

Northern Ireland Water Ltd

Annual Information Return 2010

To the

Northern Ireland Authority for Utility Regulation



Public Domain Version

Part 6 of 8 containing:

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

Reporter's Submission

By

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Halcrow Management Sciences Ltd**

Halcrow

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

Commentary by REPORTER

1. Background

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

2. Key Findings

- Proportional allocation methodologies have been further developed and are consistent with the Reporting Requirements.
- We found that a CIDA/QBEG allocation had been assessed for all projects, and that ‘CIDA Masterclass’ workshops had been held for most NI Water Project Managers – demonstrating the Company’s desire to allocate expenditure appropriately
- However, there is a general under allocation to Base Maintenance (B), as demonstrated in the Reporter’s recommended QBEG for the schemes reviewed.
- It was apparent in some of our audits that the local Project Manager’s do not always actively assess or review the allocation of expenditure for their projects, although there is evidence that many of these have been independently reviewed and challenged to improve consistency and robustness
- We recommend that NI Water continue to undertake thorough checks on the allocations, noting where and why any corrections are required such that additional training and increased vigilance can be focussed on any areas of concern

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 AIR10, the water related schemes reviewed included 3 x strategic trunk main schemes, 1 x service reservoir and 1 x water main rehabilitation scheme and the wastewater related schemes reviewed included 3 x WwTW schemes, 2 x sewerage schemes.

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 been endeavouring to understand, 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 now have a CIDA allocation and NI Water has run a number of 'CIDA master classes' during the year to ensure the consistent application of the QBEG allocation process by all NI Water Project Managers

Whilst it is apparent at a Company level, that NI Water are working hard to ensure projects were appropriately allocated to QBEG, it was apparent in some of our audits that the local Project Manager's do not always appear to take an active role in the allocation of expenditure to purpose category. There is a reliance on assessments undertaken by Consultants at the time of project inception and these are not routinely reviewed by the Project Team. QBEG is however, reviewed by the Regulation team, but there is limited understanding of proportional allocation across the project

Detailed in the table below, is a summary of the schemes we reviewed during the year, as part of AIR10. As can be seen, there is a general under allocation to Base Maintenance (B), which is reflected in the Reporter's suggested allocation.

Project Reference	Project Name	Budget (£k)	LBE (£k)	AIR10 Spend (£k)	CIDA QBEG Allocation				Reporter QBEG Allocation			
					Q	B	E	G	Q	B	E	G
KT124	Dromara WwTW	[x]	[x]	[x]	52	41	0	7	43	50	0	7
KS224	Downpatrick WwTW	[x]	[x]	[x]	25	25	0	50	40	40	0	20
KF005	Coalisland WwTW	[x]	[x]	[x]	62	38	0	0	50	33	0	17
KA143	Aldergrove Trunk Sewer	[x]	[x]	[x]	0	20	56	24	0	33	33	34
KF012	Moygashel Improvements	[x]	[x]	[x]	98	0	0	2	90	5	0	5
JB623	Northern Key Transport Corridor	[x]	[x]	[x]	73	4	0	23	25	10	10	55
JG036	Castor Bay to Dungannon Strategic Trunk Main	[x]	[x]	[x]	0	2	11	87	0	31	11	58
JG037	Ballydugan Service Reservoir Extension	[x]	[x]	[x]	-	-	-	-	-	-	-	-
JL750	Ballinrees WTW to Limavady Supply Augmentation	[x]	[x]	[x]	0	0	0	100	0	25	0	75
JS223	Ballygowan Zone WM Imps	[x]	[x]	[x]	8	28	5	59	8	28	5	59

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

For KT124 – Dromara WwTW, the Reporter's independent estimate of the split is 43/50/0/7 assuming that approximately 4% of the expenditure on odour/resilience is allocated to Base.

For KT224 – Downpatrick WwTW, the CIM identifies a QBEG split of 23/25/0/50 but the Reporter is concerned that for this phase of the project, there is a greater emphasis on the refurbishment of existing units and the addition of processes to meet the revised quality standards than on extending the capacity for greater flows. The Reporter would recommend an alternative QBEG split of 40/40/0/20 which recognises the substantial amount of capital work which is being undertaken to refurbish or replace existing assets which would otherwise require capital maintenance expenditure either at this juncture or in the short-term.

For KF005 – Coalisland WwTW, Q is a major driver for investment and, with the need to expand the works as well as overcome the overloading and meet short-term growth, the decision was made to abandon the works and build a new one. However, the old works presented a significant maintenance liability which also needs to be recognised. The Reporter therefore believes that a QBEG allocation of 50/33/0/17 is more appropriate.

For KA143 – Aldergrove Trunk Sewer Scheme, The Reporter believes that apparently large allocation to enhancement is due to the poor gradients in this area which cause the flooding; this precipitates the need for a larger diameter which in turn is proportionate to cost. In the Reporter's view, the QBEG split should reflect the purpose of the asset rather than the solution and a more even split seems therefore more appropriate: 0/33/33/34.

For KF012 – Moygashel Improvements, The QBEG allocation has changed markedly over time, due to improved understanding, changing requirements and changing solutions. QBEG in SBP was 100/0/0/0, at CIP it was 48/27/0/25 and the 2009 Q2 CIM indicates 98/0/0/2. The Reporter's view is 90/5/0/5 because whilst the principal driver is quality, there is a transfer of existing utilities to this site from Killyman WwTW and the Moygashel works was overloaded so this solution, albeit a short-term solution, provides greater headroom.

For JB623 – Northern Key Transport Corridor - Based on our understanding of the drivers for the project, which includes; water quality improvement, security of supply, growth and enhancements to DG2 and DG3, the QBEG allocation initially proposed at CIP would appear to be a closer representation of purpose categories, i.e. 25/10/10/55.

For JG036 – Castor Bay to Dungannon - Based on our understanding of the project scope, which involves the abandonment of Altmore WTW and Gortlenaghan and Shanmoy Boreholes, we would expect to see a greater allocation to Base Maintenance (B). The abandonment of existing sites negates the need for future ongoing maintenance. As such, we would expect a pro rata allocation to B, on the basis of volume supplied. As

the overall scheme provides for 30Ml/d and the three abandoned sites provide 8.8Ml/d, an assumed allocation to B of 29% would not be unreasonable. Furthermore, we were unable to ascertain the nature of the allocation to Enhanced Levels of Service (E). However, on the basis of the above assumption, the following QBEG would not be unreasonable, 0/31/11/58.

For JG037 – Ballydougan SR Extension - The project is currently on hold, with no spend during the year. This is in contrast to the latest version of the CIM template (2010 Q3), where circa £108k expenditure was reported in the report year.

For JL750 – Ballinrees WTW to Limavady Supply Zone - Based on our understanding of the project scope, which involves the abandonment/replacement of existing assets, [x], we would expect to see a significant allocation to Base Maintenance (B). We would expect to see expenditure associated with the following activities allocated to Base Maintenance:

- Remove PRV on new Ballinrees to Moys SR TM
- Replace 1.7km of 400mm PN8 PE pipework on new Ballinrees to Moys SR TM with 500mm PN16 PE pipework
- Upgrade fittings on Castle and Roe Bridge crossings from PN16 to PN25.

Based on the above we suggest an alternative QBEG of 0/25/0/75.

4.2 Proportional Allocation

NI Water produced a Capital Investment Driver Allocation (CIDA) Manual, which was updated in November 2009. This is a comprehensive document 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, 37, 38 and 40.

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

As highlighted in the Company's commentary to Table 34 and alluded to in Section 4.1 above, NI Water has further improved the CIDA data capture and analysis process as follows:

- CIDA Q apportionment against all WwTW projects was reviewed, and corrected as necessary, to ensure that the Q allocation was against the correct drivers.
- CIDA allocation on all Water Rehabilitation projects has been reviewed during 2009/10 to further improve the allocation
- CIDA master classes were used to introduce clarity around the definition for Sewerage and the split between infra (to include Civils and all long life assets) and non-infra (to include all short life assets, e.g. screens) as this is unique and not similar to the other allocations.

We recommended in AIR09 that checks continue to be undertaken on all schemes with Report Year spend above the £100k threshold, using staff with experience of capital works and detailed knowledge of the CIDA processes, and we are pleased to see that all approvals now must go via the Asset Management Strategic Investment team where the CIDA allocation is checked and challenged.

Whilst undertaking our capex audits during the year, we found that the local Project Manager's do not always appear to take an active role in the allocation of expenditure to purpose category. There is a reliance on assessments undertaken by Consultants at the time of project inception and these are not routinely reviewed by the Project Team. We anticipate that many of the project managers are occasional or infrequent users of the methodology and the retention of these requirements (when they are perceived to be of relatively low relevance/importance to their normal duties and competing pressures), will inevitably lead to some mis-allocation as the concepts and processes bed in and become a familiar routine.

It is therefore appropriate for NI Water to continue to undertake thorough checks on the allocations, noting where and why any corrections are required such that additional training and increased vigilance can be focussed on any areas of concern.

4.3 Additions – New assets (enhancement)

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, 36, 37 and 38.

4.4 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, NI Water has exceeded forecasts of water IRE (as evidenced by the substantial water mains rehabilitation programme), but are slightly behind water and sewerage MNI and sewerage IRE forecasts. In terms of actual report year expenditure compared with the previous year, the Company has continued to increase spend on the sewerage service, with a reduction on the water service spend, reflecting concerns that NI Water were previously under investing on the sewerage service.

	Water Infrastructure (£m)		Water Non-Infrastructure (£m)		Sewerage Infrastructure (£m)		Sewerage Non-Infrastructure (£m)	
	Actual	SBP	Actual	SBP	Actual	SBP	Actual	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]
SBP Total	82.793	[x]	49.941	[x]	23.400	[x]	77.718	[x]

Table 32.1 – Asset Maintenance Expenditure

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

4.5 Grants and contributions

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

Infrastructure renewals expenditure is shown net of Infrastructure Charge Receipts.

4.6 Reconciliations

We confirm the following consistencies:

- Table 32(Total)/33/2 = table 35(incl.PPP)/3
- Table 32(Total)/32/1 = table 35(incl.PPP)/25

- Table 32(Total)/17/3 + 32/33/3 = table 35(incl.PPP)/26
- Table 32(Total)/32/4 = table 36(incl.PPP)/22
- Table 32(Total)/17/6 + 32/33/6 = table 36(incl.PPP)/23

However, we found that:

- Table 32(Total)/33/5 (£30.115m) \neq table 36(incl.PPP)/3 (£30.102m), due to the removal of Base maintenance related expenditure [x] for Derrytrasna WwTW – a new obligation

Date: 30 July 2010

Prepared By: [x]

Table 33- Depreciation Charge by Asset Type**Commentary by REPORTER****1. Background**

Information in this table assists the Regulator with their understanding of the Current Cost Depreciation (CCD) applied by the Company.

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 enhancement and by asset lives in our commentary to tables 32, 35-38.
- We believe that the data does not represent a fair view of the split of depreciation between base and enhancement for AIR10. This is because the method used is incorrect. The Company advised that the table definitions have inconsistencies which need to be clarified before NI Water attempt to provide a more accurate data set.
- We believe the Company should restate the depreciation split between base and enhancement for both AIR10 and any other years where it has followed a similar method.

3. Audit Approach

Our audit consisted of an interview with the NI Water system holders and a review of the current Company methodology for data collation.

4. Audit Findings

The total depreciation charge for the year is reported in line 3. 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.

No separate depreciation has been reported for PPP and hence we have not provided comment in relation to 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, 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.

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.

Data from table 25 is already split between water and sewerage services.

5. 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.

6. Revised MEAV valuation

The previous asset revaluation was undertaken in 2001-02 by [x]. The Company advise that it will undertake the next revaluation for price control 2013.

7. Depreciation Calculations

As data already exists related to water and sewerage the following splits have been used to split expenditure between base and enhancement for water and sewerage for the current year:

Percentages used to split the depreciation charge

Water Enhancement	38%
Water Base Service	
Provision	62%
Sewerage Enhancement	69%
Sewerage Base Service	
Provision	31%

The Company advised that these percentages are derived from the table 34 submission.

We believe the Company approach will provide an inflated depreciation charge related to enhancement assets. This is because the enhancement depreciation charge calculated relates to the complete asset base valued in the region of £7.6bn.

The current Company method suggests that a large portion of this £7.6bn (69% worth for sewerage and 38% for water) are enhancement assets. Based on data received last year our assessment was that enhancement assets since April 2008 formed less than 3% of the total active asset base as at AIR09.

We believe that the Company should revisit the basis of these calculations for the report year as well as previous years where this approach has been applied. We challenged the Company in relation to why it had not updated its approach after our recommendation for AIR09. The Company advised 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 NI Water explained that it felt the guidance was unclear and that pre NIW assets could not be split between Enhancement and Base even though a large portion of this investment would have been enhancement. NI Water 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.'

The Company advised that it is depreciating asset for Kinnegar as this is an on-balance sheet transaction although it is being built and operated by the private sector. Further questions in relation to this should be referred to the financial auditors.

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

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.

We have commented on the robustness of expenditure allocation to asset lives in our commentary to tables 32 and 35-38. In general we believe that the approach is appropriate for the purposes of splitting current year expenditure between base and enhancement services. However, as noted above the approach to splitting the total depreciation charge between base and enhancements seems to be incorrect and should be revisited.

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.

The confidence grading of DX reflects the uncertainty related to the data as no historic data exists. We have not reviewed line 3 'Total depreciation charge for the year' in detail. This is because this line is consistent with data reported in table 25 which has been audited by the financial auditors.

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

We believe that calculating a weighted average split between base and enhancement assets from table 34 since April 2008 and applying this to investments since April 2008 will result in a more accurate view of data for this period.

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 approach to proportional allocation between base and enhancement and asset lives.

We undertook a sample audit of schemes. Our review highlighted some errors with allocations used by the Company. These are discussed in our commentary to tables 32, and 35-38. We would expect these to be addressed for AIR11.

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

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

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

This is slightly different 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, '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 AIR10.

AIR10

	Water (09/10)	Sewerage (09/10)	Total (09/10)
	£m	£m	£m
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

AIR09

	Water (08/09)	Sewerage (08/09)	Total (08/09)
	£m	£m	£m
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 £20 million in nominal terms. Accelerated depreciation accounts for £6 million of this. Accelerated depreciation has increased from 12.3 million, to £18.3 million. This now represents close to 20% of the total depreciation charge.

A further £9.5 million is accounted for by the increase in sewerage charge between AIR09 and AIR10. This represents an increase in the charge of close to 30% for sewerage. We challenged the Company on the reason for this variation. The Company advised:

'The majority of the increase is explained by the trend in recent years of higher spending on the capital programme. This resulted in the depreciation charge increasing by £15million last year, i.e., from 07/08 to 08/09. The increased spending on the capital programme continued in 08/09 resulting in the higher 09/10 depreciation charge. Also, 09/10 included a full year's depreciation (£3,247k) of the Alpha PPP asset which was £2,091k higher than the previous year.'

The remainder of the £5 million increase is accounted for by an increase in the depreciation charge for water. We challenged the Company to advise as to the reasons for the increase as compared to the prior year. The Company advised that that this increase is also due to increased capital expenditure as described above.

The Company advised that the amount of accelerated depreciation for 2007/08 was £0. We challenged the Company about whether there was a general asset review that had resulted in increased accelerated depreciation for AIR09 and AIR10. The Company advised that:

'The £6million increase in accelerated depreciation was the result of an extensive fixed asset register cleansing exercise carried out during the year which identified assets requiring decommissioning.'

Review and confirm whether NI Water's explanation of the impact of an MEA revaluation on its CCD charge is adequate and reasonable
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There has been no MEA revaluation for the current year. The Company advised that a revaluation would be undertaken for PRC13.

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.
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The Company fixed asset register holds details related to both HCA and CCA. Asset values reflect the values at 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 Go-Company, NI Water has used RPI to index data.

9. Infrastructure Renewals Charge

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

The basis of the calculation of the infrastructure charge is a 10 year average. The Company advise that this is a five year look back to 2004/05 from the report year 2009/10 plus a look forward for the five years until 2013/2014. It should be noted that this analysis was undertaken at the time of submission of the PC10 and has not been revisited since. Therefore the calculated appropriate Infrastructure Renewals Charge is taken from the business plan submission. It has not been updated to take account of more recent information.

As the Company notes in its commentary the backward look is based on 01/02 projected forward on a linear basis till 06/07. We note that the 01/02 data was not subject to external audit. We are therefore unable to comment on the robustness of these values. In addition the projection is a linear assumption. We note that often IRC does not necessarily behave in a linear manner, in particular where information is incomplete. Therefore it is entirely possible that projected data from 03/04 to 06/07 is not reflective of the actual position within NI Water (as it could be impacted by outlier data in both 01/02 and 06/07). Nevertheless, in the absence of better data we believe that the Company approach is appropriate.

The policy for water infrastructure renewals charge is consistent with the calculations of the infrastructure renewals charge. We have commented in more detail on the Company approach to the infrastructure renewals charge in our commentary to the strategic business plan.

We note that the regulator has requested an adjustment in the IRC charge of 9.2%. The

requested adjustment seems to be arbitrary and the impact on serviceability of assets has not been fully evaluated.

In total as at AIR10 there has been a total prepayment of £1.452 million. The Company also confirms that the IRC in the regulatory and statutory accounts is the same.

We were asked by NI Water previously to comment on whether the projected level of expenditure in the Business Plan post the requested adjustment by the regulator would be sufficient to maintain the serviceability of infrastructure assets. We have not updated this view for AIR10.

The Company advises in its commentary that the Alpha PPP has not given rise to any IRE for this year and therefore no IRC has been allocated to the PPP services.

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; and

The IRE projections used by NI Water are based on data submitted as part of the SBP. A view based on a 10 year (-5 +5) assessment can at best be considered a medium term view of expenditure. We note, and the Company accepts, a substantial portion of historic data contains uncertainties. In addition an arbitrary adjustment to the infrastructure renewals charge of 9.2% in AIR10, following a similar reduction for AIR09 of 9.9% has been made. In these circumstances we are not convinced that NI Water's view of medium to long-term IRE is sufficiently robust to be a true reflection of the actual long term average infrastructure renewals expenditure that will be needed to maintain serviceability of assets. We do however accept that in the short term the impact on serviceability is likely to be marginal. Hence our view is that there is a low risk of decline in the short term. However, we would be concerned if there were consistent requests for a reduction in the IRC by the regulator.

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.

NI Water has a negligible amount of prepayment of £1.4m.

Date: 30 July 2010
Prepared By: [x]

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

2.1 Key Findings

- The general process of expenditure allocation has improved significantly over the year and we now believe that a confidence grade of B2 would be appropriate for most lines, with B3 for the smaller numbers (where a single misallocation could be more significant)
- 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.
- Consistency between tables 34 and 32 has been satisfactorily demonstrated

2.2 Recommendations

- We recommend that a greater number of asset life categories are developed to increase the potential for CCD to simulate expenditure on non-infrastructure maintenance over the longer term.
- The entries in block C (Additions average life) are based upon generic figures rather than a calculation. If this information is deemed to be of value to NIAUR, we recommend that a methodology is developed to derive the average life of assets in each life category.
- Again, if this information is deemed to be of value to NIAUR, 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.

The methodology has improved again during 2009/10 as noted in the Company commentary. We have reviewed and tested the summary spreadsheet which covers the allocations of the majority of capital projects and are satisfied with the findings, including the inf/non-inf life categories and base or enhancement purpose categories which applies to 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.

In 2009/10, NI Water has improved data quality and allocation to cover all projects. We have been able to reconcile the capital expenditure between the SBP Capital Works Programme, Oracle, CAPTRAX, table 32 and table 34. Detail of this reconciliation is contained in our commentaries to table 40 (Capital Investment Monitoring). Our analysis and tests of the data sources and the NIW systems reports show no material concerns.

In allocating their fixed assets to life categories within their various systems, NI Water use the classifications as given in the table which follows. Whilst there are some differences, these appear to be superficial issues and do not impact on the depreciation calculations nor on the accuracy of statutory or regulatory reporting.

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 processes used by NI Water in our commentaries on tables 35 to 38.

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*

The approach to CCD is based upon a broader range of asset categories than those contained in Table 34 as shown in the table above.

During our review 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. We found for 2009/10 reporting, the Company has added a 'very short' life category as follows:

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, but are broadly consistent with the average asset lives for these categories within the water industry in England and Wales. However, in England and Wales, we are aware that a much greater range of asset categories (with relevant engineering life allocations) is often used and carried through to depreciation calculations.

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. We did not find any material areas of concern during this audit.

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 financial and regulation management.

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 of the subjective nature the assumptions required.

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*

The Company approach is continually improving. As discussed above, NI Water has developed a 'Very Short' asset life category for reporting in this table. This is new in 2009/10. Whilst it allows this table to identify depreciation associated with new additions of some vehicles and some computer equipment, it does not appear to assist in reconciling these financial measures tables with the Regulatory Accounts tables, where the depreciation rules remain unchanged.

'Land Management' (20 years) has also been added as a new category for CIDA and Fixed Asset Register classification. We questioned the activities where expenditure would be allocated to this category and challenged those which we believed to be more of an 'operational' nature. NI Water explained that the sort of expenditure that had been allocated to this category included catchment maintenance activities, eg scrub clearance. Although such activities may be perceived to be an operational activity, if done on a sufficiently infrequent basis, it seems reasonable to capitalise them (as would 'general clearance' of a site prior to the construction of new capital assets).

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; and*
- 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 approach to apportionment is being improved continually. The apportionment and asset life policy remains broadly as previous years. However, the Company is seeking to improve the application of this policy and has made a number of improvements to both CIDA and CAPTRAX to aid it in this aim.

It should be noted that the total current cost depreciation charge has been reviewed by the financial auditors. We have not reviewed the basis of the total depreciation charge. 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.

The apportionment across average asset lives has been done on the basis of the CIDA allocations. As noted above, the CIDA split had an average asset life for medium life assets at 15 years. We note that this is not consistent with data reported in Table 34.

Our capital scheme audits have also confirmed that the allocations of expenditure to asset types, lives and purpose categories have been undertaken with greater accuracy across a fuller range of schemes. Whilst we have a difference of opinion in some respects, this is relatively small and this year, there is a much greater consistency to the NI Water allocation processes and a much smaller degree of difference between us. We also acknowledge that there is some subjectivity in the apportionments. Our commentaries to tables 35 and 36 contain further discussion on allocations.

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 those that were reported in the SBP document. We have not revisited this analysis for the AIR.

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 35-38 and 40. In general the approach to allocating expenditure to asset lives remains the same as that used in the previous year.

NI Water commentary appears comprehensive and includes information on changes in the year on asset lives. Audits indicate that NIW has followed their stated methodology which, with the exception of generally improving application (due to training) and the introduction of a very short life asset category for vans and stand-alone computers, and a new category for 'land management' would appear to be consistent with that previously employed.

**5. **Methodology PPP table
Project Alpha****

The Company advise the Enhancements/Base Service split has been extracted from the Contractors financial model, although now the site is operational, it is appropriate that all expenditure will relate to maintenance. A number of assumptions have been made in order to split data between infrastructure and non-infrastructure expenditure. Table 34 data is consistent with table 42.

We have not reviewed the expenditure on PPP assets in the year and so cannot comment upon the reasonableness of the split of the £224k reported. We noted a small discrepancy (of £4k) between the table 34 entry and that used in the reconciliation (£228k) in our table 40 commentaries. This is not material and so has not been challenged. However NI Water has advised that this difference relates to salaries and overheads incurred in the EP directorate which were allocated within Oracle against the PPP Alpha project. For the purpose of the AIR tables, the £4k has been removed from PPP and added into the EP expenditure stream.

6. Consistency within AIR

There are some minor differences between table 34 data and table 32 data. The bulk of this is explained by land disposals item on table 34 and the remaining £12k is advised as being due to a land acquisition for improvements to sight-lines at a site entrance which has been treated as base (health and safety) in table 32, but can only be recorded as an enhancement in table 34. Thus water enhancements are £12k too high in table 34 and base is £12k too low.

Date: 30 July 2010
Prepared By: [x]

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 & Recommendations

- Proportional allocation methodologies have been further developed and are consistent with the Reporting Requirements.
- We found that a CIDA/QBEG allocation had been assessed for all projects, and that 'CIDA Masterclass' workshops had been held for most NI Water Project Managers – demonstrating the Company's desire to allocate expenditure appropriately
- However, there is a general under allocation to Base Maintenance (B), as demonstrated in the Reporter's recommended QBEG for the schemes reviewed.
- It was apparent in some of our audits that the local Project Manager's do not always actively assess or review the allocation of expenditure for their projects.
- Based on the schemes reviewed, the Reporter's suggested QBEG allocations would have resulted in a 48% reduction in Q, 182% increase in B, 12% increase in E and 20% decrease in G.
- Over the duration of the SBP, NI Water has over spent against the capital funding allowance for water service by circa £74m.
- Management and General (M&G) expenditure accounted for 38% of the MNI spend for the year, which is quite high when compared to companies in E&W, where M&G spend over the course of AMP4 has typically been 25% of MNI.
- Leakage related expenditure is similar to that reported in previous years, despite increased activity over the winter period to control leakage, when a large number of bursts were experienced
- We recommend that the methodology for deriving the proportions of ICR which relate to infrastructure and non-infrastructure is reviewed and is based upon assets being delivered rather than on the PC10 forecasts going forward.

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 AIR10, the water related schemes reviewed included 3 x strategic trunk main schemes, 1 x service reservoir and 1 x water main rehabilitation scheme

At year-end we undertook a review of the contents of the Capital Investment Driver Allocation (CIDA) spreadsheet systems, which collate the expenditure information by project for the Report Year. During this review, we tested the collation system 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 Strategic Business Plan Assumptions

A summary table from the Strategic Business Plan is provided on page 17 of that document and reproduced in our Table 35a commentaries.

Financial information, particularly that relating to the capital programmes, was not prepared using the principles now required for regulatory reporting. Whilst some specific project requirements could be identified, many programmes of work and levels of investment were based upon experience and historic levels of expenditure. Few projects were well defined in terms of need or solution and very few had reached detailed design, specification and reliable costing stage. Thus, the allocations of investment assumed were done at relatively high level and based on judgement, with limited supporting information.

Partly to assist with the financing of the transformed enterprise and partly to recognise the legacy of under-investment that the new Go-Co was inheriting, the concept of 'backlog' was introduced and any related expenditure was considered as enhancement investment.

The SBP contained expenditure projections covering a 7-year period. The PC10 process has required the separation of that programme such that the projects which will be commenced prior to 1 April 2010 will form one programme, those commencing later are to be considered with other new obligations and priorities. Whilst it appears that NI Water is reasonably well on track with regard to outputs being delivered, there is less clarity over the related expenditure and whether this is delivering like-for-like programmes of work to those assumed in the SBP.

4.2 Proportional Allocation

It is apparent that NI Water has been endeavouring to understand, 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 now have a CIDA allocation and NI Water has run a number of 'CIDA master classes' during the year to ensure the consistent application of the QBEG allocation process by all NI Water Project Managers

Whilst it is apparent at a Company level, that NI Water are working hard to ensure projects were appropriately allocated to QBEG, it was apparent in some of our audits that the local Project Manager's do not always appear to take an active role in the allocation of expenditure to purpose category. There is a reliance on assessments undertaken by Consultants at the time of project inception and these are not routinely reviewed by the Project Team. QBEG is however, reviewed by the Regulation team, but there is limited understanding of proportional allocation across the project

Detailed in the table below, is a summary of the water service related schemes we reviewed during the year, as part of AIR10. As can be seen, there is a general under allocation to Base Maintenance (B), which is reflected in the Reporter's suggested allocation.

Project Reference	Project Name	Budget (£k)	LBE (£k)	AIR10 Spend (£k)	CIDA QBEG Allocation				Reporter QBEG Allocation			
					Q	B	E	G	Q	B	E	G
JB623	Northern Key Transport Corridor	[x]	[x]	[x]	73	4	0	23	25	10	10	55
JG036	Castor Bay to Dungannon Strategic Trunk Main	[x]	[x]	[x]	0	2	11	87	0	31	11	58
JG037	Ballydougan Service Reservoir Extension	[x]	[x]	[x]	-	-	-	-	-	-	-	-
JL750	Ballinrees WTW to Limavady Supply Augmentation	[x]	[x]	[x]	0	0	0	100	0	25	0	75
JS223	Ballygowan Zone WM Imps	[x]	[x]	[x]	8	28	5	59	8	28	5	59

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

For JB623 – Northern Key Transport Corridor - Based on our understanding of the drivers for the project, which includes; water quality improvement, security of supply, growth and enhancements to DG2 and DG3, the QBEG allocation initially proposed at CIP would appear to be a closer representation of purpose categories, i.e. 25/10/10/55.

For JG036 – Castor Bay to Dungannon - Based on our understanding of the project scope, which involves the abandonment of Altmore WTW and Gortlenaghan and Shanmoy Boreholes, we would expect to see a greater allocation to Base Maintenance (B). The abandonment of existing sites negates the need for future ongoing maintenance. As such, we would expect a pro rata allocation to B, on the basis of volume supplied. As the overall scheme provides for 30Ml/d and the three abandoned sites provide 8.8Ml/d, an assumed allocation to B of 29% would not be unreasonable. Furthermore, we were

unable to ascertain the nature of the allocation to Enhanced Levels of Service (E). However, on the basis of the above assumption, the following QBEG would not be unreasonable, 0/31/11/58.

For JG037 – Ballydougan SR Extension - The project is currently on hold, with no spend during the year. This is in contrast to the latest version of the CIM template (2010 Q3), where circa £108k expenditure was reported in the report year.

For JL750 – Ballinrees WTW to Limavady Supply Zone - Based on our understanding of the project scope, which involves the abandonment/replacement of existing assets, namely the work initially undertaken by the PPP Alpha Contract, we would expect to see a significant allocation to Base Maintenance (B). We would expect to see expenditure associated with the following activities allocated to Base Maintenance:

- Remove PRV on new Ballinrees to Moys SR TM
- Replace 1.7km of 400mm PN8 PE pipework on new Ballinrees to Moys SR TM with 500mm PN16 PE pipework
- Upgrade fittings on Castle and Roe Bridge crossings from PN16 to PN25.

Based on the above we suggest an alternative QBEG of 0/25/0/75.

In order to understand the overall implications of these suggested revisions and quantify the impact on the allocation of expenditure, we have shown the allocations by cost in the table below.

Project Reference	Project Name	Annual spend				Annual Spend based on Reporter QBEG Allocation			
		Q	B	E	G	Q	B	E	G
JB623	Northern Key Transport Corridor	986.23	54.04	0	310.73	337.75	135.1	135.1	743.05
JG036	Castor Bay to Dungannon Strategic Trunk Main	0	168.38	926.09	7324.53	0	2609.89	926.09	4883.02
JG037	Ballydougan Service Reservoir Extension	-	-	-	-	-	-	-	-
JL750	Ballinrees WTW to Limavady Supply Augmentation	0	0	0	637	0	159.25	0	477.75
JS223	Ballygowan Zone WM Imps	358.24	1253.84	223.9	2642.02	358.24	1253.84	223.9	2642.02
	Total Spend	£1,344.47	£1,476.26	£1,149.99	£10,914.28	£695.99	£4,158.08	£1,285.09	£8,745.84

As you can see, the revised allocations have resulted in a 48% reduction in Q, 182% increase in B, 12% increase in E and 20% decrease in G. For illustrative purposes, if these adjustments were to be applied to the overall AIR10, the potential impact on Table 35 would be as follows:

	AIR10 (£m)	Revised AIR10 (£m)
Table 35 – Line 7 (Q)	19.704	10.24
Table 35 – Line 5 (B)	12.305	22.27
Table 35 – Line 9 (E)	13.452	15.06
Table 35 – Line 11 (G)	12.194	9.75

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
19%	40%	13%	28%

4.3 Year-end Capital Investment Reconciliations

For 2009/10, the year end reconciliation between Oracle and CAPTRAX was only £43k. 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.

4.4 Capital Expenditure

4.4.1 General

Overall capital expenditure in Year 3 of the SBP is significantly lower than that recorded in Year 2. However, when compared to the SBP forecast expenditure profile, NI Water has exceeded the investment profile assumed for Year 3 by circa £25m. As demonstrated in Figure 35.1 below, over the duration of the SBP, NI Water has over spent against the funding allowance by circa £74m.

[x]

4.4.2 Base Service Provision

In terms of Infrastructure Renewals Expenditure (IRE), the Company has exceeded the SBP forecast by some £17m. We found that NI Water has increased the emphasis on mains rehabilitation over the SBP period because there were difficulties in maintaining the pace of the Drainage Area Studies, and the solutions relating to these are taking longer to identify than initially anticipated.

The reported increase in expenditure for the year, reflects investment on a number of infrastructure based maintenance schemes, including KG172 – Wastewater Treatment Maintenance Provision (£2.17m) and KR309 – Belvoir Park Trunk Sewer

[x]

With regard to maintenance on non-infrastructure (MNI) assets, NI Water has focussed on a number of WTW maintenance projects, including JN390 – Lough Bradan WTW Upgrade (£0.74m) and JL723 – Carmoney WTW (£0.51m).

Management and General (M&G) expenditure accounted for 38% of the MNI spend for the year, which is quite high when compared to companies in E&W, where M&G spend over the course of AMP4 has typically been 25% of MNI.

In terms of MNI expenditure over the SBP period, NI Water is circa 13% (£8m) behind the SBP forecast. As shown in Figure 35.3 below, expenditure reduced considerably in AIR10, some £7m below the target.

[x]

4.4.3 Quality Enhancements

Expenditure against Line 7 is, as required, consistent with Line 18 of Table 37.

Details on the relevant quality programmes, progress and other related issues are given in our commentary to Table 37.

As demonstrated in Figure 35.4 below, overall spend on quality enhancement has exceeded the SBP forecast by £50m, which is hardly surprising given the progress made on PC10 carryover schemes during the year; which were not included in the SBP.

[x]

4.4.4 Enhanced Service Levels

As demonstrated in Figure 35.5 below, overall spend on enhanced service levels, is circa £59m (46%) below the SBP forecast. We queried the basis of this variance, particularly in AIR09 and found that the reported total was inclusive of a £106.3m allowance for PPP Alpha.

For AIR10, we found significant spend recorded against the following schemes:

- JL758 – Reservoir Rehabilitation Programme – Phase 3 - £2.972m
- JR348 – Dunmore to Hyde Park Pumping Main Replacement - £1.97m
- JS223 – Ballygowan Zone WM Improvements - £1.9m.

[x]

4.4.5 Improving supply/demand balance

As demonstrated in Figure 35.6 below, overall spend on supply/demand has exceeded the SBP forecast by circa £31m (77%), with significant spend recorded against JG036 – Castor Bay to Dungannon Strategic Trunk Main (£4.5m).

[x]

In addition to the above, NI Water has incurred an additional £42m on Security of Supply related projects, which were not initially allowed for in the SBP.

4.6 Operational Capital (including M&G)

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

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

The investment analysis forms are submitted to NI Water's Finance and Regulation section for review. These are particularly challenged when there is spend against Q, E and G purpose categories. Allocations are adjusted with the approval of the project manager; this appears to have resulted in an underlying trend of movements from the Q and E purpose categories to B, base service.

4.7 New Outputs/Obligations

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

4.8 Leakage Expenditure

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

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

We note that report year spend is similar to that reported in previous years. We challenged this on the basis that we were aware of increased activity over the winter period 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 may have been captured under 'Networks Opex'.

The leakage capex and opex for AIR10 was broken down broadly for AIR10 as follows:

[x]

The leakage capex/opex split appears largely determined by whether the activity is in-house or outsourced. We would normally expect that leak detection activities should be opex as they are not directly contributing to the creation or maintenance of specific assets.

The above summary accounts for all expenditure on leakage reduction, not just that which is required to reduce leakage to the ELL target established in the SBP. NI Water has assumed a 100% allocation to supply/demand balance because they have not yet achieved ELL.

Costs to maintain the level of leakage at ELL should be Base as this is maintaining the desirable level of service at the most economic point. If it is necessary to push leakage levels below ELL due to supply restrictions, or possibly due to the additional pressures of carbon reduction or public pressure then other purpose categories should apply.

5. Grants and Contributions

In accordance with the assumptions made in the SBP, NI Water assumes that all grants and contributions would relate to enhancements. Therefore 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 these same assumptions were used in compiling the PC10 submissions.

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.

We note that a small subsidy (of £38k) is still contained in the infrastructure component of the reported figure. We understand that this relates to first time connections relating to older, rural properties where the costs of such connection would otherwise be prohibitive.

6. Infrastructure Charge Receipts

The SBP forecasts have proven to be significantly optimistic (even allowing for the unexpected recession) and NI Water's current projections and annual budgets are considerably lower. The recession has further exacerbated the situation, badly slowing development and their infrastructure charge receipts for both water and sewerage.

As assumed in their SBP, NI Water consider 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 used the SBP investment projections on growth to determine the components of the ICR's which would be allocated to either infrastructure or to non-infrastructure. For 2007/08, 41.09% of ICR's was allocated to non-infrastructure; for 2008/09, 47.26% and for 2009/10 it was 42.46%. The SBP only identified the infrastructure element of these receipts, so for consistency NI Water has reported ICR's in this table on the same basis. We note that the allocations of capital expenditure between purpose categories has changed considerably since the projections of the SBP and expect that the economic downturn will have affected the infrastructure/non-infrastructure balance similarly. We recommend that the methodology for deriving the proportions of ICR which relate to infrastructure and non-infrastructure is reviewed and is based upon assets being delivered rather than on the PC10 forecasts going forward.

All receipts are for domestic customers, charges are assumed to be phased in as follows:

2007/08	33% charge	67% subsidy
2008/09	67% charge	33% subsidy
2009/10	100% charge	-

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. NIW has provided supporting information which confirms this.

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 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. We confirm that the table entry is consistent with the calculations reviewed.

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. NIW has explained this as being £7.162k which relates to Receipts received for Diversion of Watermains.

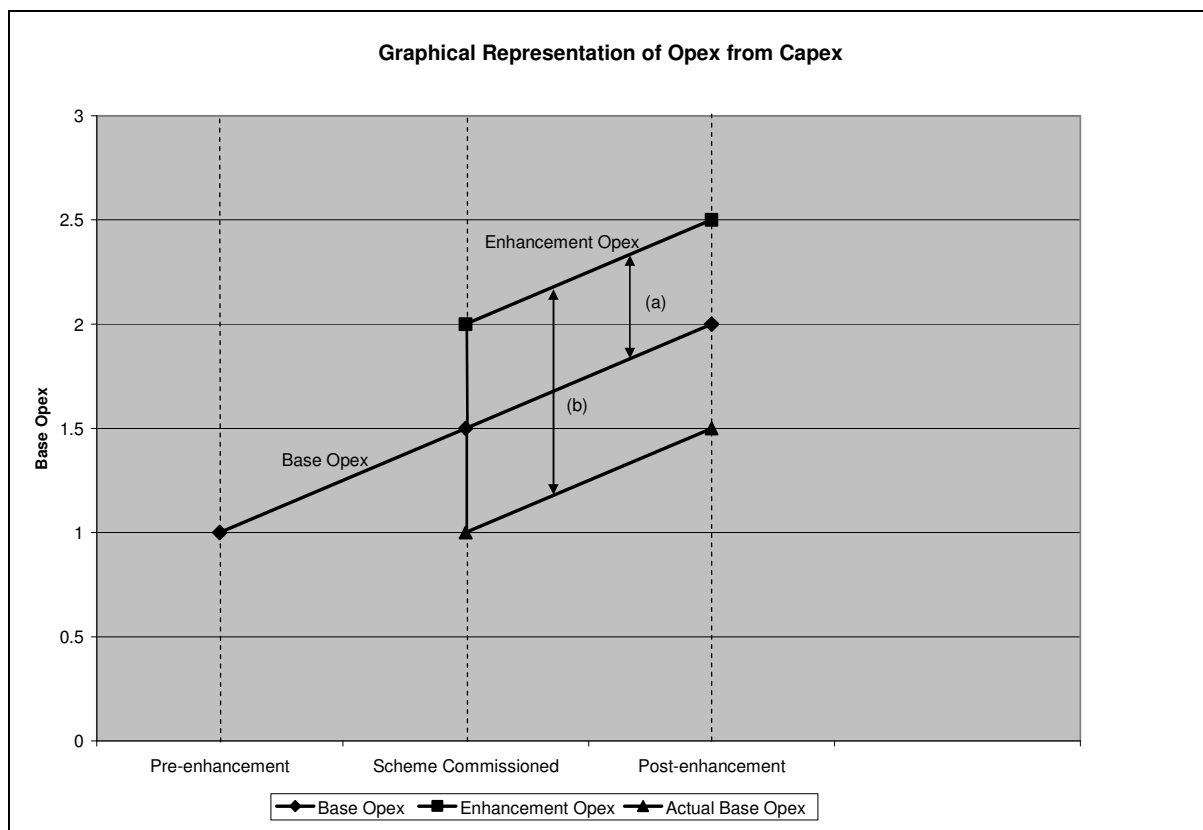
7. Operating Expenditure

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 2008/09. 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).



The Company freely acknowledge these shortcomings in their methodology and will look to improve the approach adopted for PC13.

In undertaking our review of the spreadsheet system used to derive the opex from capex for the report year, we identified a number of errors which the Company corrected prior to submission.

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 an incremental increase of £254k for the current year. This expenditure relates to recently completed schemes – Clay Lake WTW, Altnahinch/Seagahan WTWs and Lough Ross / Carran Hill WTWs.

Line 10 – Additional operating expenditure – customer service

The Company has reported zero in this line.

Line 15 – Additional operating expenditure – Supply Demand Balance

The Company has reported zero in this line.

Line 17 – Additional operating expenditure – Security of Supply

The Company has reported zero in this line.

Line 19 – Additional operating expenditure – New Outputs, Obligations

The Company has reported zero in this line.

8. Confidence Grades

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

NI Water has assigned confidence grades of B3 for most capex lines. The confidence grades placed on the investment lines are substantially dependent upon the QBEG analysis that is undertaken. The Company has undertaken a substantial review of their proportional allocation assumptions at project level and implemented further training, although (as highlighted above) there are still some allocation issues, which are accounted for in the B3 confidence grade for capex.

Base opex is supported by well tried and tested processes which have been subject to considerable scrutiny for some years. We concur with B4 for enhancement opex lines.

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

9. Reconciliations

We confirm the following consistencies:

Capex

- $\text{Table 35}(\text{incl. PPP})/3 = \text{Table 32}(\text{Total})/33/2$
- $\text{Table 35}(\text{incl. PPP})/25 = \text{Table 32}(\text{Total})/32/1$
- $\text{Table 35}(\text{incl. PPP})/26 = \text{Table 32}(\text{Total})/17/3 + 32/33/3$
- $\text{Table 35}(\text{incl. PPP})/7 = \text{Table 37}/18$

Opex

- $\text{Table 35}(\text{incl. PPP})/8 = \text{Table 37}/19$ (zero PPP Alpha opex)
- $\text{Table 35}(\text{incl. PPP})/24 = \text{Table 21}(\text{Total})/22$

Date: 30 July 2010

Prepared by: [x]

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 Strategic Business Plan.

2. Key Findings & Recommendations

- The SBP projections have had to be re-worked back into the capex categories due to the top-down adjustments made to the final case.
- SBP has been inflated using actual COPI, as per our AIR09 recommendation, and is one of the main causes of the negative variance reported.
- The SBP allocation assumptions between the purpose categories analysed in this table were significantly different from those now being developed and utilised by NI Water. We believe that this, and other impacts, will materially affect the allocations and render any comparisons inconclusive.

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 SBP Projections**

NI Water has previously provided a spreadsheet, based upon information supporting the SBP, and which reconciles to the total capital expenditure profile given in the SBP (as reproduced below).

[x]

In order to report against the lines and tables in the AIR, NI Water has needed to recast the SBP supporting information and make some corrections/adjustments to align the SBP figures with the investment streams reported in tables 35 and 36 and thus to produce the 'SBP Projections' given in columns 1 and 2 of tables 35a and 36a.

We note that NI Water has discussed these reconciliation issues with the Utility Regulator, and we assume NIAUR is content.

NI Water advised that, following the acceptance of the SBP (from which the above data is copied) the DRD adjusted the funding allowances assumed for the Capital Works Programme (CWP) between expenditure categories, as follows:

Expenditure category (£k in 06/07 prices)	2007/08	2008/09	2009/10
Water infra (base)	-2,708	-2,184	-2,626
Water infra (enhancement)	-3	-101	-59
Water non-infra (base)	+2,711	+2,285	+2,685
Sewerage infra (base)	-4,887	-3,966	-3,804
Sewerage infra (enhancement)	-307	-180	-198
Sewerage non-infra (base)	+5,194	+4,146	+4,002

These net to zero in each year and in each service area.

Previously, NI Water has adjusted their view of the SBP Projections by moving the assumed expenditure on Sewage Pumping Stations from infrastructure to non-infrastructure to accord with the reporting guidelines, however, the Company advised that this is now accounted for in the tables and no adjustment is required.

4.2 Indexation

In AIR09, we recommended that NI Water use actual RPI and COPI inflation so as to eliminate the prevailing external economic factors, which would be consistent with the interpretation in England and Wales, where the indexation figures to use are provided by Ofwat.

We confirm that for AIR10, NI Water has indexed the SBP projections from the 2006/07 base year using the COPI estimate for Q1 of 2010. As the Q1 estimate had not been finalised at year end, NI Water has assumed that COPI Q1 2010 = COPI Q4 2009, which is consistent with both guidance from NIAUR and Ofwat's interpretation for E&W.

4.3 Expenditure comparisons

As noted by NI Water in their commentary, there are significant differences between the proportional allocation assumptions made in the SBP (which tended to be poorly informed at project level and generic at programme level as well as financially influenced) and those now being applied using the CIDA methodology.

Additionally, as discussed previously, the Company had applied a rigorous challenge process to their Capital Works Programme projects, eliminating or reducing the unnecessary elements of the schemes, so as to ensure a more focussed delivery of the regulatory outputs and secure cost reductions. We believe that this is likely to influence the proportional allocation as it appears that the main elements being impacted will be base service (MNI). As the WwTW programme is the most significant, the influences of this process are likely to be greater in the sewerage service than the water service.

NI Water explain further significant anomalies between SBP and Table 35/36 assumptions relating to PPP Alpha in their commentary. As such, a comparison by purpose at the high level that this table is intended to facilitate would generally be inconclusive, although we have included some comparisons in our commentaries for Tables 35 and 36 of AIR10.

5. Audit Findings (Opex)

Line 1 – Base operating expenditure

The Company advised that the opex figures have not been reported for this line as the SBP did not separately identify base operating expenditure.

Line 7 - Opex – total quality enhancement programme

The Company advised that the opex figures have not been reported for this line as the SBP did not separately identify quality enhancement operating expenditure.

Line 9 – Additional operating expenditure – customer service

The Company advised that the opex figures have not been reported for this line as the SBP did not separately identify customer services enhancement operating expenditure.

Line 17 and Line 19 – total opex

Not required

Date: 30 July 2010

Prepared by: [x]

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

- Proportional allocation methodologies have been further developed and are consistent with the Reporting Requirements.
- We found that a CIDA/QBEG allocation had been assessed for all projects, and that 'CIDA Masterclass' workshops had been held for most NI Water Project Managers – demonstrating the Company's desire to allocate expenditure appropriately
- However, there is a general under allocation to Base Maintenance (B), as demonstrated in the Reporter's recommended QBEG for the schemes reviewed.
- It was apparent in some of our audits that the local Project Manager's do not always actively assess or review the allocation of expenditure for their projects.
- Based on the five schemes reviewed, the Reporter's suggested QBEG allocations would have resulted in a 7% reduction in Q, 57% increase in B, 41% reduction in E and 35% increase in G to those schemes.
- Over the duration of the SBP, we found that NI Water has slightly under spent against the overall capital funding allowance by circa £13m.
- NI Water has reported a new obligation at Derrytrasna WwTW. We reviewed the Company's response to the 'Statement Under Caution' for Derrytrasna, and confirm the additional work required in order to meet a new Water Order Consent.
- The Company's methodology potentially under reports the level of opex associated with capex as:
 - NI Water are only able to extract associated power costs and are unable to capture other operational costs for smaller WwTWs.
 - 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.
- We recommend that the methodology for deriving the proportions of ICR which relate to infrastructure and non-infrastructure is reviewed and is based upon assets

being delivered rather than on the PC10 forecasts going forward.

- Standard reconciliation checks with other table information identified a number of inconsistencies; however these were due to the reallocation of expenditure associated with the new obligation at Derrytrasna WwTW.

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 AIR10, the wastewater related schemes reviewed included 3 x WwTW schemes, 2 x sewerage schemes

At year-end we undertook a review of the contents of the Capital Investment Driver Allocation (CIDA) spreadsheet systems, which collate the expenditure information by project for the Report Year. During this review, we tested the collation system 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 Strategic Business Plan Assumptions

A summary table from the Strategic Business Plan is provided on page 17 of that document and reproduced in our Table 35a and 36a commentaries.

Financial information, particularly that relating to the capital programmes, was not prepared using the principles now required for regulatory reporting. Whilst some specific project requirements could be identified, many programmes of work and levels of investment were based upon experience and historic levels of expenditure. Few projects were well defined in terms of need, solution and very few had reached detailed design, specification and reliable costing stage. Thus, the allocations of investment assumed were done at relatively high level and based on judgement, with limited supporting information.

Partly to assist with the financing of the transformed enterprise and partly to recognise the legacy of under-investment that the new Go-Co was inheriting, the concept of 'backlog' was introduced and any related expenditure was considered as enhancement investment.

The SBP contained expenditure projections covering a 7-year period. The PC10 process has required the separation of that programme such that the projects which will be commenced prior to 1 April 2010 will form one programme, those commencing later are

to be considered with other new obligations and priorities. Whilst it appears that NI Water is reasonably well on track with regard to outputs being delivered, there is less clarity over the related expenditure and whether this is delivering like-for-like programmes of work to those assumed in the SBP.

4.2 Proportional Allocation

It is apparent that NI Water has been endeavouring to understand, 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 now have a CIDA allocation and NI Water have run a number of 'CIDA master classes' during the year to ensure the consistent application of the QBEG allocation process by all NI Water Project Managers

Whilst it is apparent at a Company level, that NI Water are working hard to ensure projects were appropriately allocated to QBEG, it was apparent in some of our audits that the local Project Manager's do not always appear to take an active role in the allocation of expenditure to purpose category. There is a reliance on assessments undertaken by Consultants at the time of project inception and these are not routinely reviewed by the Project Team. QBEG is however, reviewed by the Regulation team, but there is limited understanding of proportional allocation across the project

Detailed in the table below, is a summary of the sewerage service related schemes we reviewed during the year, as part of AIR10. As can be seen, there is a general under allocation to Base Maintenance (B), which is reflected in the Reporter's suggested allocation.

Project Reference	Project Name	Budget (£k)	LBE (£k)	AIR10 Spend (£k)	CIDA QBEG Allocation				Reporter QBEG Allocation			
					Q	B	E	G	Q	B	E	G
KT124	Dromara WwTW	[x]	[x]	[x]	52	41	0	7	43	50	0	7
KS224	Downpatrick WwTW	[x]	[x]	[x]	25	25	0	50	40	40	0	20
KF005	Coalisland WwTW	[x]	[x]	[x]	62	38	0	0	50	33	0	17
KA143	Aldergrove Trunk Sewer	[x]	[x]	[x]	0	20	56	24	0	33	33	34
KF012	Moygashel Improvements	[x]	[x]	[x]	98	0	0	2	90	5	0	5

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

For KT124 – Dromara WwTW, the Reporter's independent estimate of the split is 43/50/0/7 assuming that approximately 4% of the expenditure on odour/resilience is allocated to Base.

For KT224 – Downpatrick WwTW, the CIM identifies a QBEG split of 23/25/0/50 but the Reporter is concerned that for this phase of the project, there is a greater emphasis on the refurbishment of existing units and the addition of processes to meet the revised quality standards than on extending the capacity for greater flows. The Reporter would recommend an alternative QBEG split of 40/40/0/20 which recognises the substantial amount of capital work which is being undertaken to refurbish or replace existing assets which would otherwise require capital maintenance expenditure either at this juncture or in the short-term.

For KF005 – Coalisland WwTW, Q is a major driver for investment and, with the need to expand the works as well as overcome the overloading and meet short-term growth, the decision was made to abandon the works and build a new one. However, the old works presented a significant maintenance liability which also needs to be recognised. The Reporter therefore believes that a QBEG allocation of 50/33/0/17 is more appropriate.

For KA143 – Aldergrove Trunk Sewer Scheme, The Reporter believes that apparently large allocation to enhancement is due to the poor gradients in this area which cause the flooding; this precipitates the need for a larger diameter which in turn is proportionate to cost. In the Reporter's view, the QBEG split should reflect the purpose of the asset rather than the solution and a more even split seems therefore more appropriate: 0/33/33/34.

For KF012 – Moygashel Improvements, The QBEG allocation has changed markedly over time, due to improved understanding, changing requirements and changing solutions. QBEG in SBP was 100/0/0/0, at CIP it was 48/27/0/25 and the 2009 Q2 CIM indicates 98/0/0/2. The Reporter's view is 90/5/0/5 because whilst the principal driver is quality, there is a transfer of existing utilities to this site from Killyman WwTW and the Moygashel works was overloaded so this solution, albeit a short-term solution, provides greater headroom.

In order to understand the overall implications of these suggested revisions and quantify the impact on the allocation of expenditure, we have shown the allocations by cost in the table below.

Project Reference	Project Name	AIR10 spend (£k)				AIR10 spend based on Reporter QBEG Allocation (£k)			
		Q	B	E	G	Q	B	E	G
KT124	Dromara WwTW	13.416	10.578	0	1.806	11.094	12.9	0	1.806
KS224	Downpatrick WwTW	56.75	56.75	0	113.5	90.8	90.8	0	45.4
KF005	Coalisland WwTW	212.04	129.96	0	0	171	112.86	0	58.14
KA143	Aldergrove Trunk Sewer	0	148.6	416.08	178.32	0	245.19	245.19	252.62
KF012	Moygashel Improvements	1600.34	0	0	32.66	1469.7	81.65	0	81.65
	Total Spend	£1,882.55	£345.89	£416.08	£326.29	£1,742.59	£543.40	£245.19	£439.62

As you can see, the revised allocations have resulted in a 7% reduction in Q, 57% increase in B, 41% reduction in E and 35% increase in G. For illustrative purposes, if these adjustments were to be applied to the overall AIR10, the potential impact on Table 36 would be as follows:

	AIR10 (£m)	Revised AIR10 (£m)
Table 36 – Line 7 (Q)	63.032	58.619
Table 36 – Line 5 (B)	30.115	47.280
Table 36 – Line 9 (E)	20.002	11.801
Table 36 – Line 11 (G)	32.013	43.217

It should however, be noted that the above assessment was based on a relatively small proportion of the total capital programme (3%), and as such it may not be appropriate to assume the above adjustments should apply to the overall programme.

4.3 Year-end Capital Investment Reconciliations

For 2009/10, the year end reconciliation between Oracle and CAPTRAX was only £43k.

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.

4.4 Capital Expenditure

4.4.1 General

Overall capital expenditure in Year 3 of the SBP is slightly lower than that recorded in Year 2. However, when compared to the SBP forecast expenditure profile, NI Water has exceeded the investment profile assumed for Year 3 by circa £5m. As demonstrated in Figure 36.1 below, over the duration of the SBP, NI Water has slightly under spent against the funding allowance by circa £13m.

[x]

4.4.2 Base Service Provision

In terms of Infrastructure Renewals Expenditure (IRE), the Company continues to increase expenditure for the report year, and is in line with IRE forecasts for Year 3. However, as demonstrated in Table 36.2 below, IRE is some £19m (45%) behind the SBP forecast.

The reported increase in expenditure for the year, reflects investment on a number of infrastructure based maintenance schemes, including KG172 – Wastewater Treatment Maintenance Provision (£2.17m) and KR309 – Belvoir Park Trunk Sewer.

[x]

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 SBP and PC10 carryover), including KF005 – Coalisland WwTW (£2.169m) and KG172 – Watewater Treatment - Provision of Maintenance Related Work at Various Locations (£2.172m).

Management and General (M&G) expenditure accounted for only 12% of the MNI spend for the year, which is quite low when compared to companies in E&W, where M&G spend over the course of AMP4 has typically been 25% of MNI.

In terms of MNI expenditure over the SBP period, NI Water are circa 16% (£15m) behind the SBP forecast. As shown in Figure 36.3 below, expenditure continues to increase year on year, and for AIR10, spend in the year was some £2m higher than the target.

[x]

4.4.3 Quality Enhancements

Expenditure against Line 7 is, as required, consistent with Line 29 of Table 38.

Details on the relevant quality programmes, progress and other related issues are given in our commentary to Table 38.

As demonstrated in Figure 36.4 below, overall spend on quality enhancement has exceeded the SBP forecast by £30m, which is hardly surprising given the progress made on PC10 carryover schemes during the year; which were not included in the SBP.

[x]

4.4.4 Enhanced Service Levels

As demonstrated in Figure 36.5 below, overall spend on enhanced service levels has exceeded the SBP forecast by circa 60%, due primarily to the Belfast Sewers Project – KR255, where circa £5.3m was incurred during the year.

[x]

4.4.5 Improving supply/demand balance

Overall supply demand balance expenditure is circa 27% (£43m) below that assumed for the SBP, reflecting the lower than forecast levels of new development.

[x]

4.4.6 New outputs/obligations since the SBP

NI Water has reported a new obligation at Derrytrasna WwTW. We reviewed the Company's response to the 'Statement Under Caution' for Derrytrasna, and confirm the additional work required in order to meet a new Water Order Consent. We found that some short term measures have been completed a capital project is being accelerated. NI Water has reported spend of £220k against this project for 2009/10 in Line 16 of Table 36.

4.6 Operational Capital (including M&G)

Operational 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.

The investment analysis forms are submitted to NI Water's Finance and Regulation section for review. These are particularly challenged when there is spend against Q, E and G purpose categories. Allocations are adjusted with the approval of the project manager; this appears to have resulted in an underlying trend of movements from the Q and E purpose categories to B, base service.

5. Grants and Contributions

In accordance with the assumptions made in the SBP, NI Water assumes that all grants and contributions would relate to enhancements. Therefore 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 these same assumptions were used in compiling the PC10 submissions.

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

We note that a small subsidy (of £18k) is still contained in the infrastructure component of the reported figure for line 19. We understand that this relates to first time connections relating to older, rural properties where the costs of such connections would otherwise be prohibitive.

During the audit, we also noted that line 19 contains a new component of grants and contributions income - Sewer connections (£519k). We queried the basis of this, and NI Water advised that the DRD Roads Service introduced the Street Works Order on 1st April 2009 which radically changed the approach taken to sewer connections. Prior to this a developer house builder paid his inspection fee to CRC and made the connection himself. However, after 1st April 2009 he could only open the road if he had a valid Street Works Licence, which was difficult to obtain, placing the onus on NI Water. This explains the rise in this line from 2008/09.

6. Infrastructure Charge Receipts

The SBP forecasts have proven to be significantly optimistic (even allowing for the unexpected recession) and NI Water's current projections and annual budgets are considerably lower. The recession has further exacerbated the situation, badly slowing development and their infrastructure charge receipts for both water and sewerage.

As assumed in their SBP, NI Water consider 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 used the SBP investment projections on growth to determine the components of the ICR's which would be allocated to either infrastructure or to non-infrastructure. For 2007/08, 41.09% of ICR's was allocated to non-infrastructure; for 2008/09, 47.26% and for 2009/10 it was 42.46%. The SBP only identified the infrastructure element of these receipts, so for consistency NI Water has reported ICR's in this table on the same basis. We note that the allocations of capital expenditure between purpose categories has changed considerably since the projections of the SBP and expect that the economic downturn will have affected the infrastructure/non-infrastructure balance similarly. We recommend that the methodology for deriving the proportions of ICR which relate to infrastructure and non-infrastructure is reviewed and is based upon assets being delivered rather than on the PC10 forecasts going forward.

All receipts are for domestic customers and charges are assumed to be phased in as follows:

2007/08	33% charge	67% subsidy
2008/09	67% charge	33% subsidy
2009/10	100% charge	-

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. NIW has provided supporting information which confirms this.

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, different codes for water and sewerage and for charges and subsidy components. We have 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. We confirm that the table entry is consistent with the calculations reviewed.

7. Assets adopted or acquired at nil cost

NIW's Tactical Asset Management section (within the Operations Directorate) receives applications under Article 161 from developers requesting the adoption of sewerage assets: sewers; and sewerage pumping stations.

The TAM 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.

NI Water advised that the cost curves are consistent with those used for the development of the SBP. We have not confirmed this. The costs are inflated by RPI to provide the relevant Report Year prices. The reported information includes:

2009/10	2008/09	
£ 18.341m	£14.833m	of sewer adoptions
£ 0.260m	£ 3.951m	of adoptions associated with SPSs
£ 0.002m	£ 0.500m	of land at a STW
£ 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.

Whilst there has been a notable increase in the value of sewer adoptions, the value of adoptions of Sewer pumping stations has reduced considerably. This latter effect is due to the completion (in 2008/09) of a push to clear a backlog of asset adoptions, which were mainly SPS's. The figures are now more representative of Report year activities.

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 2008/09. 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 AIR10, 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. For 2009/10, 2 schemes (Ringneill and Benburb WwTWs) were identified as including work at multiple locations. We queried whether NIW were intending to review schemes completed in previous years and re-state historic AIR submissions. The Company advised that they had not done this and given the inherent inaccuracies in the reported information, there would be limited value in re-stating historic data.

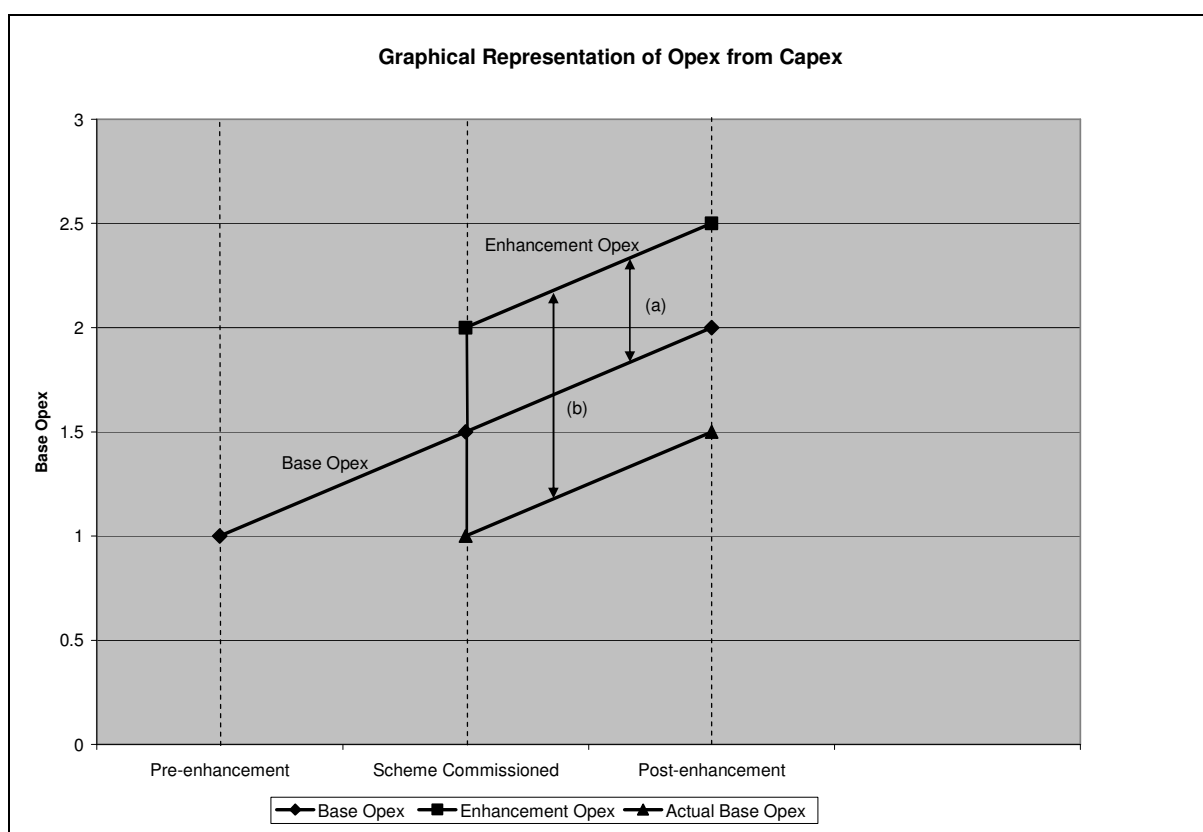
We did however, undertake a cursory review of projects completed in previous years of the SBP with the system holder and identified a small number of schemes (circa 1-2 p.a) that involved work on multiple locations, leading us to conclude that the issue has not had a material impact on reported numbers.

In addition to this, we did however identify a number of other areas where the Company's methodology potentially under reports the level of opex associated with capex:

- We found that of the 48 schemes completed during the SBP (of which 20 were commissioned in 2009/10) circa 7 were large works and 13 were small works. In addition, 102 SPSs have been completed in recent years, of which 68 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 SPS sites where no opex costs were attributed. This accounted for 4 of the 5 developer sites adopted during the year.

- 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).



The Company freely acknowledge these shortcomings in their methodology and will look to improve the approach adopted for PC13.

In undertaking our review of the spreadsheet system used to derive the opex from capex for the report year, we identified a number of errors which the Company corrected prior

to submission.

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 a substantial amount of additional Operating expenditure income related to quality enhancements. This is in the region of £1.4m. The Company advised that this relates largely to recently completed WwTW.

Line 10 – Additional operating expenditure – customer service

There has been an additional £294k worth of expenditure allocated to customer services for the current year. The Company advised that this relates to backlog base.

Line 15 – Additional operating expenditure – Supply Demand Balance

The Company has reported an overall increase in operating expenditure of £479k. 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 with that reported from Oracle.

NI Water has assigned confidence grades of B3 for most capex lines. The confidence grades placed on the investment lines are substantially dependent upon the QBEG analysis that is undertaken. The Company has undertaken a substantial review of their proportional allocation assumptions at project level and implemented further training, although (as highlighted above) there are still some allocation issues, which are accounted for in the B3 confidence grade for capex.

Base opex is supported by well tried and tested processes which have been subject to considerable scrutiny for some years. We concur with B4 for enhancement opex lines.

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, but identified a number of discrepancies, as highlighted below:

Capex

- **Table 36(incl. PPP)/3 \neq Table 32(Total)/33/6** – due to the removal of Base maintenance related expenditure (£0.0132m) for Derrytrasna WwTW – a new obligation
- Table 36(incl. PPP)/22 = Table 32(Total)/32/4
- Table 36(incl. PPP)/23 = Table 32(Total)/17/6 + 32/33/6
- **Table 36(incl. PPP)/7 \neq Table 38/29** – due to the removal of Quality related expenditure (£0.1518m) for Derrytrasna WwTW – a new obligation

Opex

- Table 36(incl. PPP)/8 = Table 38/30
- Table 36(incl. PPP)/21 = Table 22(Total)/21

Date: 30 July 2010

Prepared by: [x]

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

- The SBP projections have had to be re-worked back into the capex categories due to the top-down adjustments made to the final case.
- SBP has been inflated using actual COPI, as per our AIR09 recommendation, and is one of the main causes of the negative variance reported.
- The SBP allocation assumptions between the purpose categories analysed in this table were significantly different from those now being developed and utilised by NI Water. We believe that this, and other impacts, will materially affect the allocations and render any comparisons inconclusive.

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 SBP Projections**

NI Water has previously provided a spreadsheet, based upon information supporting the SBP, and which reconciles to the total capital expenditure profile given in the SBP (as reproduced below).

[x]

In order to report against the lines and tables in the AIR, NI Water has needed to recast the SBP supporting information and make some corrections/adjustments to align the SBP figures with the investment streams reported in tables 35 and 36 and thus to produce the 'SBP Projections' given in columns 1 and 2 of tables 35a and 36a.

We note that NI Water has discussed these reconciliation issues with the Utility Regulator, and we assume NIAUR is content.

NI Water advised that, following the acceptance of the SBP (from which the above data is copied) the DRD adjusted the funding allowances assumed for the Capital Works Programme (CWP) between expenditure categories, as follows:

Expenditure category (£k in 06/07 prices)	2007/08	2008/09	2009/10
Water infra (base)	-2,708	-2,184	-2,626
Water infra (enhancement)	-3	-101	-59
Water non-infra (base)	+2,711	+2,285	+2,685
Sewerage infra (base)	-4,887	-3,966	-3,804
Sewerage infra (enhancement)	-307	-180	-198
Sewerage non-infra (base)	+5,194	+4,146	+4,002

These net to zero in each year and in each service area.

Previously, NI Water has adjusted their view of the SBP Projections by moving the assumed expenditure on Sewage Pumping Stations from infrastructure to non-infrastructure to accord with the reporting guidelines, however, the Company advised that this is now accounted for in the tables and no adjustment is required.

4.2 Indexation

In AIR09, we recommended that NI Water use actual RPI and COPI inflation so as to eliminate the prevailing external economic factors, which would be consistent with the interpretation in England and Wales, where the indexation figures to use are provided by Ofwat.

We confirm that for AIR10, NI Water has indexed the SBP projections from the 2006/07 base year using the COPI estimate for Q1 of 2010. As the Q1 estimate had not been finalised at year end, NI Water has assumed that COPI Q1 2010 = COPI Q4 2009, which is consistent with both guidance from NIAUR and Ofwat's interpretation for E&W.

4.3 Expenditure comparisons

As noted by NI Water in their commentary, there are significant differences between the proportional allocation assumptions made in the SBP (which tended to be poorly informed at project level and generic at programme level as well as financially influenced) and those now being applied using the CIDA methodology.

Additionally, as discussed previously, the Company had applied a rigorous challenge process to their Capital Works Programme projects, eliminating or reducing the unnecessary elements of the schemes, so as to ensure a more focussed delivery of the regulatory outputs and secure cost reductions. We believe that this is likely to influence the proportional allocation as it appears that the main elements being impacted will be base service (MNI). As the WwTW programme is the most significant, the influences of this process are likely to be greater in the sewerage service than the water service.

NI Water explain further significant anomalies between SBP and Table 35/36 assumptions relating to PPP Alpha in their commentary. As such, a comparison by purpose at the high level that this table is intended to facilitate would generally be inconclusive, although we have included some comparisons in our commentaries for Tables 35 and 36 of AIR10.

5. Audit Findings (Opex)

Line 1 – Base operating expenditure

The Company advised that the opex figures have not been reported for this line as the SBP did not separately identify base operating expenditure.

Line 7 - Opex – total quality enhancement programme

The Company advised that the opex figures have not been reported for this line as the SBP did not separately identify quality enhancement operating expenditure.

Line 9 – Additional operating expenditure – customer service

The Company advised that the opex figures have not been reported for this line as the SBP did not separately identify customer services enhancement operating expenditure.

Line 17 and Line 19 – total opex

Not required

Date: 30 July 2010

Prepared by: [x]

Table 37 – Water Compliance – Expenditure Report**Commentary by REPORTER****1. Background**

The information in this table will be used to assess the overall cost of meeting compliance with specific parameters, and compare relative company efficiencies at meeting the required quality standards.

2. Key Findings & Recommendations

- We found that a CIDA/QBEG allocation had been assessed for all projects, and that ‘CIDA Masterclass’ workshops had been held for most NI Water Project Managers – demonstrating the Company’s desire to allocate expenditure appropriately
- However, there is a general under allocation to Base Maintenance (B), as demonstrated in the Reporter’s recommended QBEG for the schemes reviewed.
- It was apparent in some of our audits that the local Project Manager’s do not always actively assess or review the allocation of expenditure for their projects.
- NI Water has delivered the SBP drinking water programme outputs that were agreed with the DWI – Clay Lake WTW and Seagahan WTW. We found that Clay Lake WTW was completed in July 2008 (one month ahead of programme), and Seagahan was completed in December 2009 (one month late).
- The approach adopted by NI Water to assess QBEG for the water main rehabilitation programme, was found to be systematic, robust and appropriate.
- NI Water delivered 379km during the year at a unit cost of [x] and has delivered 1227 km in total, out performing the SBP target by some 35%.

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 AIR10, the water related schemes reviewed included 3 x strategic trunk main schemes, 1 x service reservoir and 1 x water main rehabilitation scheme

At year-end we undertook a review of the contents of the Capital Investment Driver Allocation (CIDA) spreadsheet systems, which access and collate the expenditure information by project for the Report Year. During this review, we tested the collation system 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.

The Opex audit reviewed the methodology used by NI Water to calculate the entries for this table, the procedures supporting the systems and the internal procedures in place to eliminate errors. The entries for each line were tracked and compared to recent and historic trends.

4. Audit Findings

4.1 Capital Expenditure

4.1.1 General

Our audits and reviews this year confirm that the Company's processes for proportional allocation of expenditure in the sewerage related capital programme are broadly satisfactory, although the application of these processes is not yet fully embedded into the delivery of the project.

For AIR10, we found that a CIDA/QBEG allocation had been assessed for all projects, and that 'CIDA Masterclass' workshops had been held for most NI Water Project Managers. The purpose of these classes was to ensure consistent application of the QBEG allocation process.

Whilst it is apparent at a Company level, that NI Water are working hard to ensure projects were appropriately allocated to QBEG, it was apparent in some of our audits that the local Project Manager's do not always appear to take an active role in the allocation of expenditure to purpose category. There is a reliance on assessments undertaken by Consultants at the time of project inception and these are not routinely reviewed by the Project Team. QBEG is however, reviewed by the Regulation team, but there is limited understanding of proportional allocation across the project

Detailed in the table below, is a summary of the water service related schemes we reviewed during the year, as part of AIR10. As can be seen, there is a general under allocation to Base Maintenance (B), which is reflected in the Reporter's suggested allocation.

Project Reference	Project Name	Budget (£k)	LBE (£k)	AIR10 Spend (£k)	CIDA QBEG Allocation				Reporter QBEG Allocation			
					Q	B	E	G	Q	B	E	G
JB623	Northern Key Transport Corridor	[x]	[x]	[x]	73	4	0	23	25	10	10	55
JG036	Castor Bay to Dungannon Strategic Trunk Main	[x]	[x]	[x]	0	2	11	87	0	31	11	58
JG037	Ballydougan Service Reservoir Extension	[x]	[x]	[x]	-	-	-	-	-	-	-	-
JL750	Ballinrees WTW to Limavady Supply Augmentation	[x]	[x]	[x]	0	0	0	100	0	25	0	75
JS223	Ballygowan Zone WM Imps	[x]	[x]	[x]	8	28	5	59	8	28	5	59

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

For JB623 – Northern Key Transport Corridor - Based on our understanding of the drivers for the project, which includes; water quality improvement, security of supply, growth and enhancements to DG2 and DG3, the QBEG allocation initially proposed at CIP would appear to be a closer representation of purpose categories, i.e. 25/10/10/55.

For JG036 – Castor Bay to Dungannon - Based on our understanding of the project scope, which involves the abandonment of Altmore WTW and Gortlenaghan and Shanmoy Boreholes, we would expect to see a greater allocation to Base Maintenance (B). The abandonment of existing sites negates the need for future ongoing maintenance. As such, we would expect a pro rata allocation to B, on the basis of volume supplied. As the overall scheme provides for 30Ml/d and the three abandoned sites provide 8.8Ml/d, an assumed allocation to B of 29% would not be unreasonable. Furthermore, we were unable to ascertain the nature of the allocation to Enhanced Levels of Service (E). However, on the basis of the above assumption, the following QBEG would not be unreasonable, 0/31/11/58.

For JG037 – Ballydougan SR Extension - The project is currently on hold, with no spend during the year. This was in contrast to the latest version of the CIM template (2010 Q3), where circa £108k expenditure was reported in the report year, although we subsequently found that the £108k reflected a projection, that was subsequently withdrawn when the project was put on hold.

For JL750 – Ballinrees WTW to Limavady Supply Zone - Based on our understanding of the project scope, which involves the abandonment/replacement of existing assets, [x], we would expect to see a significant allocation to Base Maintenance (B). We would expect to see expenditure associated with the following activities allocated to Base Maintenance:

- Remove PRV on new Ballinrees to Moys SR TM
- Replace 1.7km of 400mm PN8 PE pipework on new Ballinrees to Moys SR TM with 500mm PN16 PE pipework
- Upgrade fittings on Castle and Roe Bridge crossings from PN16 to PN25.

Based on the above we suggest an alternative QBEG of 0/25/0/75.

4.1.2 Obligations prior to the SBP

NI Water has not recorded any carry over expenditure in Line 1, as the SBP represents the first specifically defined and funded capital programme delivered by NI Water.

However, our review of CIDA confirmed expenditure during the year against projects that were initiated by the Water Service, prior to SBP, for example Forfanny WTW. As such you could argue that spend incurred during the year against these pre-SBP schemes could be included in Line 1.

4.1.3 Water Treatment

NI Water has a relatively small water treatment programme for SBP that is now substantially complete. Circa £8m expenditure was incurred during the year.

Spend against the Pesticide driver (Line 4) - circa £120k, relates to the delivery of the PC10 Carry over scheme – Carmoney WTW.

For Line 5 – Cryptosporidium, NI Water has recorded £589k expenditure against three separate schemes for AIR10; including Lough Bradan WTW (£470k), Carmoney WTW (£120k) and Forfanny WTW (£18k).

Carmoney and Lough Bradan are PC10 carry over schemes in the early stages of delivery, whilst Fofanny is a Water Service ‘pre-SBP’ scheme. As suggested in Section 4.1.2 above, this expenditure could reasonably be reported in Line 1 – Obligations prior to SBP.

Significant spend has been recorded against Line 7 – Other Parameters, with £3.35m incurred on Seagahan WTW (JF563), which was delivered in December 2009 and Lough Bradan (£900k). Within this driver category, NI Water has separately recorded expenditure against THM organics removal (£1,162k) and Manganese removal (£606k) with the balance against Other Parameters.

4.1.4 Water Distribution

Over the three years of the SBP, NI Water forecast the rehabilitation of 910km of water main, through its Mains Rehabilitation Programme, which equates to circa 303km/year. For AIR10, NI Water delivered 379km during the year and has delivered 1227 km in total, out performing the SBP target by some 35%.

In order to determine distribution expenditure allocated to quality (Line 10), NI Water undertake a systematic review of all projects included in the Mains Rehabilitation Programme (MRP) for the year, and assess QBEG on a project by project basis. These estimates were then applied to the yearly expenditure incurred at each scheme to assess total Q expenditure for that particular scheme.

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 mains rehabilitation programme averaged out as follows:

Q	B	E	G
19%	40%	13%	28%

For AIR10, NI Water has allocated £10.588m to Q (Line 10), which infers programme expenditure for 2009/10 of £55.73m (when based on the above QBEG split). However, our review of CIDA confirmed a total spend of £57.26m reported for the year, a variance

of circa 3%. We queried the nature of the variance and found that it related to EP spend on lead pipe replacement as part of water mains rehabilitation programme (circa £0.3m)

Based on a total expenditure of [x] and the replacement of [x] of main during the year, a unit cost of [x] was achieved for the Report Year. When compared to the unit cost achieved for AIR09, as shown below, NI Water has reported a significant increase in unit cost, which is attributed to the high level of activity in Belfast City centre, where mains rehabilitation is more difficult and the significant spend (circa £8.5m) on the Castor Bay to Dungannon Strategic LDTM, which will have an adverse impact on the overall unit rate. However, if we remove the expenditure relating the Castor Bay to Dungannon scheme, the unit rate would reduce to [x] which is still quite high, but not surprising given the large volume of city centre work completed during the year.

	AIR08	AIR09	AIR10
Total expenditure (Outturn prices)	[x]	[x]	[x]
Length rehabilitated	327km	521km	379km
Unit Cost	[x]	[x]	[x]
COPI adjusted (to 2009/10)	[x]	[x]	[x]

As highlighted above, NI Water has reported spend against the Castor Bay to Dungannon LDTM during the year (£9.3m). Furthermore, spend has also been reported against CTM Extension – Barnets Park to Purdysburn (£1.2m) and Old Portglenone Road (£0.4m), both of which are classified as LDTMs.

Expenditure relating to the replacement of Lead Communication Pipes (LCP) reported in Table 37 (£0.393m) primarily relates to the Lead Service Pipe Replacement Scheme – JR415 which is an ‘Operations’ project that has been driven by customer requests, and opportunistic lead pipe replacement as part of water mains rehabilitation programme (circa £0.3m). In addition to this, there are two small ‘Public Realm’ projects, whereby lead pipes are replaced prior to the installation of new street furniture.

4.1.5 Security related measures

Expenditure to date on security related measures reflects progress towards compliance with Advice Note 8 of the SEMD for Service Reservoirs and improvements to security at ‘Keypoint’ installations.

4.1.6 Environmental Programme

We confirm that expenditure recorded on line 16 relates to investigations undertaken for the Strule Inlet for Derg WTW.

4.1.7 Capex Totals

The total Capex recorded for the Report Year concurs with that audited and was traced back to CIDA.

4.2 Operating Expenditure

The Company advised that incremental opex has been calculated directly from the accounting general ledger. It advised that it considered those sites that had become active during 2008/09. 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.

Although the process relies substantially on manual assessment we believe that it is capable of reporting incremental opex that is reflective of the actual additional opex due to capex incurred in the year.

4.2.1 Obligations prior to the SBP

For the current year expenditure of £34k is reported, which relates to the previously completed Carron Hill WTW.

4.2.2 Water Treatment

We queried the basis of the £272k reported in Line 8 of Table 37 and found that this total reflects the balance of all opex due to capex, after the specific expenditure relating to Carron Hill WTW (see Section 4.2.1 above) is reported in Line 2.

5. Confidence Grades

5.1 Capital Expenditure

Capital related expenditure is extracted directly from CIDA. We have undertaken a detailed review of the spreadsheets, which access and collate the expenditure information by project for the Report Year and confirm the confidence grade of B3 for all capex related lines, suggested by the Company.

5.2 Operating Expenditure

The Company has reported a confidence grade of B4 for all opex related data, which is consistent with that reported previously.

6. Consistency Checks

We found that line 7 of Table 35 is consistent with lines 18 of Table 37 and that Line 8 of Table 35 is consistent with Line 19 of Table 37.

Date: 30 July 2010
Prepared by: [x]

Table 38 – Sewerage Compliance – Expenditure Report**Commentary by REPORTER****1. Background**

The information in this table will be used to assess the overall cost of meeting compliance with specific parameters under named directives, and to compare relative company efficiencies at meeting the required quality standards.

2. Key Findings & Recommendations

- We found that a CIDA/QBEG allocation had been assessed for all projects, and that ‘CIDA Masterclass’ workshops had been held for most NI Water Project Managers – demonstrating the Company’s desire to allocate expenditure appropriately
- However, there is a general under allocation to Base Maintenance (B), as demonstrated in the Reporter’s recommended QBEG for the schemes reviewed.
- It was apparent in some of our audits that the local Project Manager’s do not always actively assess or review the allocation of expenditure for their projects.
- Of the 26 outputs (out of 75) forecast for delivery during the Report Year, three were delivered ahead of programme, 18 were delivered on schedule, whilst a further five schemes have either had their completion date deferred or are no longer required..
- We noted expenditure against KS253 – Drumaness WwTW (£368k), which is neither an SBP nor PC10 carryover scheme. It appears that Drumaness WwTW is actually a pre-SBP scheme, suggesting that expenditure could be reported in Line 1 of Table 38, as an obligation prior to the SBP.
- There are some key programmes of work captured within the ‘Other EU Directives’ line, which suggests NI Water’s priorities differ to the Company’s in England and Wales. On this basis we recommend that NIAUR reconsider the future structure of Table 38 in order to better reflect NI Water’s circumstances.
- We found a slight discrepancy between T36 L7 and T36 L29 (circa 0.2%), which was due to the reallocation of expenditure associated with the new obligation at Derrytrasna WwTW.
- Whilst the Company has implemented some modifications to improve the structure and usability of the CIDA spreadsheet, transparent and easy analysis of expenditure information is still difficult to undertake.

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 AIR10, the wastewater related schemes reviewed included 3 x WwTW schemes, 2 x sewerage schemes

At year-end we undertook a review of the contents of the Capital Investment Driver Allocation (CIDA) spreadsheet systems, which collate the expenditure information by project for the Report Year. During this review, we tested the collation system 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.

The Opex audit reviewed the methodology used by NI Water to calculate the entries for this table, the procedures supporting the systems and the internal procedures in place to eliminate errors. The entries for each line were tracked and compared to recent and historic trends.

4. Audit Findings

4.1 Capital Expenditure

4.1.1 General

Our audits and reviews this year confirm that the Company's processes for proportional allocation of expenditure in the sewerage related capital programme are broadly satisfactory, although the application of these processes is not yet fully embedded into the delivery of the project.

For AIR10, we found that a CIDA/QBEG allocation had been assessed for all projects, and that 'CIDA Masterclass' workshops had been held for most NI Water Project Managers, in order to ensure consistent application of the QBEG allocation process.

Whilst it is apparent at a Company level, that NI Water are working hard to ensure projects were appropriately allocated to QBEG, it was apparent in some of our audits that the local Project Manager's do not always appear to take an active role in the allocation of expenditure to purpose category. There is a reliance on assessments undertaken by Consultants at the time of project inception and these are not routinely reviewed by the Project Team. QBEG is however, reviewed by the Regulation team, but there is limited understanding of proportional allocation across the project

Detailed in the table below, is a summary of the sewerage service related schemes we reviewed during the year, as part of AIR10. As can be seen, there is a general under

allocation to Base Maintenance (B), which is reflected in the Reporter's suggested allocation.

Project Reference	Project Name	Budget (£k)	LBE (£k)	AIR10 Spend (£k)	CIDA QBEG Allocation				Reporter QBEG Allocation			
					Q	B	E	G	Q	B	E	G
KT124	Dromara WwTW	[x]	[x]	[x]	52	41	0	7	43	50	0	7
KS224	Downpatrick WwTW	[x]	[x]	[x]	25	25	0	50	40	40	0	20
KF005	Coalisland WwTW	[x]	[x]	[x]	62	38	0	0	50	33	0	17
KA143	Aldergrove Trunk Sewer	[x]	[x]	[x]	0	20	56	24	0	33	33	34
KF012	Moygashel Improvements	[x]	[x]	[x]	98	0	0	2	90	5	0	5

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

For KT124 – Dromara WwTW, the Reporter's independent estimate of the split is 43/50/0/7 assuming that approximately 4% of the expenditure on odour/resilience is allocated to Base.

For KT224 – Downpatrick WwTW, the CIM identifies a QBEG split of 23/25/0/50 but the Reporter is concerned that for this phase of the project, there is a greater emphasis on the refurbishment of existing units and the addition of processes to meet the revised quality standards than on extending the capacity for greater flows. The Reporter would recommend an alternative QBEG split of 40/40/0/20 which recognises the substantial amount of capital work which is being undertaken to refurbish or replace existing assets which would otherwise require capital maintenance expenditure either at this juncture or in the short-term.

For KF005 – Coalisland WwTW, Q is a major driver for investment and, with the need to expand the works as well as overcome the overloading and meet short-term growth, the decision was made to abandon the works and build a new one. However, the old works presented a significant maintenance liability which also needs to be recognised. The Reporter therefore believes that a QBEG allocation of 50/33/0/17 is more appropriate.

For KA143 – Aldergrove Trunk Sewer Scheme, The Reporter believes that apparently large allocation to enhancement is due to the poor gradients in this area which cause the flooding; this precipitates the need for a larger diameter which in turn is proportionate to cost. In the Reporter's view, the QBEG split should reflect the purpose of the asset rather than the solution and a more even split seems therefore more appropriate: 0/33/33/34.

For KF012 – Moygashel Improvements, The QBEG allocation has changed markedly over time, due to improved understanding, changing requirements and changing

solutions. QBEG in SBP was 100/0/0/0, at CIP it was 48/27/0/25 and the 2009 Q2 CIM indicates 98/0/0/2. The Reporter's view is 90/5/0/5 because whilst the principal driver is quality, there is a transfer of existing utilities to this site from Killyman WwTW and the Moygashel works was overloaded so this solution, albeit a short-term solution, provides greater headroom.

We provide further detail on the Company's approach to QBEG proportional allocation within our commentary to Table 36.

4.1.2 Obligations prior to the SBP

NI Water has not reported expenditure against any pre-SBP obligations for AIR09. Although we did identify some expenditure incurred during the year on projects initiated by the Water Service prior to the SBP, which suggests spend incurred during the year against these pre-SBP schemes could be included in Block A.

4.1.3 Intermittent Discharges

For 2009/10, NI Water has reported £23.2m expenditure on UID related outputs, summarised as follows:

- | | |
|------------------------|---------|
| • Sewerage Service - | £19.66m |
| • WwTW - | £0.09m |
| • Outfalls/Headworks - | £0.02m |
| • WwPS - | £3.44m |

The majority of spend on UIDs reported during the year was once again incurred on UIDs associated with the Belfast Sewers Project (circa £13.4m). Although this project has been subject to regular scrutiny, we reviewed this project for AIR10, to provide an update on progress to date, as summarised below:

Belfast Sewers Project – Progress Update

The 10km storm water tunnel ends at a pumping station and waste water treatment works. The vast majority of any storm water is pumped into the river via five duty and one standby pumps and a series of drum screens. Within this arrangement, one of the connecting pipes has cracked and needs to be replaced.

Of the 10 tunnel connections proposed, 3 have now been completed. These are the main tunnels intended to alleviate flooding whilst the remainder primarily address 'environmental' issues. An overall budget of £16.2m has been agreed with the DFP.

[x]

- [x]
- [x]
- [x]

Otherwise, only minor further expenditure is anticipated and the residual risk schedule now contains few, relatively minor items.

Other related contracts are also largely complete. Of the [x] of sewer in the contributing urbane area, CCTV work has been identified for, and undertaken on, [x]. This work is complete and only minor expenditure was outstanding in 2009/10.

Contract work [x] on critical sewer repairs is still ongoing.

4.1.4 EU Directives

NI Water has agreed a relatively large SBP wastewater quality programme, whereby 75 WwTW improvements were forecast for delivery during the SBP.

We found that 26 of the 75 outputs were forecast for delivery during the Report Year. Of these, three were delivered ahead of programme, 18 were delivered on schedule, whilst a further five schemes have either had their completion date deferred or are no longer required. We queried the reasons for delay/removal of these schemes and have summarised the Company's responses below:

- [x] – there has been long drawn out negotiations with the NIEA and the Loughs Agency regarding the location of the effluent outfall. Further delays have occurred as the selection of a suitable site has also resulted in protracted negotiations
- Darragh Cross WwTW – difficulties encountered in the purchase of land to pick up a small hamlet at Jacksons Crescent has delayed the completion of this project.
- Lurganare WwTW – delays caused by the change of scope to the project. It was initially considered that an influent pump-away to Newry WwTW was the preferred solution. However, following discussions with NIEA, the solution was changed to treatment and effluent discharge to a nearby river.
- Portavogie WwTW – a solution was abstracted from an original SBP project – Ards South. The Ards South solution was more complex than originally perceived, consequently some projects were abstracted and separate solutions provided, of which Portavogie was one of these schemes. To further compound the issue, there are also land purchase issues at the Portavogie site.
- [x] – is no longer required, as on investigation it was discovered that [x] was privately operated and not an NI Water asset.

We sought evidence to confirm that NIEA have been kept informed of the delayed delivery to the schemes highlighted above and the Company advised that NIEA were kept informed of progress, but no formal 'relaxation' of delivery dates were provided.

In addition to the outputs programmed for delivery in 2009/10, we found that NI Water has also completed five x 2008/09 schemes, one x 2007/08 scheme and five x non-SBP schemes.

For the schemes completed during the year, and in previous years, we queried whether NIEA has provided any formal sign off/approval of the solutions delivered to confirm that the driver has been achieved. NI Water advised that there is still no formal system in place where works are signed off, although they advised that NIAUR would like to see mechanisms in place to formally agree the delivery of outputs. As explained in AIR09, we found that prior to a scheme being initiated, E&P will submit a pre-application to NIEA based on the assessed PE's and flows. NIEA will then issue design standards. Prior to the upgraded/new WwTW coming into operation a full application form will be submitted for the final Water Order Consent which will come into effect from a specified date. NI Water is self monitoring so undertakes audit sampling at all WwTWs with numeric standards to a schedule agreed with NIEA. These results are submitted to NIEA on a monthly basis and from these the compliance with the environmental drivers can be ascertained. For WwTWs with descriptive standards, there will still be design standards but to confirm the meeting of environmental drivers, NI Water will submit the performance and take-over test data to NIEA. However, this has not yet occurred.

For AIR10, we reviewed the breakdown of expenditure for UWWTD schemes and found a large proportion of the report year expenditure (circa 66%) related to PC10 carryover schemes, with £1.7m incurred at Coalisland WwTW.

In addition to the above schemes, we also noted expenditure against KS253 – Drumaness WwTW (£368k), which is neither an SBP nor PC10 carryover scheme. It appears that Drumaness WwTW is actually a pre-SBP scheme, suggesting that expenditure could be reported in Line 1 of Table 38, as an obligation prior to the SBP.

Furthermore, we noted that expenditure against Ballybrakes and Glenstall WwTW (KC252) was reported against the U2 driver when it is actually a U1 scheme.

For Line 9, the majority of expenditure against the Bathing Water Directive (BWD) was incurred at Ballyhalbert WwTW (£0.29m) and an inline pumping solution for Lukes Point DAP Phase 1 (£0.6m).

We found that expenditure associated with the Freshwater Fish Directive has been incurred on all schemes forecast for delivery in 2009/10, with the exception of Limavady WwTW.

In addition to the funded SBP outputs, detailed in the Company's commentary, we found there was also expenditure during the year against Moygashel, Crossmaglen and Milltown

(Antrim) WwTWs. The Company advised that funding had been allowed for these sites in the SBP, however, actual outputs were not defined. We queried the nature of these sites and sought to confirm the extent of expenditure against undefined outputs, and found that the above WwTWs were identified as requiring a capital project to ensure effluent quality compliance. NIEA set the effluent discharge standards and the capital works programme delivered projects at each location thus ensuring the required environmental compliance.

As highlighted previously, NI Water has also reported significant expenditure against PC10 carryover schemes.

Once again, NI Water has reported significant expenditure against the other EU Directives, which we have summarised below:

Driver	Total	U3	U4	U5	U6	U7	HS 1	HS 2	SF	WFD
2009/10 Expenditure (£k)	23,526	3,900	22	5,768	2,687	2,597	1,454	1,395	322	5,382

As can be seen in the table above, there are some key programmes of work captured within the 'Other EU Directives' catch-all line, which suggests NI Water's priorities differ to the Company's in England and Wales. On this basis we recommend that NIAUR reconsider the future structure of Table 38 in order to better reflect NI Water's circumstances.

We found that total expenditure against each of the programme areas has been adjusted on a pro-rata basis to ensure consistency with the total expenditure reported in Table 36. The Company advised that the adjustment process accounts for rounding errors between Oracle and Captrax. We confirm that the adjustment was negligible circa £45k.

4.1.5 Other environmental programmes

Whilst NI Water does not have a formal first time sewerage programme funded in the SBP, expenditure was incurred during the year in the provision of first time sewerage for existing properties identified during the delivery of capital schemes. An example of this relates to Cranagh WwTW, where £124k was incurred during the year.

4.1.6 Investigations

No expenditure reported during the year

4.1.7 Sewerage sludge management

Not applicable

4.1.8 Capex Totals

We found that all projects now have CIDA allocation. Therefore the total Capex recorded for the Report Year has only been adjusted to account for rounding errors on Captrax, to ensure reconciliation with expenditure reported in Table 36 and as such does not quite reconcile with CIDA, as described in Section 4.1.4 above.

4.2 Operating Expenditure

4.2.1 General

The Company advised that incremental opex has been calculated directly from the accounting general ledger. It advised that it considered those sites that had become active prior to and during 2008/09. 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.

Although the process relies substantially on manual assessment we believe that it is capable of reporting incremental opex that is reflective of the actual additional opex due to capex incurred in the year.

The allocation of the Opex across individual lines is based on CIDA analysis where the allocation is split between all CIDA enhancement categories. Projects with a Base allocation in CIDA have had this transferred to the Enhancement categories on a pro-rata basis for applying Enhancement Opex lines. This is because all base additional operating expenditure is coded to enhancement. See our commentary for table 36 for more details.

The approach to application of the expenditure across quality drivers is the same as that used for the Capital schemes. The Opex costs relate to the works commissioned during the SBP period.

4.2.2 Unsatisfactory Intermittent Discharges

The Company has reported £27k for intermittent discharges for the report year, of which £26k related to KT140 – Huguenot Drive, Lisburn SPS upgrade.

4.2.3 Discharges – EU Directives

Line 8 – Opex: Continuous discharges

The Company has reported £469k for continuous discharges for the report year, with significant spend recorded against KC252 - Ballybrakes & Glenstall WwTW (£278k). Nominal opex was also recorded against recently completed schemes – Gilford WwTW, and Saintfield WwTW.

Line 10 – Opex: Continuous and intermittent discharges – Bathing Waters Directive

The Company has reported £61k for intermittent discharges, with significant spend recorded against KV033 – Warrenpoint WwTW (£42k)

Line 12 – Opex: Continuous and intermittent discharges – Freshwater Fish Directive

The Company has reported £109k for intermittent discharges, with significant spend recorded against KB035 – Cookstown WWTW (£41k). Nominal opex was also recorded

against recently completed schemes – Gilford WwTW, Saintfield WwTW, Lisbarnet WwTW and Annahilt WwTW, amongst others.

Line 16 – Opex: Continuous and intermittent discharges – Other EU Directives

The Company has reported £747k for intermittent discharges, with significant spend recorded against KR333 – Newtownbreda, Dunmurry, New Holland WWTW's Nutrient removal (£204k) and KR342 – Belfast lough north shore WWTW's (£183k).

6. Confidence Grades

6.1 Capital Expenditure

All capital related expenditure is extracted directly from CIDA. We have undertaken a review of the spreadsheets, which access and collate the expenditure information by project for the Report Year, and based on the allocation discrepancies identified confirm the confidence grade of B3 for all capex related lines, suggested by the Company.

6.2 Operating Expenditure

The Company has reported a confidence grade of B4 for all opex related data, which is consistent with that reported previously and in other tables.

7. Consistency Checks

We sought to ensure that lines 29 and 30 of Table 38 were consistent with 7 and 8 of Table 36, and found a slight discrepancy between T36 L7 and T38 L29 (circa 0.2%) which was due to the reallocation of expenditure associated with the new obligation at Derrytrasna WwTW.

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Date: 30 July 2010

Prepared by: [x]

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 should be consistent with those reported on the other capital investment.

For AIR10, any capital expenditure which is not captured within standard CIM submissions should be included to allow reconciliation of total Capital expenditure on Table 40 with that of the other Capex tables within the Annual Return.

2.1 Key Findings

- Consistency between Table 40 and Table 32 has been satisfactorily demonstrated.
- Table 40 is consistent with the CIM template issued with the Guidance, NIW has included two additional columns (1a and 1b) to assist in relating actual projects undertaken to those identified in the SBP
- Actual expenditure has been deflated to 06/07 prices using SBP assumptions.
- Output data are now being recorded. Table 40 reports outputs over the 3 year period and whilst NI Water believes that reliable data is now being reported, the information trails we have discussed/reviewed are offline, collate a large amount of base data and contain references which cannot be corroborated against secure and stable data. Our audits on this information have therefore been relatively superficial. Errors, mainly related to the apportionment of new and renewed pipes, have been noted and NI Water intends to issue a revision.
- Procedures for proportional allocation are significantly improved on previous years and allocations into QBEG categories have been greatly improved with data collation processes now being largely automated.
- Apportionments are undertaken by project engineers/managers at project level, many of which have been internally reviewed and challenged to improve consistency and robustness.
- Overall, we believe that the allocation of investment into service areas and asset types has been done well.
- Previous concerns over omissions and inconsistencies in the asset category/type information have been fully addressed.

2.2 Recommendations

- If this table is endeavouring to identify the differences between the SBP capital investment assumptions and the actual expenditure due to causes within management control, it would seem more suitable to use actual COPI inflation (rather than that forecast in 2006/07) so as to eliminate the prevailing external economic factors, which have been significantly different. This would be consistent with the interpretation in England and Wales. [We note that in the proposed PC10 template, actual expenditure will be reported in money-of-the-day terms rather than deflated to the 2007/08 baseline, and we anticipate that NIAUR intends to adjust the determination allowances by COPI to effect a more appropriate comparison].
- The indexation figures to be used in this and tables 35a and 36a should be provided by NIAUR.
- To improve the confidence in the QBEG allocations, we recommend that formal records are kept of attendees at relevant training events and of the checks, challenges and changes that are already being effected as a result of the investment approvals processes and the 'financial team' reviews.
- We recommend that we work with NI Water early in the current year to assist in the preparation and presentation of suitable, transparent audit trails which will assure the outputs information to be reported in the PC10 period.
- With regard to the table itself: as the spreadsheet becomes more complicated with projects which may overlap between periods or may relate to change protocols or interim determinations, it could be helpful to include a column for use in identifying the 'determination' to which each project relates. This could, if required, be extended to identify separately funded or separately monitored programmes (eg for consistency with tables 37 and 38).

3. Year-end capital investment reconciliations

In the AIR10 submission, our commentaries confirm a satisfactory reconciliation has been achieved between the capital investment tables.

To tie Table 40 to the AIR capital investment tables, we sought a reconciliation from NI Water. They provided a calculation which aligned AIR Table 40, via other information sources, to AIR Table 32 as follows:

{ x }

4. SBP Projections

NI Water has provided a spreadsheet, based upon information supporting the SBP, and which reconciles to the total capital expenditure profile given in the SBP (as reproduced below).

[x]

In order to report against the lines and tables in the AIR, NI Water has needed to recast the SBP supporting information and make some corrections/adjustments to align the SBP figures with the investment streams reported in Tables 35 and 36 and thus to produce the 'SBP Projections' given in columns 1 and 2 of Tables 35a and 36a.

With NI Water assistance, we were able to reconcile the totals and a sample of the SBP Projection figures back to the SBP extract above.

NI Water advised that, following the acceptance of the SBP (from which the above data is copied) the DRD adjusted the funding allowances assumed for the Capital Works Programme (CWP) between expenditure categories, as follows:

Expenditure category (£k in 06/07 prices)	2007/08	2008/09	2009/10
Water infra (base)	-2,708	-2,184	-2,626
Water infra (enhancement)	-3	-101	-59
Water non-infra (base)	+2,711	+2,285	+2,685
Sewerage infra (base)	-4,887	-3,966	-3,804
Sewerage infra (enhancement)	-307	-180	-198
Sewerage non-infra (base)	+5,194	+4,146	+4,002

These net to zero in each year and in each service area.

NI Water has also adjusted their view of the SBP Projections by moving the assumed expenditure on Sewage Pumping Stations from infrastructure to non-infrastructure to accord with the reporting guidelines as follows:-

Expenditure category (£k in 06/07 prices)	2007/08	2008/09	2009/10
Sewerage infra (base)	-3,557	-3,626	-3,982
Sewerage non-infra (base)	+3,557	+3,626	+3,982

Whilst these changes are not evident in Table 40, they will be a component of the explanations which cover the differences between the assumed SBP budget allowances and the actual expenditure incurred in delivering the Capital Works Programme.

5. Indexation

As indicated in the reconciliation above, NI Water has indexed the SBP projections from the 2006/07 base year using the inflation assumption used at that time. These are:

- For COPI: 5.38% for 2007/08 and 2.50% for 2008/09 and beyond, aggregating to an inflation multiplier of 1.1072 for 2009/10.
- NB - For RPI (not used in table 40): there is no reported Determination information for opex, so indexation is not required. However 2.50% per annum was assumed in the SBP for opex.
- NB - In reconciling the information supporting the SBP to the figures that were finally agreed with DRD, NI Water has found it necessary to use a hybrid inflation rate for the M&G programme cost assumptions. These equate to 3.71% for 2007/08 and approximately 2.50% beyond.

If these tables are endeavouring to identify the differences between the SBP investment assumptions and the actual expenditure due to causes within management control, it would seem more suitable to use actual RPI and COPI inflation (rather than that forecast in 2006/07) so as to eliminate the prevailing external economic factors, which have been significantly different. Thus, we believe actual RPI and COPI should be used and this would be consistent with the interpretation in England and Wales, where the indexation figures to use are provided by Ofwat.

6. Differences between the SBP and current programmes

6.1 DZS and DAS

For comparison with the SBP budgets, Distribution Zonal Studies capex, at £1.54m in 2009/10, has been removed from Table 40 as, with the new organisational structure, this activity has been moved to the Asset Management directorate. Similarly, the costs associated with Drainage Area Studies, at £1.10m in 2009/10, have also been removed. We have confirmed the derivation of these values back to Oracle.

Within the SBP, the DZS and DAS costs were included in the project costs. The assumptions used at that time are not sufficiently detailed to distinguish the allowances assumed but in NI Water's final Cost Base report, allowances of 5% for DZS and 2% for DAS on all (water or sewerage) infrastructure costs were assumed.

6.2 Allocation assumptions

There are significant differences between the proportional allocation assumptions made in the SBP (which tended to be poorly informed at project level and generic at programme level) and those now being applied using the CIDA methodology.

The table below indicates the scale of changes in allocation. They are taken as straight averages of the allocations assumed from the projects in each category: they are not weighted by scheme capex.

Asset Type		SBP Assumptions				SBP Outturns			
		Q	B	E	G	Q	B	E	G
Water	Facilities and pumping stations	17	47	0	36	22	47	18	13
	Service reservoirs and towers	12	60	0	28	20	56	7	17
	Resource facilities	-	-	-	-	7	59	9	25
	Treatment works	-	-	-	-	17	60	8	15
	Infrastructure	*	*	*	*	10	41	3	46
	M&G	-	-	-	-	2	76	2	20
Wastewater	In-line pumping stations	23	46	0	31	21	49	8	22
	Sewage treatment works	31	23	1	45	21	48	5	26
	Sludge treatment works	-	-	-	-	32	58	0	10
	Terminal pumping stations	-	-	-	-	6	53	9	32
	Sea outfalls and headworks	37	44	0	19	38	55	1	6
	Sewerage	22	32	1	45	20	35	5	40
	M&G	-	-	-	-	0	100	0	0

Figures in %

QBEG: Quality; Base; Enhancement; Growth

- no data available in CIM

* insufficient data for meaningful comparison

Of particular note from the above table is the general migration away from Growth and towards Enhancement. As stated elsewhere, our current view of the proportional allocation methodology is that it is undertaken in a much more informed, checked and appropriate way and so we can only deduce that the principal cause of the variance is the better understanding and implementation now employed (see section 7 below).

In one category noted in the table above, 'Sea outfalls and headworks', the allocation shift has been from Growth to Base. We investigated this further and discussed the cause with NI Water. The shift is dominated by one project KB436 (Whitehead/Ballystruder and Ballycarry) where QBEG has changed from 24/53/0/23 to 78/10/0/12. The project description provided indicates that the initial driver was deemed to be Q, but the scope of works provided for the project includes significant replacement as well as new facilities and a new outfall. Thus, although this scheme was not reviewed in the depth that a scheme selected for capex audit would have been, we believe that the allocations in the table are reasonable.

6.3 *Project scope reviews*

Additionally, the Company had applied a rigorous challenge process, 'Mprove', to their Capital Works Programme projects, eliminating or reducing the unnecessary elements of the schemes, so as to ensure a more focussed delivery of the regulatory outputs and secure cost reductions. I believe that this is likely to influence the proportional allocation as it appears that the main elements being impacted will be investment in base service (MNI). As the WWTW programme is the most significant, the influences of this process are likely to be greater in the sewerage service than the water service.

The difference in maturity of understanding of the allocations process and the way in which it is implemented are such as to render any comparisons between the allocations of the outturn programme and the assumptions in the SBP inappropriate.

6.4 *Capitalised salaries*

We note that the current relationship between capitalised salaries and the CWP is approximately 4%. The SBP ratio was 2.04%.

6.5 *Capital contributions*

Capital contributions are derived from Oracle. We requested that NI Water provide a reconciliation of the £633k used in the analysis in section 3 above, with the figures stated in tables 35, line 27 and table 36, line 24. NI Water staff were able to extract the relevant information from their systems to satisfactorily demonstrate their figures.

6.6 *Capital expenditure*

Looking at the CWP expenditure over the SBP period, we note the following can be derived from the CIM table.

[x]

7. Proportional Allocation

NI Water has produced a Capital Investment Driver Allocation (CIDA) Manual, June 2007 (November 2009). This is a comprehensive document 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 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 with the NIAUR Reporting Requirements and the Regulatory Accounting Guidelines and should form a sound basis for compliant reporting in Tables 32, 34, 35, 36, 37, 38 and 40.

The Reporting Requirements indicate that, for a company with capital investment greater than £100m per annum (which includes NI Water), proportional allocation should be applied to all schemes/projects expending over £100k in the Report Year. This has been done.

Further training events have been held in the year, a programme of project reviews has been undertaken (covering the majority of projects and the vast majority of expenditure on SBP capital investment programmes) and the requirement for a CIDA review at key project stages (A0, A1, A3 and Project Commissioning) has now been embedded into business-as-usual practice.

Templates for capturing the CIDA information have been produced and linked to investment monitoring systems and to Regulatory Reporting processes, and a series of reconciliation checks have been undertaken to provide assurance of the integrity of the operation of these processes.

The processes are, unfortunately, necessarily time-consuming and complex and much detailed information needs to be assimilated by each user in order to fully and correctly apply all the allocation procedures in accordance with the guidance. Furthermore, we anticipate that many of the users are occasional or infrequent and the retention of these

requirements (when they are perceived to be of relatively low relevance/importance to their normal duties and competing pressures) will inevitably lead to some mis-allocation as the concepts and processes bed in and become a familiar routine. In our experience, this is an ongoing issue which regular training and refresher courses should address.

It is therefore appropriate for NI Water to continue to undertake thorough checks on the allocations, noting where and why any corrections are required such that additional training and increased vigilance can be focussed on any areas of concern.

Allocation Checks

During 2009/10, NIW continued to review the allocation assumptions at several levels: as part of the investment approvals processes at A0, A1, A3 and Project Commissioning stages, the allocations are reviewed, then passed to the finance team for uploading. Specialists in the finance team also review the new additions and amendments and challenge those that do not appear to accord with project descriptions, purposes or other expectations.

Recommendation

To improve the confidence in the allocations, we recommend that formal records are kept of attendees at relevant training events and of the checks, challenges and changes that are effected to the data as a result of the investment approvals processes and the 'financial team' reviews.

8. Outputs

Columns 120 and 123-164 of Table 40 relate to the outputs of the CWP projects. No formal output schedule was agreed for the SBP, therefore no data has been entered into columns 120-142 of the table.

The provenance of the outputs information is of concern and although there have been substantial improvements in the methodology, the information sources are disparate and involve significant manual manipulation and reconciliation, which does not lend itself to robust or efficient audit. The data presented is also cumulative which renders it subject to the reduced rigour applied to the previous years' information. As a result, NI Water has helpfully provided second-tier information (spreadsheets which show how the lengths of water mains and sewers are generated and how they reconcile to other AIR tables), which we have reviewed, but we have not pursued this information (nor samples thereof) back to source data at project or contract level. We would hope that a greater benefit can be gleaned by assisting in the development of robust and repeatable methodologies and end-to-end processes which would include suitable audit trails such that these outputs can be assured in future years.

In terms of Actual Project Outputs delivered, NI Water has reported the following cumulative outputs in the CIM table (all intervening lines have no data):

*Note****Drinking Water Compliance***

143. Taking into account Authorised Departures	-	MI/d	
144. Not taking into account Authorised Departures	112.4	MI/d	

WWTW compliance (>250 pe):

147. Nr of works	96		
148. Population equivalent	78,253		(1)

WwTW passing numeric consents

149. Nr of works	85		
150. Population equivalent	1,837,298		(1)

Internal sewer flooding caused by overloaded sewers:

153. Properties removed from Register (DG5)	141		
154. Length of sewer replaced/refurbished	-	m	
155. Properties removed from low pressure register (DG2)	1,808		
157. Nr uCSO's removed/made compliant	80		
158. Nr UID's removed/made compliant	-		

Water mains

159. length renewed	589,385	m	(2)
160. length renovated	0	m	
161. length brand new	636,615	m	(2)

Sewerage

162. length renewed	77,619	m	(3)
163. length renovated	9,046	m	(3)
164. length brand new	115,050	m	(3)

Total 201,715 m

Notes

- (1) Data source needs to be quality assured
- (2) Supporting spreadsheet (derived from Captrax) provided which materially reconciled (to within 1km) to table 40 and table 11, minor adjustments for prior years necessary. Note the double-counting of lengths where mains up-sizing is involved.
- (3) Supporting spreadsheet (derived from Captrax) provided which materially reconciled (to within 1km) to table 16. Error detected in compiling the table 40 totals whereby the splits between the three length categories are incorrect but the overall 3-year total appears correct. Table 40 to be corrected and re-issued:
- | | | |
|--------------------------|----------------|----------|
| Col 162 Length renewed: | 32,785 | m |
| Col 163 Length renovated | 9,046 | m |
| Col 164 Brand new length | 159,884 | m |
| Total | 201,715 | m |

9. Other findings

9.1 *Consistency with Tables 37 and 38*

Table 40 reports regulatory outputs at project level and a number of these were cross-checked back to the output of the review to ensure the upload/download and any interim manipulations still retained the appropriate CIDA splits. Tables 37 and 38 report on investment in quality drivers and a series of sample checks were made to trace the expenditures stated in the tables back to relevant allocations from appropriate projects. These checks also assist with the verification of the allocations of investment into base and enhancement purposes as required by Table 32.

We checked the report year spend and the QBEG allocation and overall, we found no material inconsistencies between CIDA, Table 40 and the other AIR10 information.

9.2 *CIDA to Table 40*

We chose an additional small random sample of projects to review, to compare between CIDA and Table 40 and to test the assumptions of proportional allocation on the basis of the information presented, which in CIDA had some additional scope information. We were fully satisfied with the consistency of these.

9.3

[x]

10. Table 40 structure/observations

With the exception of NI Water's addition of columns 1a and 1b discussed above, and the absence of column 165: *Explanatory Notes/ Comments*, the Table 40 presented by NI Water has the same structure as that issued by NIAUR with the Reporting Requirements.

We are pleased to note that many of the suggestions/recommendations we made for AIR09 have been accepted and implemented and that the quality and comprehensiveness of information in this table has been significantly improved to high levels of compliance. We have undertaken a series of cursory checks on the data and have not identified any material concerns with the general completion of his table.

We also note that the future structure of table 40 has been the subject of discussions within the year between NIAUR and NIW and a modified template has been produced to take effect for the PC10 period. However, to facilitate data sorting and more realistic, we recommend a number of data cleansing activities or improvements to the table as follows:-

- Column 0 - We note that NI Water has now used a preliminary column for additional sorting purposes and believe that as the spreadsheet becomes more complicated with projects which may overlap between periods, to change protocols or interim determinations, it could be helpful to include such a column for use in identifying the determination to which each project relates [we note that this has been incorporated in the PC10 CIM as 'PC Project Period']. This could be further extended to identify separately funded or separately monitored 'programmes of work' (eg for consistency with specific lines of tables 37 and 38).
- Column 44 - we remain concerned that outturn capex is being deflated by the inflation assumptions used in the SBP rather than by COPI, particularly in the light of the recession (which was not anticipated in 2006/07). However, we confirm that Report Year capex has been deflated by 10.715% in accordance with the SBP assumptions of 5.38% in 2007/08 and 2.50% in 2008/09 and 2009/10. [We are therefore pleased to note that in the proposed PC10 template, actual expenditure will be reported in money-of-the-day terms rather than deflated to the 2007/08 baseline and anticipate that NIAUR intends to adjust the determination allowances by COPI to effect a more appropriate comparison].
- Outputs - The PC10 CIM template does not appear to include provision for reporting the outputs being delivered. NI Water has expended considerable effort in capturing, collating, reconciling and reporting this information to meet current requirements and, with some improvement to audit trails, we believe this would be reliable information, useful in the regulatory process.

We note the 9 projects with £0.594m (in 06/07 prices) spend 'below the line'. These are projects not linked to the SBP. The recommendation above relating to column 0 would enable these projects to be identified as separate.

Date: 30 July 2010
Prepared by: [x]