We have commented on investment allocations in more detail in our commentaries for Tables 35-36 and 40. In general the approach to allocating expenditure to asset lives remains the same as that used in the previous year.

5. Methodology PPP table

The Company has reported only £28k worth of additional depreciation. The Company advise the Enhancements/Base Service split has been extracted from the Contractors financial model.

No PPP information has been included for either Omega or Kinnegar contracts. This is because the information is felt to be of insufficient quality.

Date: 29 July 2013
Prepared By: HMS

Table 35 – Water Service – Expenditure by purpose

Commentary by REPORTER

1. Background

This table disaggregates expenditure between base, enhancements, grants and contributions and adopted assets. Enhancements are reported under quality, enhanced service levels, and supply/demand. The table also indirectly checks the Company's proportional allocation rules.

2. Key Findings

- NI Water's proportional allocation procedures are now well established and consistently applied and we are finding fewer instances where the allocation of expenditure between purpose categories requires adjustment.
- We note a 16% decrease in overall capital expenditure in Year 3 of PC10 when compared to the forecast PC10 expenditure profile for Year 3, reflecting the re-profiling of Public Expenditure (PE) funding, which resulted in a £36m reduction in expenditure against the PC10 budget for 2012/13. However, during the year PE was revised by the DRD, and an additional £12m was made available, which has helped to reduce the overall variance.
- NI Water has outperformed the PC10 WMRP by 141km. Against an overall PC10 programme of 900km of water mains activity, NI Water has out-turned 1040km of new and replacement main. We consider the reported outperformance of the WMRP reflected the relative uncertainty of funding, due to revisions in PE.
- Management and General (M&G) expenditure accounted for 48% of the MNI spend for the year, which is higher than that reported previously and higher than we normally find at companies in E&W, where M&G spend has typically been 25% of MNI. We found that NI Water, have charged expenditure associated with feasibility studies to M&G, which is not consistent with E&W. For AIR13, feasibility related expenditure accounts for circa 20% of total M&G expenditure.
- The opex from capex process has been further improved through the completion of the Business Improvement project - Cost to Serve. We found that the Company is now able to monitor power costs at each site and assess the impact that enhancements have on the power consumption at specific assets. They are also able to identify other operational costs, such as; site specific materials and management costs, ensuring a more representative total opex from capex is reported.
- We note that there were very few outputs delivered against the PC10 water capital programme during the report year, with the majority of the outputs that were outstanding in 2011/12, deferred to PC13/PC15.

3. Audit Approach

As part of our review of NI Water's AIR13 submission, we completed a number of 'Capex' audits, weighted towards those involving greater capital expenditure in the Report Year. For AIR13, the water related schemes reviewed included 2 x strategic trunk main schemes, 1 x WTW scheme and 4 x water main rehabilitation schemes.

At year-end we undertook a review of the contents of the Capital Investment Driver Allocation (CIDA) spreadsheet systems and CIM template, which collates the expenditure information by project for the Report Year. During this review, we tested the collation systems to ensure that the proportional allocations exposed in the scheme specific audits are correctly stated at the summary level for entry into the AIR Tables.

We also met with the system holder to confirm the reported data for each line and review progress against the various programmes.

4. Audit Findings - Capex

4.1 PC10 Assumptions

In order to assist with the population of Table 35a, NIAUR provided a breakdown of the Final Determination. We have reproduced the breakdown below for ongoing reference, to form the basis of expenditure comparisons undertaken throughout the PC10 period.

Water	2010-11	2011-12	2012-13	Total
Q	[x]	[x]	[x]	[x]
B	[x]	[x]	[x]	[x]
E	[x]	[x]	[x]	[x]
G	[x]	[x]	[x]	[x]
Total	[x]	[x]	[x]	[x]

Base	2010-11	2010-11	2010-11	Total
WATER INFRA	[x]	[x]	[x]	[x]
WATER NON-INFRA	[x]	[x]	[x]	[x]
Total	[x]	[x]	[x]	[x]

4.2 Proportional Allocation

NI Water's proportional allocation procedures are now well established and consistently applied. Whilst NI Water still review projects to confirm the appropriateness of the proportional allocation of expenditure for all projects that have had the CIDA allocation updated on CAPTRAX, we are finding fewer instances where the allocation of expenditure between purpose categories requires adjustment.

As reported previously, the capital scheme approvals process is formalised, with all schemes >£25k, but <£500k, requiring formal approval by the BICC Panel and all schemes >£500k requiring CIP approval. The Strategic Investment team (within the Asset Management Directorate) review the CIDA on all projects as they seek approval and advise the above panels of any challenges.

At year-end we reviewed a sample of schemes to specifically test allocation methodologies for AIR13. As summarised below, the sample of schemes reviewed provided us with assurance that the CIDA allocations applied by the Company are broadly in line with the Reporter's expectations.

Project Reference	Project Name	PC10 Budget (£m)	Spend to date (£m)	Latest Best Estimate (£m)	QBEG Allocation on CIM				Reporter Agreement (✓/×)
					Q	B	E	G	
JB687	Cookstown Phase 2 Watermain Improvements	[x]	[x]	[x]	3	62	21	14	✓
JG035	Ballydougan to Newry Main Link Reinforcement	[x]	[x]	[x]	0	6	0	94	✓
JI025	MIMP South (Major Incident Mitigation Project South Region) Freeze Thaw Improvements	[x]	[x]	[x]	0	91	0	9	✓
JN226	Strule Intake For Derg WTW	[x] [x]	[x]	[x]	0	2	0	98	✓*
JR440	Newtownabbey Zone Watermain Improvements Phase 2	[x]	[x]	[x]	92	5	1	2	✓
JV844	WP101 Newry Phase2	[x]	[x]	[x]	32	49	0	19	✓
JA271	Killylane WTW	[x]	[x]	[x]	0	100	0	0	✓

*See comments below

A summary of our findings are detailed below:

For **JB687 – Cookstown Ph 2 Watermain Improvements**, the Company proposes to replace 69km of main and abandon a further 11km of main in the Cookstown area. At the time of review, circa 96% of the work had been completed. Proportional allocation of expenditure is based on the works required in each street, the principal reason why the work is necessary, lengths, diameters and materials of existing and proposed assets, and the technique for rehabilitation/replacement, which we consider to be an excellent methodology. On this basis, a QBEG of 3/ 64/ 24 / 11 was initially determined. When compared to the QBEG reported on the CIM we noted a slight discrepancy (3 / 62 / 21 / 14), which NI Water confirmed was due to subsequent revisions to the scheme which have resulted in the slight movements in QBEG.

For **JG035 – Ballydougan to Newry Main Link Reinforcement**, the purpose of this trunk main link and pumping station scheme is to supplement supply to the Newry and Lough Ross Resource Zones, by providing a link with Castor Bay WTW, as the existing water treatment works (Foffany and Carran Hill), and trunk main supply from Castor Bay are of insufficient capacity to meet future demands. The scheme, which was initially split into 3 phases and planned to be delivered over PC10 and PC13, is now on target for delivery in 2014, with the final phase due to commence on site in

November 2013. We have reviewed this scheme previously and concur with the QBEG allocation reported in the CIM.

For **JI025 - MIMP South Freeze Thaw Improvements**, the Company proposes to replace 23km of main and abandon a further 2km of main that burst during the previous freeze/thaw events across the southern part of the province. At the time of review, circa 51% of the work had been completed. Proportional allocation of expenditure is based on the works required in each street, the principal reason why the work is necessary, lengths, diameters and materials of existing and proposed assets, and the technique for rehabilitation/replacement. On this basis, a QBEG of 0 / 91 / 0 / 9 is appropriate, given the fact that the structural condition of the mains in question is the primary driver for the renewals.

For **JN226 – Strule Intake for Derg WTW**, the scheme has been subject to significant change since it was initially proposed in the WRS 2002, when a new regulating reservoir (Glendargan Dam) was part of the proposal (hence the high initial estimate) to reduce the raw water supply deficit in the Derg supply zone. The scope which is currently being delivered includes a 6.8km x 450mm pumping main and 26Ml/d WPS. Work is forecast for completion in 2013/14. The QBEG has been subject to regular review, to reflect the changing scope, and a recent bottom up assessment completed by the PM has resulted in a QBEG of 0 / 1 / 0 / 99.This is slightly different to the QBEG currently on CIM, but we anticipate this to be updated shortly.

As per the other WMRP schemes reviewed for AIR13, **JR440 - Newtownabbey Zone Watermain Improvements Phase 2**, proportional allocation of expenditure is based on the works required in each street, the principal reason why the work is necessary, lengths, diameters and materials of existing and proposed assets, and the technique for rehabilitation/replacement. On this basis, the scheme to deliver 35km of new main has been proportionally allocated 92 / 5 / 1 / 2, which we consider to be appropriate. At the time of review the scheme was 62% complete, which is consistent with the spend to date.

For **JV844 - WP101 Newry Phase2**, the Company proposes to replace 41km of main and abandon a further 6km of main in rural areas to the east of Newry, in order to reduce unplanned interruptions to supply. At the time of review, circa 78% of the work had been completed. Proportional allocation of expenditure is based on the works required in each street, the principal reason why the work is necessary, lengths, diameters and materials of existing and proposed assets, and the technique for rehabilitation/replacement. On this basis, a QBEG of 32 / 49 / 0 / 19 is appropriate.

The proposed upgrade to **JA271 – Killylane WTW**, was initially a PC10 Q scheme; however, we note that it has subsequently been reallocated to B. We reviewed the Business Case for Killylane and confirm the maintenance nature of the work proposed.

4.3 Year-end Capital Investment Reconciliations

As has been the case in previous years, we found that data reported in T35 of AIR13 does not quite reconcile with equivalent data in the CIM, as AIR13 data is taken from CIDA, which has greater levels of granularity for each purpose/driver code. As summarised below, a 0.3% variance in water related capex between CIM and CIDA was identified.

Table 35 line descripton		T35 £m	CIM £m	Variance £m	Variance %
3	MNI (gross of grants and contibutions)	15.909	16.259	0.350	**2.15**
6	Infrastructure renewals expenditure (gross)	22.593	22.593	0.000	**0.00**
7	Capex: Total quality enhancement programme	9.972	10.207	0.235	**2.30**
9	Capital expenditure:customer service	3.126	2.868	-0.258	**-8.99**
11	Capital expenditure supply demand balance	8.568			
16	Capital expenditure - security of supply	9.214	17.691	0.091	**0.51**
	Totals	69.382	69.618	0.236	**0.34**

Although the variance was negligible for AIR13, we sought to better understand the nature of the variances, and the Company advised that expenditure reported on CIM is allocated between WI – Q,B,E & G and WNI – Q,B,E & G on a percentage basis, whereas expenditure reported in Table 35 is derived directly from CIDA. Project expenditure in the CIM is reported in an 8 box format (WI – QBEG and WNI – QBEG) which introduces inaccuracies when back calculated for Table 35, which is effectively a 4 box format (QBEG). To demonstrate this, we reviewed how the expenditure for JG035 was allocated into T35. JG035 is a trunk main scheme that includes Water infra and Water non-infra items. The water infra item is associated with Growth (as reported on AIR Tables) but when examining the CIM and back calculating this results in infra being allocated to B and G which is incorrect. It is however the case that at a project level both the service indicators and purpose allocations reported on the CIM are correct. On this basis, projects with a mix of Water/Sewerage and infra/non-infra provide an incorrect answer when generating the comparisons from the CIM.

Additionally, capitalised salaries and overheads are separately reported on CIM as a consolidated line item, however they are then applied to each project on a pro rata basis, which generates rounding errors. For AIR13, a [x] adjustment was required to all lines on a pro rata basis to account for the rounding error identified.

4.4 Capital Expenditure

4.4.1 General

When compared against the actual expenditure incurred during the year against the various drivers, as summarised below, we note a [x] decrease in overall capital expenditure in Year 3 of PC10 [x] when compared to the forecast PC10 expenditure profile for Year 3 [x]. We found that the decrease in expenditure reflects the re-profiling of Public Expenditure (PE) funding, which resulted in a £36m reduction in expenditure against the PC10 budget for 2012/13. During the year PE

was revised by the DRD, with an additional £12m made available, which has helped to reduce the overall variance. We found that the additional expenditure has primarily targeted additional water main rehabilitation, due to the relatively short lead in time for well established rolling programmes of work such as the WRMP. In addition, work on Lisnarick WTW (a PC13 scheme) was brought forward to ensure the additional PE allocation for 2012/13 was spent.

Water	[x]	[x]	[x]
	[x]	[x]	[x]
Q	[x]	[x]	[x]
B	[x]	[x]	[x]
E	[x]	[x]	[x]
G	[x]	[x]	[x]
Total	[x]	[x]	[x]

Base	[x]	[x]	[x]
	[x]	[x]	[x]
IRE	[x]	[x]	[x]
MNI	[x]	[x]	[x]
Total	[x]	[x]	[x]

4.4.2 Base Service Provision

In terms of Infrastructure Renewals Expenditure (IRE), the expenditure incurred during the year [x] is circa [x] above the PC10 forecast for IRE in Year 3, reflecting a further increase in the length of main new/replacement main delivered during the year. Against a PC10 Year 3 target of 300km, NI Water delivered 41km of new main and 286km of replacement main during the year.

Overall, NI Water has outperformed the PC10 WMRP by 140km. Against an overall PC10 programme of 900km of water mains activity, NI Water has out-turned 1040km of new and replacement main. We consider the reported outperformance of the WMRP reflects the relative uncertainty of funding, due to revisions in PE. When additional funding is made available at short notice, (as was the case in 2011/12 and 2012/13) well established, rolling programmes of work such as the WMRP will benefit from any additional funding.

IR Expenditure during the year, reflects investment on 28 separate water main improvement schemes (with expenditure in excess of [x] during the year), with significant expenditure incurred on the following schemes; JV024 – Ballintemple Zone Water main Improvements [x], JS293 – North Down Bangor Ph2 Water main Improvements [x] and JV844 – Newry Ph 2 Water main Improvements [x].

Expenditure on maintenance to non-infrastructure (MNI) assets is lower than reported in AIR12, reflecting reduced activity on WTW maintenance projects. This is based on the fact that most WTW's were upgraded around the formation of NI Water

and do not require additional maintenance spend. In fact, the only significant WTW related MNI spend related to JF581 - Clay Lake WTW Remedial Work [x] and JP667 – Killyhevlin WTW Standby Generation [x]. We found that the majority of MNI expenditure reported related primarily to Operational Capital [x] and M&G related expenditure [x].

Management and General (M&G) expenditure accounted for 48% of the MNI spend for the year, which is higher than that reported previously and higher than we normally find at companies in E&W, where M&G spend has typically been 25% of MNI. We sought to better understand the reason for this variance, and found that NI Water, on the advice of the Regulator, have charged expenditure associated with feasibility studies to M&G. For AIR13, feasibility related expenditure accounts for circa 20% of total M&G expenditure. Whilst we understand the reasoning for this, i.e the absence of a confirmed solution, allocation of feasibility expenditure to asset type may be a more appropriate approach. Notwithstanding this, there has also been significant M&G expenditure, relating to the rationalisation of NI Water's regional office space at Altnagelvin [x] and Ballymena [x].

In terms of MNI expenditure, NI Water is broadly in line with the Year 3 PC10 forecast, but slightly behind in overall terms.

4.4.3 Quality Enhancements

Expenditure against Line 7 [x] is [x] lower than the PC10 forecast for Year 3.

NI Water had a relatively small WTW programme for PC10, with all outputs delivered in Years 1 and 2 of PC10. As such there has been minimal WTW Q expenditure in 2012/13, with the exception of the provision of enhanced site security at a number of WTW sites [x] as part of the SEMD.

NI Water was also expecting to deliver a Q scheme at Killylane WTW, but the results of the study completed during PC10, confirmed that a scheme was not required to improve quality standards. We reviewed the findings from the study in the subsequent business case and confirm that only base maintenance expenditure is required.

In terms of water distribution expenditure, NI Water has committed to the rehabilitation of 900km of water main over for the PC10 period (300km per year). For AIR13, NI Water delivered 327km (new and replacement mains – AIR12 T11), outperforming the PC10 target by 140km. In total, the new and replacement mains programme accounted for [x] of the [x] total Q spend for 2012/13.

4.4.4 Enhanced Service Levels

Overall spend on enhanced service levels, circa [x], is circa [x] lower than the PC10 forecast for Year 3. As expenditure primarily relates to the Water Mains Rehab Programme and Service Reservoir Rehab Programme, the reported under spend in the Service Reservoir Rehab Programme due to the framework procurement issues which have only recently been resolved. Activity on the Service Reservoir Rehab

Programme has been forecast to re-commence in PC13.

4.4.5 Improving supply/demand balance

Overall spend on supply/demand [x] is circa [x] lower than the PC10 forecast for Year 3, with significant spend recorded against JN226 - Strule Intake to Derg WTW [x]. We reviewed this scheme as part of AIR13 and note the significant change in scope required, whereby an increase in abstraction volume from 9Ml/d to 26.6Ml/d will eliminate the need for the proposed Glendargan Dam, resulting in a significant reduction in the final cost.

There was still some expenditure recorded against the LDTM and Service Reservoir Rehabilitation programmes, however, as summarised below, the majority of the outstanding outputs have been deferred to PC13 and PC15 due to PE constraints.

There are four named LDTM projects in PC10, Castor Bay to Dungannon, Cross Town Main, Castor Bay to Newry and Castor Bay to Belfast. As summarised in Section 10 below, Cross Town Main was claimed in AIR11, Castor Bay to Dungannon was claimed in AIR12 and the Castor Bay to Newry Link Main was completed in AIR13. Whilst the Castor Bay to Belfast Link Main has been deferred to PC13 due to PE constraints, there was still [x] incurred in 2012/13.

For the Service Reservoir/Clearwater tank PC10 programme, there are 13 named outputs. For AIR13, we found that NI Water has claimed nine outputs in PC10, with Tully SR claimed during the year.

4.6 Operational Capital (including M&G)

Operations Capital (including M&G projects) is subject to similar procedures as the Capital Works Programme. Project engineers provide the initial QBEG allocations (for Tables 35) and the investment splits into asset type (for Table 32) and asset life categories (for Table 34 - and Table 33).

Most Operational capital will relate to base maintenance, new development, lead pipe replacement or security of supply.

4.7 New Outputs/Obligations

NI Water has reported no new outputs/obligations to date.

4.8 Leakage Expenditure

NI Water has identified expenditure on leakage in their commentary as follows:

Leakage	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Capex	[x]	[x]	[x]	[x]	[x]	[x]
Opex	[x]	[x]	[x]	[x]	[x]	[x]
Total	[x]	[x]	[x]	[x]	[x]	[x]

We note that report year spend is similar to that reported in previous years, and consistent with PC10 forecasts. The leakage capex and opex for AIR13 has been allocated in accordance with Table 3.25 of Annex N of the FD as follows:

[x]

5. Grants and Contributions

Zero receipts are reported against maintenance non-infrastructure (line 4). Lines 3 and 5 are therefore identical. We believe this to be reasonable. NI Water has also confirmed that when compiling the PC10 submissions all grants and contributions were assumed to be enhancement.

NI Water confirms the analysis of enhancement requisitions, grants and contributions in their commentaries. We have confirmed this from summary data provided which links back to reports derived from Oracle.

6. Infrastructure Charge Receipts

NI Water considers all infrastructure charge receipts (ICR's) to relate to enhancements (and thus there is generally no difference between IRE net and IRE gross). For 2012/13, 44.3% of ICR's was allocated to non-infrastructure. The SBP only identified the infrastructure element of these receipts, so for consistency NI Water has continued to report ICR's in this table on the same basis.

The non-infrastructure element of the ICR's is assigned an asset life of 30 years and released over that period into the P&L account. As NI Water has previously provided supporting information which confirms this we have not revisited for AIR13.

ICR's are received by customer services and coded into the Oracle accounting systems. For year-end reporting, an Oracle report is accessed showing the receipts against the relevant codes, using different codes for water and sewerage and for charges and subsidy components. We have previously reviewed the spreadsheets used to calculate the full ICR's for water and sewerage, then to calculate the infrastructure and non-infrastructure components using the percentage apportionments above. The infrastructure element is entered into the table. Whilst we have not reviewed the spreadsheets for AIR13 we understand the approach is consistent with that previously reviewed.

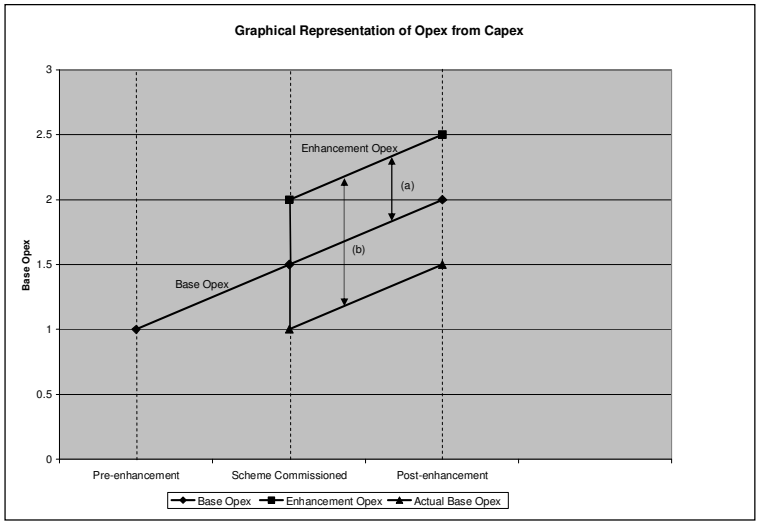
7. Operating Expenditure

We found that the methodology used to derive operating expenditure associated with capital expenditure and reported in Table 35 has been further improved for AIR13.

As before, Opex from Capex is based on incremental Opex associated with enhancement projects from prior years that has been assessed and removed from the total Opex reported in Table 21. Incremental Opex is calculated directly from the accounting general ledger, based on sites that become active during 2010/11 to 2012/13. A comparison of data on a site by site basis, pre and post Capex investment is then undertaken, with an adjustment for inflationary impacts.

Once the total additional Opex per site is obtained the Company applies a split between the different lines based on the enhancement component of the CIDA split.

The Company's approach involves the comparison of base opex in the year preceding and post enhancement, assuming the base expenditure remains steady over the two year period. The increase in reported opex post enhancement is then assumed to reflect the additional opex due to enhancement. However, the Company's approach does not account for the fact enhancement expenditure would often result in an improvement in performance and resulting reduction in base opex expenditure. As summarised in the graphical representation below, it would appear that for certain schemes. NI Water is actually understating the true opex from capex by only reporting the incremental increase (a) and not accounting for the improved efficiency as a result of the enhancement (b).



As highlighted above, the opex from capex process has been further improved through the completion of the Business Improvement project - Cost to Serve. We found that the Company are not only able to monitor power costs at each site and assess the impact enhancements have on the power consumption at specific assets, they are also able to identify other operational costs, such as; site specific materials and management costs, ensuring a more representative total opex from capex is reported.

7.1 Line commentaries

Line 1 – Base operating expenditure
The value is derived as the balancing residual after specifically allocated operating expenditure is deducted from the total operating expenditure as reviewed by the Auditors.

Line 8 – Opex: Total quality enhancement programme
The Company has reported additional opex of £786k for the current year. This expenditure relates to recently completed schemes.

Line 10 – Additional operating expenditure – customer service
The Company has reported additional opex of £260k for the current year. This expenditure relates to recently completed schemes.

Line 15 – Additional operating expenditure – Supply Demand Balance
The Company has reported additional opex of £88k for the current year. This expenditure relates to recently completed schemes.

8. Confidence Grades

Capex and opex totals reconciles very closely with that reported from Oracle.

NI Water has assigned confidence grades of B3 for most capex lines. The confidence grades placed on the investment lines are substantially dependent upon the QBEG analysis that is undertaken. As highlighted in the summary of schemes reviewed above, there were very few allocation issues identified during our audit. On this basis there may be scope to further improve the reported B3 confidence grade for capex in future years.

Base opex is populated from the General Ledger information which is used for financial management. Given the historic underreporting of opex from capex as demonstrated on the Chart we believe a B4 confidence grade is reasonable, although the ongoing improvements to methodology is assisting in the submission of a more complete total.

Information relating to infrastructure charge receipts, grants, contributions and adopted assets appears to be well founded, with stable and appropriate methodologies and assumptions. We concur with the A2 confidence grades assigned

9. Reconciliations

We confirm the following consistencies:

Capex

- Table 35(incl. PPP)/2 = Table 32(Total)/32/3
- Table 35(incl. PPP)/3 = Table 32(Total)/33/3
- Table 35(incl. PPP)/25 = Table 32(Total)/32/3
- Table 35(incl. PPP)/26 = Table 32(Total)/17/3 + 32/33/3 ≠ 25/5/4

The difference between T35/26 and T25/5/4 is due to the fact:

- PPP Alpha capital maintenance of [x] is not included in Table 35
- -£52k included in Table 25 relates to Decapitalised projects in 12/13

Opex

- Table 35(incl. PPP)/24 =Table 21(Total)/22-21a

10. PC10 Programme Delivery

Within our commentary, we have highlighted PC10 outputs that have delivered during the year, and those that are forecast for delivery during the current year. To ensure the delivery of the overall water related PC10 capital programme is adequately monitored, we have replicated Annex N1 from the FD below:

Water Treatment Works			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
WTW/001	Carmoney WTW		2010/11
WTW/002	Lough Braden WTW		2010/11
WTW/003	Killylane WTW - Study		2011/12

Trunk main projects			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
TMS/001	Castor bay to Dungannon		2011/12
TMS/002	Cross Town Main		2010/11
TMS/003	Castor Bay to Newry Phase 1		2012/13
TMS/004	Castor Bay to Belfast Phase 2	PC13	

Service Reservoirs			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
SRV/001	Carland SR		2011/12
SRV/002	Ballylone SR		2011/12
SRV/003	Crew Hill SR		2010/11
SRV/004	Dungonnell CWT		2010/11
SRV/005	Glenlough SR		2010/11
SRV/006	Altnahinch CWT		2010/11
SRV/007	Tullaghans SR		2010/11
SRV/008	Tullyhappy SR		2011/12
SRV/009	Crieve SR	PC13	
SRV/010	Tully SR		2012/13
SRV/011	Lough Macrory CWT	PC15	
SRV/012	Drumaroad CWT	PC15	
SRV/013	Killyhevlin CWT	PC13	
SRV/014	Service Reservoir rehabilitation Programme continuation.		2012/13

Water Resources			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
WRS/001	Strule Abstraction.	2013/14	
WRS/002	Completion of Inspection (Panel) Engineer's Recommendations on Impounding reservoir.	PC13	
WRS/003	Completition of new Water Resource Strategy in 2010.		2012/13

Defined activities			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
WRS/003	Water mains rehabilitation		2012/13

Date: 29 July 2013
Prepared by: HMS

Table 35a – Water service – Expenditure comparisons by purpose

Commentary by Reporter

1. Background

This table facilitates capital and operating expenditure comparisons between Company report year actual figures and those contained in the PC10 Final Determination.

2. Key Findings & Recommendations

- NIAUR has provided a breakdown of the annual PC10 projections on the basis of QBEG, to enable population of Table 35a.
- PC10 has been adjusted using actual COPI, resulting in a slight increase in forecast expenditure for Year 3.
- Whilst some variance has been reported amongst purpose categories, particularly IRE, overall expenditure in Year 3 of PC10 is in line with the adjusted PE allowance for Year 3, with the PC10 water programme substantially complete

3. Audit Approach

The audit consisted of interviews with the NI Water's table author and a review of relevant supporting documentation, the methodology, assumptions and data used to compile the table. The audit also included a review of the Company's commentary.

4. Audit Findings (Capex)

4.1 PC10 Projections

In order to assist with the population of Table 35a, NIAUR provided a breakdown of the Final Determination. We have reproduced the breakdown below (in 2007/08 baseline prices) for ongoing reference, to form the basis of expenditure comparisons undertaken throughout the PC10 period.

Water	2010-11	2011-12	2012-13	Total
Q	[x]	[x]	[x]	[x]
B	[x]	[x]	[x]	[x]
E	[x]	[x]	[x]	[x]
G	[x]	[x]	[x]	[x]
Total	[x]	[x]	[x]	[x]
				[x]

Base	2010-11	2010-11	2010-11	Total
WATER INFRA	[x]	[x]	[x]	[x]
WATER NON-INFRA	[x]	[x]	[x]	[x]
Total	[x]	[x]	[x]	[x]

However, the above forecasts are subject to adjustments in Public Expenditure (PE) funding, compromising the Company's ability to deliver the agreed outputs. When compared to the actual expenditure incurred during the year against the various drivers, as summarised below, we note a 16% decrease in overall capital expenditure in Year 3 of PC10 (£69.4m) when compared to the forecast PC10 expenditure profile for Year 3 (£82.1m), reflecting the re-profiling of PE funding, which resulted in a £36m reduction in expenditure against the PC10 budget for 2012/13. However, during the year PE was further revised by the DRD, with an additional £12m made available, at short notice. We found that the additional expenditure has been primarily targeted on additional water mains rehabilitation, due to the relatively short lead in time for well established rolling programmes of work such as the WRMP. In addition, work on Lisnarick WTW (a PC13 scheme) was brought forward to ensure the additional PE allocation for 2012/13 was spent.

4.2 Indexation

We confirm that NI Water has indexed the PC10 projections from the 2007/08 base year using the COPI adjustment of 1.012. Whilst this approach is consistent with guidance from NIAUR, the Company has highlighted that subsequent revision to COPI for the year (1.018), if applied to Table 35a, would increase the Year 3 allowance by £0.5m. Considering the PC10 FD is already subject to variation in accordance to PE funding allowances, we continue to question the appropriateness of this form of comparison.

4.3 Expenditure comparisons

In reviewing the expenditure for Year 3 of PC10, the Company has highlighted a number of well justified reasons for reported variance.

As noted by NI Water in their commentary, there are significant differences between the proportional allocation assumptions made in the PC10 submission and those now being applied using the CIDA methodology.

Additionally, the Company has identified a number of additional external constraints since the Final determination was published, impacting on the Company's ability to efficiently deliver the agreed PC10 capital programme, including:

- External funding constraints imposed by fixed annual levels of public expenditure, differing from those agreed in the PC10 Final Determination
- More stringent procurement governance, reducing the scope for capital efficiency
- Delays in acceptance of the PC10 Final Determination

4.3.1 Base service provision

- *Infrastructure renewals expenditure (line 2)*

[x]

In terms of Infrastructure Renewals Expenditure (IRE), the expenditure incurred during the year (£22.5m) is circa 18% above the PC10 forecast for IRE in Year 3, reflecting a further increase in the length of main new/replacement main delivered during the year. Against a PC10 Year 3 target of 300km, NI Water delivered 41km of new main and 286km of replacement main during the year.

Overall, NI Water has outperformed the PC10 WMRP by 140km. Against an overall PC10 programme of 900km of water mains activity, NI Water has out-turned 1040km of new and replacement main. We consider the reported outperformance of the WMRP reflects the relative uncertainty of funding, due to revisions in PE. When additional funding is made available at short notice, (as was the case in 2011/12 and 2012/13) well established, rolling programmes of work such as the WMRP will benefit from any additional funding.

- *Maintenance non-infrastructure (lines 3 and 5)*

[x]

Expenditure on maintenance to non-infrastructure (MNI) assets is lower than reported in AIR12, reflecting reduced activity on WTW maintenance projects. This is based on the fact that most WTW's were upgraded around the formation of NI Water and do not require additional maintenance spend. In fact, the only significant WTW related MNI spend related to JF581 - Clay Lake WTW Remedial Work [x] and JP667 – Killyhevlin WTW Standby Generation [x]. We found that the majority of MNI expenditure reported related primarily to Operational Capital [x] and M&G related expenditure [x].

Additionally, the PC10 Service Reservoir Rehabilitation programme was deferred due to procurement issues. Whilst the framework has now been approved, no SR related expenditure was incurred in Years 2 and 3 of PC10. The Company advised that the Service Reservoir Rehabilitation programme was due to re-commence in PC13, with [x] forecast for 2013/14.

4.3.2 Quality Enhancements

[x]

Expenditure against Line 7 (£9.9m) is 30% lower than the PC10 forecast for Year 3.

NI Water had a relatively small WTW programme for PC10, with all outputs delivered in Years 1 and 2 of PC10. As such there has been minimal WTW Q expenditure in 2012/13, with the exception of the provision of enhanced site security at a number of WTW sites (£1.7m) as part of the SEMD.

NI Water was also expecting to deliver a Q scheme at Killylane WTW, but the results of the study completed during PC10, confirmed that a scheme was not required to improve quality standards. We reviewed the findings from the study in the subsequent business case and confirm that only base maintenance expenditure is required.

In terms of water distribution expenditure, NI Water has committed to the rehabilitation of 900km of water main over for the PC10 period (300km per year). For AIR13, NI Water delivered 327km (new and replacement mains – AIR12 T11), outperforming the PC10 target by 140km. In total, the new and replacement mains programme accounted for £7.8m of the £9.9m total Q spend for 2012/13.

4.3.3 Enhanced service levels

[x]

Overall spend on enhanced service levels, circa £3.1m, is circa 35% lower than the PC10 forecast for Year 3. As expenditure primarily relates to the Water Mains Rehab Programme and Service Reservoir Rehab Programme, the reported under spend in the Service Reservoir Rehab Programme due to the framework procurement issues which have only recently been resolved. Activity on the Service Reservoir Rehab Programme has been forecast to re-commence in PC13.

4.3.4 Maintaining supply/demand balance

[x]

Overall spend on supply/demand (£17.8m) is circa 19% lower than the PC10 forecast for Year 3, with significant spend recorded against JN226 - Strule Intake to Derg

WTW [x]. We reviewed this scheme as part of AIR13 and note the significant change in scope required, whereby an increase in abstraction volume from 9Ml/d to 26.6Ml/d will eliminate the need for the proposed Glendargan Dam, resulting in a significant reduction in the final cost.

5. Audit Findings (Opex)

Nothing further to add.

Date: 29 July 2013
Prepared by: HMS

Table 36 – Sewerage Service – Expenditure by purpose

Commentary by REPORTER

1. Background

This table disaggregates expenditure between purpose categories for the sewerage service, namely base, enhancements, grants and contributions and adopted assets. Enhancements are reported under quality, enhanced service levels, and supply/demand. The table also indirectly checks the Company's proportional allocation rules.

2. Key Findings

- NI Water's proportional allocation procedures are now well established and consistently applied and we are finding fewer instances where the allocation of expenditure between purpose categories requires adjustment. During the course of our AIR13 audits we did query the allocation of expenditure applied to KL350 – Benone Area Sewerage, KR389 – Ballyhalbert WwTW and KL468 – Strathfoyle Syphon Inlet Screen, however, as described below the Company were generally able to justify the reported allocation of expenditure.
- We note a [x] in overall capital expenditure in Year 3 of PC10 [x] when compared to the forecast PC10 expenditure profile for Year 3 [x]. We found that the decrease in expenditure reflects the re-profiling of Public Expenditure (PE) funding.
- The Sewer Mains Rehabilitation Programme (SMRP) was forecast to deliver 56km of critical and 8km of non-critical sewer improvements over PC10. Whilst the total 64km length was delivered, the Company has only delivered 24km of critical sewer improvements with the balance non-critical.
- When taken in the context of poor blockage performance in NI (when compared to E&W), the low levels of capital investment in the SMRP may be a significant contributory factor to the disproportionately large number of blockages reported in the year (circa 21,000). We recommend that the cause of these high numbers is investigated to determine whether other causes may be contributing (eg the counting methodology, contractual arrangements, network attributes). Nonetheless, there do appear to be some significant repeat blockage hotspots where a targeted approach would be most cost beneficial.
- NI Water has a large WwTW programme for PC10, with 14 PC10 WwTW outputs and 30 SBP Carryover WwTW outputs forecast for delivery during the period. At the end of PC10, one SBP carryover scheme and six original PC10 schemes were still outstanding. We found that the outstanding SBP scheme – Ardglass, was currently under construction, with a forecast completion date of 2014/15. Of the six outstanding PC10 schemes all but one was currently under construction with forecast completion dates in 2013/14 or 2014/15.
- NI Water has committed to the delivery of a large UID programme over the PC10 period, with circa 117 outputs initially forecast for delivery. Overall, NI Water has delivered a UID programme of a similar magnitude for PC10 (with 102 outputs

delivered), but of a significantly different scope, where only 42 of the originally identified 117 PC10 UIDs were delivered.

- Land acquisition issues are apparent in the delivery of the PC10 programme. We note that NI Water is limited to only paying 'Land Authority' valuations when it comes to purchasing additional land for capital schemes, severely restricting the Company's ability to deliver the Capital Programme in a timely manner.
- The opex from capex process has been further improved through the completion of the Business Improvement project - Cost to Serve. We found that the Company is now not only able to monitor power costs at each site and assesses the impact enhancements have on the power consumption at specific assets, but also identifies other operational costs, such as; site specific materials and management costs.

3. Audit Approach

As part of our review of NI Water's AIR13 submission, we completed a number of 'Capex' audits, weighted towards those involving greater capital expenditure in the Report Year. For AIR13, the wastewater related schemes reviewed included 2 x sewerage schemes, 3 x WwTW schemes, 1 x sewerage/WwTW scheme and 1 x UID scheme.

At year-end we undertook a review of the contents of the Capital Investment Driver Allocation (CIDA) spreadsheet systems and CIM template, which collates the expenditure information by project for the Report Year. During this review, we tested the collation systems to ensure that the proportional allocations exposed in the scheme specific audits are correctly stated at the summary level for entry into the AIR Tables.

We also met with the system holder to confirm the reported data for each line and review progress against the various programmes.

4. Audit Findings - Capex

4.1 PC10 Assumptions

In order to assist with the population of Table 36a, NIAUR provided a breakdown of the Final Determination. We have reproduced the breakdown below for ongoing reference, to form the basis of expenditure comparisons undertaken throughout the PC10 period.

Sewerage	2010-11	2011-12	2012-13	Total
Q	[x]	[x]	[x]	[x]
B	[x]	[x]	[x]	[x]
E	[x]	[x]	[x]	[x]
G	[x]	[x]	[x]	[x]
Total	[x]	[x]	[x]	[x]

Base	2010-11	2010-11	2010-11	Total
SEWERAGE INFRA	[x]	[x]	[x]	[x]
SEWERAGE NON-INFRA	[x]	[x]	[x]	[x]
Total	[x]	[x]	[x]	[x]

4.2 Proportional Allocation

NI Water's proportional allocation procedures are now well established and consistently applied. Whilst NI Water still reviews projects to confirm the appropriateness of the proportional allocation of expenditure for all projects that have had the CIDA allocation updated on CAPTRAX, we are finding fewer instances where the allocation of expenditure between purpose categories requires adjustment.

As reported previously, the capital scheme approvals process is formalised, with all schemes >£25k, but <£500k, requiring formal approval by the BICC Panel and all schemes >£500k requiring CIP approval. The Strategic Investment team (within the Asset Management Directorate) review the CIDA on all projects as they seek approval and advise the above panels of any challenges.

At year-end we reviewed a sample of schemes to specifically test allocation methodologies for AIR13. As summarised below, whilst the CIDA allocations applied by the Company for the selection of schemes reviewed, were generally in line with the Reporter's expectations, particularly on the water schemes, we did query the allocation of expenditure applied to KL350 – Benone Area Sewerage, KR389 – Ballyhalbert WwTW and KL468 – Strathfoyle Syphon Inlet Screen. Between the preparation of our draft Reporter Commentary and submission to NIAUR, the Company advised the following, which should be read in conjunction with our summary findings below:

- For KL350, the Company advised that 'Base Maintenance has been allocated based on the existing assets which are summarised as follows
  - Benone – a RBC plant with a sand soakaway.
  - Drumavalley – Septic tank type plant with outfall into local stream <10m.
  - Aughil – Biological filter works with outfall to local stream.

  The solution to included MOD and the prison sites did not affect the base allocation as these were never NIW sites so we were not replacing anything. The new project also included costs for sea outfall which will not replace any existing asset.'
- For KR389, the Company advised that 'the CIDA allocation for this project did consider base maintenance taking account of the assets on the existing site. The former Ballyhalbert WwTW consisted of a 'Retention Tank' which was estimated to cost [x] to replace in today's costs. This taken as a % of the total project cost is less than 0.5% so was reported as 0% Base'.
- For KL468, the Company accepted our recommendations to complete a full CIDA review on this project

Project Reference	Project Name	PC10 Budget (£m)	Spend to date (£m)	Latest Best Estimate (£m)	QBEG Allocation on CIM				Reporter Agreement (✓/×)
					Q	B	E	G	
KL350	Benone Area Sewerage	[x]	[x]	[x]	46	18	0	36	**
KL451	Londonderry DAP: Strathfoyle & Drumahoe Work package: CSO Abandonments	[x]	[x]	[x]	61	17	18	4	✓
KL468	Strathfoyle, Londonderry Siphon Inlet Screen	[x]	[x]	[x]	0	100	0	0	✓*
KL475	Lone Moor Road, Londonderry Storm Sewer Extension	[x]	[x]	[x]	0	0	0	100	✓
KR389	Ballyhalbert WwTW Interim Solution	[x]	[x]	[x]	53	0	0	47	**
KV105	Newry WwTW Extension	[x]	[x]	[x]	0	8	0	92	✓
KV125	Forkhill WwTW	[x]	[x]	[x]	46	39	0	15	✓

*See comments below
** Recommends further review

A summary of our findings are detailed below:

Wastewater Schemes

The **KL350 – Benone WwTW extension**, was initially driven by the fact Benone WwTW was regularly overloaded and non-compliant. Due to the fact the existing WwTW is sited in a Special Area of Conservation, it was proposed to construct a new works on a MOD site near Magilligan Strand, some distance from Benone. In developing the scheme, the scope was subsequently increased to enable the transfer of flows and closure of 4 additional WwTWs at Drumavalley, Aughil, MOD camp and the local prison, which accounts for the increase in expenditure. The scheme, which is due for completion in September 2013, has been allocated 46% Q, 18%B, 0%E and 36%G. We queried the allocation of expenditure, as the allocation to B seemed quite low and the allocation to G quite high. We based our view on the fact 5 existing WwTW and associated outfalls will be de-commissioned and transferred to a single site. On this basis, we would have expected a larger proportion of expenditure to be allocated to base maintenance. Additionally, NI Water has based the design of the scheme on the assumption PE will increase by 50% (circa 3000 PE) by 2030. Based on the fact the 5 communities are located in a special area of conservation, we would expect limited permitted development in the future, and as such NI Water may be providing additional treatment capacity that may not be required.

KL451 - Londonderry DAP: Strathfoyle & Drumahoe Work package: CSO Abandonments, involves the closure of 3 x UIDs, resolution of 2 x DG5 properties and upsize of the network to provide additional in-system storage, as identified in the Londonderry DAP. We concur with the QBEG of 61 / 17 / 18 / 4, which we consider has been assessed appropriately. Work was completed in 2012, with an outturn cost, circa 25% higher than initially forecast.

For **KL468 - Londonderry DAP: Strathfoyle Londonderry Syphon Inlet Screen,** the Strathfoyle syphon which enables the transfer of sewerage across the River Foyle, has been subject to ongoing partial blockage. In order to reduce the frequency of blockage and keep the siphon clear, NI Water has constructed an inlet screen

structure within a separate building. Whilst we concur with the 100% allocation to B, we note that the expenditure has also been allocated 100% to IRE. As the screen is to be located within a separate, purpose built building we would expect a proportion of expenditure to be allocated to MNI.

KL475 – Lone Moor Road Sewer Extension, is a Developer driven scheme to provide additional network capacity to enable the connection of 4 new residential developments. Expenditure, which is slightly higher than initially budgeted due to unforeseen ground conditions, has been allocated 100% to G

KR389 – Ballyhalbert WwTW Interim Solution, was initially proposed as part of the larger Ards South scheme (KS111), to address issues at Portavogie, Ballyhalbert, Cloughey and Kirkistown. Due to the lack of a permanent site to construct a new works, interim solutions on rented land were proposed, of which KR389 was one of those schemes. During the development of the scheme a permanent site became available for Ballyhalbert. The scheme was re-scoped to construct a secondary-treatment WwTW and long sea outfall, to provide a permanent solution. It was also proposed to transfer flow from Portavogie and abandon Portavogie WwTW. The significant but prudent change in scope explains the 100% increase in reported expenditure. The scheme has been allocated 53% Q, 0%B, 0%E and 47%G. We queried the 0% allocation of expenditure to B, as the scheme involves the abandonment of 2 WwTW sites.

For **KV105 – Newry WwTW Extension**, high industrial loading within the Newry catchment means the WwTW was significantly overloaded. An upgrade to the WwTW to provide additional treatment capacity, supports the QBEG allocation of - 0 / 8 / 0 / 92. At the time of review, Phase 1 had been completed and commissioning is currently ongoing.

KV125 – Forkhill WwTW, involves the construction of a new RBC plant at Forkhill and the transfer pumping station to enable the transfer of flow from Mullaghbane. This will ensure both sites achieve proposed discharge consents, whilst also enabling the decommissioning of Mullaghbane WwTW. A QBEG allocation of 46 / 39 / 0 / 15 is appropriate for the scope delivered, which includes an increase in capacity to meet future forecast demand.

4.3 Year-end Capital Investment Reconciliations

As has been the case in previous years, we found that data reported in T36 of AIR13 does not quite reconcile with equivalent data in the CIM as AIR13 data is taken from CIDA, which has greater levels of granularity for each purpose/driver code. As summarised below, a 0.2% variance in water related capex between CIM and CIDA was identified.

Table 36 - Sewerage service nominal expenditure

Table 36 line descripton		T36 £m	CIM £m	variance £m	Variance %
3	MNI (gross of grants and contibutions)	41.258	41.119	-0.139	**-0.34**
6	Infrastructure renewals expenditure (gross)	8.775	9.340	0.566	**6.06**
7	Capex: Total quality enhancement programme	21.626	21.242	-0.384	**-1.81**
9	Capital expenditure:customer service	2.899	2.533	-0.366	**-14.43**
11	Capital expenditure supply demand balance	18.318	18.418	0.100	**0.54**
	Totals	92.875	92.652	-0.224	**-0.24**

We queried the nature of the minor reported variances, and as described in our commentary for Table 35, the Company advised that the variance is due to the '8 box' approach adopted on the CIM, whereby expenditure is reported at project level against the 4 purpose and 4 service allocations. For projects with more than one service allocation, back calculation for Table 36 provides a slightly incorrect answer.

4.4 Capital Expenditure

4.4.1 General

When compared against the actual expenditure incurred during the year against the various drivers, as summarised below, we note a [x] decrease in overall capital expenditure in Year 3 of PC10 [x] when compared to the forecast PC10 expenditure profile for Year 3 [x]. We found that the decrease in expenditure reflects the re-profiling of Public Expenditure (PE) funding, and whilst an additional £12m was made available by DRD during the year, this has primarily been used on water related activity, specifically targeting additional water main rehabilitation.

As demonstrated in the table below, expenditure on the Quality and Enhancement Programmes are significantly lower than forecast. In order to maintain the necessary Base Maintenance programme, in lieu of the PE reductions, NI Water has deferred aspects of the Quality programme. The reduced Enhancement expenditure reflects the smaller than expected DG5 programme.

Sewerage	[x]	[x]	[x]
	[x]	[x]	[x]
Q	[x]	[x]	[x]
B	[x]	[x]	[x]
E	[x]	[x]	[x]
G	[x]	[x]	[x]
Total	[x]	[x]	[x]

Base	[x]	[x]	[x]
	[x]	[x]	[x]
IRE	[x]	[x]	[x]
MNI	[x]	[x]	[x]
Total	[x]	[x]	[x]

4.4.2 Base Service Provision

In terms of Infrastructure Renewals Expenditure (IRE), the expenditure incurred during the year [x] is [x] below the Company's PC10 forecast for IRE in Year 3 [x].

IRE expenditure during the year reflects investment on a number of infrastructure based maintenance schemes, including; KL468 – Strathfoyle, Londonderry Syphon Inlet Screen [x]; KR457 – Ladybrook, Belfast Sewer Investigation [x] and KV176 – Milltown, Warrenpoint foul sewer replacement [x]. Circa [x] was also incurred as Operational capital in the maintenance of critical and non-critical sewers. In the case of KL568 – Strathfoyle Syphon Inlet Screen, we reviewed this scheme as part of our AIR13 review (see Section 4.2 above) and queried the 100% allocation of this scheme to IRE. We understood that the scheme involved the construction of an offline screening building, suggesting a portion of the expenditure should have been allocated to MNI.

The Company advised that the Sewer Mains Rehabilitation Programme (SMRP) was forecast to deliver 55km of critical and 8km of non-critical sewer improvements over PC10. At year end, we found that the Company delivered 24km of critical and 39km of non-critical sewer improvements over the PC10 period, a significant improvement on the probable underperformance reported by the Company in 2011/12. We understand the SMRP contractors had not been submitting the mains returns, and a concerted effort was made post year-end to ensure all returns were submitted. Overall, sewerage IRE was circa 60% lower than the water IRE incurred over PC10, with 94% (970km) more water mains replaced in PC10. When taken in the context of poor blockage performance in NI (when compared to E&W), the low levels of capital investment in the SMRP may be a significant contributory factor to the disproportionately large number of blockages reported in the year (circa 21,000). We recommend that the cause of these high numbers is investigated to determine whether other causes may be contributing (eg the counting methodology, contractual arrangements, network attributes). Nonetheless, there do appear to be some significant repeat blockage hotspots where a targeted approach would be beneficial.

With regard to maintenance on non-infrastructure (MNI) assets, expenditure over the year [x] was lower than reported in AIR12, but higher than forecast for Year 3 of PC10 [x].

NI Water has continued to focus on the delivery of a large number of WwTW maintenance projects (both PC10 and PC10 carryover), with significant expenditure reported against; KR486 – Whitehouse WwTW [x], KN631 – Strabane WwTW [x] and KB460 – M&E Tullygarley WwTW [x]. There was also expenditure incurred on the inline and terminal pumping stations, including KI488 – Inlet Screen Removal and Solid Handling Pump @ 27 WwPS [x] and KR443 – Sydnenham WwPS Remedial Works [x]. Circa [x] was also incurred as Operational capital in the maintenance of wastewater assets, of which [x] related to M&E activity.

Management and General (M&G) expenditure accounted for 13% of the MNI spend for the year. This is quite low when compared to companies in E&W, where M&G spend has typically been 25% of MNI, and quite surprising based on the level of office refurbishment that was ongoing during the year.

In terms of MNI expenditure over Year 3 of PC10, NI Water was circa [x] higher than the PC10 forecast. We queried the basis of the reported over spend, and the Company advised that there was an increase in Operational Capital spend to match the increased PE allowance for 2011/12, whereby a number of WwTW refurbishments were brought forward, which required continued spend in Year 3.

4.4.3 Quality Enhancements

Expenditure against Line 7 [x] is circa 43% lower than the PC10 forecast for Year 3 [x], reflecting the re-profiled PE for Year 3.

NI Water has a large WwTW programme for PC10, with 14 PC10 WwTW outputs and 30 SBP Carryover WwTW outputs forecast for delivery during the period. Over the course of the PC10 period, NI Water has also progressed an additional 20 WwTW schemes that were not originally part of the PC10 programme (to utilise additional PE funding in Year 1) and delivered 11 (>250PE) outputs as part of the Small WwTW Programme.

As highlighted in the Company's commentary for AIR13, NI Water delivered 17 outputs during the year, summarised as follows:

- 1 x SBP Carryover scheme – Portavogie Interim Solution
- 5 x PC10 schemes – Glenstall WwTW, Omagh WwTW, Mullaghbane WwTW, Forkhill WwTW and Limavady WwTW
- 8 x additional WwTW outputs – Brockagh Terrace/Mountjoy WwTW, Drumaness WwTW, Keady WwTW, Newry WwTW, Swatragh WwTW, Tamnaherin WwTW, Annaghmore WwTW, Derrytresna WwTW, Dungiven WwTW and Martinstown WwTW (a number of which were delivered in earlier years but not claimed), and
- 11 small WwTW outputs (10 of which were delivered in previous years, but not claimed separately).

At year end, one SBP carryover scheme and six original PC10 schemes were still outstanding. We found that the outstanding SBP scheme – Ardglass, was currently under construction, with a forecast completion date of 2014/15. Of the six outstanding PC10 schemes all but one was currently under construction with forecast completion dates in 2013/14 or 2014/15. The exception – Ballintoy WwTW, had been delayed due to difficulties in purchasing the necessary land, however, we were advised that the land issues have now been resolved and the Company were currently awaiting planning permission.

Land acquisition issues are also apparent in the additional PC10 schemes that were still outstanding. We note that NI Water is limited to only paying 'Land Authority'

valuations when it comes to purchasing additional land for capital schemes, severely restricting the Company's ability to deliver the Capital Programme in a timely manner.

During the year, significant spend has been incurred on PC10 projects, such as; KS848 – Newcastle WwTW [x], KL350 – Benone Area Sewerage [x] and KS355 – Ballynahinch WwTW [x].

NI Water has committed to the delivery of a large UID programme over the PC10 period, with circa 117 outputs initially forecast for delivery. Overall, NI Water has delivered a UID programme of a similar magnitude over PC10 (with 102 outputs delivered), but of a significantly different scope. As summarised in Section 11 below, NI Water has delivered 42 of the originally identified 117 PC10 UIDs, but has also delivered 60 additional UIDs, that were not previously identified.

In total, NI Water has identified 177 UIDs, of which 102 were delivered in PC10, 63 are forecast for delivery in PC13 and the remaining 12 forecast for delivery in PC15. We queried why such a large number of outputs, not initially identified for PC10 were being delivered at the expense of nominated PC10 outputs. The Company advised that a number of additional UIDs are being identified during the delivery of the PC10 nominated schemes, and following discussion and agreement with NIEA are included as additional UID outputs for resolution. Notwithstanding this, there are still a large number of catchments, including; Armagh, Bangor, Downpatrick and Lisburn where limited UID activity has been undertaken, despite being nominated PC10 outputs.

In Year 3 of PC10, 38 UID outputs were delivered during the year; of which 11 were original PC10 UIDs and the balance were 'new' UIDs. Our review of CIDA identified significant expenditure recorded against KR255 – Belfast Sewers Project [x], KS373 – Church St SPS Upgrade [x] and KS835 – Newtonards WwPS Refurbishment [x]. In completing our review of CIDA and the CIM we noted that there was fairly limited expenditure reported against the actual UID outputs that were claimed in 2012/13. We did query the nature of this variance; however, this was not addressed prior to submission.

4.4.4 Enhanced Service Levels

Overall spend on enhanced service levels [x] is circa [x] lower than the PC10 forecast for Year 2 [x]. We found that the Company has continued to focus on the delivery of outputs identified within the DAP process, with significant spend recorded against outputs associated with the Londonderry DAP [x] and Belfast Sewers [x], and also the DG5 programme, with 51 DG5 outputs delivered as a result of KN595 – Brookmount Road Sewer Replacement [x]. In total, NI Water has delivered 84 removals by company action over the PC10 period, which is circa 59 outputs lower than was initially forecast. However, as the Company is experiencing fewer than 10 DG5 incidents per year, we do not consider a large DG5 capital programme going forward to be justified. For PC13, we consider it would have been prudent for the Company to invest in the development of solutions for all properties on the Flooding Registers and then prioritise delivery of these on a cost beneficial/highest impact basis, thus delivering a very modest programme for PC13/15.

4.4.5 Improving supply/demand balance

Supply demand balance expenditure relates primarily to the growth element of the PC10 WwTW programme (described above), with significant spend recorded against KI463 – Small WwTW Programme [x], KV105 – Newry WwTW Extension [x] and KF028 – Keady WwTW Extension [x].

We note that circa [x] has been expended against the Small WwTW Programme, some [x] greater than forecast over the PC10 period. The Company advised, that in addition to the improvements delivered to a number of small WwTW with a PE<250, NI Water also delivered 11 WwTW improvements to works with PE>250 under the small WwTW framework, despite the framework being established for sites with PE's below 250. The Company advised that the small WwTW framework provided a means of quickly procuring a number of projects for works that were in urgent need of upgrade and were close to the PE threshold.

At year-end, SDB expenditure [x] was circa 10% above the PC10 forecast for Year 2 [x].

4.4.6 New outputs/obligations since the SBP

NI Water has reported no new outputs/obligations, although there is a substantial Additional Outputs programme. We were advised that expenditure against the additional outputs is recorded against the appropriate driver and reported in blocks A, B, C or D of T36.

4.5 Operational Capital (including M&G)

Operations Capital is subject to similar procedures as the Capital Works Programme. Project engineers provide the initial QBEG allocations (for tables 35 and 36) and the investment splits into asset type (for Table 32) and asset life categories (for Table 34 and Table 33).

Most Operational capital will relate to base maintenance, new development or security of supply.

5. Grants and Contributions

In NI Water's PC10 submission all grants and contributions were assumed to relate to enhancements. Zero receipts are reported against maintenance non-infrastructure (line 4). Lines 3 and 5 are therefore identical. We believe this to be reasonable.

NI Water confirms the analysis of enhancement requisitions, grants and contributions in their commentaries.

6. Infrastructure Charge Receipts

NI Water considers all infrastructure charge receipts (ICR's) to relate to enhancements (and thus there is no difference between IRE net and IRE gross).

Further, the Company has used the PC10 investment projections on growth to determine the component of the ICR's which would be allocated to either infrastructure or to non-infrastructure. For 2012/13, 44% of ICR's was allocated to non-infrastructure, which is in-line with that reported previously.

As the Company's approach is unchanged from that adopted previously and the reported numbers are similar to AIR12, we have not undertaken a detailed review of ICRs for AIR13.

7. Assets adopted or acquired at nil cost

NI Water's DSCT team (within the Operations Directorate) receives applications under Article 161 from developers requesting the adoption of sewerage assets: sewers; and sewerage pumping stations.

The DSCT team surveys the assets, checking for compliance against the required standards set out in the current edition of 'Sewers for Adoption'. Upon acceptance, sewers are adopted at nil cost but added to the asset register at a cost which is determined by the diameter and the length, using cost curves developed from NI Water's own historic costs.

The costs are inflated by COPI to provide the relevant Report Year prices. We found that NI Water has reported a similar value of assets adopted at nil cost (reported in Line 20) as reported in AIR12. The previous three years nominal expenditure is significantly higher than reported previously as;

- Significant levels of social housing being built
- Developers try and reduce their liability on completed developments, resulting in increased levels of notional expenditure;
- NI Water Developer Services team pro-actively deals with backlog/mature developments in (a) reviewing old sites and (b) working with DRD Roads Service to clear a number of outstanding sites; and
- there has been a higher than usual number of sewerage pumping stations within the sites adopted.

The adopted assets are analysed by type, the proportion of spend by asset type being assigned to an Oracle asset reference code. The coding references to an appropriate asset life and uploads the asset additions to the Corporate Asset Register.

8. Operating Expenditure

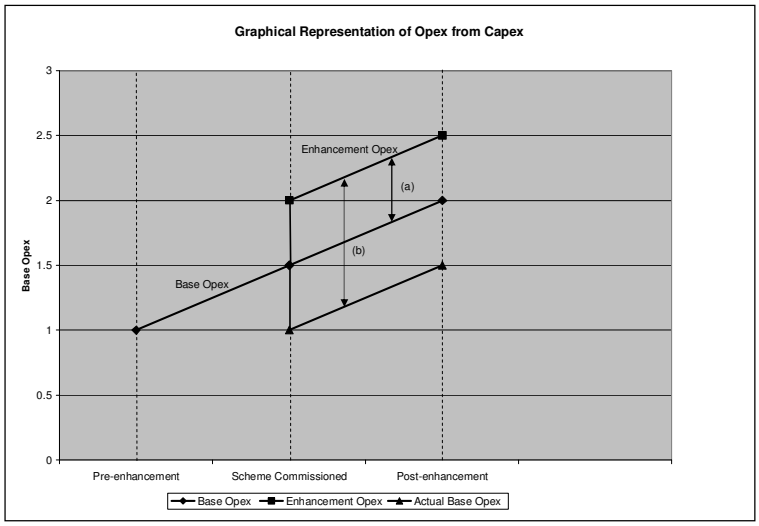
We found that the methodology used to derive operating expenditure associated with capital expenditure and reported in Table 35 has been further improved for AIR13.

As before, Opex from Capex is based on incremental Opex associated with enhancement projects from prior years that has been assessed and removed from

the total Opex reported in Table 21. Incremental Opex is calculated directly from the accounting general ledger, based on sites that become active during 2010/11 to 2012/13. A comparison of data on a site by site basis, pre and post Capex investment is then undertaken, with an adjustment for inflationary impacts.

Once the total additional Opex per site is obtained the Company applies a split between the different lines based on the enhancement component of the CIDA split.

The Company's approach involves the comparison of base opex in the year preceding and post enhancement, assuming the base expenditure remains steady over the two year period. The increase in reported opex post enhancement is then assumed to reflect the additional opex due to enhancement. However, the Company's approach does not account for the fact enhancement expenditure would often result in an improvement in performance and resulting reduction in base opex expenditure. As summarised in the graphical representation below, it would appear that for certain schemes. NI Water is actually understating the true opex from capex by only reporting the incremental increase (a) and not accounting for the improved efficiency as a result of the enhancement (b).



As highlighted above, the opex from capex process has been further improved through the completion of the Business Improvement project - Cost to Serve. We found that the Company are not only able to monitor power costs at each site and assess the impact enhancements have on the power consumption at specific assets, they are also able to identify other operational costs, such as; site specific materials and management costs, ensuring a more representative total opex from capex is reported.

8.1 Line commentaries

Line 1 – Base operating expenditure

The value is derived as the balancing residual, after specifically allocated operating expenditure is deducted from the total operating expenditure as reviewed by the Auditors.

Line 8 – Opex: Total quality enhancement programme
There has been some additional operating expenditure income related to quality enhancements. This is in the region of £0.35m. The Company advised that this relates to recently completed WwTWs.

Line 10 – Additional operating expenditure – customer service
There has been nominal additional operating expenditure allocated to customer services for the current year (£0.24m). The Company advised that this relates to DG5 related sites within recently completed projects.

Line 15 – Additional operating expenditure – Supply Demand Balance
The Company has reported additional operating expenditure of £0.4m. The Company advised that this relates to the growth element of recently completed WwTW.

Line 17 – Additional operating expenditure – New Outputs, Obligations
The Company has reported £0 in this line.

9. Confidence Grades

Capex and opex totals reconciles very closely with that reported from Oracle.

NI Water has assigned confidence grades of B3 for most capex lines. The confidence grades placed on the investment lines are substantially dependent upon the QBEG analysis that is undertaken. As highlighted in the summary of schemes reviewed above, there were a few allocation issues identified during our audit, confirming the reported B3 confidence grade.

Base opex is populated from the General Ledger information which is used for financial management. Given the historic underreporting of opex from capex as demonstrated on the Chart we believe a B4 confidence grade is reasonable, although the ongoing improvements to methodology are assisting in the submission of a more complete total.

Information relating to infrastructure charge receipts, grants, contributions and adopted assets appears to be well founded, with stable and appropriate methodologies and assumptions. We concur with the A2 confidence grades assigned

10. Reconciliations

We sought to confirm the following consistencies, as highlighted below:

Capex
- Table 36(incl. PPP)/2 = Table 32(Total)/32/6
- Table 36(incl. PPP)/3 = Table 32(Total)/33/6
- Table 36(incl. PPP)/22 = Table 32(Total)/32/6
- Table 36(incl. PPP)/23 = Table 32(Total)/17/6 + 32/33/6 ≠ 25/5/8
- Table 36(incl. PPP)/31 ≠ Table 42 (unitary charge)

The difference between T36/23 and T25/5/8 is explained as follows:

- [x] relates to the Residual interest on Kinnegar PPP project which is not included on Table 36.
- -£194k included in Table 25 relates to De-capitalised projects in 12/13.

The difference between T36/31 and T42 relates to the fact NI Water does not have a QBEG analysis for PPP OMEGA which means they cannot complete this section accurately. This has been the approach on all prior years.

Opex

- Table 36(incl. PPP)/21 = Table 22(Total)/21-20a

11. PC10 Programme Delivery

Within our commentary, we have highlighted PC10 outputs that have delivered during the year, and those that are forecast for delivery during the current year. To ensure the delivery of the overall sewerage related PC10 capital programme is adequately monitored, we have replicated Annex N1 from the FD below:

Wastewater Treatment Works			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
STW/001	Ardglass WWTW	2014/15	
STW/002	Ballyhalbert WWTW		2011/12
STW/003	Ballymonie WWTW		2010/11
STW/004	Ballywalter WWTW		2009/10
STW/005	Bushmills Portballintrae WWTW		2010/11
STW/006	Cargan WWTW		2010/11
STW/007	Cloughmills WWTW		2010/11
STW/008	Coagh WWTW		2010/11
STW/009	Coalisland WWTW		2010/11
STW/010	Downpatrick WWTW		2010/11
STW/011	Dunmurry WWTW Modifications		2011/12
STW/012	Eniskillen WWTW		2009/10
STW/013	Feeny WWTW		2010/11
STW/014	Hook's Corner WWTW		2010/11
STW/015	Lisbarnet WWTW		2009/10
STW/016	Loughries WWTW		2010/11

Wastewater Treatment Works			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
STW/017	Lurganare WWTW		2010/11
STW/018	Maghera WWTW		2010/11
STW/019	Magherafelt WWTW		2010/11
STW/020	Milltown Antrim WWTW		2009/10
STW/021	Moneymore WWTW		2010/11
STW/022	Dungannon (Moygashel) WWTW		SBP
STW/023	Mullaghboy WWTW		2011/12
STW/024	Newtownbreda WWTW		2010/11
STW/025	Portavogie WWTW / Kirkistown		2012/13
STW/026	Rousky Sewerage Scheme		2010/11
STW/027	Saintfield WWTW		2009/10
STW/028	Stewartstown WWTW		2010/11
STW/029	Toome (Creagh) Sewerage Scheme [PE's Toome - 1349 Creagh - 605]		2010/11
STW/030	Whitehead, Ballystudder & Ballycarry Rationalisation		2011/12
STW/031	Bush WWTW		2010/11
STW/032	Benone WWTW	2013/14	
STW/033	Maghera WWTW	2014/15	
STW/034	Newcastle WWTW	2013/14	
STW/035	Gulladuff WWTW	2014/15	
STW/036	Ballintoy WWTW	PC15	
STW/037	Glenstall WWTW		2012/13
STW/038	New Holland WWTW		2010/11
STW/039	Omagh WWTW		2012/13
STW/040	Forkhill WWTW		2012/13
STW/041	Mullaghbane (Forkhill) WWTW		2012/13
STW/042	Hillsborough WWTW	2013/14	
STW/043	Limavady WWTW		2012/13
STW/044	Small WTWW programme	See Below	
STW/045	Darragh Cross WWTW		2010/11
	Additional PC10 WwTW Outputs		
STW/046	Ballycastle WwTW	PC15	
STW/047	Ballygowan WwTW	PC15	

Wastewater Treatment Works			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
STW/048	Ballymartin and Blackrock WwTW's	2014/15	
STW/049	Ballynahinch WwTW	2013/14	
STW/050	Brockagh Terrace/Mountjoy WwTW		2012/13
STW/051	Causeway Aird		2011/12
STW/052	Drumaness WwTW		2012/13
STW/053	Glassdrumman WwTW		2011/12
STW/054	Keady WwTW		2012/13
STW/055	Moneyreagh WwTW	2013/14	
STW/056	Newry WwTW		2012/13
STW/057	Stoneyford WwTW	PC13	
STW/058	Swatragh WwTW		2012/13
	Dunmore Sewerage – EC compliance		2011/12
	Ardress WwPS (including Ardress WwTW)		2011/12
	Tamnaherin WwTW		2012/13
	Annaghmore WwTW		2012/13
	Derrytrasna WwTW		2012/13
	Dungiven WwTW		2012/13
	Martinstown WwTW		2012/13
Sub-prog 17	Annaghugh WwTW		2010/11
Sub-prog 17	Glabally WwTW		2010/11
Sub-prog 17	Garvaghy WwTW		2010/11
Sub-prog 17	Monteith WwTW		2010/11
Sub-prog 17	Donagheady WwTW		2010/11
Sub-prog 17	Orritor WwTW		2010/11
Sub-prog 17	Maghery WwTW		2010/11
Sub-prog 17	Attical Tullyframe WwTW		2011/12
Sub-prog 17	Donagh WwTW		2011/12
Sub-prog 17	Teemore WwTW		2011/12
Sub-prog 17	Glack WwTW		2012/13

	Unsatisfactory Intermittent Discharges		
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
UID/001	Armagh (HUARMBSOLNOO1) - Storm King CSO	PC13	
UID/002	Armagh (HUARMBSOLNOO1) - Scotch street CSO	PC13	
UID/003	Armagh (HUARMBSOLNOO1) - Courthouse 1 CSO	PC13	
UID/004	Armagh (HUARMBSOLNOO1) - Courthouse 2 CSO	PC13	

Wastewater Treatment Works			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
UID/005	Armagh (HUARMBSOLNOO6) - The Mall East CSO	PC13	
UID/006	Armagh (HAURMBSOLN005) - English Street CSO	PC13	
UID/007	Armagh (ENARMBSOLN003) - Drumcairn SPS	PC13	
UID/008	Armagh (ENARMBSOLN005/HUARMBSOLN010) - Milford SPS	PC13	
UID/009	Armagh (ENARMBSOLN002/HUARMBSOLN012) - Killylea Road SPS	PC13	
UID/010	Armagh (ENARMBSOLN004/HUARMBSOLN007) - Newry Road SPS	PC13	
UID/011	Bangor (Scheme 1) - Carnlea CSO 01	PC13	
UID/012	Bangor (Scheme 1) - Killaney PS 03	PC13	
UID/013	Bangor (Scheme 2) - Westburn Crescent 25-27 CSO 03A	PC13	
UID/014	Bangor (Scheme 2) - Crawfordsburn Rd 18 CSO 03B	PC13	
UID/015	Bangor (Scheme 2) - Crawfordsburn Rd 25 CSO 03 C	PC13	
UID/016	Bangor (Scheme 3) - Maxwell CSO 04	PC13	
UID/017	Bangor (Scheme 3) - Glen Rd PS 05	PC13	
UID/018	Bangor (Scheme 4) - Somerset Ave CSO 11	PC13	
UID/019	Bangor (Scheme 4) - Bridge St CSO 13	PC13	
UID/020	Bangor (Scheme 4) - Quay St CSO 14	PC13	
UID/021	Bangor (Scheme 4) - Tennyson CSO 10	PC13	
UID/022	Bangor (Scheme 4) - Queens parade CSO 12	PC13	
UID/023	Bangor (Scheme 5) - Castle Park CSO 07	PC13	
UID/024	Bangor (scheme 8) - Sandee Lane SPS		2011/12
UID/025	Bangor (scheme 8) - Coastgard Larne SPS		2011/12
UID/026	Ballygally (unknown) - to be determined	PC15	
UID/027	Ballygally (unknown) - to be determined	PC15	
UID/028	Ballygally (unknown) - to be determined	PC15	
UID/029	Ballywalter(DAP stage1) - Main St CSO1		2010/11
UID/030	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 53		2011/12
UID/031	Castlewellan (ENCWNCSOLN002) - Ballylough Road CSO 02	PC13	
UID/032	Castlewellan (HUCWNCSOLN009) - Annesborough Pk SPS CSO 05	PC13	
UID/033	Castlewellan (ENCWNCSOLN001) - Mill Hill CSO 04	PC13	
UID/034	Castlewellan (ENCWNCSOLN004) - Castlewellan Park CSO 03		2012/13
UID/035	Castlewellan (ENCWNCSOLN004) - Castlewellan WWTW SPS CSO 06		2012/13
UID/036	Castlewellan (ENCWNCSOLN003) - Annesborough Park CSO 01	PC13	
UID/037	Cookstown (Moneymore Road Cookstown Sewerage Scheme) - Molesworth Rd CSO	PC13	
UID/038	Cookstown (Moneymore Road Cookstown Sewerage Scheme) - WWTW Inlet CSO	PC13	
UID/039	Coleraine (DAP Phase 1) - Queens st CSO 02a		2011/12

Wastewater Treatment Works			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
UID/040	Coleraine (DAP Phase 1) - Ballysally CSO 06a	PC13	
UID/041	Coleraine (DAP Phase 1) - Ballycairn Playing fields CSO 08a	PC13	
UID/042	Coleraine (DAP Phase 1) - Strand Road PS ERO PS 02a		2011/12
UID/043	Coleraine (DAP Phase 1) - Screen Road CSO 07a	PC13	
UID/044	Downpatrick (Market Street SPS upgrade)	PC13	
UID/045	Downpatrick stream st - CSO	PC13	
UID/046	Downpatrick (Churck street SPS upgrade) - CSO 3 meadowlands	PC13	
UID/047	Downpatrick (Churck street SPS upgrade) - Church street PS CSO	PC13	
UID/048	Downpatrick (Churck street SPS upgrade) - CSO 4 scotch street	PC13	
UID/049	Downpatrick (Churck street SPS upgrade) - CSO 11 scotch street	PC13	
UID/050	Downpatrick (Churck street SPS upgrade) - CSO 12 Rathkelt Terrace	PC13	
UID/051	east Belfast (Loop Interceptor sewer from east Belfast) - Alexander Road CSO 21		2011/12
UID/052	east Belfast (Loop Interceptor sewer from east Belfast) - Woodcot Avenue CSO 24	PC15	
UID/053	east Belfast (Loop Interceptor sewer from east Belfast) - Bells Bridge CSO 20	PC15	
UID/054	east Belfast (Loop Interceptor sewer from east Belfast) - Rosetta park/Knockbreda Road CSO 18	PC15	
UID/055	east Belfast (Loop Interceptor sewer from east Belfast) - Carnamena Avenue CSO 28		2011/12
UID/056	east Belfast (Loop Interceptor sewer from east Belfast) - Abetta Parade CSO 23	PC15	
UID/057	east Belfast (Loop Interceptor sewer from east Belfast) - Manderson Street Duffins Yard CSO 36	PC15	
UID/058	east Belfast (Loop Interceptor sewer from east Belfast) - Holywood Road CSO 37	PC15	
UID/059	east Belfast (Loop Interceptor sewer from east Belfast) - Ladas Drive CSO 108	PC15	
UID/060	east Belfast (Loop Interceptor sewer from east Belfast) - Manderson Street CSO 111	PC15	
UID/061	east Belfast (Loop Interceptor sewer from east Belfast) - Prince Regent Ave CSO 109	PC15	
UID/062	Greyabbey (DAP Phase 1) - Main st CSO 01		2012/13
UID/063	Greyabbey (DAP Phase 1) - Main st CSO 02		2012/13
UID/064	Kilkeel harbour SPS and Sewerage Improvements (CSO13)		2012/13
UID/065	Lisburn (ENLBNASOLNOO4) - Glenmore PS CSO 21	PC13	
UID/066	Lisburn (ENLBNASOLNOO5) - Waterside 2 CSO 07	PC13	
UID/067	Lisburn (ENLBNASOLNOO2) - Hilden PS CSO 13b	PC13	
UID/068	Lisburn (ENLBNASOLNOO3) - Hilden PS Compound CSO 13a	PC13	
UID/069	Lisburn (HULBNASOLNOO11) - Antrim st CSO 24	PC13	
UID/070	Lisburn (HULBNASOLNOO12) - Maralin ave CSO 02	PC13	
UID/071	Lisburn (HULBNASOLNOO13) - Maghergeery PS CSO 17	PC13	
UID/072	Lisburn (HULBNASOLNOO14) - New Holland WWTW	PC13	

Wastewater Treatment Works			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
UID/073	Lisburn (HULBNASOLNOO5) - Duncans road upgrade	PC13	
UID/074	Lisburn (HULBNASOLNOO9) - Laws yard CSO 14	PC13	
UID/075	Millisle (DAP stage 2) - CSO 1		2012/13
UID/076	Millisle (DAP stage 2) - CSO 2 Millisle SPS	PC13	
UID/077	Newcastle (Murlough SPS Upgrade & Network Improvements) - Bonnys caravan CSO14		2011/12
UID/078	Newcastle (Down Road/castle Park Sewer upgrade/attenuation) - CSO 10		2011/12
UID/079	Newtownards (South Street Newtownards refurb) - PS16		2012/13
UID/080	Portadown (DAP Stage 1) - Eden Avenue SPS CSO 05	PC13	
UID/081	Portadown (DAP Stage 1) - Meadow Lane CSO 06	PC13	
UID/082	Portadown (DAP Stage 1) - Meadow Lane CSO 07	PC13	
UID/083	Portadown (DAP Stage 1) - Meadow Lane CSO 08	PC13	
UID/084	Portadown (DAP Stage 1) - Princess Way CSO 10	PC13	
UID/085	Portadown (DAP Stage 1) - Clonavon Avenue CSO 11	PC13	
UID/086	Portadown (DAP Stage 1) - Meadow lane health centre CSO 12	PC13	
UID/087	Portadown (DAP Stage 1) - Orbins St CSO 01 CSO 25		2012/13
UID/088	Portadown (DAP Stage 1) - Orbins St CSO 01 CSO 24		2012/13
UID/089	Portadown (DAP Stage 1) - Park Road CSO 28		2012/13
UID/090	Portadown/Craigavon (HUPORASOLN003) - to be determined.	PC13	
UID/091	Portadown/Craigavon (ENPORASOLN005) - Annagh SPS. CSO 20	PC13	
UID/092	Portadown/Craigavon (ENPORASOLN007) - Chambers Pk CSO 01	PC13	
UID/093	Portadown/Craigavon (ENPORASOLN008) - CSO 21	PC13	
UID/094	Portadown/Craigavon (ENPORASOLN009) - Seagoe ST CSO 29	PC13	
UID/095	Warrenpoint (Newry Road Sewage pumping station Warren Point upgrade) - Newry Road SPS CSO	PC13	
UID/096	Belfast (Annadale flats belfast hydraulic upgrades) - CSO 73 - Annadale flats		2011/12
UID/097	Belfast (Annadale flats belfast hydraulic upgrades) - CSO 72 - Sunnyside street		2011/12
UID/098	Draperstown (DAP) - Derrynoyd Road CSO 02		2010/11
UID/099	Draperstown (DAP) - Saint Patricks street CSO 01		2010/11
UID/100	Londonderry (sewer imps stage 2 Duke St PS group schemes) - Duke St rab CSO 28		2010/11
UID/101	Londonderry (sewer imps stage 2 Duke St PS group schemes) - Duncreggan road CSO 29		2010/11
UID/102	Londonderry (sewer imps stage 2 Duke St PS group schemes) - Dunfield terrace CSO 30		2010/11
UID/103	Londonderry (sewer imps stage 2 Duke St PS group schemes) - Fountain Hill CSO 31		2011/12
UID/104	Londonderry (DAP Duke street work package) - Duke street PS 09		2011/12
UID/105	Londonderry (DAP Duke street work package) - Duke street storm PS CSO63/PS 24		2011/12
UID/106	Londonderry (DAP Duke street work package) - Duke street 1		2011/12

Wastewater Treatment Works			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
	PS CSO CSO 4		
UID/107	Londonderry (DAP Victoria road work package) - Victoria road PS CSO 13		2011/12
UID/108	Londonderry (DAP Victoria road work package) - Victoria road PS CSO 64		2012/13
UID/109	Londonderry (DAP Duke street work package Flood alleviation) - King street RAB CSO 35		2011/12
UID/110	Londonderry (DAP Duke street work package Flood alleviation) - Victoria Road(new) CSO 57		2011/12
UID/111	Londonderry (DAP Duke street work package Flood alleviation) - Victoria Road (old) CSO 58		2011/12
UID/112	Londonderry (DAP Strathfoyle & Drumahoework package Drumahoe old PS) - PS CSO 07		2010/11
UID/113	Londonderry (DAP Strathfoyle & Drumahoework package CAW PS) - CAW PS CSO 05		2010/11
UID/114	Londonderry (DAP Strathfoyle & Drumahoework package CAW PS) - CAW Park CSO 23		2011/12
UID/115	Portadown (Gilford Road Portadown Sewerage upgrades) - Gilford road CSO		2010/11
UID/116	Portadown (Gilford Road Portadown Sewerage upgrades) - Princess way CSO		2010/11
UID/117	Portadown (Gilford Road Portadown Sewerage upgrades) - Eden Avenue SPS CSO		2010/11
	Additional PC10 UID Outputs		
UID/118	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 46		2011/12
UID/119	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 47		2011/12
UID/120	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 50 - Fort Street		2011/12
UID/121	Coleraine (DAP Phase 1) - Rose Gardens CSO		2011/12
UID/122	Coleraine (DAP Phase 1) - Millburn Road CSO		2011/12
UID/123	Coleraine (DAP Phase 1) - Andersons Park CSO		2011/12
UID/127	Beechlawn WwPS Hillsborough		2011/12
UID/128	Newcastle (Murlough SPS Upgrade & Network Improvements) - Murlough SPS CSO 21		2011/12
UID/129	Newcastle (Murlough SPS Upgrade & Network Improvements) - Burrendale hotel CSO 03		2011/12
UID/130	Newcastle (Murlough SPS Upgrade & Network Improvements) - Burrendale hotel No 1 CSO 02		2011/12
UID/131	Newcastle (Murlough SPS Upgrade & Network Improvements) - Mourneview CSO 04		2011/12
UID/132	Newcastle (Murlough SPS Upgrade & Network Improvements) - Burrenview CSO 05		2011/12
UID/133	Newcastle (Murlough SPS Upgrade & Network Improvements) - Shan Slieve Drive CSO 15		2011/12
UID/134	Newcastle (Murlough SPS Upgrade & Network Improvements) - South Promenade CSO 18		2011/12
UID/135	Newcastle (Down Road/castle Park Sewer upgrade/attenuation)-Castle Park WwPS CSO13		2011/12
UID/136	Newcastle (Down Road/castle Park Sewer upgrade/attenuation) – Valenta Place CSO 11		2011/12
UID/137	Newcastle (Down Road/castle Park Sewer upgrade/attenuation) – Castle Park CSO 12		2011/12
UID/138	Portadown Drainage Area Network Improvements: Obins Street and Park Road: Railway Station/Park Road		2012/13
UID/140	Belfast (Annadale flats belfast hydraulic upgrades) -		2011/12

Wastewater Treatment Works			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
	Annadale SPS - CSO closure		
UID/141	Belfast (Annadale flats belfast hydraulic upgrades) - Sunnyside street SPS CSO upgrade		2011/12
UID/142	Londonderry (DAP Victoria road work package) – Prehen Park CSO 47		2010/11
UID/143	Londonderry (DAP Victoria road work package) – Prehen Road CSO 46		2010/11
UID/144	Baroda Street/Ormeau Park, Belfast CSO – Baroda Street CSO 77		2011/12
UID/145	Baroda Street/Ormeau Park, Belfast CSO –Ormeau Park CSO 78		2011/12
UID/146	Londonderry DAP:Foyle Road Work Package:CSO Rationalisation – Lower Bennett Street CSO		2012/13
UID/147	Londonderry DAP:Foyle Road Work Package:CSO Rationalisation – Moat Street CSO		2012/13
UID/148	Londonderry DAP:Foyle Road Work Package:CSO Rationalisation – Bridge Street CSO		2012/13
UID/149	Londonderry DAP:Foyle Road Work Package:CSO Rationalisation – John Street CSO		2012/13
UID/150	Londonderry DAP:Foyle Road Work Package:CSO Rationalisation – Lone Moor Street CSO1		2012/13
UID/151	Londonderry DAP:Foyle Road Work Package:CSO Rationalisation – Lone Moor Street CSO2		2012/13
UID/152	Londonderry DAP:Foyle Road Work Package:CSO Rationalisation – Lone Moor Street CSO3		2012/13
UID/153	Londonderry DAP:Foyle Road Work Package:CSO Rationalisation – Letterkenny Road WWPS		2012/13
UID/154	Londonderry DAP:Foyle Road Work Package:CSO Rationalisation – Foyle Road WWPS		2012/13
UID/155	Londonderry DAP:Foyle Road Work Package:CSO Rationalisation – Cashowen CSO		2012/13
UID/156	Londonderry DAP: Strathfoyle & Drumahoe Work Package: Cambourne Park CSO		2012/13
UID/157	Londonderry DAP: Strathfoyle & Drumahoe Work Package: Rossdowney Road CSO		2012/13
UID/158	Londonderry DAP: Strathfoyle & Drumahoe Work Package: Fallowlea Park CSO		2012/13
UID/159	Ballyeaston, Sewage System Upgrade		2011/12
UID/160	east Belfast (Loop Interceptor sewer from east Belfast) - Clonduff Drive CSO 29		2011/12
UID/161	east Belfast (Loop Interceptor sewer from east Belfast) - Merok Crescent CSO 27		2011/12
UID/162	Londonderry (DAP Victoria road work package) – Sunningdale Drive CSO 53		2010/11
UID/163	Joymount WwPS		2010/11
UID/164	Whitehouse DAP Phase 1 – Camross Park CSO		2010/11
UID/165	Whitehouse DAP Phase 1 – Merville Mews CSO		2010/11
UID/166	Whitehouse DAP Phase 1 – Manse Road CSO		2010/11
UID/174	Lukes Point DAP Phase 1 – Lukes Point WwPS		2010/11
UID/189	Bangor DAP – Seacliff Road		2011/12
UID/235	Londonderry DAP:Buncrana Road Work Package – Racecourse Road CSO		2012/13
UID/236	Londonderry DAP:Buncrana Road Work Package – Buncrana Road CSO		2012/13
UID/244	Winters Lane CSO		2012/13

Wastewater Treatment Works			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
UID/249	Brookmount Road, Hunters Crescent Sewer replacement: 21 Clontarf Drive CSO		2012/13
UID/250	Brookmount Road, Hunters Crescent Sewer replacement: Tamlaght Road CSO		2012/13
UID/251	Brookmount Road, Hunters Crescent Sewer replacement: Creevenagh Road WWPS		2012/13
UID/252	Horners Lane CSO		2012/13
UID/262	Dublin Road CSO		2012/13
UID/270	Brookmount Road, Hunters Crescent Sewer replacement: Hunters Cresent WWPS		2012/13
UID/271	Brookmount Road, Hunters Crescent Sewer replacement: 4 Lambrook Gardens SCO		2012/13
UID/277	Killkeel Harbour WWPS and Sewerage Improvements:		2012/13
UID/278	Murlough WWPS		2012/13

Defined activities			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
WRS/003	Length of sewer replaced or rehabilitated	64km	63.5km

Date: 29 July 2013
Prepared by: HMS

Table 36a – Water service – Expenditure comparisons by purpose

Commentary by Reporter

1. Background

This table facilitates capital and operating expenditure comparisons between Company report year actual figures and those contained in the PC10 Final Determination.

2. Key Findings & Recommendations

- NIAUR has provided a breakdown of the annual PC10 projections on the basis of QBEG, to enable population of Table 36a.
- PC10 has been adjusted using actual COPI, resulting in a slight increase in forecast expenditure for Year 3.
- Whilst some variance has been reported amongst purpose categories, overall expenditure in Year 3 of PC10 is in line with the adjusted PE allowance for Year 3.
- The Company has broadly delivered the PC10 WwTW and UID programme, although the outputs include a large number of sites that were not initially identified.

3. Audit Approach

The audit consisted of interviews with the NI Water's table author and a review of relevant supporting documentation, the methodology, assumptions and data used to compile the table. The audit also included a review of the Company's commentary.

4. Audit Findings (Capex)

4.1 PC10 Projections

In order to assist with the population of Table 36a, NI Water requested a breakdown of the Final Determination from NIAUR. The summary table, which we have reproduced below (based on 2007/08 baseline prices), will form the basis of expenditure comparisons undertaken throughout the PC10 period.

Sewerage	2010-11	2011-12	2012-13	Total
Q	[x]	[x]	[x]	[x]
B	[x]	[x]	[x]	[x]
E	[x]	[x]	[x]	[x]
G	[x]	[x]	[x]	[x]
Total	[x]	[x]	[x]	[x]

Base	2010-11	2010-11	2010-11	Total
SEWERAGE INFRA	[x]	[x]	[x]	[x]
SEWERAGE NON-INFRA	[x]	[x]	[x]	[x]
Total	[x]	[x]	[x]	[x]

However, the above forecasts are subject to adjustments in Public Expenditure (PE) funding, compromising the Company's ability to deliver the agreed outputs. When compared against the actual expenditure incurred during the year against the various drivers, as summarised below, we note a 12% decrease in overall capital expenditure in Year 3 of PC10 [x] when compared to the forecast PC10 expenditure profile for Year 3 [x]. We found that the decrease in expenditure reflects the re-profiling of Public Expenditure (PE) funding, and whilst an additional £12m was made available by DRD during the year, this has primarily been used on water related activity, specifically targeting additional water main rehabilitation.

As demonstrated below, expenditure on the Quality and Enhancement Programmes are significantly lower than forecast. In order to maintain the necessary Base Maintenance programme, in response to the PE reductions, NI Water has deferred aspects of the Quality programme. The reduced Enhancement expenditure reflects the smaller than expected DG5 programme.

4.2 Indexation

We confirm that NI Water has indexed the PC10 projections from the 2007/08 base year using the COPI adjustment of 1.012. Whilst this approach is consistent with guidance from NIAUR, the Company has highlighted that subsequent revision to COPI for the year (1.018), if applied to Table 35a, would increase the Year 3 allowance by £0.5m. Considering the PC10 FD is already subject to variation in accordance to PE funding allowances, we continue to question the appropriateness of this comparison.

4.3 Expenditure comparisons

In reviewing the expenditure for Year 3 of PC10, the Company has highlighted a number of well justified reasons for reported variance.

As noted by NI Water in their commentary, there are significant differences between the proportional allocation assumptions made in the PC10 submission and those now being applied using the CIDA methodology.

The Company has also identified a number of additional external constraints since the Final determination was published, impacting on the Company's ability to efficiently deliver the agreed PC10 capital programme, including:

- External funding constraints imposed by fixed annual levels of public expenditure, differing from those agreed in the PC10 Final Determination
- More stringent procurement governance, reducing the scope for capital efficiency

- Delays in acceptance of the PC10 Final Determination
- Land procurement issues, delaying delivery of some WwTW outputs

4.3.1 Base service provision

- *Infrastructure renewals expenditure (line 2)*

[x]

In terms of Infrastructure Renewals Expenditure (IRE), the expenditure incurred during the year [x] is [x] below the Company's PC10 forecast for IRE in Year 3 [x]. This is due primarily to the prudent deferral of the flooding and DG5 sub programmes.

The Company advised that the Sewer Mains Rehabilitation Programme (SMRP) was forecast to deliver 55km of critical and 8km of non-critical sewer improvements over PC10. At year end, we found that the Company delivered 24km of critical and 39km of non-critical sewer improvements over the PC10 period, a significant improvement on the forecast underperformance reported by the Company in 2011/12. We understand the SMRP contractors had not been submitting the mains returns, and a concerted effort was made post year-end to ensure all returns were submitted. Overall, sewerage IRE was circa 60% lower than the water IRE incurred over PC10, with 94% (970km) more water mains replaced in PC10. When taken in the context of poor blockage performance in NI (when compared to E&W), it is apparent that there has been under investment in the SMRP over the PC10 period.

- *Maintenance non-infrastructure (lines 3 and 5)*

[x]

In terms of maintenance on non-infrastructure (MNI) assets, expenditure over the year [x] was lower than reported in AIR12, but higher than forecast for Year 3 of PC10 [x].

NI Water has continued to focus on the delivery of a large number of WwTW maintenance projects (both PC10 and PC10 carryover), with significant expenditure reported against; KR486 – Whitehouse WwTW [x], KN631 – Strabane WwTW [x] and KB460 – M&E Tullygarley WwTW [x].

In terms of MNI expenditure over Year 3 of PC10, NI Water was circa [x] higher than the PC10 forecast. We queried the basis of the reported over spend, and the Company advised that there was an increase in Operational Capital spend to match the increased PE allowance for 2011/12, whereby a number of WwTW refurbishments were brought forward, which required continued spend in Year 3.

4.3.2 Quality Enhancements

[x]

Expenditure against Line 7 [x] is circa [x] lower than the PC10 forecast for Year 3 [x], reflecting the re-profiled PE for Year 3.

NI Water has a large WwTW programme for PC10, with 14 PC10 WwTW outputs and 30 SBP Carryover WwTW outputs forecast for delivery during the period. Over the course of the PC10 period, NI Water has also progressed an additional 20 WwTW schemes that were not originally part of the PC10 programme (to utilise additional PE funding in Year 1) and delivered 11 (>250PE) outputs as part of the Small WwTW Programme.

As highlighted in the Company's commentary for AIR13, this variance is due primarily to a slower than expected start on the Wastewater Treatment new start programme and a shift in CIDA allocation for the overall WwTW programme, with less spend than expected on Q and more on S&D. There were also delays to the main sewerage programme and additional outputs programme that will not be caught up due to PE limitations.

Land acquisition issues are also apparent in the additional PC10 schemes that were still outstanding. We note that NI Water is limited to only paying 'Land Authority' valuations when it comes to purchasing additional land for capital schemes, severely restricting the Company's ability to deliver the Capital Programme in a timely manner.

NI Water has committed to the delivery of a large UID programme over the PC10 period, with circa 117 outputs initially forecast for delivery. Overall, NI Water has delivered a UID programme of a similar magnitude over PC10 (with 102 outputs delivered), but of a significantly different scope. For PC10, NI Water has delivered 42 of the originally identified 117 PC10 UIDs, but has also delivered 60 additional UIDs, that were not previously identified.

4.3.3 Enhanced service levels

[x]

Overall spend on enhanced service levels [x] is circa [x] lower than the PC10 forecast for Year 2 [x]. We found that the Company has continued to focus on the delivery of outputs identified within the DAP process, with significant spend recorded against outputs associated with the Londonderry DAP [x] and Belfast Sewers [x], and also the DG5 programme, with 51 DG5 outputs delivered as a result of KN595 – Brookmount Road Sewer Replacement [x].

4.3.4 Maintaining supply/demand balance

[x]

At year-end, SDB expenditure [x] was circa [x] above the PC10 forecast for Year 2 [x].

We note that circa [x] has been expended against the Small WwTW Programme, some [x] greater than forecast. The Company advised, that in addition to the improvements delivered to a number of small WwTW with a PE<250, NI Water delivered 11 WwTW improvements to works with PE>250 under the small WwTW framework, despite the framework being established for sites with PE's below 250. The Company advised that the small WwTW framework provided a means of quickly procuring a number of projects for works that were in urgent need of upgrade and were close to the PE threshold.

5. Audit Findings (Opex)

Nothing more to add.

Date: 29 July 2013
Prepared by: HMS

Table 40 – Capital Investment Monitoring Return

Commentary by REPORTER

1. Background

This table covers the Capital Investment Monitoring (CIM) Return for the Report Year.

Figures reported in Table 40 should be consistent with those reported on in the other capital investment tables of the AIR submission. For the PC10 period, of which 2012/13 is the final year, the CIM template has been modified to more easily identify the outputs and expenditure relating to the PC10 Determination. The CIM template includes:

- A breakdown of the agreed outputs by sub-programme or project, covering the whole capital programme*, except for the capital elements of the PPP projects.
- Milestones*, expenditure profiles, expenditure allocations by purpose and asset category assumed in the Determination.
- Actual spend and updated forecasts of milestones, expenditure and allocations.
- A commentary by NI Water providing an overview of progress against the baseline programme.
- A textual explanation covering any material changes to the baseline programme*.
- Expenditure shall be reported net of any grants and capital contributions.
- Note that for this final CIM of the PC10 period, the regulator has requested that the milestone dates.

Note * that for this final CIM submission of the PC10 period and, presumably in recognition of the significant impacts that external funding changes have had on the capital programme, we understand that the UR has requested that the PC10 Baseline dates (columns 11-17) be cleared. Other than through the review of a relatively small sample of specific schemes, which adds to similar sampling in the two previous years, this has limited our analysis of NI Water's progress. However, we do recognise that the changes to the budgets will have impacted materially on certain components and specific projects/initiatives within the capital programme and that the PC10 Baseline may have caused confusion in these regards.

The Baseline estimates interpreted from the PC10 Determination have been retained but due to price base differences and potential re-programming impacts, are of limited analytical value at project or programme level without a the incorporation of appropriate Baseline dates in the CIM.

For the Capital Works Programme, a revised Monitoring Plan was produced following the PE10 budget revisions (referred to as Table 8). NI Water has included extensive details of their progress against the agreed Quality driven schemes in their commentaries on Tables 11, 16, 35 and 36. We have reviewed these tables and audited progress on a sample basis. Our commentaries relating to each table refer.

2. Key Findings

- No Baseline date information is given in the CIM.
- Baseline expenditures have been amended from the PC10 Baseline figures reported previously.
- Expenditure is stated as the gross figure, ie prior to adjustments for Grants and Contributions. Adopted Assets are excluded.
- Table 40 is highly consistent with capital expenditure information in Oracle.
- We confirm that NI Water has correctly translated the 2012/13 expenditure given in Table 40 into the 16-box model given in their commentary.
- The 16-box model from Table 40 is materially consistent with Table 32 and Tables 35 and 36.
- The Company has provided a detailed account of their progress by sub-programme.
- Baseline expenditure assumptions are expressed in 2007/08 prices. Actual and forecast expenditure is given in 2012/13 prices.
- Our audits of projects and programmes indicate that allocations into QBEG categories are appropriate.
- Overall, we believe that the allocation of investment into service areas and asset types has been done reasonably well.
- We found that many of the forecast completion dates are notional, based simply on a 12 month period from the 'start on site' date.

2.1 Recommendations

- We recommend that the Reporter is advised of material changes to the Reporting Requirements and/or given year-specific guidance such that suitable procedures can be agreed prior to engagement with the Company.
- In order to fully close out a Determination period, we would generally advise that a final outturn report is produced and that those projects which are deemed and agreed to be complete should be captured and removed from the CIM Report.
- We recommend that at least each financial year end, a full review of estimates to complete and of the projected dates is formally required of the Project Managers for all material deliverables in the capital programme and the CIM is updated to reflect this latest best estimate.
- We understand that a number of wastewater schemes in the current programmes have been/are being designed to new drivers/standards and that it is highly likely that there will be material cost implications which are currently being absorbed. Other than for the PE10 changes, we have not seen any clear mechanism which identifies and accounts for output and/or cost variations and recommend that an appropriate process is devised, agreed and put into effect as soon as is practicable.

3. Audit Findings

3.1 General

A general check has been undertaken on the expenditure profiles of several PC10 programmes (which generally have significant numbers of discrete outputs) to ascertain whether the rates of spend on the tranches of schemes to be delivered in 2013/14 and 2014/15 are similar to those which have been delivered in recent years. The results are as follows:

08 – Water mains rehabilitation programme								
Completion Year (CY)	Nr of Projects delivered in CY	Total capex for group (£m)	Average Project cost (£m)	Before CY-2	CY-2	CY-1	CY	CY+
				% expenditure complete by period end				
2011/12	11	[x]	[x]	9	30	75	90	100
2012/13	24	[x]	[x]	2	17	62	89	100
2013/14	10	[x]	[x]	1	30	71	96	100
2014/15	3	[x]	[x]	4	14	62	100	100

On the basis of this analysis, the programme of projects due for delivery in 2013/14 looks broadly on target.

The projects identified for delivery in 2014/15 make up a much smaller programme than has been delivered over recent years and the rate of spend to date (at 14%) is well below the typical delivery profiles previously achieved. Given that so few schemes remain in the programme, this could be down to them being generally quicker than average to deliver. In our experience, the more complex schemes are often the ones which are deferred. However, the expenditure profile in this programme has been subject to significant imposed variance as the levels of activity can be more easily adjusted to cope with the volatility in the PE budgets.

16 – New Wastewater Treatment Works								
Completion Year (CY)	Nr of Projects delivered in CY	Total capex for group (£m)	Average Project cost (£m)	Before CY-2	CY-2	CY-1	CY	CY+
				% expenditure complete by period end				
2011/12	6	[x]	[x]	1	8	28	86	100
2012/13	11	[x]	[x]	4	20	51	81	100
2013/14	12	[x]	[x]	2	12	55	95	100
2014/15	4	[x]	[x]	2	17	27	93	100

There is a wide variety of project types in this programme and this may affect the comparisons. However, all else being equal, this analysis could suggest that either the schemes still to be delivered are generally ahead of their delivery dates, and/or

possibly that the expenditure remaining has been under-estimated.

NI Water has commented more fully on several of the projects within this programme.

17 – Small Wastewater Treatment Works

This programme is made up of 6 mini-programmes rather than individual projects. Only programme KI470 is not reported as complete, but has no associated dates. Looking therefore only at annual expenditures across this programme, which in 2013/14 and 2014/15 is low spend against that reported in the years since 2008/09, it would seem that NI Water and their supply chain has the capacity to deliver this programme.

3.2 Capex Totals

The 'Actuals' total for 2012/13 is also the same in the Table 40, confirming that no inflation has been applied to 'Actuals' data, i.e. reporting is in 'money of the day'.

NI Water has replaced the PC10 Baseline data with PC13 Baseline data at the UR's request. The Reporting Requirements do not yet reflect this requirement. However, we have traced the annual capex figures given for the PC10 period back to other information submitted to the UR as follows:

- 2010/11 £162.266m tallies with actual capex reported in AIR12 CIM and with table R.28 in NIW's response to the PC13 DD
- 2011/12 £192.008m tallies with the actual capex reported in the AIR12 CIM
- 2012/13 £162.269m traced back to table R.20 in NIW's response to the PC13 DD

3.3 Reconciliation of Table 40 with ORACLE

NI Water has provided a table in section 1.4 of their commentary which satisfactorily reconciles Table 40 to their ORACLE financial reporting system. The spreadsheet submitted with AIR13 also contains the workings which support these reconciliations.

Operations Capital and M&G expenditure has not been subject to any significant Reporter scrutiny although the content and progress of the PC10 M&G programmes were reviewed in 2011/12 as a topic within the Systems of Planning and Internal Control (SPIC) Review 2012. We believe that it would be beneficial to include a review of these programmes of work on an annual basis.

3.4 Comparison with other tables and submissions

NI Water has provided a reconciliation of actual 2012/13 expenditure reported in the CIM with AIR13 Tables 35 and 36. These tables also reconcile satisfactorily with Table 32.

3.5 Proportional Allocation

Our commentaries to Tables 35 and 36 include an analysis of our findings from a more detailed review of specific projects and programmes, including comments on the assumptions made in proportionally allocating expenditure to purpose categories and to asset types. Over recent years, we have found that the allocation procedures have continued to improve, and we are no longer concerned that there are any material errors or systemic mis-allocation issues.

Date: 29 July 2013
Prepared by: HMS