

Investigation into the release by Northern Ireland Water Limited of information relating to its costs and tariffs

July 2008



Table of contents

		Pages
Section 1	Summary	3 - 6
Section 2	Introduction	7 - 10
Section 3	Background to the water charging process	11 - 13
Section 4	The investigation process	14 - 17
Section 5	Contemporaneous documentation	18 - 27
Section 6	NIW internal review	28 - 32
Section 7	Conclusions	33 - 39
Appendix A	Chronological list of key documents	40 - 42

Summary

Overview

- 1.1 The Northern Ireland Authority for Utility Regulation ("Utility Regulator") investigation found serious shortfalls in areas of management at Northern Ireland Water Limited ("NIW"). In particular significant weaknesses were apparent in NIW's systems of planning and governance procedures. The investigation evidenced prima facie grounds to support a breach of the licence obligation to have in place appropriate systems, processes and management resources.
- 1.2 The context for the events covered in this report is that NIW were undertaking a new process that made new calls on its data systems. In a similar context in other reform programmes (in GB water reform, or other utility commercialisation processes), similar data problems came to light even years after charging had been introduced. The company deserves some credit for identifying the incorrect data behind cost apportionment. Unfortunately however, its subsequent handling of the issue left much to be desired and lessons need to be learned for the future. It is also important to point out that NIW's 2008-09 Scheme of Charges was in the event correct and our investigation has found no evidence that non-domestic customers were overcharged as a result of the problems. The advent of independent regulation has ensured that the issue, when identified, was dealt with appropriately for this charging year.
- 1.3 Nevertheless, NIW has accepted that serious shortfalls exist and has committed to actions as listed by the Utility Regulator. NIW has agreed to share its internal review of NIW's control environment, data integrity and quality, and accompanying action plan. The Utility Regulator will seek to put NIW's commitments onto a legal footing thus facilitating formal enforcement action should improvements not be realised.
- 1.4 It is also evident that NIW did not conduct its business in an open and transparent manner. NIW failed to immediately communicate with the Utility Regulator on the cost apportionment issue which had direct implications for the Scheme of Charges, to be approved by the Utility Regulator.
- 1.5 It is imperative that lessons are learnt. The re-apportionment issue has had a negative impact on customers' perception of the new commercial regime. In this respect, NIW has committed to the adoption of transparent, timely and quality information returns to the Utility Regulator.
- 1.6 The investigation has been focused on NIW's behaviour, and not that of any other stakeholder. NIW has responsibilities to provide information to the Utility Regulator, and our objective is to ensure a productive regulatory relationship with the company and full compliance with its regulatory obligations.

Introduction

- 1.7 From 1 April 2007, responsibility for the provision of water and sewerage services in Northern Ireland passed from Water Service, a governmental agency, to NIW, a corporate entity. This process of change was accompanied by the creation of the Water Directorate of the Utility Regulator.
- 1.8 The Utility Regulator has been tasked by the Water and Sewerage Services (Northern Ireland) Order 2006 ("The Order") with a number of duties, not least the protection of the interests of consumers of water and sewerage services in Northern Ireland. In order to fulfil its duties, the Utility Regulator requires robust and reliable financial and technical information to be made available by NIW in a timely manner.
- 1.9 On 22 February 2008, it became publicly known that the assumptions as regards domestic and non-domestic customers in NIW's Strategic Business Plan ("SBP") were inaccurate; hence, less revenue was available from non domestic customers, therefore more was required from domestic customers (accepting that DRD paid a subsidy to NIW on behalf of those customers who were not being billed).
- 1.10 It subsequently became clear that NIW had been aware of this cost apportionment issue prior to its submissions to the Utility Regulator on 31 January 2008. NIW informed the Department for Regional Development ("DRD") of the re-apportionment issue on the 14th January 2008, following more extensive discussions with DRD on the tariff model. However, the Utility Regulator was only formally made aware of the cost apportionment issue and the significance of the re-allocations by NIW on 22 February 2008.
- 1.11 On 8 April 2008, the Utility Regulator announced its intention to formally investigate the cost apportionment issue. The Utility Regulator has now completed its investigation.

Overall findings

- 1.12 The Utility Regulator's investigation has not identified any dishonesty by NIW in regard to the cost apportionment issue, nor any conspiracy to conceal information. However, the Utility Regulator has significant concerns in the following areas of operation regarding NIW which have been identified by its investigation:
 - (a) Quality of customer data and assumptions;
 - (b) Corporate governance standards (especially systems of planning and internal control);
 - (c) Communication with the Utility Regulator;
 - (d) Interaction with stakeholders; and
 - (e) Financial effect of the mitigation measures.

- 1.13 The Utility Regulator has carefully considered all the information available to it. NIW operates in accordance with its 'Instrument of Appointment by the Department for Regional Development of Northern Ireland Water Limited as a water and sewerage undertaker under the Water and Sewerage Services (Northern Ireland) Order 2006' ("the Licence"). The Utility Regulator is of the opinion that NIW may have contravened three areas of the Licence:
 - (a) Condition E, Section 2 requires that no undue preference is shown to, and there is no undue discrimination against, any category of customer or potential customers;
 - (b) Condition F, 6A.1 requires NIW to act at all times, as regards its obligations, in the manner best calculated to ensure that it has adequate:

 (i) financial resources and facilities;
 (ii) management resources;
 (iii) systems of planning and internal control;
 - (c) Condition F, 6A.5A requires NIW to conduct its business as if it were substantially its sole business and as if it were a separate listed public company.

The Utility Regulator's decision

- 1.14 In respect of these Licence conditions, the Utility Regulator has determined that:
 - (a) Condition E, Section 2 insufficient information to support a breach of Licence has been collected. NIW, therefore, has no case to answer as a result of the investigation. Further information, through the usual regulatory channels, will be pursued over the coming months. However, it is not anticipated that this matter will lead to a decision with respect to a breach of Licence. The Utility Regulator has nevertheless concluded that this is a significant issue, revealing generally unwelcome behaviours by NIW, in terms of information provision to the Utility Regulator. However, there has not been, nor is there likely to be, a breach of Licence Condition E, Section 2;
 - (b) Condition F, Section 6A.1 sufficient evidence appears to have been collected with respect to the above matter and no further information is required. The Utility Regulator has concluded that serious and significant weaknesses are apparent in NIW's systems of planning and governance procedures. Further, the Utility Regulator has observed a failure to put in place adequate information and planning systems. The Utility Regulator is concerned with the lack of candour and transparency by NIW as regards its relationship with the Utility Regulator. Overall, the Utility Regulator believes there to be a *prima facie* breach of the Licence by NIW. Therefore, NIW has a case to answer with respect to its failure to comply with Licence Condition F 6A.1; and
 - (c) Condition F, Section 6A.5A insufficient evidence has been collected with respect to the above matter in order to assess whether or not a breach of Licence Condition F 6A.5A has occurred. However, the Utility

Regulator has concluded that there appears to be influence by DRD over NIW's internal affairs. Therefore, the relationship between the Licence and the context of public funding requires further consideration. Accordingly, the Utility Regulator will communicate its concerns to DRD and will continue to keep the matter under review.

- 1.15 Therefore, in light of the above, it has been agreed, and NIW has confirmed its acceptance thereof, that:
 - (a) The Utility Regulator will seek commitments from NIW immediately in relation to a series of steps in order to provide assurance that NIW will improve its resources and systems of internal control; and
 - (b) The Utility Regulator's board will consider a resolution in Autumn 2008 to decide as a matter of fact and law whether or not NIW has breached the Licence in respect of Condition F Section 6A.1. If a breach has occurred, the Utility Regulator may proceed to an enforcement order imposing the commitments provided by NIW, or in the alternative, NIW may offer to convert its commitments into legally binding obligations.
- 1.16 The Utility Regulator has received a letter from the NIW Chairman dated 4 July 2008. The NIW Chairman has reaffirmed his Board's commitment to learn lessons from the cost apportionment issue and to commit to a list of commitments in order to bring about the necessary improvements within NIW. The areas where the Utility Regulator requires commitments include:
 - (a) An upfront approach drawing attention to known data and assumption shortfalls with an accompanying action plan;
 - (b) The assessment of and an action plan to address internal governance shortfalls:
 - (c) Open, transparent and timely communications with the Utility Regulator, notably of any change in circumstance which may have a material affect on the performance of and / or revenue requirement for NIW, and any material changes in revenue required from different customer groups;
 - (d) Open and transparent communication with all stakeholders; and
 - (e) Full and comprehensive engagement with the Utility Regulator in order to address outstanding areas of concern including the treatment of the closure of major commercial businesses in 2008-09 and discussion on mitigation measures for 2009-10 onwards.

Introduction

The water industry in Northern Ireland

- 2.1 The Utility Regulator is an independent public body with wide ranging legal powers. Its primary focus is the effective regulation of key utilities in Northern Ireland, including that of water and sewerage under the aegis of the Water Directorate. Its duties and powers with respect to the water industry in Northern Ireland were established consequent on the Order.
- 2.2 Until recently, Water Service was responsible for the provision of water and sewerage services in Northern Ireland. From 1 April 2007, these responsibilities passed to NIW as the successor body to Water Service. Water Service was an unregulated agency within DRD. NIW is a statutory entity, wholly owned by the government. NIW is the only statutory water company in Northern Ireland. It operates in accordance with company legislation and is subject to the economic and quality regulation relevant to water companies in Great Britain.
- 2.3 DRD is a Northern Ireland governmental department. It has two primary functions as regards NIW:
 - (a) It is the sole NIW shareholder; and
 - (b) Its Water Policy Division ("WPD") advises on policy matters concerning water and sewerage, as well as discharging DRD's duties under the Order.
- 2.4 The Order empowers DRD to licence companies to provide water and sewerage services in Northern Ireland, including the ability to raise revenue from customers. It also imposes standards in relation to the provision of these services. Effective 1 April 2007, DRD issued NIW with the Licence.

Regulation of the water industry by the Utility Regulator

- 2.5 Article 6 of the Order sets out the general duties of the Utility Regulator. These duties must be carried out in the manner that the Utility Regulator considers it best calculated in order to:
 - (a) Protect the interests of consumers in relation to the supply of water and sewerage services, wherever appropriate by facilitating effective competition between persons engaged in, or in commercial activities connected with, the supply of water and sewerage services;
 - (b) Secure that the functions of water and sewerage service providers are properly carried out for every area in Northern Ireland; and

- (c) Secure that companies appointed to provide water and sewerage services are able (in particular, by securing reasonable returns on their capital) to finance the proper carrying out of the functions required under the Order.
- 2.6 The Utility Regulator is obliged under Article 60 of the Order to keep under review the activities carried on by NIW connected to its regulatory functions. Furthermore, the Utility Regulator has a duty to collect information with respect to those activities with a view to it becoming aware of and ascertaining the circumstances relating to matters which come within the sphere of its powers and duties in the field of water and sewerage regulation.
- 2.7 The Licence requires NIW to provide the Utility Regulator with financial and technical information. The Utility Regulator relies upon this information in order to help it to ensure that NIW is in compliance with the Licence in an effective and cost efficient manner. The Utility Regulator regards the accuracy, reliability and timely availability of this information as fundamental to the regulatory function.
- 2.8 The Consumer Council for Northern Ireland ("CCNI") is a public body established to represent the interests of consumers. It is entirely separate and distinct from the Utility Regulator. As of 1 April 2007, CCNI took over responsibility for the representation of consumers of water and sewerage services in Northern Ireland.

The cost apportionment issue

- 2.9 NIW receives income in respect of water and sewerage services provided by it to both non-domestic (business) customers and domestic (household) customers. Currently, non-domestic customers pay a proportion of the water charge as apportioned to them; domestic customers are wholly subsidised by DRD. Subject to DRD policy and that of the Northern Ireland Executive and Assembly, it is anticipated that non-domestic customers will commence payment in full for their water and sewerage services from 2009-10 financial year; domestic customers will commence part payment of their allotted charges from 2009-10.
- 2.10 The aforementioned financial and technical information provided to the Utility Regulator by NIW includes support for its proposed water and sewerage charges for the coming year in order that it may raise sufficient revenue to cover its costs. The Utility Regulator must approve these proposed water and sewerage charges before they come into effect. In setting the water and sewerage charges, NIW is obliged by the Licence to ensure that the charges are fair and not unduly discriminatory, such that each category of customer pays only for services received and does not subsidise another category of customer.
- 2.11 On 31 January 2008, NIW provided the Utility Regulator with the following information in accordance with the Licence:

- (a) A combined tariff model which derives the proposed charges for 2008-09;
- (b) An Interim Principle Statement ("IPS") in respect of 2007-08; and
- (c) A Scheme of Charges ("SoC") for 2008-09.
- 2.12 On 22 February 2008, it became publicly known that assumptions as regards the number of domestic and non-domestic customers in NIW's SBP were inaccurate and had been amended in NIW's submissions of 31 January 2008. As a consequence, more revenue was required from water and sewerage charges to domestic customers than had been expected and less revenue was due from water and sewerage charges to non-domestic customers. The Utility Regulator understands that NIW's submissions of 31 January 2008 reflected these more accurate assumptions. However, the covering letter to the Utility Regulator made no reference to the cost apportionment issue.
- 2.13 Further, it became apparent that NIW had been aware of the deficiencies in its assumptions prior to its submissions to the Utility Regulator on 31 January 2008. NIW also informed DRD of the re-apportionment issue on the 14th January 2008, following wider discussions with NIW on the tariff model. NIW did not formally inform the Utility Regulator of the amended figures until 22 February 2008.

Scope of the investigation

- 2.14 The Utility Regulator considered it appropriate to undertake a formal investigation of the events surrounding the cost apportionment issue and the adequacy and timeliness of the provision of information by NIW to the Utility Regulator. Its investigation was launched on 8 April 2008. The investigation has been guided largely by: (i) the Utility Regulator's primary functions and general duties as set out at Article 6 of the Order; (ii) the regulatory controls imposed upon NIW by virtue of the conditions of the Licence.
- 2.15 Accordingly, the Utility Regulator set the following 'Stage 1' and 'Stage 2' objectives for the investigation:

Stage 1:

- (a) Who had what information about the cost apportionment issue and when;
- (b) What information was contained in NIW's submissions to the Utility Regulator of 31 January 2008;
- (c) Whether the Utility Regulator had made appropriate use of information; and

Stage 2:

- (d) To establish whether there are *prima facie* grounds for a finding of a breach of the Licence by NIW.
- 2.16 The Utility Regulator's Board invited its Audit Committee to take responsibility for oversight of the investigation. The terms of reference were set by the Audit Committee who reported progress back to the Board. The Audit Committee met on three occasions to review progress and reported back to the Board its recommendations for action which were agreed at the Audit Committee on 2 July 2008 and subsequently by the Board on 3 July 2008. The Board is expected to agree formal resolutions in respect of this matter during Autumn 2008.

This report

- 2.17 The Utility Regulator has now completed its investigation into the cost apportionment issue. It has set out its findings and observations in the remainder of this document, which is comprised as follows:
 - Section 3 contains background information on the process of setting water and sewerage charges;
 - (b) Section 4 sets out the approach to the investigation by the Utility Regulator;
 - (c) Section 5 focuses on the Utility Regulator's review of contemporaneous documents;
 - (d) Section 6 addresses the internal review undertaken by NIW; and
 - (e) Section 7, sets out the Utility Regulator's conclusions.

Background to the water charging process

Water and sewerage services

- 3.1 NIW charges customers for water and sewerage services in Northern Ireland in accordance with Article 200 of the Order. These services include: the supply of drinking water; the collection, treatment and disposal of wastewater, road drainage and surface water; the treatment and disposal of trade effluent.
- 3.2 It had been foreseen that for 2007-08, NIW would charge its customers for those services supplied in accordance with the annual SoC as approved by the Utility Regulator in accordance with Article 201(7) of the Order. However, the Northern Ireland Executive has since determined that the direct charging of domestic customers by NIW should be postponed until at least April 2009. Currently, NIW charges certain non-domestic customers for metered water and for the disposal of trade effluent. From April 2008, NIW has charged non-domestic customers for non-metered water and sewerage services at 50% of the full charge rate. It is anticipated that NIW will make a full charge for its services to these customers from April 2009; in the meantime, the remaining 50% of applicable charges has been subsidised by DRD.

The Licence

3.3 Condition B of the Licence defines the basis of charges for water and sewerage services in Northern Ireland. The application of Condition B of the Licence has been impacted by the aforementioned postponement of direct charging for domestic customers. Notwithstanding the above and that the majority of NIW's income in 2008-09 is derived under subsidy from DRD, Condition E of the Licence continues to require that charges for water and sewerage services are fair and that no undue preference is granted to any particular category of customer. Condition F of the Licence governs the quality and quantity of accounting information the Utility Regulator must receive. It also places important legally binding obligations relating to corporate governance on the NIW.

NIW submissions to the Utility Regulator

- 3.4 The tariffs for water and sewerage services by category of customer should enable NIW to generate sufficient revenue in aggregate so as to cover its costs, to the extent that these costs are not funded by DRD subsidy. Once NIW has agreed its annual revenue requirement, specific tariffs are determined based on the combined tariff model which takes into account:
 - (a) Number of customers in each category of customer;
 - (b) Value of the property or business of each customer;

- (c) Volume of actual water usage (for metered customers);
- (d) Volume of estimated water usage (for non-metered customers);
- (e) Volume of wastewater (whether for metered or un-metered customers);
- (f) Volume and strength of trade waste;
- (g) Application of standing charges, if any;
- (h) Phasing of charges, recognising any DRD subsidy; and
- (i) Depreciation of NIW's assets.
- 3.5 On or before 31 January each year, NIW is required to submit three documents to the Utility Regulator for approval: its combined tariff model which derives the proposed charges; its IPS which discloses revenues by category of customer for the current year; its proposed SoC for the coming year. The IPS discloses movements in key data (notably, customer numbers, water and sewerage volumes, prior and current year revenues). This regulatory process enables NIW to issue annual updated charges in accordance with Condition B of the Licence.
- In England and Wales, the Water Services Regulation Authority ("OFWAT") requires the equivalent of the IPS (known as the Principal Statement) to be subject to independent audit, in order to ensure that reported data is reliable and robust. In December 2007, the Utility Regulator determined that NIW's first IPS, due to be submitted on 31 January 2008, should be subject to similar controls; hence, it provided appropriate instructions to the technical reporter ("Reporter") even though this is not a mandatory requirement under the Licence. In so doing, the Utility Regulator signalled the importance it attached to accurate and reliable data in support of NIW's SoC and other submissions.
- 3.7 As the Annual Information Return ("AIR") 2006-07 submitted by NIW related to an unregulated period, it was not possible for the Reporter to critically compare the IPS data with that information contained in NIW's AIR. The AIR contains detailed technical and financial information, and is the principal mechanism by which the Utility Regulator monitors the performance of NIW. In particular, it helps the Utility Regulator to have confidence that NIW is meeting its requirements as a water and sewerage undertaker in compliance with both the Order and the Licence.

Approval process

- 3.8 Under Condition B7.1(1) of the Licence, in its 2007-08 IPS, NIW was required to report revenue raised from customers for the previous year, 2006-07. However, 2006-07 was the final year of operation for Water Service and its customer base was limited to a number of non-domestic metered water customers and certain trade effluent customers.
- 3.9 Therefore, NIW was unable to report year-on-year movements in domestic customers and non-domestic un-metered customers because it had never previously raised revenue directly from these customers. Similarly, it could not report revenue raised from any of its sewerage customers because it had never charged directly for the provision of this service.
- 3.10 NIW submitted its combined tariff model, IPS and SoC to the Utility Regulator on 31 January 2008. The Utility Regulator had intended to approve the SoC within four weeks of receipt in order to allow NIW ample time to liaise with its billing contractor for the issue of bills by 1 April 2008. However, this timetable became impossible as NIW had been unable to accommodate the Reporter's audit until 11 February 2008. The Utility Regulator had, in fact, requested access for the Reporter to NIW some two months earlier, on 14 December 2007.
- 3.11 The Reporter provided its final report to the Utility Regulator on 22 February 2008, three weeks after the deadline for NIW's submissions. This was also the date on which the cost apportionment issue became public knowledge and the Utility Regulator had first been formally informed of the matter by NIW.
- 3.12 As a consequence of the cost apportionment issue, the DRD Minister required NIW to put in place a series of mitigation measures as shown in 'Table 2: NIW mitigation measures' (see paragraph 6.5(I)). On 27 February 2008, NIW provided the Utility Regulator with amended versions of its combined tariff model and draft SoC, both of which reflected a number of the Reporter's recommendations as set out in his report of 22 February 2008.
- 3.13 NIW, DRD and the Utility Regulator held discussions regarding the charging process, which resulted in a final combined tariff model and SoC being submitted for approval by the Utility Regulator on 18 March 2008. On 21 March 2008, the Utility Regulator approved the SoC.

The investigation process

The regulatory environment

- 4.1 The Water Directorate of the Utility Regulator has been in existence for 14 months; NIW has recently completed its first year of operation, although its legacy organisation, Water Service, is of longstanding. Unlike NIW the Utility Regulator had no previous role in the Northern Ireland water industry. This is the first formal investigation by the Utility Regulator in respect of NIW. It arises at a time when water and charges have been the subject of keen political interest and when several of the water companies in Great Britain have themselves been the subject of investigation by OFWAT under the media spotlight.
- 4.2 Therefore, it has been incumbent upon the Utility Regulator to ensure that its investigation derives solely from the regulatory functions and statutory duties under which it operates, with due regard to the specific issues at NIW. The Utility Regulator has sought throughout its investigation to adopt a proportionate response to the cost apportionment issue whilst maintaining due regard for its primary functions of protecting the interests of consumers and ensuring the proper behaviour of NIW.

Approach to the investigation

- 4.3 In October 2007, NIW submitted its draft IPS for 2007-08, prepared on a *proforma* basis for guidance purposes, to the Utility Regulator. On 22 February 2008, NIW informed the Utility Regulator of the cost apportionment issue and the consequent financial effect on NIW. With this in mind, the Utility Regulator has focussed its investigation on events during the period October 2007 to March 2008.
- 4.4 The areas subject to investigation are complex and have required detailed technical analysis by the Utility Regulator. The Utility Regulator assigned the investigation to an internal team compiled from different areas of its organisation. The investigation team has operated throughout under the direct control and responsibility of the Director of Water. External forensic input has been obtained from Grant Thornton UK LLP, one of the larger firms of accountants and business advisers engaged under the current framework agreement by OFWAT. Legal input has been provided internally by the Utility Regulator's Head of Legal Services with external support from Wragge & Co LLP.
- 4.5 The Utility Regulator acknowledges that the involvement of Grant Thornton UK LLP has been invaluable to its investigation. In addition to providing assistance and advice on the investigation process, Grant Thornton UK LLP has participated in relevant Audit Committee meetings, has met with the principal NIW investigator, reviewed this report and has generally acted as an independent

- 'sounding board' for the Utility Regulator in performing a proportionate and robust investigation.
- 4.6 Notwithstanding this assistance, for the avoidance of doubt, the Utility Regulator emphasises that the investigation process, related decisions, the content of this report and its conclusions as regards the investigation are the sole responsibility of the Utility Regulator, as is only proper under these circumstances. In this respect, the Utility Regulator Audit Committee has been kept fully informed of the focus and progress of the investigation. Wragge & Co LLP provided legal advice in relation to the implications of the facts disclosed by the investigation.

Sources of information

- 4.7 As part of the investigation process, the Utility Regulator has reviewed in detail the information supplied by NIW in response to the information and documentation requested, as well as the findings of NIW's own internal review. The Utility Regulator has reviewed the full range of written information, including formal correspondence, e-mails and other relevant documentation as made available to it by NIW. The Utility Regulator has also critically reviewed its own records as regards any interaction with NIW concerning the cost apportionment issue.
- 4.8 It was the original intention of the Utility Regulator to complete Stage 1 of its investigation by the end of May 2008. The objective of the Utility Regulator was, and continues to be, to address the cost apportionment issue without undue delay. However, the Utility Regulator remains committed to a comprehensive review of all relevant issues before reaching its conclusions. Accordingly, additional time has been required due in part to the complexity of the issues but specifically due to the need to request from NIW, on a number of occasions, further information pertinent to the investigation.

Chronology of the investigation

- 4.9 On 3 April 2008, the Utility Regulator wrote formally to NIW and set out its initial information requirements. It indicated a response date of 18 April 2008. In so doing, the Utility Regulator recognised that the information requested might require some time to collate; whilst seeking to progress the investigation as quickly as practicable. In particular, the Utility Regulator sought to minimise the risk of any deficiency in the completeness and accuracy of the information provided to it by NIW.
- 4.10 On 4 April 2008, the NIW Chief Executive responded to the above information request; NIW agreed to provide the Utility Regulator with the requested information by 18 April 2008. At the same time, NIW confirmed that its Chairman's independent (to the extent that the NIW Chairman may be considered independent) internal review would conclude in the near future.

- 4.11 On 18 April 2008, NIW submitted an information pack to the Utility Regulator under cover of a letter from its Chief Executive. NIW explained its view of the chronology of events insofar as relevant to the cost apportionment issue. The NIW Chairman also submitted a letter to the Utility Regulator in which he explained that NIW's internal review of the matter was still being completed and that it would be considered at NIW's Board meeting of 29 April 2008.
- 4.12 On 1 May 2008, the Utility Regulator wrote to NIW's Chief Executive. The purpose of the letter was to highlight instances where the information provided by NIW on 18 April 2008 appeared incomplete. The Utility Regulator requested further information necessary to achieve satisfactory completeness of its information requirements. On the same date, the Utility Regulator wrote to NIW's Chairman in order to emphasise the urgent need for NIW to provide the Utility Regulator with a full copy of its internal review report together with any associated reports and documents.
- 4.13 On 2 May 2008, NIW's Chairman replied to the Utility Regulator. He explained that his internal review was not yet complete and had not been discussed at the NIW Board meeting of 29 April 2008, other than one specific issue relevant to Board reporting.
- 4.14 The Utility Regulator has remained sensitive to NIW internal governance exigencies. It recognised the importance of Board involvement before formal release of the internal review report. Accordingly, the Utility Regulator waited until 9 May 2008 before writing once again to the NIW Chairman in order to formally request a copy of the complete internal review report by 15 May 2008. The Utility Regulator also stated that it was now unavoidable that the Utility Regulator's report into the cost apportionment issue would be delayed beyond 30 May 2008, due in large measure to the fact that NIW had still not provided the Utility Regulator with a copy of its internal review report.
- 4.15 On 13 May 2008, NIW's Chairman replied to the Utility Regulator. He reaffirmed that a copy of NIW's internal review report would be provided to the Utility Regulator as soon as it was complete.
- 4.16 On 15 May 2008, NIW provided further responses to the information request previously submitted by the Utility Regulator. The information was submitted under letter from the NIW Chief Executive who expressed concern at the nature of the Utility Regulator's investigation. In any event, before the Utility Regulator was able to engage the NIW Chief Executive on this matter, on 20 May 2008 NIW publicly announced that its Chief Executive would stand down effective 31 May 2008 and that the NIW Chairman would assume responsibility for the role of Chief Executive until a suitable replacement was appointed.
- 4.17 On 30 May 2008, NIW's Chairman wrote to the Utility Regulator and provided, subject to validation of a few minor points, a copy of his summary of the NIW

- internal review report. However, at this time no copy of the actual NIW internal review report was made available to the Utility Regulator.
- 4.18 On 4 June 2008, under Article 261(2) of the Order, the Utility Regulator had no choice but to issue a formal notice to NIW requiring NIW to provide:
 - (a) A copy of its internal review report;
 - (b) The full minutes of the NIW Board meeting of 29 April 2008; and
 - (c) Any briefing papers considered by NIW at this Board meeting.
- 4.19 On 9 June 2008, NIW wrote to the Utility Regulator and provided:
 - (a) A copy of its documents: (i) 'Internal Review Background Briefing Note'; (ii) 'Internal Review - Findings and Recommendations';
 - (b) Minutes of the NIW Board meeting of 29 April 2008; and
 - (c) Summary of matters agreed by the NIW Board in light of the cost apportionment issue.
- 4.20 On 3 July 2008, representatives of the Utility Regulator's investigation team met with the NIW principal investigator in order to discuss NIW's approach to its internal review of the cost apportionment issue. On the same date, the Utility Regulator Board met with several NIW Board members in order to discuss the cost apportionment issue and major findings from their respective investigations.

Contemporaneous documentation

Sources of information

- The Utility Regulator has not had direct access to the books, records and other documentation held by NIW. It has made reasonable requests for the disclosure of relevant information by NIW. These requests for information have largely been forthcoming from NIW. In addition, a constructive meeting has taken place between the NIW and the Utility Regulator investigation teams.
- 5.2 The Utility Regulator has, in whole or in part, reviewed and relied upon the following sources of documentary information:
 - (a) 'The Independent Water Review Panel Strand One Report, Costs and Funding', dated October 2007 ("the Strand One Report");
 - (b) The NIW submission of 31 January 2008, comprising: (i) the combined tariff model; (ii) the IPS 2007-08; (iii) the SoC 2008-09;
 - (c) The IPS external audit opinion dated 31 January 2008 and the Reporter's report dated 22 February 2008;
 - (d) The revised and reissued combined tariff model and SoC of 18 March 2008:
 - (e) Three files of information submitted by NIW to the Utility Regulator on 18 April 2008 and a further three files of information submitted by NIW on 15 May 2008;
 - (f) The NIW 'Chairman's Summary of the Internal Review' provided on 30 May 2008 and the further documents delivered to the Utility Regulator on 9 June 2008, comprising: (i) 'Internal Review Background Briefing Note'; (ii) 'Internal Review Findings and Recommendations'; (iii) minutes of the NIW Board meeting of 29 April 2008; and
 - (g) The Utility Regulator's correspondence, notes of discussions and minutes of meetings with NIW particularly during the period January to March 2008, including meetings between the respective Chairmen.

Strand One Report

On 30 September 2007, Professor Paddy Hillyard, Chair of the Independent Water Review Panel, signalled the completion of the Strand One Report. This document has been publicly available since October 2007. Both the Utility Regulator and NIW have publicly commented on this document.

- 5.4 The Strand One Report addressed many issues, including the accuracy of the data used by NIW as a basis for developing the new charging system:
 - "1.19 Third, more attention should have been given to the accuracy of the data on which the proposed new charging system was to be based. As the bulk of the new funding was to be raised through direct charges, it was essential that data on connections for water and sewerage services was as accurate as possible. Yet in the course of our research we encountered large variations between different documents in the estimated number of domestic and non-domestic connections. Moreover, we observed a significant differential between the number of connections and the number of new houses and apartments completed each year as recorded in DSD statistics. These variations could lead to significant differences in the estimated amounts to be raised from the average household in the form of direct charges."
- 5.5 Consequently, it is clear that some four months prior to the submission of the IPS by NIW to the Utility Regulator, whilst un-quantified, there were known issues as regards the accuracy of the underlying data for water usage and customer numbers. The Strand One Report also explained that this situation could lead to incorrect billings by NIW.

NIW submissions of 31 January 2008

- 5.6 The combined tariff model, the IPS and the SoC submitted by NIW on 31 January 2008 reflected certain changes (now seen as corrections) to a number of parameters, when compared with Condition B, Section 4 of the Licence, previous versions of the combined tariff model and the AIR for 2007-08. These changes included:
 - (a) The number of non-domestic un-measured water customers;
 - (b) The number of non-domestic measured water customers; and
 - (c) The amount of water consumed by each of these categories of customer.
- 5.7 In overview the key changes have been summarised as follows:

Table 1: Comparison of data assumptions

Non-domestic	Licence	Tariff model	Difference
Measured water - volume (million m3)	52.9	47.0	(11.1%)
Unmeasured water - customers	42,000	21,000	(50.0%)
Unmeasured sewerage - volume (million m3)	39.4	23.5	(40.4%)

Source: customer numbers have been extracted from the Reporter's Report of 22 February 2008; volume figures have been extracted from the NIW Chairman's Summary of the Internal Review of 30 May 2008. This table excludes figures contained in the 2007 AIR.

5.8 The cover letter accompanying the NIW submissions of 31 January 2008 included the following comment:

"As indicated in previous correspondence, Northern Ireland Water is striving to improve the reliability of its data collection systems and thus the accuracy and completeness of data reported in Northern Ireland Water Licence and other deliverables. The data in the IPS relies on recent evidence-based charging assumptions and reflects as accurate a picture of the breakdown of customer numbers as is possible at this time. It is suggested that in order to provide assurance to the Utility Regulator - in addition to that provided by the Auditor - the Reporter should undertake a review of all the evidence-based assumptions underlying the IPS."

- 5.9 The Utility Regulator acknowledges that the current investigation also provides it with the opportunity to evaluate its own performance and involvement as regards the cost apportionment issue. It is only with hindsight, the Utility Regulator acknowledges that comments such as that set out above by way of modifying the financial and other returns submitted to the Utility Regulator should not have gone unchallenged. Further, the necessary response should be issued promptly.
- Notwithstanding this, it is not for the Utility Regulator to tease out hidden meanings behind obtuse and arguably incidental comments. NIW did not provide the Utility Regulator with a timely, clear, written explanation of the impact of the changes in customer numbers and water volumes on its charges. The Utility Regulator emphasises that such an expectation is only reasonable and reflects accepted practice in Great Britain where the water companies are fully aware of the fundamental requirement to explain to their regulator the impact of any changes in customer numbers and/or water volumes on charges and tariffs. In contrast to its communication style with the Utility Regulator, NIW was in correspondence with the DRD on this matter between 14th January 2008 and 15th February 2008 at which point DRD itself made the Utility Regulator aware of the re-apportionment issue.
- The Utility Regulator notes that a draft IPS was provided by NIW in November 2007. However, this was submitted by NIW as a *pro-forma* document for review of layout and confirmation of correct reporting data. The data were not subject to extensive scrutiny on the basis that NIW marked its data as draft and that it was clearly incomplete. Consequently, the Utility Regulator considered any data as draft and the focus of any review was on the format rather than detailed evaluation and acceptance of specific content.
- 5.12 The final IPS for 2007-08, as already explained, reported only financial information on those customers currently being billed. Information was not relevant, therefore, for non-domestic un-measured customers or water/sewerage volumes associated with this same category of customer. Therefore, it was not possible to compare the data provided in the IPS for 2007-08 with the 2007 AIR (reporting on the un-regulated period of 2006-07).

- 5.13 However, going forward, it will be possible to undertake such a comparison between the IPS for 2008-09 and the 2008 AIR. Both the Reporter and the Utility Regulator will compare data provided in these two regulated submissions. The Reporter in his report on the 2008 AIR will comment on any changes between the two submissions and also on NIW's commentary explaining the reason for any reported differences. Similarly, the IPS external auditor's opinion should address both current and prior year data.
- 5.14 Further, the Utility Regulator did not undertake any extensive review of the combined tariff model, the IPS for 2007-08 and SoC immediately because the Reporter had yet to review the data (which review commenced on 11 February 2008 and concluded by way of the Reporter's report to the Utility Regulator on 22 February 2008). By this time, the cost apportionment issue had arisen and the combined tariff model and SoC had to be re-submitted with revised data, including the impact of several of the recommendations of the Reporter and a reduced revenue requirement.
- In each version of the combined tariff model submitted to the Utility Regulator, the numbers of customers increased as well as decreased from one version to the next. It was not possible, therefore, to determine with any confidence the likely impact on tariffs from draft and evolving data.
- 5.16 Ultimately, the Utility Regulator expects NIW to ensure that accurate and robust data is reflected in its submissions. NIW should have no doubt that it must identify areas of concern to the Utility Regulator where it has any reservations over the validity of its figures.
- 5.17 The Utility Regulator is confident, therefore, that appropriate use was made by it of the data submitted to it and that the cost apportionment issue could not have been identified from the data submitted. The amount of subsidy is not the direct concern of the Utility Regulator; this is a matter upon which NIW and DRD must agree.
- Incidental to its investigation, the Utility Regulator has observed that there remains a concern over the expected closure of certain non-domestic customers (such as Seagate Technologies (Limavady)) during 2008-09. It is not clear from the submissions to the Utility Regulator how the reduction in water consumption and, therefore, revenue reallocation has been addressed. In subsequent information provided by NIW, there appears to be conflicting accounts. The Utility Regulator requires further clarification of this matter from NIW in advance of the process leading to the approval of the 2009-10 SoC.

Audit opinion and the Reporter's report

- 5.19 On 14 December 2007, the Utility Regulator issued its draft audit opinion guidance on the IPS to the NIW external auditor, KPMG; final guidance was issued on 7 January 2008. On 31 January 2008, KPMG completed its audit of the IPS and submitted its audit opinion thereon to the Utility Regulator. As already noted, it was not possible for the audit to address figures prior to 2007-08 financial year as this was the first year of operation for NIW. In future years, the Utility Regulator fully expects NIW's external auditor to be in a position to perform and audit data for all years relevant to the IPS.
- 5.20 The Utility Regulator has observed that KPMG issued an unqualified audit opinion in respect of the IPS other than the inevitable limitations due to the year 2007-08 being the first year of operation and there being an absence of prior year comparator data.
- 5.21 On 14 December 2007, the Utility Regulator notified NIW of its intention to utilise the Reporter to undertake specified procedures in respect of selected data entry and assumptions in the combined tariff model as agreed with the Utility Regulator. Initially, NIW questioned the Utility Regulator's decision to utilise the Reporter but subsequently agreed to meet the Reporter on 11 February 2008, albeit some two months after the Utility Regulator had first issued its request to NIW and after the submission of the combined tariff model, IPS and SoC on 31 January 2008.
- The Reporter's primary duty of care is to the Utility Regulator although there is also a duty of care to NIW. The Reporter's detailed scope of work is undertaken in response to reporting requirements developed by the Utility Regulator. Accordingly, on 3 January 2008, the Utility Regulator issued guidance to the Reporter and confirmed the steps to be covered by the Reporter's report. The Utility Regulator met with the Reporter on 20 February 2008 to discuss the contents of the Reporter's draft report. The Reporter received outstanding information from NIW on 21 February and issued its final report on 22 February 2008.
- 5.23 The Reporter's report of 22 February 2008 identified 17 recommendations based upon the scope of work agreed with the Utility Regulator. A number of these recommendations related to the accuracy of customer data, including:
 - (a) Allowances for domestic property demolition and new connections should be the average rate of development set out in the latest government estimates unless NIW provides supporting information for alternative projections;
 - (b) NIW should consider how it will confirm that properties recorded as not connected to the water and/or sewerage service are truly not connected;
 - (c) NIW should consider what action it can take to disconnect or reduce the supply to void properties connected to the water service in order to reduce leakage and to provide an incentive for new occupiers to contact the company;

- (d) NIW should reconcile its records of properties with septic tanks with properties billed for water and/or sewerage services. This would allow properties with a septic tank not billed for water to be identified and investigated. It would allow properties billed for water, not billed for sewerage, and without a record of a septic tank, to be identified and investigated;
- (e) The Utility Regulator recognises that NIW continues to develop and cleanse its customer records and that some movement in reported numbers will occur as this process is completed and the first bills are issued. It may be helpful to include a balance of movements on each category of customer in the AIR so as to separate and explain corrections in numbers of customers billed from real changes in customer numbers;
- (f) NIW should consider the treatment of possible mis-coding of chargeable supplies to test meters. At present, the assumed volume of water is allocated to un-measured non-domestic customers which may distort the allocation of revenue and tariffs for this type of customer;
- (g) NIW should exclude the population and volume of water taken for domestic purposes by farms from the measured domestic reports. The population and volume taken should be included in figures reported for measured non-domestic customers;
- (h) The estimated volume of wastewater discharged from unmeasured domestic customers in the combined tariff model should be adjusted to reflect the latest estimate of the proportion of properties connected to the water supply discharging to the sewerage system;
- (i) NIW and the Utility Regulator should note that changes to the volumes of measured and unmeasured non-domestic water included in the combined tariff model will have a material impact on the water balance and the reported level of leakage. The implications of this should be assessed in advance of the AIR; and
- (j) In general, the data in the combined tariff model and the water balance should align and any differences explained by NIW in the additional information submitted in support of the combined tariff model and proposed SoC.

Revised tariff model and SoC

- The combined tariff model and SoC were revised and re-issued on 18 March 2008, following the DRD's requirement for NIW to reflect a number of mitigating measures in order to offset the financial effect of the cost apportionment issue on 2008-09 revenues.
- The Utility Regulator identified a number of anomalies in the final draft SoC, where figures did not reconcile with those stated in the combined tariff model. These anomalies were corrected. As a result of the cost apportionment issue and the consequent revisions by NIW of its revenue requirement (and

- therefore tariffs), the Utility Regulator had just two working days available for its review of the SoC for 2008-09. On 21 March 2008, the Utility Regulator approved the SoC.
- The Utility Regulator acknowledges that a number of issues in relation to tariffs remain outstanding, including the Reporter's recommendations. The Utility Regulator intends to analyse and address these points during the consultation process for the 2009-10 tariffs.

Information submitted by NIW

- 5.27 On 3 April 2008, the Utility Regulator requested NIW to provide all information in whatever form relating to the cost apportionment issue. On 18 April 2008, NIW submitted three files of information in this respect. This information was subject to detailed review by the Utility Regulator, assisted by Grant Thornton UK LLP. The review process identified numerous references to analyses, spreadsheets, other reports and diverse communications, which had not been included in the original information pack provided by NIW. As already noted, on 1 May 2008, the Utility Regulator requested this further information from NIW, which led to a further three files of information, provided to the Utility Regulator on 15 May 2008.
- 5.28 These six files of information contained several different types and categories of data, including: e-mails, letters, internal briefing notes, internal presentations, notes of both internal and external meetings, data sheets, and NIW publications.
- 5.29 Following a review of the documentation provided, the Utility Regulator has identified certain key information which supports a chronology as regards the evolution of the cost apportionment issue and the dissemination of this knowledge within NIW and its stakeholders. In this respect, the Utility Regulator has included an analysis of this key information as Appendix A to this report.
- 5.30 The Utility Regulator's review of the information pack provided by NIW also identified certain recurring themes, in particular concerning:
 - (a) The quality of customer related data which underpinned the combined tariff model; and
 - (b) The issue of the DRD subsidy.
- 5.31 As regards the quality of customer related data, the Utility Regulator has the following observations:
 - (a) During October 2007, it is apparent that NIW set in motion a programme to review metered water variances in light of acknowledged inaccuracies in existing reporting methodologies;
 - (b) During November 2007, internal correspondence relating to metered water data indicated that related data was subject to update for the first

- time since 2006. In addition, metered water consumption data appeared to be based upon 2005 figures;
- (c) In December 2007, following a further review of its customer related data, NIW amended its non-domestic metered water customer assumption from 79,000 to 50,000. Of this difference, NIW concluded that some 20,000 customers did not exist; a proportion of the other customers related to test meters within the distribution system which are not revenue generating. Further, there were a number of trade effluent (waste measuring meters) which, although revenue generating, had already been included within the metered water and trade effluent revenue figure and hence represented a double count;
- (d) During January 2008, there were a significant number of e-mails which expressed concern over the quality of the data underpinning the tariff calculations as well as that data used to calculate the water balance which determines the leakage data. The same customer data should be used for both calculations. E-mails expressed concern that the identified revisions to customer numbers could result in an increase in estimates for leakage levels; and
- (e) The Utility Regulator met with DRD and NIW in November 2007 and was given a general overview of the workings of the combined tariff model (along with a copy of the model). There was also a meeting between the same parties in January 2008 in order to discuss issues which would reduce the revenue to be raised from customers, including: the recharge of the costs of roads drainage to DRD Roads Service; increased efficiency targets; the financial categorisation of backlog base maintenance (whether the required revenue should be raised from customers directly or funded by debt). The cost apportionment issue was not raised with the Utility Regulator by DRD or NIW in January 2008.
- 5.32 The Utility Regulator acknowledges that the issue of the DRD subsidy is not its direct concern as it represents an agreement between DRD and NIW. However, the data underpinning the allocation of revenue to be raised from different categories of customer is a prime concern for the Utility Regulator. Therefore, as regards its review of the information provided by NIW, the Utility Regulator has the following observations as regards the DRD subsidy:
 - (a) There is e-mail traffic during mid January 2008 where it is clear that the change in customer numbers and/or water volumes impacted upon the revenue to be raised from domestic customers and, therefore, the subsidy to be provided from DRD;
 - (b) From the information available, it appears that NIW first notified DRD of the cost apportionment issue on 14 January 2008. The Utility Regulator met with both NIW and DRD on this date to discuss in general terms the impact on tariffs of changes in NIW's revenue as a result of recent issues such as the roads drainage recharge, additional efficiencies and capital

- base maintenance. As already noted, the issue of cost apportionment was not mentioned to the Utility Regulator at that meeting;
- (c) Later that week correspondence passed between NIW and DRD concerning the impact on the domestic subsidy due to the redistribution of non-domestic revenue. This issue was also discussed at the DRD/NIW shareholder meeting on 28 January 2008. Information provided to the Utility Regulator indicates that neither party recommended that the Utility Regulator should be informed of the cost apportionment issue. The following day, the NIW Board met, but the issue of cost apportionment does not appear to have been discussed;
- (d) Two days later, the combined tariff model, the IPS and the SoC for 2008-09 were submitted to the Utility Regulator in accordance with the Licence. The covering letter to the Utility Regulator made no reference to the cost apportionment issue, as already noted;
- (e) On 11 February 2008, two months after the initial request to NIW, the Reporter met NIW in order to audit the data underpinning the combined tariff model, the IPS and the SoC. A number of significant recommendations were made which ultimately assisted NIW in its mitigation of the cost apportionment issue. NIW accepted all seventeen recommendations made by the Reporter and a number were adopted with immediate effect, the remainder to be implemented in due course. Some issues required the review and agreement of the Utility Regulator, particularly those relating to trade effluent charges;
- (f) On 15 February 2008, DRD contacted the Utility Regulator and advised on a number of issues under consideration in relation to NIW's revenue for 2008-09. DRD also advised the Utility Regulator, in a letter, that it was aware of the cost apportionment issue, having previously been advised by NIW;
- (g) There was communication between DRD and NIW on 20 February 2008 relating to the closure of two major business customers and a proposal to delay the financial impact of these closures. This proposal was not directly set out in the submission received by the Utility Regulator on 18 March;
- (h) The cost apportionment issue was reported first verbally by NIW to the Utility Regulator on 22 February 2008 and subsequently formally confirmed in writing;
- On 28 February 2008, DRD advised NIW that it should inform the Utility Regulator and CCNI of the re-balancing of revenue to be raised from customers for 2008-09; and
- (j) On the same day a meeting took place between NIW and the Utility Regulator in order to discuss the cost apportionment issue and the

necessary mitigation, following ministerial guidance and recommendations from the Reporter.

Utility Regulator records

- In addition to seeking information from NIW, the Utility Regulator has also critically reviewed its own records as regards its interaction with NIW in relation to customer related data and the cost apportionment issue. In this respect, the Utility Regulator has identified little significant further information beyond that already set out in this report.
- However, the Utility Regulator considers it appropriate to highlight one particular letter from DRD to the Utility Regulator dated 15 February 2008, in which DRD identified the cost apportionment issue at NIW (referred to at paragraph 5.32 (f) above). That letter set out several matters in relation to the NIW SoC for 2008-09 and included a brief reference that DRD had recently been advised of the cost apportionment issue. The Utility Regulator acknowledges that such comments should have been promptly challenged. In any event, the Utility Regulator responded to this letter on 27 February 2008 by which time matters had progressed following NIW's formal notice to the Utility Regulator on 22 February 2008 of the cost apportionment issue.

NIW internal review

The internal review process

- 6.1 The Utility Regulator understands that the NIW Chairman did not become aware of the cost apportionment issue until 11 February 2008. Amongst other actions, once the position became known to him, the NIW Chairman instigated an internal review to investigate this issue. He appointed the NIW Company Secretary and the Internal Auditor to conduct the exercise ("the Internal Review Team"). The Utility Regulator understands that NIW's internal audit is out-sourced to Ernst & Young UK LLP; hence, the internal audit role was performed by an external consultant.
- 6.2 The following terms of reference were agreed between the NIW Chairman and the Internal Review Team:
 - (a) Have the full facts been established in terms of how this matter first arose; when and how the subsequent communications to Board members and external stakeholders (particularly DRD) took place, and was the information given factually correct at the times when given; and
 - (b) What can be learned from this matter in terms of: (i) escalating significant/material issues within NIW (for example, are appropriate procedures in place, are staff aware of them and are they being followed); (ii) escalating significant/material issues externally with appropriate stakeholders (for example, were the right stakeholders briefed at the right time in relation to this matter); (iii) any other significant/material learning issues.
- 6.3 The Utility Regulator acknowledges this positive action at the behest of the NIW Chairman. However, it also considers it a further example of the marginalisation of the role of regulator. Whilst it is understandable that the Chairman should be concerned with gaining knowledge of events as quickly as practicable, if the matter had been brought to the attention of the Utility Regulator at that time, it is likely that the Utility Regulator would have insisted on an independent external investigation with terms of reference agreed between NIW and the Utility Regulator.

NIW Chairman's Summary

In advance of receiving a copy of the NIW internal review report, the Utility Regulator was provided with a copy of the fourteen page paper entitled 'Northern Ireland Water (NIW) Internal Review of Cost Apportionment Issue Chairman's Summary' ("the Chairman's Summary"). The document was issued to the Utility Regulator on 30 May 2008.

- 6.5 The Utility Regulator understands that the NIW Chairman's Summary has generally been made available to the stakeholders. The Utility Regulator has the following observations with respect to the Chairman's Summary:
 - (a) The NIW Chairman has carefully explained the historical position whereby discrepancies already existed within customer data and assumptions as regards volumes and tariffs, under Water Service. The Utility Regulator's view is that whilst NIW is a new organisation, it is substantially the embodiment of the previous Water Service. Therefore, any significant discrepancies in customer data and assumptions were known, or should have been known, internally. Corrective action was required as a matter of priority. The Utility Regulator confirms that leakage figures are an important part of the information provided by NIW. However, NIW commenced operations on 1 April 2007; management review of customer data and assumptions did not start until around November 2007. NIW has responsibility for addressing deficiencies within its information systems;
 - (b) The Utility Regulator notes that the main reasons behind the cost apportionment issue were:
 - (i) Chargeable water consumption had been assumed in respect of test meters, which are non-chargeable;
 - (ii) Chargeable water consumption included trade effluent flow meters, which do not represent water supply and have been already charged in trade effluent revenues; and
 - (iii) The incorrect inclusion of sewerage volumes attributable to farms;
 - (c) It is the Utility Regulator's view that these issues were basic errors in the assumptions underlying the combined tariff model. They were known, or should have been known, within NIW. That the origin of the issues lies in Water Service is no excuse for the current management not to have given greater priority to these matters;
 - (d) The Utility Regulator notes the NIW Chairman's comments as regards NIW corporate governance procedures. In particular, the NIW Chairman has stated:

"It is clear that the Chairman and non executive directors (NEDs) were not informed as to the nature of the issue and its magnitude early enough. It is evident Executive Directors were aware from mid January 2008 onwards of the Cost Apportionment issue and by 28 January of its seriousness in most material aspects, but it was not raised at the Board meeting on 29 January. Indeed it was not until a phone call from DRD on 11 February to the

Chairman prior to the Minister's letter of 14 February requesting a meeting to explain the issue, followed by a subsequent briefing, prior to the meeting with the Minister on 19 February, that the Chairman and NEDs realised its importance. This was a serious failure of NIW internal governance that must not be repeated. NB: This issue was confronted at the NIW Board meeting on 29 April and appropriate protocols agreed and assurances requested."

- (e) A failure of this sort in corporate governance is a serious matter and one which must be addressed as a matter of urgency. The Utility Regulator takes some comfort at the acknowledgement by the NIW Chairman that internal controls and corporate governance procedures require attention within NIW and that certain steps have already been taken;
- (f) The Utility Regulator notes that the Chairman has identified with hindsight that it would have been sensible in late December 2007, for NIW to have informally identified the cost apportionment issue to the Utility Regulator The Utility Regulator concurs with this sentiment - even earlier notification would have been preferable;
- (g) The Chairman's Summary refers to the covering letter accompanying the NIW submissions of 31 January 2008, which the Utility Regulator has already referred to in this report. The NIW Chairman has acknowledged that this cover letter should have been more transparent and identified the cost apportionment issue to the Utility Regulator. The NIW Chairman has noted that:
 - "[the covering letter] failed to explicitly draw the attention of the UR to the issue. This was another missed opportunity."
- (h) The NIW Chairman commented on the timing of the Reporter's report as follows:
 - "The corrected volume/costs were discussed with the UR reporter on his visit on 11 February, but he did not issue his report until 22 February."
- (i) The Utility Regulator views the above comments as potentially misleading in that they could leave the reader with the mistaken impression that the Reporter delayed his report until 22 February 2008. The Utility Regulator understands that the Reporter sought clarification on issues arising from his meeting with NIW on 11 February 2008. The Reporter did not receive these points of clarification from NIW until 21 February 2008 and was not, therefore, in a position to finalise his report prior to 22 February 2008;

- (j) Further, the NIW covering letter accompanying its submissions of 31 January 2008 stated that it was NIW's suggestion that the Reporter should be appointed in order to provide assurance to the Utility Regulator on data included in the IPS. The letter stated:
 - "It is suggested that in order to provide assurance to the Utility Regulator in addition to that provided by the Auditor the Reporter should undertake a review of all the evidence-based assumptions underlying the IPS."
- (k) For the avoidance of doubt, as already noted, it was in fact the Utility Regulator who initiated the appointment of the Reporter. The Utility Regulator had requested NIW to accommodate the Reporter on 14 December 2007, two months before NIW was, in fact, able to facilitate the audit:
- (I) NIW identified the subsidy gap due to the cost apportionment issue as being in the order of £16.8 million. The analysis below reflects the mitigation measures put in place by NIW as a result of the cost apportionment issue):

Table 2: NIW mitigation measures

£ millions	2008-09
Subsidy gap due to cost apportionment issue	16.8
Less mitigation	
Additional efficiencies	3.5
Reduction in capital base maintenance	3.8
Reduction in retained earnings	3.7
Bad debt provision not required	5.8
Residual gap	nil

- (m) The Utility Regulator will not engage in speculation on the future quantum of any funding gaps due to the cost apportionment issue. The mitigation measures set out above apply to 2008-09 only. The Utility Regulator notes that the impact of the cost apportionment issue is a recurring one and the precise funding gap figures in any one year cannot be known until cost and revenue figures for each category of customer are determined for each year in question when setting NIW's annual Scheme of Charges.
- (n) However, the Utility Regulator is concerned at the rationale behind proposed future mitigation measures, particularly in relation to any proposed dividend waiver and the treatment of capital base maintenance. The Utility Regulator appreciates that a financial buffer has advantages and is needed to protect customers from unexpected financial surprises.

The internal review report

- 6.6 The NIW internal review report is comprised of:
 - (a) An eight-page paper entitled 'Internal Review Background Briefing Note';
 - (b) A seven-page paper entitled 'Internal Review Findings and Recommendations'; and
 - (c) A three-page set of appendices common to both of the above documents.
- 6.7 The Utility Regulator has the following observations with respect to the NIW internal review report:
 - (a) NIW's internal review consisted of the Company Secretary and Internal Auditor carrying out semi-structured interviews with NIW staff and contractors, supported by a review of documents which they and/or NIW finance and regulation staff considered relevant;
 - (b) As already noted, the Utility Regulator considers that the appointment of an independent investigation team would have been preferable, agreed between NIW and the Utility Regulator;
 - (c) There was little additional information within the two internal review documents, which had not been addressed in the Chairman's Summary. In fact, the aggregate of the two documents were more or less the same length as the Chairman's Summary. The Utility Regulator might have expected a more substantial report. For this reason, the Utility Regulator sought a meeting with the NIW Internal Review Team in order to supplement the report and to assist in further enquiries as to the precise nature of the NIW internal review; and
 - (d) On 3 July 2008, there was a meeting between representatives of the Utility Regulator and NIW investigation teams. The Utility Regulator took some comfort from this meeting in that whereas the length of the NIW internal review report was relatively brief, a significant amount of time and effort appeared to have been invested by NIW in the investigation process. In particular, it was confirmed that the NIW investigation had identified no instances of dishonesty. The Utility Regulator's investigation has similarly not identified any dishonesty at NIW as regards the cost apportionment issue.

Conclusions

Significant concerns

- 7.1 The Utility Regulator set out and explained its Stage 1 and Stage 2 objectives in Section 2 of this report. The Utility Regulator is satisfied that its investigation has materially addressed these objectives. Further, these objectives were not intended to restrict, and have not restricted, the investigation and the subject matter on which the Utility Regulator may seek to comment. In this respect, the Utility Regulator has the following significant concerns regarding NIW:
 - (a) Quality of customer data and assumptions;
 - (b) Corporate governance standards (especially systems of planning and internal control);
 - (c) Communication with the Utility Regulator;
 - (d) Interaction with stakeholders; and
 - (e) Financial effect of the mitigation measures.

Quality of customer data and assumptions

- 7.2 NIW knew, or should have known, that its data assumptions as regards customer numbers and volumes were likely to be inaccurate. Whilst the Utility Regulator accepts that the financial implications of these deficiencies were not known, it is clear that a significant risk existed. This should have been clear to NIW from its inception on 1 April 2007. In particular:
 - (a) Whilst NIW was a new organisation, it inherited much from the legacy governmental agency, Water Service. The accumulated knowledge and experience as regards the assumptions contained in the combined tariff model would not have ceased to exist. The errors in customer data assumptions were significant. The Reporter has identified 17 recommendations most of which relate to the accuracy of customer data and related assumptions;
 - (b) Professor Hillyard in his Strand One Report referred to his concerns over customer data accuracy and the risk of incorrect bills. This report was publicly available from October 2007. It was commented on by both the Utility Regulator and NIW; and
 - (c) NIW has confirmed that it had reservations as regards the accuracy of its data assumptions from at least October 2006. In this respect, NIW

submitted a letter to the Utility Regulator on 25 February 2008 clarifying the cost apportionment issue. NIW has stated that:

"The assumption sets in the tariff model had last been updated in October 2006 as part of the water reform process. Following this exercise it became apparent that the assumptions used in the model as at October 2006 could be made more accurate and inclusion of the revised assumption set would have a significant impact on the balance of revenues to be recovered from domestic and non-domestic customers."

- 7.3 Notwithstanding that the data integrity issue is likely to have existed for some time, the Utility Regulator considers that it as incumbent on NIW to have instigated whatever measures were necessary in order to validate its data records and assumptions. That it chose to only address such matters in November 2007 represents a flawed management decision by NIW.
- 7.4 The Utility Regulator understands from NIW's internal review reports that steps have been taken by NIW to enhance data integrity and to validate its data assumptions. In so doing, NIW has recognised that other data sets and assumptions may be vulnerable to misstatement and need to be subject to validation procedures.
- 7.5 The Utility Regulator will need to review these steps in due course in order to satisfy itself that the necessary improvements to data integrity and data assumptions are taking place at NIW.

Corporate governance standards

- 7.6 Customers have the right to expect NIW to maintain the highest governance standards at all times. The Licence is prescriptive in this respect and places a number of legal requirements on NIW to maintain such standards.
- 7.7 NIW has acknowledged that there was a serious failure of internal governance in relation to the cost apportionment issue. NIW has acknowledged that although its executive directors were aware of the cost apportionment issue from mid January 2008, they did not raise the matter at NIW's Board meeting of 29 January 2008. Thus, the Chairman and non-executive directors were, effectively, kept in the dark.
- 7.8 This issue was confronted at the NIW Board meeting on 29 April 2008 at which point the Chairman of NIW asked the Director of Finance and Regulation and the then Chief Executive for an explanation in writing as to why the cost apportionment issue was not raised at the NIW Board meeting of 29 January 2008. The Utility Regulator has not been provided with a copy of any such written explanations but reserves the right to require such clarification in any supplemental analysis of NIW's actions.

7.9 The NIW Chairman's Summary has explained that initiatives have been set in motion to improve the level of corporate governance controls within NIW. The Utility Regulator recognises the significant changes to structures, people, processes and controls that NIW has put in place and continues to put in place since becoming a government owned company from 1 April 2007. The Utility Regulator will expect NIW to demonstrate that any new controls and processes will become and remain effective in the short, medium and longer term.

Communication with the Utility Regulator

- 7.10 NIW was certainly aware of the cost apportionment issue by December 2007. However, formal communication with the Utility Regulator did not take place until 22 February 2008, despite ample opportunity having been available to raise the matter:
 - (a) NIW could have and should have made the Utility Regulator aware of the cost apportionment issue and its impact by 14 January 2008 when NIW contacted DRD. The NIW Chairman has accepted in his Chairman's Summary that NIW was aware of the issues from December 2007;
 - (b) DRD wrote to NIW seeking urgent clarification of the cost apportionment issue on 18 January 2008. The Utility Regulator should have also similarly been advised of matters;
 - (c) The cost apportionment issue was discussed at the Quarterly Shareholder Meeting between the DRD Shareholder and NIW on 28 January 2008. The minutes of this meeting stated that:
 - "DRD WPD had recently written to NIW about the revised assumptions on water assumptions for the domestic and non-domestic sectors. It was emphasised the need for 'no surprises' in respect of any issues which could impact on subsidy";
 - (d) The Utility Regulator is also entitled to expect a 'no surprises' approach; and
 - (e) The cover letter accompanying the NIW submissions of 31 January 2008 included obtuse and arguably incidental comments. It is not for the Utility Regulator to tease out hidden meanings in communications with NIW. NIW did not provide the Utility Regulator with a timely, clear written explanation of the impact of the changes in customer data and assumptions. The NIW Chairman's Summary also identified this issue.
- 7.12 The Utility Regulator recognises that reporting on some issues may require an element of judgement. In such instances, the Utility Regulator expects NIW to draw uncertainties to its attention and to make appropriate use of confidence grades and supporting narratives when it provides information. The ultimate

responsibility for the accuracy of the information rests with NIW and its employees.

Interaction with stakeholders

- 7.13 Whereas the Utility Regulator was not formally informed of the cost apportionment issue until 22 February 2008, DRD was first advised of the issue by 14 January 2008.
- 7.14 Given the extensive correspondence between the management of NIW, which covers a range of matters relating to NIW's internal affairs and relations with consumers and other stakeholders, the Utility Regulator is concerned that NIW is not clear as to how much and what kinds of contact and influence are appropriate.
- 7.15 The directors of NIW have duties under company law to act in the interests of NIW. The Licence requires NIW to act as if it were a separate listed company. Maintaining clarity as to these boundaries appears essential so as to retain clear accountability for delivery of regulatory and commercial targets. It is, therefore, of fundamental importance to customers.
- 7.16 At the same time, the Utility Regulator recognises that NIW will naturally have extensive discussions with its shareholder; and as the provider of a large part of Northern Ireland's revenue, DRD has an obligation to ensure that public funds are managed effectively and appropriately.
- 7.17 The Utility Regulator will seek further information from NIW in order to ascertain how it will clarify the terms of its interactions with DRD and will then consider what action should be taken to ensure that the interests of NIW's customers are best protected, both now and in the future.

The financial effect of the cost apportionment issue

- 7.18 NIW identified the subsidy gap due to the cost apportionment issue of being in the order of £16.8 million for 2008-09. Clearly, the impact of the cost apportionment issue is a recurring one and the precise funding gap figures cannot be known until cost and revenue figures for each customer group are known in each year in question when setting NIW's annual SoC.
- 7.19 The Utility Regulator is concerned with the rationale behind proposed future mitigation measures. The Utility Regulator is of the opinion that a financial buffer needs to be in place in order to protect customers from financial surprises arising from incidents such as: flooding; *Cryptosporidium*; cost apportionment issues.
- 7.20 The Utility Regulator remains concerned as to how the expected closure of certain non-domestic customers (in particular, Seagate Technologies (Limavady)) during 2008-09 has been reflected within the combined tariff model

and IPS. It is not clear from the submission to the Utility Regulator how the reduction in water consumption and, therefore, revenue has been addressed.

Potential breaches of the Licence

- 7.21 With these concerns in mind, the Utility Regulator has considered NIW's compliance with the Licence. The Utility Regulator has identified three potential breaches, only one of which has been determined as warranting further assessment in light of a finding of a *prima facie* breach:
 - (a) Condition E, Section 2;
 - (b) Condition F, Section 6A.1; and
 - (c) Condition F, Section 6A.5A.

Condition E, Section 2

- 7.22 Licence Condition E, Section 2 requires that no undue preference is shown to, and there is no undue discrimination against, any category of customer or potential customers. The investigation has identified that the Utility Regulator had not been informed by NIW at the appropriate time of the impact that the closure of major commercial businesses (notably Seagate Technologies (Limavady)) would have on other business customers.
- 7.23 The Utility Regulator considers that the evidence base collected reveals that NIW does not have a case to answer in this field, as the circumstances surrounding the handling of customer numbers and revenue reallocations does not suggest that a breach of the Licence has occurred. Nevertheless, the Utility Regulator intends to complete its fact finding in connection with this particular matter, with a view to improving the system of information provision to the Utility Regulator in the future.

Condition F, Section 6A.1

- 7.24 Licence Condition F, Section 6A.1 requires NIW to act, *inter alia*, at all times, as regards its obligations, in the manner best calculated to ensure that it has adequate: (i) financial resources and facilities; (ii) management resources; (iii) systems of planning and internal control.
- 7.25 The Utility Regulator considers that sufficient evidence has been collated with respect to the above matter and no further information is required at this time. The Utility Regulator has concluded that serious and significant weaknesses are apparent in NIW's systems and planning and governance procedures. Further, the Utility Regulator has observed a failure to put in place adequate information and planning systems. The Utility Regulator is concerned with the lack of candour and transparency by NIW as regards its relationship with the Utility Regulator. There has been a *prima facie* breach of Licence Condition F 6A.1,

which the Utility Regulator will examine in full and formal terms at its next Board meeting.

Condition F 6A.5A

- 7.26 Licence Condition F, Section 6A.5A requires NIW to conduct its business as if it were substantially its sole business and as if it were a separate listed public company.
- 7.27 The Utility Regulator considers that insufficient evidence has been collected with respect to the above matter in order to assess whether or not a breach of Licence Condition F 6A.5A has occurred. However, the Utility Regulator has concluded that there appears to be influence by DRD over NIW's internal affairs. Therefore, the relationship between the Licence and the context of public funding requires further consideration.
- 7.28 Further, the Utility Regulator has observed as regards the cost apportionment issue that NIW tended to communicate with DRD before the Utility Regulator despite the fact that this was a matter in which the Utility Regulator had a legitimate business interest.
- 7.29 Accordingly, the Utility Regulator will communicate its concerns to DRD and will continue to keep the matter under review.

Further action by the Utility Regulator

- 7.30 In consequence of the breach by NIW of Licence Condition F, Section 6A.1, the Utility Regulator has determined that it will:
 - (a) Seek commitments from NIW immediately in relation to a series of steps in order to provide assurance that NIW will improve its resources and systems of internal control; and
 - (b) Consider a Board resolution for consideration by the Utility Regulator board members at the next Board meeting in September 2008. At that point, the Utility Regulator will decide whether or not NIW has in fact and at law breached the Licence in respect of Condition F Section 6A.1. If a breach has occurred, the Utility Regulator may proceed to an enforcement order imposing the commitments provided by NIW, or in the alternative, NIW may offer to convert its commitments into legally binding obligations.
- 7.31 The Utility Regulator has received a letter from the NIW Chairman dated 4 July 2008. The NIW Chairman has reaffirmed his Board's commitment to learn lessons from the cost apportionment issue and to commit to a list of undertakings in order to bring about the necessary improvements within NIW. The areas where the Utility Regulator requires commitments include:
 - (a) An upfront approach drawing attention to known data and assumption shortfalls with an accompanying action plan;

- (b) The assessment of and an action plan to address internal governance shortfalls;
- (c) Open, transparent and timely communications with the Utility Regulator, notably of any change in circumstance which may have a material affect on the performance of and / or revenue requirement for NIW, and any material changes in revenue required from different customer groups;
- (d) Open and transparent communication with all stakeholders; and
- (e) Full and comprehensive engagement with the Utility Regulator in order to address outstanding areas of concern, including the treatment of the closure of the major commercial businesses in 200809 and discussion of mitigation measures for 2009-10 onwards.
- 7.32 The Utility Regulator acknowledges this positive step by NIW but will continue the enforcement process pending a satisfactory agreement of these commitments, and confirmation that these commitments are legally binding on NIW. The Utility Regulator expects to be afforded due access to NIW in order to obtain sufficient evidence as to the necessary improvements.

Appendix A: Chronological list of key documents

Date	Originator	Recipient	Issue	Summary of relevant issue	Regulator's comment
19 October 2007	NIW	NIW	Metered water variance	Programme agreed 10 September 2007 to update metered water data	Bills issued 1 April 2007 for non – domestic customers
14 November 2007	NIW	UR	Draft IPS	Draft IPS provided for checking of format	Regulator approved format
18 November 2007	NIW	NIW	Water consumption	Includes e-mail dating from May 2006 which refers to data from 2005 advising of 2007 metered water forecast	Data for 2008-09 charges appear to be based initially on unverified data from 2005
22 November 2007	NIW/DRD/UR	NIW/DRD/UR	Tariff model	Meeting regarding a brief overview of the model	
3 December 2007	DRD/UR	DRD/UR	IWRP and NIW revenue	A number of issues were discussed (including roads drainage, operating expenditure efficiencies, dividend waiver)	
12 December 2007	NIW	NIW	Measured sewerage	32,000 farms incorrectly assumed to be on mains drainage removed from data base	Loss of revenue of approximately £5m
14 December 2007	UR	NIW	IPS	UR requested the Reporter review the IPS, SoC and CTM	It took two months for NIW to arrange for the Reporter to review data underpinning tariffs
19 December 2007	NIW	NIW	Metered water	79,000 business customers reduced to 50,000 customers following cleansing of data base	Reduced revenue raised from remaining customers - over 20,000 customers potentially did not exist
21 December 2007	UR	NIW	Revenue factors	UR requested NIW to formally submit information relating to any change in revenue circumstances	NIW did not advise of any changes in revenue circumstances
8 January 2008	NIW	NIW	Reporter and data	Numerous internal e-mails concerning the quality of data following UR's reminder of its request for NIW to permit the Reporter to review data underpinning its tariffs. Also concern is expressed about leakage estimates.	Considerable e-mail traffic on this day expressing clear internal concern over quality of data employed to determine tariffs and that used to determine leakage
9 January 2008	NIW	NIW	Closure of non- domestic customers	Information required to remove two large business customers from revenue forecasts	UR was not advised of how NIW handled this loss of revenue for 2008-09

14 January 2008	DRD/NIW/UR	DRD/NIW/UR	Tariff model	There is general discussion of the impact of roads drainage, efficiencies and backlog base maintenance	The UR was not advised of cost apportionment issue by DRD or NIW
14 January 2008	NIW	DRD	Cost apportionment	NIW informally advised DRD of the cost apportionment issue	UR is not advised of cost apportionment issue
16 January 2008	NIW	NIW	Subsidy	The impact of the loss of non-domestic revenue on domestic revenue and hence subsidy is discussed	Apparent first instance that NIW internally becomes aware of a domestic subsidy issue. The UR is not advised of issue
17 January 2008	NIW/UR	NIW/UR	BIP and PC10	Meeting of members of both Boards to discuss BIP, NIW strategic business plan and PC10	UR not advised of cost apportionment issue
18 January 2008	DRD	NIW	Subsidy	DRD requested confirmation on subsidy issue	UR not advised of cost apportionment issue
28 January 2008	DRD/NIW	DRD/NIW	Shareholder meeting	The issue of subsidy is discussed	UR not advised of cost apportionment issue
28 January 2008	NIW/UR	NIW/UR	BIP review	Meeting to review BIP	UR not advised of cost apportionment issue
29 January 2008	NIW Board	NIW Board	Closure of non- domestic customers	Board minutes note the closure to two large business customers and that it may have an impact on required subsidy. The NIW Board do no appear to have been advised of cost apportionment issue	UR not advised of cost apportionment issue
31 January 2008	NIW	UR	IPS/SoC/CTM	Submission of IPS, SoC and CTM to UR by NIW	UR not advised of subsidy issue or re-apportionment although the cover letter alludes to data integrity issues
11 February 2008	B&V	NIW/UR	Reporter	Reporter reviews data underpinning the CTM	Request for the Reporter to review data made two months previously (mid December 2007)
15 February 2008	DRD	UR	SoC 2008-09	Discussion on issues relating to NIW revenue adjustments: bad debt, roads drainage, dividend waiver, OPEX efficiencies, backlog base maintenance and RPI Also states DRD assumes UR is aware that NIW advised DRD on cost apportionment issue	The UR was unaware of the issue of cost apportionment until this date
20 February 2008	DRD	NIW	Cost apportionment	NIW/DRD propose delaying financial impact of closing two large business customers	The UR was not consulted on this issue

21 February 2008	NIW	NIW	Cross- subsidisation	NIW considers making up shortfall by correcting weighting between customer groups	The UR was not consulted on this issue
22 February 2008	NIW	UR	Cost apportionment	Following leak to press, NIW advised UR by telephone of cost apportionment issue	NIW advised the UR on this matter for the first time
22 February 2008	B&V	NIW/UR	Reporter report	Reporter submits report on data underpinning the CTM and makes 17 recommendations impacting on tariffs	NIW accepts recommendations and actions where appropriate
26 February 2008	NIW	UR	Cost apportionment	NIW advised the UR in writing of the cost apportionment issue	-
28 February 2008	DRD	NIW	Cost apportionment	DRD advises NIW to inform stakeholders (UR & CCNI) of the re-balancing of revenue	-
28 February 2008	NIW/UR	NIW/UR	Cost apportionment	Meeting to agree changes to the NIW revenue and mitigation measure to reduce the impact on subsidy	-
28 February 2008	UR	NIW	Cost apportionment	Chairman of the UR telephones Chairman of NIW to discuss the issue of lack of communication of the issue to the UR	

The following abbreviations have been used in the above analysis:

BIP - NIW's Business Improvement Programme

B&V - the Reporter, Black and Veatch

CTM - Combined Tariff Model

DRD - Department for Regional Development

DRD WS - Water Service

F&R - NIW Finance and Regulation Directorate

IPS - Interim Principal Statement

IWRP - Independent Water Review Panel

NIW - Northern Ireland Water Limited

OFWAT - the English and Welsh Economic Regulator for Water

PC10 - Price Control 2010

SoC - NIW's Scheme of Charges

UR - the Utility Regulator

[This page is intentionally left blank]