

Northern Ireland Water Ltd
Annual Information Return 2011
To the
Northern Ireland Authority for Utility Regulation



Public Domain Version

Part 1 of 10 containing:
Reporter's Report on the Board Overview

Reporter's Submission

By

CWJ Turner
Halcrow Management Sciences Ltd

Halcrow

Reporter's Commentary on the Board Overview

Basis of Opinion

In accordance with its Instrument of Appointment, Northern Ireland Water Ltd (NI Water) has appointed Halcrow Management Sciences Ltd, a ring-fenced member of the Halcrow Group, to provide reporting services to the Northern Ireland Authority for Utility Regulation (UR). The UR regulates the appointment and work of Reporters by a Protocol which formally sets out the mechanism for appointment and the tasks that the UR requires of Reporters.

The Reporter for NI Water, Chris Turner, supported by a team of technical and operational specialists, has examined, tested and provided opinion on the information provided by the Company in its Annual Information Return 2011.

The Reporter's work includes:

- assessing the Company's compliance with the UR's reporting requirements and guidelines,
- ensuring that the Company's material assumptions have been exposed and explained, and
- preparing a written report together with a professional opinion on the Company's processes for developing its submission and on the accuracy and reliability of the information.

In accordance with our appointment, we have carried out checks on the Company's reporting processes and examined the data in the context of our knowledge of NI Water's activities and the prevailing conditions in the regulated water sector. We have examined and provided opinion on the Company's tables, commentaries and other information forming its Annual Information Return 2011 to the UR.

We would like to thank NI Water for the time and assistance they have afforded throughout the 2010/11 audits. We have received full co-operation from NI Water and have had sufficient and timely access to the staff and information that we reasonably require to form our opinions. We have no reason to believe that any relevant information has been withheld.

NI Water's Governance of the Annual Information Return

In the Board's Overview, which accompanies the AIR11 submission, NI Water describes the processes and internal systems of control which have been applied to the preparation of the submission.

In accordance with our appointment, we have carried out checks on the Company's reporting processes and examined the data in the context of our knowledge of NI Water's activities and the prevailing conditions in the regulated water sector. We have examined and provided opinion on the Company's tables, commentaries, compilation methodologies and other information forming its Annual Information Return 2011 to NIAUR.

Our audits confirm that NI Water continues to develop their line methodologies for all the non-financial information. To the extent we are required to audit and comment upon the financial measures information, we confirm that methodologies also exist for these tables. Any departures from their prescribed methodologies that we have identified during the course of our work have been brought to the Company's attention and, where material, are reported on in our detailed commentaries or where of concern, have been escalated into this report.

As stated in their Board's Overview, NI Water has compiled their AIR11 submission in accordance with their AIR Completion Manual (ACM). The ACM was updated in the year to accommodate the new lines and tables; changes in roles and responsibilities and the restructuring of NI Water's directorates. We confirm that this document addresses our key observations and recommendations from AIR09 and AIR10 for enhancing the regulatory reporting processes and information quality.

All requirements and responsibilities are disseminated into the Directorates through the AIR Project Board. The project management team then communicates with the full team directly. We found that line authors, reviewers/checkers, and approvers (level 3 manager or above) were identifiable for all AIR entries. As AIR information is reported to the Finance and Regulation team and approvals from senior management are received, the data is locked down and thereafter a formal change control takes effect. Final AIR11 sign-off was effectively achieved at the NI Water Board meeting of 6th July 2011.

We also note that NI Water continues to make significant enhancements to their approach, with associated benefits to their methodologies and quality assurance procedures, resulting in a greater understanding of, and confidence in, their reported data. In particular, the ACM now requires assurance statements to be produced. These provide evidence of sign-off by the authors, reviewers and level 3 managers of the line methodologies, data and commentaries. At the close of the audit period, we checked a representative sample of tables to ensure that this was being implemented and we were satisfied that it was.

We note that the Company's Internal Audit function has not undertaken further reviews of the Annual Information Return processes in 2010/11. In the Internal Audit Annual Assurance Statement, they comment that since the Reporter's approach is similar to theirs, they consider it more appropriate to avoid duplication and thereby make more effective use of resources. Thus, their focus will be on ensuring that the Reporter's recommendations are appropriately managed and implemented to deliver continuous improvement of the AIR process.

We also note that the actions pertaining to any recommendations made by the Reporter, Auditor, Internal Auditor or Regulator are now monitored by the Director of Finance and Regulation (a recommendation from 2010/11) and, apart from a small number where the log had not been updated, only those where close-out was not programmed to be completed within the year remained to be actioned.

Queries and clarifications are co-ordinated by the Economic Regulation (project management) team but referenced and passed through to the relevant staff for information/resolution. The Economic Regulation team also maintain control of the definite version of the AIR document, including the issue of any errata.

We have carefully considered the Board's statement on the compilation of the Annual Information Return and except as identified below or in our Main Report, we consider that:

- The measures and procedures they describe are consistent with those we observe being implemented during our audits of the AIR information
- Material assumptions embedded within the Company's procedures appear reasonable
- The report adequately represents NI Water's activities and performance in the Report Year
- The information reported in AIR11 is consistent with the Reporting Requirements
- NI Water has established suitable procedures for collecting and reporting the required information consistently and accurately
- The processes of control of AIR information by the Finance and Regulation team appear to be sound, and simple but reasonable systems are in place to manage and check that the information they receive has been duly approved
- They continue to enhance their corporate governance and QA processes and have applied them to the preparation of this submission
- Senior managers and Directors are required to approve and thereby assume accountability for the integrity of the regulatory information provided.

We are also able to confirm the degree of involvement of the Board in the production and completion of the AIR11 submission. We have witnessed Board and Executive Team meeting minutes which demonstrate that Regulatory information submissions have been an important focus of their attention.

Significant time and resource is invested by NI Water in regulatory submissions. We assume that this is as a result of the importance in which the supply of reliable, accurate and complete information is held, and the speed at which the Company is trying to catch up by improving their fundamental systems and processes (which supply and collate the necessary information in a consistent and timely manner). Indeed, the investment targeted at providing and improving their regulatory information is more significant than that which we witness in similar reviews of water companies in England and Wales. We feel that the continuation of these efforts and the pace of improvement will successfully hasten NI Water's progress towards an appropriate quality of information.

Our commentaries on each of the AIR11 tables provide further detail of our findings on the processes and methodologies, assumptions and sources of information which are employed to assemble the components of reported data and the degree of compliance against the reporting guidelines that has been achieved.

We therefore consider that NI Water's Annual Information Return process is appropriate for generating suitable information for the submission and has been effectively implemented for producing AIR11.

Consistency of the Board's Overview with the AIR 11 submission

We confirm the consistency of the Report Year information in Tables A to E in the Board's Overview with the relevant information provided in the AIR11 tables as follows:

- Table A - Fully consistent, but we note an error in the processing rule for line 9, which would otherwise return a value for the percentage of calls receiving the engaged tone, rather than 'the percentage of calls not receiving the engaged tone'.
- Table B - Consistent except for line 12 where there may be confusion between the line description and the processing rule given. The Company has reported a value of 73.67%. This is consistent with a definition which includes both CSOs and other intermittent discharges in the calculation. However, the processing rule for this line, which excludes the CSO element, would generate a value of 85.8%.
- Table C - Blocks A & B only checked. These are fully consistent.
- Table D - Fully consistent. However, for line 20, the reporting requirements state that Table D, block D should include water savings from activities in Table 1, blocks A, B and C. NI Water's Table 1 should, but does not, include the water savings and costs relating to supply pipe leakage repairs.
- Table E - Fully consistent.

Key Outputs and Service Delivery

Table 2 - DG2 - Properties receiving pressure/flow below reference level

- Following clarification of the reporting requirements from the Regulator, an additional 94 properties were added to the register at the start of the year. Whilst these properties are within 15m elevation of an existing service reservoir, there is no statutory requirement for them to be supplied with a constant supply of water but they do still need to be included in the DG2 register.
- Nonetheless, a total of 304 properties were removed from the register, mainly as a result of network improvements, some 76 properties were added to the register as a result of better information. This results in a net improvement of 228 properties, further consolidating the previous year's reductions.

Table 2 - DG3 - Interruptions to supply

- DG3 performance has deteriorated during the year. However, this has been dramatically affected by the severe freeze thaw experienced.
- Due to the scale of the interruptions experienced, an approximate but appropriate allocation methodology was applied to allocate properties affected into the various interruption time bands. We believe the Company's approach is both pragmatic and reasonable in these circumstances.
- Nevertheless, if the freeze/thaw event of December 2010 was discounted, the Company's performance would still have been a deterioration, and below the Company's PC10 target.

Table 3 - DG5 – Sewer flooding

Flooding Incidents

- For AIR11, we have primarily focussed on the verification of the methodology to capture and report against the DG5 (internal flooding) indicator.
- We believe the Company has made considerable improvements and introduced significantly more rigour to the overall flooding process for AIR11. However, we believe there remain a number of improvements which can still be made to make the application of the DG5 methodology more effective and efficient.
- The introduction of the 'DG5 Panel' is a positive initiative, which adds further rigour to the reporting process and demonstrates improved governance. We consider there is scope for additional value to be derived from the collective technical/operational skills of the Panel, through a more active challenge of proposed additions and severe weather exclusions.
- We remain concerned that the number of confirmed incidents of internal flooding still seems disproportionately low for a company of NI Water's size and as yet, we have not been able to identify any robust correlation with factors which may be the cause of this difference.
- All incidents of internal flooding (overloaded sewers) should be reported in Table 3 Line 3, including those attributed to severe weather. As such, and on the basis of the numbers reviewed at year end, Line 3 should be 16 not 6.

DG5 Flooding Register

- The Company has almost completed an exercise to investigate, assess and cleanse the 742 historic flooding records that were on the Flooding Register as at 31/3/08. It was apparent that NI Water had investigated each incident, reviewed all available information and, where possible, spoken to the customer affected. Some work remains to be done and we consider that a number of improvements would materially benefit the process going forward.

Table 3a - External flooding

- The procedures used for reporting internal and external flooding are essentially identical. Thus our findings and recommendations relating to Table 3 also apply to Table 3a.
- NI Water has reported zero incidents of external flooding due to overloaded sewers for AIR11, and 1440 incidents of external flooding due to other causes.
- As the Company are still in the early stages of developing an external flooding register, they have not populated lines 12 to 25 for AIR11.

Table 4 - DG6 - Response to billing contacts

- When compared to the previous Report Year the overall number of billing contacts has increased by approximately 6%.
- A large increase was reported in the previous year due to the introduction of full charging for non-domestic sewerage but the increase this year is thought to be due to a number of factors including the severe winter delaying meter reads and a large number of meters being re-designated as part of a categorisation project undertaken by NI Water.

Table 5 - DG7 – Written complaints

- The total number of written complaints received has increased by 25%. This is predominately related to the winter freeze thaw event where over half of the total complaints received were sent in December.

Table 5 - DG8 - Bills for metered customers

- The Company report that 96.1% of customers received a bill based on a meter reading in 2010/11. The reported performance is ahead of the Company's target of 95% and a further improvement on 2009/10.

Table 5 - DG9 – Telephone contact

- During the freeze thaw event, the NI Water telephony provider recorded an unprecedented 699,564 calls which received an all lines busy tone. This total is over twice the number of calls answered in a normal year.
- Over 40,000 calls were abandoned in the year, of which the vast majority were attributable to the freeze thaw.

Table 5 - Special assistance register

- The number of customers registered on the scheme has more than doubled. We believe this is a combination of NI Water's efforts to promote the scheme and also the winter freeze/thaw event which raised awareness amongst NI Water's customer base.

Table 5a – Customer complaints data

- The breakdown of complaints reported by the Company is consistent with the complaint volumes reported in Table 5 and their initial allocation to complaint categories is satisfactory. However, we consider that there is a small risk that some allocations may change as a result of investigations, leading to some residual miscoding.

Table 9 – Water quality

- Overall improvements in water quality and OPI are evident, largely due to the completion of further improvements of PPP 'Alpha' works.
- No existing or new 'Legal Instruments of Work' or Authorised Departures for distribution input are in effect at the end of the Report Year.
- There have been further improvements to plumbosolvency with 99.55% zonal compliance with the current 25µg/l target limit for lead.
- Four 'Consideration of Provisional Enforcement Orders' were in place at the end of the Report Year covering THMs, Aluminium and MCPAs.

Table 11 – Water service activities

- There has been a small change in the reported numbers of mains bursts this year, decreasing from 147 to 137 bursts per 1000km, and is now similar to the AIR09 value of 141 bursts per 1000km.
- The migration to the Mobile Works Management system (MWM) appears to have significantly improved data capture and the totals are now based on actual numbers of logged mains bursts repairs, rather than the number of 'reported mains bursts' as previously. As we reported for AIR10, this has theoretically removed a significant number (estimated at around 20%) of previously duplicated event logs when entered for both the reported event and the actual repair.
- Nonetheless, the freeze/thaw incident during December/January appears have led to a significant increase in bursts during these months; the December number was 715 compared with a typical value of approximately 240 in other months.

Table 11a – Water serviceability indicators

- There has been a further improvement in the number of works with 95%ile greater than or equal to 0.5NTU, but the proportion of total output volume affected remains relatively high at almost 10%, primarily due to exceedences at Killyhevlin WTW.
- There are no sites with 95 percentile value >1.0 NTU.

Table 16 – Sewerage service activities

- It is still not possible to distinguish failures on laterals from failures on main sewers, although NI Water has recently added critical and lateral sewer base layers to their Corporate Asset Register. Work is also progressing on the identification of sewer repairs resulting from CCTV inspections.
- The improved collapse/blockage performance would suggest an improvement in wastewater infrastructure serviceability; however, it is difficult to draw strong conclusions until a consistent methodology is established over several years to determine the real trend.

Table 16a - Sewerage service serviceability indicators

- The company has reported a 5.6% increase in equipment failures compared with last year which the company is attributing to the abnormally wet weather conditions which resulted in an increased burden on sewage pumping stations.

Table 16b – Sewerage service serviceability indicators

- A steady performance across all indicators has been recorded.
- There has been an apparent improvement in reported performance at the PPP sites, although a lack of data from previous years, a changing data set and a background of tightening consent standards does not yet make this a robust trend.

Table 35 – Water – Expenditure by purpose

- Two of the three PC10 WTW outputs were delivered during the year. The Killylane WTW study is ongoing.

Table 36 – Sewerage – Expenditure by purpose

- We note that NI Water has committed to the delivery of a large UID programme over the PC10 period, however, our review of the CIM confirmed minimal expenditure against the nominated UID outputs.
- NI Water has a large WwTW programme for PC10, with 13 WwTW outputs and 30 Carryover WwTW outputs forecast for delivery during the period. NI Water has delivered two of these outputs during the year (Bush WwTW and New Holland WwTW) and 18 of the carryover schemes.

Table 40 – Capital Investment Monitoring Return

- Key milestone dates rarely match between Annex N (ex table C5-1), the CIM Baseline dates, the CIM current forecast and the date indicated during audit.
- Analysis indicates that re-programming has resulted in projects being brought forward as well as deferred but the projects we have audited this year show that whilst some projects have been delivered early or to the current 'Beneficial use date' milestones given in the CIM, there is general but small slippage in the programme as a whole (approximating to one month per project).

Table 41 – Health & Safety information

- The Company continues to improve their 'days lost rate' and 'occupational ill health rate'.
- See also our Supplementary commentary on Health and Safety, later in this Reporter's Overview.

Expenditure and financial performance measures**Table 21 – Activity costing analysis – Water, and****Table 22 – Activity costing analysis - Sewerage**

- Total operating expenditure is reported at £184m, a reduction of 7% on the previous year. Water service opex has increased by 7% but Sewerage service opex has fallen by 17%. A change in the proportions of the general and support expenditure allocated to water rather than sewerage functions largely accounts for this disparity.
- For the report year the general and support costs make up approximately 36% of total functional costs. The split for equivalent companies in England and Wales is approximately 24%. This variation may be due to: differences in allocations as compared to England and Wales; and/or additional costs at NI Water associated with transformational activities; and/or inefficiencies
- The company has also reported a number of atypical costs. These costs have been included in general and support costs and customer services.

Table 25 – Analysis of fixed assets by asset type

- No AMP adjustment has been reported in 2010/11.

Table 32 – Analysis of fixed asset additions and asset maintenance by type

- NI Water has continued to develop, implement and improve their proportional allocation procedures. Much work has been done to review ongoing projects and to better allocate the investment to the appropriate QBEG purpose categories, and we have seen evidence of this in our capex reviews; although we believe there is still a slight tendency to under allocate to Base.

Table 33 – Depreciation charge by asset type

- We believe the revised table format means the data reported by the Company is more accurate in relation to splits between different rows of the table.
- We note significant accelerated depreciation which follows significant accelerated depreciation from AIR10:
 - a £21.7 million impairment adjustment has been included, mainly correcting for assets not actually owned on formation of the company in 2007. These have been split between infra and non-infra. The non-infra assets have been split on the basis of the civil/plant asset split used at the time of formation.
 - Increased capital expenditure is also a driver for increased depreciation.
 - Together this means that the depreciation charge for the year has increased by more than £30 million.
 - These levels of accelerated depreciation are very high and represent 2.5% of the initial opening value of the regulatory asset base. We would not expect there to be consistent high levels of accelerated depreciation.
- Historically the IRC was based on a 10 year average. However for PC10 the IRC calculation is based on the final determination for PC10. The Company advised

that the Utility Regulator has determined that the IRC and IRE would be the same for the three years covered by PC10.

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

- The array of assets should be increased in order to allow more appropriate recording of actual asset lives and a more accurate simulation of the longer term non-infrastructure capital maintenance requirements;
- The audit trail for the basis of the split of assets into life categories is not transparent.

Table 35 – Water – Expenditure by purpose

- Overall, capital expenditure in Year 1 of PC10 is broadly in line with the forecast.
- Leakage related expenditure is 20% lower than that reported in previous years, despite substantially increased activity over the winter period during the freeze/thaw incident. The Company advised that the additional expenditure, which is predominantly wages and salaries, *'may have been captured under Networks Opex'*.
- The data reported in Table 35 does not fully reconcile with equivalent data in the CIM (which we deem to be the more correct). The discrepancy is associated with Enhanced Service Levels which incorrectly included expenditure associated with backlog base. As such, the submitted financial measures tables are not quite correct, with variance of up to 7% on one purpose category.

Table 35a – Water – Expenditure comparisons by purpose

- The PC10 expenditure allowances have been adjusted using actual COPI, resulting in a ~10% reduction in FD expectations for Year 1.
- Whilst some variance has been reported amongst purpose categories, overall actual expenditure in Year 1 is in line with the adjusted allowance for Year 1, with good progress made in the delivery of the PC10 water programme.

Table 36a – Sewerage – Expenditure comparisons by purpose

- The PC10 expenditure allowances have been adjusted using actual COPI, resulting in a ~10% reduction in FD expectations for Year 1.
- Overall capital expenditure in Year 1 is circa 17% below the inflation adjusted expectations. The reported under spend is of particular concern, as NI Water are unable to carry over unused expenditure from Year 1 to Year 2 and, when combined with recently confirmed reductions in Public Expenditure, it means NI Water will have real difficulty delivering the PC10 programme of outputs.

Table 40 – Capital Investment Monitoring Return

- Reasonable consistency between Table 40 and Table 32 has been satisfactorily demonstrated.
- Baseline expenditure assumptions are expressed in 2007/08 prices. Actual and

forecast expenditure is given in 2010/11 prices.

- Although the scope of the overall programmes and investment totals are the same, there are significant differences between the allocations assumed in the FD and those in the CIM Baseline. It is clear that NI Water has had to make assumptions about the FD allocations and have further modified the allocations to generate a Baseline which they consider to best represent a deliverable programme.
- Procedures for proportional allocation of actual expenditure continue to improve and our audits of projects and programmes indicate that allocations into QBEG categories are more reliable.
- Overall, we believe that the allocation of investment into service areas and asset types has been done reasonably well, though we still perceive that there is an under-allocation to Base maintenance and an under-allocation to infrastructure.
- The CIM Baseline appears to contain a good match to the outputs required in the Final Determination and to the total capital expenditure allowed, although it is not split into the programme areas, purpose categories and asset types as was assumed in the FD. We recommend that NI Water formally confirm that the Baseline information contained in the CIM presents a reasonable representation of the programmes of outputs and investment allocations and that the Utility Regulator considers using this information to redefine the initial PC10 capital programme expectations for outputs and for investment allocations, and from which any further changes can be assessed and monitored.

Key supporting information**Table 1 – Promoting the efficient use of water**

- The Company's water efficiency policies are in-line with those employed by water companies in England & Wales. NI Water makes more use of "face-to-face" techniques to distribute measures, so should be expected to achieve a higher installation rate. However, the lack of domestic metering (customers have less incentives to save water) and NI Water not being funded to provide a free/subsidised supply-pipe repair/replacement policy, limit the success of some of the measures.
- Table 1, block A should, but does not, include the savings and costs from supply pipe leakage repairs.

Table 7 – Water properties and population

- The methodology is consistent with that used in AIR10, with the exceptions that the property numbers are now obtained from the Company's own property database (RAPID) and the population estimates are derived from the revised (2008) NISRA projections.
- The Company has continued its non-household metering programme which has led to a further drop in the number of unmeasured non-household properties and a corresponding increase in the measured non-household property numbers.

Table 8 – Water metering

- NI Water reports that meters have been installed on all new properties and that it has made good progress with metering of non-household customers.
- The Company has also made good progress in meeting the targets set out within Appendix 19 of their response to the draft determination. A total of 1,017 installations have been reported against a target of 1,000.

Table 10 – Water delivered

- The Company highlight the impact on supplies of the extreme freeze/thaw event and weather conditions from late November 2010 to January 2011. The Company has undertaken additional analysis this year to separate exceptional customer night use from leakage. We have reviewed the leakage trend through the Report Year and can confirm that, until November 2010 the Company was on track to achieve a level of leakage below the target of 175 MI/d.
- A high level comparison of the nightline suggests that without an additional night-use allowance, leakage would have been reported at ca. 182 MI/d, whereas with the robust analysis presented during the audit, the best estimate of leakage is ca 177 MI/d. This suggests that the freeze/thaw event led to an increased leakage of ca 2 MI/d and increased night-use (including plumbing losses) of ca 5 MI/d. This ratio of 29% to 71% is consistent with the analysis reported in *Report of the investigations into the Freeze/Thaw incident 2010/11* by the Utility Regulator.

Table 10a– Security of Supply Index (SOSI)

- Changes to the parameters of the SOSI calculations have resulted in significant improvements in SOSI since 2008, achieving 97 for the current report year for the dry year average planned Levels of Service (LoS) conditions.
- The change for AIR11 primarily results from a minor re-allocation of PPP output. Although these changes are not consistent with the current draft Water Resources Management Plan, the Company considers this to be an appropriate split of resources for 2010/11.
- The company has not prepared a table for the Critical Period, although the Company now recognise that the critical period analysis is relevant for NI Water. They have therefore asked their consultant to undertake critical period analysis for the DWRMP which will then be included within AIR12.

Table 12 – Water explanatory factors

- There has been a further reduction in the total number of sources, particularly borehole sites, although the proportion of production at these sites was relatively small resulting in only minor changes to the overall percentage split of distribution input by source type.
- A significant increase in the value of the calculated pumping head (+16.8%) has occurred this year. This is due to data improvement (mainly from PPP sites) rather than any significant operational change.

Table 13 – Non financial measures – Sewerage properties and population

- The Company has continued its non-household metering programme which has led to a further drop in the number of unmeasured non-household properties and a corresponding increase in the measured non-household property numbers.

Table 15 – Sewage treatment

- The variance from AIR10 is due to more meters being installed. As a result of using measured flows, rather than consented volumes, the standard charged traders registered a 66% reduction in loading.
- (PPP-only): The reduction in load receiving biological treatment is not reflected by reduced volumes of sludge produced, which has increased. The cause is unclear as significant assumptions are used in both estimates.
- (PPP-only): In AIR10 this table reported on a part-year amount of sludge disposed of at Ballynacor Sludge Disposal Facility. This year's data represents a full year of PPP disposal, hence the significant change in data recorded.

Table 16 – Sewerage service activities

- Reconciliation of lines 1 & 2 with 14 & 15 does not follow the table definition. Instead adjustments are made in line with the Company GIS database which is appropriate and consistent with AIR10.
- There is an inconsistency between the reporting of WwTW IDs in line 17a but excluding WwTW UIDs from line 16a. However reporting is consistent with AIR10.

- Only a single drainage area plan has been completed and there are none ongoing at present. This is a consequence of the expiry of the previous framework for studies and ongoing delays in the procurement of a new framework.

Table 17a-g – Sewerage service explanatory factors

- Work is continuing to take place to allow NI Water to disaggregate the data in table 17a into sub-areas. The Company believes that it will be able to report disaggregated data by AIR12.
- There is also a significant amount of volatility in the numbers and bandings of WwTW as NI Water is in the midst of a period of asset consolidation: closing smaller works and transferring flows to extended WwTW, or transferring small works to private ownership where only a single customer is served.
- To improve the aggregated data in table 17d, we suggest that NI Water consider comparing the results from the ongoing programme of flow and load surveys against the previous assumptions for each site to determine if there is a statistically significant difference which should be extrapolated into the larger population of WwTW sites.
- Costs in Table 17f have been assigned to individual STWs of size band 1 to 4 based on population equivalents. In the absence of better data we believe this approach is appropriate.

Table 21 – Activity costing analysis – Water, and**Table 22 – Activity costing analysis - Sewerage**

- The data relies on a combination of service activity codes, expense codes and responsibility codes. In the majority of cases this should be sufficient to report data for the purposes of tables 21 and 22. However, it is possible that some costs will not neatly fit into the coding structure and the coding may require additional definition to ensure that NI Water is able to report more accurately at lower levels of granularity.

Table 35 – Water – Expenditure by purpose, and**Table 36 – Sewerage – Expenditure by purpose**

- Delays in the appointment of framework contractors for non-infrastructure projects, has resulted in prolonged delays to a number of work programmes.
- Much work has been done in the year to review ongoing projects and to better allocate the investment to the appropriate QBEG purpose categories, although we believe there is still a slight tendency of under-allocation to Base.

Table 42 – PPP Data

- New certificates reflecting the service reporting period have been issued during AIR11 for Ballynacor WwTW and Ballynacor sludge treatment facilities. All other certificates are unchanged from AIR10.

Table 43 – PPP Operating costs

- In order to report data for some lines the Company has had to rely on data from external sources.
- Some apportionments and assessments are required to report the data. We believe these to be appropriate and should result in data that is reflective of the actual position.

Table 44 – Overall performance assessment

- We note that the processing rule relating to line 37 does not return the value expected, nor the value provided by NI Water. Since the Company's performance in the year achieved that of the reference level, we consider that line 37 should return a value of 0.00%. We recommend a processing rule of: $((L36-L35)/L36) \times 100$.
- The Line 61 processing rule should be $(L59/(L60/1000))$. This returns the value reported by NI Water.
- Otherwise, we confirm that the data in this table has been correctly calculated from the information presented elsewhere in the AIR.

Table 45 – Carbon accounting

- Data quality is improving markedly but historic data is sparse and is not sufficiently consistent for drawing robust conclusions on performance, trends or measuring the benefits of strategic initiatives.
- The UKWIR carbon accounting methodology has been applied correctly.
- NI Water has used the correct greenhouse gas conversion factors.
- Improving the accuracy of the Flow to Full Treatment volume needs to be addressed to improve confidence in NI Water's normalised headline wastewater emissions figure (emissions/MLd).

Supplementary commentaries

Health and Safety

Health and Safety information is recorded in Datix, the company's Risk Management Tool. The Company has invested in improvements to Datix to improve useability, most notably to enhance the use of drop down boxes giving options which improve the standardisation of incident and accident categories and supporting information for analysis. However the Company does not currently capture employees' hours working for non-appointed businesses, therefore the confidence grades should be downgraded.

RoSPA was engaged by NI Water to carry out an "H&S Capability Audit" in July 2007 to review H&S policy, procedures and practice across the company. Some 80 recommendations were identified by RoSPA. NI Water confirmed that they have accepted them all and full implementation was later confirmed by NIW Internal Audit. The recommendation on training continues to be carried out as staff change posts or enter the company. The NIW Safety Officers have also been working within the NIW Functions to improve focus and to embed H&S as a centralised issue.

The acting CEO has recently endorsed the Company's H&S Policy Statement. The Director of Asset Management is the Champion for H&S at Board level and the Head of H&S reports direct to the Champion. Health & Safety is a standing item on the agenda at both Executive Committee and Board Meetings with a series of KPI's and other indicators being reported. In all cases, the targets set for 2010/11 are reported as having been either achieved or beaten.

Each year, NI Water develops awareness campaigns and training programmes which respond to the previous years statistics. For example, the current changes in office accommodation, which involve the refurbishment of older buildings, have raised the potential for finding asbestos. NI Water has responded with an enhanced awareness and training campaign for those likely to be involved in refurbishment or maintenance activities. A further training initiative relates to fire safety where changes in the regulations need to be embedded into the company.

NI Water currently captures major incidents and RIDDOR data from their contractors' on their Captrax system which is manually transferred onto Datix. We have not performed any audits on source data, calculations or data transfers and we believe that only limited, if any, checks are performed on this information by NI Water. Currently, we therefore have limited confidence in the data reported for contractors.

From our audits and meetings with NI Water, we believe that there is good evidence of a strong senior-level engagement and commitment, and of steady marked improvements being achieved in Health and Safety within NI Water. Achievements towards their 'Zero Accident Ambition' are being tested and recognised by RoSPA as being worthy of top industry awards. Continued focus should ensure that the Company maintains high standards and a high reputation for being a safe place to work within the utilities sector.

Carbon Accounting

The Environmental & Social Guidance for Water and Sewerage Services (2010-13) requires NI Water to establish an appropriately indexed carbon cost to be included in the assessment of all significant capital projects from the PC13 period onwards. For AIR11, the Company explained that they do not have a specific strategy in place for managing carbon emissions but that they do accept the targets set by the Government for the use of energy from renewable sources which stands at 11% for 2010/11, rising to 20% in 2019/20.

In 2009/10, NI Water derived circa 13% of their total power usage from renewable sources (ahead of the target above). We note that the figure for renewable energy (electricity only) purchased or self-generated in 2010/11 is 13.44%.

NI Water's approach to the management of their GHG emissions is contained within their Climate Change Mitigation Strategy, produced by a cross-directorate Climate Change Forum and headed by the Director for Asset Management, who sits on NI Water's Board of Directors. The strategy includes a broad range of mitigation measures aimed at improved monitoring and reporting, using less energy, using renewable energy sources and reducing emissions.

NI Water has established some internal energy reduction targets to improve efficiency. These relate to overall KWh usage, but which also have beneficial impacts on emissions and on costs. They have an Energy Efficiency Group which considers base maintenance projects where energy consumption could be reduced.

In terms of the quality of information available for monitoring carbon emissions, NI Water's 2006/07 programme of electricity metering provided full coverage on operational sites. Approximately 95% of these meters are automated and connected to a third-party database for information collation and reporting.

NI Water currently operates 5 hydro-power plants, which generate approximately 0.5% of their consumption, though there are longer term plans to increase this. Although a new incineration plant is soon to be commissioned (at Druncrue Street, Belfast), the reliance on PPP concessions for the disposal of wastewater sludge will also have a bearing on NI Water's ability to develop different forms of power generation or to optimise the costs of using such power if it were generated within a combined sewage treatment and sludge processing site.

It is clear that the Company is rising to the challenges posed by climate change and are proactive in seeking ways to reduce their GHG emissions footprint. They have established a clear and accountable structure with strong links spanning the company's operations and up to their Board of Directors. This should ensure that their approach to reducing GHG emissions should be well considered, implemented and managed. However, the operational structure of the organisation (and the Single Electricity Market) appear to inhibit the options they have for unilaterally delivering energy and emissions reductions, when compared against water companies in England and Wales. The development of a strategy for PC13 and beyond, capable of delivering the longer term targets is likely to require broader collaboration with PPP concessionaires and the regulated electricity generation sector.

Sustainable Procurement

We note the commentary provided by NI Water in their Board's Overview on this issue and provide detailed coverage of this in our Procurement Activity Report, which covers the AIR11 period and the Procurement Plan, which sets out the Company's strategy for the years ahead.

CWJ Turner
Reporter for Northern Ireland Water Ltd

Halcrow Management Sciences Ltd
29 July 2011