Northern Ireland Water Ltd

Annual Information Return 2011

To the

Northern Ireland Authority for Utility Regulation

Public Domain Version

Part 6 of 10 containing:

Financial Measures - commentaries for tables 32 to 38 and 40 (excluding tables 35b and 36b)

Reporter's Submission

By

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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 has continued to develop, implement and improve their proportional allocation procedures. Much work has been done to review ongoing projects and to better allocate the investment to the appropriate QBEG purpose categories, and we have seen evidence of this in our capex reviews, although we believe there is still a slight tendency to under allocate to Base.
- Data reported in T32 of AIR11 does not quite reconcile with equivalent data in the CIM. We queried this discrepancy and found that expenditure reported on CIDA, associated with Enhanced Service Levels, incorrectly included expenditure associated with backlog base. Although this was identified and corrected prior to submission, the Company's governance processes did not provide sufficient time to correct the AIR11 tables. As such, the submitted AIR11 tables are not quite correct; however, the overall reported variance is in the order of ±1-2%, which is not material.

3. Audit Approach

A total of 10 projects, summarised below, were included this year in our detailed 'Capex' audit programme, weighted towards those involving greater capital expenditure in the Report Year. For AIR11, the schemes reviewed included 1 x strategic trunk main schemes, 1 x water treatment works, 1 x water main rehabilitation scheme, 3 x WwTW schemes, 1 x small WwTW programme, 1 x sewage catchment rationalisation scheme, 1 x sewerage programme and the Innovation programme.

The detailed level 'Capex' audits were followed up with a review of the contents of the spreadsheet systems, which access and collate the expenditure information by project for the Report Year. During this review, the collation system is tested to ensure that the proportional allocations exposed in the scheme specific audits are consistent with our expectations from the detailed Capex audits.

4. Audit Findings

4.1 General

It is apparent that NI Water has continued to develop, implement and improve their proportional allocation procedures. Much work has been done to review ongoing

projects and to better allocate the investment to the appropriate QBEG purpose categories.

All projects have a CIDA allocation and as highlighted in AIR10, NI Water has held a number of 'CIDA master classes' to ensure the consistent application of the QBEG allocation process by all NI Water Project Manager. The findings from our AIR11 capex audits demonstrate the benefits of this training, through the reduced number of allocation issues identified. In addition to this, NI Water has rolled out further 'CIDA master class' training to Engineering Consultants involved in the delivery of the Capital Works Programme.

The capital scheme approvals process has been 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. Furthermore, all Operational capital schemes (currently 30% of total capital expenditure) were previously approved and enacted within Operations and were not subject to the approvals process. We found that for AIR11, all Operational capital schemes now go through the Asset Management Approvals Panel for approval and verification of need and driver.

Detailed in the table below, is a summary of the schemes we reviewed during the year, as part of AIR11. As can be seen, CIDA allocation is generally in line with the Reporter's expectation, although there is still a tendency to under allocate to Base.

Project Ref	Project Name	Budget (£k)	LBE (£k)	CIDA QBEG Allocation				Reporter QBEG Allocation			
				Q	B	E	G	Q	B	E	G
JG035	Ballydougan to Newry Strategic Trunk Main	[x]	[x]	0	1	0	99	0	14	0	86
JN390	Lough Bradan WTW Upgrade	[x]	[x]	51	49	0	0	51	49	0	0
JS227	South Down Zone WM Imps	[x]	[x]	31	56	4	9	36	58	2	4
MAG012	Innovation Programme	[x]	[x]	0	32	60	8	0	32	60	8
KB282	Magherafelt WwTW	[x]	[x]	55	20	0	25	37	35	0	28
KB269	Toome WwTW	[x]	[x]	18	0	2	80	18	5	3	75
KR389	Ballyhalbert WwTW	[x]	[x]	59	9	0	32	59	9	0	32
KB436	Whitehead Ballystrudder and Ballycarry Rationalisation	[x]	[x]	78	10	0	12	78	10	0	12
OSB000	Ops Capital Sewerage	[x]	[x]	0	100	0	0	0	100	0	0
KI463	Small WwTW programme	[x]	[x]	90	0	0	10	10	39	0	51

The basis of our suggested allocation of QBEG is summarised below:

For **JG035 – Ballydougan to Newry STM**, an initial QBEG of 0/1/0/99 was recorded. Based on our understanding of the project scope, which involves the

decommissioning of Camlough WTW, we would expect to see a greater allocation to Base Maintenance (B) on the basis that a proportion of the trunk main capacity (circa 5Ml/d out of 55Ml/d) would be required to replace output from Camlough WTW. Following this observation, NI Water undertook a 'bottom up' incremental analysis of the scheme and apportioned specific lengths of trunk main to the decommisioned Camlough WTW. On the basis of this analysis, which we reviewed and agreed, NI Water has updated the CIDA allocation for JG035 to 0 / 14 / 0 / 86.

Upon further consideration, subsequent to the above review, we noted that the scheme is believed to deliver additional DG2/DG3 benefits to the resource zone, and as such, a % allocation to E (enhancement) should be made. However, as the majority of the benefits relate to the future deteriorations of service (following increased demand) it is difficult to determine a % allocation to E. As such, we consider the above allocation to be appropriate.

For **JN390 – Lough Bradan WTW Upgrade**, the scope of work includes:

- Refurbishment of the existing superpulsators and rapid gravity filters (RGF) to ensure optimum performance.
- Addition of a dissolved air flotation (DAF) unit to work in parallel with the superpulsators.
- Facilities to allow addition of an ozone plant at a later date.
- Addition of GAC filters to reduce organic load and hence reduce THM formation.
- Rationalisation of the existing sludge system with the addition of lamella thickeners in line with recently completed water treatment works.

On the basis of the above scope and the fact the work is primarily driven by deteriorating raw water quality from the forestry commission owned catchment, a QBEG of 51 / 49 / 0 / 0 was recorded, which we confirm.

For **JS227 – South DownZone WM Improvements**, 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 36 / 58 / 2 / 4 was determined. To ensure consistency, we checked the allocation of expenditure on CIM for JS227, and found a slightly different QBEG – 31 / 56 / 4 / 9. We queried the basis of this variance, and NI Water advised that the QBEG on CIM was established at A1 approval stage, and subsequent revisions to the scheme have resulted in the slight movements in QBEG. On this basis, we recommend that the CIM is adjusted to reflect the latest QBEG.

For **MAG012 - Innovation Programme** - This is a programme of work with a number of sub-projects relating to the Company's Innovation Programme. The type of work within the programme relates to both services and each project has significantly different business drivers and outputs. Examples of the projects currently ongoing range from telemetry studies and IT to digitisation projects. Expenditure is allocated to 60% water non-infrastructure and 40% sewerage non-

infrastructure. We reviewed the list of projects within this programme and from inspection of the project titles and allocation to service area; we confirm that the allocation appears reasonable. There is a risk that expenditure could be allocated to infrastructure as some of the programmes of work potentially relate to below ground – network assets. However without analysis of every project within the programme this is difficult to verify.

To test the allocations within the programme of work, we also challenged a number of projects within the programme. Our checks focussed specifically where the nature of the work was not clear from the project description. In response NI Water provided further evidence to verify the allocations made. Expenditure has been proportionally allocation on a programme basis as follows - Q – 0%, B – 32%, E – 60%, G – 8%

We concur with the allocations made but without detailed review and understanding of each sub-programme of work it is difficult to fully verify this allocation. Analysis of the Company's planned breakdown of the programme appears to indicate that a higher proportion of expenditure should be allocated to base and a lesser proportion to enhancements, but given the relatively low level of total expenditure in the year spend on any one project has the potential to skew the allocation made at a programme level. However, we believe the stated QBEG is rational, given that the main drivers of the programme are to deliver either service enhancements or are designed to replace and update existing assets/processes.

KB282 – Magherafelt WWTW - This 17,500 pe WWTW with percolating filters is required to meet a new Ammonia consent standard of 5mg/l and a design p.e. of 25,000. FBP proposals assumed that Activated Sludge would be the generic solution but NIW has reviewed this using their m-Prove process and determined that they could reuse more of the existing assets, improve performance with some new media, and add a second set of percolating filters to nitrify the effluent.

A detailed QBEG analysis had been undertaken by NIW on this project, splitting the project into elements, analysing the asset additions and purpose categories for each element by cost. This analysis shows a different split from CIDA and CIM information as follows:-

	Q	B	E	G	SNI	SI
CIM Baseline	55%	21%	0%	24%	100%	0%
CIDA }	55%	20%	0%	25%	100%	0%
CIM 2010/11 Q4 }	55%	20%	0%	25%	100%	0%
Element Analysis/(Recommended)	**37%**	**35%**	0%	28%	100%	0%

We consider the Element analysis split to be the most reliable and should be uploaded to CIDA and thence to CIM as soon as is practicable, but is not expected to be in the 2010/11 Q4 CIM.

An initial estimate of £8.8m (2007/08 prices) was used in the FBP. The current Latest Best Estimate (LBE) indicates a cost of £8.4m (2010/11 prices), including

£0.7m of residual contingency. The project is currently 80% complete (March 2011).

We consider the most recent cost estimate to be reliable but at this advanced stage, we would not anticipate the use of most of the residual contingency and thus, the project may be realised for less £8.0m.

KB269 – Toome WWTW - Toome and Creagh WWTW are to be superseded by a larger single works at Creagh with a 2017 p.e of 4,000 rather than 2,500 as the previous combined p.e. The works is to be expandable as increased industrial effluent is also expected in future years. A series of network improvements will also be required to facilitate the change to a single works.

Both existing works are at risk of flooding, both are at the limit of treatment capability and both have recorded failures against the current discharge standards.

The initial (SBP) estimate of £9.2m for the works anticipated that a full new works would be built. However, the m-Prove process reviewed the whole solution and recommended two separate works. This was further challenged and the current solution was developed and accepted. This involves a full new works at Creagh, treating Formula A flows prior to discharge into the river Mayola. All flows to site will be pumped, requiring the upgrade and rationalisation of pumping stations and rising mains in both catchments.

The work was procured as an add-on to the Bushmills WwTW project to gain Early Contractor Involvement (ECI) such that the processes could be jointly developed – but the Contractor retains full process liability to ensure the commissioning trails prove effective.

The CIDA allocation was last reviewed in October 2009, before the need for tunnelling in Toome had been identified and which has increased the infrastructure component by £700k. This one-off adjustment has not yet been recognised in the allocations, nor has any Base Maintenance to compensate for the replacement and refurbishment of the pumping station components. The CIDA QBEG allocations are 18:0:2:80 where we would recommend 15:15:2:68. An increased allocation to sewerage infrastructure to correct for the tunnelling would also seem appropriate.

	Q	**B**	**E**	**G**	**SNI**	**SI**
PC10 Baseline	20%	3%	0%	77%	100%	0%
CIDA	18%	0%	2%	80%	86%	14%
CIM 2010/11 Q4	18%	0%	2%	80%	86%	14%
Recommended	15%	**15%**	2%	**68%**	**70%**	**30%**

KR389 – Ballyhalbert WwTW - is one of the works classified in 2006 by the EHS as failing the UWWTD for having inappropriate treatment. There have been problems obtaining land for the permanent solution, so an interim solution providing secondary treatment has been agreed. A new wastewater PS will replace the existing retention tanks and will pump to a new RBC and then to the existing sea outfall.

At March 2011, the interim solution is complete, in beneficial use and undergoing commissioning trials. The pumping main from Portavogie is also complete. However, at March 2011, the solution is still developing, with additional storage, a pumping station and a long sea outfall (part of KS111 – Ards South Strategy) is still to be provided.

The m-Prove process was employed to review the needs and solution and this reduced the requirement from secondary treatment discharging to sea via the existing outfall, to primary treatment only with a new long sea outfall. Opex is also reduced by removing the need for air-blowers.

	Q	B	E	G	SNI	SI
Baseline	44%	40%	0%	16%	100%	0%
CIDA	66%	17%	0%	17%	76%	24%
CIM 2010/11 Q4	59%	9%	0%	32%	83%	17%
Recommended	59%	9%	0%	32%	83%	17%

KB436 – Whitehead, Ballystrudder and Ballycarry Rationalisation - Whitehead and Ballystrudder have been deemed to have inappropriate treatment and hence have been failing since 2007. Ballycarry has been given a new 10/20 standard which it will likely fail. The three catchments are to be rationalised, Whitehead sewage will be pumped untreated to Ballystrudder. Secondary effluent from Ballycarry will also be pumped to Ballystrudder, mixed with the flows from the other two catchments, screened and pumped to a new long sea outfall into the Irish Sea.

The current combined population equivalent of 7,500 is predicted to rise to 8,475 by 2030, which remains below the 10,000 pe threshold for 'appropriate treatment'.

Planning approval was granted in November 2010. The networks contract has been awarded (March 2011) and work should be complete by end of 2011.

	Q	B	E	G	SNI	SI
Baseline (CIM)	78%	10%	0%	12%	100%	0%
CIDA	78%	10%	0%	12%	100%	0%
CIM 2010/11 Q4	78%	10%	0%	12%	100%	0%
Recommended	78%	10%	0%	12%	**40%**	**60%**

OSB000 - Ops Capital - Sewerage - Is a programme of work with a number of sub projects which relate to the Company's wastewater base maintenance programme. The type of work within the programme varies significantly but we confirm it generally contains a large number of small refurbishment/replacement schemes (see below for details of the audit checks undertaken).

All expenditure is allocated to base maintenance - sewerage. We reviewed the list of projects within this programme and from inspection of the project titles confirmed this allocation to be reasonable. The Company also confirmed that they undertake similar verification checks and provided evidence of amendments made as a result if this challenge process.

To further test the allocations with this programme, we also challenged a number of projects where the scope of the work was not immediately clear from the project title. In response, NI Water provided the descriptions of each project selected to verify the allocation to base.

KI463 - Small WwTW Programme - covers a range of sites each with less than 250 population equivalent. Typically these works are septic tanks or small biological filter beds discharging to small streams or ditches. The drivers for work at each site are varied but typically associated with achievement of tighter quality standards for mainly domestic wastes (in line with the UWWTD) and addressing capacity constraints as a result of recent or forecast development. NI Water confirmed that a typical solution would involve the construction of a RBC appropriately scoped for a particular sites circumstance. In a very small number of cases other solutions have been adopted e.g. extension of an existing outfall but NI Water outlined that such instances are rare. All expenditure has been allocated to sewerage non-infrastructure which appears reasonable given the nature of the programme.

NI Water have allocated expenditure for this programme of work as follows –
Q – 90%, B – 0%, E – 0%, G – 10%

We queried this allocation on the following basis:

a) a large number of the works appear to have been suffering from capacity issues so we were of the opinion that the percentage allocation to growth should be higher. Similarly, we were uncertain whether an allocation to base would also be appropriate, given that some assets are likely to be have been replaced over the course of the programme.

b) whether the inclusion of an additional 7 works with a p.e. greater the 250 within the programme would have a significant impact on the QBEG allocation and Annual Information Return.

In response NI Water advised that that in light of the query they had opted to revisit the QBEG allocation as the allocation was initially based on the PC10 submission, which excluded the base maintenance allocation. NI Water shared the analysis undertaken at this time and also the updated CIDA allocation. We confirm that the allocation is now:

Q – 10%, B – 39%, E – 0%, G – 51%

We believe this allocation is more appropriate as a greater allowance to base recognises that assets are being replaced/refurbished and that a number of the projects address capacity issues. Whilst the allocation is derived from a historic analysis we believe this is appropriate given that the nature of the solutions implemented and drivers have generally been consistent over time. Given that a driver for the programme is tighter quality standards it could be argued that the allocation to quality could be assigned a higher weighting. This could be in favour of the allocation to base but, without an updated assessment of each scheme within the programme, a precise QBEG estimate is difficult to derive. Even though the revised

allocation above is based on a relatively old assessment, we believe it to be the most appropriate allocation as it is based on the most detailed analysis the Company holds and, at a high-level, appears rational.

In relation to the additional 7 works included in the programme in 2010/11 we discussed the potential impact on the AIR. The Company outlined that they have discussed the issue with the Regulator. In relation to the QBEG allocation, we believe it appropriate that the allocation is consistent with that applied to the main body of the programme. This is based on the rationale that the additional work included in the programme is similar in scope to that already being delivered.

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 should form 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 alluded to in Section 4.1 above, NI Water continues to improve the CIDA data capture and analysis process as follows:

- 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.
- Operating Capital expenditure will be subject to the same governance and approvals processes as the Capital Works Programme expenditure.

Whilst undertaking our capex audits during the year, our challenge of QBEG for a particular scheme, resulted in the Project Manager completing a 'bottom up' incremental analysis of QBEG for each element of the scheme, which was then aggregated to develop an overall CIDA allocation. We consider this to be good practice that should be considered by all Project Managers when assessing new and existing projects.

4.3 Data Reconciliation

We found that data reported in T32, T35 & T36 of AIR11 did not quite reconcile with equivalent data in the CIM. We queried this discrepancy and found that AIR11 data is taken from CIDA, which has greater levels of granularity for each purpose/driver code.

We challenged the magnitude of some of the variances with the Company and they confirmed that expenditure reported on CIDA, associated with Enhanced Service Levels, incorrectly included expenditure associated with backlog base. Although this was identified and corrected prior to submission, the Company's governance processes did not provide sufficient time to correct the AIR11 tables. As such, the submitted AIR11 tables are not quite correct; however, the overall reported variance is in the order of ±1-2%, which is not material.

For consistency, our commentaries relate to the data submitted and not the corrected data.

4.4 Additions – New assets (enhancement)

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

We note a significant (41%) increase in expenditure against sewerage infrastructure assets and a corresponding (but unrelated) 41% reduction in expenditure against water infrastructure assets.

We found that NI Water have reported an increase in the number of assets adopted at nil cost (reported in Line 7 Column 4) as developers try and reduce their liability on completed developments, resulting in increased levels of notional expenditure, whereas the reduced level of expenditure reported in Line 3, Column 1 reflects delays to the WMRP due to prolonged procurement of the new WMRP framework contract, caused by the current procurement governance and approval processes in place.

There has previously been an issue with the allocation of expenditure associated with; DMZ/DAS studies (base) and; the delivery of actions identified in those studies (enhancement). Previously all work was performed under a single project, however, for AIR11, separate projects have been established for studies and delivery of actions.

For AIR11, M&G expenditure has been allocated on a project by project basis rather than an assumed proportional allocation between water and sewerage. For 2010/11,

M&G expenditure has been allocated 52% Water : 48% Sewerage.

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, 36, 37 and 38.

When compared to the overall levels of cumulative expenditure forecast in the SBP (in 2009/10 prices), as summarised in Table 32.1 below, in the first year of PC10, NI Water are slightly behind water and sewerage IRE forecasts, although expenditure is broadly in line with Year 1 of SBP. However, in terms of MNI expenditure, the Company is significantly down on the level of expenditure forecast for Year 1 of PC10. We queried the basis of this circa 30% under spend, and the Company advised that delays in the appointment of non-infra framework contractors, due to the stringent governance and approvals processes currently in place for the procurement of goods and services, has resulted in prolonged periods where work has not been possible. An example of this relates to the Service Reservoir Rehabilitation Framework, which ended in November 2010. Under the current procurement processes, approval of the new framework contractor is not expected until late 2011. We confirm that no work on SR rehabilitation has been possible since November 2010.

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		[x]		[x]		[x]		[x]
	2012/13		[x]		[x]		[x]		[x]

Overall report year maintenance expenditure is 10% lower than reported for AIR09, and circa 2% lower than forecast in the SBP for Year 3.

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.

5. Consistency Checks

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 2011
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

- The total data reported under table 33 is consistent with data reported for table 25, which has been reviewed by the financial auditors.
- We have commented on proportional allocation between base and enhancements and by asset lives in our commentaries to tables 32, 35-36.
- We believe the revised table format facilitates more accurate reporting in relation to splits between different rows of the table.
- We note significant accelerated depreciation in the year, which follows similar levels of acceleration reported in AIR10. In addition we note a £21.7m impairment adjustment included in the depreciation charge. Increased capital expenditure is also a driver for increased depreciation. Together this means that the depreciation charge for the year has increased by more than £30m.
- Historically the IRC was based on a 10 year average. However for 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.

3. Depreciation

The total depreciation charge for the year is reported in line 5 of table 33. We note that this is consistent with data reported in table 25. Data in table 25 is audited by the financial auditors. Our scope for depreciation is therefore limited to comments on the split of the depreciation charge between base and enhancement assets reported in table 33.

The Company has reported a small depreciation charge for PPP and we have commented separately on this.

We have provided comment on the appropriateness of the infrastructure renewals charge below.

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.

As the company advises in their commentary, 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 reported in table 34. Nevertheless we do believe that the current array of asset lives should be improved in order to better reflect the true economic life of assets.

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 Mott MacDonald. The company advise that it may undertake the next revaluation for price control 2015.

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. We comment on the basis of the split of assets between base and enhancement in our commentary to table 34.

We note that the total depreciation charge for the year is about 1.5 times the new additions for the year. It is however comparable with investments in non-infrastructure assets between 2007-2010.

We note that the table structure has changed and this no longer requires the Company to split historic depreciation between base and enhancement. Supporting CIDA analysis now exists for the years for which depreciation is required to be split by base and enhancement and we believe this change will increase the accuracy of data reported in this table. This follows ongoing discussions with the Utility Regulator as follows:

'Following the Reporter recommendation in AIR09 in respect of Table 33, lines 1–3, NIW met with the UR on the 30/03/10 to discuss the Table Guidance. At the meeting NIWS explained that it felt the guidance was unclear and that pre-NIWS assets could not be split between Enhancement and Base even though a large portion of this investment would have been enhancement. NIWS explained to those present that it had looked at the OFWAT table and that the additional blocks of lines in their JR

allowed pre regulation spend to be unallocated and permit the table to become meaningful. The Regulator accepted that further discussion was necessary but due to time constraints they were content that the table would be populated in AIR10 on the same basis as AIR09. A future meeting is to take place in advance of the AIR11 guidance being issued.'

We understand that this further meeting did take place, the outcome of which was to agree the revised table format.

The company 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 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 where CIDA analysis has been applied for AIR12.

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.

Confidence grades have now moved from a DX as was the case last year to a B3. The Company advises of the reasons for this in its commentary. We agree with the confidence grades assigned by the Company.

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.

For the current year the Company has applied accelerated depreciation of £22.73m. These were identified by means of a review of the assets in the asset register and discussions with investment managers. Some of these assets were decommissioned prior to 2010-11 report year. This follows accelerated depreciation in the region of £19m last year. These levels of accelerated depreciation are very high and represent 2.5% of the initial opening value of the regulatory asset base. We would not expect there to be consistent high levels of accelerated depreciation. The Company may wish to undertake a comprehensive exercise to ensure that its asset data is up to date and should ensure that any decommissioning of assets is advised immediately and highlighted as such on the existing asset data set. We note that the Company has previously advised us that it has undertaken extensive asset register

cleansing so it is a slight concern that the Company continues to find assets at the level that it has during AIR2010 and AIR2011 that have been decommissioned or require decommissioning.

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, 35-36.

The company has reported the following asset lives in table 34.

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

Last year 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 challenged the company in relation to the reason for the variation. The company advised that:

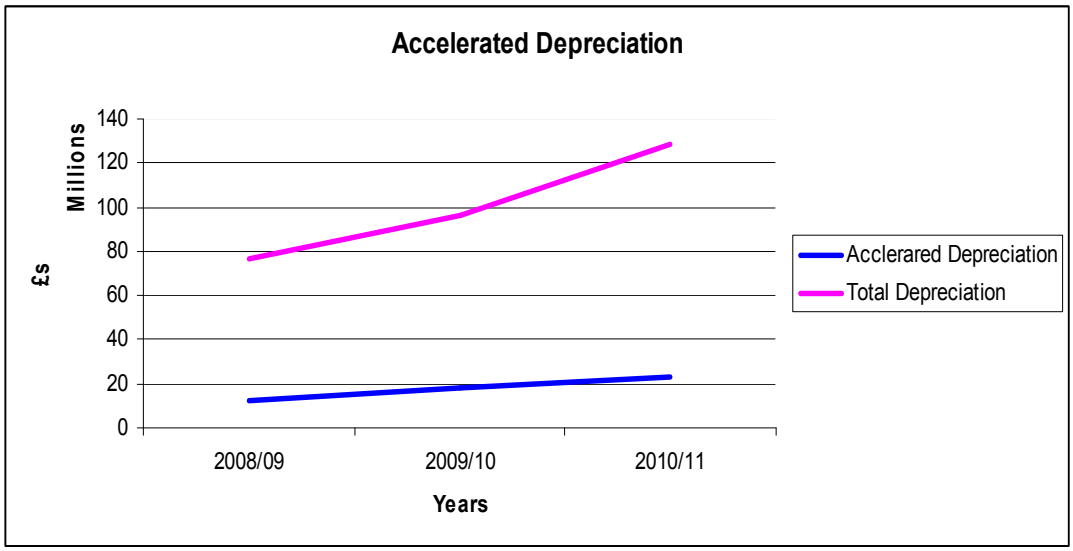
'The asset lives quoted in table 34 are based upon generic figures, rather than calculated, and, as per page 4 of the Halcrow draft reporter commentary [AIR10], 'are broadly consistent with the average asset lives for these categories within the water industry in England and Wales'.

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

The company has shown the following comparison with regards to AIR11.

2010/11	**Water**	**Sewerage**	**Total**
	£m	**£m**	**£m**
CC Depreciation in Year	35.56	52.30	87.85
Accelerated Depreciation	0.53	22.2	22.7
Impairment – 2010/11	*8.97*	*12.60*	*21.56*
Total (2010/2011)	**41.61**	**87.10**	**128.72**
09/10			
CC Depreciation in year	33.94	44.07	78. 01
Accelerated Depreciation	12.29	6.02	18.30
Total (2009/2010)	**46. 23**	**50. 09**	**96.32**
08/09			
CC Depreciation in year	29.483	34.463	63.946
Accelerated Depreciation	2.394	9.844	12.238
Total (2008/2009)	**31.877**	**44.307**	**76.184**

Overall, depreciation has increased by more than £30m in nominal terms. Accelerated depreciation accounts for £4.4m of this, as it has increased from £18.3 million to £22.7 million.
The accelerated depreciation profile is shown below. This now represents 18% of the total depreciation charge.



A further £21.56m is accounted for due to asset impairments between FY 2010 and FY2011. This is split between water and sewerage as shown above. We challenged the Company in relation to the reasons for this revaluation. The Company advised that this was due to the total value of surplus assets reducing between the 2010 and 2011 report years. This seems a large reduction between the two years based on the relative economic conditions between the two years not being vastly different. Nevertheless we have accepted this judgement on face value. The Company advised that the revaluation was recommended by independent property consultants.

The remaining £5 million is attributed to increased asset additions.

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. The company advised that a revaluation may be undertaken for PC15.

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, NI Water has used RPI to index data.

The Company has on-balance sheet additions to the Alpha PPP assets. This has resulted in depreciation of £3.966m, a slight increase on 2010 where depreciation was £3.247m.

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 for 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.

Halcrow has previously audited the IRE and commented on this as part of the Business Plan audits.

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. 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 accrual balance of £3.044m.

Date: 29 July 2011
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

- Last year we commented that the general process of expenditure allocation has improved significantly over the year and the Company should apply a confidence grade of B2 for most lines, with B3 for the smaller numbers (where a single misallocation could be more significant). This has been taken on board by the Company.
- The depreciation charge is based on depreciating a wide range of asset types over a limited selection of asset life categories;
- The asset life categories now include one for very short life assets which covers vans (5 years) and computers (3 years);
- 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.

2.1 Recommendations

- We recommend that a greater number of asset life categories is developed to increase the potential for CCD to simulate expenditure on non-infrastructure maintenance over the longer term. This recommendation was made last year as well. The Company advises that it is considering extending the number of asset life categories that it currently used.
- The entries in block C (Additions average life) are based upon generic figures rather than a calculation. This is incorrect and should be addressed for AIR12.
- We also recommend that a decimal place is added to the requirement for entries in lines 15 and 16 such that underlying trends can be more readily discerned.

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.

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.

The Company used the project control system (Captrax) and Oracle in order to report data in this table.

The Company advises 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 AIR11. Our analysis and tests of the data sources and the NI Water systems show no material concerns.

In allocating their fixed assets to life categories within their various systems, NI Water uses the classifications as given in the table which follows. We believe that a greater array of assets is required in order to fully reflect the economic life of the different assets within NI Water's asset register.

As advised in their commentary, internal training and mentoring has been ongoing. Key staff who were targeted for training included those from Engineering Procurement, Operations, Asset Management, PPP and Finance and Regulation directorates. This should ensure ongoing improvement in reporting of data.

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

Fixed Asset Register and CIDA	Asset Life	Table 34	Asset Life	Statutory/Regulatory Accounting Reporting (ORACLE coding)
Infrastructure	n/a	-	-	0113
Buildings	60	long	60	0111
Civils	60	long	60	0112
Fixed plant	20	medium	20	0115
Digitisation	20	medium	20	0115
Capital studies	20	medium	20	0115
Land management	20	medium	20	0115
Radio and monitoring	20	medium	20	0115
Long life mobile plant	10	short	10	0114
Short life mobile plant	5	short	10	0114
Lorries	10	short	10	0114
Computer equipment	6-10	short	10	0116
ICA	7	short	10	0115
Telemetry	7	short	10	0115
Furniture and office	10	short	10	0116
Lab equipment	5	short	10	0115
Vans	5	v. short	4	0114
Computers (stand alone)	3	v. short	4	0116

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 audits in 2010 and 2011 of a sample 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. This trail was followed through the additions made to the fixed asset register and the asset lives assumed with checks to the depreciation tables to reconcile the amounts charged for those particular assets.

Life Category	Assumed Average asset life
Very short	4
Short	10
Medium	20
Long	60

The average asset lives reported in table 34 are generic rather than calculated. We undertook a review of asset data during AIR10 and found the following calculated average asset lives.

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

This shows a variance in particular with regard to the very short asset lives and medium asset lives. The Company may wish to reconsider which assets it assigns to which categories and whether the current number of asset lives categories is enough.

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.

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 will undertake a sample audit of the application of the CIDA proportional allocations to life categories for AIR12 to review the correctness of the expenditure to asset life category allocations. We note that the Company intends to introduce a greater array of asset lives in the future and is considering introducing a 'medium long' asset life category.

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.

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 AIR10 and AIR11. The Company is planning changes to some asset life information and the way that the business case is presented for approval by being more explicit about CIDA splits. NI Water should also consider providing a justification of the split of asset lives in the business cases it presents for approval to 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. It further advised that it is developing systems that will allow a full review of asset lives to be completed in the future.

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.

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. We believe this will improve the allocation of asset lives to categories.

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 have commented that we believe the financial asset lives to be materially consistent with the expected engineering asset lives as part of our commentary to the SBP. Nevertheless, we do believe that the array of asset lives currently used by NI Water is insufficient to fully capture all assets and hence, in some cases, the average operational lives of assets may differ from the financial lives assumed.

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 the Executive Approval reports we reviewed for

individual schemes. We note that this is not consistent with data reported in Table 34 nor with data contained in the Company asset database.

Our previous audits of capital schemes have confirmed that the Company's approach to allocation of expenditure in CIDA is improving. We will undertake a sample audit of the split of asset lives across categories during our audit of AIR12.

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. We will review this for our work in AIR12.

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 audits to 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 advise the Enhancements/Base Service split has been extracted from the Contractors financial model. A number of assumptions have been made in order to split data between infrastructure and non-infrastructure expenditure.

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 2011
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 has continued to develop, implement and improve their proportional allocation procedures. Much work has been done to review ongoing projects and to better allocate the investment to the appropriate QBEG purpose categories, although we believe there is still a slight tendency to under allocate to Base.
- Data reported in T35 of AIR11 does not quite reconcile with equivalent data in the CIM. We queried this discrepancy and found that expenditure reported on CIDA, associated with Enhanced Service Levels, incorrectly included expenditure associated with backlog base. Although this was identified and corrected prior to submission, the Company's governance processes did not provide sufficient time to correct the AIR11 tables. As such, the submitted AIR11 tables are not quite correct, with variance of up to 7% on one purpose category.
- Overall capital expenditure in Year 1 of PC10 (£73.876m) is broadly in line with forecast PC10 expenditure profile for Year 1 (£77.246m).
- Delays in the appointment of non-infra framework contractors, due to the stringent governance and approvals processes currently in place for the procurement of goods and services, has resulted in prolonged delays to a number of work programmes
- We found that two of the three PC10 WTW outputs were delivered during the year, with the Killylane WTW study ongoing.
- Leakage related expenditure is 20% lower than that reported in previous years, despite increased activity over the winter period during the freeze/thaw incident.

3. Audit Approach

As part of our review of NI Water's AIR10 submission, we completed a number of detailed 'Capex' audits, weighted towards those involving greater capital expenditure in the Report Year. For AIR11, the water related schemes reviewed included 1 x strategic trunk main schemes, 1 x water treatment works, 1 x water main rehabilitation scheme and the Innovation Programme.

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, NI Water requested a breakdown of the Final Determination from NIAUR. The summary table, which we have reproduced below, will form the basis of expenditure comparisons undertaken throughout the PC10 period.

Water	2010-11	2011-12	2012-13	Total
Q	10.498	9.413	14.884	34.795
B	40.341	40.341	40.341	121.024
E	5.907	5.803	4.933	16.643
G	20.500	18.735	21.965	61.200
Total	77.246	74.293	82.123	233.661

Base	2010-11	2010-11	2010-11	Total
WATER INFRA	19.010	19.010	19.010	57.030
WATER NON-INFRA	21.331	21.331	21.331	63.994
Total	40.341	40.341	40.341	121.024

However, in Years 2 and 3 of PC10, the above forecasts will be subject to downward adjustments in Public Expenditure funding, compromising the Company's ability to deliver the agreed outputs. We will monitor and report on programme adjustments in future years.

4.2 Proportional Allocation

It is apparent that NI Water has continued to develop, implement and improve their proportional allocation procedures. Much work has been done to review ongoing projects and to better allocate the investment to the appropriate QBEG purpose categories.

All projects have a CIDA allocation and as highlighted previously, NI Water has held a number of 'CIDA master classes' to ensure the consistent application of the QBEG allocation process by all NI Water Project Managers. The findings from our AIR11 capex audits, demonstrate the benefits of this training, through the reduced number of allocation issues identified. In addition to this, NI Water has rolled out further 'CIDA master class' training to Engineering Consultants involved in the delivery of the Capital Works Programme.

The capital scheme approvals process has been 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. Furthermore, all Operational capital schemes (currently 30% of total capital expenditure) were previously approved and enacted within Operations and were not subject to the approvals process. We found that for AIR11, all Operational capital schemes now go through the Asset Management Approvals Panel for approval and verification of need and driver.

Detailed in the table below, is a summary of the schemes we reviewed during the year, as part of AIR11. As can be seen, CIDA allocation is generally in line with the Reporter's expectation, although there is still a slight tendency to under allocate to Base.

Project Reference	Project Name	Budget (£k)	LBE (£k)	Spend to date (£k)	CIDA QBEG Allocation				Reporter QBEG Allocation			
					Q	B	E	G	Q	B	E	G
JG035	Ballydougan to Newry Strategic Trunk Main	[x]	[x]	[x]	0	1	0	99	0	14	0	86
JN390	Lough Bradan WTW Upgrade	[x]	[x]	[x]	51	49	0	0	51	49	0	0
JS227	South Down Zone WM Imps	[x]	[x]	[x]	31	56	4	9	36	58	2	4
MAG012	Innovation Programme	[x]	[x]	[x]	0	32	60	8	0	32	60	8

The basis of our suggested allocation of QBEG is summarised below:

For **JG035 – Ballydougan to Newry STM**, an initial QBEG of 0 / 1 / 0 / 99 was recorded. Based on our understanding of the project scope, which involves the decommissioning of Camlough WTW, we would expect to see a greater allocation to Base Maintenance (B) on the basis that a proportion of the trunk main capacity (circa 5Ml/d out of 55Ml/d) would be required to replace output from Camlough WTW. Following this observation, NI Water undertook a 'bottom up' incremental analysis of the scheme and apportioned specific lengths of trunk main to the decommissioned Camlough WTW. On the basis of this analysis, which we reviewed and agreed, NI Water has updated the CIDA allocation for JG035 to 0 / 14 / 0 / 86.

Upon further consideration, subsequent to the above review, we noted that the scheme is also believed to deliver additional DG2/DG3 benefits to the resource zone, as such an allocation to E (enhancement) could be expected. However, as the majority of the benefits relate to the future deteriorations of service (following increased demand) it is difficult to determine a % allocation to E. As such, we consider the above allocation to be appropriate.

For **JN390 – Lough Bradan WTW Upgrade**, the scope of work includes:

- Refurbishment of the existing superpulsators and rapid gravity filters (RGF) to ensure optimum performance.
- Addition of a dissolved air flotation (DAF) unit to work in parallel with the superpulsators.

- Facilities to allow addition of an ozone plant at a later date.
- Addition of GAC filters to reduce organic load and hence reduce THM formation.
- Rationalisation of the existing sludge system with the addition of lamella thickeners in line with recently completed water treatment works.

On the basis of the above scope and the fact the work is primarily driven by deteriorating raw water quality from the forestry commission owned catchment, a QBEG of 51 / 49 / 0 / 0 was recorded, which we confirm.

For **JS227 – South Down Zone WM Improvements**, 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 36 / 58 / 2 / 4 was determined. To ensure consistency, we checked the allocation of expenditure on CIM for JS227, and found a slightly different QBEG – 31 / 56 / 4 / 9. We queried the basis of this variance, and NI Water advised that the QBEG on CIM was established at A1 approval stage, and subsequent revisions to the scheme have resulted in the slight movements in QBEG. On this basis, we recommend that the CIM is adjusted to reflect the latest QBEG.

For **MAG012 - Innovation Programme** - This is a programme of work with a number of sub-projects relating to the Company's Innovation Programme. The type of work within the programme relates to both services and each project has significantly different business drivers and outputs. Examples of the projects currently ongoing range from telemetry studies and IT to digitisation projects. Expenditure is allocated to 60% water non-infrastructure and 40% sewerage non-infrastructure. We reviewed the list of projects within this programme and from inspection of the project titles and allocation to service area; we confirm that the allocation appears reasonable. There is a risk that expenditure could be allocated to infrastructure as some of the programmes of work potentially relate to below ground – network assets. However without analysis of every project within the programme this is difficult to verify.

To test the allocations within the programme of work, we also challenged a number of projects within the programme. Our checks focussed specifically where the nature of the work was not clear from the project description. In response NI Water provided further evidence to verify the allocations made. Expenditure has been proportionally allocation on a programme basis as follows - Q – 0%, B – 32%, E – 60%, G – 8%

We concur with the allocations made but without detailed review and understanding of each sub-programme of work it is difficult to fully verify this allocation. Analysis of the Company's planned breakdown of the programme appears to indicate that a higher proportion of expenditure should be allocated to base and a lesser proportion to enhancements, given the relatively low level of total expenditure in the year, spend on any one project has the potential to skew the allocation made at a programme

level. However, we believe the stated QBEG is rational, given that the main drivers of the programme are to deliver either service enhancements or are designed to replace and update existing assets/processes.

As alluded to above, proportional allocation of the water mains rehabilitation programme is determined for each zone separately. Extensive spreadsheets are produced which provide details of 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. The principal reason (justification) for the work in each street is taken to indicate the (prime) purpose category as follows:

- structural = base
- hydraulic = supply/demand balance (new development)
- operational = base
- water quality= quality

We have previously reviewed the analysis undertaken by NI Water to assess QBEG and found the systematic approach adopted to be both robust and appropriate and in contrast to the high level assessments undertaken at other E&W companies. For 2009/10, the QBEG for the overall mains rehabilitation programme (inclusive of trunk main projects and small watermain extensions) averaged out as follows:

Q	B	E	G
29%	46%	11%	13%

4.3 Year-end Capital Investment Reconciliations

For 2010/11, the year end reconciliation between Oracle and CAPTRAX / CPMR was only £12k. NI Water advised that the differences were due to rounding errors: CAPTRAX rounds down to the nearest £1,000. The reconciliation was absorbed into the CWP using the average QBEG split.

In addition to the above, we found that data reported in T35 of AIR11 does not quite reconcile with equivalent data in the CIM. We queried this discrepancy and found that AIR11 data is taken from CIDA, which has greater levels of granularity for each purpose/driver code. As summarised below, a [x] variance in water related capex between CIM and CIDA was identified.

Table 35 line description		T35 £m	CIM £m	variance £m	Variance %
3	MNI (gross of grants and contributions)	14.756	[x]	[x]	[x]
6	Infrastructure renewals expenditure (gross)	18.844	[x]	[x]	[x]
7	Capex: Total quality enhancement programme	10.775	[x]	[x]	[x]
9	Capital expenditure: customer service	4.395	[x]	[x]	[x]
11	Capital expenditure supply demand balance	14.934	[x]	[x]	[x]
16	Capital expenditure - security of supply	10.248			
	Totals	73.951	[x]	[x]	[x]

We challenged the larger variances with the Company and they confirmed that expenditure reported on CIDA, associated with Enhanced Service Levels, incorrectly included expenditure associated with backlog base. Although this was identified and corrected prior to submission, the Company's governance processes did not provide sufficient time to correct the AIR11 tables. As such, the submitted AIR11 tables are not quite correct. For consistency, our commentaries relate to the data submitted and not the corrected data, but for completeness we have provided a corrected variance table below:

Table 35 line description		T35 £m	CIM £m	variance £m	Variance %
3	MNI (gross of grants and contributions)	15.008	[x]	[x]	[x]
6	Infrastructure renewals expenditure (gross)	18.886	[x]	[x]	[x]
7	Capex: Total quality enhancement programme	10.775	[x]	[x]	[x]
9	Capital expenditure: customer service	4.101	[x]	[x]	[x]
11	Capital expenditure supply demand balance	14.932	[x]	[x]	[x]
16	Capital expenditure - security of supply	10.245			
	Totals	73.946	[x]	[x]	[x]

4.4 Capital Expenditure

4.4.1 General

Overall capital expenditure in Year 1 of PC10 (£73.876m) is broadly in line with forecast PC10 expenditure profile for Year 1 (£77.246m). Although, base maintenance expenditure is circa £7m below forecast, growth related expenditure was circa £5m above forecast.

4.4.2 Base Service Provision

In terms of Infrastructure Renewals Expenditure (IRE), the expenditure incurred during the year (£18.8m) is broadly in line with the PC10 forecast for IRE in Year 1 (£19.01m). We note that, despite being on target for the year, expenditure is circa £8m lower than reported for AIR10. The Company advised that the watermain rehabilitation programme (WMRP) was delayed due to a prolonged procurement process for the new WMRP framework contractors, due to the governance processes currently in place, requiring ministerial approval of significant expenditure commitments. We found that NI Water had increased the emphasis on mains rehabilitation over the SBP period because there were difficulties in maintaining the pace of the Drainage Area Studies, explaining the higher levels of expenditure previously reported.

Expenditure during the year, reflects investment on a number of infrastructure based maintenance schemes, including JB458 – Dunore West Watermain Improvements (£1.98m), JG036 – Castor Bay to Dungannon STM (£1.89m) and JR321 – Breda North WM Imps (£1.86m).

With regard to maintenance on non-infrastructure (MNI) assets, NI Water has focussed on a number of WTW maintenance projects, including the delivery of JN390 – Lough Bradan WTW Upgrade (£0.79m) and JL723 – Carmoney WTW (£2.03m). Additional MNI expenditure has also been incurred on a number of broader maintenance programmes including; Reservoir Integrity Programme (~£2m),

Operational Capital schemes (~£2m) and Leakage (~£1m).

Management and General (M&G) expenditure accounted for 29% of the MNI spend for the year, which is broadly in line with companies in E&W, where M&G spend has typically been 25% of MNI. The rationalisation of NI Water office space in Belfast city centre (£1.9m) was the main source of M&G expenditure for AIR11.

In terms of MNI expenditure over Year 1 of PC10, NI Water is circa 32% (£7m) behind the PC10 forecast. We queried the basis of this under spend, and the Company advised that delays in the appointment of non-infra framework contractors, due to the stringent governance and approvals processes currently in place for the procurement of goods and services, has resulted in prolonged periods where work has not been possible. An example of this related to the Service Reservoir Rehabilitation Framework, which ended in November 2010. Under the current procurement processes, approval of the new framework contractor is not expected until late 2011. We confirm that no work on SR rehabilitation has been possible since November 2010.

4.4.3 Quality Enhancements

Expenditure against Line 7 (£10.8m) is consistent with the PC10 forecast for Year 1 (£9.5m following COPI adjustment).

NI Water has a relatively small WTW programme for PC10, with only three WTW outputs, Carmoney WTW, Lough Bradan WTW and Killylane WTW (study). We found that the two WTW outputs were delivered during the year, with the Killylane WTW study ongoing. We queried the slight overspend on Carmoney WTW [x] and found that additional work was required to repair leakage into the Clearwater tank.

In terms of water distribution expenditure, NI Water has committed to the rehabilitation of 900km of water main over for the PC10 period [x] per year). For AIR11, NI Water delivered [x]km (new and replacement mains – AIR11 T11). Based on a total expenditure [x], a unit cost of [x] was achieved. Whilst this is broadly in line with the unit rate achieved in AIR10, our audit of JS227 - South Downs WM Imps, suggested lower unit costs were being achieved across the framework, due to the current economic climate. We queried the nature of the apparent variance and found that the total expenditure reported during the year, not only included expenditure against the WMRP, but also; the large diameter trunk main programme, preliminary design work on future LDTM projects and operational capital expenditure. In the time available, NI Water were unable to strip out the LDTM and Ops Capital expenditure, but advised that a unit cost of [x] was currently being achieved on the WMRP, which is in line with PC10 expectations.

4.4.4 Enhanced Service Levels

Overall spend on enhanced service levels, is circa £4.4m, which is £1.5m (25%) below the PC10 forecast. As expenditure primarily relates to the Water Mains Rehab Programme and Service Reservoir Rehab Programme, the reported under spend is primarily due to the framework procurement issues identified above.

4.4.5 Improving supply/demand balance

Overall spend on supply/demand has exceeded the PC10 forecast by circa £5m (20%) for Year 1, with significant spend recorded against LDTM and Service Reservoir Rehab programmes

There are four named LDTM projects in PC10, Castor Bay to Dungannon, Cross Town Main, Castor Bay to Newry and Castor Bay to Belfast. We found that the Cross Town Main was completed on 29/11/10 and claimed during the report year, whilst Castor Bay to Dungannon was completed in May 2011 and will be claimed in AIR12.

For the Service Reservoir/Clearwater tank PC10 programme, there are 13 named outputs. For AIR11, we found that Dungonnell SR and Altnahinch CWT were completed, whilst a further five outputs; namely Carland, Ballylone, Crew Hill, Glenlough and Tullaghans were due for completion during the current year.

4.5 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 or security of supply.

As highlighted above, all Operational capital schemes (currently 30% of total capital expenditure) were previously approved and enacted within Operations and were not subject to the same approvals process. We found that for AIR11, all Operational capital schemes now go through the BICC or CIP for approval and verification of need and driver.

4.6 New Outputs/Obligations

NI Water has reported no new outputs/obligations to date, although there is a small Additional Outputs programme, with £1.25m expenditure recorded during the year against JA264 – Crosskennan WPS, JL750 Balinrees to Limavady supply augmentation and JA272, Killylane WTW.

4.7 Leakage Expenditure

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

Leakage	2007/08	2008/09	2009/10	2010/11
Capex	£6.44m	£ 6.39m	£6.79m	£3.33m
Opex	£4.21m	£ 3.86m	£3.81m	£4.63m
Total	£10.65m	£10.29m	£10.60m	£7.96m

We note that report year spend is lower than that reported in previous years. We challenged this on the basis of the increased activity over the winter period (during the freeze/thaw incident) to control leakage (when an increased number of bursts were experienced), and would have expected to see additional expenditure. The Company advised that the additional expenditure (predominantly wages and salaries) may have been captured under 'Networks Opex'.

The leakage capex and opex for AIR11 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. NIW 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.

During the audit of the draft table, we noted a small difference between lines 2 and 6, suggesting some receipts related to base infrastructure renewals. NI Water explained that this related to receipts received for the diversion of watermains (£76k).

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 2010/11, 43.63% 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 NIW has previously provided supporting information which confirms this we have not revisited for AIR11.

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 AIR11 we confirm the approach is consistent with that previously reviewed.

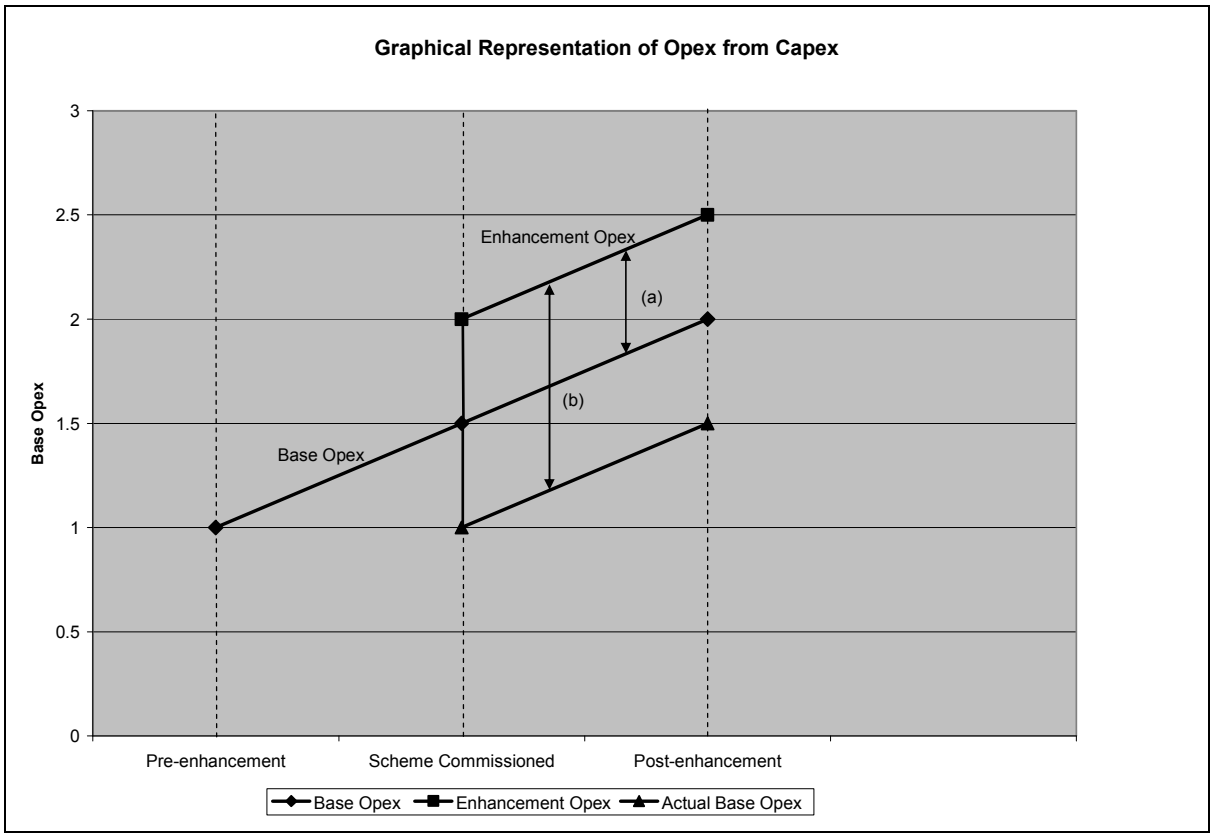
7. Operating Expenditure

Operating expenditure associated with capital expenditure and reported in Table 35 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.

The Company advised that incremental opex has been calculated directly from the accounting general ledger, and that it considered those sites that had become active during 2009/10. It then undertook a comparison of data on a site by site basis related to pre and post Capex investment. It then adjusted for inflationary impacts.

Once the total additional Opex per site is obtained the Company applies a split between the different lines based on the CIDA split. Note it applies the entire CIDA split to enhancement. The base portion of any CIDA split is apportionment across the enhancement categories based on the non-base aspect 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. NIW are 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).



During the year, the Company implemented a Business Improvement project - Cost to Serve. It is intended that in future years this Oracle module will be used to facilitate the reporting of Opex from Capex.

In undertaking our review of the spreadsheet system used to derive the opex from capex for the report year, we note that a minimal £48k was identified from six completed water service projects, with circa £32k associated with Garstings Hill WPS.

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 £16k for the current year. This expenditure relates to recently completed schemes.

Line 10 – Additional operating expenditure – customer services

The Company has reported additional opex of £18k 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 £15k for the current year. This expenditure relates to recently completed schemes.

8. Confidence Grades

Capex and opex totals reconcile very closely with those 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. The Company is increasing the rigour applied to proportional allocation assumptions at project level, and there were very few allocation issues identified during our audit. As such, there may be scope to improve the reported B3 confidence grade for capex in AIR12.

Base OPEX is populated from the General Ledger information which is used for financial management. Given the underreporting of OPEX form CAPEX as demonstrated on the Chart we believe a B4 confidence grade is reasonable.

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. Consistency Checks

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 £113k is not included in T35
- £-68k included in T25 relates to decapitalised projects in 2010/11
- The balance is £-136k which is a reconciling error that cannot be identified

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 been 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	2012/13	

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	2012/13	

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	2011/12	
SRV/004	Dungonnell CWT		2010/11
SRV/005	Glenlough SR	2011/12	
SRV/006	Altnahinch CWT		2010/11
SRV/007	Tullaghans SR	2011/12	
SRV/008	Tullyhappy SR	2012/13	
SRV/009	Crieve SR	2012/13	
SRV/010	Tully SR	2012/13	
SRV/011	lough Macrory CWT	2012/13	
SRV/012	Drumaroad CWT	2012/13	
SRV/013	Killyhevlin CWT	2012/13	
SRV/014	Service Reservoir rehabilitation Programme continuation.	2012/13	

Water Resources			
Ref.	**Project Name**	**Forecast Delivery**	**Actual Delivery**
WRS/001	Strule Abstraction.	2012/13	
WRS/002	Completion of Inspection (Panel) Engineer's Recommendations on Impounding reservoir.	2012/13	
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 2011
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 ~10% reduction in forecast expenditure for Year 1.
- Whilst some variance has been reported amongst purpose categories, overall expenditure in Year 1 of PC10 is in line with the adjusted allowance for Year 1, with good progress made in the delivery of the PC10 water programme

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, NI Water requested a breakdown of the Final Determination from NIAUR. The summary table, which we have reproduced below, will form the basis of expenditure comparisons undertaken throughout the PC10 period.

Water	2010-11	2011-12	2012-13	Total
Q	10.498	9.413	14.884	34.795
B	40.341	40.341	40.341	121.024
E	5.907	5.803	4.933	16.643
G	20.500	18.735	21.965	61.200
Total	77.246	74.293	82.123	233.661

Base	2010-11	2010-11	2010-11	Total
WATER INFRA	19.010	19.010	19.010	57.030
WATER NON-INFRA	21.331	21.331	21.331	63.994
Total	40.341	40.341	40.341	121.024

However, in Years 2 and 3 of PC10, the above forecasts will be subject to downward adjustments in Public Expenditure funding, compromising the Company's ability to deliver the agreed outputs. We will monitor and report on programme adjustments in future years.

4.2 Indexation

We confirm that NI Water has indexed the PC10 projections from the 2007/08 base year using the COPI adjustment of 0.91, which reduced the Year 1 allowance for PC10 by circa £7m for the water service. Whilst this approach is consistent with guidance from NIAUR, the Company has highlighted that the overall decline of the construction industry, as evidenced by the 10% reduction in COPI between 2007/08 and 2010/11, is not fully reflected across all areas of the PC10 programme. Although we have seen some reductions in tender price for some activities, namely water main rehabilitation, we are inclined to agree that COPI does not fully reflect activities across the water sector.

4.3 Expenditure comparisons

In reviewing the expenditure for Year 1 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 (following Reporter challenge).

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
- Severe winter weather in 2010/11, which saw the temporary abandonment of the WMRP and LDTM programme

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 (£18.8m) is broadly in line with the inflation adjusted PC10 forecast for IRE in Year 1 (£17.3m).

The Company believe the slight overspend is primarily due to a change in CIDA allocation suggested by the Reporter in AIR10, for projects where trunk mains are being laid to remove existing Water Treatment Works (WTW), specifically JG036. In these cases, a non infrastructure asset (WTW) is being replaced with an infrastructure asset (Trunk Main). We recommended that when an asset is being replaced, base maintenance is included in the CIDA allocation of the replacement asset. This has had the effect of increasing the water infrastructure base allocation for the project JG036 by c£1.33m which was not allowed for in the FD allocation for 2010/11.

Furthermore, despite being broadly on target for the year, IRE expenditure is circa £8m lower than reported for AIR10. The Company advised that the watermain rehabilitation programme (WMRP) was delayed due to a prolonged procurement process for the new WMRP framework contractors, due to the governance processes currently in place, requiring ministerial approval of significant expenditure commitments.

Maintenance non-infrastructure (lines 3 and 5)

[x]

In terms of MNI expenditure over Year 1 of PC10, NI Water is circa 32% (£7m) behind the inflation adjusted PC10 forecast. We queried the basis of this under spend, and the Company advised that delays in the appointment of non-infra framework contractors, due to the stringent governance and approvals processes currently in place for the procurement of goods and services, has resulted in prolonged periods where work has not been possible. An example of this related to the Service Reservoir Rehabilitation Framework, which ended in November 2010. Under the current procurement processes, approval of the new framework contractor is not expected until late 2011. We confirm that no work on SR rehabilitation has been possible since November 2010.

4.3.2 Quality Enhancements

[x]

Expenditure against Line 6 (£10.8m) is broadly consistent with the inflation adjusted PC10 forecast for Year 1 (£9.5m following COPI adjustment).

NI Water has a relatively small WTW programme for PC10, with only three WTW outputs, Carmoney WTW, Lough Bradan WTW and Killylane WTW (study). We found that the two WTW outputs were delivered during the year, with the Killylane WTW study ongoing.

4.4.3 Enhanced service levels

[x]

Overall spend on enhanced service levels, is circa £4.4m, which is £1.5m (18%) below the inflation adjusted PC10 forecast. As expenditure primarily relates to the Water Mains Rehab Programme and Service Reservoir Rehab Programme, the reported under spend is primarily due to the framework procurement issues described in Table 35.

4.2.4 Maintaining supply/demand balance

[x]

Overall spend on supply/demand has exceeded the PC10 forecast by circa £5m (20%) for Year 1, with significant spend recorded against LDTM and Service Reservoir Rehab programmes.

5. Audit Findings (Opex)

Nothing further to add

Date: 29 July 2011
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 & Recommendations

- NI Water has continued to develop, implement and improve their proportional allocation procedures. Much work has been done to review ongoing projects and to better allocate the investment to the appropriate QBEG purpose categories, although we believe there is still a slight tendency to under allocate to Base.
- Data reported in T36 of AIR11 does not quite reconcile with equivalent data in the CIM. We queried this discrepancy and found that expenditure reported on CIDA, associated with Enhanced Service Levels, incorrectly included expenditure associated with backlog base. Although this was identified and corrected prior to submission, the Company's governance processes did not provide sufficient time to correct the AIR11 tables. As such, the submitted AIR11 tables are not quite correct, with variance of up to 30% on one purpose category.
- Overall capital expenditure in Year 1 of PC10 (£88.267m) is circa 25% below the forecast PC10 expenditure profile for Year 1 (£116.063m).The reported under spend is of particular concern, as NI Water are unable to carry over unused expenditure from Year 1 to Year 2 of PC10. This combined with confirmed reductions in Public Expenditure (actual funding allocated annually), means NI Water will have real difficulty delivering the programme, as defined in PC10.
- Delays in the appointment of non-infra framework contractors, due to the stringent governance and approvals processes currently in place for the procurement of goods and services, has resulted in prolonged delays to a number of work programmes
- NI Water has a large WwTW programme for PC10, with 13 WwTW outputs and 30 Carryover WwTW outputs forecast for delivery during the period. For AIR11, NI Water has delivered two PC10 outputs during the year (Bush WwTW and New Holland WwTW) and 18 carryover schemes
- We note that NI Water has committed to the delivery of a large UID programme over the PC10 period, however, our review of the CIM confirmed minimal expenditure against the nominated UID outputs.
- For AIR11, all Operational capital schemes now go through the Asset Management Strategic Investment Team for approval and verification of need and driver.

3. Audit Approach

As part of our review of NI Water's submission, we completed a number of detailed 'Capex' audits, weighted towards those involving greater capital expenditure in the Report Year. For AIR11, the wastewater related schemes reviewed included 3 x WwTW schemes, 1 x small WwTW programme, 1 x sewage catchment rationalisation scheme, 1 x sewerage programme and the Innovation programme.

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, NI Water requested a breakdown of the Final Determination from NIAUR. The summary table, which we have reproduced below, will form the basis of expenditure comparisons undertaken throughout the PC10 period.

Sewerage	2010-11	2011-12	2012-13	Total
Q	47.608	45.131	37.868	130.607
B	43.287	43.287	43.287	129.861
E	9.263	7.985	7.378	24.626
G	15.905	13.036	16.653	45.594
Total	116.063	109.439	105.186	330.688

Base	2010-11	2010-11	2010-11	Total
SEWERAGE INFRA	10.372	10.372	10.372	31.115
SEWERAGE NON-INFRA	32.915	32.915	32.915	98.746
Total	43.287	43.287	43.287	129.861

However, in Years 2 and 3 of PC10, the above forecasts will be subject to downward adjustments in Public Expenditure funding, compromising the Company's ability to deliver the agreed outputs. We will monitor and report on programme adjustments in future years.

4.2 Proportional Allocation

It is apparent that NI Water has continued to develop, implement and improve their proportional allocation procedures. Much work has been done to review ongoing projects and to better allocate the investment to the appropriate QBEG purpose categories.

All projects have a CIDA allocation and as highlighted in AIR10, NI Water has held a number of 'CIDA master classes' to ensure the consistent application of the QBEG allocation process by all NI Water Project Manager, and the findings from our AIR11 capex audits, demonstrate the benefits of this training, through the reduced number of allocation issues identified. In addition to this, NI Water has rolled out further 'CIDA master class' training to Engineering Consultants involved in the delivery of the Capital Works Programme.

The capital scheme approvals process has been 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. Furthermore, all Operational capital schemes (currently 30% of total capital expenditure) were previously approved and enacted within Operations and were not subject to the approvals process. We found that for AIR11, all Operational capital schemes now go through the BICC or CIP for approval and verification of need and driver.

Detailed in the table below, is a summary of the schemes we reviewed during the year, as part of AIR11. As can be seen, CIDA allocation is generally in line with the Reporter's expectation, although there is still a slight tendency to under allocate to Base.

Project Ref	Project Name	Budget (£k)	LBE (£k)	CIDA QBEG Allocation				Reporter QBEG Allocation				CIDA Allocation		Reporter Allocation	
				Q	B	E	G	Q	B	E	G	SNI	SI	SNI	SI
KB282	Magherafelt WwTW	[x]	[x]	55	20	0	25	37	35	0	28	100	0	100	0
KB269	Toome WwTW	[x]	[x]	18	0	2	80	18	5	3	75	86	14	70	30
KR389	Ballyhalbert WwTW	[x]	[x]	59	9	0	32	59	9	0	32	83	17	83	17
KB436	Whitehead Ballystrudder and Ballycarry Rationalisation	[x]	[x]	78	10	0	12	78	10	0	12	100	0	40	60
MAG012	Innovation Programme	[x]	[x]	0	32	60	8	0	32	60	8				
OSB000	Ops Capital Sewerage	[x]	[x]	0	100	0	0	0	100	0	0				
KI463	Small WwTW programme	[x]	[x]	90	0	0	10	10	39	0	51				

The basis of our suggested allocation for each of the above schemes is summarised below:

KB282 – Magherafelt WWTW - This 17,500 pe WWTW with percolating filters is required to meet a new Ammonia consent standard of 5mg/l and a design p.e. of 25,000. FBP proposals assumed that Activated Sludge would be the generic solution but NIW has reviewed this using their m-Prove process and determined that

they could reuse more of the existing assets, improve performance with some new media, and add a second set of percolating filters to nitrify the effluent.

[x]

[x]

[x]

An initial estimate of [ ] (2007/08 prices) was used in the FBP. The current Latest Best Estimate (LBE) indicates a cost of [x] (2010/11 prices), including [x] of residual contingency. The project is currently 80% complete (March 2011).

We also consider the most recent cost estimate to be reliable but at this advanced stage, we would not anticipate the use of most of the residual contingency and thus, the project may be realised for less[x].

KB269 – Toome WWTW - Toome and Creagh WWTW are to be superseded by a larger single works at Creagh with a 2017 p.e of 4,000 rather than 2,500 as the previous combined p.e. The works is to be expandable as increased industrial effluent is also expected in future years. A series of network improvements will also be required to facilitate the change to a single works.

Both existing works are at risk of flooding, both are at the limit of treatment capability and both have recorded failures against the current discharge standards.

The initial (SBP) estimate of [x] for the works anticipated that a full new works would be built. However, the m-Prove process reviewed the whole solution and recommended two separate works. This was further challenged and the current solution was developed and accepted. This involves a full new works at Creagh, treating Formula A flows prior to discharge into the river Mayola. All flows to site will be pumped, requiring the upgrade and rationalisation of pumping stations and rising mains in both catchments.

The work was procured as an add-on to the Bushmills WwTW project to gain Early Contractor Involvement (ECI) such that the processes could be jointly developed – but the Contractor retains full process liability to ensure the commissioning trails prove effective.

The CIDA allocation was last reviewed in October 2009, before the need for tunnelling in Toome had been identified and which has increased the infrastructure

component by [x]. This one-off adjustment has not yet been recognised in the allocations, nor has any Base Maintenance to compensate for the replacement and refurbishment of the pumping station components. [x].

[x]

KR389 – Ballyhalbert WwTW - is one of the works classified in 2006 by the EHS as failing the UWWTD for having inappropriate treatment. There have been problems obtaining land for the permanent solution, so an interim solution providing secondary treatment has been agreed. A new wastewater PS will replace the existing retention tanks and will pump to a new RBC and then to the existing sea outfall.

At March 2011, the interim solution is complete, in beneficial use and undergoing commissioning trials. The pumping main from Portavogie is also complete. However, at March 2011, the solution is still developing, with additional storage, a pumping station and a long sea outfall (part of KS111 – Ards South Strategy) is still to be provided.

The m-Prove process was employed to review the needs and solution and this reduced the requirement from secondary treatment, discharging to sea via the existing outfall, to primary treatment only with a new long sea outfall. Opex is also reduced by removing the need for air-blowers.

[x]

KB436 – Whitehead, Ballystrudder and Ballycarry Rationalisation - Whitehead and Ballystrudder have been deemed to have inappropriate treatment and hence have been failing since 2007. Ballycarry has been given a new 10/20 standard which it will likely fail. The three catchments are to be rationalised, Whitehead sewage will be pumped untreated to Ballystrudder. Secondary effluent from Ballycarry will also be pumped to Ballystrudder, mixed with the flows from the other two catchments, screened and pumped to a new long sea outfall into the Irish Sea.

The current combined population equivalent of 7,500 is predicted to rise to 8,475 by 2030, which remains below the 10,000 pe threshold for ‘appropriate treatment’.

Planning approval was granted in November 2010. The networks contract has been awarded (March 2011) and work should be complete by end of 2011.

[x]

For **MAG012 - Innovation Programme** - This project is a programme of work with a number of sub-projects relating to the Company's Innovation Programme. The type of work within the programme relates to both services and each project has significantly different business drivers and outputs. Examples of the projects currently ongoing range from telemetry studies and IT to digitisation projects. Expenditure is allocated to 60% water non-infrastructure and 40% sewerage non-infrastructure. We reviewed the list of projects within this programme and from inspection of the project title and allocation to service area; we confirm that the allocation appears reasonable. There is a risk that expenditure could be allocated to infrastructure as some of the programmes of work potentially relate to below ground – network assets. However without analysis of every project within the programme this is difficult to verify.

To test the allocations within the programme of work, we also challenged a number of projects within the programme. Our checks focussed specifically where the nature of the work was not clear from the project description. In response NI Water provided further evidence to verify the allocations made. Expenditure has been proportionally allocation on a programme basis as follows - Q – 0%, B – 32%, E – 60%, G – 8%

We concur with the allocations made but without detail review and understanding of each sub-programme of work it is difficult to fully verify this allocation. Although analysis of the Company's planned breakdown of the programme appears to indicate that a higher proportion of expenditure should be allocated to base and a lesser proportion to enhancements, given the relatively low level of total expenditure in the year spend on any one project has the potential to skew the allocation made at a programme level. However, we believe the stated QBEG is rational, given that the main drivers of the programme are to deliver either service enhancements or are designed to replace and update existing assets/processes.

OSB000 - Ops Capital - Sewerage - Is a programme of work with a number of sub projects which relate to the Company's wastewater base maintenance programme. The type of work within the programme varies significantly but we confirm it generally contains a large number of small refurbishment/replacement schemes (see below for details of the audit checks undertaken).

All expenditure is allocated to base maintenance - sewerage. We reviewed the list of projects within this programme and from inspection of the project titles confirmed this allocation to be reasonable. The Company also confirmed that they undertake similar verification checks and provided evidence of amendments made as a result if this challenge process.

To further test the allocations with this programme, we also challenged a number of projects where the scope of the work was not immediately clear from the project title. In response, NI Water provided the descriptions of each project selected to verify the allocation to base.

KI463 - Small WwTW Programme - covers a range of sites each with less than 250 population equivalent. Typically these works are septic tanks or small biological filter beds discharging to small streams or ditches. The drivers for work at each site are varied but typically associated with achievement of tighter quality standards for mainly domestic wastes (in line with the UWWTD) and addressing capacity constraints as a result of recent or forecast development. NI Water confirmed that a typical solution would involve the construction of a RBC appropriately scoped for a particular sites circumstance. In a very small number of cases other solutions have been adopted e.g. extension of an existing outfall but NI Water outlined that such instances are rare. All expenditure has been allocated to sewerage non-infrastructure which appears reasonable given the nature of the programme.

NI Water have allocated expenditure for this programme of work as follows:

Q – 90%, B – 0%, E – 0%, G – 10%

We queried this allocation on the following basis:

a) a large number of the works appear to have been suffering from capacity issues so we were of the opinion that the percentage allocation to growth should be higher. Similarly, we were uncertain whether an allocation to base would also be appropriate, given that some assets are likely to be have been replaced over the course of the programme.

b) whether the inclusion of an additional 7 works with a p.e. greater the 250 within the programme would have a significant impact on the QBEG allocation and Annual Information Return.

In response NI Water advised that that in light of the query they had opted to revisit the QBEG allocation. The Company outlined that they have opted to revise the allocation to that originally derived during the SBP. NI Water shared the analysis undertaken at this time and also the updated CIDA allocation. We confirm that the allocation is now - Q – 10%, B – 39%, E – 0%, G – 51%

We believe this allocation is more appropriate as a greater allowance to base recognises that assets are being replaced/refurbished and that a number of the projects address capacity issues. Whilst the allocation is derived from a historic analysis we believe this is appropriate given that the nature of the solutions implemented and drivers have generally been consistent over time. Given that a driver for the programme is tighter quality standards it could be argued that the allocation to quality could be assigned a higher weighting. This could be in favour of the allocation to base but without an updated assessment of each scheme within the programme a precise QBEG estimate is difficult to derive. Even though the revised

allocation above is based on a relatively old assessment we believe it to be the most appropriate allocation as it is based on the most detailed analysis the Company holds and, at a high-level, appears rational.

In relation to the additional 7 works included in the programme in 2010/11 we discussed the potential impact on the AIR. The Company outlined that they have discussed the issue with the Regulator. In relation to the QBEG allocation, we believe it appropriate that the allocation is consistent with that applied to the main body of the programme. This is based on the rationale that the additional work included in the programme is similar in scope to that already being delivered.

4.3 Year-end Capital Investment Reconciliations

For 2010/11, the year end reconciliation between Oracle and CAPTRAX / CPMR was only £12k. NI Water advised that the differences were due to rounding errors: CAPTRAX rounds down to the nearest £1,000. The reconciliation was absorbed into the CWP using the average QBEG split.

In addition to the above, we found that data reported in T36 of AIR11 does not quite reconcile with equivalent data in the CIM. We queried this discrepancy and found that AIR11 data is taken from CIDA, which has greater levels of granularity for each purpose/driver code. As summarised below, a [x] variance in sewerage related capex between CIM and CIDA was identified.

[x]

We challenged the larger variances with the Company and they confirmed that expenditure reported on CIDA, associated with Enhanced Service Levels, incorrectly included expenditure associated with backlog base. Although this was identified and corrected prior to submission, the Company's governance processes did not provide sufficient time to correct the AIR11 tables. As such, the submitted AIR11 tables are incorrect. For consistency, our commentaries relate to the data submitted and not the corrected data, but for completeness we have provided a corrected variance table below:

[x]

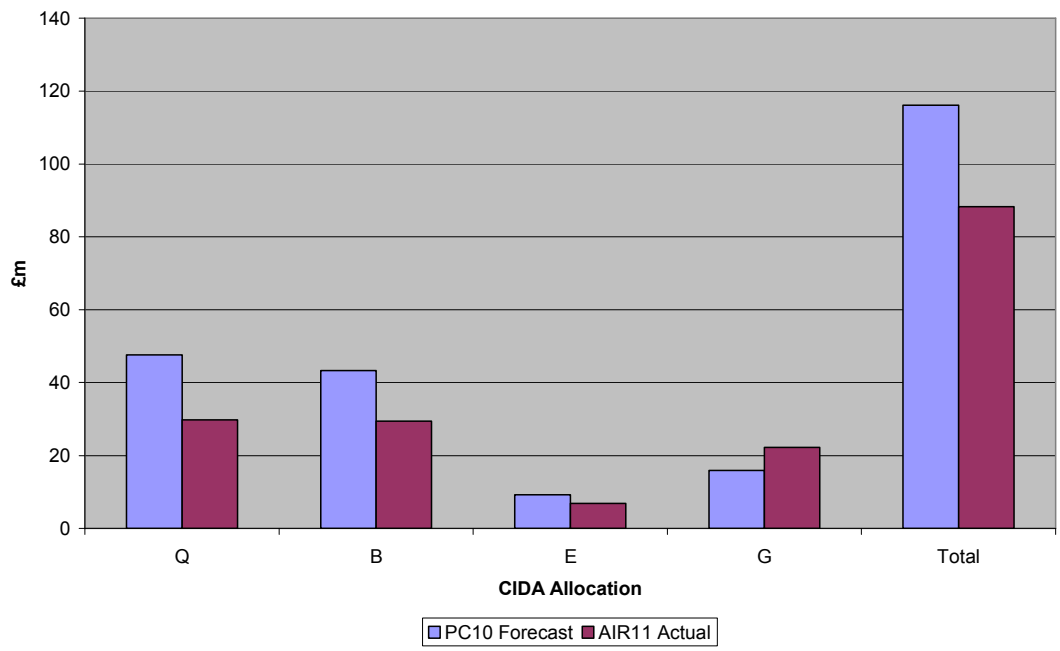
4.4 Capital Expenditure

4.4.1 General

Overall capital expenditure in Year 1 of PC10 (£88.267m) is circa 25% below the forecast PC10 expenditure profile for Year 1 (£116.063m). As demonstrated in Figure 36.1 below, expenditure is lower than expected on all programme areas, with the exception of growth, where significant expenditure was incurred on the PC10 WwTW programme, many of which were commenced during the SBP.

The reported under spend is of particular concern, as NI Water are unable to carry over unused expenditure from Year 1 to Year 2 of PC10. This combined with confirmed reductions in Public Expenditure (actual funding allocated annually), means NI Water will have real difficulty delivering the programme, as defined in PC10.

Figure 36.1 - Year 1 Capex Comparisons



* populated using corrected AIR11 data

4.4.2 Base Service Provision

In terms of Infrastructure Renewals Expenditure (IRE), the expenditure incurred during the year (£6.06m) is 40% below the PC10 forecast for IRE in Year 1 (£10.37m).

Expenditure during the year reflects investment on a number of infrastructure based maintenance schemes, including Londonderry DAP. Circa £1m was also incurred as Operational capital in the maintenance of critical and non-critical sewers

With regard to maintenance on non-infrastructure (MNI) assets, NI Water has

focussed on the delivery of a large number of WwTW maintenance projects (both PC10 and PC10 carryover), including KI463 – Small WwTW Upgrades (£3.5m), KT377 – New Holland WwTW (£1.5m) and KB282 – Magherafelt WwTW (£1.0m).

Management and General (M&G) expenditure accounted for less than 10% of the MNI spend for the year, which is quite low when compared to companies in E&W, where M&G spend has typically been 25% of MNI.

In terms of MNI expenditure over Year 1 of PC10, NI Water is circa 35% (£11m) behind the PC10 forecast. We queried the basis of this under spend, and the Company advised that delays in the appointment of non-infra framework contractors, due to the stringent governance and approvals processes currently in place for the procurement of goods and services, has resulted in prolonged periods where work has not been possible.

4.4.3 Quality Enhancements

Expenditure against Line 7 (£29.8m) is circa 38% below the PC10 forecast for Year 1 (£47.6m).

NI Water has a large WwTW programme for PC10, with 13 PC10 WwTW outputs and 30 PC10 Carryover WwTW outputs forecast for delivery during the period. As highlighted in the Company's commentary for AIR11, NI Water has delivered two PC10 outputs during the year (Bush WwTW and New Holland WwTW) and 18 PC10 carryover schemes (six of which were actually delivered pre PC10). At year end, seven PC10 carryover schemes and nine PC10 schemes were still outstanding.

During the year, significant spend has been incurred on PC10 carryover projects; KB282 – Magherafelt WwTW (£2.9m) and KR310 – Newtonbreda WwTW (£2.2m), both of which were completed during the year. We also identified spend against PC10 carryover scheme KT102 – Dunmurry WwTW (£2.4m).

The Company advised that land purchase difficulties has caused the deferral of Benone WwTW to PC13.

During our review of the CIM we identified spend against a number of WwTWs, such as KB322 - Martinstown WwTW, that were not nominated PC10 outputs. We queried the nature of these outputs, and the Company advised that these were SBP projects, with expenditure relating primarily to project closure and siteworks completion.

We note that NI Water has committed to the delivery of a large UID programme over the PC10 period, however, our review of the CIM confirmed minimal expenditure against the nominated UID outputs. We queried the reason for the lack of progress and requested an update on the progress of the nominated UID outputs. The Company advised that the PC10 programme was planned to deliver outputs primarily in the latter years of PC10, and that a number of projects have commenced in 2010/11 that will deliver outputs in 2011/12. They also advised that a number of outputs were in fact delivered during the year; however, the detail of these outputs was not available at the time of submission.

4.4.4 Enhanced Service Levels

Overall spend on enhanced service levels (£8.8m) is broadly in line with the PC10 forecast for Year 1 (£9.3m). The Company has focussed on the delivery of outputs identified within the DAP process, with significant spend recorded against outputs associated with the Londonderry DAP (£1.69m). We note that the Company has held back on the delivery of sewer flooding (DG5) outputs, which is sensible, given the current lack of clarity of the DG5 Register and forecast cuts in future funding allowances.

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 (£4.4m), KB269 – Toome (Creagh) Sewerage scheme (£2.2m) and KB282 – Magherafelt WwTW (£1.3m).

At year-end, SDB expenditure (£22.4m) was circa 40% (£6.5m) above the PC10 forecast for Year 1.

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 found that there are 16 wastewater related Additional Outputs, included for delivery in PC10, of which Keady WwTW is currently on site with (£2.7m) spend in the year. 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 (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 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.

As highlighted above, all Operational capital schemes (currently 30% of total capital expenditure) were previously approved and enacted within Operations and were not subject to the same approvals process. We found that for AIR11, all Operational capital schemes now go through the BICC or CIP for approval and verification of need and driver.

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 2010/11, 43.63% of ICR's was allocated to non-infrastructure.

As the Company's approach is unchanged from that adopted previously and the reported numbers are similar to AIR10, we have not undertaken a detailed review of ICRs for AIR11.

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 survey 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 adjusted by COPI to provide the relevant Report Year prices. We found that NI Water has reported an increase in the number of assets adopted at nil cost (reported in Line 20) as developers try and reduce their liability on completed developments, resulting in increased levels of notional expenditure. The reported information includes:

2010/11	2009/10	2008/09	
£44.732m	£ 18.341m	£14.833m	of sewer adoptions
£1.505m	£ 0.260m	£ 3.951m	of adoptions associated with SPSs
	£ 0.002m	£ 0.500m	of land at a STW
£46.237m	£ 18.602m	£19.284m	

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

Operating expenditure associated with capital expenditure and reported in Table 36 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 22.

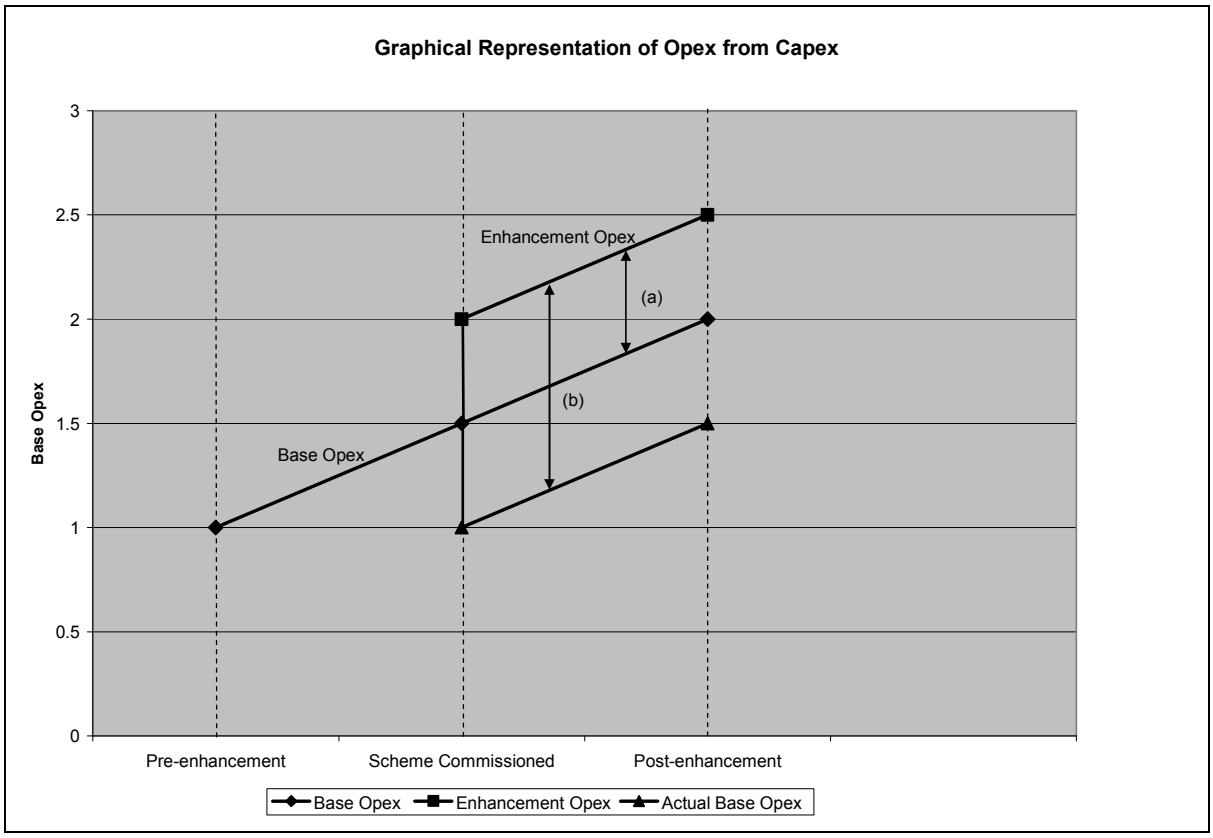
The Company advised that incremental opex has been calculated directly from the accounting general ledger, and that it considered those sites that had become active during 2010/11. It then undertook a comparison of data on a site by site basis related to pre and post Capex investment. It then adjusted for inflationary impacts.

Once the total additional opex per site is obtained the Company applies a split between the different lines based on the CIDA split. Note it applies the entire CIDA split to enhancement. The base portion of any CIDA split is apportionment across the enhancement categories based on the non-base aspect of the CIDA split.

We found that for AIR11, NI Water has undertaken a manual review of all projects completed during the year and identified a number of schemes where multiple sites were enhanced. Historically, NI Water has only included the primary location code associated with each project and as such have been potentially under reporting the opex from capex associated with schemes completed during the year.

We found that 47 WwTW schemes (12 large and 35 small) were completed in 2010/11. In addition, 21 SPSs were completed, (19 of which were adopted from developers). Whilst the Company maintains specific cost data for the larger sites, costs for smaller sites were generally grouped into regional cost centres. For these smaller sites, NI Water are only able to extract associated power costs and are unable to capture other operational costs. Furthermore, we identified a number of sites (12) where no opex costs were attributed, which is plainly not correct.

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. NIW are 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).



During the year, the Company implemented a Business Improvement project - Cost to Serve. It is intended that in future years this Oracle module will be used to facilitate the reporting of Opex from Capex.

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 £0.13m. The Company advised that this relates to recently completed WwTWs.

Line 10 – Additional operating expenditure – customer services

There has only been nominal additional operating expenditure allocated to customer services for the current year. 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 £0.1m. 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 reconcile very closely to 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. The Company is increasing the rigour applied to proportional allocation assumptions at project level, and there were very few allocation issues identified during our audit. As such, there may be scope to improve the reported B3 confidence grade for capex in AIR12.

Base OPEX is populated from the General Ledger information which is used for financial management. Given the underreporting of OPEX from CAPEX as demonstrated on the Chart we believe a B4 confidence grade is reasonable.

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:

- £3.143m relates to the residual interest on the Kinnegar PPP project, which is not included in T36
- £-419k included in T25 that relates to the decapitalisation of projects in 2010/11. The balance is a small rounding error.

The difference between T36/31 and T42 relates to the fact NI Water do not have a

QBEG analysis for PPP OMEGA which means they cannot complete this section accurately. This has been the approach in 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 been 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 [x].

[x]

[x]

[x]

[x]

[x]

[x] within Table 16, the Company reported 20 UID completions, 5 of which are not PC10 listed. As such 15 of the above boxes could be completed, but the Company didn't have the detail at the time of audit. We will update this table for AIR12.

Date: 29 July 2011
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 Strategic Business Plan.

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 ~10% reduction in forecast expenditure for Year 1.
- There has been an underspend of some 16% against the inflation adjusted PC10 assumptions for 2010/11.
- There appears to be a mis-match between NI Water's and NIAUR's assumptions on what each expenditure programme, particularly within the quality funded programmes, contains and this, at a more granular level, confounds the comparisons of expenditure versus determination further

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, will form the basis of expenditure comparisons undertaken throughout the PC10 period.

Sewerage	2010-11	2011-12	2012-13	Total
Q	47.608	45.131	37.868	130.607
B	43.287	43.287	43.287	129.861
E	9.263	7.985	7.378	24.626
G	15.905	13.036	16.653	45.594
Total	116.063	109.439	105.186	330.688

Base	2010-11	2010-11	2010-11	Total
SEWERAGE INFRA	10.372	10.372	10.372	31.115
SEWERAGE NON-INFRA	32.915	32.915	32.915	98.746
Total	43.287	43.287	43.287	129.861

However, in Years 2 and 3 of PC10, the above forecasts will be subject to downward adjustments in Public Expenditure funding, compromising the Company's ability to deliver the agreed outputs. We will monitor and report on programme adjustments in future years.

4.2 Indexation

We confirm that NI Water has indexed the PC10 projections from the 2007/08 base year using the COPI adjustment of 0.91, which reduced the Year 1 allowance for PC10 by circa £11m for the sewerage service. Whilst this approach is consistent with guidance from NIAUR, the Company has highlighted that the overall decline of the construction industry, as evidenced by the 10% reduction in COPI between 2007/08 and 2010/11, is not fully reflected across all areas of the PC10 programme.

4.3 Expenditure comparisons

In reviewing the expenditure for Year 1 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 (following Reporter challenge).

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
- Severe winter weather in 2010/11, caused delays to numerous projects
- 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 (£6.06m) is 36% below the inflation adjusted PC10 forecast for IRE in Year 1 (£9.5m). This is due to programme delays in the named sewerage and sewer maintenance programmes and deferral of the flooding and DG5 sub programmes.

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

[x]

In terms of MNI expenditure over Year 1 of PC10, NI Water is circa 29% (£9m) behind the inflation adjusted PC10 forecast. We queried the basis of this under spend, and the Company advised that delays in the appointment of non-infra framework contractors, due to the stringent governance and approvals processes currently in place for the procurement of goods and services, has resulted in prolonged periods where work have not been possible.

4.3.2 Quality Enhancements

[x]

Expenditure against Line 6 (£29.8m) is circa 31% below the inflation adjusted PC10 forecast for Year 1 (£43.3m).

NI Water has a large WwTW programme for PC10, with 13 PC10 WwTW outputs and 30 PC10 Carryover WwTW outputs forecast for delivery during the period.

As highlighted in the Company's commentary for AIR11, this variance is due primarily to a slower than expected start on the Wastewater Treatment new start programme and a change in CIDA allocation for the overall WwTW programme, with less spend than expected on Q and more on S&D.

In addition to this, the Company advised that land purchase difficulties has caused delays to a number of outputs, including Benone WwTW which has been deferred to PC13.

4.4.3 Enhanced service levels

[x]

Overall spend on enhanced service levels (£8.8m) is broadly in line with the inflation adjusted PC10 forecast for Year 1 (£8.4m). The Company has focussed on the delivery of outputs identified within the DAP process. We note that the Company has held back on the delivery of sewer flooding (DG5) outputs, which is sensible, given the current lack of clarity of the DG5 Register and forecast cuts in future funding allowances.

4.2.4 Maintaining supply/demand balance

[x]

The Company highlights that the reported variance in supply/demand expenditure relates primarily to amendments in CIDA allocation to a number of wastewater

programme areas, from that initially defined in PC10.

5. Audit Findings (Opex)

Nothing more to add.

Date: 29 July 2011
Prepared by: HMS

Table 40 – Capital Investment Monitoring Return

Commentary by REPORTER

1. Background

This Table covers the Capital Investment Monitoring 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, the CIM template has been modified to more easily identify the outputs and expenditure relating to the PC10 Determination. The CIM submission 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 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.

Date: 29 July 2011
Prepared by: HMS