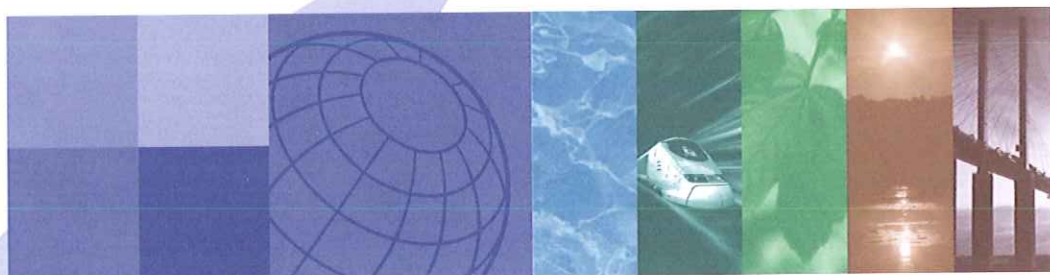


**Northern Ireland Water Ltd**  
Annual Information Return 2010  
To the  
Northern Ireland Authority for Utility Regulation



**Public Domain Version**

**Part 2 of 8 containing:**  
Key Outputs - commentaries for tables 1 - 5

**Reporter's Submission**

**By**

**CWJ Turner**  
**Halcrow Management Sciences Ltd**

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***Halcrow***

Table 1 – Water Service – 1

## Commentary by REPORTER

**1. Background**

The information and data collected in this table describes and quantifies the activities carried out by the Company in promoting water efficiency. A summary of other companies' performance is published annually by Ofwat in the 'Service and delivery – performance of the water companies in England and Wales 2008-09' report. This provides a reference to track and monitor the NI Water's performance and to compare strategies and practices across the industry.

**2. Key Findings**

- We believe that the Company methodology and its application are appropriate to meet the Reporting Requirements.
- The number of water efficiency measures distributed is based on actuals, with appropriate assessments of savings that are likely to be been achieved, based on Ofwat report (Water Supply and Demand Policy, Ofwat, November 2008).
- 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 would be expected to achieve a higher installation rate and therefore be more efficient. However, the lack of domestic metering (customer have less incentives to save water) and not being funded to provide a free/subsidised supply-pipe repair/replacement policy limit the success of some of the measures.
- The Company's water efficiency focus is on education, with close relationships with schools and use of the water bus. We consider it would be appropriate to follow UKWIR guidance to estimate likely savings of the "softer" measures.

**3. Audit Approach**

The audit comprised of an interview with the NI Water's system holders, a review of the Company methodology and a review of the table entries. We also undertook a consistency check between the table entries, commentary and the NIAUR Reporting Requirements.

**4. Audit Findings****4.1 General**

During the audit the Company explained its water efficiency strategy. We discussed the range of activities the Company has promoted and it outlined several initiatives which have taken place during the year. These activities have focussed on education (working both with the children and the schools themselves) and on face-to-face methods to

distribute water efficiency measures through the school and at shows. These initiatives are detailed below in 'Section 4 – Audit Findings and 5 – Company Methodology'.

## **4.2 Household Leakage**

Unlike water companies in England & Wales, NI Water is not funded to offer a free/subsidised repair or replacement of domestic supply pipes. This policy has remained unchanged since AIR08. We are advised that the customer is liable for the entire cost of the repair. When a leak in a supply pipe is identified NI Water sends a Leakage Notice to customers which allows the customers to repair the leakage within 28 days. After 28 days upon issue of final notice NI Water may undertake a repair and recover the cost from the customer. The policy is only applicable to domestic customers and does not apply to properties that are used wholly for commercial purposes. The policy applies to the point of entry to the household, except for common supplies, and does not include the customer's plumbing losses.

The number of household supply pipes repaired reported in line 1 (1,114) is consistent with the number reported in AIR09 (975). The value in AIR09 was almost double (97% increase) the value reported in AIR08. In 2007/08 NI Water had counted the number of Leakage Notices circulated for a half year and the rest was estimated. We therefore consider the value reported in AIR10 (and AIR09) is an accurate assessment. We discussed a number of points relating to leak notices, and were provided with a copy of the spreadsheet used to track the issue of waste notices. Customers are informed at the time of issue of the leakage notice that if they fail to undertake the repair then cost of a repair is recovered by the company. The spreadsheet is used by leakage inspectors to check repairs have been undertaken after the 28-day notice period has expired.

Lines 2 – 6 are reported as 0. This is because the Company does not offer its customers free or subsidised repairs or replacements. Therefore, total savings achieved and cost in lines 7 and 8 are also zero.

There is a marked difference in supply pipe repair policies between those in England and Wales and in Northern Ireland. In England and Wales companies offer free/subsidised supply pipe repairs/replacements to its customers. As such the savings reported in England and Wales are larger than those reported by NI Water. Due to this constraint there is little more NI Water can do to manage/reduce supply pipe leakage from current levels.

## **4.3 Household Water Efficiency Methods**

### *Cistern devices (lines 9 to 12)*

The number of cistern devices distributed by the Company has increased significantly from last year. In total 2,813 devices were distributed in the Report Year (compared to 2,472 in 2008/09).

The Company policy is to distribute cistern devices to customers who request a device. Customers can order cistern devices through the Company's Customer Relations Centre (CRC), the number of cistern devices requested was during the report year was 20. As the Company does not issue bills directly to customers there is less opportunity to facilitate awareness of water efficiency. NI Water prefer to use face-to-face distribution of devices to ensure they are only given to customers with appropriate cisterns. As highlighted above, the Company has continued to promote water efficiency, including cistern device distribution, through schools and community shows with a number of promotional days throughout the year.

For line 10 - "number of cistern devices installed by household customers" the Company has assumed a fit installation rate of 20% for those distributed at shows (2,339) and 70% for those requested through schools (454) and CRC (20). These are from the Ofwat 'Water efficiency targets 2010-11 to 2014-15' and means that the Company assumes that 800 devices (i.e.  $0.2 * 2,339 + 0.7 * (454 + 20)$ ) have been installed during the year. We discussed with the Company the appropriateness of this assumption and they outlined that they have followed the recommendations given in the Ofwat Good Practice Register.

The Company has made several other assumptions relating to the savings assumed and these are described below:

- percentages of devices installed (shows) – 20%
- percentage of devices installed (customer request) – 70%
- occupancy rate – 2.5
- numbers of flushes per person per day – 5
- saving per toilet flush – 2.5 litres

To align with other parts of the Annual Information Return the average occupancy rate has been assumed to be 2.5.

During the audit, the Company illustrated how they had calculated the costs for this initiative. We found a clear audit trail was evident and confirm the Company has only included unit costs of production. We have not undertaken a detailed check on the derivation of these unit costs but these appear reasonable. We confirm the Company's calculation is as stated in its methodology.

#### *Water Butts (lines 13 to 16)*

The Company promotes the use of water butts through the distribution of advice leaflets but does not subsidise the sale of water butts to its customers. Lines 13 to 16 are therefore reported as zero.

In the forthcoming year the Company are proposing to work with a large National DIY retailer to promote water efficiency within the house & garden. This would be expected to increase the use of water butts, but there are no plans to subsidise their purchase.

*Self Water Audit Packs (lines 17 to 19)*

The Company has reported 3,028 packs as being distributed during the Report Year. This is a significant increase over the number distributed (660) in 2008/09. The focus has been on schools (2,049) shows (364) and hits to water audit on website (614).

The Company has received 18% of responses from the 2,049 packs distributed to schools. NI Water assumes that these customers will save 10 litres of water a day. Different installation rates were assumed for schools (70%), shows (20%) and website (10%) and we confirm that these are appropriate. We also confirm that the amount of water saved a day is in line with the assumption within Ofwat's 'Water efficiency targets 2010-11 to 2014-15'. Using this assumption the calculated savings from the water audit packs is 0.015687Ml/d.

In summary, the assumptions are as follows:

- installation rate (schools): 70%
- installation rate (shows): 20%
- installation rate (website): 10%
- saving per day – 10 litres

We confirm the costs reported in line 19 relate to production of the self audit packs and prizes of £628 to schools/customers who returned the audit packs. This prize is made up of four water-butts at £30 each (i.e. £120); four watering cans at £5 (i.e. £20) and 30 hippos per school at £17 for 14 schools (i.e. £238); drought resistant seeds and a cash prize of £250 for top school returns giving a total prize of approx £628. We have checked the audit trail and confirm the number reported is consistent with that reviewed during the audit.

*Water Audits carried out by the Company (lines 20 to 22)*

The Company has carried not carried out water audits during the Report Year, as the focus has been on distributing self-audit packs to schools at shows. Lines 20 to 22 are therefore reported as zero.

#### 4.4 Non household Water Efficiency Methods

*Self Water Audit Packs (lines 23 to 25)*

The Company has reported 277 packs as being distributed to schools during the Report Year through the teachers pack as part of its overall programme of working with schools. NI Water assumes that customers will save 10 litres of water a day with an implementation rate of 20%. These two assumptions are consistent with the values presented in "Water efficiency targets 2010-11 to 2014-15" published by Ofwat. Using these assumptions the calculated water savings are 0.000554 Ml/d (which is displayed as 0.00 Ml/d to 2 decimal places on the table).

In summary, the assumptions are as follows:

- installation rate: 20%
- saving per day – 10 litres

We confirm the costs presented in line 25 relate to production of the self audit packs. We have checked to audit trial and confirm the number reported is consistent with that reviewed at audit.

*Water audits at commercial premises (lines 26 to 28)*

The Company outline that they did not undertake any non-household water audits during the Report Year. Lines 26 to 28 are therefore reported as zero.

#### **4.5 Other water saving initiatives**

The Company has outlined other water efficiency actions directed at households and non-households which includes leaflets, bookmarkers, pencils, games, fridge magnets, shower timers, and its 'Water Bus' exhibition. The Company has presented the costs of each of the measures and estimated the assumed water savings achieved from the shower timers alone.

During the audits we discussed the Company's water efficiency focus, which is on education, and some of the more "softer" water efficiency measures that should bring long-term benefits but are difficult to quantify the initial water savings. We reviewed the Company's Water Efficiency Plan (which is downloadable from the website) which highlights the range of measures being implemented by the Company.

We consider that the water savings associated with these water efficiency actions are reasonable given the inherent difficulties in calculating water savings from such activities. The Company also discussed the recent UKWIR Report "Cost Benefit of Water Efficiency Measures" which suggests an approach whereby the savings from these "softer" measures could be estimated and traded-off against the "harder" measures such as cistern devices and water audits. We consider an approach that provides incentives for implementing the "softer" measures would also be appropriate for NI Water.

The Company has reported 5,833 shower timers being distributed during the Report Year. NI Water assumes these will save 5 litres per property today, with an installation rate of 23%, which results in a total water saving from this initiative of  $5,833 \times 0.23 \times 5 = 6708$  l/day (i.e. 0.0067 Ml/d).

The Company has made the following assumptions according to the Ofwat's 'Water efficiency targets 2011- to 2014-15' which are:

- saving per property per day from shower timer – 5 litres
- installation rate of shower timer – 23%

Total costs of these initiatives include costs of production (£14,765), the Water Bus exhibition (£22,917), and NI Water staff costs (60% of 2 Water Education staff, i.e. £34,201)). The Company explained that this is consistent with AIR09 and we confirm that this appears reasonable.

#### **4.6 Total savings/cost of initiative**

During the audit, checked for consistencies between the table figures and commentary.

#### **4.7 Water efficiency initiatives**

During the audit we discussed both the outcome of these schemes with the Company. Our main findings are detailed below.

**Water Bus** – The Company advised NI Water’s Water Education Team has visited schools and shows with the ‘Water Bus’. It was explained that the bus is in great demand with a long waiting list.

**Water Efficiency Plan** – We reviewed the water efficiency plan and confirm that this represents an accurate description of the initiatives implemented by the Company during the Report Year. This also highlights the focus on education through working with schools and pursuing other opportunities to increase awareness of water efficiency issues.

### **5. Company Methodology**

We have reviewed the Company’s methodology for reporting Table 1 in order to confirm that it is appropriate and meets the Reporting Requirements issued by NIAUR for AIR10.

#### **5.1 Household Leakage**

The Company methodologies are satisfactory and described in their commentary. The Company recorded actual numbers of Leakage Notice issued monthly and provided annual figures for AIR10.

#### **5.2 Household/Non-household water efficiency**

Spreadsheets held by the system holder are used to obtain the information for Blocks B, C and E. This spreadsheet collects all data on cistern devices, self water audit packs distributed, other promotional materials (such as magnets and shower timers) dispatched.

We have reviewed the Company methodology and believe that the practice adopted is consistent with the stated methodologies and in line with the Reporting Requirements.

## 6. Company Assumptions

In relation to cistern devices the Company has made several assumptions relating to the savings assumed. These are as follows:

- percentages of devices installed (shows) – 20%
- percentages of devices installed (customer requested) – 70%
- occupancy rate – 2.5
- numbers of flushes per person per day – 5
- saving per toilet flush – 2.5 litres

For household and non-household Self Audit Packs, the Company has made several assumptions relating to the savings assumed. These are as follows:

- implementation rate (schools) – 70%
- implementation rate (shows) – 20%
- implementation rate (website) – 10%
- saving per day – 10 litres

For savings associated with the shower timer initiative, the assumptions used are:

- saving per property per day from shower timer – 5 litres
- installation rate of shower timer – 23%

## 7. Confidence Grades

The confidence grades assigned by the Company are consistent with those used for AIR09. The company has assigned the following confidence grades:

- numbers of items distributed: B3
- installation rate: B4
- water savings achieved: B4
- cost: B3

The number of items distributed (waste notices issued, cistern devices, self water audits, leaflets and shower timers) are recorded by the Company on a monthly basis, with annual valued entered in line 1, 9, 17, 23, 31a, 31b, 31c and 31d. Therefore the confidence grade of B3 is appropriate.

Total savings assumed in lines 11, 18 and 29 were calculated according to Ofwat guidance. Therefore the confidence grade of B4 is appropriate as the actual numbers distributed are B3. We challenged the company over the confidence grades for total water savings for self audits (line 24) and total savings from other initiatives (line 32) which had been assigned a confidence grade of B3 in the draft table and the Company agreed that a confidence grade of B4 is more appropriate.



The costs of the efficiency programmes reported in lines 12, 19, 25, 30 and 33 have been assigned a B3 confidence grade. As these rely on cost estimation we believe a B3 grade is reasonable.

**Date:** 30 July 2010  
**Prepared by:** [ x ]

**Table 2 – Key Outputs - Water Service – 2****Block A – DG2 Properties receiving pressure/flow below reference level****Commentary by REPORTER****1. Background**

The information included in this table is used to monitor and compare company performance against the DG indicators.

**2. Key Findings**

- For AIR10, the logging exercise that was started in the previous year was completed. Of the 4,705 properties on the DG2 Register that had not been investigated 4,350 were subject to pressure logging and verification during the current year. The remaining properties were in areas subject to mains renewal. This logging exercise has removed 3,606 and added 713 properties to the register.
- During the Report Year an additional 572 properties were removed from the DG2 Register as a result of capital schemes.
- Re-zoning removed 57 properties from the DG2 Register.
- The DG2 Register contains full documentary evidence for properties that remain, are added or are removed from the register following the logging exercises.
- The DG2 Register is not supported by any sustained level of customer complaint
- NI Water has only excluded 94 properties from the DG2 Register (as an allowable exclusion) on the basis that they are located within 15m elevation of the service reservoir.
- NI Water has investigated properties on the register with pressure below 7.5m, and this number has reduced to 169 properties

**3. Audit Approach**

The audit consisted of interviews with the NI Water system holder and the NI Water Consultant, which included a discussion on the Company methodology for data collection and collation, a review of the programme implemented to verify the properties currently on the DG2 Register and a demonstration of the DG Register and supporting documents.

**4. Audit Findings****4.1 Properties connected at year end (Line 1)**

This line contains the total number of properties (domestic and non-domestic) connected to the distribution system at the end of the Report Year. The number of properties is derived from Northern Ireland Water's billing system (Rapid). This estimate made includes properties which are connected but not billed (for example, temporarily

unoccupied) but excludes properties which have been permanently disconnected

We note a decrease of 5,700 properties connected for water supply only from 2009/10. However we also noted an increase in the number of properties reported as being connected to the sewerage system (see Table 3). We challenged this as we would normally expect changes in property numbers to be mirrored in each service. NI Water explained they believe due to the recession there was a decrease in properties connected to the sewerage system as more rural properties were built than in urban areas. These rural properties had their own septic tank and are not connected to the sewerage system. We have not sought to verify the accuracy of the statement made.

#### **4.2 DG2 - Properties receiving pressure/flow below reference level (Lines 2-4a)**

##### **4.2.1 Line 2 – Properties below reference level at start of year**

For AIR08, NI Water reported that 10,321 properties were at risk of receiving pressure below the surrogate reference level of 15m in the adjacent main. The estimate was based on results from the Company's existing suite of hydraulic network models and, where a hydraulic model was not available, targeted pressure logging. The properties reported in Line 3 of Table 2 for AIR08 were accepted at face value and were not subject to any validation or verification checks. The primary purpose of the exercise undertaken for AIR08 was to provide an initial DG2 baseline position.

For AIR09, NI Water undertook a comprehensive review of the 'Under Investigation Register' and also commenced an exercise to verify the 10,321 properties on the DG2 Register. During this exercise 5,621 of the 10,321 properties were logged during the year, of which 3,431 were no longer deemed to be at risk of low pressure and 1,808 were removed from the DG2 register as a result of capital schemes. An additional 739 properties were confirmed to suffer from low pressure and added to the register and 51 properties were removed as a result of zonal boundary changes. The total number of properties at the end of AIR09 Report Year (start of AIR10 Report Year) was therefore 5,770 (line 2).

##### **4.2.2 Line 3 – Properties below reference level at end of year**

For the 10,321 properties initially on the DG2 Register at the start of 2008-09, a comprehensive logging programme was initiated to confirm the status of the properties at risk of low pressure. This exercise was completed during the Report Year. We found that 'Map info' was used to identify logger locations (at 250m centres), such that a logger was located no more than 250m from each DG2 property. In order to confirm the validity of the exercise undertaken, we reviewed the results of the logging exercises completed for three DMAs selected at random during the audit. The Company provided full details (all hyper-linked documents from the DG Register) for Portaferry DMA, Lislea District DMA and Isabella DMA.

For each of the sample of DMAs, we reviewed a GIS plot of the DMA, the affected properties and the logger locations, to confirm the Company's assessment. We found the documentation contained evidence of the pressure logging (a copy of the logger trace was

available for each logging point). The location and elevation of all properties, not just those on the original DG2 Register, were shown on GIS outputs which also showed the DMA and pressure logging boundaries. A report was also included for each DMA that documented the surrogate pressure at each property, justifying its inclusion, removal or valid exclusion from the DG2 Register.

The Portaferry DMA and the Lislea District DMA provided examples of exclusions (within 15m elevation of the service reservoir), the Isabella DMA provided examples of removals from the DG2 Register.

In summary 4,350 of the remaining 4,705 properties were logged during the year, of which 3,606 are no longer deemed to be at risk of low pressure and as such have been removed from the DG2 Register.

In addition to the above, as a result of the ongoing watermain rehabilitation programme, a number of properties were removed from the DG2 Register as a result of a capital scheme. For AIR10, we found that 572 properties were removed as a result of 10 separate capital schemes (and confirmed in the above mentioned logging programme). We reviewed the Pre and Post Rehabilitation Assessments (PPRA) for Clough to confirm the removals achieved. In summary, we found that in the case of this scheme, following the logging exercise 10 properties were removed from the DG2 Register.

Overall, we found that for AIR10:

- 4,350 properties were logged during the year, of which 3,606 were found to have adequate pressure and therefore removed from the DG2 Register as a result of better information.
- 713 properties were added to the DG2 Register as a result of the logging exercise.
- 572 properties were removed from the DG2 Register as a result of a capital schemes.
- 57 properties were removed as a result of zonal boundary changes and other operational improvements.

We note that the logging exercises were undertaken over a 7-day period generally during the autumn/winter months. With water companies in England & Wales we would have concerns that this period would have lower demands, and hence higher pressures so may lead to an under-reporting of properties on the DG2 Register this is not the case for NI Water. We have been shown historic distribution input values which demonstrate that the autumn/winter months typically have higher demands than the summer months.

We also note that the current DG2 Register is not supported by any sustained level of customer complaint, although the NI Water customer base is currently not compensated for poor service. We challenged the Company, which responded that historically some customers have always received low pressures and that in rural areas the customer expectations are therefore lower. If the customer has always had low pressures then they

are unlikely to complain now. Any low pressure complaints received by customer services are initially investigated by operations as they normally arise due to operational issues, such as valve operations and/or burst for example.

#### **4.2.3 Line 4 – Properties receiving low pressure but excluded from DG2**

For AIR10, NI Water has only excluded 94 properties from the DG2 Register (as an allowable exclusion) on the basis that they are located within 15m elevation of the service reservoir.

NI Water advised that they currently do not have the infrastructure in place to validate other allowable exclusions, such as; abnormal demand, planned outages, one-off incidents and short-duration low pressure incidents.

#### **4.2.4 Line 4a – DG properties with a pressure below a surrogate level of 7.5m**

For AIR09, NIAUR included an additional line to Table 2 (Line 4a), to assess the number of properties experiencing pressure below a surrogate level of 7.5m. All properties on the current DG Register have now been validated, so this was interrogated to identify those properties below a surrogate level of 7.5m.

The number of confirmed properties on the DG2 Register with a recorded surrogate pressure below 7.5m is 198, of which 29 are within 7.5m elevation of the service reservoir and can therefore be classed as valid exclusions.

Detailed validation exercises were undertaken at each site; we examined evidence from [ x ], Mullaghbawn DMA. The initial DG2 Register identified seven properties receiving less than 7.5m pressure. Site investigation found that four properties were in the incorrect location on GIS, and when they were changed they were all shown to have greater than 20m pressure. The remaining three properties had private supplies. All seven properties were therefore removed from the DG Register.

### **5. Company Methodology**

NI Water has collected DG2 information using a representative network of critical pressure monitoring points, details from which have been converted into numbers of properties at risk of receiving low pressure, by using its GIS system. During the Report Year the Company has completed development of a formal DG2 Register using Microsoft Access which was demonstrated during the audit.

We found that the DG2 Register contains hyperlinks to all available information to support each property within the DG2 Register. This includes reports, logging traces, GIS plots and details of pressure analysis. This information is also retained for any properties originally on the DG2 Register and subsequently removed due to better information.

In terms of allowable exclusions, NI Water are aware of the various low pressure events that can be excluded from the DG2 Register, however, in the absence of comprehensive

monitoring systems, NI Water are currently only excluding properties that are located within 15m elevation of the service reservoir.

## **6. Confidence Grades**

We queried why the confidence grade assigned to Line 1 was A2 when property number estimates reported elsewhere in the AIR had been assigned a grade of C3. NI Water explained this was because they have more confidence in robustness of water connections than wastewater. We believe that this set of data should have a consistent grade throughout and as similar data is reported elsewhere in the Return and is derived from the same system. We therefore consider a C3 grade to be appropriate.

Based on the improved systems and processes used by NI Water to identify properties receiving low pressure, we believe a confidence grade for Lines 2-4 of B3 to be appropriate. This is an improvement from a confidence grade of B4 in AIR09, reflecting the greater certainty in the properties on the DG2 Register due to the completion of the logging exercises. A confidence grade of B2 for line 4a reflects the greater number of site investigations undertaken for properties with a pressure below 7.5m.

**Table 2 - Water Service – 2****Block B – DG3 Supply Interruptions, Lines 5 to 19****Commentary by REPORTER****1. Background**

The aim of this indicator is to identify the number of properties affected by planned and unplanned supply interruptions lasting longer than 3 hours, 6 hours, 12 hours and 24 hours.

**2. Key Findings**

- A review of the data reported by the Company in their commentary and tables shows that DG3 performance has deteriorated during the year. However, the Company's performance has been materially affected by the severe weather experienced during the latter part of the Report Year.
- We reviewed the Company's methodology to quantify the impact of frozen communication pipes. NI Water has based their methodology on the results of a number of excavations which were undertaken during the cold weather in late December and January. On the basis of the discussions held we believe the Company's methodology is, given the scale of the event, reasonable.
- We discussed NI Water's interpretation of planned, unplanned, overruns on planned interruptions and on the basis of the discussions held (and incidents reviewed) we are satisfied that the Company's interpretation of the guidance is sound.
- We also reviewed the nature of a number of the largest unplanned events affecting NI Water's customers. In the majority of cases we were able to follow an audit trail to verify the details of each incident.

**2.1 Key Recommendations**

- The Company's checks on the start time of an unplanned interruption between the data received from the field and that from their customer contact system is considered good practice. However, these could be improved by targeting the sample of checks undertaken to interruptions with durations around the 6, 12 and 24 hour categories.

**3. Audit Approach**

To verify the data reported by the Company, our audit consisted of an interview with the NI Water system holder, a review of the current Company methodology for data collation and an audit of the data from the Company's systems to the final table. This years data has been compared with last years table entries to identify significant areas of change.

As unplanned interruption data is used as a key performance metric we have reviewed this data with greater scrutiny than the other interruption categories.

## **4. Audit Findings**

### **4.1 Reporting System**

As we have found in previous years OMIS is used as the main tool for recording supply interruptions. We found the system is managed by Operations Directorate and Engineering and Procurement Directorate (E&P) and Customer Services Directorate (CSD) do not currently have access. However, interruption data is provided by representatives of these directorates on a monthly basis. Interruption details are transferred to the Composite Interruption Data File along with information extracted from OMIS for Networks Water and E&P.

### **4.2 DG3 Performance**

A review of the data reported by the Company in their commentary and tables shows that DG3 performance has deteriorated during the report year. Using Ofwat's OPA analysis the Company's score for 2009/10 is 2.21 compared to 1.41 from the previous year. In terms of the Ofwat's assessment criteria, NIW's reported performance for 2008/09 would be graded as 'needing improvement'. However, we note that the Company's performance in the year was significantly affected by the cold weather experienced during the winter months. We provide an overview of the Company's methodology to quantify the impact of the affect of this incident in our commentary below.

The Company also highlighted that in comparing DG3 performance with E&W companies it should be noted that NI Water has more than double the length of water mains per 1,000 connected properties than the E&W average and hence more bursts. NI Water also advised that they have a predominately rural supply area so bursts tend to take longer to locate and repair.

### **4.3 Summary of discussions**

As per the DG3 Reporting Requirements, we questioned the Company on a number of issues regarding the duration and nature of supply interruptions. We discussed their interpretation of planned, unplanned, overruns on planned interruptions and on the basis of the discussions held (and incidents reviewed) we are satisfied that the Company's interpretation of the guidance is sound.

We also questioned the Company's when they consider the start of an incident to be and the Company confirmed that this is the time at which water is first unavailable at the first cold tap in a property. The end of an interruption is considered to be when water has been fully restored to an acceptable pressure to an affected property. The duration of an



incident is thus determined by the elapsed amount of time between these start and end definitions.

During the audit we discussed the start time for an unplanned interruption and the Company advised, as per their methodology in AIR09, they had undertaken an analysis of the time of no water calls into their customer contact centre and compared these to the start time reported by field managers within OMIS. Whilst the Company have only carried out a limited number of checks (on longest duration interruptions) we found evidence of the start time of an interruption being amended. We believe this is a useful additional check to verify the start time of an interruption and therefore the interruption duration. During the audit we discussed the interruptions which are subject to such checks and the Company advised that the tests described are generally undertaken on a sample of the longest duration interruptions i.e. greater than 6 hours in length. Whilst we concur with the Company that it is important to focus on the longest duration we believe it would be beneficial to concentrate such checks around the time boundaries of the 6, 12 and 24 hour bands. This would assist in ensuring properties are reported in the correct time bands.

We also questioned the Company on the structure and content of the DG3 Register and we believe it contains the information demanded by the Reporting Requirements. We noted that the Company does not detail each property affected by an interruption but tends to group the listing by particular house numbers in a street or cluster.

#### 4.4 Unplanned Interruptions (lines 5 to 8)

During the audit we reviewed the nature of a number of the largest unplanned events affecting customers. The audit checks carried out for each incident are detailed below. Except where noted, we were able to follow an audit trail to verify the details of each incident. Where possible these incidents were reconciled to upward reports produced at the time of the interruption. A summary of our findings are detailed below.

Incident	Unplanned Categorisation	Duration	Comment
Brishey SR, Dungiven	ok	>12hrs	<ul style="list-style-type: none"> <li>Unplanned interruption associated with burst on 6" main in August 09.</li> <li>260 properties affected &gt;6hrs, 356 properties affected &gt;12hrs.</li> </ul>
Backford Bridge DMA Coalisland	ok	>24hrs	<ul style="list-style-type: none"> <li>Incident initially affected 45 properties but revalving meant impact was limited to 36 properties affected &gt;6 hrs and 29 properties &gt;24hrs.</li> <li>NI Water provided a timeline of events to support these property counts. Property details were checked on OMIS.</li> </ul>
Greysteel	ok	>24hrs	<ul style="list-style-type: none"> <li>Multiple bursts in which repairs were hampered by 'air locking' and bad weather which spanned a number of days</li> </ul>

Incident	Unplanned Categorisation	Duration	Comment
			<ul style="list-style-type: none"> <li>Worst affected were 16 properties greater than &lt;24hrs (properties were without supplies for 5 days)</li> </ul>
Fofanny WTW	ok	>24hrs	<ul style="list-style-type: none"> <li>Consistent high throughput during cold weather caused build up in one filter which resulted in problems in the remainder of the works.</li> <li>9 properties affected for a total of 193 hours but others resolved within 1 day.</li> <li>We challenged a discrepancy between the upward report produced at the time of the incident and the OMIS record as the upward report indicated full throughput at the works was restored within 24 hours. NI Water advised that this was correct as a small number of properties were affected by an air lock which was not detected for some time.</li> </ul>

We reviewed the nature of the each incident and believe they have been accurately transposed into Table 2. During the audit we challenged the Company to demonstrate the data held on their DG3 Register was consistent with the guidance set out in the Reporting Requirements and the property counts reported. In addition to the above we asked NI Water to demonstrate the information held on the Register for an additional seven unplanned incidents. These checks revealed consistency to the proformae completed in OMIS.

For several interruptions we noted that the Company had been able to restore supplies by rezoning to some of the affected properties earlier than some others and properties related to these incidents were reported in different time bands. We challenged NI Water on what evidence exists to verify that some properties were restored with supply earlier than others. In response the Company representatives sought further evidence from the field operatives and were able to verify and support the interruption durations reported.

### Impact of cold weather (Dec - Jan 10)

As highlighted above, the freezing temperatures experienced between December 09 and January 10 materially affected the Company's DG3 performance.

During these periods customers were subject to supply interruptions caused by frozen service and communication pipes. The Company's methodology assumes that where the communication pipe or communication pipe and supply pipe were frozen then affected customers would be included within the Company's DG3 return. Where the supply interruption was caused by only frozen supply pipes then this was deemed to be the customers' responsibility and therefore excluded from the Company's return.

We queried how NI Water had determined the cause of a particular interruption and what evidence was collected to determine whether the interruption was the responsibility

of the Company or the customer. NI Water advised that due to the scale of the events their records of supply interruptions associated with this event are based on a sample of 66 excavations which were made between 21 December 09 to 21 January 10. Of the excavations made in 28 cases (42%) it was deemed that the communication pipe was frozen and therefore the Company's responsibility. In the remaining 58% of cases it was deemed the cause of the interruption was on the supply pipe and therefore the customer's responsibility.

To estimate the number of properties affected by frozen supply and communication pipes and which were NI Water responsibility and which were the customers responsibility (and therefore non reportable) the Company has analysed the number of calls logged at their Customer Response Centre between 21 December 09 and 21 January 10. From a total of 55,280 calls the Company has using the work orders generated on Ellipse filtered the number of contacts relating to only 'no water' complaints. We reviewed the Company's methodology to filter these calls and believe the approach taken is reasonable.

Of the 'no water' complaints (3,724) which could not be attributable to a burst or other operational issue the Company has applied the percentages highlighted above to derive the number of properties affected by interruptions which are deemed to be NI Water's and the customers responsibility. This results in a total of 1,564 properties being added to the Company's DG3 return and the Company has assumed that each of these properties supplies would have been affected for greater than 24 hours.

We queried a number of aspects of the Company's methodology including the process for recording 'no water' complaints and the potential for multiple freeze/thaw instances occurring during the month at the same property but believe the approach taken by the Company is sound. We also discussed the impact of this methodology upon the confidence grades assigned to line 5 to 8 in the table. NI Water advised that the confidence grade assigned to lines 5 to 7 (B3) remain as reported previously but the extrapolation methodology outlined has the greatest proportionate effect on line 8 – unplanned interruptions greater than 24 hours so the grade for this line has been downgraded to C4. We believe the approach taken in respect of confidence grades is reasonable.

#### **Impact of adverse weather (March 10)**

The Company advised that heavy snow at the end of March resulted in electricity supply failures also had a significant impact upon their DG3 performance. Within their commentary NI Water provide a breakdown of the properties affected by supply interruptions during this time. Overall 245 properties were affected by supply interruptions greater than 24 hours whilst 300 properties were affected by supplies greater than 12 hours. We have not undertaken any specific checks on these interruptions but understand they occurred at the very end of the Report Year and some of the interruptions reported ended in the following Report Year. Aligned to NIAUR's clarification we confirm those interruptions which commenced in the 09/10 Report Year

have been reported in this year. We understand some interruptions commenced in the 10/11 Report Year and will be reported in AIR11. We propose to comment upon these in our AIR11 audit programme.

#### **4.5 Planned and Warned Interruptions (lines 9 to 12)**

For lines 9 to 12 – “Planned and warned interruptions” there has been a decrease in the number of properties affected by interruptions greater than 3 hours and 6 hours. NI Water outlined that the overall meterage reduced by over 25% in the year. This together with a change in the mix of work locality has resulted in a reduction in the numbers of properties affected by planned and warned interruptions. We found 135 properties had been subject to a supply interruption greater than 12 hours and we understand that these was a result of just one planned shut off. There have been no planned interruptions greater than 24 hours.

During the audit we challenged the Company on how they classify step testing (in terms of leakage detection) as we were unsure as this would be categorised as a planned interruption or not. The Company explained that they do not classify step testing as a planned interruption as the test would not unduly affect customers as they generally occur during the night. We concur that the Company approach appears reasonable, and consistent to our experience elsewhere, although the Reporting Requirements do not refer to classification of step testing. The Company also advised that they do not record interruptions last less than one hour unless difficulties arise or there happens to be an exception to the type of routine interruption when the interruption may be recorded at the discretion of the operative or field manager.

#### **4.6 Interruptions caused by Third Parties (lines 13 to 16)**

During the audit we reviewed a number of interruptions the Company had classified as being caused by a third party during the year. Following errors identified in the Company’s interpretation of third party interruptions in 2008/09 we checked a number of interruptions within this category within our AIR10 audits. We checked three incidents from across the year and confirm these incidents were correctly reported as third party (caused by contractors or persons not acting on behalf of NI Water). On the basis of the checks carried out we are content the Company’s methodology in this area is sound.

#### **4.7 Overruns of Planned Interruptions (lines 17 to 19)**

As in previous years, the Company has reported a small number of overruns of planned interruptions. During the audit we discussed the methodology and checks the Company uses to identify overruns of planned interruptions and believe them to be satisfactory. We have not reviewed any specific incidents reported by NI Water.

## 5. Company Methodology

### 5.1 General

As reported above, the Company issued the Reporter with a copy of their updated methodology to derive data reported in for supply interruptions. This document contains several definitions which are replicated below for clarity. We believe the definitions used are in line with the Reporting Requirements.

- **Interruption** - An interruption to supply is defined as the actual loss of water supply to a property, whether planned or unplanned, warned or unwarned.
- **Start Time** - For a planned interruption the start time is the time at which water is unavailable at the first cold tap in a property; for an unplanned interruption it is when customers first notice the loss of supply or if this is not available the time a 'no water' complaint is logged by the Customer Relation Centre.
- **Duration** - The duration is the length of time for which customers are without a continuous supply of water. An interruption starts when water is unavailable from the first cold tap in a property and finishes when the supply is restored.

We also reviewed how the Company classify interruption and believe these are in line with the Reporting Requirements. Again, the definitions used have been replicated below for clarity.

- **Planned and warned** - This is where notice of an interruption (more than 3 hours) is provided to properties affected at least 48 hours in advance of the beginning of the interruption.
- **Unplanned/unwarned interruption** - This is when an unplanned, or a planned and unwarned, interruption to supply occurs. Properties receiving less than 48hrs notice of a planned interruption (more than 3 hours) are to be counted as 'unplanned' and reported under this category.
- **Overruns of planned interruptions** - When a planned interruption and warned interruption begins before or continues beyond the end of the warned time, for whatever reason and whether or not a customer has been advised during the shut down that an overrun is going to occur, the interruption is described as an overrun and is reported separately.
- **Third party interruptions** - A third party is defined as anyone who does not act for, or on behalf of NI Water. This category is intended to cover damages to NIW's mains or other equipment which directly or indirectly results in an unplanned loss of supply to enable the damage to be repaired.

We challenged the Company on whether a planned interruption which starts before the warned time should be classified as an overrun or an unplanned interruption. The Company advised this would be classified as an unplanned interruption. We believe this is in line with the Reporting Requirements.

We discussed with the Company their approach to counting the number of properties affected by an interruption and they advise properties are identified from either a manual count off network maps and in other cases are estimated using a GIS polygon. We have not reviewed the accuracy of the property counts made by the Company.

## **5.2 Reporting Procedures**

OMIS is used as the main tool for recording supply interruptions. We found the system is managed by Operations Directorate and Engineering and Procurement Directorate (E&P) and Customer Services Directorate (CSD) do not currently have access. However, interruption data is provided by representatives of these directorates on a monthly basis. Information from the two E&P regions and Customer Services Directorate is provided for input each month on spreadsheets and entered on OMIS by the DG3 system holder.

NI Water's reporting procedures require field engineers to record events on standard proforma. The data collected on these sheets is subsequently uploaded on OMIS via the defined input screens on a monthly basis. The DG3 system holder extracts data from OMIS each month and transfers it into a worksheet entitled the 'Composite Interruption Data' file, which is the DG3 Register. This data is combined with data from other Directorates to form a complete listing. Whilst we consider the Company has sound and centralised collation methodologies in place, further checks to enhance the controls in place could be carried out by further testing the interpretation of the DG3 definitions and recording methodologies of field staff responsible for recording the nature, type and duration of a supply interruptions.

We also questioned NI Water on several aspects of their reporting protocol and specifically how they ensure interruption which may been uploaded into OMIS late or remained open (and therefore editable) on the system when the data is extracted. The Company representative advised that controls are in place to track late returns and the previous months report is re-run at the end of the following month to ensure that any late entries are picked up.

## **5.3 Quality Assurance**

During the audit the Company demonstrated the quality assurance controls they have in place to ensure the data collation process is robust. Over the course of our audits we saw evidence of data challenge and the correction of interruption details received from field operatives. We therefore believe that interruption data is being appropriately administered.

We also note that the Company's methodology demands that each monthly return of DG3 data is signed off by senior management.

**6. Company Assumptions**

The Company assumptions relating to the classification and duration of incidents have been discussed above.

**7. Confidence Grades**

The Company has assigned a B3 grade to the majority of the lines in line 5 to 18. NI Water provides a detailed overview of their justification for this line and we concur with their assessment.

However, for unplanned interruptions greater than 24 hours the Company has assigned a confidence grade of C4. We challenged the Company on the rationale behind this grade and they explained that this was associated with the recording of interruptions related with frozen communication pipes associated with the cold weather experienced over the winter. NI Water detail their justification for assigning this grade within their commentaries and we concur with their assessment that the grade should be lowered as the extrapolation made to account for these interruptions has the largest proportional impact upon the greater than 24 hours.

**Table 2 - Water Service – 2****Block C - Population – Winter (Line 20)****1. Audit Findings**

The estimate of winter population is based on NI Tourist Board statistics. The Company provide a detailed explanation of the approach adopted to derive winter population in their commentary for Table 2. We have followed the methodology laid out by the Company in their commentaries and believe the approach taken is reasonable.

During the audit the Company explained that their methodology for reporting the population in this line has changed from that reported previously. In previous returns NI Water has used an estimated annual number of non-residents visitor nights for NI using a NI Tourist Board report. However the Company advised that the NI Tourist Board has published actual number of non-resident visitor nights for part of the year and the Company have used this estimate to project an annual figure.

In terms of overall population reported there has been a small increase of 0.3%.

**2. Assumptions**

The Company assume the bed spaces sold during the winter are for those months with the lowest percentage of bed spaces sold. These are the months between January 09 to April 09 and November 09 to December 09. We believe this is reasonable as it is in line with our expectations of when visitor numbers are likely to be at their lowest.

**3. Confidence Grades**

The Company have assigned a confidence grade of C2 to this line. We consider this confidence grade to be appropriate, based on the Company's reliance on third party data sources to derive the number of non-resident visitor nights.



**Table 2 - Water Service – 2****Block D - DG4 - Restrictions on use of water (Lines 21-23)****1. Audit Findings**

There have been no DG4 restrictions on the use of water during the report year. As such the entries for lines 21, 22 and 23 are correctly recorded as zero.

**2. Assumptions**

There are no assumptions to disclose.

**3. Confidence Grades**

The Company have assigned a confidence grade of A1 to this line. We consider this confidence grade to be appropriate.

**Date:** 30 July 2010

**Prepared by:** [ x ]

**Table 3 – Sewerage Service – Internal Flooding****Commentary by REPORTER****1. Background**

The information included in this table is used to monitor and compare company performance against the DG indicators.

The DG5 – Annual Flooding Summary includes properties internally flooded as a result of overloaded sewers and other causes

The DG5 – Properties on the “at risk” register cover properties at risk of flooding more frequently than once in twenty years and once or twice in ten years, problem status of the properties on the register and annual changes to the register.

**2. Key Issues and Recommendations**

- The methodology adopted to populate Table 3 Block A of AIR10 is unchanged from that adopted for AIR09
- Despite receiving 1233 contacts from customers reporting incidents of internal flooding, NI Water has only reported 6 confirmed incidents of internal flooding in Line 3 of Table 3.
- The lack of detail provided for each incident by the attending sewer maintenance contractor is of serious concern as there is no tangible evidence to indicate why the customer would erroneously report a sewer flooding incident.
- We would recommend that NI Water undertakes an end to end process review in order to improve its understanding of the reported internal flooding contacts. The Reporter would be willing to assist if required.
- We found that the call centre script used to identify flooding incidents could be further refined to ensure a more logical flow of questions to determine the nature, location and extent of the reported flooding.
- We note that the Company is continuing to allocate flooded properties to the 1 in 10 year register by default rather than the 1 in 20 year register as recommended in the NIAUR guidance.
- The Company has developed and implemented an appraisal procedure which once completed, should provide a reasonably accurate snapshot of the current flooding register, and enable a reasonable population of Table 3 Block B.
- We recommend that NI Water should develop a protocol to ensure the appropriate details (scheme and property) are captured for each property, in order to verify the removal from the Flooding Register as a result of a capital scheme,
- The Company has assigned a confidence grade of B4 to lines 2, 3, 4, 6, 8, 9 and 10. Whilst the overall data collection process is probably consistent with a B grading, we have a number of concerns over the application of the process and would thus

suggest the accuracy of the data to only be  $\pm 50\%$ . However, as a B5 is not available, we suggest a BX for these lines.

### **3. Audit Approach**

The audit consisted of an interview with the NI Water system holder to discuss the methodology and data that has been used to populate this table as well as plans for improving the data in future years.

### **4. Audit Findings**

#### **4.1 Properties connected at year end (Line 1)**

This line contains the total number of domestic properties connected to the sewerage system at the end of the Report Year. We note a decrease of 4,600 properties connected from that reported in 2009/10. The number of properties is derived from Northern Ireland Water's billing system (Rapid).

We note a decrease of 4,600 properties connected from that reported in 2009/10. However we also noted an increase in the number of properties reported as being connected to the water service. We challenged this as we would normally expect changes in property numbers to be mirrored in each service. NI Water explained they believe that due to the recession there was a decrease in properties connected to the sewerage system as more rural properties were built than in urban areas. These rural properties had their own septic tank and are not connected to the sewerage system. We have not sought to verify the accuracy of the statement made.

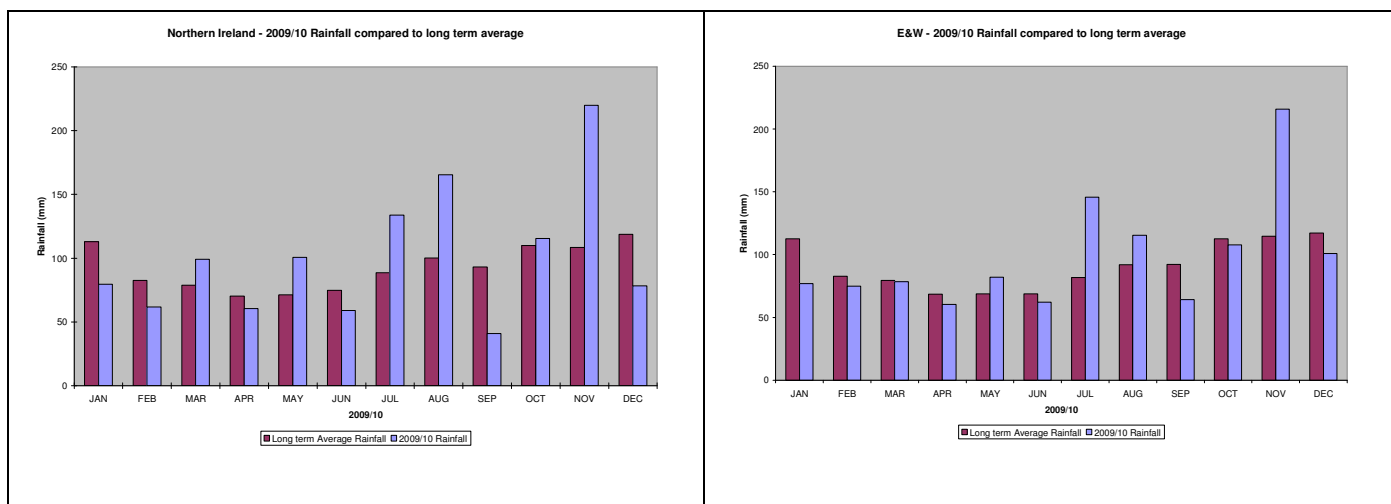
#### **4.2 DG5 Annual Flooding Summary**

The methodology adopted to populate Table 3 Block A of AIR10 is unchanged from that adopted for AIR09, whereby all calls logged as internal flooding by the customer contact centre are downloaded from Ellipse. Each contact is then 'investigated' and validated by NI Water, simply by reviewing 'Flooding Incident Report' forms, which are completed by the sewer maintenance contractor, following their attendance at each reported flooding incident. As we describe in further detail below, we have reservations over the veracity of the information used to implement this methodology and are concerned that NIW are under reporting the actual number of incidents reported during the year.

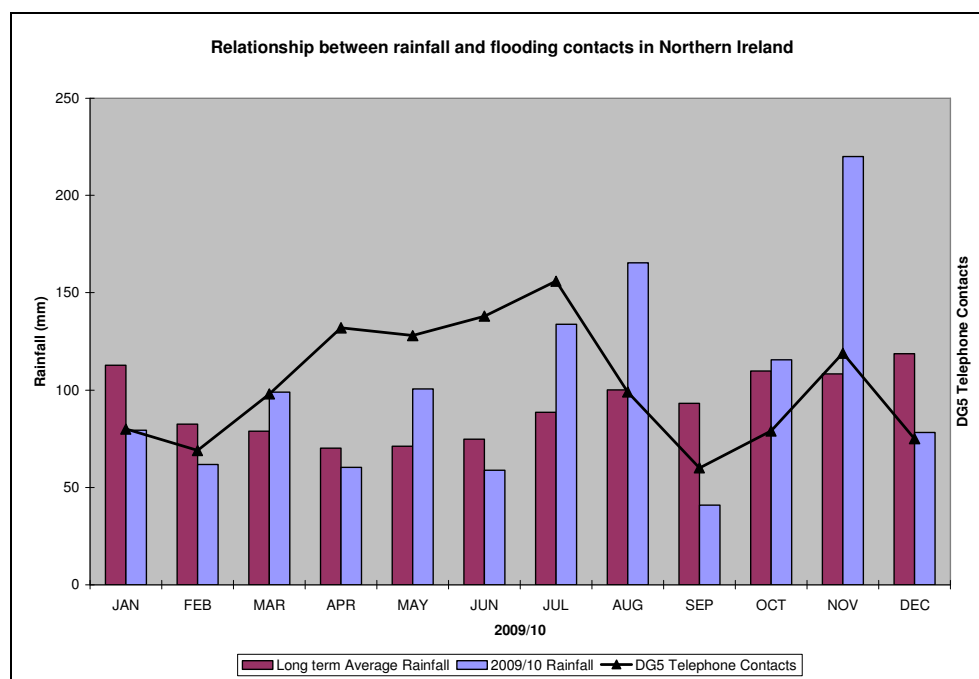
Despite receiving 1233 contacts from customers reporting incidents of internal flooding, NI Water has only reported 6 confirmed incidents of internal flooding in Line 3 of Table 3.

This low number of confirmed internal flooders is not consistent with our experience of England and Wales (E&W), where the higher than average rainfall and high number of severe weather events recorded during the year, resulted in the E&W water industry experiencing a high number of reported internal flooding incidents.

In order to ensure the weather experienced in Northern Ireland for 2009/10 was similar to that experienced in E&W, we compared Met Office rainfall records for both NI and the rest of the UK. As demonstrated in the two graphs below, when the 2009/10 rainfall is compared against long term averages, similar rainfall patterns are evident, whereby higher than average rainfall was recorded in July, August and November 2009. As such we would have expected the sewerage network to have performed similarly.



Furthermore, when we compare the frequency of calls to the NI Water Call Centre, reporting incidents of internal flooding, there is a similar correlation evident. During the months of higher than average rainfall the graph below generally demonstrates a corresponding increase in reported incidents.



As highlighted above, NI Water received 1233 contacts from NI Water customers over the report year, stating that they had suffered from internal flooding. However, only 6 of these contacts (circa 0.5%) were confirmed to have actually flooded internally due to overloaded sewers, with a further 5 incidents confirmed as being flooded due to other causes.

We challenged this very low ratio of confirmed incidents to contacts, as we consider it highly unlikely that 1222 of the 1233 customers would contact NI Water to report internal flooding, when flooding had not occurred.

As highlighted above, NI Water relies primarily on the details provided within the Flooding Incident Report (FIR), which is completed by the Company's sewer maintenance contractors, to assess the validity of each reported flooding incident. The purpose of the FIR is to capture as much information relating to the incident as possible, in order to assess the nature and cause of each flooding incidents. The FIR should be completed following attendance at each incident.

In order to test the assessments undertaken by the sewer maintenance contractors, we requested a sample of 40 FIRs, relating to incidents reported to have occurred in July, August and November 2009. These months were selected as they correspond to the months of higher rainfall, when you would expect increased levels of flooding. For each of the 40 FIRs reviewed, we found that the sewer maintenance contractor had failed to include any details of the incident, apart from the address of the property, work order reference number and confirmation that no flooding has occurred.

The lack of detail provided is of serious concern as there is no tangible evidence to indicate why the customer would erroneously report a sewer flooding incident. We would expect the contractor to assess the cause and extent of flooding; and provide details of the next course of action (if not by NI Water), then what had been suggested to the customer. If flooding had not occurred, we would expect the Company (perhaps via contractors) to capture details of the contact with the customer, whilst on site, and provide any physical evidence, both written and photographic, in order to confirm the contractor's assessment and the true cause of the contact for future reference rather than to simply state 'no flooding'. Such actions and records have proven to be extremely useful in improving customer relations and enhancing the understanding of the performance of the network.

We would recommend that NI Water undertakes an end to end process review in order to improve its understanding of the reported internal flooding contacts by:

- further improving the quality of information received at the initial point of contact;
- ensure greater levels of detail are captured by its sewer maintenance contractors, for both flooding and non-flooding incidents;
- ensure the full extent of flooding is investigated at each incident and;
- attend a number of reported incidents with the contractor, in order to observe the contractors work practice and ensure it is appropriate.

This will help identify any shortfalls in the processes currently in place, and the Reporter would be willing to assist in a ‘root and branch review’, should we be required.

As highlighted above, the quality of information requested and received during the initial call to the NI Water customer contact centre could also be further improved to ensure each contact is appropriately assessed and actioned. In order to assess the appropriateness of the call handling process for flooding contacts, we listened to a recording of a call taken during the year (customer reference [ x ]), where the customer reported sewer flooding. We found that the call centre script could be further refined to ensure a more logical flow of questions. The customer was never asked for a description of the incident or the impact of the incident, but was asked specific, but disjointed questions, which did not give the call handler any understanding of the actual problem. This initial interface should be used to greater effect, in order to gather sufficient information to determine the nature, location and extent of the reported flooding.

#### **4.3 DG5 Properties on the At Risk Register**

During the year, we found that the Company has developed an appraisal procedure which they are currently in the process of applying to the current Flooding Register, in order to verify the nature, frequency and extent of flooding at each property.

We found that for each property/flooding location the following review/investigation process is proposed:

1. Assess the history of flooding incidents at each property from ‘Operations’ records
2. Interview local Operations staff to gather any local knowledge on the flooding history of the property
3. Interview local residents – A questionnaire based concentric ring survey will be undertaken to confirm the validity and extent of historic flooding incidents
4. Assess topography surrounding affected property
5. Run/review results from existing network model to assess theoretical flooding volumes and locations
6. Compile report with recommended ‘at risk’ status for each property.

At the time of review, we found that Activities 1 and 2 of the above process had been completed.

During the year, NI Water held a series of workshops with relevant ‘Operations’ staff to review and assess each of the properties on the Flooding Register. In summary, each of the 823 properties on the 2in10 and 1in10 ‘At risk’ register (although we note a slight discrepancy with AIR09 T3 submission) was placed in one of four categories, as follows:

Category	Category Definition	No. of Properties
Category 1	High probability that flooding caused by overloaded sewer	243
Category 2	Unsure whether flooding caused by overloaded sewer	118
Category 3	High probability that flooding not caused by overloaded sewer	290
Category 4	Work has already been implemented to address the problem	163
Not Categorised		9

The Company highlighted that they intend to complete Activity 3, the concentric ring survey of local residents, during the current year.

In addition to the above, we were advised that NI Water is intending to assess and remove all properties currently on the Flooding Register that flooded as a result of a severe weather event. However, the Company has not yet developed the methodology to undertake this assessment. We are aware that ad-hoc radar based storm analysis from the Met Office, is an expensive means of determining the rainfall return period for any given event, and based on the number of assessments required by NI Water, in order to review their entire Flooding Register, this approach may prove prohibitively expensive. An alternative approach, that another company has recently adopted, is to take out a contract with the Met Office for the provision of real time radar based rainfall data from a local NI based radar station. The radar provides 5 minute duration rainfall intensity for 1km<sup>2</sup> square grids across the entire region. As such, NI Water would be able to estimate the rainfall intensity for any storm at any location within the province. It will also enable the Company to assess the impact of a rainfall event across the catchment.

We consider the above action plan to be a positive step forward and once it is completed, should provide a reasonably accurate snapshot of the current flooding register.

For AIR10, NI Water report that 705 properties are currently at risk of flooding greater than 1in10 years, (a reduction of 120 on the 825 reported in AIR09), with a further six properties included in the recently created Line 15a. This entry relates to the six confirmed flooders during the year. We queried the nature of the six 'arisals' and found the following events were 'confirmed' to have occurred during the year

Incident Date	Address	
14/04/2009	[ x ]	[ x ]
19/06/2009	[ x ]	[ x ]
10/12/2009	[ x ]	[ x ]

Incident Date	Address	
07/12/2009	[ x [	[ x ]
09/12/2009	[ x ]	[ x ]
12/03/2010	[ x [	[ x ]

We note that two of the events occurred in the early part of 2009/10 and are somewhat surprised that they have not yet been investigated.

We found that during the year, UUW removed 185 properties by company action (Line 22). Of the 185 properties removed we can confirm that 80 were at risk of flooding 2 in 10 years and 105 were at risk of flooding 1 in 10 years.

We undertook an analysis of the outputs delivered during the Report Year and, although there is limited detail available, found that the 185 internal outputs appear to have been delivered through 13 separate schemes, of which 80 of the outputs were delivered through the Belfast Sewers Project. We recommend that NI Water should develop a protocol to ensure that for each property removed from the Flooding Register as a result of a capital scheme, the appropriate details (scheme and property) are captured in order to verify the removal.

Furthermore, we found that 71 properties were added to the 1 in 10 year risk band during the Report Year (Line 24), based on feedback from Operations field staff detailing properties believed to have historically flooded. Although these properties have been added to the Flooding Register they are still subject to further investigation.

We note that the Company is continuing to allocate flooded properties to the 1 in 10 year register by default rather than the 1 in 20 year register as recommended in the NIAUR guidance.

## 5. Company Methodology

### 5.1 DG5 Annual Flooding Summary

The base data for internal flooding records is downloaded from Ellipse and originates from calls logged as internal flooding by the customer contact centre. This data is sorted so that records from the same property are grouped together and records from the same incident are grouped together.

For AIR10, each incident has theoretically been 'investigated' by the sewer maintenance contractor and data is collected on flooding incident report forms. Based on this information, each incident is either categorised as confirmed internal flooding or confirmed no internal flooding. For those that have experienced internal flooding, the cause of the flooding is identified. If the flooding can not be attributed to a blockage, equipment failure or collapse, it is assumed to be due to an overloaded sewer. For those



properties that did not experience internal flooding, but experienced restricted toilet use, this is also recorded.

Data is excluded from the count if it is a repeat call within 3 days of the original call. NI Water have found that, based on analysis of past records, repeat calls within 3 days of the original call tend to be related to the original event.

Data is also excluded if it is clean water flooding – i.e. burst water main.

The data is then tabulated on a month by month basis for each category (excluded no flooding, excluded repeat call, excluded clean water, flooding blocked sewer, etc) and then summed to provide annual totals for input into Table 3.

For each of the events classified as internal flooding (overloaded sewer), a Met Office report is obtained to ascertain whether the flooding was due to severe weather conditions. In AIR10, none of the events were considered to be due to severe weather conditions.

NI Water does not collect sufficient information to determine whether uninhabited cellars are flooded, and based on the fact that there are very few basements or uninhabited cellars in Northern Ireland, it assumes there were no uninhabited cellars flooded.

## **5.2 DG5 Properties on the At Risk Register**

NI Water has developed an appraisal procedure which they are currently in the process of applying to the current Flooding Register, in order to verify the nature, frequency and extent of flooding at each property.

We found that for each property/flooding location the following review/investigation process is proposed:

- Assess the history of flooding incidents from ‘Operations’ records
- Interview local Operations staff to gather any local knowledge on the flooding history of the property
- Interview local residents – A questionnaire based concentric ring survey will be undertaken to confirm the validity and extent of historic flooding incidents
- Assess topography surrounding affected property
- Run/review results from existing network model to assess theoretical flooding volumes and locations
- Compile report with recommended ‘at risk’ status for each property.

## 6. Assumptions

It is assumed that repeat calls logged within three days relate to the same event and are therefore counted as a single event rather than two events. This is based on the Company's analysis of historical data, which suggests that when several calls are made from the same property within three days, they relate to the original event.

It is assumed that there has been no flooding of uninhabited cellars only, on the basis that Northern Ireland has very few houses with either basements (inhabited) or uninhabited cellars.

Flooding resulting from overloaded sewers (or that can not be attributed to other causes) is added by default onto the 1 in 10 year register.

## 7. Confidence Grades

A confidence grade of C3 has been assigned to line 1. This is consistent with Table 13, which has assigned confidence grades of C3 to connected properties.

The Company has assigned a confidence grade of B4 to lines 2, 3, 4, 6, 8, 9 and 10. Whilst the overall data collection process is probably consistent with a B grading, we have a number of concerns over the application of the process and would thus suggest the accuracy of the data to only be  $\pm 50\%$ . However, as a B5 is not available, we suggest a BX for these lines.

A confidence grade of CX has been assigned to line 7, reflecting the inaccurate historical data that has been used and the small number of properties reported.

A confidence grade of DX has been assigned to lines 5 and 11 (uninhabited cellars), which is appropriate, given that a value of zero has been assumed.

A confidence grade of D6 has been assigned to line 13 and DX has been assigned to lines 12, 14 and 15, which is appropriate.

A confidence grade of B2 has been assigned to Line 15a and 24, which is appropriate, based on the fact these are actual known properties.

## 8. Consistency Checks

- Lines 18 to 33 have not been completed; therefore there are no consistency checks relevant for this table.

**Date:** 30 July 2010

**Prepared by:** [ x ]

**Table 3a – Sewerage Service – External Flooding****Commentary by REPORTER****1. Background**

The information included in this table is used to measure the frequency of actual flooding of external areas from the public sewerage system by foul water, surface water or combined sewage

The DG5 – Annual External Flooding Summary includes properties externally flooded as a result of overloaded sewers and other causes

The DG5 – Areas on the external “at risk” register cover areas at risk of flooding more frequently than once in twenty years and once or twice in ten years, problem status of the external areas on the register and annual changes to the register.

**2. Key Findings and Recommendations**

- The methodology for the annual flooding summary (Table 3a Block A) has not changed from AIR09
- In order to start reporting on incidents of external flooding, we recommend that NI Water should further refine the call centre script used to identify flooding incidents to ensure the nature, location and extent of flooding is identified at the initial point of contact. Furthermore, NI Water should ensure more detailed information is provided by their sewer maintenance contractor, both written and photographic, in order to confirm any assessment made.
- Block B of the table remains unchanged from AIR09.

**3. Audit Approach**

The audit consisted of an interview with the NI Water system holder to discuss the methodology and data that has been used to populate this table as well as plans for improving the data in future years.

**4. Audit Findings****4.1 DG5 Annual Flooding Summary**

The methodology for the annual flooding summary (Table 3a Block A) has not changed from AIR09 and is still based on unverified external flooding complaints made to the customer contact centre and logged in Ellipse.

We reported in our AIR09 commentary that NI Water had intended to further investigate each complaint for AIR10, to confirm whether or not flooding did occur and

to ascertain the cause of the flooding. However, we confirm that at year end, this has not occurred.

In order to start reporting on incidents of external flooding, we recommend that NI Water should further refine the call centre script used to identify flooding incidents to ensure the nature, location and extent of flooding is identified at the initial point of contact. Furthermore, NI Water should ensure more detailed information is provided by their sewer maintenance contractor, both written and photographic, in order to confirm any assessment made.

For AIR10, the reported numbers of external flooding incidents has significantly reduced when compared to AIR09, reflecting a reduced number of contacts. However, this inferred reduction in external flooding events, is not consistent with the higher than average rainfall experienced during the year. Until these contacts are properly investigated, NI Water is unable to confirm whether the contacts logged relate to actual flooding incidents.

As such, there is little value in analysing or commenting on reported number of external flooding incidents because they have simply been proportioned to various causes based on the average allocation of England and Wales incidents, and therefore bear no real relation to the actual extent and causes of external flooding in Northern Ireland.

## **4.2 DG5 Properties on the At Risk Register**

Block B of the table remains unchanged from AIR09.

## **5. Company Methodology**

### **5.1 DG5 Annual Flooding Summary**

The methodology for the annual flooding summary has not changed from AIR09 and is based on unverified flooding complaints made to the customer contact centre and logged in Ellipse.

The external flooding complaint data is downloaded from Ellipse and sorted by location and date so that duplicate entries can be removed.

Duplicate complaints made from the same address within 3 days are removed as these are assumed to be related to the same incident. This data is then compared to the internal flooding incidents. External flooding incidents occurring at the same address and date as confirmed internal flooding incidents are removed from the external flooding data. This means that an incident that causes both internal and external flooding is only logged as an internal flooding incident in line with the guidance. However a property that experiences only external flooding in a separate event to the internal flooding event will be counted on the annual external flooding summary (in line with the guidance).

The remaining data represents an entry for each separate external flooding incident at each property and is used as the basis for completing block A of this table.

*Lines 1 and 7*

The basic data is further analysed and duplicate property entries are removed (i.e. where a property has reported two or more separate instances of external flooding). This leaves a list of all properties that have experienced flooding at least once in the year. For this return, NI Water currently does not have information on the cause of the flooding, so it has divided the properties between “overloaded sewer” and “other causes” in the same proportion as the average of the water companies in England and Wales.

*Lines 2, 3, 4, 5, 9, 10 and 11*

The basic data is further analysed and sorted according to address. Entries are grouped together to identify those relating to the same street within 3 days and these duplicate entries are removed. This leaves a list of all incidents in the year that have affected one or more properties in a street. For this return, NI Water currently does not have information on the cause or the location of the flooding, so it has divided the incidents between “overloaded sewer” and “other causes” in the same proportion as the average of the water companies in England and Wales.

The “overloaded sewer” incidents are then divided between “curtilage”, “highway” and “other external areas” and the “other causes” incidents are divided between “equipment failure”, “blockages” and “collapses” on the same basis.

*Line 6*

In order to determine the number of incidents attributable to severe weather, the Company has reviewed met office monthly reports and identified dates when “heavy rainfall” or “flooding” were noted. The number of external flooding incidents attributed to severe weather has been calculated as the number of “heavy rainfall” days / 365 x the total number of external flooding incidents. As highlighted previously, this will yield a highly inaccurate estimate of the number of flooding incidents attributable to severe weather because:

- the threshold for the met office reporting “heavy rainfall” appears to be considerably lower than the 1 in 20 year event that is required by NIAUR as the standard for severe weather.
- the heavy rainfall may have only been experienced in part of the province, and may be unrelated to the locations where flooding has been reported.
- it does not allow for the fact that the properties flooded may be at risk of flooding more frequently than once in 20 years (such properties should be excluded from this count in accordance with the guidance).

*Line 8*

The basic data for 09/10 has been combined with historical records of flooding from the external flooding database. These records include all determined and undetermined records. This data was then taken through a series of sorting and elimination processes to reduce the list to those properties with more than one complaint of external flooding with an interval between complaints of more than three days but less than ten years.

As the data does not allow identification of the cause of the flooding the proportion of flooding due to overloaded sewers has been taken as the same proportion as the average of the water companies in England and Wales.

## **5.2 DG5 Properties on the At Risk Register**

The at risk register for external flooding only includes those records determined as DG5 reportable. Incidents are not DG5 reportable if they were due to equipment failure, blockage or collapse, if the return period of the storm was less frequent than 1 in 20 years or if the mitigation work is complete and the external area is no longer at risk of flooding. Those records that are still under investigation (i.e. undetermined) are not included on the register.

The register has not been updated for AIR10.

## **6. Assumptions**

It is assumed that repeat calls logged within three days relate to the same event and are therefore counted as a single event rather than two events. This is based on the Company's analysis of historical data, which suggests that when several calls are made from the same property within three days, they relate to the original event.

The cause of the flooding (overloaded sewer, equipment failure, blockage, collapse) and the location of the flooding (cartilage, highway, other external areas) is assumed to be in the same proportion as that which has been reported by the water companies in England and Wales in JR07.

## **7. Confidence Grades**

A confidence grade of D6 has been assigned to lines 1 to 11 on the basis that the data that has been used is unverified customer service centre logs of customer complaints. These numbers would be expected to reflect an upper limit of actual flooding incidents as it is likely that, when investigated, some of the reports were not related to foul or surface water flooding.

A confidence grade of DX has been assigned to lines 12 to 15 on the basis that the flooding register is incomplete. These numbers would be expected to rise significantly in future returns once the records are determined.

**8. Consistency Checks**

- Line 5 is the sum of lines 2 to 4.
- Line 15 is the sum of lines 12 to 14.

The following validation check is not possible as the Company does not record for lines 16-25.

- $\text{line 15 previous year} - (\text{current year line 20} + \text{line 21} + \text{line 22} + \text{line 25}) + (\text{current year line 23} + \text{line 24}) = \text{line 15 current year}.$

**Date:** 30 July 2010  
**Prepared by:** [ x ]

**Table 4 - Customer Service – 1****Commentary by REPORTER****DG6 Response to billing contacts (lines 1 to 5)****1. Background**

These lines collect data on the number of billing contacts received and the time taken to respond to them. This information is used to inform and compare performance for the DG6 indicator.

**2. Key Findings**

- NI Water report that they have received 99,126 billing contacts during the 09/10 year. When compared to the previous Report Year the overall number of billing contacts has increased by approximately 17,750 or 21%.
- We have reviewed a number of written and a small number of telephone DG6 contacts to test various aspects of the Company's methodology. Our checks were generally satisfactory but some concerns were noted (see Section 4 for details).

**2.1 Key Recommendations**

- Following issues found within the sample of checks undertaken we recommend the NI Water reinstate and extend audit checks undertaken on written and telephone DG6 contacts (including the treatment of holding responses).

**3. Audit Approach**

To verify the data reported our audit consisted of an interview with the NI Water system holders, an audit of the data from the Company's systems to the final table and a review of the current Company methodology for data collation. This years data has been compared with last years table entries to identify significant areas of change.

We have checked data reported in the final submission for consistency with previously audited information.

**4. Audit Findings**

During the year NI Water announced its intention to change the contractual arrangements of the [ x ], which provides support in customer contact and billing services. This change was effective from July 2009. We discussed the change in contractual arrangements and the Company advised this has allowed NI Water taking direct management control of the core customer service support activities.



We are pleased to report that a number of known weaknesses identified in previous audits e.g. logging of mail after 2pm has been addressed and corrected in the 09/10 Report Year. We also met with the Company mid way through the year to discuss some of the improvements e.g. CMS code rationalisation which were planned (and are in the process of being implemented). We therefore anticipate that further improvements in the Company's methodology will improve over the course of the next report year.

During our year end audits, NI Water advised that they intend revise their current customer service delivery model and bring in-house from their service provider their Account Services department. This will mean that going forward all written DG6 contacts and DG7 complaints will be dealt with directly by NI Water. As part of this initiative NI Water has commenced a DG6 improvement plan and this should be completed to drive further enhancements in the treatment of billing contacts. We propose to report on the impact of this change within our AIR11 audits

In our AIR10 audits we have reviewed a number of aspects of the Company's methodology. We have documented our audit findings below in the following structure:

- Section 4.1 – Overall DG6 performance
- Section 4.2 – Dealing with paper based contacts
- Section 4.3 – Dispatch of automated items
- Section 4.4 – Non-DG correspondence
- Section 4.5 – Telephone billing contacts
- Section 4.6 – Web Based services
- Section 4.7 – QA procedures

#### **4.1 DG6 Performance**

NI Water report that they have received 99,126 billing contacts during the 09/10 year. When compared to the previous Report Year the overall number of billing contacts has increased by approximately 17,750 or 21%. This increase is thought to be as a result of a number of factors including the introduction of the domestic sewerage allowance for accounts which have a domestic rateable allowance for water and full charging for non-domestic sewerage. The Company also stated that the freeze thaw event during the winter led to disruption to their meter reading cycles which could in turn lead to an increase in billing queries in the latter part of the Report Year. We believe that the factors laid out above to account for the increase in written billing contacts are reasonable

In terms of responding to DG6 billing contacts, the Company has reported that they dealt with 98.1% of contacts within 5 working days 0.1% were dealt with in more than 10 working days. This represents a slight deterioration in performance from that reported in AIR09. Using the Ofwat's performance classification, the NI Water's

reported performance in 2008/09 is classified as 'good' (>95% within five working days and less than 1.5% over ten working days). The performance reported in AIR10 is also better than the SBP 09/10 DG6 target which was >98% within five working days.

However, in discussing the Company's approach to reporting in 09/10 we found that the line process rules within the Reporting Requirements are not followed as this would lead to a potential incompatible approach being adopted. Currently NI Water report in line 1, the actual number of complaints received in the Report Year whilst the those contacts reported in lines 2 and 3 are the number of open contacts responded to in the Year (please see Section 5 below for additional detail on the Company's reporting methodology).

## **4.2 Paper based correspondence**

All Customer contact information is managed through customer contact and billing system Rapid.

We reviewed the operation of Rapid and confirm the principles of the Company's methodology are appropriate to meet the Reporting Requirements. All incoming correspondence is scanned and indexed before being passed to an Agent. The Rapid system subsequently offers work allocation, tracking and retrieval functions to the Company.

During our audits we reviewed a sample of correspondence received by the Company during the year. This sample was chosen at random from contacts received in March 10. Our audit checks were designed to check the following:

- Correct categorisation
- Correct application of the DG6 Reporting Requirements, which included:
  - dispatch
  - substantive replies
  - application of response criteria
  - date recording on systems.
- Evidence of appropriate audit trails

In total we reviewed a sample of 8 contacts to review the criteria set out above and undertook checks on a further 15 contacts to review the Company's methodology for closing responses back to the first holding response.

A summary of our audit findings are detailed below.

We reviewed the audit trail for all of the contacts selected and confirm that they were all correctly reported as DG6 contacts and were treated in line with the Reporting Requirements. We noted a small number of observations and shortcomings concerning the dating of correspondence and the maintenance of audit trails and fed back our

findings to the Company. However, we do not believe these observations would have a material impact upon AIR reporting.

We found that all written contacts received by the Company are logged on day of receipt. We specifically challenged the Company's treatment of email contacts received on non-working days (such as weekends) and we confirm that the methodology employed should ensure that contacts received at these times are reported in line with the reporting guidance i.e. the date of receipt is classed as day zero. In our audit checks we noted one instance where the receipt date of an email was incorrectly recorded but we do not believe that this is a widespread issue.

- Use of holding replies

NI Water explained that they do use holding replies and in our audit checks we reviewed several examples of these types of replies. We noted numerous instances where the Company has used multiple holding responses before a customer's contact is closed out fully. These generally relate to complaints about operational issues where additional investigatory work needs to be undertaken. From the discussions held we believe the Company's approach to these types of contacts is in line with the Reporting Requirements.

We found that where a contact which is subject to a holding response remains open on the Company's system until it is closed out substantive reply. When this reply is sent to the customer the contact is closed back to the first holding response which has been sent. This process then allows the regulatory response time to be calculated as the Company derives its response based performance statistics on closed contacts.

During our audits we reviewed the Company's methodology for closing DG6 contacts back to the initial holding response once a substantive reply had been sent. We found each agent maintains a log of the status of each contact i.e. whether they are open or closed and when the next action is due. Through sample checks of 15 contacts we endeavoured to check that a closed contact was closed back to date of the initial holding response on Rapid. For a number of contacts this proved to be the case but we did find instances (in circa 50% of cases) where the contact was not always closed to the correct date (sometimes earlier, sometimes later than what was the correct date). The contacts reviewed were all closed/completed within a 5 day timescale but there is a potential risk that the age profile of contacts dealt with between day 0 to 5 is inaccurate. However, it should be noted that the audit sample was limited to a small number of contacts and to particular agents so there is a strong likelihood that the error rate highlighted above is overstated and skewed somewhat.

A follow-up session was held with the Company's Service Agents and they advised they had undertaken a more representative audit check of 30 contacts taken from all agents and found errors in 3 contacts (giving a circa 10% error rate). The Company's Service Agents have agreed to put in additional audit checks on this area to improve the

recording of dates by agents. Based on own audits undertaken we do not believe this finding has a material impact on reporting as the errors were only found in dates between day 0 and day 5 however there is a potential risk the age profile of contacts resolved is inaccurate. We do however envisage the planned DG6 improvement project will help resolve such issues. We propose to revisit this issue in our AIR11 commentaries.

#### **4.3 Dispatch of automated items**

During the audit we challenged the Company on how they record the date of dispatch for items such as re-bills. NI Water advised that there are a variety of ways in which such stationery could be sent to a customer. We found that if a customer called to request a re-bill then this could be actioned through the Company's billing system which would subsequently be picked up and processed by the Company's Provider for printing and dispatch. The Company advised that their Agent has a 2 day Service Level Agreement to action these items, but for reporting purposes the date when the action was requested is used for reporting purposes.

The Company's Agents advised that whilst this could be the case, a holding response may also be issued to the customer advising that a re-bill and in effect this would count as the response used for regulatory reporting. We subsequently challenged the Company's service agents whether this scenario would apply to all contacts where an automated dispatch available and whether there was a risk that items could be closed down on day 4 or 5 when they were not dispatched to day 6 or 7. The Company's agents advised that a review of this process was ongoing. We propose to revisit this in our AIR11 audit programme.

We also queried what checks are undertaken to ensure these types of items are dispatched in line with the SLA of the agents' sub-contractors. The Company's agents advised that whilst checks are undertaken to ensure that their contractors receives all of the intended stationary items to be printed no checks are undertaken on the dispatch process. The Company's agents agreed to consider undertaking such checks in the future.

#### **4.4 Non DG correspondence**

Mid-way through the Report Year we reviewed a small sample of non-DG correspondence (i.e. those excluded from both DG6 and 7) and believe the Company's methodology is generally sound. We did however review one group of contacts which related to debt management. Within this sample one piece of correspondence from an administrator of a Company asking NI Water for a balance of an account was reviewed. In the Reporter's view this was a DG6 item as the contact is billing related, driven by a customer request (admittedly from their administrator) and requires an action from the Company. Following clarification from NIAUR the Company has amended their methodology to include these types of 'legal' queries within their DG6 statistics.

In our year end audit checks we tested a sample of those now included and are content the methodology applied is appropriate and confirm this change was effective from the beginning of March 10. We also reviewed those contacts received prior to this date and logged as 'legal' (circa 340). In recognising that this sample of contacts would contain reportable and non-reportable contacts we sampled 10 contacts and found 50% of these would be classed as reportable. Thus applying this percentage to the total volume means the total DG6 volumes could be underreported by 170 contacts (50% \* 340 contacts). This figure equates to 0.17% of all DG6 contacts and therefore considered immaterial.

#### **4.5 Telephone billing contacts**

As we have found elsewhere the vast majority of DG6 billings contacts are received by NI Water over the phone. We found that of the circa 99k contacts received by the Company, the majority (80%) were received via NI Water's dedicated billing line. Similarly, we found that the vast majority of these were responded to at the time of the call and were responded to within 5 working days.

During the year we undertook brief checks on the Company's call handling process. In total we listened to six calls and on the basis of the checks carried out we believe the Company's methodology and recording of these calls is reasonable.

#### **4.6 Web Based services**

From reviewing the Company's website we are aware that they offer web based facilities to their non-domestic customers where payments can be made, direct debit amendments etc can be made. We understand that contacts made via this facility are included within the Company's DG6 statistics but we have not undertaken any specific checks in this area. We queried the number of contacts made via this facility during 2009/10 and NI Water advised that 200 contacts were reported. This is immaterial in the context of the total number of DG6 contacts received. However, if the number of these types of contacts increase it is important to consider whether these contacts meet the criteria of DG6 contacts and whether they require an action to be taken by a Company agent or not. Comparable debates in relation to DG6 and 7 email and web based contacts have recently been drawn by Ofwat in RD 05/10.

#### **4.7 Quality Assurance**

During our audit work we queried what QA controls NI Water operates on the calls/correspondence received. The Company outlined that the controls and checks previously undertaken and reported on had ceased but similar checks have recently been reinstated.

We reviewed the checks now undertaken by the Performance Team and believe the checks undertaken are soundly based but could be extended to check the full end-to-end process of the DG6 handling process for both written and telephone contacts. The

checks currently in place test whether the contact is correctly reported as DG6 contact but additional value could be added if checks were extended to include date recording and assessing the substantiveness of replies.

## 5. Company Methodology

To confirm the methods used by the Company are as described and are generally in line with the Reporting Requirements, we performed a series of reviews and audit checks. From these checks we are content that the approach adopted is in line with their stated methodology.

On the basis of our audits from AIR10 we have provided a summary of our findings and the Company's methodology below.

- NI Water outsources the majority of its' customer contact, billing services and complaint handling to their Service Provider.
- Correspondence is opened and date stamped on the date of receipt. At this point, correspondence is allocated between various categories including correspondence relating to DG6 (billing contact) and DG7 complaints.
- Written complaints about billing are recorded in DG7 (Table 5) not DG6.
- Once correspondence has been opened and indexed it is routed to an agent for action. Managers maintain a list of prioritised contacts which ensures that contacts are dealt with in line with the SLA and regulatory timescales.
- Contacts are closed when a response is sent to the customer by the contact team. We discussed with the Company various logistical points of this process including the times of collection and dispatch, resourcing issues and contingency plans to ensure all mail is dispatched on the same day a contact is closed. From these discussions we believe the practice adopted by the Company is suitable (except for automated dispatch items) to ensure satisfactory compliance with the Reporting Requirements.
- The Company's methodology recognises the bank holidays applicable in NI, even though there may be occasions where their Service Agents may be able to action items as their non-working days are not aligned to NI bank holidays.
- A high proportion of billing contacts are counted from the telephone system. Calls to these lines are recorded on Rapid.

The Company reports all billing contacts received during the Report Year within line 1. To report lines 2 to 4 NI Water reports the number of contacts in the year as the number of contacts 'closed' in the year. The difference between the number of contacts received and the number of contacts closed (circa 2%) is due to contacts being 'open' at year end.

To report data for line 1 the Company relies on data extracted from CorVu reports. To report data for lines 2 to 4 the Company extracts data from Rapid system. NI Water demonstrated how these reports are run and demonstrated the consistency of the audit

trail.

The Company advised that whilst holding responses close the contact for reporting purposes the contact remains open on their system until a final response is issued by the contact team. NI Water explained its methodology for reporting contacts received in one reporting period but not closed until the following year. We understand for AIR10, if a contact was received in the 2009/10 Report Year then this would be included line 1 of Table 5. If a complaint received in 2009/10 is addressed by a holding response in the 2010/11 year (and subsequently closed out the Company's system with a final response) the response time will be reported in AIR10.

The Reporter is content that the methodology employed regarding contacts received versus contacts closed in the year is satisfactory as the staggered approach should mean (assuming the methodology is consistent in subsequent AIR's) contacts are reported as received then closed in the subsequent year. However in terms of AIR reporting there exists a potential scenario of more contacts being closed than received as the current backlog of contacts is reduced.

We are aware of a number of different methodologies to report DG6/DG7 contacts including those to report based on the closure date of the contact. Further consideration in conjunction with NIAUR to address the known weaknesses of the system employed is recommended.

## **6. Company Assumptions**

NI Water publishes a number of telephone numbers for different specific purposes. The Company assumes that all calls on the specified billing contact lines will be billing contacts. It is assumed that there is only a low level of customers dialling the wrong number. We confirm that these are reasonable assumptions, appropriate for the volume of calls received.

## **7. Confidence Grades**

The Company has applied a confidence grade of B3 to all the DG6 related information in the table. Whilst data for this line is derived from corporate system which should provide robust data there are known weaknesses in the reporting process e.g. dating of correspondence and use of holding replies. As such, we concur with the assessment made by NI Water.

**Table 4 - Connected properties, Lines 6-8****1. Background**

This section of Table 4 collects details on the number of connected properties broken down by service category.

**2. Key Findings**

- Our audits indicated satisfactory compliance with the guidance

**3. Audit Scope**

We carried out an audit with the Company's system holder for these lines. Our audit consisted of a review of the Company's methodology and the systems the Company employs to transpose the data from its billing system data extracts into the table.

**4. Audit Findings**

As reported elsewhere the Company has derived their estimates of property numbers from extracts produced from their Rapid billing system. We have followed the Company's methodology and believe is to be in accordance with the Reporting Requirements and consistent with the summary information presented to the Reporter during the audit. We challenged why the confidence grade assigned to these lines was A2 when other property estimates (most notably in Tables 7 and 13) have a confidence grade of C3. NI Water explained this was because they have more confidence in robustness of water connections than wastewater. We believe that this set of data should have a consistent grade throughout and as similar data is reported elsewhere in the Return and is derived from the same system. We therefore consider a C3 grade to be appropriate.

Specific line comments are as follows:

- *Line 6 – Number of properties connected for water supply only*  
We note an increase of 2,904 properties connected for water supply only from 2008/09.
- *Line 7 – Number of properties connected for water and sewerage services*  
We note that the number of properties connected for both water and sewerage services has decreased by 8,544 since 2008/09.
- *Line 8 – Number of properties connected for sewerage services only*  
We note that the number of properties connected for sewerage services has decreased by 3 since 2008/09.



**5. Consistency Checks**

We confirm that the sum of lines 6 and 7 of Table 4 are consistent with Line 1 – Total connected properties at year end in Table 2.

**Date:** 30 July 2010  
**Prepared by:** [ x ]

**Table 5 - Customer Service – 2****Commentary by REPORTER****DG7 - Response to written complaints, Lines 1-9****1. Background**

The DG7 indicator shows the total number of written complaints received and the number dealt with within the specified time bands.

**2. Key Findings**

- The number of complaints received has decreased by 7% or 258 written complaints in real terms. NI Water explained that they believe the decrease in written complaint volumes is predominately related the improvement implemented during the year by the Company.
- Since October 2009 NI Water has been operating a DG7 ‘Triage Team’ to help improve DG7 complaint handling. The Company outlined that the introduction of this team has helped to reduce the average time a complaint is open, the number of holding responses issued and improving the rate of first contact resolution.

**2.1 Key Recommendations**

- Further consideration, in conjunction with NIAUR, to address the potential weaknesses of the reporting methodology employed is recommended. See Section 5.2 for more details.

**3. Audit Approach**

To check the accuracy of the information reported, our audit consisted of an interview with the NI Water line holders, an audit of the data from the Company’s systems to the final table and a review of the current methodology for data collation. This years data has also been compared with last years table entries.

**4. Audit Findings**

During the year NI Water announced its intention to change the contractual arrangements of the[ x ], which provides support in customer contact and billing services. This change was effective from July 2009. We discussed the change in contractual arrangements and the Company advised this has allowed NI Water taking direct management control of the core customer service support activities.

We are pleased to report that a number of known weaknesses identified in previous audits e.g. logging of mail after 2pm has been addressed and corrected in the 09/10

Report Year. We also met with the Company mid way through the year to discuss some of the improvements e.g. CMS code rationalisation which were planned (and are in the process of being implemented). We therefore anticipate that further improvements in the Company's methodology will occur over the course of the next Report Year.

We also found that the Company have since October 2009 been operating a DG7 'Triage Team' to help improve DG7 complaint handling. NI Water outlined that this team contained experienced and specialist staff and was set up to address a number of issues including reducing the average time a complaint is open, the number of holding responses issued and improving the rate of first contact resolution. The Company presented evidence (which is replicated in their commentaries) which shows the improvements the Triage Team has made. We briefly reviewed the operation and contacts dealt with by this team and believe their treatment of written complaints is in line the Reporting Requirements.

#### **4.1 Line 1 - Total written complaints**

For AIR10, the Company report that the total number of written complaints received has decreased. Overall the number of complaints has decreased by 7% or 258 written complaints in real terms. This decrease follows a large increase in the volume of complaints received in 08/09.

NI Water explained that they believe the decrease in written complaint volumes is predominately related the improvement implemented during the year by the Company (as outlined above).

#### **4.2 Lines 2 to 5 – DG7 Performance**

The Company has improved the level of performance in responding to complaints compared to the AIR09. Overall, the Company report 99.4% of written complaints were responded to within 10 working days and 0.4% of written complaints were dealt with in more than 20 working days. However, please see section 5 below for details on how the Company reports response times.

The Company's reported performance is ahead of their SBP target (98%) of contacts dealt with within 10 working days. Using the equivalent Ofwat assessment criteria for DG7, the NI Water's performance for 2008/09 Report Year would be classified as 'good'.

#### **4.3 Audit Checks**

During our audits we reviewed a sample of correspondence received by the Company during the year. This sample was chosen at random from contacts received in March 10. Our audit checks were designed to check the following:

- the contact has correctly been classified as DG7
- the Rapid system correctly records the incoming and response date
- there was an audit trail evident for each complaint
- the nature of the complaint (to inform table 5a)
- the response to the complaint is substantive.

In total we reviewed a sample of 8 contacts to review the criteria set out above. A summary of our audit findings are detailed below.

In general, we found that the Company's approach is consistent with their stated methodologies. We found all the complaints reviewed were correctly classified as DG7 written complaints. Our audit checks covered complaints received by both post and email. We reviewed the audit trail for all of the contacts selected and confirm that they were all correctly reported as DG7 contacts and were treated in line with the Reporting Requirements. We noted a small number of observations and shortcomings concerning the dating of correspondence and the maintenance of audit trails and fed back our findings to the Company. However, we do not believe these observations would have a material impact upon AIR reporting.

We also questioned the Company on the types of correspondence classified as non-DG. We challenged this aspect to ensure that written pieces of correspondence from a wider population should not be classified as DG7 (or DG6) items. We tested a small sample of correspondence which had been classified as non-DG. In all of the items reviewed we concur with the Company's classification. We found a number of issues could have been considered a DG6 item (see table 4) but do not have concerns over the Company's DG7 allocation methodology.

- Dating of correspondence

#### *Written contacts*

We have reported previously that the Company methodology for mail received after 2pm was to record this as being received on the next working day which is not in strict accordance with the Reporting Requirements. In AIR2009, NI Water advised that they intend to implement process changes which would ensure that all mail is logged on date of receipt. We are pleased to report that the Company has revised their approach to ensure that all mail is logged on the day received. The Company also presented a summary report which demonstrated the methodology they had adopted to retrospectively identify and adjust those item logged incorrectly prior to the refreshed methodology being adopted.

#### *Emails (and faxes) received on non-working days*

During our audit we noted instances of emails being received on non-working days and confirm they had been reported as per the Reporting Requirements i.e. a contact should be recorded as being received on the date it is delivered to the Company even if this is not within normal working hours (with the next working day being recorded as day 1).

We did however note one instance of the date being recorded incorrectly but do not believe this to be a widespread issue.

- Use of holding replies

Within our audit checks we noted instances where the Company issues holding responses to customer complaints. This effectively closes the contact for regulatory reporting but the contact remains open on the Company's system to ensure a response is issued to the customer. We queried how the Agent ensures that a holding response is tracked and the Company advised that each advisor maintains a spreadsheet of each contact which flags when an update needs to be provided to the customer. In specific relation to DG7 we have not undertaken any specific checks on the process used to track the actions required. However, we did find a number of instances in our DG6 audit checks where the contact was not always closed back to the initial holding response. We recommend more work is undertaken to assess whether similar weaknesses exist in the DG7 process

- Substantiveness of Responses

We confirm that all replies reviewed, except for those highlighted above, were considered substantive.

- Dispatch

We also questioned the Company on various logistical points of the dispatch process, including the times of collection and dispatch and resourcing issues to ensure all mail is dispatched appropriately. On the basis of these discussions we are content NI Water's approach is consistent with their stated approach and with the NIAUR Reporting Requirements.

#### **4.4 Treatment of emails (and faxes)**

We asked the Company to clarify the processes for email communication and found in general it is treated in the same way as written correspondence. Emails are logged, date stamped, indexed and passed to an Agent as per the Company's methodology statement. We tested NI Water's methodology for recording the receipt date of a complaint received via email and the outcomes of these checks are detailed above.

#### **4.5 Exclusions from the DG7 indicator**

NI Water advised that they have not excluded any complaints from the DG7 indicator.

The NIAUR Reporting Requirements allow complaints to be excluded for a number of reasons (e.g. about non-appointed activities, are anonymous). If in future Returns NI Water excludes complaints from the DG7 indicator, we recommend that clear audit trails

are maintained to support the exclusion. The Reporter would normally expect to review and substantiate a sample of such exclusions.

#### **4.6 Postal Strikes**

We questioned NI Water as to whether the mail strikes had a material impact on their operations (and performance) as they would not have received incoming mail or been able to dispatch mail on certain days. In response the Company advised that they do not believe interruptions in the postal service have had a material impact on their operations in 2009/10.

### **5. Company Methodology**

#### **5.1 Overview**

To confirm the methods used by the Company are as described and are in line with the Reporting Requirements, we performed a series of reviews and audit checks. From these checks we are content that the approach adopted is in line with their stated methodology.

On the basis of our audits from AIR10 (and AIR09) we have provided a summary of our findings and the Company's methodology below:

- NI Water outsources some of its' complaint handling to their third party agents.
- All written correspondence is received and processed by their service providers. Correspondence is opened and date stamped on the date of receipt. At this point, correspondence is allocated between various categories including correspondence relating to DG6 (billing contact) and DG7 complaints.
- All Customer contact information is managed through customer contact and billing system, Rapid Xtra.
- Once correspondence has been opened and indexed it is routed to an agent for action. Managers maintain a list of prioritised contacts which ensures that contacts are dealt with in line with the SLA and regulatory timescales.
- Contacts are closed when a response is sent to the customer by the contact team. We discussed with the Company various logistical points of this process including the times of collection and dispatch, resourcing issues and contingency plans to ensure all mail is dispatched on the same day a contact is closed. From these discussions we believe the practice adopted by the Company is suitable to ensure satisfactory compliance with the Reporting Requirements.
- NI Water methodology assumes that all mail received after 2pm is logged on the day it is received. We also found that emails received on non-working days are reported correctly i.e. they are recorded as being received on the non-working day and the next day is reported as day 1.

## 5.2 Reporting

The Company reports all complaints received during the Report Year within line 1. To report lines 2 to 4 NI Water reports the number of contacts in the year as the number of complaints 'closed' in the year.

To report data for line 1 the Company relies on data extracted from CorVu reports. To report data for lines 2 to 4 the Company extracts data from Rapid system. NI Water demonstrated how these reports are run and demonstrated the consistency of the audit trail. The Company did however advise that whilst holding responses close the contact for reporting purposes the contact remains open on their system until a final response is issued. NI Water further explained that the configuration of their system tracks a closed response to a holding response. We have not undertaken any checks on the configuration or accuracy of this process but understand closed contacts are traced back to the initial holding response which has been issued.

Within their commentary, NI Water explains its methodology for reporting complaints received in one reporting period but not closed until the following year. We understand for AIR10, if a complaint was received in the 2009/10 Report Year then this would be included line 1 of Table 5. If a complaint received in 2009/10 is addressed by a holding response in the 2010/11 year (and subsequently closed out the Company's system with a final response) the response time will be reported in AIR11.

The Reporter is content that the methodology employed regarding contacts received versus contacts closed in the year is satisfactory as the staggered approach should mean (assuming the methodology is consistent in subsequent AIR's) contacts are reported as received then closed in the subsequent year. However in terms of AIR reporting there exists a potential scenario of more contacts being closed than received as the current backlog of contacts is reduced. We are aware of a number of different methodologies in other companies to report DG6/DG7 contacts including those to report based on the closure date of the contact. Further consideration in conjunction with NIAUR to address the known weaknesses of the methodology employed is recommended.

## 5.3 Quality Assurance

During our audit work we queried what QA controls NI Water operates on complaints received. The Company outlined the various controls in place including the administration of their customer service contract and the checks undertaken by the Customer Service office on the data provided. NI Water explained that they currently test the allocation of contacts to DG7 and how they intend to extend these checks in the future to include other elements of the complaint handling process and call listening exercises. The Company also explained how feedback is disseminated back to the agents via monthly meetings with their service provider.

**6. Company Assumptions**

There are no further material assumptions that we have identified.

**7. Confidence Grades**

The Company has applied a confidence grade of B4 to all the DG7 related information in the table. Whilst data for this line is derived from corporate system which should provide robust data there are potential weaknesses in the reporting process. As such, we concur with the assessment made by NI Water.



**DG8 - Bills for metered customers, Lines 6 – 12****1. Background**

This indicator identifies the proportion of metered customers who receive bills during the year based on actual meter readings and the proportion based on estimated readings.

**2. Key Findings**

- The Company report that 91.2% of customers received a bill based on a meter reading in 2009/10. The reported performance is below the Company's SBP target which was 95%.

**2.1 Key Recommendations**

- In relation to DG8 exclusions and change of occupancy we believe the Company's methodology is not in strict accordance with the Reporting Requirements. Whilst we believe this will not have a material impact on the DG8 reported performance, further investigation to verify this is required.

**3. Audit Approach**

To verify the information provided by the Company our audit consisted of an interview with the NI Water system holder, a review of the current methodology for data collation, an audit of the data from the Company's systems to the final table and a comparison with last years table entries.

We also checked the data in the final submission for consistency with previously audited data.

**4. Audit Findings****4.1 General**

The information to derive DG8 data is supplied from reports produced from the Company's billing records. Summary tables are produced from these records to collate figures for the final table. We reviewed the data in the reports and followed the data trail through to the Company's final table.

**4.2 Performance and Industry Comparison**

After taking the number of exclusions reported in line 6 away from the total number of metered accounts reported in line 7, a total of 68,093 accounts are included with the DG8 indicator. The Company state that of this total, 91.2% of customers received a bill based on a meter reading in 2009/10. The reported performance is also below that

reported in 08/09 and below the Company's SBP target which was 95%.

The percentage of meters not read by the Company for two years equates to 1.6% of the metered base included in the DG8 indicator. We have checked these calculations and confirm that, using the comparable Ofwat DG8 assessment criteria, this would indicate as performance as 'needing improvement' (<98% of company or customer reads and <0.15% unread by the company for 2 years).

Within their commentary the Company explain the reasons for the deterioration in performance reported in the year. These include the restructuring of the meter reading team, the introduction of new working practices and the cold weather experienced during the year. NI Water presented a summary of each of these issues together with a programme of actions they intend to implement during the year. We propose to revisit these actions and comment upon their impact within our AIR11 commentaries.

#### **4.3 Line 6 – Total metered accounts**

As we would anticipate, the number of total metered accounts has increased due to the Company's ongoing non-domestic metering programme and the policy to meter all new properties. Please see our table commentaries for Tables 8 and 7 for further details on these numbers.

#### **4.4 Line 7 - Exclusions**

During the audit the Company cited a number of examples where an account would be reported in line 7 and excluded from the DG8 indicator. Whilst the Company advised that these have been previously agreed with the Regulator, we discussed a number of these and believe their exclusion from the DG8 indicator appears reasonable. Examples of such accounts include:

- Charged on another basis
- Test meters
- Trade-effluent meters
- DRD or NIW meters
- Fire supplies
- Properties occupied less than six months
- Complex accounts – Including combination meters
- Void properties

Overall, NIW excluded approximately 20% of its metered base from the DG8 indicator. This is somewhat higher than the average of accounts excluded by WaSC's in England and Wales, which is circa 11%. However, whilst providing a useful metric for comparison purposes, it is difficult to make any direct comparisons as NIW DG8 statistics included non-domestic accounts only.

To check the Company's methodology in this area, we asked the Company to provide a list of accounts from each exclusion category. NI Water was able to supply this listing and we selected a random sample of accounts to review. For each account reviewed we sought to check the billing history and consumption records on Rapid to ensure the account was correctly interpreted as an exclusion. In total we reviewed 16 accounts which are broken down as follows:

- 4 void accounts,
- 4 accounts where occupancy is less than 180 days
- 4 new properties (where occupancy is less than 180 days)
- 4 accounts charged on another basis

In all the accounts reviewed the Company was able to demonstrate why these accounts had been excluded. Whilst this represents only a small proportion of the total number of reported exclusions, on the basis of the checks undertaken we are content that the Company's methodology in this area is satisfactory.

We specifically challenged the Company on their interpretation of the 'less than 6 month' category exclusion category. We also supplied a number of scenarios to NI Water to understand their interpretation of this exclusion category. The Company explained whether these scenarios were included or excluded from the DG8 analysis and in the majority of cases we concurred with the Company's assessment. However, in relation to change of occupancy we believe the Company's methodology is not in strict accordance with the Reporting Requirements. The Requirements infer that change of occupancy is taken into account when deriving the 6 month exclusion. In the scenario supplied to the Company, customer A occupied the property for 3 months and then customer B occupied the property for a further 4 months, giving a continuous occupancy of the property of 7 months. Following the guidance this property should be included within the DG8 measure but is currently counted as a exclusion within the Company's DG8 measure. We are aware of similar interpretation issues elsewhere but do not consider this to be a material issue. This is based on the fact that the meters included in the Company's DG8 measure are all non-domestic and there is likely to be less movement/change of occupancy in the customer base when compared to the domestic base. However, further investigation to verify this is required.

We also questioned the Company on whether they are able to reconcile the number of 'complex' accounts from one report year to the next as under normal circumstances we would expect the types of accounts to remain relatively static over time. NI Water advised that they could not reconcile these accounts between AIR2009 and AIR2010 but would endeavour to undertake an exercise within their AIR11 submission.

#### **4.5 Line 8 and 9 - Company readings/Company or customer readings**

The Company methodology outlines that that is encourages customers to provide their own readings and reads can be register via NI Water's website or by calling their billing

line. We briefly reviewed the website facility and have witnessed use of the CMS code to record customer meter reads on Rapid. On the basis of the discussions held with NI Water we believe the Company methodology is in line with their stated practice and with the Reporting Requirements.

#### **4.6 Line 10 - Estimated Bills only**

Whilst the Company has made endeavours to ensure that every non-household customer receives a bill based on at least one meter reading, NI Water report a number of instances where this was not possible.

The proportion of metered accounts of receiving a bill based on a estimated reading has increased from 5.8% in 08/09 to 7.3% in 09/10 and within their commentaries NI Water highlight a number of reasons why their meter reading cycles had been affected by circumstances which prevailed in 09/10. Going forward the Company highlight several initiatives they plan to implement during the year which we believe should reduce this percentage. We propose to revisit this area in our AIR11 commentaries.

#### **4.7 Line 11 - No bills received during the Report Year**

NI Water report a small number of accounts where the customer has not received a bill during the year. We have not sought to verify the accuracy of the numbers reported.

#### **4.8 Line 12 - Unread by the Company for 2 years**

The percentage of meters not read by the Company for two years equates to 1.6% of the metered base included in the DG8 indicator. This figure is somewhat higher than that typically reported in England and Wales but meaningful comparisons are difficult given that NI Water only bill non-domestic properties.

### **5. Company Methodology**

The primary source of data is the Company's billing system and we confirm that the Company presents all the annual data and that no sampling techniques have been employed.

To confirm the methods used by the Company are as they describe and are in line with the Reporting Requirements, we performed a series of reviews and audit checks. From these checks we are content that the approach adopted is in line with their stated methodology.

On the basis of our audits from AIR10 we have provided a summary of our findings and the Company's methodology below:

- NI Water outsources its' billing activities to its third party provider
- The primary source of data is the Company's billing system, Rapid.
- All customers who are eligible for billing are billed, regardless of consumption.
- Before the start of each reading period all meter accounts which need to be read are transferred from the Rapid system onto the Routestar system. These accounts are then transferred onto the PDA's of meter reader who then visits the meter.
- When in the field, all meter readings (including those not able to be read) are input by the meter reader on their PDA.
- Meter readings are uploaded back from the Routestar system onto the Rapid on a daily basis. Bills are then generated on Rapid based on the consumption recorded and appropriate tariff.

The Company described the processes by which meter readings are managed to the Reporter's satisfaction. When meter readings cannot be obtained the meter reader records this on their PDA and this is fed back into Rapid. On such occasions the Company has the facility for customers to enter a reading via the phone or website. If no reading is provided before the subsequent billing run a system estimate is generated and a bill is issued.

## **6. Company Assumptions**

We consider that there are no assumptions to be disclosed and that the data is based on sound procedures.

## **7. Confidence Grades**

The Company has assigned a confidence grade of B2 to lines 6 to 12. Although we have not undertaken any statistical audit tests, we consider that the Company's systems for recording data and producing the necessary reports warrant the confidence grade applied.

**DG9 - Telephone Contact, Lines 13-17****1. Background**

This indicator identifies the ease with which customers can make telephone contact with the Company.

**2. Key Findings**

- The total volume of calls received, the total abandoned calls and number of telephone complaints have increased significantly from those reported in 2008/09. NI Water presented evidence which illustrates these metrics were significantly affected by operational incidents during the year.

**2.1 Key Recommendations**

- We understand the NI Water does not currently undertake assurance checks on calls received and recommend call listening exercises are re-introduced to further ensure the reporting of calls is robust.

**3. Audit Approach**

Our audit consisted of an interview with the NI Water system holders, a review of the current methodology for data collation, an audit of the data provided and a listening exercise to calls received.

We have also checked the data in the final submission for consistency with previously audited data. We have not attempted to reconcile the numbers of calls received to the number of calls logged on the Company's contact management system.

**4. Audit Findings****4.1 General**

The Company confirmed that there has been no material change in the methodology for AIR10. We found that as in previous years, the information is supplied from collation reports produced from the Company's telephony system. Data is extracted directly from this system and summary tables are produced from this system to produce figures for the final table.

Under normal circumstances, a call received from a customer is logged by the telephony system and routed directly to an agent. When all agents are busy, the customers call is placed in a queue until the next available agent is free.

For further details on the call services the Company offers and how these are reported within DG9 please see our commentary in Section 5.

#### **4.2 Line 13 - Calls received**

NI Water report that they have received 351,864 calls from customers during the year.

We confirm the total number of calls received is circa 9% higher than that reported previously and the Company outline various reasons for this increase. Of greatest note is the number of calls received on certain days during the cold weather which prevailed in December and January of the Report Year.

Within the commentary illustrate the call volumes received during this period and the data illustrated that for the majority of days within this period NI Water received above the average call volumes and in some case received 4 or 5 times the number of calls which would be typically offered.

#### **4.3 Line 14 - All lines busy**

NI Water report that no calls received an all lines busy tone during the year. When questioned on the configuration of the telephony system the Company representative advised that their system has sufficient capacity to ensure customers should never hear an engaged tone.

#### **4.4 Line 15 - Abandoned Calls**

The Company report a significant increase in the number of calls abandoned. Overall NI Water report 5,478 more calls were abandoned in 2009/10 than 2008/09. We confirm this equates to 2.6% of all calls received compared to the equivalent figure of 1.1% reported in AIR09.

The Company explained that the majority of this increase was a result of the high call volumes received during the cold weather experienced in December and January of the Report Year. This is supported by the evidence presented by the Company which shows that 2,000 calls being abandoned on just one day in January.

#### **4.5 Line 16 - Call Handling Satisfaction**

During the audit the Company outlined that they has provided data to the market researcher during the year. We questioned the Company if any of the four data waves were in weeks which were consider atypical for any reason e.g. problems with the telephony system, operational incidents etc. The Company explained that they did not consider any of the four waves to be atypical but for a short period during the March 10 data wave, the fire alarm within the Company's office sounded which impacted upon the Company's operation for a short time.

The Company briefly explained the process by which the call data is collated prior to dispatch to the market researcher. All calls are passed to the market researcher and no exclusions are made. In our experience elsewhere, Company's do make a number of small exclusions to the data provided to the market researcher. The possible circumstances where this occurs include

- Calls (mainly operational) that can be identified as "non-customer" calls (e.g. from field staff or contractors).
- Customers who have ex directory phone numbers.
- From customers sharing the same number (e.g. switchboard).
- If there is a "do not phone" indicator on the account.
- Calls from key customers.

#### **4.6 Line 17 - Telephone Complaints**

In the Company's draft submission we noted that the reported number of telephone complaints had increased significantly. We found that the overall the number of telephone complaints has increased by approximately 15,000 complaints to 47,860 complaints which is a 44% increase on that reported in 08/09.

The Company highlight that volume of telephone complaints received has increased due to a number of large operational incidents which occurred during the Report Year. These include the freeze/thaw incident in December and January, the widespread power outages in March 10 and a supply contamination event in April 09.

#### **4.7 Audit Checks**

During our visit we requested details of a 6 calls and undertook a call listening exercise to verify how the call had been logged using the CMS codes employed by the Company. We have not undertaken a end to end process review of the handling of each call. A summary of our audit findings are given below.

- We concur with the CMS codes assigned to 5 of the calls. However we were unable to identify the CMS code used to record one call relating to flooding.
- We reviewed 3 calls relating to septic tank empty requests and confirm calls relating to such activity are included within the Company's reporting even though they are not strictly part of appointed business.
- In listening to the calls we highlighted several weaknesses in the way in which the call was dealt with. We highlighted these to the Company representative who agreed to follow up on these observations.

We also asked NI Water for clarification on the 4,923 calls cited in their commentary which had been rejected by the Company's system. NI Water explained that these calls are received outside of the advertised operating hours of their billing lines. In such cases the customer calls in answered with an automated message advising them that the call centre is currently closed.



## **5. Company Methodology**

### **5.1 Overview**

The Company's commentary describes the configuration of its telephony system. NI Water has also identified the telephone numbers and locations against which they are reporting in their Methodology Statement. The volume of each calls received on each line is taken directly from Call Media reports.

In summary:

- For Customer Billing the office hours are 8am to 8pm Monday to Friday, and 8am to 6pm Saturday.
- The Company's debt line office hours are 9am and 5pm weekdays only.
- For Service Enquiries, NI Water's Waterline and Leakline are open 24 hours a day 365 days a year
- Calls received outside of these advertised times are not included are in the report of calls received or calls abandoned.
- NI Water has not utilised any temporary customer contact points during the year.
- No message manager systems or answering machine facilities were used during the reporting year.

### **5.2 Call Services offered/telephony configuration.**

During the audit we questioned the Company on the call services it offered in terms of IVR, TouchTone, Queuing or automated speech recognition facilities as were are aware from other experience that calls via such services are often difficult to track and report. In response NI Water advised that their telephony system has the capability to but does not currently offer such services. We understand that the only option presented when callers contact the 'Waterline' number is to opt for new connections or to hold for all other enquiries.

### **5.3 Reporting**

NI Water advised that the telephony system is configured to produce data required by the Reporting Requirements. As such data is provided for the total number of calls received, calls abandoned, all lines busy and telephone complaints directly from the system itself. We have not undertaken any checks o the configuration of these reports.

During the audit we also met with staff whose responsibility it is to report DG9 and other management information. The Company has a documented methodology of how data is collated from the system and during the audit the representatives outlined the processes they follow.

We have checked and confirm that the totals presented in the DG9 lines of Table 5 are consistent with the summary Call Media reports compiled by the Company. We challenged the Company on the content of one report which related to the distinction between calls abandoned and calls rejected calls. NI Water advised that rejected calls reported within Call Media relate to calls received outside of office hours.

#### **5.4 Telephone Complaints**

As highlighted above, the Company use CMS contact type rather than complaint flag on Call Media to report telephone complaints.

#### **5.5 Call Handling Satisfaction**

We found that the Company reports all calls received the market researcher as no exclusions are made. As such it is possible that allowable exclusions are included in the market researchers' sample in each of the four designated weeks.

#### **5.6 Quality Assurance**

During our audit work we queried what QA controls NI Water operates on the calls received. The Company outlined that whilst various checks were carried out by the Performance Team these have ceased during the year. However, we understand that these will be reinstated shortly and the Company intend to undertake detailed checks on the call handling process. NI Water explained these checks will include logging of calls, allocation to CMS code etc. We propose to revisit this issue within our AIR11 audit programme.

### **6. Company Assumptions**

We believe that all relevant and material assumptions have been disclosed above by either the Company or the Reporter.

### **7. Confidence Grades**

We believe the confidence grades assigned to lines 13 to 17 are appropriate but have not undertaken any specific or statistically significant checks to verify the volume of calls reported.

**Special Needs Register - line 18****1. Audit Findings**

This table identifies customers registered for special assistance.

Within their commentaries, NIW explain that its Priority Service scheme was launched in the latter part of the 2008/09 Report Year and that 546 customers were registered on the scheme by the end of 2009/10. We have not undertaken any specific checks on this number but from a cursory inspection of the Company's website we were able to download the Company's brochure and application form.

**Date:** 30 July 2010

**Prepared by:** [ x ]

**Table 5a – DG7 Response to Written Complaints (complaints data for CCNI)****Commentary by REPORTER****1. Background**

This table summarises written complaints received by a company into 5 complaint categories defined by the Consumer Council.

**2. Key Findings**

- The breakdown of complaints reported by the Company is consistent with the complaint volumes reported in Table 5.
- We have tested the Company's allocation of complaints to the various complaint categories and believe NI Water's methodology is satisfactory. However, there is a risk of misclassification as opening CMS codings are used rather than closed (post investigative) codings.

**2.1 Recommendations**

- The Company introduces a protocol and methodology to allow the reporting of complaints at stage 2 within their complaint handling process.

**3. Audit Approach**

The audit involved an examination of the procedures adopted by NI Water for its customer service activities regarding customer complaints. Whilst the main focus of our audits has been on the work systems and practices used by the Company in preparing data for Table 5, we have carried out a cursory inspection of the methodologies used to populate Table 5a.

**4. Audit Findings****4.1 General**

During the audit, we discussed with the Company their methodology for completing this requirement. The Company explained that as for the DG7 measure, they extract data from their Rapid billing system.

**4.2 Total written complaints - lines 1 to 3**

We confirm the source of these lines is Table 5 lines 1, 2 and 4. Please see our DG7 commentary for the derivation of these lines. We also confirm that the totals reported in these lines is consistent with that reported in Table 5.

#### 4.3 Category of written complaints – lines 4 to 13

- *Allocation to category*

During the audit the Company explained that as each complaint is logged it is allocated to a category. The Company should therefore be able to classify all complaints into the high level headings cited in the Reporting Requirements. However, within their commentary NI Water advise that they have found a number of contacts where they believe the allocation to a category was incorrect. We undertook a small sample check of complaints and concurred with allocation made. However, we noted a large increase in the proportion of complaints allocated to ‘other activities’ from that reported previously which supports in part the Company’s concern that the allocation of a complaint to category is not always undertaken robustly.

We also understand classification has been based on the coding when a complaint is received rather than when the complaint is closed. Using this methodology there is a risk that contacts could be misclassified as evidence gained during the investigation could facilitate a more accurate assessment of the correct classification.

We confirm the addition of lines 4, 6, 8, 10 and 12 equal the number of complaints reported in line 1.

- *Allocation to Stage*

In our review of DG7 (see Table 5 commentary) we reviewed a number of complaints and witnessed evidence of complaints being logged at various stages within the Company’s complaint handling process on Rapid.

However, we found that NI Water had not populated lines 7, 9, 11 and 13 so queried why this was when complaints are allocated to a stage. The Company explained that whilst complaints were allocated to various stages they are not sufficient reporting controls in place to ensure the stage of each complaint is reported correctly. Going forward we would expect the Company to be able to report such data.

#### 5. Company Methodology

The Company methodology is similar to that it employs for DG7 – written complaints.

In essence, the Company interrogates its Rapid system to extract the required data to populate the table. During our audits of DG7 we reviewed the Company’s processes for dealing with written complaints, including the operation of this system. Please see our Table 5 commentaries for further details.

From discussions with the Company and checks carried out we believe the methods used by the Company are as described in their methodologies. CMS codes are used by agents

to allocate complaints to a particular category.

## **6. Company Assumptions**

We believe all assumptions have been reported.

## **7. Confidence Grades**

For lines 1 to 3 – “total written complaints”, data is copied directly from Table 5 and therefore the grades assigned to these lines are consistent. Please see our commentary on Table 5 on the appropriateness of the confidence grades assigned to these lines.

For lines 4 to 13 – “Category of written complaint”, the majority of data is extracted directly from Rapid and therefore the Company methodology does not rely on sampling or extrapolation to populate the table. Whilst a B2 grade has been assigned, there is some concern that the data reported is not accurately reported and a lower grade may be more appropriate. However, we have not investigated this issue sufficiently to make a more informed judgement.

**Date:** 30 July 2010

**Prepared by:** [ x ]