

Annual Information Return 2022

Reporter's Table Commentaries

[Public Domain version]

Prepared for:

Utility Regulator & NI Water

11 November 2022

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1. Context

1.1 Introduction

The Reporter's Annual Information Return 2022 (AIR22) Table Commentaries are presented in this document. It is a free standing, stand alone report, as required by Section 5.2 of the Reporter's Protocol.

The document is a deliverable from independent reporting of Northern Ireland Water's (NI Water's) AIR22 submission, for the financial year 2021-22, as identified through the Reporter's Audit Plan dated 29th April 2022.

1.2 Reporter's AIR22 Audit Scope

The scope of the Reporter's work is defined in the Utility Regulator (UR)'s letter dated 15th April 2022.

The scope is limited to the following AIR22 Tables with the associated UR guidance notes reproduced here for completeness.

- ☐ Table 5 Key Outputs (including new customer satisfaction measures)
 - Lines 19 and 20 Total Contacts and Unwanted Contacts
 - This included a review of the application of new definitions for 'contact' and 'unwanted contact' as agreed by the Customer Measures / Satisfaction Working Group (CM/SAT-WG), and any subsequent refinement to Unwanted Contacts by the Company as well as the resulting confidence grades.
 - Line 22 First Point of Contact Resolved (FPOCR)
 - This included a review of the application of the definition of FPOCR, including the full range of datasets compiled using different time-periods.
 - Line 23 Customer Advocacy Measure and Lines 24 through 25 Omnibus survey questions 1 and 2
 - This included our comments on the reliability of the surveys from which the data has been collated, including research survey reports, as well as the appropriateness of confidence grades.
- ☐ Table 11 Activities only (including additional output measures) and not the asset balance.
 - We audited delivery of nominated outputs and BU dates on a sample basis.
- ☐ Table 16 Activities only (including additional output measures) and not the asset balance.
 - We audited delivery of nominated outputs and BU dates on a sample basis.
- ☐ Table 40 - Capital Investment Monitoring (CIM).

- We audited a sample of schemes in accordance with the requirements set out in Section 4.0 of Chapter 40 and Section 4.0 of Chapter 30 of the AIR22 information requirements.
- ❑ Table 40b - Delivery of DAPs and Integrated Environmental Modelling (**This is a new Table designed to capture information on the completion of Drainage Area Plans and Integrated Environmental Modelling**).
- We carried out an evidence-based enhanced audit of Table 40b following the approach described in our approved Audit Plan.
- ❑ Table 42 PPP reporting.
- ❑ Table 43 PPP reporting.
- ❑ Table 47 Development Outputs (**This Table has been refreshed for the PC21 period, with a flexible 'UR to Company' guidance on the choice of Table format to use to satisfy the UR's AIR22 reporting requirements**).
- We carried out an evidence-based enhanced audit of Table 47 following the approach described in our approved Audit Plan.

The Reporter's Team's technical assurance is limited to the Tables within the Reporter's audit scope.

1.3 Content of Document

The structure of this Table Commentaries document is as follows.

- Section 2.1 describes the AIR22 Key Outputs Table audited.
- Section 2.2 highlights the AIR22 Non-Financial Tables audited.
- Section 2.3 presents the AIR22 Capital Investment & Drainage Area Plans (DAPs) and Integrated Environmental Models (IEMs) Delivery Tables audited.
- Section 2.4 provides a list of the AIR22 PPP Contract Tables audited.
- Section 2.5 describes the AIR22 Development Outputs Table audited.
- Appendix A presents the individual Table commentaries with audit findings and recommendations.

2. Table Commentaries

2.1 Key Outputs

The AIR22 Key Output Table audited was:

- Table 5 (Customer Service): Table 5 Key Outputs (including new customer satisfaction measures). Lines 19 and 20. Lines 22, 23 and 24-25.

The Auditor's Table Commentary is given in Appendix A: Table 5 of this document.

2.2 Non-Financial

The AIR22 Non-Financial Tables audited were:

- Table 11 (Water Service): Table 11 Activities only (including additional output measures) and not the asset balance (Water Service). Lines 2-10, Lines 11, 13-17, 18-21, 22-24, 25-26 and 27-28.
- Table 16 (Sewerage Service): Table 16 Activities only (including additional output measures) and not the asset balance (Sewerage Service). Lines 3-13c, 16a-17b, 18-22, 23-25, 26-28, 29-33 and 34-35.

The Auditor's Table Commentaries are given in Appendix A: Tables 11 and 16 of this document.

2.3 Capital Investment, DAPs & IEMs Delivery

The AIR22 Capital Investment and the DAPs & IEMs Tables audited were:

- Table 40 - Capital Investment Monitoring (CIM). All Lines.
- Table 40b - Delivery of DAPs and Integrated Environmental Modelling. Columns 1-11.

The Auditor's Table Commentaries with audit findings and recommendations are given in Appendix A: Table 40 and Table 40b of this document.

2.4 PPP

The AIR22 PPP Contract Tables audited were:

- Table 42 (PPP Reporting): Lines 1-20, 21-22, 23-24 and 25-52.
- Table 43 (PPP Reporting): Lines 1-3, 4, 5 and 6-15.

The Auditor's Table Commentaries with audit findings and recommendations are given in Appendix A: Tables 42 and 43 of this document.

2.5 PC21 Development Outputs

The AIR22 PC21 Development Outputs Table audited was:

- Table 47 (Development Outputs) which covered the 25 FD21 Annex T Development Outputs.

The Auditor's Table Commentary is given in Appendix A: Tables 47 of this document.

Appendix A

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A. Individual Table Commentaries & Recommendations





SUMMARY OF AUDIT FINDINGS







Table 5 – Customer Satisfaction Measures Lines 19-20, 22-25

PREPARED BY	X
DATE	28 July 2022

1. Key Findings

The key findings of the AIR22 Table 5 [Lines 19-20, 22-25] audit, against the AIR22 audit criteria are summarised below.

Rating	Meaning
	No material exceptions and compliant with requirement
	Content with the reported data but supporting information needs to be complete and/or improvement identified for AIR23, or other noteworthy comment
	Minor exceptions
	Material exceptions
N/A	Not applicable to report

AIR22 Table Criteria	RAG	Assessment
Independent review of performance against PC21 target (where relevant)	N/A	N/A
Methodology – consistency with the reporting process with clear control points		Most Table 5 lines have stayed consistent since AIR19. There has been a change introduced for Line 22, where the response window has been increased from 90 days to 180 days (90 days before and after). The methodology for Lines 24 and 25 remains adapted to suit COVID restrictions (e.g., use of online and telephone surveying).
Assumptions – reasonableness and applicability		Processing assumptions are reasonable and applied as agreed with the Utility Regulator (UR).
Source data – completeness		Data for Lines 19, 20, 22 are sourced from the system and collated by NI Water through clear processes and reports. Data for Lines 23, 24 and 25 are generated by NI Water through reports clearly identified and handled by independent research companies, which follow specified methods of data sampling, collection and reporting. Data sample size was smaller than for AIR21 and prior years but considered to be representative.
Clarity of audit trails – evidence of appropriate audit trail		At audit, NI Water provided evidence of audit trails for the reported numbers.
Confidence grades – documentation of appropriateness and rationale		We agree with the rationale for the confidence grades stated as: A2 for Line 19, 20 and 22 and A1 for Line 23-25.
Governance – evidence of quality assurance and of final sign-off		Responsibilities for integrity of data and commentary clearly defined. Data and commentary approvals governed through SharePoint tasks. Final sign-off confirmed.

2. Audit Scope

The scope of this audit was the Customer Satisfaction Measures which comprises Table 5 Lines 19-20 and 22-25. Line 21 is no longer used and excluded from the AIR19 Table set [Table 5] submitted by NI Water to the UR.

3. Performance and Significant Events

Total contacts and unwanted contactsLines 19-20

The definition of 'contact' and 'unwanted contact' were updated in AIR19 and remained unchanged in AIR21 and for AIR22. The new meanings were agreed by the Customer Measures / Satisfaction Working Group (CM/SAT-WG) who report to the Consumer Engagement Oversight Group (CEOG) and endorsed by the UR.

The opening of communication channels including on social media and NI Water's website has been the main factor contributing to the drop in telephone contacts (Line 19) since AIR19. According to the definitions introduced in AIR19, three categories of contacts (requests for information, run of water and switchboard contacts) are no longer considered as 'unwanted' as these events do not cause customers unnecessary aggravation. This explains why the number of unwanted contacts (Line 20) has dropped significantly since AIR19, compared to AIR17 and AIR18 as shown in the table below.

Table Line No & Description	AIR17	AIR18	AIR19	AIR20	AIR21	AIR22
Line 19 - Total contacts	257,866	250,753	252,844	190,729	182,029	201,170
Line 20 - Unwanted contacts	110,197	105,964	75,569	67,013	70,204	66,064

The total contacts (Line 19) are reported as 201,170 in AIR22, which is higher than in AIR21 (about a 11% increase). However, the total unwanted contacts (Line 20) reported in AIR22 was slightly lower than in AIR21 (about a 6% decrease).

As in previous reporting years, the total number of contacts and unwanted contacts are obtained monthly from the All Received CorVu report, which NI Water receives from X, the external service provider contracted to run the service. The estimate of unwanted contacts is then calculated using the CMS categories of contacts logged within Rapid.

NI Water keep monitoring monthly performance against target values for unwanted contacts. The targets were generally met. It reported that 36% and 52% of the total unwanted contacts related to Sewerage Services and Water Services, respectively, which is very similar to AIR21 (35% and 55%). The remaining contacts were associated with other services such as metering and billing. The top complaints under both services related to sewer blockages and water supply issues. This is in line with the previous years.

The Company explained that the algorithm for deriving Unwanted Contacts has been refined since AIR19. NI Water recognises that the absence of 'chase' calls count may lead to an undercount of Unwanted Contacts, but in the Company's opinion, this is more than compensated by the overcount of other categories such as network issues, which often are domestic issues and not related to NI Water's service failures. The Company is convinced that this is the most practical and realistic algorithm that can be developed through the current system.

NI Water believes that an accuracy band 2 of +/-5% is most appropriate and that this is justified by uncertainties associated with manual handling and logging of data for the CMS category, which seems sensible. The A reliability band attributed to Line 19 and Line 20 seems reasonable. We are satisfied with the processes and templates demonstrated during the audit and the clarity of results presented. The resulting A2 confidence grade remains in line with AIR21.

As in the previous reporting years NI Water listen to a sample of both 50 wanted and 50 unwanted contacts each month (a total of 1200 samples annually) to ensure they are logged and processed correctly by X. The Company then provides feedback to X on the outcomes of its monthly check including any required corrective measures. No anomalies were found in the AIR22 reporting period. This has decreased from 15 last year.

First Point of Contact Resolved (FPOCR)

Line 22

The definition of First Point of Contact Resolved provided by NI Water is consistent with the Company's AIR22 definition (i.e., 'when a contact requires an action and the action is completed and there has been no contact from the same property on the same issue within a 180-day period (90 days before or 90 days after) then it shall be counted as FPOCR'). This has changed since AIR21, when the contact period was a 90-day historic window.

The definition provided by the UR is as follows: *'A contact is deemed to be dealt with at first point if there is no repeat contact from the same property on the same issue in the time-period applying. The First Point of Contact Resolved measure is calculated as follows: (FPOCR / Contacts) x 100 by time periods.'*

The figure for FPOCR is based on the following criteria:

- A 180-day window (90 days before and 90 days after) – a report run on 31 May for the month of May would look back to 31 January to check whether there was a repeated call in that time window.
- Same CMS category – a contact that has been made regarding the same issue in the given historic window (as more than one contact may have been made by the same customer about different issues).
- Same property – a contact that has been made with reference to same property (as customers may have multiple properties in a given area).

The adoption of a new methodology since AIR19 has resulted in a significant change in the FPOCR figures, which were 90.4% in AIR21 and 90.0% in AIR20, up from 65.8% and 66.5% in AIR18 and AIR19, respectively.

The FPOCR figure reported in the AIR22 Data Table was 84.0% , which is significantly lower than the reported figures in AIR21 (90.4%) and AIR20 (90.0%); this is attributed to the change in methodology where the call window has been increased from 90 days to 180 days.

We consider that a confidence grade of A2 for Line 22 remains appropriate, for the reasons stated for the numbers in Lines 19 and 20.

Customer Advocacy measure

Line 23

A Customer Experience and Insight Specialist, X, has been appointed to undertake independent 'Voice of the Customer' surveys. The methodology for conducting the survey can be summarised as follows:

- whilst in previous reporting years the survey was conducted on 800 customers (4 waves per year of 200 customers), in AIR21 all customers interacting with NI Water are requested to complete the survey;
- the survey targets customers' interactions with any part of the business, not only billing and operational areas (Water and Wastewater) as was done in previous reporting years.

As in previous years, the survey was conducted on all resolved contacts only (from telephone and written channels). NI Water aligns the closed date and actual closed date fields in the report to ensure the contact is effectively resolved. A list of resolved contacts is provided daily by NI Water to X, who conduct the surveys via text message or similar.

The customer advocacy measure is represented by Net Promoter Score, calculated as the percentage of customers responding to the question *"Based on your recent experience with us, how likely are you to recommend NI Water? Please respond 0 for very unlikely up to 10 for very likely"*, with grades 9 and 10 (promoters), minus the percentage of those responding with grades 0 to 6 (detractors). Percentages of detractors and promoters are calculated over the total number of respondents to the survey, which is the sum of detractors, promoters and 'passive' customers (i.e. respondents with grades 7 and 8). Those responding 'Don't know' do not form part of the calculation.

This methodology is clearly outlined in the 'NPS Calculation' document attached to the commentary.

The value reported for Line 23 can fall between -100 (worst score) to +100 (best score). The calculated value in AIR22 is 32, which is less than the value reported for AIR21 (42). This is attributed mainly to metering and billing, which NI Water already recognise as ongoing challenges.

Omnibus survey question 1 and 2

Lines 24-25

X is an independent firm contracted by NI Water to carry out the annual Omnibus survey. Due to the COVID pandemic and associated restrictions, significant changes were adopted to the survey methodologies since AIR19. As part of the survey, domestic and non-domestic customers, who may or may not have contacted NI Water, were asked whether they are happy with service received from NI Water (Line 24) and whether they would recommend NI Water (Line 25).

Domestic customers were surveyed through an online platform of Knowledge Base. In this system, panellists are recruited via a random probability unclustered address-based sampling method, meaning that all households have a possibility of being selected to join the panel. Letters were sent to selected addresses (using the Postcode Address File) inviting them to become members of the panel. Members of the public who are digitally excluded are also able to register to the Knowledge Panel either by post or by telephone, and are given a tablet, an email address, and basic internet access which allows them to complete surveys online.

For the purposes of the Omnibus surveys (Lines 24-25) only panellists from Northern Ireland, and in effect, NI Water Customers were used. A total of 1,200 panellists were registered, from which 885 survey responses were received (about 74%).

Non-domestic surveys were conducted via telephone. The survey is derived from a random sample of businesses in Northern Ireland, with quotas applied to ensure that the survey mirrors the profile of the Northern Ireland business community insofar as this is possible, and building quota requirements by region with a view to ensuring maximum geographical representativeness.

The sample size of domestic customers that responded (885) is comparable to AIR21 (784), and significantly lower than previous years - 1009 and 1035 in AIR20 and AIR19, respectively, when surveys were conducted face to face.

Line 24 is the combined, weighted percentage of domestic and non-domestic customers responding 1 (strongly agree) and 2 (tend to agree) on a 1 to 6 scale.

From the numbers stated in the commentary, overall satisfaction in AIR22 was 81% for domestic customers (slightly down from 83% in AIR21) and 76% for non-domestic customers (down slightly from 77% in AIR21). The combined score of 79.2 indicates that overall satisfaction has decreased by 1.5% since last year (80.7% in AIR21).

The score for Line 25 is calculated using Net Promoter Score methodology based on results from the following statement; if people could choose their water company how likely would you be to recommend your water company to a friend or colleague where 0 is 'not at all likely to recommend' and 10 is 'extremely likely to recommend'. Like Line 24, the total score is the sum of the weighted scores from domestic and non-domestic surveys.

The AIR22 mean score for Line 25 is 7.5, which remains unchanged from AIR21.

The audited commentary stated that the AIR22 results for Lines 24 and 25 are not comparable to previous years for the following reasons:

- Domestic customers surveyed had increased to 885 compared to the 784 surveyed the previous year.

- The survey was carried out earlier in the year (Feb). Previous year, the survey had been carried out in April and there is potential for a seasonal impact on the customers response.
- It should also be noted that this smaller sample size was obtained during a unique year in which all of Northern Ireland was affected and therefore this may have impacted on the response rate and the answers obtained.
- The non-domestic sample remained the same amount as previous years, however the data is not comparable to previous financial years due to a number of lockdowns seeing many business' shut and a freeze to billing at the beginning of the year.
- NI Water does not have control over the order in which the survey questions are asked, there is potential for the previous question asked to impact the response given to the statement above.

At audit, it was discussed that this reasoning should be reviewed due to the following reasons:

- It may be argued that the number of domestic customers surveyed (884) in AIR22 is not comparable to AIR20 (1009 respondents) and prior years when the response level was significantly higher. However, it is comparable to AIR21 (784 respondents).
- It is understood that NI Water does not have control over the order in which the survey questions are asked, and that there is potential for the previous question asked to impact the responses given. However, this is an uncertainty in the methodology for all reporting years. Therefore, it should be taken into account in the confidence grade and should not significantly impact comparability of results.

The confidence grade for Lines 24 and 25 remain unchanged at A1. At the audit, it was clarified that whilst there were unforeseen constraints that limited sample size and impacted timing of the surveys, the methodology itself was deemed to be sound. Whilst the sample size for domestic respondents was smaller compared to AIR20 and prior years, it was also deemed to be representative; source survey data on respondent demographics was provided to support this.

4. Summary of Audit Checks

Our audit was attended by the NI Water team responsible for the derivation of numbers for Table 5, Lines 19-20 and 22-25. The team confirmed any new definitions and changes in methodology for data collation adopted since AIR21 and responded to the questions on the draft Table 5 commentary provided pre-audit.

We checked the reported numbers for Lines 19-20 and 22-25 against those generated by the underlying reports and found the numbers to be consistent. We also discussed this reporting year's results in the context of historical performance.

5. Confidence Grades

In Section 3 we have provided commentary on the reliability and accuracy of data for each audited line within the scope of our audit. We generally agree with the rationale for the confidence grades stated as: A2 for Lines 19, 20 and 22 and A1 for Lines 23-25.

We note that entries in Lines 23-25 are given the highest confidence grades because scores are generated by specialised and independent service providers. For Lines 24-25, the service provider ensures that the samples used for the surveys are randomly selected, and despite the domestic sample size being significantly reduced this year, they are representative of the population from which they are drawn. Further, the service provider has assured NI Water that there were no fundamental changes to how the data was reviewed and scored and therefore the confidence grades have remained the same.

Typical sources of errors such as in sampling design, data analysis and processing should be minimal as data collection and management is carried out following clear procedures by experienced professionals

specialising in this type of service. This suggests that data is reliable and that the true population parameter (satisfaction and likeliness of recommending NI Water) should be within +/-1% of the sample estimate.

6. Recommendations

None.

7. References

- a) NIAUR_air22_repreq_Sec2_Chap05 01.00.pdf. The UR Guidance for AIR22 Table 5.
- b) NIAUR_air22_repreq_Sec2_Chap05a 01.00.pdf. The UR Guidance for AIR22 Table 5a.
- c) NI Water Data Table: DT_Table5_L18-25.xlsx
- d) NI Water Commentary: CC_Table5_Lines18-25 – updated.Docx
- e) NI Water Commentary: CC_Table5_Lines18-25.Docx
- f) NI Water Methodology: LM_Table5_Lines18-25.Docx
- g) NI Water Methodology: LM_Table5_Lines18-25-updated.Docx





SUMMARY OF AUDIT FINDINGS





Table 11 – Water Service. Activities only not the asset balance Lines 2-11 & 13-28

PREPARED BY	X
DATE	28 July 2022

1. Key Findings

The key findings of the AIR22 Table 11 audit [Activities only (including additional output measures) and not the asset balance (Water Service) Lines 2-10, Lines 11, 13-17, 18-21, 22-24, 25-26 and 27-28], against the AIR22 audit criteria are summarised below.

Rating	Meaning
	No material exceptions and compliant with requirement
	Content with the reported data but supporting information needs to be complete and/or improvement identified for AIR23, or other noteworthy comment
	Minor exceptions
	Material exceptions
N/A	Not applicable to report

AIR22 Table Criteria	RAG	Assessment
Independent review of performance against PC21 target (where relevant)		<p>Good performance overall. However, for Line 6b [Length of new, renewed or relined mains delivered under the watermain rehabilitation programme], the PC21 target for mains renewed was 838km, giving average annual target of 139.667km.</p> <p>In AIR22, NIW achieved 101.62km set against the PC21's target for Year 1. We note that there a number of reasons for the Company's failure to achieve this target including: availability of resources due to the 'draw' from other utilities such as Gas, Telecoms and Irish Water, increases in material costs and more work focused in urban areas, which is generally slower to complete.</p>
Methodology – consistency with the reporting process with clear control points		<p>Methodologies were found to be consistent with current processes. There is one exception that should be considered for future AIRs.</p> <p>Line 28 [Number of treatability studies completed]: consider improving the method statement with a process diagram and a description of the logic applied to the count of numbers for reporting.</p>
Assumptions – reasonableness and applicability		Assumptions are reasonable and applied appropriately.
Source data – completeness		<p>Lines 6 [New mains]: the source data did not show whether any renewed pipes have been included.</p> <p>Line 8a (Lead communication pipes replaced as a consequence of water quality sample failures) -37 reported this year with no evidence for the provenance of this number.</p> <p>Lines 18 [% overall compliance with drinking water regulations], 19 [% compliance at consumers tap] and 20 [% iron compliance at consumers tap]: it is noted that the reduced sampling at customer taps resulting from COVID-19 restrictions meant that the AIR22 figure is not representative. This has had a material impact on reported figures however it is noted that this is outside of the Company's control.</p>
Clarity of audit trails – evidence of appropriate audit trail		Content with reported information. The audit trails and explanation of year-on-year changes appear reasonable.
Confidence grades – documentation of appropriateness and rationale		Confidence grades appear to have been appropriately assigned.

AIR22 Table Criteria	RAG	Assessment
Governance – evidence of quality assurance and of final sign-off		NI Water's SharePoint workflow process for this Table is in place for document checks and approvals.

2. Audit Scope

For Table 11, seven separate audits were carried out remotely using Microsoft Teams with the key NI Water system holders between 23rd May and 10th June:

Date	Lines	No. of Audits
23/05/2022	L18-21	1
26/05/2022	L27	1
27/05/2022	L22-24	1
30/05/2022	L11	1
30/05/2022	L25-26	1
09/06/2022	L28	1
10/06/2022	L2-10, 13-17	1

The audits reviewed NI Water (or NIW)'s performance relating to the water service which includes: activities and asset balance in respect of water distribution; information on water distribution zone studies; performance against water quality compliance and delivery of nominated outputs.

In accordance with the UR guidance, audits were completed for Table 11 lines with the exception of the asset balance lines 1 and 12.

3. Performance and Significant Events

3.1. Performance against PC21 Target

Out of the 26 measures covered through the Table 11 audit, the following 13 measures have PC21 targets associated with them. NI Water's performance against these targets in 2021/22 may be summarised as follows.

Changes During Report Year (Lines 6b and 8d)

Line 6b - Length of new, renewed or relined mains delivered under the watermain rehabilitation programme

- PC21 Year-1 performance: For AIR22, NIW reported 101.62km length for this line which is less than the baseline target for the year (139.667km).
- Cumulative by the end of Year-1 of PC21 performance: The NIW PC21 cumulative target is 838km giving an annual average of 139.667km. By the end of Year-1, NIW delivered a total length of 101.62km, 38.047km less than the committed annual average target.

We note that there a number of reasons for the lack of achievement of this target:

- availability of resources due to the 'draw' from other utilities such as Gas, Telecoms and Irish Water; and

- increases in material costs and more work focused in urban areas, which is generally slower to complete.
- c) Remaining performance in PC21: without achieving the Year-1 target, NIW has to deliver 736.38km in the next five years.

Line 8d - Lead communication pipes replaced under the proactive lead replacement programme

- a) PC21 Year-1 performance: For AIR22, NIW reported 1,864 lead pipes through its proactive lead replacement programme, meeting the baseline target for the year of 1,844.
- b) Cumulative by the end of Year-1 of PC21 performance: A total of 1,864 lead pipes have been replaced in PC21 Year 1, meeting the Year-1 FD target of 1,844 lead pipes.
- c) Remaining performance in PC21: As well as meeting the baseline target, NIW has to proactively replace 9,200 lead pipes in the next five years to meet the remaining PC21 target of 9,200 lead pipes.

Water Quality Compliance Measures (Lines 18-21)

These lines are about the overall compliance of the public water supply with the regulatory water quality standards set by the European Union Drinking Water Directive (and as required by National legislation) at water treatment works, service reservoirs and consumers' taps, and the percentage of the overall number of service reservoirs that have not complied with the national regulatory standard.

Line 18 - Percentage of overall compliance with drinking water regulations

- a) PC21 Year-1 performance: For AIR22, NIW collected 98,139 samples and achieved an overall compliance of 99.89%, which exceeded the baseline target for the year (99.83%) by 0.06%. It should be noted that sampling was still affected by the COVID restrictions, the reported numbers are therefore not representative.
- b) Cumulative by the end of Year-1 of PC21 performance: Not applicable
- c) Remaining performance in PC21: NIW aims to meet the annual baseline target of 99.83% in the next five years.

Line 19 - Percentage compliance at consumers tap

- a) PC21 Year-1 performance: For AIR22, NIW collected 49,091 samples and achieved 99.82% compliance at consumers tap for AIR22, which exceeded the baseline target for the year (99.74%) by 0.08%. It should be noted that sampling was still affected by the COVID restrictions where the customer tap samples were mainly collected at the upstream of service reservoirs. The reported numbers are therefore not representative.
- b) Cumulative by the end of Year-1 of PC21 performance: Not applicable
- c) Remaining performance in PC21: NIW aims to meet the annual baseline target of 99.74% in the next five years.

Line 20 - Percentage iron compliance at consumers tap

- a) PC21 Year-1 performance: NIW achieved 99.35% of iron compliance at consumers tap for AIR22, which exceeded the baseline target for the year (98.62%) by 0.73%. It should be noted that sampling was still affected by the COVID restrictions where the customer tap samples were mainly

collected at the upstream of service reservoirs. The reported numbers are therefore not representative.

- b) Cumulative by the end of Year-1 of PC21 performance: Not applicable
- c) Remaining performance in PC21: NIW aims to meet the annual baseline target of 98.62% in the next five years.

Line 21 - Percentage of service reservoirs with coliforms in >5% samples

- a) PC21 Year-1 performance: 52 samples per service reservoir were collected in the calendar year 2021 giving a total of 15,028 samples for all 289 service reservoirs. A total of 17 failures were recorded but no service reservoir sites had more than three failures during the year, as profiled in the baseline forecast. Hence NIW will report 0.00% for this line.
- b) Cumulative by the end of Year-1 of PC21 performance: Not applicable
- c) Remaining performance in PC21: NIW aims to meet the annual baseline target of 0.00% in the next five years.

Nominated Water Service Outputs (Lines 22-24)

These lines are about the number of nominated schemes NIW delivered to achieve their beneficial use milestone in the financial year.

Line 22 - Completion of nominated trunk main schemes

- a) PC21 Year-1 performance: X achieved Beneficial Use in Year 1 (2021/22) (AIR22).
As a result, NIW delivered 1 scheme exceeding the baseline target of 0 scheme for AIR22.
- b) Cumulative by the end of Year-1 of PC21 performance: NIW has delivered 1 nominated trunk scheme in PC21.
- c) Remaining performance in PC21: Having exceeded the year-1 target, NIW plans to deliver 1 scheme in 2022-23 to meet the baseline target of 2 schemes but NIW aims to do more.

Line 23 - Completion of nominated water treatment works schemes

- a) PC21 Year-1 performance: Dungonnell Treatability Improvements achieved Beneficial Use in Year 1 (2021/22) (AIR22) meeting the baseline target of 1.
- b) Cumulative by the end of Year-1 of PC21 performance: NIW has delivered 1 nominated WTW scheme in PC21 against the baseline target of 1 scheme for the year.
- c) Remaining performance in PC21: NIW plans to meet next year's baseline target hence does not plan to deliver any schemes in 2022-23.

But it aims to deliver 5 schemes (X, X, X, X and X) in year 2023-24.

Line 24 - Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks

- a) PC21 Year-1 performance: Drumaroad WTW Clear Water Tank (CWT) achieved Beneficial Use Year 1 (2021/22) (AIR22) meeting the baseline target of 1.

- b) Cumulative by the end of Year-1 of PC21 performance: NIW has delivered 1 nominated scheme in PC21 against the baseline target of 1 scheme for the year.
- c) Remaining performance in PC21: NIW aims to complete 3 nominated improvements (X, X and X) in 2025-26 to meet the baseline target and the PC21 commitment.

PC15 Additional Water Service Output Measures (Lines 25 and 26)

Line 25 - Number of School Visits

The total number of Water Bus visits, class visits and activities held at the Education Centre.

- a) PC21 Year-1 performance: 299 school visits were carried out against the baseline target of 176 visits for the year.
- b) Cumulative by the end of Year-1 of PC21 performance: NIW has carried out a total 299 school visits against the baseline target of 176 visits, an outperformance of 123 visits for the first year of PC21.
- c) Remaining performance in PC21: NIW plans to continue to outperform the annual baseline target over the next year.

Line 26 - Number of Other Educational Events

- a) Year-5 performance: 64 education visits were carried out against the baseline target of 57 visits for the year.
- b) Cumulative by the end of Year-6 of PC21 performance: NIW carried out a total 64 educational visits against the cumulative baseline target of 57 visits, an outperformance of 7 visits over the one-year period.
- c) Remaining performance in PC21: NIW plans to continue to outperform the annual baseline target over the next year.

Additional Water Service Output Measures (Lines 27 and 28).

These are the new PC21 measures introduced by the UR.

Line 27 - Number of catchments where management plan recommendations have been delivered

This line is to review the number of catchments where interventions have been implemented in order to contribute to achieving sustainable catchment area management plans (SCAMPs) objectives.

- a) PC21 Year-1 performance: Zero catchments were delivered in AIR22 against the baseline target of 0 for the year.
- b) Cumulative by the end of Year-1 of PC21 performance: Zero catchments have interventions implemented.
- c) Remaining performance in PC21: NIW aims to meet the PC21 committed level of delivering the management plan recommendations in 20 catchments in the next five years. For 2022-23, the interventions for 3 catchments need to be implemented to meet the baseline target.

Line 28 - Number of treatability studies completed

- a) PC21 Year-1 performance: Zero studies were completed in AIR22 against the baseline target of 0 for the year.
- b) Cumulative by the end of Year-1 of PC21 performance: Zero studies completed.

- c) Remaining performance in PC21: To meet the PC21 committed target, NIW will need to deliver 12 treatability studies by 2024-25 to inform its PC27 investment requirements.

3.2. AIR21 to AIR22 Movements

Changes of note are summarised below:

- The total of new, renewed or relined mains (Line 6a) increased by 8.97km from AIR21 and the total new mains (Line 6) has increased by 14.02km
- Between AIR21 and AIR22, lead communication pipes replaced as a consequence of customers notifying NI Water that they are replacing their lead supply pipe (Line 8b) has increased by 45.06% and the replacement as a consequence of water quality sample failures (8a) has increased by 117.65%.
- There has been an increase of 433.33% between AIR21 and AIR22 in the number of other education events (Line 26) – we note the relaxation of COVID-19 measures over the report year has contributed to this.

The water quality compliance measures reduced slightly since AIR21 due to customer tap samples being collected to a large extent from upstream service reservoirs.

We note that two new measures have been introduced by the UR for PC21 period namely: the number of catchments with interventions implemented (Line 27) and the number of treatability studies completed (Line 28).

4. Summary of Audit Checks

Changes During Report Year (Lines 2-11)

This section reviews the Company's record of the additions and maintenance of mains, and the burst rate on mains and communication pipe activity.

The overall methodologies and commentary structures for these lines have not changed significantly compared to last year. The commentary features the inputs from the Customer Services Directorate (CSD) Networks Water Operations and Asset Delivery (AD) teams for Lines 2 to 10. Trunk main lengths are included in the totals, with details of trunk mains included in the commentary as required by the UR reporting requirements.

Line 2: Mains renewed.

The AD team renewed 90.10 km of water mains, of which 78.94 km were water mains rehabilitation, 7.415 km of distribution mains installed alongside the Dungiven to Drumahoe Trunk Main, 2.301km of trunk/transmission mains installed under the X scheme, Stiles Way 0.285km of trunk/transmission mains and 1.156km of trunk/transmission pumping mains at X. The CSD team delivered 1.50km of smaller schemes involving social housing redevelopments and minor mains diversions or realignments. The total mains renewed in AIR22 has therefore been reported as 91.60km.

Line 3: Mains relined.

Same as last year, NIW has not carried out any mains relined activity in AIR22. The Asset Delivery Team continues to review the value for money from the delivery of mains relining.

Line 4: Mains cleaned (total).

Mains cleaning is performed by the CSD team. The total length of mains cleaned in AIR22 (2,223.75km) is 34.55 km more than in AIR21 (2,189.20km).

The length is calculated based on the 0.317km per flush factor and the 7015no. of flushing which comprises a total count of 6736no. flushing MST's in Ellipse, minus 2no. flushing MST's identified as not

having been carried out in the reporting year, plus 281no. reactive flushing jobs completed. The audited line commentary states that an assumption of 0.317km per flush (same as last year) was used for the return but the line methodology (bullet 11) states that this is 0.318km – the difference is not material.

Line 6: New mains.

NIW installed 78.94 new mains in AIR22, 14.02km more than AIR21 (64.92 km). The CSD team delivered 56.62 km of new mains with the remaining 22.68 km delivered by the AD team in AIR22, in contrast to 43.27km and 21.65 km respectively in AIR21. The source data did not show whether any renewed pipes have been included.

Line 6a: Total length of new, renewed and relined mains.

This is a calculated line as the sum of Lines 2, 3 and 6, which is 170.54km in AIR22, an increase of 8.97 km on last year (161.57 km). At audit, the sum was checked and confirmed to be correct and consistent with the line definition of the AIR22 Reporting Requirements and Definitions Manual.

Line 6b: Length of new, renewed or relined mains delivered under the watermain rehabilitation programme.

The reported length for this line has decreased from 104.13 km in AIR21 to 101.62km which is derived from the Asset Delivery totals of 78.94km of rehabilitated Watermains Rehab plus 22.68km of new mains funded by the Water Rehabilitation Budget.

Line 7: Mains abandoned and other changes.

NIW reported 14.44 km fewer abandoned mains in AIR22 (74.61 km) than in AIR21 (89.05 km). The majority of the AIR22 number was reported by the AD (74.27 km) while the remaining (0.34 km) was reported by the CSD team for smaller schemes involving social housing redevelopments and minor mains diversions. There are reductions in CSD abandoned mains, 0.34 km in AIR22 compared to 1.04 km in AIR21, and reduction in AD abandoned mains, 74.27 km in AIR22 compared to 88.01 km in AIR21.

The reported length includes both wholly abandoned mains and those replaced by renewals as per definition for this line in the UR's Reporting Requirements and Definitions Manual.

Line 8a: Lead communication pipes replaced as a consequence of water quality sample failures.

This activity is carried out solely by the CSD team. A total of 37 lead communication pipes was replaced as a consequence of water quality failures in AIR22, in comparison to 17 in AIR21. The audited line commentary states that the increase in numbers may be attributable to the easing of COVID-19 restrictions allowing greater access to properties. However, there is no evidence for the provenance of the 37 replacements.

Line 8b: Lead communication pipes replaced as consequence of customers notifying NI Water that they are replacing their lead supply pipes.

This activity is also carried out solely by the CSD team. The reported value in AIR22 is 470 which is 146 more than the previous year's report of 324.

Line 8c: Opportunistic lead communication pipes replacement undertaken under the watermain rehabilitation programme or during burst service pipe repairs.

The reported value for AIR22 is 22. The audited line commentary states this figure is down in comparison to the previous year of 28 but these numbers are small and therefore this does not indicate a significant trend.

Line 8d: Lead communication pipes replaced under the proactive lead replacement programme.

Unlike other lead communication pipes replacement activities, this activity is delivered solely by the AD team and is related to the proactive lead replacement programme. The reported AIR22 number (1,864) is 189 more than the previous year (1675). The audited line commentary states this output figure is an

accurate representation of this activity as it is a proactive Project focused on replacing a number of lead communications pipes in defined areas.

Line 9: Total lead communication pipes replaced.

The reported value for AIR22 (2,392) is a summation of Lines 8a, 8b, 8c and 8d as per the UR's Regulatory Reporting and Definitions Manual definition for this line. This year's value is 348 more than the previous year (2,044). The audited line commentary states that the increasing numbers may be attributable to the more customers carrying out work at their homes in the aftermath of the COVID-19 pandemic as society edges towards normality.

Line 10: Communication pipes replaced - other.

In AIR22, NIW replaced 2,881 communication pipes (other), which is lower than the previous year of 3,739 (AIR21). The AIR21 number is built up from 1,685 from the AD team and 1,196 from the CSD team. NIW stated during the audit that there are remaining problems when analysing work orders where it is not clear if communication pipes have been fully replaced or only repaired at a localised burst. NIW also stated that it is not clear when replaced pipes are lead, as a result some lead pipes may be reported in this line where they should have been included in Line 8c or 8d.

Line 11: Mains bursts per 1000km.

The reported AIR22 number (92 mains bursts per 1000km), is 4 more than AIR21 (88 bursts per 1000km).

We note this number is derived from the total number of recorded burst events (minus those attributable to third party damage) divided by the total main length. The number of bursts is calculated directly from monthly reports from the Mobile Work Management or MWM system compiled by the Water Business Unit. The reports summarise job split between those generated through proactive and non-proactive detection methods.

We note that the reported AIR22 number is comprised of 1,145 proactive repairs by the active leakage control team and 1,353 reported burst mains (non-proactive) repairs by CSD Networks Water team minus 10 bursts due to third party damage. We also note the NI Water internally audited total main length of 27,086.39km used in the calculation.

The number of bursts detected through pro-active actions has increased by 1% since AIR21. The number of non-proactive detection bursts has increased by 7%. The number of bursts due to third party damage is significantly reduced by 66% since AIR21. NIW explained that this is as a result of a change in the team responsible for following up third party damages. The total number of reported bursts has increased by 7% from AIR20 (2211) but is comparable to AIR18 (2444) and AIR19 (2467).

Distribution Studies (Lines 13 to 17)

At the time of the audit, no values were entered for lines 13 to 17. NI Water states there are no distribution studies undertaken since 2014 and that the UR had acknowledged that the lines were no longer relevant (email evidence provided as evidence). Hence, we did not follow up on the audit of these lines.

Line 13: Cumulative number of distribution zone studies completed.

Nil value reported.

Line 14: Distribution zone studies ongoing.

Nil value reported.

Line 15: Total distribution zones identified for study.

Nil value reported.

Line 16: Cumulative % distribution zone studies completed.

Nil value reported.

Line 17: Percentage population/properties – completed studies.

Nil value reported.

Water Quality Compliance Measures (Lines 18 to 21). NI Water states that:

“All targets for water quality compliance measures were achieved in AIR22. During 2021 as a result of the COVID-19 pandemic, NI Water carried on with the approach taken from 18th May 2020 with sampling returning to the regulatory frequencies but with the exception of a small number of customer tap specific parameters. NI Water re-commenced sampling at public buildings from 21st June 2021, and at private customer taps from 13th September 2021. However due to the Omicron COVID-19 variant, with the agreement of the Drinking Water Inspectorate (DWI), NI Water again ceased sampling at customer taps from 20th December 2021. This has created a shortfall in the regulatory sampling at customer tap for the calendar year 2021. NIW states in its commentary that the Company is maintaining assurance that there is no risk to public health from public water supplies.”

Method statement, data table and commentary were provided before the audit and reviewed during the audit. The methodology applied to produce the lines were clearly explained and demonstrated. The reported AIR22 values for lines 18-20 exceeds NIW's targets for the year but were lower than the previous year's values.

At audit, NIW justified parameter changes from last year and the influence of the prevailing COVID-19 measures on customer tap sampling. Through our audits, we reviewed the calculation process (automatically from the database) and sample checked the data back to source (LIMS). The check and control processes were explained through the audit process. We did not identify any material issue or concerns with the data sampled.

The reasons for including PPP assets and the sampling approach compared to last year were discussed in the audit and the commentary was updated to reflect these. The revised commentary was provided after the audit. The DWI agreement of ceasing sampling at customer taps from 20th December was shown during the audit.

The assigned confidence grade for lines 18-20 is A2 and for line 21, A1. These have not changed from the previous year and appear appropriate.

Water Quality Compliance Measures (Lines 18 to 21)

The trend of reported numbers for Lines 18-21 is given in Table TC_11_1

Table TC_11_1: Line 18-21 – Trend of Reported Values

Line	Reporting Year	2014	2015	2016	2017	2018	2019	2020	2021
18	% Overall Compliance	99.86	99.83	99.86	99.88	99.90	99.90	99.94	99.89
19	% Compliance at consumer tap (including supply points)	99.78	99.74	99.77	99.81	99.83	99.84	99.91	99.82
20	% Iron compliance at consumer tap	98.95	98.40	98.66	98.85	98.94	98.89	99.56	99.35
21	% Service reservoirs with coliforms in >5% samples	0	0	0	0	0	0	0	0

Line 18: % overall compliance with drinking water regulations.

The reported AIR22 value (99.89%) is lower than the previous year value of 99.94%. This year's figure exceeds NIW's target of 99.83%. However, it is noted that customer tap samples being collected to a large extent at the upstream of service reservoirs means that the AIR22 figure is not representative.

Line 19: % compliance at consumers tap.

The reported AIR22 value (99.82%) is lower than the previous year's value of 99.91%. This year's figure exceeds the NIW's target of 99.74%. However, it is noted that customer tap samples being collected to a large extent at the upstream of service reservoirs means that the AIR22 figure is not representative.

Line 20: % iron compliance at consumers tap.

The reported AIR22 value (99.35%) is lower than the previous year's value of 99.56%. This year's figure exceeds the target of 98.62%. However, it is noted that customer tap samples being collected to a large extent at the upstream of service reservoirs means that the AIR22 figure is not representative.

Line 21: % service reservoirs with coliforms in >5% samples.

No service reservoir sites have had more than 3 failures during the year. NIW advised us that it has an ongoing service reservoir cleaning programme to maintain this. All sites achieved 95% compliance.

Nominated Water Service Outputs (Lines 22 to 24)

Through our audits, we checked the nominated outputs associated with these lines against the corresponding schemes in Capital Programme Monitoring and Reporting (CPMR) and found these to be consistent.

Line 22: Completion of nominated trunk main schemes.

One nominated trunk main scheme was completed in AIR22. Northern Zone resilience Phase 3 achieved Beneficial use in 2021/22. NIW advised that the Northern Zone resilience Phase 4 is still on-going.

Line 23: Completion of nominated water treatment works schemes.

Dungonnell Treatability Improvements achieved beneficial use in 2021/22. It was noted that there is some £200k overspent on this scheme.

The following 3 WTW schemes are carried over from PC15 and programmed to be completed in the PC21 period.

- X
- X
- X

Line 24: Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks.

X achieved Beneficial Use in 2021/212. This is the carry over scheme from PC15.

PC15 Additional Water Service Output Measures (Lines 25 and 26)Line 25: Number of School Visits.

A total of 299 school visits were carried out in AIR22 against the annual baseline target of 176. Due to the COVID-19 impact some AIR22 school visits were still to be carried out virtually and no bus visits have been arranged for this reporting year.

For year 2021-22, NIW recorded the visits manually in a master workbook. At audit, NIW explained the checking approach that has been applied to ensure the accuracy of numbers and to avoid double counting.

Auditees explained that the number of visits are reported to the Board on a monthly basis. We did not encounter any material issues from our samples checks. At audit, NIW demonstrated the future booking system that will be used from September 2022 onwards to facilitate the tracking and automatic recording of visits.

Line 26: Number of Other Educational Events.

A total of 64 events took place in AIR22. This exceeded the annual baseline target of 57 events. The total number of other educational events reported were checked against the spreadsheet tracker and found to be consistent. As per our comment on the number of school visits reported, a robust checking process has been applied to the number of other educational events.

Additional Water Service Output Measures (Lines 27 and 28)

Line 27: Number of catchments where management plan recommendations have been delivered

A total of zero catchments will be reported in AIR22.

We note that NIW has commenced associated work related to passive sampling in 3 catchments namely: X, X and X.

Line 28 - Number of treatability studies completed

The AIR22 reported number is zero.

The Company aims to deliver 12 schemes over the PC21 period. Instead of delivering all 12 schemes in year 2024/25 as proposed in the PC21 submission, NIW is considering a proposal to deliver 3 in year 2022/23, 4 in year 2023/24, 3 in year 2024/25 and 2 in 2025/26.

5. Confidence Grades

As shown in Table TC_11_1, the confidence grades used have remained the same as last year. The rationale and appropriateness of the assigned confidence grades were discussed at audit and found to be reasonable.

6. Challenges to the Company, Recommendations & Suggested Actions

Challenge: One of the AIR21 Table 11 Auditor recommended actions has not been addressed.

The AIR21 Table 11 Auditor highlighted a number of our AIR20 Table 11 recommended actions as “outstanding” – i.e. that the actions have not been addressed. Subsequent to the audit, NIW provided a summary of the status of these “outstanding” actions on file as “06-04-22 Recommendations - Reporter's AIR21 Report.xlsx”. The “outstanding” actions are noted below, with the current NIW status notes [*blue text*].

Line 8c [Opportunistic lead communication pipes replacement undertaken under the watermain rehabilitation programme or during burst service pipe repairs]: NIW should consider updating the CPMR system to record lead communication pipe replacements. For each replaced pipe, the system should record the pipe material and a note of whether the pipe is fully replaced or repaired. [*Agreed action: Stakeholder group to review and decide on possible solutions (E RN 30/07/21). Contractor crews have been requested to record the number of lead pipe replacements (arising from the rehabilitation of the watermain programme) as BAU. Need to confirm this can be picked up in CPMR (E RN 20/1/22)*].

Recommendations:





1. Line 6 [*New mains*]: the AIR22 source data did not show the composition of the length of new mains laid in report year, following the requirements of the UR Guidance for new mains and mains renewals involving upsizing whose prime justification is the requirement for additional capacity. We suggest that the Company considers improvements to the source data to highlight the composition of new mains laid in the report year.
2. Line 8a [*Lead communication pipes replaced as a consequence of water quality sample failures*]: The Company reported 37 pipes for AIR22 with no differentiation between ‘the actual number of Lead Pipe Replacements due to water quality sample failures’ and ‘the number of sample failures associated with this’. We suggest that the Company improves the basis of the reported data for audit purposes.

3. Line 22-24 [*Completion of nominated trunk main schemes, Completion of nominated water treatment works schemes and Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks*]: Jobs can be tracked through the CPMR system but with no further supporting evidence such as 'as-built records' or 'approval of completion'. The Company should document supporting evidence [PM notes, sign-off documents and as-built records] for CPMR entries.
4. Line 28 [*Number of treatability studies completed*]: The line methodology was discussed at audit but did not explain the process and logic applied to count the number of treatability studies completed. We suggest that the Company considers improvements to the method statement with a process diagram (that shows the relationship between source data and the reported number) and a description of the logic applied to the count of numbers for AIR reporting purposes.

SUMMARY OF AUDIT FINDINGS








Table 16 – Lines 3-13c, 16a-17b, 18-22, 23-25, 26-28, 29-33 and 34-35

PREPARED BY	X
DATE	28 July 2022

Rating	Meaning
	No material exceptions and compliant with requirement
	Content with the reported data but supporting information needs to be complete and/or improvement identified for AIR23, or other noteworthy comment
	Minor exceptions
	Material exceptions
N/A	Not applicable to report

1. Key Findings

The key findings of the AIR22 Table 16 audit [Lines 3-13c, 16a-17b, 18-22, 23-25, 26-28, 29-33 and 34-35, Activities only (including additional output measures) and not the asset balance (Sewerage Service)], against the AIR22 audit criteria are summarised below.

AIR22 Table Criteria	RAG	Assessment
Independent review of performance against PC21 target (where relevant)		Delivery of outputs against target have slipped in some areas. These are: Lines 26 (Improvements to nominated UIDs) and 28 (Small WWTWs delivered as part of the rural wastewater investment programme).
Methodology – consistency with the reporting process with clear control points		Methodology found to be clear and reporting consistent with documented methods. Minor errors identified in limited number of commentaries have been corrected. No material changes in reporting methodology since AIR21.
Assumptions – reasonableness and applicability		Assumptions reasonable and appropriately documented.
Source data – completeness		Source data well referenced in the methods and commentaries. Master spreadsheets and evidence of NIEA sign-off reviewed in the audit meetings.
Clarity of audit trails – evidence of appropriate audit trail		Audit trails clear.
Confidence grades – documentation of appropriateness and rationale		Consistent documentation of confidence grades and rationale. Highest grades assigned where outputs are signed-off by NIEA.
Governance – evidence of quality assurance and of final sign-off		Evidence that all minor corrections identified in audit have been applied.

2. Audit Scope

This audit covers non-financial measures for sewerage services activities recorded in Lines 1-33 of Table 16. A series of interviews was conducted with NI Water staff responsible for the collation and reporting of relevant data:

- Lines 3-11, 16, 17, 29, 31: X
- Lines 16a-16b: X, X
- Lines 12-13: X, X
- Lines 18-22: X
- Lines 23-25, 30: X, X

- Lines 26-28, 32-33: X

During the audit, methodologies and commentaries were reviewed, and a range of supporting spreadsheets were audited to verify the provenance of figures in the data table sheets and assess alignment with the Utility Regulator's guidance notes. We also compared the AIR22 reporting methodology and figures against AIR21 to understand any material changes.

3. Performance and Significant Events

Line 3: 11.68km of critical sewers were added during the AIR22 period, an increase from 1.19 km in AIR21. The additional network has been transferred from developer services schemes delivered during the period (where critical sewers are defined as > 600mm diameter).

Source data taken from developer services systems and the Capital Programme Monitoring Report (CPMR) system.

Line 4: 117km of critical sewers inspected, similar run rate to AIR21 (118.46 km). Figure is comprised of totals from Capital Delivery, in-house inspection team and contractor inspections managed by the asset performance team as part of the Drainage Area Planning (DAP) programme.

Capital Delivery carried out 28.34km of CCTV work, with Asset Performance undertaking 38.9km as part of the Drainage Area Study and Sewer Rehab programme. The total length of CCTV work done by in-house crews is reported as 199.02km, to which NIW applied the assumption that 25% are designated as critical sewers. The same assumption was applied in previous years and is derived from the % of critical sewers as a proportion of the total NIW sewer network. In-house CCTV inspection is therefore estimated at 49.76km, bringing the total to 117km for Line 4.

Lines 5 & 6: Length of critical sewers renovated and replaced is 2.24 (AIR21 = 3.71 km) and 2.11 (AIR21=2.5 km) respectively. Data sourced from the CPMR system and includes outputs from the planned capital programme and unplanned/reactive work undertaken. Specific designations for replaced/renovated are captured in CPMR.

Line 7: 0.11km of abandoned critical sewer reported.

Line 8: 98.64km of non-critical sewers added to the network (compared to 88.77 km in previous period). The methodology follows the same approach as for Line 3 for sewers with a non-critical designation.

Lines 9 & 10: Length of non-critical sewers renovated and replaced is 6.98km and 19.04km respectively. Methodology and data sources as per Lines 5 & 6, but for sewers classified as non-critical.

Line 11: Only 80m of non-critical sewers were abandoned in the period.

Line 11a: Total length of sewer renovated and replaced is 30.35km, an increase from 12.71 km reported in AIR21, and ahead of the PC21 target requiring an average of 10.1 km to be replaced/renovated per year.

Line 12: 74.9 sewer collapses per 1000km, a reduction from 80.4 in the previous year. Reporting is consistent with Table 46. Data is derived from GIS (total network length) and monthly reporting of operational data from the Ellipse work management system. Contractors are responsible for collating and reporting monthly data, which is subject to NIW validation by field managers.

Line 13: 748.3 sewer blockages per 1000km, a reduction from 872.1 in the previous year. Figure is derived based on the same principles and source data as Line 12. Duration data for Lines 13a, b and c are recorded as the time between the initial customer contact to the call centre through to the work order being marked as complete in Ellipse by field staff.

Total number of blockages recorded was 12,245, an improvement from 14,417 in the previous year which NIW attributes to a media campaign and increased emphasis on contractors resolving issues on the first visit. The total includes blockages < 6 hours, which are not shown in Table 16. We were able to verify from the source data that Line 13 and 13a, b and c were derived from the same data set.

Line 16a: Number of unsatisfactory discharges (excluding CSOs). Refers to intermittent discharges that have been defined as unsatisfactory by the NIEA under the terms of the UWWT Directive.

Figures have increased over AIR21 due to an additional 20 DAPs received up to the end of March 2022. A total of 133 UIDs (excluding CSOs) were reported in AIR21. During AIR22, three UIDs were resolved at Ballyrobert Bangor WwPS, Cooks Cove WwPS and Brompton Road 1 WwPS. However, accounting for the additional DAPs, the new total of UIDs confirmed by NIEA is 323.

Line 16b: Number of unsatisfactory discharges CSOs. Figures for 16b have increased due to the same reason as 16a above. The additional 20 DAPs have increased the UID CSO figure from 253 in AIR21 to 283 in AIR22, an increase which includes a reduction of 1 UID following the completion of a scheme at Maxwell Road on 09/02/22.

Line 17a: The number of overflows from within WwTWs has increased by one during the period to 682. This is a result of changes on the ground with respect to the number of WwTW overflows since AIR21, and also work NIW has been doing to review and update its consents and discharges database. Two overflows were withdrawn and three added as part of works upgrades. One was withdrawn and one added due to incorrect designation in AIR21.

Reported figure of 1784 for Line 17a excludes CSOs and is a function of the total number of WW Pumping Station overflows (1102) and the number of overflows from within WwTWs (682).

Line 17b: The number of CSOs is reported as 784.

Line 18: Cumulative number of DAPs completed is reported as 84, an increase of 2 since the previous year. The list of sites is contained in the file embedded in the method document. 72 discrete catchments now have DAPs in place, and 12 of those catchments have been through the process twice. The priority for revisiting and updating DAPs is based on business need and catchment drivers. The aim is to balance increasing the area covered by DAPs with ensuring that large urbanised or otherwise 'critical' catchments have DAPs that are robust and up to date.

Line 19: 72 DAPs are currently in progress, an increase from 58 in the previous year. 2 were completed (Moy and Greenisland), 1 was cancelled, and 17 new DAPs were kicked-off during the year.

Line 20: Total sewerage drainage areas - this figure only changes with growth/decline in domestic and trade flows which shift catchments above or below the 250 PE threshold. The value has not changed from AIR21 despite updates to the PE figures for each catchment. The AIR22 number of drainage areas remains at 255.

Line 21: Cumulative % drainage area plan studies completed. Calculated line, Line 18 (cumulative number of DAPs completed) divided by Line 20 (Total sewerage drainage areas). The value has changed from 32.2% in AIR21 to 32.9% due to changes in Line 18 only.

Line 22: % population/properties covered by completed DAP studies. Both the number of DAPs and the PE figures have increased from AIR21 and the figure remains as 89%.

The calculation is based on the latest PE figures for the 72 discrete DAP areas completed, to avoid double-counting of the 12 repeated/revisited studies.

Line 23: WwTW discharges compliant with numeric consents is reported as 93.6%. This represents NIW numeric sites only (234) and excludes the six PPP sites. 15 works failed within the year. Source data is held in the Lab Information Management System (LIMS) and the monthly reports produced to track regulatory compliance against look-up table conditions.

Line 24: % of total PE served by WwTWs compliant with numeric standards reported as 98.8 and includes upper tier failures (X and X). Line 24a (99.1%) excludes upper tier failures and therefore excludes Lisnaskea. Ballygowan remains included as both 95%ile and Upper Tier limits were breached.

Line 25: % compliance for WwTW with descriptive consents is reported as 92.02. Compliance is based on meeting the requirements of NIEA inspection and reporting includes sites in the range >20 and <250 PE. Criteria for compliance is defined by NIEA who generate the data and report non-compliance to NIW. The 92.02 figure is confirmed by the NIEA.

Line 26: Reporting consistent with Table 40a which sets out full details of the UID improvement delivery. 4 UID outputs achieved beneficial completion against a target of 8. The remaining 4 will be delivered in 2022/23. Delays at X due to time taken to gain planning consent, and procurement supply issues at the remaining 3 sites. Confidence Grade A1 based on NIEA sign-off against guidelines on beneficial use.

Line 27: One output achieved at X, which was a carry-over scheme from PC15. 4 outputs targeted (internal NIW target) for 2021/22 have slipped and are rescheduled for 2022/23. Confidence Grade of A1 based on NIEA sign-off of two-week sample programme.

Line 28: 2 outputs were delivered as part of the Rural Wastewater Investment Programme. NIEA set the standards for design and then monitor treatment performance through the commissioning process, signing-off on the sampling programme, before shifting the consent conditions to descriptive. 6 sites were in the original 2021/22 target, but 4 have slipped and will need to be added to future year delivery to ensure NIW maintain the 6 sites per year run-rate required to hit the 36 site target for PC21. Outputs are signed-off by NIEA on the basis of 2-3 samples rather than the two-week programme required for larger sites, and this is reflected in the A2 Confidence Grade.

Line 29: 52 CSO monitors were installed during the period. NIEA has agreed that all installation criteria have been met and that the reporting methodology developed by NIW is consistent with NIEA requirements.

Line 30: No WwTWs were upgraded to comply with PPC Regulations during the period. Three outputs were achieved in the previous year, and a target of 5 outputs is to be achieved by the end of PC21.

Line 31: 1200m² of impermeable surface area was removed in-year as part of the delivery of the PC21 storm separation programme in Bangor DAP. NIW is seeking to build options to significantly ramp-up the programme in subsequent years.

Line 32: No sustainable WwTW solutions delivered for site >250 PE against target of 0. Investigation and solution/options analysis is ongoing for specific sites to determine the programme and priority for future years' delivery.

Line 33: As above. None delivered against a target of 0. Investigations ongoing to determine programme.

Line 34: New target for PC21, relates to areas designated as 'hub-towns' by council planning. Originally a PC21 Year 1 target for X (3 outputs) and X (1 output). NIW has made progress in developing dashboards to track progress. The four outputs are currently in construction and approaching completion. While the status of the work now means that NIW has lifted planning restrictions, the outputs will not be claimed until beneficial completion is signed off. Therefore, the reported output is 0 and the four outputs will be claimed in the next period.

Line 35: New line for PC21. As above but for all other areas not designated as 'hub-towns'. No target in PC21 Year 1, therefore 0 outputs reported.

4. Summary of Audit Checks

We have reviewed all the Word commentary files and Excel tables provided by NI Water during and following the audit, including review of workbooks containing source information and the calculations underpinning the figures reported in Table 16.

5. Confidence Grades

Rationale for confidence grades was reviewed in the audits. We found documentation and rationale for confidence grades to be consistent. Highest grades are assigned where outputs are signed off by NIEA.

6. Challenges to the Company, Recommendations & Suggested Actions

Action: NIW to update the Line 22 commentary and line methodology to clarify that the calculation is based on the 72 discrete DAPs completed rather than the total number of 84 which includes repeated studies. Initially, 84 DAPs were referenced in the documents. Actioned by Brian Connolly. **Action closed out post-audit on 21st June 2022.**

7. References

- a) NIAUR_air22_repreg_Sec2_Chap16 01.00.pdf. The UR Guidance for AIR22 Table 16.
- b) NI Water Commentary: CC_Table16_Lines12-13c.docx
- c) NI Water Data Table: DT_Table16_L12-13c.xlsx
- d) NI Water Methodology: LM_Table16_Lines12-13c.docx
- e) Final_AIR22 PEs.xlsx
- f) NI Water Commentary: CC_Table16_Lines18-22.docx
- g) NI Water Data Table: DT_Table16_L18-22.xlsx
- h) NI Water Methodology: LM_Table16_Lines18-22.docx
- i) NI Water Commentary: CC_Table16_Lines18-22_updated.docx
- j) NI Water Data Table: DT_Table16_L18-22_updated.xlsx
- k) NI Water Methodology: LM_Table16_Lines18-22_updated.docx
- l) NI Water Commentary: CC_Table16_Lines23-25_30.docx
- m) NI Water Data Table: DT_Small_Works_Compliance_2021_NIEA_Agreed.xlsx
- n) NI Water Data Table: DT_Table16_L23-25_30.xlsx
- o) NI Water Methodology: LM_Table16_Lines23-25_30.docx
- p) NI Water Commentary: CC_Table16_Lines26-28_32-33.docx
- q) NI Water Methodology: LM_Table16_Lines26-28_32-33.docx
- r) NI Water Data Table: DT_Table16_L26-28_32-33.xlsx
- s) NI Water Commentary: CC_Table16_Lines3-11a_16a-17b_29_31.docx
- t) NI Water Methodology: LM_Table16_Lines3-11a_16a-17b_29_31.docx

- u) NI Water Data Table: DT_Table16_L3-11a_16a-17b_29_31.xlsx
- v) NI Water Commentary:CC_Table16_Lines34-35.docx
- w) NI Water Methodology:LM_Table16_L34-35.docx
- x) NI Water Data Table: DT_Table16_L34-35.xlsx





SUMMARY OF AUDIT FINDINGS




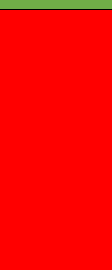


Table 40 – Capital Investment Monitoring (CIM)

PREPARED BY	X
DATE	28 July 2022

1. Key Findings

The key findings of the AIR22 Table 40 audit, against the AIR22 audit criteria are summarised below.

Rating	Meaning
	No material exceptions and compliant with requirement
	Content with the reported data but supporting information needs to be complete and/or improvement identified for AIR23, or other noteworthy comment
	Minor exceptions
	Material exceptions
N/A	Not applicable to report

AIR22 Table Criteria	RAG	Assessment
Independent review of performance against PC21 target (where relevant)		Where the information is available PC21 schemes appear to be on track and expenditure across the PC21 programme is being smoothed when compared with the backloaded baseline, giving confidence in overall delivery.
Methodology – consistency with the reporting process with clear control points		The methodology provides concise and clear instructions on how Table 40 has been generated and includes check measures to be taken demonstrating good data control. The relationship between Primavera V6 (P6) milestones and CPMR is not mentioned, an area with significant consistency issues at audit. The Reporter has received an updated Line Methodology from NIW post-audit, however it does not resolve all omissions.
Assumptions – reasonableness and applicability		Reasonable and appropriate assumptions applied.
Source data – completeness		Source data is taken directly from the Capital Programme Monitoring and Reporting (CPMR) system. The introduction of P6 milestones in CPMR and a change in the way data fields are collated from CPMR into Table 40 has led to significant omissions and errors in milestone dates being identified in the revised Table 40. This is despite some improvements observed since the working version shown at audit.
Clarity of audit trails – evidence of appropriate audit trail		Audit processes and evidence of approvals were seen within CPMR.
Confidence grades – documentation of appropriateness and rationale		N/A.
Governance – evidence of quality assurance and of final sign-off		Through our audits, we have seen evidence of good governance covering project information in CPMR.

- The rules on proportional allocation are consistent with the Utility Regulator (UR)'s expectations, they are consistently and comprehensively applied to the forecast programme. Prime and proportional allocations for both purpose and service cost allocations are appropriately applied.
- Omission of baseline information in Table 40 was evident during the audit. NIW have introduced Primavera V6 (P6) project management software since AIR21 which should deliver forecasting benefits in the medium to long term. Unfortunately for this audit it was evident that P6 has either not been fully populated, or issues with the integration of P6 with the existing CPMR system and the Table 40 reporting process have not been fully addressed. This means significant amounts of baseline information is missing, impacting the Reporter's ability to investigate all aspects of audit scope. **Post-audit submission to the Reporter of a revised Table 40 did resolve some of omissions raised, however**

omissions and errors in milestone dates have been identified in the audit sample subsequent to the audit meeting.

- At audit NIW estimated around 60 projects fall short of having information across the PC21 period detailed in P6. Table 40 is currently based on old project dates section of CPMR. It was evident to the Auditor that a large amount of baseline information, both within the audit sample and across Table 40 were missing baseline information (milestones, purpose allocations, service cost allocations, baseline capital expenditure profiles).
- NIW have provided a working copy of the Line Methodology to describe how Table 40 is produced. It has not been finalised before the Reporter's auditing deadline. Improvements to Table 40 are recommended in Section 6 of this commentary which focus on including how P6 programmes are developed in the methodology, as well as how milestones are generated and populated in CPMR.
- NIW have not presented a Commentary document for Table 40 before the Reporter's auditing deadline. NIW have provided some high level financial details and justification for the values given, as presented in Section 3.

2. Audit Scope

The initial audit was carried out on 7th June against the principles and requirements of the UR guidance. The Reporter Letter's specific UR guidance for Table 40 states that:

The Reporter should carry out a sample audit of schemes in accordance with the requirements set out in Section 4.0 of Chapter 40 and Section 4.0 of Chapter 30 of the AIR22 information requirements. Any issues with the proportional allocation of expenditure and the appropriateness and consistency of interpretation/application of the company's Capital Investment Driver Allocation (CIDA) guidance should be highlighted.

The audit focuses on Table 40 provided by NIW with the following information received a day in advance of the audit:

- CC_Table11_Lines22-24.docx (shown at audit)
- CC_Table16_Lines26-28_32-33.docx (shown at audit)
- DT_Table40_LAll workings.xlsx (shown at audit)
- DT_Table40_LAll workings v2.xlsx (received post-audit 24/06/22)
- DT_Table40a_LAll workings.docx (received post-audit 24/06/22)
- DT_Table40b_LAll workings_V3.xlsx (received post-audit 24/06/22)
- LM_Table40_LinesALL working.docx (shown at audit)

Sample selection

We sampled projects in Table 40 across scheme types to examine the values presented across all columns, considering the appropriateness and consistency of interpretation and application in line with the company's CIDA guidance.

The sampled schemes include those from the sub-programmes highlighted in the UR's guidance for AIR22 reporting and are schemes which contain significant costs in the coming years. These areas of interest are:

- proportional allocation of leakage expenditure
- allocation of expenditure on Watermains rehabilitation

- allocation of expenditure between quality, maintenance and growth for treatment works
- allocation of expenditure between quality, maintenance and growth for UIDs.

A range of PC nominated and non PC nominated schemes were chosen. These are shown in Table TC_40_1.

Table TC_40_1: Sample Schemes Audited

Sub-programme (Col 8 of Table 40)	Scheme audited (Cols 3 and 4 of Table 40)	PC Project Period (Col 77 of Table 40)
Leakage (09)	X X	
Watermains rehabilitation (08)	X X	
Wastewater treatment (new starts) (16)	X X	PC27 LWWP
Sewerage (12)	X X	PC21 Nominated
	X X	PC21 Nominated
Water trunk mains (05)	X X	PC21 Nominated

3. Performance and Significant Events

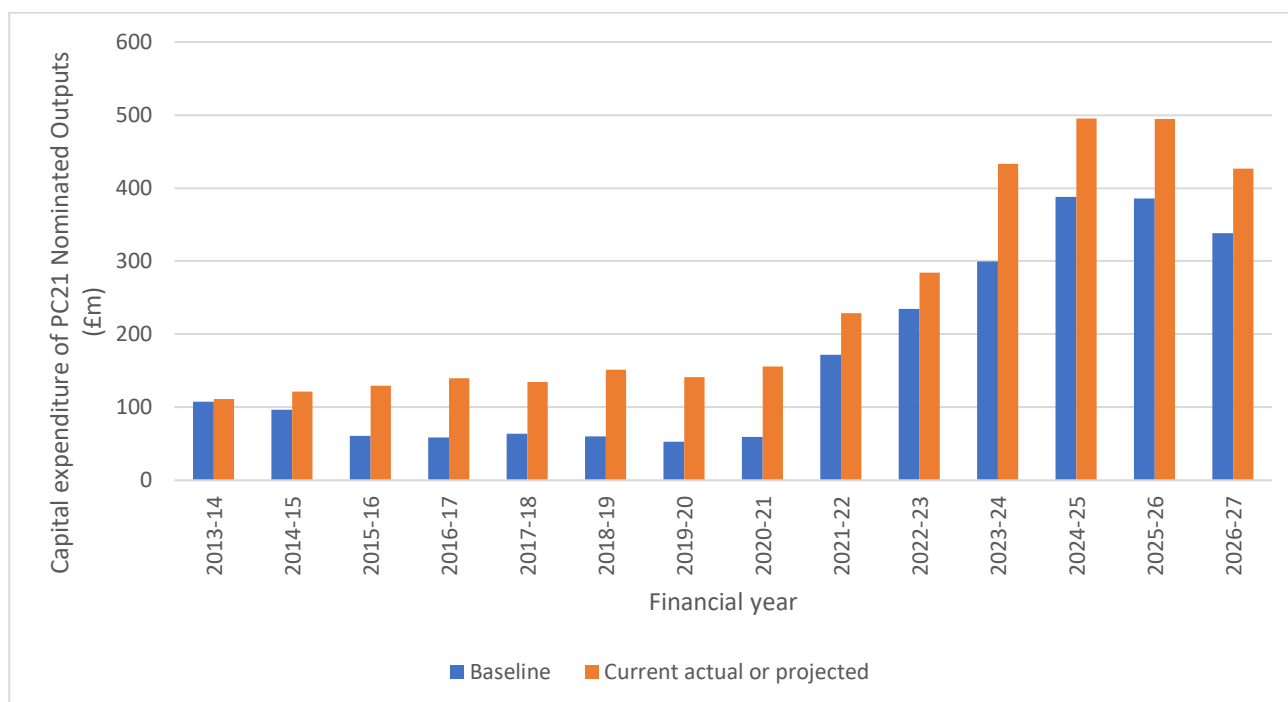
NIW's projection of expenditure in 2021-22 and upcoming years align with the Auditee's knowledge of scheme delivery progress, no examples of inaccurate expenditure or incorrect purpose/service cost allocations were identified across the audit sample.

Progress and ability to deliver PC21 outputs

NIW appear to be making good progress towards delivering the Company's PC21 nominated outputs, delivering a greater expenditure than at baseline as shown in Figure TC_40_1. The total actual/current and projected capital expenditure across all years in Table 40 (£3,477.017m) exceeds the baseline (£2,377.347m) by £1,069.670m.

NIW have identified that after taking RPI into account, the PC21 programme is now £182m higher than the FD allocation (c.8% of baseline). NIW were able to attribute the increases as follows across the sub-programmes:

- Small overages in each sub-programme.
- c.£22m overage in the Water Treatment Works sub-programme (SP04) which is currently being compiled into a Change Control submission to the UR.
- c.£19m overage in the Services Reservoirs and Clear Water Tanks sub-programme (SP06) relating to increased costs associated with Clean Water Tanks, these are currently under review by NI Water Cost Managers.
- c.£28m and £34m in the Sewerage subprogramme (SP12) and Wastewater Treatment carryover projects (SP16) which are currently awaiting determination on a large number of schemes from the Scope Uncertainty submissions.
- C.£25m in the Management & General sub-programme (SP20) which mainly relates to a single project to address H&S concerns and legislative requirements. Our understanding is that these critical schemes will be prioritised over delivery of other schemes in the M&G subprogramme.

Figure TC_40_1: Progress of capital expenditure of PC21 Nominated Outputs**Nominated outputs for delivery by end of 2021-22**

In the baseline programme the six PC21 nominated / LWWP schemes listed below were planned for completion in 2021-22. These have been identified for 2021-22 where the final year of baseline capital expenditure took place on these schemes. Baseline milestones could not be consistently used as this information was not reliably available at the time of the audit. The baseline and current actual / projected dates for beneficial use and completion are compared in Table TC_40_2. Determination dates have not been identified for any of these schemes.

In all cases where the information is presented these schemes are either on track or have been successfully delivered. Where schemes have not yet been completed, beneficial use dates are recent enough that completion may not be expected yet, as the schemes are still closing out. The two LWWP schemes still have 'to be determined PC21' status.

A reduction in unpopulated milestone dates and changes to the dates are noted in the post-audit revision of Table 40 received, when compared with the revision shown at audit.

We identified an error in the revised Table 40 for the actual completion date on scheme JS274. When challenged NIW have been able to provide a corrected date as shown in the table below.

Table TC_40_2: Key Milestones for PC21 Nominated Schemes Completing in 2021-22

PC21 Nominated Scheme (estimated 2021-22 delivery)	Beneficial Use Date		Completion	
	Baseline (Block B, Col 13)	Current Actual or Projected (Block F, Col 45)	Baseline (Block B, Col 15)	Current Actual or Projected (Block F, Col 47)
X	31/03/2022	Not populated	31/03/2022	Not populated
X	31/03/2017	22/07/2021	22/07/2022	22/07/2022
X	Not populated	10/04/2023	Not populated	10/04/2023
X	31/03/2022	17/06/2021	31/03/2022	12/09/2022
X	31/03/2022	23/12/2021	31/03/2022	13/01/2022
X	31/03/2022	29/03/2023	31/03/2022	29/03/2023

4. Summary of Audit Checks

Proportional Allocation completeness

Checks on the completeness of purpose allocations in Table 40 have been undertaken. 36% of purpose allocation data is populated at baseline for schemes with expenditure greater than £100k; 100% are populated with current actual or project information. Purpose allocations all sum to 100%. Aside from the baseline information issue, this demonstrates compliance with the UR guidance.

Checks on new blocks

For AIR22 additional blocks (columns 78-87) have been added to the Table 40 template to provide the UR with additional information about the schemes, how they link to other areas and stages of the delivery programme. The following spot checks relating to population of columns were undertaken:

- *Block K – Nominated outputs, PC period (Col 77)*

A range of values are entered into this column, but greater clarity could be achieved by ensuring no blanks exist.

- *Block L – Living with Water Programme (Cols 78-79)*

At audit 56 schemes were assigned as included in the Living With Water Programme (LWWP), reducing to 55 following receipt of the revised Table 40 post-audit.

The adjacent LWWP Catchment Delivery Plan column remains unpopulated. The Auditee explained it was not possible to assign these for AIR22.

- *Block N – Drainage Area Plan (Col 85)*

At audit 23 schemes had Drainage Area Plan references assigned.

It was agreed that improvements here could involve referencing historical DAPs associated with schemes where known in addition to the current ones listed at present. This column will align with information in Table 40b, for which improvements are planned. Following receipt of the revised Table 40 post-audit, 88 schemes now have this reference demonstrating improvements made.

Scheme checks

Scheme expenditure for the selected audit sample is summarised in Table TC_40_3 below and discussion in the proceeding text on a scheme by scheme basis.

Table TC_40_3: Summary of Expenditure for Sample Schemes

Scheme Name from audit sample	Expenditure (£m)*		
	Baseline (2018-19 prices) (Block D, Col 21-37)	Current Actual or Projected (2021-22 prices) (Block H, Col 54-70)	Difference
X	Not populated	0.914	-
X	Not populated	4.913	-
X	72.904	98.338	25.434
X	9.759	9.770	0.011
X	1.087	2.143	1.056
X	Not populated	13.791	-

*PC21 expenditure in Table TC_40_3 has been forecast as far forward as 2026-27 only at this time. All values rounded to 3dp.

The following audit checks took place on the sample scheme information presented in Table 40:

- *X – Leakage (09)*

This scheme was selected as it has the largest current and future expenditure planned in the leakage sub-programme (£0.914m) after the sub-programme holding line (£35.553m). No baseline information has been populated; this omission relates to the key issue previously described on NIW's transition to using P6 data in CPMR to populate these fields. Current/actual or projected information fields are suitably populated considering the nature of the project.

The service allocation of 100% Water Infrastructure and purpose allocation of 100% to Base expenditure are both considered accurate, the latter is an area of audit focus for this sub-programme. The expenditure profile only identifies funds for the 2021-22 financial year. NIW explained that the SP09 PC21 holding line (£25.565m) is used to identify funding not yet assigned to projects. The Company will draw down on this allocation to fund 'yet to be identified' expenditure on the scheme during the PC21 period. The nominated output status for this scheme is blank indicating this is not a nominated output.

- *X – Watermains rehabilitation (08)*

This scheme was selected as it has the fifth largest current and future expenditure planned in the watermains rehabilitation sub-programme (£4.913m). No baseline information has been populated; this omission relates to the key issue previously described on NIW's transition to using P6 data in CPMR to populate these fields. Current/actual or projected fields are fully populated. Expenditure for this project is allocated over a four year period, with a fifth spent to date over the first year considered reasonable, this is an area of audit focus for this sub-programme. Current/actual or projected service cost and purpose allocations of 100% Water Infrastructure and 100% Base respectively are considered accurate. The nominated output status for this scheme is blank indicating this is not a nominated output.

Checking the consistency of information across NIW's CPMR system and Table 40, differences in project costs were identified with NIW's A0 approval form indicating £8.9m of costs compared with planned expenditure of £4.913m in Table 40. NIW explained that this was due to development of the project scope evidently underway.

- *X – Wastewater treatment (new starts) (16)*

This scheme was selected as it has the second largest current and future expenditure planned in the wastewater treatment (new starts) sub-programme (£98.338m). All baseline information has been populated except for beneficial use milestone. There is a significant increase in expenditure profile between baseline (£72.904m) and current/actual projected (£98.338m), an increase of ~35%. NIW noted that this is reflective of the early stage in developing the scope and cost of this high value capital project. A change in purpose allocation is also evident, 100% Quality at baseline now modified to 48% Quality, 23% Base and 29% Growth, this is an area of audit focus for this sub-programme. NIW explained that these changes reflect that the scheme will lead to the replacement of existing assets and support greater demand than originally recognised. NIW noted changes may occur as the detail of the scheme continues to develop. The scheme is assigned 100% to the Sewerage Non-Infrastructure service cost allocation.

The scheme has recently approved Early Contractor Involvement (ECI) to identify requirements in greater detail. The scheme has PC27 LWWP nomination status, however NIW noted that future changes may increase the priority and urgency, leading to delivery as part of PC21. Funding for UID schemes will be reduced to balance the increased funding of this capital project recognising the changing needs it will bring.

- *X – Sewerage (12)*

This scheme was selected as it is a PC21 nominated output and has the eighth largest current and future expenditure planned (2021-22 onwards) in the sewerage sub-programme (£9.417m). Baseline information has been fully populated, except for regulatory signoff date. The expenditure profile remains quite consistent with baseline. A change in purpose allocation is also evident, 42% Quality, 15% Base and 43% Growth at baseline now modified to 100% Base, this is an area of audit focus for this sub-programme. The change was explained by NIW, it was originally thought the capacity of the syphons was the flow constraint, however after surveying it was found they actually require repair works and can continue to operate at the desired flow rates without upsizing. The service cost allocation is 100% to Sewerage Infrastructure.

- *X – Sewerage (12)*

This scheme was selected as it is a PC21 nominated UID scheme within the sewerage sub-programme, it has £1.886m of current and future expenditure planned (2021-22 onwards). Baseline information is fully populated, except for regulatory signoff date. An incorrect completion date has been corrected since audit. NIW confirmed they expect to claim beneficial use at the end of July 2022. The expenditure profile aligns with the planned completion of the scheme with minimal expenditure assigned in 2022-23. A change in purpose allocation is also evident with 38% Base, 17% Enhanced Service Level and 45% Growth at baseline now modified to 22% Quality and 78% Base, this is an area of audit focus for this sub-programme. The change is due to NIW identifying that this is predominantly a replacement scheme on a wastewater pumping station site reaching end of life in many aspects. It is correct that this should be recognised as Base purpose allocation. The service cost allocation has also adjusted from 35% Sewerage Infrastructure and 65% Sewerage Non-Infrastructure at baseline to 28% Sewerage Infrastructure and 72% Sewerage Non-Infrastructure.

- *X – Water trunk mains (05)*

This scheme was selected as it is a PC21 nominated output and has the second largest current and future expenditure (2021-22 onwards) within the water trunk mains sub-programme (£13.791m). All baseline information is absent from Table 40 for this scheme; the current actual or projected information expected is populated. In the expenditure profile very high level cost estimates (reported to the nearest £m) are presented for the second half of the programme giving limited confidence that future expenditure has been planned out in detail. Purpose allocations of 40% Base and 60% Growth are identified. The scheme is accurately assigned with a service cost allocation of 100% to Water Non Infrastructure.

5. Confidence Grades

Confidence grades are not applicable to Table 40 entries.

6. Challenges to the Company, Recommendations & Suggested Actions

Challenges

- Provide finalised data table, methodology and commentary, as these were not ready at the time of audit.
- Provide commentary as none has been presented at the time of the audit.
- Populate baseline information consistently and accurately in Table 40.
- Challenged what factors have led to project capital expenditure exceeding the baseline expenditure profile, response received and detailed in Section 3.

- Requested all baseline information for the X to X scheme (JG090) as it was absent from the working version of Table 40 presented at audit.
- Requested population of completion milestones and other empty fields for the Cottage Row WWPS upgrade scheme (KL533).
- Clarification requested of how Leakage Factors and Seasonal Analysis PC21 (LN168) will be funded in future as only one year of expenditure assigned in Table 40.
- Challenged whether assigning greater expenditure sub-programme holding lines than to specific schemes within the sub-programme was a reasonable approach. Example identified in the Leakage sub-programme (SP09) where there is over five times the planned capital expenditure in the holding line than in specific schemes of the sub-programme.

Recommendations and Suggested Actions

1. Review and ensure completion of all baseline information (milestones, allocations and expenditure), as well as current and future milestones. At audit, omissions were identified almost uniformly across the audit sample.
2. A revised Table 40 submission was provided post-audit in which the large scale issues previously seen had been resolved, addressing some audit actions. The following issues are highlighted which remain in this latest revision of Table 40.
 - a) Absence of planned regulatory signoff date information at baseline (Column 14). This field is only populated for two schemes of over 2,000 reporting lines in Table 40. The current actual or projected regulatory sign off date field is entirely empty across Table 40. These should be populated where scheme programme delivery is understood.
 - b) Absence of all baseline information for the majority of schemes was noted at audit and requested to be provided for those in the audit sample after the audit. Improved population of the revised Table 40 provided post-audit has resolved this for some of the initial audit actions, however three of the schemes in the audit sample remain without any baseline information.
 - X
 - X
 - X
3. Consider the inclusion of historical DAPs references in Block N (Col 85). Improvements to this column have been implemented post-audit.
4. Consider binary nominated / non-nominated values and their PC year derivatives for Block K (Column 77), preventing empty cells will ensure nomination status is clear.
5. In the Line Methodology expand on where source data comes from and how it is populated. Include how P6 data is created and extracted into CPMR.
6. Produce a compliant Commentary document (ref: Section 3 of the UR guidance for Table 40 - "NIAUR_air22_repreq_Sec2_Chap40 02.00.PDF") in support of Table 40 for AIR22 submission.

7. References

- a) NI Water Commentary: CC_Table11_Lines22-24.docx (shown at audit)
- b) NI Water Commentary: CC_Table16_Lines26-28_32-33.docx (shown at audit)

- c) NI Water Data Table: DT_Table40_LAll workings.xlsx (shown at audit)
- d) NI Water Data Table: DT_Table40_LAll workings v2.xlsx (received post-audit 24/06/22)
- e) NI Water Data Table: DT_Table40a_LAll workings.xlsx (received post-audit 24/06/22)
- f) NI Water Data Table: DT_Table40b_LAll workings_V3.xlsx (received post-audit 24/06/22)
- g) NI Water Methodology: LM_Table40_LinesALL working.docx (shown at audit).

SUMMARY OF AUDIT FINDINGS

Table 40b – Delivery of DAPs and Integrated Environmental Modelling (IEMs) Cols 1-11

PREPARED BY	X	NI WATER AUDITEE
DATE	28 July 2022	X Supported by: x

1. Audit Assessment of Table 40b Information and Recommendations

1.1 Progress on the Delivery of DAP Model Build and Needs and Options Reports and Integrated Environmental Modelling

The Company states that:

- ☐ the number of Drainage Area Plans (DAPs) “Model Build Reports” that should be completed by end of Report Year is **19**; and that
- ☐ the number of DAPs “Needs and Options Reports” that should have been completed by 31st March 2022 is **9**.

Of the 19 Model Build Reports that should have been completed, NI Water provided evidence on file as “NIW MBV DA0040_Ballynahinch_Final.PDF” to demonstrate completion of 1 of 19. **We are unable to validate NI Water’s claim for the completion of the remaining 18 Model Build reports due to lack of evidence.**

With respect to the Needs and Options reports that should have been completed, NI Water provided evidence for 1 of the 9 planned DAP “Needs and Options reports”. The evidence, on file as “DA0057_Kilkeel_Design Workshop.PPTX” relates to the DAP DA0057 [Kilkeel DA]. It is a set of PowerPoint slides titled “Kilkeel Drainage Area Plan Design Support: Meeting No 1- Initial Design Support Workshop”. We note that this evidence is not the final and deposited Needs and Options Report for DA0057. **We are unable to validate NI Water’s claim for the completion of the remaining 8 Needs and Options reports due to lack of evidence.**

We identified that NI Water did not plan to complete any Integrated Environmental Modelling/Model (IEM) by the end of the Report Year. **We note that the required NIEA’s sign off of the IEM model produced for Dundrum catchment (linked to the Dundrum DA DAP ref DA0063) is outstanding.**

Late Evidence Note:

On 20th July 2022, 23 days after the final Table 40b audit (on 27th June 2022) and following NI Water’s review of the draft version of the Reporter’s report, the Company provided a late evidence note through email correspondence, copied as follows.

“X, I realise this is too late to make any difference to your report, but we have uploaded some supporting information requested at the last meeting [final audit meeting of 27th June 2022] we had on Table 40b (MBV and Risk Reports). Regards, X”.

1.2 Audit Assessment and Conclusion

1. **Completeness:** the reported number of DAPs & IEMs in Table 40b is unvalidated. We identified that there is no Company method statement on how the Table 40b entries have been compiled for audit.

A record of the NI Water’s DAP and IEM numbers associated with the Company’s Table 40b submission and noted through our AIR22 audit process is shown in Table TC_40b_1.

Table TC_40b_1: Number of DAPs and IEMs

Date	Number of DAPs	Number of IEMs	Comment
29 April 2022	60-70	30-40	Reporter/Company Audit planning engagement
13 June 2022	101	16	AIR22 Audit session
27 June 2022	1,063	16	Extended AIR22 Audit session
8 July 2022	1,191	16	NI Water's AIR22 Table 40b submission.

2. **Accuracy:** questionable. For example due to mismatch of some population served numbers when set against the population numbers used in the Company's AIR22 Table 16 line 22 calculation that is based on 72 of the listed DAPs from the Table 40b list. Further details are given in Sections 5.2, 6.2 and Appendix B of this commentary.
3. **Reliability:** doubtful – e.g. for DAP ref DA0040 (Ballynahinch DA). Date of Model Build Report in main audit list (13th June 2022) = Dec 21. Extended audit list date (27th June 2022) = Mar 22. Evidence provided [on file as "NIW MBV DA0040_Ballynahinch_Final.PDF"] is dated Mar 22. Should the baseline have been dated Dec 21 and not Mar 22? Further details are given in Sections 5.4 and 6.3.

We conclude that the issues identified through our audits have implications for the delivery of the PC21 capital programme. **In particular, the timely delivery of the PC21 capital projects reliant on the timely completion of the DAPs and IEMs reported in Table 40b.**

We made a number of recommendations aimed at addressing the identified audit issues.

1.3 Recommendations

We suggest that NI Water:

- ☐ appoints a PC21 DAP and IEM delivery coordinator, with responsibility for the internal and external reporting of progress on delivery of DAPs + IEMs and alignments with the delivery of the PC21 capital programme, and leading the programme of NI Water's DAPs/IEMs engagement with the UR and the NIEA.
- ☐ de-risk critical aspects (including NIEA sign off and NIW's residual risks) of the DAPs/IEMs programme delivery through pro-active and continuing engagements with the NIEA and the UR.
- ☐ **improves the 'date' and 'population' data sets incorporated into the Table 40b submission to address the accuracy and reliability issues outlined in Section 5 [for DAPs] and Section 6 [for IEMs] of this Reporter's commentary.**

2. Audit Scope, Approach and Timeline

2.1 Context

1. Table 40b provides a statement of NI Water's plans for delivering DAPs and IEMs for the PC21 capital programme. It provides a mechanism by which progress on delivery can be monitored and will inform the PC21 Mid-Term review.
2. Table 40b entries provide a basis for the determination of the links between the DAPs, the related IEMs and any associated capital investment projects and outputs listed in Tables 40 [PC21 Capital Investment Monitoring Return] and 40a [nominated outputs by PC21 capital projects and programmes of work].

3. Table 40b entries help with the identification of how any movement in the planned delivery programme for either the DAPs or the IEM work would affect the delivery of capital investment projects and associated benefits to consumers.
4. The DAP and IEM reference information collected in Table 40 [Columns 85 and 86] will also allow links to be established between the DAPs and IEM work and specific subsets of the investment programme, such as the Living with Water Programme and the PC21 'To be Determined' projects.

2.2 Scope

The scope of our Table 40b reviews and audits is dictated by the UR's AIR22 Reporter Guidance specific requirements, outlined as follows.

- a) *The Reporter should review the company submission and comment on its progress on the delivery of DAP Model Build and Needs and Options Reports and Integrated Environmental Modelling.*
- b) *The Reporter should comment on the company's progress with the delivery of DAP and Integrated Environmental Modelling outputs.*
- c) *The Reporter should assess the company's comments on DAPs and Integrated Environmental Modelling which were planned to be delivered by the end of the Report Year (by 31st March 2022) and have not been delivered and the potential impact for the delivery of associated capital investment and nominated outputs.*
- d) *The Reporter should highlight any material differences between the 'baseline' and 'current actual or projected' completion dates and comment on the implications this might have for delivery of the PC21 capital investment programme.*

2.3 Approach

a) Introduction

Our audit approach is an **evidence-based**, sample audits, focussed on the UR's scope outlined in Section 2.2. The method consists of seven separate but inter-related steps covering: development of an Audit Template (**see Xs in Appendix C**) to fulfil the UR's AIR22 specific requirements, review of NI Water's draft and final Data Table (and commentary) submission, provision of audit feedback to Auditees, closure of post-audit corrective actions (where appropriate) to the audit programme timescales and finalisation of the Audit Templates and related commentaries.

The approach is illustrated in Figure TC_40b_1.

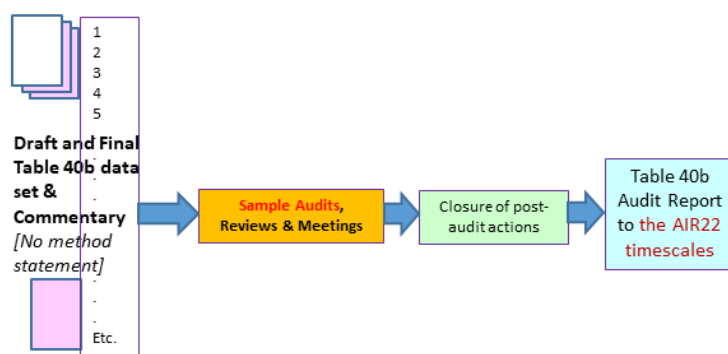


Figure TC_40b_1: Illustration of Audit Approach

b) RAG Ratings

The RAG ratings applied to determine the strength of evidence provided by NI Water for our reviews and commentary against the audit scope are defined as follows.

Red = Insufficient evidence/material issue(s) on aspects of submission related to consistency of data with the corporate systems data used for internal reporting and/or disconnected/unclear links between reference entries across Table 40 [Capital Investment Monitoring], Table 40a [Nominated Outputs Delivered by PC21 Projects and Programmes of Work] and Table 40b [Delivery of DAPs and Integrated Environmental Modelling].

Amber = Needs further evidence to prove consistency of data with the corporate data used for internal reporting and/or provenance of links between entries in Table 40, Table 40a and Table 40b.

Green = Good evidence underpinning consistency of data with the corporate systems data used for internal reporting. Coherent links between submission entries across Table 40, Table 40a and Table 40b.

c) The Table 40b Audit Commentary Appendices

In Appendix A we provide highlights of the RAG ratings associated with our strength of evidence evaluation across our DAP and IEM sample audits.

Details of our comparison of AIR22 Table 40b and Table 16 [Block E, Line 22] DAP population numbers are given in Appendix B. Xs for each of our Table 40b audit samples are given in Appendix C.

2.4 Timeline of Table 40b Audits

- ☐ **Initial Audits.** 6th June 2022 (First Audit), 7th June 2022 (Second Audit), 8th June 2022 (Third Audit), 9th June 2022 (Fourth Audit).
- ☐ **Main Audits.** 13th June 2022 – Main Audit Session (1) and 23rd June 2022 – Main Audit Session (2).
- ☐ **Extended Audits.** 27th June 2022 – Extended Audit Session.

3. Strength of Evidence Evaluation

3.1 Audit Sample

The reported number of DAPs and IEMs is unvalidated. We recorded changes to the numbers of DAPs and IEMs reported by the Company, through our Table 40b audit process – see Table TC_40b_1.

Given that the number of DAPs and IEMs is unvalidated, we based our detailed audit of a representative sample of DAPs and IEMs on qualitative sampling (as opposed to theoretical quantitative sampling) that reflects the high level issues identified through our initial audits. The audited DAPs and the linked PC21 capital projects are listed in Table TC_40b_2.

Table TC_40b_2: Sample DAPs Audited

Table 40b Ref	Name	Linkage to PC21 Capital Projects
DA0755	Armagh DA	Linked to a PC21 project in Table 40 and Table 40a [Project ID KF428, X]. SP12b.
DA0363	Ballyclare DA	Linked to a PC21 project in Table 40 [Project ID SP019, X (1845)][SP12b] but no link to Table 40a.
DA0040	Ballynahinch DA	Linked to a PC21 project in Table 40 [Project ID KH010, X (1861/2246)][SP12b] and Table 40a.
DA0956	Lisnaskea DA	Table 40 ref: SP-16, Project ID KN683, X (1424)].
DA0092	Kircubbin DA	Linked to two PC21 projects in Table 40 namely: [Project ID KR667, X (2600)][SP12][linked to a project in Table 40a] and [Project ID KS933, X][SP12][not linked to a project in Table 40a].
DA0002	Belfast DA	Linked to 17 PC21 projects [Table 40: KI599, KI604, KR433.....KR746] and 1 Table 40a project [KR726 - X].
DA0134	Annsborough DA	Linked to a PC21 project in Table 40 [Project ID KV249, X (1821)][SP12b] and Table 40a.

Table 40b Ref	Name	Linkage to PC21 Capital Projects
DA0844	Ballykelly Limavady DA	Linked to a PC21 project in Table 40 [Project ID KL489, X [SP16] and Table 40a.

The audited IEMs and the linked DAPs and PC21 capital projects are listed in Table TC_40b_3.

Table TC_40b_3: Sample IEMs Audited

Table 40b Ref	Name	Linkage to DAPs & PC21 Capital Projects
IEM003	Carlingford	IEM003 [Carlingford] is linked to three DAPs [DA0057, DA0230 and DA0195] and 4 PC21 capital projects outlined as follows. 1. X. [Table 40 ref: SP-12, Project ID KS991]. 2. X (1191). [Table 40 ref: SP-16, Project ID KV244]. 3. X (1459/1588). [Table 40 ref: SP-12b, Project ID KV248]. 4. X (1246). [Table 40 ref: SP-16a, Project ID KV252].
IEM008	Larne	IEM008 [Larne] is linked to one DAP [DA0327] and 2 PC21 capital projects outlined as follows. 1. X (1878/1894/1897). [Table 40 ref:SP-12b, Project ID KA298]. 2. X (1194). [Table 40 ref: SP-16a, Project ID KB558].
IEM011	Moyola	IEM011 [Moyola] is linked to one DAP [DA0437] and 1 PC21 capital project noted as follows. 1. X DAP (1764/1768). [Table 40 ref:SP-12b, Project ID KL572].
IEM014	Six Mile Water	IEM014 [Six Mile Water] is linked to two DAPs [DA0363 and DA0364] and 2 PC21 capital projects outlined as follows. 1. X (1048/1066). [Table 40 ref: SP-12b, Project ID KA297]. 2. X (1845). [Table 40 ref: SP-12b, Project ID SP019].

3.2 Strength of Evidence Evaluation

Through our initial audit meetings with NI Water's Auditees, we found that there were incomplete or missing evidence in the Company's pre-audit Table 40b information. We suggested a number of post-audit corrective actions to address specific gaps to fulfil the needs of our audit scope outlined in Section 2.2.

The Company responded to our request for additional information (and clarified some of the statements made in its draft commentary) and provided supplementary evidence. An overview of our strength of evidence evaluation that informed the conclusions and recommendations outlined in Section 7, is shown in Table TC_40b_4.

Further details are given in Appendix A.

Table TC_40b_4: Overview of Table 40b Strength of Evidence Evaluation

RAG Assessment (Ref Table 40b Headings)	RAG	Notes
Table Data: Block A. DAP Information & Links between the DAP [Table 40b], the associated capital investment projects [Table 40] and outputs [Table 40a]		Missing names between related data sets, alignment issues and population number mismatches.
Table Data: Block B. Model Build Report Dates		Missing record of the original completion dates of Model Build Report Dates as baseline. Consistency of DAP dates.
Table Data: Block C. Needs and Options Report Dates		Missing record of the original completion dates of Needs and Options Report Dates as baseline. Consistency of DAP dates.

RAG Assessment (Ref Table 40b Headings)	RAG	Notes
Table Data: Block D. Integrated Environmental Modelling (IEM) Dates		Missing IEM references in Corporate system file for IEMs, missing names between related data sets. Alignment issues.
Commentary		Lack of justification for baseline date assumptions.
Clarity of DAP & IEM Deliverables		Completed MBR evidence & NIEA's new proposed approach for IEMs.

4. General Audit Findings

4.1 NI Water's Corporate system for internal reporting of DAPs and IEMs

1. The Company's corporate system used for internal reporting of DAPs is the DAP Apps. **The development of the DAP Apps is about 60% complete.** Future developments are aimed at storing Table 40b information. There are no corporate systems used for internal reporting of IEMs. IEMs are a relatively new feature currently at the project creation stage.
2. We identified that NI Water does not currently hold the complete DAP records (name, population served, delivery dates and programme information) on its DAP Apps.
3. At the initial audits, NI Water provided an 'offline' Excel spreadsheet on file as 'PC21 DAP Prioritisation Programming_Cut_V1.xlsx' in place of Auditor scrutiny of the DAP Apps DAP information used for internal reporting. **We refer to this Excel spreadsheet as the 'Corporate system file for DAPs'.**
4. At the initial audits, NI Water also provided an 'offline' Excel spreadsheet on file as 'PC21 DD Response SP12 SP16 Scope Certainty DRAFT IEM 21062021.xlsx' in place of Auditor scrutiny of the DAP Apps IEM information used for internal reporting. **We refer to this Excel spreadsheet as the 'Corporate system file for IEMs'.**
5. NI Water advised that in the future, the plan is to consolidate the different 'offline' spreadsheets into the corporate asset register to be used for future reporting of the DAPs and the IEMs delivery progress via Table 40b.
6. **Issue:** absence of full DAP records on the Company's DAP Apps – the platform being developed for NI Water's internal DAP and IEM progress reporting purposes.
7. **Issue:** absence of full IEM records on the Company's DAP Apps – the platform being developed for NI Water's internal DAP and IEM progress reporting purposes.

4.2 DAP-IEM-PC21 Capital Project Dependency Information

We note that the Company's commentary for Table 40b states that *'Each IEM stands separate to the DAP however the DAP models are an input into the IEM therefore any delay in the DAP programme is likely to have a knock on effect in the IEM programme.'* This statement highlights the inter-dependencies between the DAP delivery dates and the IEM delivery dates. The DAP-IEM inter-dependencies are reflected through our IEM audit samples – see Table TC_40b_3.

For example, IEM003 (Carlingford) is linked to three DAPs in Table 40b [DA0057 (Kilkeel DA), DA0230 (Newry DA) & DA0195 (Warrenpoint DA)] and four DAPs [DA0057, DA0230, DA0195 & DA1100 (Cranfield Kilkeel DA)] in Table 40 – the Capital Investment Monitoring Return Table.

Further details are given in Appendix A.

4.3 Completeness of Information

We identified that there is no Company method statement on how the Table 40b entries have been compiled for the AIR22 submission. The range of the DAPs and IEMs shown in Table TC_40b_1, in the period 29th April to 8th July 2022 suggests that:

- ☐ there is a need to **validate the number of DAPs and IEMs required to be completed (to time) to inform the delivery of the PC21 capital investment programme.**

4.4 DAP & IEM Deliverables and Risk of Delivery

Through our audits, NI Water advised that the DAP deliverables are the Model Build Reports and the Needs and Options Reports. NI Water also advised that the IEM deliverables are the IEM model and the IEM model report.

We understand that the IEM deliverables would help to confirm/validate the recommendations for the DAP's Needs & Options Reports. NI Water's plan is to use the IEM deliverables to challenge the initial NIEA's requirements.

As part of our audits we identified that the NIEA's sign off of the IEM model produced for Dundrum catchment (DA0063) is outstanding. **We also identified that NI Water's current assessment of the IEMs residual delivery risks is not robust in light of the NIEA's new proposed approach to handling IEM outputs and solution optioneering outlined in the document titled "NIEA-Water Regulation- DAERA Response to the Dundrum Ecosystem Modelling Report 26th May 2022" (reviewed through our audits).**

5. Table 40b Information for DAPs [Block A, Block B and Block C] – Audit Findings

5.1 NI Water's Table 40b Commentary on DAPs

NI Water's commentary noted that *"if the DAP Model Build and Verification (MBV) dates are pushed back then there would be a knock on effect on the production of the Needs & Options report and consequently, the investment programme resulting from DAPs delivery"*. We also note that the timely delivery of DAPs would inform the scope uncertainty assessments for the PC21's mid-term review and the associated "To Be Determined" projects.

With respect to changes that have been or might need to be made through the Change Control process to reflect changes to the PC21 investment programme resulting from DAPs delivery [Model Build Report, followed by the Needs and Options Report], the commentary stated that *"any delays to the receiving the Statement of Need from the NIEA [required by NI Water to progress to the Needs and Options Report from the Model Build Report] would be reported through Outputs Review Group (ORG: DfI, UR, NIEA, DWI, CCNI & NI Water) and may result in Change Control process being followed to notify the Utility Regulator of schemes which may not be delivered within the period"*. **We therefore note that it is the Company's intention to use the Change Control process to reflect changes to the PC21 investment programme resulting from any delays to DAPs delivery.**

The Commentary states that *"..Table 40b refers specifically to Tables 40, 40a and 40b with alignment through each table..."*. The Commentary did not identify any date variance in its Table 40b's DAP delivery dates submission due to the assumption that:

1. Baseline Model Build Report Completion Date = Current Actual or Projected Model Build Report Completion Date and that
2. Baseline Needs and Options Report Completion Date=Current Actual or Projected Needs and Options Report Completion Date"

We consider the above to be material assumptions. There are no justifications in the Company's commentary, for not using the 'original planned completion dates' as 'baseline dates' for DAPs, following the UR Guidance on file as "NIAUR_air22_repreq_Sec2_Chap40b 02.00.PDF", Sections 2.2-2.3, and the linked Table 40b Column Definitions.

We note that NI Water did not provide any pre-audit commentary on the assumptions made for the Table 40b entries titled 'Baseline Model Build Report Completion Date' and 'Baseline Needs and Options Report Completion Date'. At audit, the Company advised that the AIR22 Table 40b dates should form the baseline for future report years as the AIR reporting requirements came in during Year 1 of the PC21 period.

5.2 Accuracy of DAPs Information - General

Our assessment of the accuracy of the Table 40b's DAP information relies on audit observations of factors that combine together to influence the degree of correctness of the NI Water's Table 40b [Block A] data submission. The factors include:

- ☐ Population number mismatches between AIR22 Tables within the Reporter's audit scope of work – see Appendix B for a comparison of AIR22 Table 40b and Table 16 Line 22 population numbers. Also see mismatches of population numbers between a sample of Table 40b entries and entries in the *Corporate system file for DAPs – details are given below*.
- ☐ Alignment issues.
- ☐ Missing names between related data sets.

Our audit findings across each of our DAP audit sample, with respect to the accuracy of information, are summarised as follows. Details of the linked PC21 capital projects and our RAG assessment of the strength of evidence provided for audit are given in Appendix A.

a) DA0755 [Armagh DA].

1. Block A [DAP Information, DAP reference]. Table 40b DAP reference = DA0755. Table 40 DAP reference = DA0755. Linked Project ID = KF428. Table 40a Project ID = KF428 Armagh DA - Storm Tanks. So, the DAP reference [Table 40b, Column 1] is consistent with the DAP reference in Table 40 [Column 85] and the linked output in Table 40a.
2. Block A [DAP Information, Population Served]. Table 40b population served = 15374. Population number in the 'PC21 DAP Prioritisation Programming_Cut_V1'.xlsx (the *Corporate system file for DAPs*) = 0 or 25856? **Issue: mismatch of the DA0755 population number in Table 40b and the population number in the Corporate system file for DAPs.**

b) DA0363 [Ballyclare DA].

1. Block A [DAP Information, DAP reference]. Table 40b DAP reference = DA0363. Table 40 DAP reference = DA0363. Linked Project ID = SP019. Table 40a [Project ID SP019 not found]. We are unable to establish the reason for the absence of DA0363-linked PC21 project SP019 - Ballyclare DA UID-Park Street CSO (1845) in Table 40a.
2. Block A [DAP Information, Population Served]. Table 40b population served = 20356. Population number in the Corporate system file for DAPs = 16316 or 26450 or 22130? **Issue: mismatch of the DA0363 population numbers in Table 40b and the population number in the Corporate system file for DAPs.**

c) DA0040 [Ballynahinch DA].

1. Block A [DAP Information, DAP reference]. Table 40b DAP reference = DA0040. Table 40 DAP reference = DA0040. Linked Project ID = KH010. In Table 40a, Project ID for this DAP is linked to 2 projects namely: X and X. So, the DAP reference [Table 40b, Column 1] is consistent with the DAP reference in Table 40 [Column 85] and the linked outputs in Table 40a.
2. Block A [DAP Information, Population Served]. Table 40b population served = 8107. Population number in the Corporate system file for DAPs = 7936 or 14600 or 8857? **Issue: mismatch of the DA0363 population numbers in Table 40b and the population number in the Corporate system file for DAPs.**

d) DA0956 [Lisnaskea DA].

1. Block A [DAP Information, DAP reference]. Table 40b DAP reference = DA0956. Table 40 DAP reference = DA0956. Linked Project ID = KN683. In Table 40a, Project ID for this DAP is linked to a project in Table 40a [X]. So, the DAP reference [Table 40b, Column 1] is consistent with the DAP reference in Table 40 [Column 85] and the linked outputs in Table 40a.
2. Block A [DAP Information, Population Served]. Table 40b population served = 6389. Population number in the Corporate system file for DAPs = 6840 or 7000 or 7935? **Issue: mismatch of the DA0363 population numbers in Table 40b and the population number in the Corporate system file for DAPs.**

e) DA0092 [Kircubbin DA].

1. Block A [DAP Information, DAP reference]. Table 40b DAP reference = DA0092. Table 40 DAP reference = DA0092. Linked Project IDs = KR667, KS933. In Table 40a, KR667 is linked to project [X]. **But KS933 [Kircubbin DAP CSO Upgrade] is not linked to a project in Table 40a.** We are unable to establish the reason for this observation.
2. Block A [DAP Information, Population Served]. Table 40b population served = 1717. Population number in the Corporate system file for DAPs = 1361 or 3000 or 1767? **Issue: mismatch of the DA0363 population numbers in Table 40b and the population number in the Corporate system file for DAPs.**

f) DA0002 [Belfast DA].

1. Block A [DAP Information, DAP reference]. Table 40b DAP reference = DA0002. Table 40 DAP reference = DA0002. Linked Project IDs are: KI599, KI604, KR433, KR456, KR489, KR586, KR588, KR599, KR692, KR707, KR707.1, KR716, KR717, KR721, KR723, KR726 and KR746. In Table 40a, this Belfast DAP is linked to 1 of the 17 projects: the Project ID KR726 - X.
2. Block A [DAP Information, DAP name]. Block A [DAP Information, DAP name]. Table 40b DAP Name = Belfast DA. In the *Corporate system file for DAPs*, this DAP name is missing [**Issue: missing DAP name in the Corporate system file for DAPs.**]
3. Block A [DAP Information, Population Served]. Table 40b population served = 484790. Population number in the Corporate system file for DAPs is missing. **Issue: no population numbers for DA0002 in the Corporate system file for DAPs.**

g) DA0134 [Annsborough DA].

1. Block A [DAP Information, DAP reference]. Table 40b DAP reference = DA0134. Table 40 DAP reference = DA0134. Linked Project ID = KV249. In Table 40a, Project ID for this DAP is linked to a project in Table 40a [X (1821)]. So, the DAP reference [Table 40b, Column 1] is consistent with the DAP reference in Table 40 [Column 85] and the linked outputs in Table 40a.
2. Block A [DAP Information, DAP name]. Block A [DAP Information, DAP name]. Table 40b DAP Name = Annsborough DA. In the *Corporate system file for DAPs*, this DAP name is missing [**Issue: missing DAP name in the Corporate system file for DAPs.**]
3. Block A [DAP Information, Population Served]. Table 40b population served = 6086. Population number in the *Corporate system file for DAPs* is missing. **Issue: no population numbers for DA0134 in the Corporate system file for DAPs.**

h) DA0844 [Ballykelly Limavady DA].

1. Block A [DAP Information, DAP reference]. Table 40b DAP reference = DA0844. Table 40 DAP reference = DA0844. Linked Project ID = KL489. In Table 40a, Project ID for this DAP is linked to a project in Table 40a [KL489 - X]. So, the DAP reference [Table 40b, Column 1] is consistent with the DAP reference in Table 40 [Column 85] and the linked outputs in Table 40a.

2. Block A [DAP Information, DAP name]. Block A [DAP Information, DAP name]. Table 40b DAP Name = Ballykelly Limavady DA. In the *Corporate system file for DAPs*, this DAP name is missing [Issue: missing DAP name in the *Corporate system file for DAPs*].
3. Block A [DAP Information, Population Served]. Table 40b population served = 3985. Population number in the *Corporate system file for DAPs* is missing. Issue: no population numbers for DA0134 in the *Corporate system file for DAPs*.

5.3 Accuracy of DAP Information – Population Served

The AIR22 Table 16 Block E Line 22 numbers (and the DAPs information associated with this) are part of the Reporter's scope for AIR22 reviews and audits. For our audit of Table 16, NI Water provided us with a list of 72 DAPs as the number of DAPs in progress at the end of the Report Year [Table 16, Block E, Line 19].

We checked the alignment of the Table 16 DAP names with the Table 40b, with T40b references and we then compared the Company's population numbers for the two **DAP information-driven regulatory submissions**. From the comparisons, we identified the following.

1. There is a mismatch of a large number of DAP population numbers between the 72 DAPs [Table 16, Block E] and the corresponding 72 DAPs on Table 40b. Details are given in Appendix B.
2. The total discrepancy between the Table 16 Block E DAP population numbers and the corresponding Table 40b population numbers is 83,813. This is material.
3. These are differences in the DAP names of the 72 DAPs used for the Table 16 Block E calculations and the names used to describe the corresponding DAPS in Table 40b [applies to DA0134, DA0187, DA1175, DA0570 and DA0287].

In addition, we found that across the 1186 DAPs listed on the NI Water's final Table 40b submission, there are 42 DAPs listed with no "Population Served" numbers - marked as TBC.

5.4 Reliability of DAPs Information

Our assessment of the reliability of Table 40b's DAP information relies on audit observations of factors that combine together to influence the degree of consistency of the NI Water's Table 40b [Block B and Block C] 'dates' submission. The factors include:

- ☐ Missing record of the original completion dates of Model Build Report Dates as baseline i.e. to fulfil the UR guidance requirement that "The original planned completion date should be entered as the baseline date....." [UR Guidance on file as "NIAUR_air22_repreq_Sec2_Chap40b 02.00.PDF", Sections 2.2-2.3 and the linked Table 40b Column Definitions].
- ☐ Missing record of the original completion dates of Needs and Options Report Dates as baseline.
- ☐ Consistency of DAP dates information in the *Corporate system file for DAPs* and Table 40b.

Our audit findings across each of our DAP audit sample, with respect to the reliability of DAPs information, are summarised as follows. Details of the linked PC21 capital projects and our RAG assessment of the strength of evidence provided for audit are given in Appendix A.

a) DA0755 [Armagh DA].

1. Block B [Model Build Report Dates]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for DA0755. NI Water advised that there is no record of the original planned completion date for DA0755. Issue: missing record of the original model build report completion date of the DA0755 DAP.
2. Block B [Model Build Report Dates]. We identified that the Company has used Jul 2022 as the 'Baseline Model Build Report Completion Date' for DA0755. For this DAP, NIW used the

assumption: Baseline Model Build Report Completion Date for DA0755 = Current Actual or Projected Model Build Report Completion Date = Jul 2022. But this date is difference from the date stated in the *Corporate system file for DAPs* [Apr 22][Column BJ date = Apr 22, Column 5 of Table 40b = Jul 22]. **Issue: mismatch of actual/projected Model Build Report dates.**

3. Block C [Needs and Options Report Dates]. Table 40b Column 6 (Baseline needs and options report Date), baseline date = Aug 23. No information on original planned completion date. **Issue: missing record of the original needs and options report completion dates for DAP DA0755.**
4. Block C [Needs and Options Report Dates]. Table 40b Column 7 (current actual or projected completion date) = Aug 2023. But Column BK of the *Corporate system file for DAPs* shows the actual / projected completion date (needs and options) 'Needs and options' = Apr 23. Apr 23 is different from Aug 23. **Issue: consistency of DAP dates information in the Corporate system file for DAPs and Table 40b.**
5. For DA0755, the Table 40b's reported Model Build Report Date and the Needs and Options Report Date are sequential [Aug 23 follows Jul 22 (12 months elapsed time)], following the NIEA sign-off process for the model build and verification stage and provision of the "Statement of Needs" stage to enable the Needs and Options reporting work to proceed.

b) DA0363 [Ballyclare DA].

1. Block B [Model Build Report Dates]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for DA0363. NI Water advised that there is no record of the original planned completion date for DA0363. **Issue: missing record for the original completion dates of the DA0363 DAP.**
2. Block B [Model Build Report Dates]. We identified that the Company has used Apr 22 as the 'Baseline Model Build Report Completion Date' for DA0363. For this DAP, NIW used the assumption: Baseline Model Build Report Completion Date for DA0363 = Current Actual or Projected Model Build Report Completion Date = Apr 22. Table 40b [Column 5] completion date = Apr 22. *Corporate system file for DAPs* [Column BJ] completion date = Apr 22. **So, the Table 40b's Model Build Report completion dates match the dates in the Company's Corporate system file for DAPs.**
3. Block C [Needs and Options Report Dates]. Table 40b Column 6 (Baseline needs and options report Date), baseline date = Jun 23. No information on original planned completion date. **Issue: missing record of the original needs and options report completion dates for DAP DA0363.**
4. Block C [Needs and Options Report Dates]. Table 40b Column 7 (current actual or projected completion date) = Jun 23. But Column BK of *Corporate system file for DAPs* shows the actual / projected completion date (needs and options) 'Needs and options' = Apr 23. Apr 23 is different from Jun 23. **Issue: consistency of DAP dates information in the Corporate system file for DAPs and Table 40b.**
5. For DA0363, the Table 40b's reported Model Build Report Date and the Needs and Options Report Date are sequential [Jun 23 follows Apr 22 (15 months elapsed time)] following the NIEA sign-off process for the model build and verification [MBV] stage and provision of the "Statement of Needs" stage to enable the Needs and Options reporting work to proceed.

c) DA0040 [Ballynahinch DA].

1. Block B [Model Build Report Dates]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for DA0040. NI Water advised that there is no record of the original planned completion date for DA0040. **Issue: missing record for the original completion dates of the DA0040 DAP.**

2. Block B [Model Build Report Dates]. We identified that the Company has used Mar 22 as the 'Baseline Model Build Report Completion Date' for DA0040. For this DAP, NIW used the assumption: Baseline Model Build Report Completion Date for DA0040 = Current Actual or Projected Model Build Report Completion Date = Mar 22. Table 40b [Column 5] completion date = Mar 22. *Corporate system file for DAPs* [Column BJ] completion date = Dec 21. **Issue: mismatch of actual/projected Model Build Report dates between Table 40b and the Company's Corporate system file for DAPs.**
3. Block C [Needs and Options Report Dates]. Table 40b Column 6 (Baseline needs and options report Date), baseline date = Apr 23. No information on original planned completion date. **Issue: missing record of the original needs and options report completion dates for DAP DA0040.**
4. Block C [Needs and Options Report Dates]. Table 40b Column 7 (current actual or projected completion date) = Apr 23. But Column BK of *Corporate system file for DAPs* shows the actual / projected completion date (needs and options) 'Needs and options' = Dec 22. Apr 23 is different from Dec 22. **Issue: consistency of DAP dates information in the Corporate system file for DAPs and Table 40b.**
5. For DA0040, the Table 40b's reported Model Build Report Date and the Needs and Options Report Date are sequential [Apr 23 follows Mar 22 (12 months elapsed time)] following the NIEA sign-off process for the model build and verification [MBV] stage and provision of the "Statement of Needs" stage to enable the Needs and Options reporting work to proceed.

Through our audits, we compared the DA0040 information (Table 40b v3 provided on 23rd June 2022 by NI Water, for the extended audit session on 27th June 2022) with the information provided for the main audit on 13th June 2022 dated 7th June 2022. The Table 40b v3 data is shown alongside the 13th June information in **red text**, within square brackets.

Column 1. DAP reference: DAP012 **[v3, ref label changed from DAP012 to DA0040]**.

Column 2. DAP Name: Ballynahinch DA.

Column 3. Population Served: 7936 **[v3, 8107]**. **Difference: 8107 - 7936 = 171 customers.**

Column 4. Baseline Model Build Report Completion Date: Dec 21 **[v3, Jul 22]**.

Column 5. Current Actual or Projected Model Build Report Completion Date: Dec 21 **[v3, Jul 22]**.

Column 6. Baseline Needs and Options Report Completion Date: Dec 22 **[v3, Aug 23]**.

Column 7. Current Actual or Projected Needs and Options Report Completion Date: Dec 22 **[v3, Aug 23]**.

On 21st June 2022, NI Water provided evidence to demonstrate completion of the DA0040's 'Model Build Report' [due: Dec 21 in the 13th June version of Table 40b] on file as "**NIW MBV DA0040_Ballynahinch_Final.PDF**". The document was dated Mar 22, with a baseline date of Mar 22 (in the Table 40b submission) instead of Dec 21 previously provided. **We challenged the Company about the change of dates in the period between the 13th June and the 23rd June audits.**

NI Water explained that the new Table 40b v3 dates were compiled subsequent to the 13th June audit, based on dates from the prioritised programme of DAPs and information from consultants.

d) DA0956 [Lisnaskea DA].

1. Block B [Model Build Report Dates]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for DA0956.

NI Water advised that there is no record of the original planned completion date for DA0956. **Issue: missing record for the original completion dates of the DA0956 DAP.**

2. Block B [Model Build Report Dates]. We identified that the Company has used Nov 22 as the 'Baseline Model Build Report Completion Date' for DA0956. For this DAP, NIW used the assumption: Baseline Model Build Report Completion Date for DA0956 = Current Actual or Projected Model Build Report Completion Date = Nov 22. Table 40b [Column 5] completion date = Nov 22. *Corporate system file for DAPs* [Column BJ] completion date = Apr 22. **Issue: mismatch of actual/projected Model Build Report dates between Table 40b and the Company's Corporate system file for DAPs.**
3. Block C [Needs and Options Report Dates]. Table 40b Column 6 (Baseline needs and options report Date), baseline date = Nov 23. No information on original planned completion date. **Issue: missing record of the original needs and options report completion dates for DAP DA0956.**
4. Block C [Needs and Options Report Dates]. Table 40b Column 7 (current actual or projected completion date) = Nov 23. But Column BK of *Corporate system file for DAPs* shows the actual / projected completion date (needs and options) 'Needs and options' = Apr 23. Apr 23 is different from Nov 23. **Issue: consistency of DAP dates information in the Corporate system file for DAPs and Table 40b.**
5. For DA0956, the Table 40b's reported Model Build Report Date and the Needs and Options Report Date are sequential [Nov 23 follows Nov 22 (12 months elapsed time)] following the NIEA sign-off process for the model build and verification [MBV] stage and provision of the "Statement of Needs" stage to enable the Needs and Options reporting work to proceed.

e) DA0092 [Kircubbin DA].

1. Block B [Model Build Report Dates]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for DA0092. NI Water advised that there is no record of the original planned completion date for DA0092. **Issue: missing record for the original completion dates of the DA0092 DAP.**
2. Block B [Model Build Report Dates]. We identified that the Company has used Nov 21 as the 'Baseline Model Build Report Completion Date' for DA0092. For this DAP, NIW used the assumption: Baseline Model Build Report Completion Date for DA0092 = Current Actual or Projected Model Build Report Completion Date = Nov 21. Table 40b [Column 5] completion date = Nov 22. *Corporate system file for DAPs* [Column BJ] completion date = Apr 22. **Issue: mismatch of actual/projected Model Build Report dates between Table 40b and the Company's Corporate system file for DAPs.**
3. Block C [Needs and Options Report Dates]. Table 40b Column 6 (Baseline needs and options report Date), baseline date = Feb 23. No information on original planned completion date. **Issue: missing record of the original needs and options report completion dates for DAP DA0956.**
4. Block C [Needs and Options Report Dates]. Table 40b Column 7 (current actual or projected completion date) = Feb 23. But Column BK of *Corporate system file for DAPs* shows the actual / projected completion date (needs and options) 'Needs and options' = Apr 23. Apr 23 is different from Feb 23. **Issue: consistency of DAP dates information in the Corporate system file for DAPs and Table 40b.**
5. For DA0092, the Table 40b's reported Model Build Report Date and the Needs and Options Report Date are sequential [Feb 23 follows Nov 21 (16 months elapsed time)] following the NIEA sign-off process for the model build and verification [MBV] stage and provision of the "Statement of Needs" stage to enable the Needs and Options reporting work to proceed.

f) DA0002 [Belfast DA].

1. Block B [Model Build Report Dates]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for DA0002. NI Water advised that there is no record of the original planned completion date for DA0002. **Issue: missing record for the original completion dates of the DA0002 DAP.**
2. Block B [Model Build Report Dates]. We identified that the Company has used Nov 21 as the 'Baseline Model Build Report Completion Date' for DA0002. For this DAP, NIW used the assumption: Baseline Model Build Report Completion Date for DA0002 = Current Actual or Projected Model Build Report Completion Date = Mar 21. Table 40b [Column 5] completion date = Mar 21. We note that there is no entry for DA0002 in the *Corporate system file for DAPs*. So we do not have any supporting information to validate the Model Build Report dates. **Issue: No evidence to support assumption of Baseline Model Build Report Completion Date [Column 4] = Current Actual or Projected Model Build Report Completion Date [Column 5] for DA0002 - the Belfast DA DAP.**
3. Block C [Needs and Options Report Dates]. Table 40b Column 6 (Baseline needs and options report Date), baseline date = Apr 23. No information on original planned completion date. **Issue: missing record of the original needs and options report completion dates for DAP DA0002.**
4. Block C [Needs and Options Report Dates]. Table 40b Column 7 (current actual or projected completion date) = Apr 23. We note that there is no entry for DA0002 in the *Corporate system file for DAPs*. So we do not have any supporting information to validate the Needs and Options Report dates reported for DA0002. **[Issue: No evidence to support assumption of Baseline Needs and Options Report Date [Column 6] = Current Actual or Projected Needs and Options Report Date [Column 7].**
5. For DA0002, the Table 40b's reported Model Build Report Date and the Needs and Options Report Date are sequential [Apr 23 follows Mar 21 (24 months elapsed time)] following the NIEA sign-off process for the model build and verification [MBV] stage and provision of the "Statement of Needs" stage to enable the Needs and Options reporting work to proceed.

g) DA0134 [Annsborough DA].

1. Block B [Model Build Report Dates]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for DA0134. NI Water advised that there is no record of the original planned completion date for DA0134. **Issue: missing record for the original completion dates of the DA0134 DAP.**
2. Block B [Model Build Report Dates]. We identified that the Company has used Jun 22 as the 'Baseline Model Build Report Completion Date' for DA0134. For this DAP, NIW used the assumption: Baseline Model Build Report Completion Date for DA0134 = Current Actual or Projected Model Build Report Completion Date = Jun 22. Table 40b [Column 5] completion date = Jun 22. We note that there is no entry for DA0134 in the *Corporate system file for DAPs*. So we do not have any supporting information to validate the Model Build Report dates. **Issue: No evidence to support assumption of Baseline Model Build Report Completion Date [Column 4] = Current Actual or Projected Model Build Report Completion Date [Column 5] for DA0134 - the Annsborough DA DAP.**
3. Block C [Needs and Options Report Dates]. Table 40b Column 6 (Baseline needs and options report Date), baseline date = Jun 22. No information on original planned completion date. **Issue: missing record of the original needs and options report completion dates for DAP DA0134.**
4. Block C [Needs and Options Report Dates]. Table 40b Column 7 (current actual or projected completion date) = Oct 22. We note that there is no entry for DA0134 in the *Corporate system file*

for DAPs. So we do not have any supporting information to validate the Needs and Options Report dates reported for DA0134. **Issue: No evidence to support assumption of Baseline Needs and Options Report Date [Column 6] = Current Actual or Projected Needs and Options Report Date [Column 7].**

5. For DA0134, the Table 40b's reported Model Build Report Date and the Needs and Options Report Date are sequential [Oct 22 follows Jun 22 (9 months elapsed time)] following the NIEA sign-off process for the model build and verification [MBV] stage and provision of the "Statement of Needs" stage to enable the Needs and Options reporting work to proceed.
6. DAP-IEM Alignment Issue. **Issue: In Table 40, DA0134 is aligned with IEM004. But DA0134 is not aligned to any IEM in Table 40b.**

h) DA0844 [Ballykelly Limavady DA].

1. Block B [Model Build Report Dates]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for DA0844. NI Water advised that there is no record of the original planned completion date for DA0844. **Issue: missing record for the original completion dates of the DA0844 DAP.**
2. Block B [Model Build Report Dates]. We identified that the Company has used Feb 14 as the 'Baseline Model Build Report Completion Date' for DA0844. For this DAP, NIW used the assumption: Baseline Model Build Report Completion Date for DA0844 = Current Actual or Projected Model Build Report Completion Date = Feb 14. Table 40b [Column 5] completion date = Feb 14. We note that there is no entry for DA0844 in the *Corporate system file for DAPs*. So we do not have any supporting information to validate the Model Build Report dates. **Issue: No evidence to support assumption of Baseline Model Build Report Completion Date [Column 4] = Current Actual or Projected Model Build Report Completion Date [Column 5] for DA0844 - the Ballykelly Limavady DA DAP.**
3. Block C [Needs and Options Report Dates]. Table 40b Column 6 (Baseline needs and options report Date), baseline date = N/A. No information on original planned completion date.
4. Block C [Needs and Options Report Dates]. Table 40b Column 7 (current actual or projected completion date) = "Not progressed beyond MBV". We note that there is no entry for DA0844 in the *Corporate system file for DAPs*. So we do not have any supporting information to validate the Needs and Options Report dates reported for DA0134. **Issue: No supporting information to justify the stated Baseline Needs and Options Report Date [Column 6] = "N/A" and the Current Actual or Projected Needs and Options Report Date [Column 7] = "Not progressed beyond MBV"] [Question: if DA0844 is not progressed beyond the MBV – the Model Build and Verification stage, then why is it linked to the PC21 project ID KL489 – Ballykelly WwTW?].**

6. Table 40b Information for IEMs [Block D] – Audit Findings

6.1 NI Water's Table 40b Commentary on IEMs

The commentary states that "NI Water did not intend to complete any IEM models in Year 1 of the PC21 period". We note that the timely delivery of IEMs would inform the scope uncertainty issues for the PC21's mid-term review and the associated "To Be Determined" projects.

With respect to changes that have been or might need to be made through the Change Control process to reflect changes to the PC21 investment programme resulting from IEMs delivery, the commentary indicated that any delays to the receiving NIEA sign off would be reported through Outputs Review Group (ORG: DfI, UR, NIEA, DWI, CCNI & NI Water) and may result in Change Control process being followed to notify the Utility Regulator of schemes which may not be delivered within the period. **We therefore note that it is the Company's intention to use the Change Control process to reflect changes to the PC21 investment programme resulting from any delays to IEMs delivery.**

The Commentary did not identify any date variance in its Table 40b's IEM delivery dates submission due to the assumption that:

- ☐ Baseline IEM Completion Date = Current Actual or Projected IEM Completion Date

We consider the above to be a material assumption. There are no justifications in the Company's commentary on IEM delivery, for not using the 'original planned completion dates' as 'baseline dates' following the UR Guidance on file as "NIAUR_air22_repreq_Sec2_Chap40b 02.00.PDF", Sections 2.2-2.3, and the linked Table 40b Column Definitions.

NIW did not provide any pre-audit commentary on the assumptions made for the Table 40b entries titled 'Integrated Environmental Modelling (IEM) Dates'. At audit, the Company advised that the AIR22 Table 40b dates should form the baseline for future report years as the AIR reporting requirements came in during Year 1 of the PC21 period.

6.2 Accuracy of IEM Information

Our assessment of the accuracy of the Table 40b's IEM information relies on audit observations of factors that combine together to influence the degree of appropriateness of the NI Water's Table 40b [Block D, Columns 8-9] data submission. The factors include:

- ☐ Missing IEM references in corporate system for internal reporting.
- ☐ Alignment issues
- ☐ Missing names between related data sets.

Our audit findings across each of our IEM audit sample, with respect to the accuracy of information, are summarised as follows. Details of the linked PC21 capital projects and our RAG assessment of the strength of evidence provided for audit are given in Appendix A.

a) IEM003 [Carlingford]

1. Block D [IEM Information, IEM reference]. Table 40b IEM reference = IEM003. Table 40 IEM reference = IEM003. We checked the linked 8No Project IDs (obtained from Table 40) and noted as: KS991, KV230, KV241, KV244, KV248, KV250, KV252 & SP023 on Table 40a. **Although the IEM reference is consistent across Tables 40, 40a and 40b, we found that 3No out of the 8No linked projects are not listed in Table 40a.**
2. Block D [IEM Information, IEM reference]. Table 40b IEM reference = IEM003. In the *Corporate system file for IEMs*, this IEM reference is missing. **Issue: missing IEM reference in the Corporate system file for IEMs.**
3. Table 40b IEM Name = Carlingford. IEM name in the *Corporate system file for DAPs* = Carlingford". So, the Table 40b's IEM003 name is consistent with the IEM name in Table 40 and outputs in Table 40a.

b) IEM008 [Larne]

1. Block D [IEM Information, IEM reference]. Table 40b IEM reference = IEM008. Table 40 IEM reference = IEM008. Linked Project IDs = KA298 & KB558. In Table 40a, we identified that Project ID = KA298 has 3No entries and that the Project ID KB558 has 1No entry. So, the IEM008 reference is consistent with the IEM reference in Table 40 and outputs in Table 40a.
2. Block D [IEM Information, IEM reference]. Table 40b IEM reference = IEM008. In the *Corporate system file for IEMs*, this IEM reference is missing. **Issue: missing IEM reference in the Corporate system file for IEMs.**

c) IEM011 [Moyola]

1. Block D [IEM Information, IEM reference]. Table 40b IEM reference = IEM011. Table 40 IEM reference = IEM011. Linked Project ID = KL572. In Table 40a, we identified that the Project ID = KL572 has 2No entries. So, the IEM011 reference is consistent with the IEM reference in Table 40 and outputs in Table 40a.
2. Block D [IEM Information, IEM reference]. Table 40b IEM reference = IEM011. In the *Corporate system file for IEMs*, this IEM reference is missing. **Issue: missing IEM reference in the Corporate system file for IEMs.**

d) IEM014 [Six Mile Water]

1. Block D [IEM Information, IEM reference]. Table 40b IEM reference = IEM014. Table 40 IEM reference = IEM014. Linked Project IDs = KA297 & SP019. In Table 40a, we identified that the Project ID = KA297 has 2No entries namely: X and X. **Issue: we note that there is no project entry for SP019 in Table 40a. See our audit findings for DAP DA0363 in Section 5.3 b).**
2. Block D [IEM Information, IEM reference]. Table 40b IEM reference = IEM014. In the *Corporate system file for IEMs*, this IEM reference is missing. **Issue: missing IEM reference in the Corporate system file for IEMs.**

6.3 Reliability of IEM Information

Our assessment of the reliability of the Table 40b's IEM information relies on audit observations of factors that combine together to influence the degree of consistency of the NI Water's Table 40b [Block D, Columns 10-11] 'dates' submission. The factors include:

- ☐ Missing record of the original completion dates of IEM models as baseline i.e. to fulfil the UR guidance requirement that "*The original planned completion date should be entered as the baseline date.....*" [UR Guidance on file as "NIAUR_air22_repreq_Sec2_Chap40b 02.00.PDF", Sections 2.2-2.3 and the linked Table 40b Column Definitions].
- ☐ Missing record of the original completion dates of IEM deliverables.
- ☐ Consistency of IEM dates information in the *Corporate system file for IEMs* and Table 40b.

Our audit findings across each of our IEM audit sample, with respect to the reliability of information, are summarised as follows. Details of the linked PC21 capital projects and our RAG assessment of the strength of evidence provided for audit are given in Appendix A.

a) IEM003 [Carlingford]

1. Block D [Baseline IEM Completion Date]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for IEM003 to check the IEM003's Column 10 (Table 40b) baseline IEM completion date = Mar 2023 entry. NI Water advised that there is no record of the original planned completion date for IEM003. **Issue: missing record of the original baseline IEM completion date for IEM003.**
2. Block D [Current Actual or Projected IEM Completion Date]. We identified that the Company has used Mar 23 as the IEM003's Column 11 (Table 40b) current actual or projected IEM completion date = Mar 23. But Column S of the *Corporate system file for IEMs* shows a NIL entry for "Expected Date ready for submission". **Issue: insufficient evidence that the current actual or projected completion date reflects the anticipated or actual completion date at the time of reporting.**

3. IEM-DAP Alignment Issue [1]. IEM003 is aligned to 3No DAPs in Table 40b [DA0057, DA0230 & DA0195]. But IEM003 is aligned to 4No DAPs in Table 40 [DA1100, DA0057, DA0230 & DA0195].
Issue: the alignment of DA1100 to IEM003 is not shown in Table 40b.

We note that the misalignment of the link between IEM003 and DA1100 across Table 40b and Table 40 does not impact on the sequence of delivery milestone dates reported in Table 40 and Table 40a.

This is because the DAP DA1100's baseline model build completion date=current actual model build report completion date =Oct 18. In addition, the associated needs and options report baseline=current actual completion dates = Jun 21. Therefore, the needs and options completion date of Jun 21 is in advance of the IEM003 completion date of Mar 23.

4. IEM-DAP Alignment Issue [2]. NI Water's commentary for Table40b states that *"each IEM has a number of DAP models as an input therefore any delay in the DAP programme is likely to have a knock-on effect on IEM programme timings, resulting in slippage of the IEM delivery plan"*. DAP ref DA0195 feeds IEM003. But the IEM003 completion date is Mar 23 in advance of the DAP completion date of Apr 23. **Issue: misalignment of the dependency of the IEM003 & DA0195 completion dates.**

b) IEM008 [Larne]

1. Block D [Baseline IEM Completion Date]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for IEM008 to check the IEM008's Column 10 (Table 40b) baseline IEM completion date = Mar 2023 entry. NI Water advised that there is no record of the original planned completion date for IEM008.
Issue: missing record of the original baseline IEM completion date for IEM008.
2. Block D [Current Actual or Projected IEM Completion Date]. We identified that the Company has used Mar 23 as the IEM008's Column 11 (Table 40b) current actual or projected IEM completion date = Mar 23. But Column S of the *Corporate system file for IEMs* shows a NIL entry for "Expected Date ready for submission". **Issue: insufficient evidence that the current actual or projected completion date reflects the anticipated or actual completion date at the time of reporting.**
3. IEM-DAP Alignment. We note that the IEM/DAP solution dependency notes in Column L of the *Corporate system file for IEMs* is 'Integrated' against the listed projects.

c) IEM011 [Moyola]

1. Block D [Baseline IEM Completion Date]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for IEM011 to check the IEM011's Column 10 (Table 40b) baseline IEM completion date = Mar 2023 entry. NI Water advised that there is no record of the original planned completion date for IEM011.
Issue: missing record of the original baseline IEM completion date for IEM011.
2. Block D [Current Actual or Projected IEM Completion Date]. We identified that the Company has used Mar 23 as the IEM011's Column 11 (Table 40b) current actual or projected IEM completion date = Mar 23. But Column S of the *Corporate system file for IEMs* shows a NIL entry for "Expected Date ready for submission". **Issue: insufficient evidence that the current actual or projected completion date reflects the anticipated or actual completion date at the time of reporting.**
3. IEM-DAP Alignment [1]. We note that the IEM/DAP solution dependency notes in Column L of the *Corporate system file for IEMs* is 'Integrated' against the listed projects.

4. IEM-DAP Alignment [2]. We identified that the IEM-DAP solution dependency notes in Column L of the *Corporate system file for IEMs* is 'TBC' against the project titled "X". **Issue: elaboration of the uncertainty of the IEM011-DA0437 solution dependency with respect to the project titled 'Maghera DA UID-Largantogher Park CSO'.**

d) IEM014 [Six Mile Water]

1. Block D [Baseline IEM Completion Date]. Due to the limitations of the available NI Water's Table 40b compilation records, we are unable to establish the original planned completion date for IEM014 to check the IEM014's Column 10 (Table 40b) baseline IEM completion date = Mar 2023 entry. NI Water advised that there is no record of the original planned completion date for IEM014. **Issue: missing record of the original baseline IEM completion date for IEM014.**
2. Block D [Current Actual or Projected IEM Completion Date]. We identified that the Company has used Mar 23 as the IEM014's Column 11 (Table 40b) current actual or projected IEM completion date = Mar 23. But Column S of the *Corporate system file for IEMs* shows a NIL entry for "Expected Date ready for submission". **Issue: insufficient evidence that the current actual or projected completion date reflects the anticipated or actual completion date at the time of reporting.**
3. IEM-DAP Alignment. We note that the IEM/DAP solution dependency notes in Column L of the *Corporate system file for IEMs* is 'Integrated' or 'DAP' against the listed projects.

7. Table 40b Information for IEMs [Block D] – Audit Findings

7.1 Conclusions

The conclusions drawn from our AIR22 audits of the NI Water's Table 40b submission set against the high level UR Reporter requirements are set out in Table TC_40b_5.

Table TC_40b_5: Table 40b Audit Conclusions

Scope Item (Ref Section 2.2)	UR Reporter Requirement	Conclusion
Section 2.2 a)	The Reporter should review the company submission and comment on its <u>progress</u> on the delivery of DAP Model Build and Needs and Options Reports and Integrated Environmental Modelling.	1. The Company states that the number of DAPs "Model Build Reports" (MBRs) that should be completed by end of Report Year is 19 and that the number of DAPs "Needs and Options Reports" (NORs) is 9.
Section 2.2 b)	The Reporter should comment on the company's <u>progress</u> with the delivery of DAP and Integrated Environmental Modelling outputs.	2. For our reviews and audits, of the 19 MBRs, NI Water provided evidence on file as "NIW MBV DA0040_Ballynahinch_Final.PDF" to demonstrate completion of 1 of the 19 MBRs. We are unable to validate NI Water's claim for the completion of the remaining 18 Model Build reports due to lack of evidence.
Section 2.2 c)	The Reporter should assess the company's comments on DAPs and Integrated Environmental Modelling (IEMs) <u>which were planned to be delivered by the end of the Report Year (by 31st March 2022) and have not been delivered</u> and the potential impact for the delivery of associated capital investment and nominated outputs.	3. NI Water also provided evidence for 1 of the 9 planned NORs. The evidence, on file as "DA0057_Kilkeel_Design Workshop.PPTX" – is a set of PowerPoint slides titled "Kilkeel Drainage Area Plan Design Support: Meeting No 1- Initial Design Support Workshop". It relates to the DAP DA0057 [Kilkeel DA]. We note that this is not the final NOR for DA0057. We are unable to validate NI Water's claim for

Scope Item (Ref Section 2.2)	UR Reporter Requirement	Conclusion
		<p>the completion of the remaining 8 NORs due to lack of evidence.</p> <p>4. We note that DAP DA1100 [Cranfield Kilkeel DA] <u>is one of the DAPs whose "Needs and Options Report" should have been completed by the end of the 2021-22 Report Year.</u> We have not seen any evidence to confirm that it has been completed. If there are delays in delivering this DAP output, then delivery of the linked PC21 capital project [KV230 - Cranfield Catchment , Kilkeel Storm Separation] would be pushed back.</p> <p>5. With respect to the IEMs, we note that NI Water did not plan to complete any IEM model by the end of the Report Year. We also note that the NIEA's sign off of the IEM model produced for Dundrum catchment (the Dundrum DA DAP ref DA0063) is outstanding.</p>
Section 2.2 d)	The Reporter should highlight any material differences between the <u>'baseline' and 'current actual or projected' completion dates</u> and comment on the implications this might have for delivery of the PC21 capital investment programme.	<p>To prepare the Table 40b information, NI Water has used assumptions that equates 'baseline' and current actual or projected completion dates. These assumptions have impacted the Reporter's ability to investigate any material differences.</p> <p>The Table 40b submission issues identified through our audits (and highlighted through this Reporter commentary) have implications for the delivery of the PC21 capital investment programme.</p>

7.2 Recommendations

a) General

We suggest that NI Water:

- ☐ appoints a PC21 DAP and IEM delivery coordinator, with responsibility for the internal and external reporting of progress on delivery of DAPs + IEMs and alignments with the delivery of the PC21 capital programme and leading the programme of NI Water's DAPs/IEMs engagement with the UR and the NIEA.
- ☐ de-risk critical aspects (including NIEA sign off and NIW's residual risks) of the DAPs/IEMs programme delivery through pro-active and continuing engagements with the NIEA and the UR.

b) Specific [1] – informed by the Reporter's Audit Findings

1. For planning/operational reasons and for internal control purposes, we suggest that DAP and IEM information including 'population served [population equivalent or PE data]' are kept on the NI Water's corporate system used for internal reporting - the DAP Apps.
2. For planning/operational reasons and for internal control purposes, we also suggest that IEM and related IEM information [including the 'baseline IEM completion date' and 'current actual or projected IEM completion dates'] are kept on the NIW corporate system used for internal

reporting – the DAP Apps. The DAP Apps can then be turned into a single source of truth for all regulatory submissions involving population served numbers.

3. Prepare a method statement (details of the procedures, systems and validation checks used) for the compilation of the NI Water's AIR22 Table 40b submission.
4. Validate the reported number of DAPs and IEMs in the AIR22 Table 40b. For this to be effective, a validation criteria should be developed and agreed, by reference to the UR's Guidance for Table 40b and the NI Water's DAP Apps design documentation.
5. Undertake a DAPs/IEMs programme delivery risk assessment to determine the current and residual risks for the timely delivery of DAPs and IEMS and the associated PC21 capital projects. De-risk critical aspects of the programme to aid timely completion of related PC21 projects.
6. Address the current Table 40b data accuracy issues across the Reporter's AIR22 audit sample for DAPs and IEMs.
7. Address the current Table 40b data reliability issues across the Reporter's AIR22 audit sample for DAPs and IEMs.
8. Provide evidence to demonstrate completion of the 18 Model Build Reports that should have been completed by the end of the 2021-22 Report Year.
9. Provide evidence to substantiate the Company's claim that 8 Needs and Options Reports have been completed by the end of the 2021-22 Report Year.

c) **Specific [2] – Table 40b design**

We note that the linkage between Table 40 and 40a is via a unique project ID (Column 3 of Table 40). The project ID is not currently part of the Table 40b design. If this recommendation is taken up by the UR and NI Water, it would provide a clearer audit trail for AIR23.

References

1. NIAUR, 2022. Annual Information Return 2021-22 (AIR22) – Reporter Letter with Table 40b Audit Guidance on file as "2022-04-15 AIR22 Reporter Letter.PDF".
2. NIAUR, 2022. Annual Information Return Reporting Requirements and Definitions Manual for AIR22. Tables & Commentaries. Chapter 40b Delivery of DAPs and Integrated Environmental Modelling.
3. NI Water, 2022. Pre-Audit and Post-Audit versions of the AIR22 Table 40b Data Table and Commentaries.
4. NI Water, 2022. Table 16 Lines 18, 19, 20, 21 and 22 – Drainage Area Plans – see Table 16 vs Table 40b comparisons in Appendix B.

Appendices

Appendix A: Strength of Evidence Evaluation for Each Sample DAP and IEM

Appendix B: Comparison of AIR22 Table 40b DAPs and Table 16 Line 22 DAPs Population Numbers

Appendix C: Xs



Appendix A: Strength of Evidence Evaluation for each DAP and IEM Audit Sample

Table 40b Audits – Delivery of DAPs & IEMs

Strength of Evidence Evaluation

Rating	Meaning
G	Good evidence underpinning consistency of data with the corporate systems data used for internal reporting. Coherent links between submission entries across Table 40, Table 40a and Table 40b.
A	Needs further evidence to prove consistency of data with the corporate data used for internal reporting and/or provenance of links between entries in Table 40, Table 40a and Table 40b.
R	Insufficient evidence/material issue(s) on aspects of submission related to consistency of data with the corporate systems data used for internal reporting and/or disconnected/unclear links between reference entries across Table 40 [Capital Investment Monitoring], Table 40a [Nominated Outputs Delivered by PC21 Projects and Programmes of Work] and Table 40b [Delivery of DAPs and Integrated Environmental Modelling].

Pre-Audit:

Reviewed a sample of NI Water's AIR22 Table 40b submissions and the linked Tables 40 and 40a

Audit:

Audit meeting: Auditor/Auditees

Post-Audit:

NI Water's Auditees addressed post-audit (corrective) actions to the AIR22 audit programme timescale

Auditor closes out post-audit actions (where appropriate) to finalise Audit Template and report.

Enhanced Table 40b Audits [DAPs (Audit Sample)]

Highlights of the Reporter’s Team Audit Findings: RAG Assessment

DAPs: Table 40b Reference, Sample Name		Table Data: Block A. DAP Information & Links between the DAP [Table 40b], the associated capital investment projects [Table 40] and outputs [Table 40a]	Table Data: Block B. Model Build Report Dates	Table Data: Block C. Needs and Options Report Dates	Table Data: Block D. Integrated Environmental Modelling (IEM) Dates	Commentary	Clarity of DAP & IEM Project Deliverables	Notes
DA0755	Armagh DA				N/A			Full DAP record not on corporate system
DA0363	Ballyclare DA				N/A			Table 40b vs “PC21 DAP Prioritisation Programming_Cut_V1'.xlsx” population mismatch
DA0040	Ballynahinch DA				N/A			Mismatch of actual/projected MBR dates
DA0956	Lisnaskea DA				N/A			Mismatch of actual/projected NOR dates
DA0092	Kircubbin DA				N/A			Linked to 2 projects in Table 40 [1 in 40a]. Not linked to any IEM?
DA0002	Belfast DA				N/A			Belfast DA DAP is not linked to any IEM?
DA0134	Annsborough DA				N/A			IEM004 misaligned [Table 40 vs Table 40b]
DA0844	Ballykelly Limavady DA				N/A			Not progressed beyond model build. Not linked to any IEM?

DAP Ref	Linked PC21 Capital Projects (ref Tables 40 & 40a)	General Comments
DA0755	Linked to a PC21 project in Table 40 and Table 40a [Project ID KF428, X]. SP12b.	<div>1. Missing names between related data sets, alignment issues and population number mismatches.</div> <div>2. Missing record of the original completion dates of Model Build Report Dates as baseline. Consistency of DAP dates.</div> <div>3. Missing record of the original completion dates of Needs and Options Report Dates as baseline. Consistency of DAP dates.</div> <div>4. Missing IEM references in Corporate system file for IEMs, missing names between related data sets. Alignment issues.</div> <div>5. Lack of justification for baseline date assumptions.</div>
DA0363	Linked to a PC21 project in Table 40 [Project ID SP019, X (1845)][SP12b] but no link to Table 40a.	
DA0040	Linked to 1 Table 40 project but to 2 projects in Table 40a [X and X] .	
DA0956	Table 40 ref: SP-16, Project ID KN683, X (1424)]	
DA0092	Linked to two PC21 projects in Table 40 namely: [Project ID KR667, X][SP12][linked to a project in Table 40a] and [Project ID KS933, X][SP12][not linked to a project in Table 40a].	
DA0002	Linked to 17 PC21 projects [Table 40: KI599, KI604, KR433.....KR746] and 1 Table 40a project [KR726 - X].	
DA0134	Linked to a PC21 project in Table 40 [Project ID KV249, X (1821)][SP12b] and Table 40a.	
DA0844	Linked to a PC21 project in Table 40 [Project ID KL489, X][SP16] and Table 40a.	

Enhanced Table 40b Audits [IEMs (Audit Sample)]

Highlights of the Reporter’s Team Audit Findings: RAG Assessment

IEMs: Table 40b Reference, Sample Name		Table Data: Block A. DAP Information & Links between the DAP [Table 40b], the associated capital investment projects [Table 40] and outputs [Table 40a]	Table Data: Block B. Model Build Report Dates	Table Data: Block C. Needs and Options Report Dates	Table Data: Block D. Integrated Environmental Modelling (IEM) Dates	Commentary	Clarity of DAP & IEM Project Deliverables	Notes
IEM003	Carlingford	N/A	N/A	N/A				Date Issue: DAP ref DA0195 feeds IEM003. But the IEM003 completion date is Mar 23 in advance of the DAP completion date of Apr 23?
IEM008	Larne	N/A	N/A	N/A				Missing IEM reference in corporate system.
IEM011	Moyola	N/A	N/A	N/A				Uncertainty of IEM/DAP solution dependency.
IEM014	Six Mile Water	N/A	N/A	N/A				No entry for one of the PC21 IEM014/DA0363 linked projects in Table 40a [Ballyclare DA UID-Park Street CSO (1845)].

IEM003 [Carlingford] is linked to three DAPs in Table 40b [DA0057, DA0230 & DA0195] and four DAPs [DA0057, DA0230, DA0195 & DA1100] in Table 40.

The following PC21 capital projects are linked to IEM003 in Table 40. DA0195 does not have any linked project in Table 40.

1. Kilkeel DAP. [Table 40 ref: SP-12, Project ID KS991].
2. Cranfield Catchment , Kilkeel Storm Separation. [Table 40 ref: SP-12, Project ID KV230].
3. Warrenpoint WwTW Phase 2. [Table 40 ref: SP-16, Project ID KV241].
4. Newry WwTW. [Table 40 ref: SP-16, Project ID KV244]. **Regulatory sign-off note: NIEA.**
5. Newry DA Newpoint Greenbank TPS (1459/1588). [Table 40 ref: SP-12b, Project ID KV248].
6. Cranfield Catchment, Kilkeel Storm Separation (1931). [Table 40 ref: SP-12g, Project ID KV250].
7. Kilkeel WwTW (1246). [Table 40 ref: SP-16a, Project ID KV252].
8. Kilkeel DA - Location 28 River Ingress (2535). [Table 40 ref: SP-12g, Project ID SP023].

IEM008 [Larne] is linked to one DAP [DA0327] and the following PC21 capital projects.

1. Larne Blackcave DAP (1878/1894/1897). [Table 40 ref:SP-12b, Project ID KA298].
2. Larne WwTW (1194). [Table 40 ref: SP-16a, Project ID KB558].

IEM011 [Moyola] is linked to one DAP [DA0437] and the following PC21 capital project.

1. Magherafelt DAP (1764/1768). [Table 40 ref:SP-12b, Project ID KL572].

IEM014 [Six Mile Water] is linked to two DAPs [DA0363 and DA0364] and the following PC21 capital projects.

1. X (1048/1066). [Table 40 ref: SP-12b, Project ID KA297].
2. X (1845). [Table 40 ref: SP-12b, Project ID SP019].

Appendix B: Comparison of AIR22 Table 40b and Table 16 Line 22 Population Numbers

Table 40b DAP Reference	Table 40b DAP Name	Table 16 DAP Name	Comparison of Population Numbers				Notes
			Table 16 [Block E - DAPs], Lines 18, 19, 20, 21- 22 [Nr]	Table 40b, Column 3 [Nr]	Diff [T16 minus T40b] [Nr]	% Difference (Rounded) [Diff/T16 Number]	
DA0034	Annalong DA	Annalong DA	3502	3301	201	6%	
DA0134	Annsborough DA	Annesborough /Castlewellan DA	6133	6086	47	1%	Name difference?
DA0364	Antrim DA	Antrim DA	69606	68648	958	1%	
DA0069	Ardglass DA	Ardglass DA	2837	2401	436	15%	
DA0755	Armagh DA	Armagh DA	13237	15374	-2137	-16%	
DA0558	Ballycastle DA	Ballycastle DA	12810	12797	13	0%	
DA0363	Ballyclare DA	Ballyclare DA	19960	20356	-396	-2%	
DA0095	Ballygowan DA	Ballygowan DA	3529	3528	2	0%	
DA0087	Ballyhalbert DA	Ballyhalbert DA	5900	5900	0	0%	
DA0187	Ballykelly Craigavon DA	Ballykelly DA	4004	20	3984	100%	Name difference? Large difference in population
DA0386	Ballymena DA	Ballymena DA	83515	83749	-234	-0.3%	
DA0040	Ballynahinch DA	Ballynahinch DA	8106	8107	-1	0%	
DA0017	Ballyrickard DA	Ballyrickard DA	47542	41900	5642	12%	
DA1175	Ballystrudder Whitehead DA	Ballystrudder DA	7608	7608	0	0%	Name difference?
DA0086	Ballywalter DA	Ballywalter DA	2427	2427	0	0%	
DA0002	Belfast DA	Belfast DA	459639	484790	-25151	-5%	
DA0442	Bellaghy DA	Bellaghy DA	1804	1804	0	0%	
DA0570	Bushmills DA	Bushmills/ Portballintrae DA	5952	5949	3	0%	Name difference?
DA0005	Carrickfergus DA	Carrickfergus DA	32342	32296	46	0%	
DA0506	Cookstown DA	Cookstown DA	19691	22569	-2878	-15%	
DA0148	Craigavon DA	Craigavon DA	121758	118862	2896	2%	
DA0416	Cranfield DA	Cranfield DA	4390	155	4235	96%	
DA0296	Crossmaglen DA	Crossmaglen DA	3311	3311	0	0%	
DA0846	Culmore DA	Culmore DA	165480	165653	-173	-0.1%	
DA0420	Cushendall DA	Cushendall DA	4320	4320	0	0%	
DA0137	Downpatrick DA	Downpatrick DA	18561	23735	-5174	-28%	
DA0509	Draperstown DA	Draperstown DA	3408	3412	-4	-0.1%	
DA0287	Dromore Down DA	Dromore DA (Down)	8253	8253	0	0%	Name difference?
DA0063	Dundrum DA	Dundrum DA	2281	2281	0	0%	
DA0744	Dungannon DA	Dungannon DA	80254	79561	693	1%	
DA0821	Dungiven DA	Dungiven DA	4610	4608	2	0%	
DA0010	Dunmurry DA	Dunmurry DA	50788	50186	602	1%	
DA0942	Enniskillen DA	Enniskillen DA	27164	27074	90	0.3%	
DA0604	Garvagh DA	Garvagh DA	1990	1990	0	0%	

Table 40b DAP Reference	Table 40b DAP Name	Table 16 DAP Name	Comparison of Population Numbers				Notes
			Table 16 [Block E - DAPs], Lines 18, 19, 20, 21- 22 [Nr]	Table 40b, Column 3 [Nr]	Diff [T16 minus T40b] [Nr]	% Difference (Rounded) [Diff/T16 Number]	
DA0315	Glenavy DA	Glenavy DA	2636	2636	0	0%	
DA0665	Glenstall DA	Glenstall DA	22099	22353	-254	-1.1%	
DA0004	Greenisland DA	Greenisland DA	11909	12732	-823	-7%	
DA0014	Greyabbey DA	Greyabbey DA	1208	1208	0	0%	
DA0851	Greysteel DA	Greysteel DA	2077	2079	-2	-0.1%	
DA0916	Keady DA	Keady DA	5126	18	5108	100%	
DA0057	Kilkeel DA	Kilkeel DA	14529	13386	1143	8%	
DA0027	Killyleagh DA	Killyleagh DA	6722	6722	0	0%	
DA0571	Kilrea DA	Kilrea DA	2761	2610	151	5%	
DA0016	Kinnegar DA	Kinnegar DA	173736	95717	78019	45%	
DA0092	Kircubbin DA	Kircubbin DA	1717	1717	0	0%	
DA0327	Larne DA	Larne DA	27564	27462	102	0%	
DA0838	Limavady DA	Limavady DA	16582	16566	16	0%	
DA0131	Lisburn DA	Lisburn DA	73823	74652	-829	-1.1%	
DA0307	Maghaberry DA	Maghaberry DA	4603	4597	6	0.1%	
DA0515	Maghera DA	Maghera DA	6574	6647	-73	-1.1%	
DA0437	Magherafelt DA	Magherafelt DA	19522	19702	-180	-1%	
DA0710	Markethill DA	Markethill DA	2585	2585	0	0%	
DA0256	Moir DA	Moir DA	6314	6302	12	0%	
DA0493	Moneymore DA	Moneymore DA	3036	3043	-7	-0.2%	
DA0076	Moneyreagh DA	Moneyreagh DA	2381	2381	0	0%	
DA0743	Moy DA	Moy DA	4157	4914	-757	-18%	
DA0022	Newcastle DA	Newcastle DA	17312	17280	32	0%	
DA0230	Newry DA	Newry DA	65122	64893	229	0%	
DA0132	Newtownbreda DA	Newtownbreda DA	36694	36683	11	0%	
DA0590	North Coast DA	North Coast DA	81671	82014	-2419	-3%	
DA0054	North Down DA	North Down DA	79595	62177	-28605	-36%	
DA1008	Omagh DA	Omagh DA	33572	33008	564	2%	
DA0088	Portaferry DA	Portaferry DA	3676	3675	1	0%	
DA0399	Portglenone DA	Portglenone DA	3775	3743	32	1%	
DA0275	Rathfriland DA	Rathfriland DA	4036	4036	0	0%	
DA0718	Richhill DA	Richhill DA	2308	2417	-109	-5%	
DA0081	Seahill DA	Seahill DA	6772	6771	1	0%	
DA1022	Strabane DA	Strabane DA	22372	22261	111	0%	
DA0259	Tandragee DA	Tandragee DA	10122	9677	445	4%	
DA0159	Waringstown DA	Waringstown DA	6917	6917	0	0%	

Table 40b DAP Reference	Table 40b DAP Name	Table 16 DAP Name	Comparison of Population Numbers				Notes
			Table 16 [Block E - DAPs], Lines 18, 19, 20, 21- 22 [Nr]	Table 40b, Column 3 [Nr]	Diff [T16 minus T40b] [Nr]	% Difference (Rounded) [Diff/T16 Number]	
DA0195	Warrenpoint DA	Warrenpoint DA	16071	15948	123	1%	
DA0003	Whitehouse DA	Whitehouse DA	88106	88141	-35	0%	
		TOTAL	2196494	2112681	83813		



Appendix C: Xs





SUMMARY OF AUDIT FINDINGS





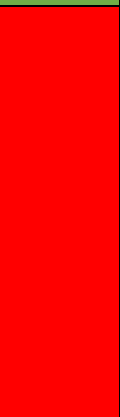

Table 42 – PPP Reporting. Lines 1-52

PREPARED BY	X
DATE	28 July 2022

1. Key Findings

The key findings of the AIR22 Table 42 audit [Lines 1-20, 21-22, 23-24 and 25-52], against the AIR22 audit criteria are summarised below.

Rating	Meaning
	No material exceptions and compliant with requirement
	Content with the reported data but supporting information needs to be complete and/or improvement identified for AIR23, or other noteworthy comment
	Minor exceptions
	Material exceptions
N/A	Not applicable to report

AIR22 Table Criteria	RAG	Assessment
Independent review of performance against PC21 target (where relevant)	N/A	No PC21 Targets for T42, Lines 1-52
Methodology – consistency with the reporting process with clear control points		Methodology found to be clear and reporting consistent with documented methods. Minor errors identified in commentaries have been corrected. New Line added for AIR22: Line 39a : Total Sludge Imported from other PPP Facilities. Otherwise, no material changes in reporting methodology since AIR21.
Assumptions – reasonableness and applicability		Assumptions reasonable and appropriately documented.
Source data – completeness		High detail of source data provided. Source data well referenced in the methods and commentaries.
Clarity of audit trails – evidence of appropriate audit trail		Audit trails clear
Confidence grades – documentation of appropriateness and rationale		Consistent documentation of confidence grades and rationale. Highest grades assigned where values are derived from contractual data or accredited sampling programmes. Red relates only to material decrease in Confidence Grade (CG) for Lines 30 and 31 – due only to Kinnegar issues. There is no lack of confidence in the sample results, but a lack of confidence that load values are representative of incoming load due to potential for double counting and operational practices on site. See commentary for Lines 30-31. All other aspects, including CG for Lines 30 and 31 for sites under the Omega contract, is considered Green.
Governance – evidence of quality assurance and of final sign-off		Evidence that all minor corrections identified in audit have been applied

2. Audit Scope

Audits of Table 42 data were carried out on the 23rd May, 10th and 13th June against the principles and requirements of the UR guidance for reporting.

Our audits consisted of a series of Teams conference calls with NI Water's staff responsible for the preparation of the AIR22 data and the PPP contracts team: X, X and X.

A follow-up call was held with X on 20th June to confirm updates to Lines 30-31.

During the audits we reviewed methodologies, commentaries, data tables and a selection of additional supporting documents.

3. Performance and Significant Events

Project description

Lines 1-6 is factual data relating to the PPP contracts and remains unchanged.

Payment to PPP concessionaire

Line 7: The Unitary charge for capacity and only applies to the Alpha sites, which are paid monthly to the concessionaire on invoice. Since AIR21 costs have increased by 8.75% due to inflationary uplift in tariffs and application of a 16% 'sculpting' increase effective from Oct 2021.

Line 8: The Unitary Charge for variable payments apply to all PPP concession sites are paid monthly to the concessionaire on invoice.

Charges are based on volumetric measures, therefore changes from the previous year are due to variation in water treated, and inflationary increases. In total there was an 8.4% decrease from the previous year, a function of:

- 10.3% increase at Alpha sites.
- 10% decrease at Omega sites.
- 17.8% decrease at Kinnegar – largely due to a step-down in tariff in April 2021, following settlement of senior debt. This was offset by increases in SS (101%) and BOD (65%) volumes as a result of ongoing operational issues on site related to the management of sludge.

Line 9: Unitary Charge deductions are applicable to all PPP concession sites.

Alpha - performance deductions of £0.39m were applied, an increase from £0.17m in the previous year. A temporary relaxation of water quality standards, applied in the previous period, has now been withdrawn.

Omega – X has commenced declaring performance deductions in monthly invoices following the settlement agreement. Deductions in the reporting period amounted to £85k.

Kinnegar – No performance deductions have been reported. However, it should be noted that due to a failure event in February 2021, NIW is pressing for a one-off deduction of £59,832.39. This remains in dispute and no credit note has been received to date. Therefore NIW continue to hold as an accrual.

Line 10: Atypical expenditure incurred by the concessionaire. All three concessionaires incurred atypical expenditure in 2020/21. This included any payments or credits agreed in monthly invoices between the parties beyond the Unitary Charge payments due and includes provisions for claims.

The reported AIR22 atypical expenditure is -£0.656m for Alpha (AIR21=-£0.632m), -£0.003m for Kinnegar (AIR21= £0.166m), and -£1.582m for Omega (AIR21=-£0.211m).

The Omega total includes -£2.099m related to IFRS accounting adjustments, and £1.445m which relates to a significant (and as yet unexplained) reduction sludges transferred from Belfast WwTW to X for disposal. X has notified of a compensation event and the NIW has accrued in full an estimate of the shortfall.

The values in this line are consistent with the supporting documentation.

Line 11: Efficiency Gains at the PPP contract level.

Some changes for cost reductions have resulted in efficiency gains in the report year against the baseline contract at award. During AIR22, efficiency gains of £0.572m and £0.154m have been achieved by the Alpha and Omega schemes respectively.

These are not materially different from the previous year, where efficiencies were £0.563m and £0.198m respectively.

Line 12: Total PPP payments, sum of Lines 7-10.

This line is also the source data for Table 43 line 4, which was confirmed to be reported consistently during the audit.

Line 13: Capital Repayment

Relates to paying off finance lease liability. The reported numbers are consistent with the extracts of the Company's financial accounts for Alpha and Omega provided in the commentary and Alpha, Kinnegar and Omega are consistent with the supporting document '*Finance Lease Repayments – All Contracts.xlsx*'.

Line 14: Capital Maintenance

Allocated on a straight-line assumption over the life of the contract following a change implemented in 2013/14. This reflects the assumption that the unitary charge does not fluctuate with changes in the capital maintenance spend in any year. The straight-line amount has been allocated to the sites on the basis of the total amounts included in the original contract's financial models. The line commentary adequately explains the allocation by site and is consistent with source spreadsheet data.

Line 15: No longer used (deleted line)

Line 16: Atypical Payments Capitalised.

The Company has reported a nil return for this line for all three PPP contracts, resulting in no change from AIR21.

Line 17: Total Capitalised (Sum of lines 13 to 16).

Line 18: Total PPP Expensed (Calculated by line 12 (Total PPP Payments) minus line 17 (Total Capitalised)).

Line 19: Interest. This applied to all PPP contracts, the entries to this line represent the notional interest on the finance lease.

Additional information is presented in the commentary to demonstrate consistency with company accounts. Following the move to IFRS reporting, all contracts are now on balance sheet and residual interest is no longer reported. A breakdown of the accruals and intercompany balances included in the year-end accounts in relation to each of the PPP contracts is given in Table TC_42_1.

Table TC_42_1: Breakdown of Accruals and Intercompany Balances

Figures in £'m	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	£m
Unitary Charge	1.969	5.149	0.399	7.517
Disputed Amts	0.000	0.679	0.571	1.251
Claims	0.000	1.445	0.000	1.445
Other	0.000	0.000	0.000	0.000

Of the £5.149m for Omega, £2.426m relates to the outstanding monthly unitary charge invoice for February 2022 and £2.543m to the invoice for March 2022, both of which were unpaid at the end of March 2022. Also included is £0.180m of additional unitary charge arising from the Ballynacor TDS mandatory contract change which became effective from 1 April 2010 and was agreed during 2013/14.

The Omega claims amounting to £1.445m relate to the Belfast WwTW indigenous sludge shortfall liability (see Line 10 commentary).

Line 20: Total PPP Opex - calculated by subtracting Line 19 (Interest) from Line 18 (Total PPP Expensed).

Water Distribution Data

Line 21: Distribution Input (DI).

The reported data is only relevant for the Alpha PPP Contract. The total DI across Alpha sites is 283.33 MI/d, compared to 267.96MI/d [AIR21]. Consistent with the data and methodology for Table 10, Line 26.

Line 21a: Water Treatment Works Capacity.

This data is specified in the contract arrangements for each site in the Alpha contract. The reporting guidance refers to this as 'Qminreq' for each site and in line with the Alpha Contract requirements. There has been no change to the minimum required capacity in the report year, with the total capacity for all Alpha sites remaining static at 396 MI/d. Confidence grade for the line is appropriate at A1.

Line 22: Length of Mains.

Unchanged at 16.42km - this is the length of the DBFO link main from Castor Bay to Forked Bridge, managed by the Alpha Ops Contractor. The length was derived from "as-built" record drawings and is used in Table 11 Line 12.

Lines 23 & 24: Turbidity 95%ile greater or equal to 0.5NTU and Turbidity 95%ile less than 0.5NTU respectively.

These lines only apply to the Alpha sites. Data is taken directly from the regulatory sample database (Oracle). All sites compliant during the reporting period. Audit included a review of the source data.

Water Resource & Treatment Data**Line 25:** Source Type.

Applicable to Alpha PPP sites only, this is a reference to the type of raw water source providing the input to each works. There is no change to the reported sources in this line from AIR21. The confidence grade for the line is appropriate at A1.

Line 26: Treatment Type.

Applicable to Alpha PPP sites only and refers to the technical process classification for each works. Therefore, there is no change to the reported treatment types in this line from AIR21. Balinrees, Castor Bay, Dunore Point, and Moyola are all reported as Cat W4 which relates to processes with high operating costs. Confidence grade for the line is appropriate at A1.

Line 27: Average Pumping Head

Applicable to Alpha PPP sites only. Reported figure reflects only a marginal increase in the APH figure to 154.2 m.hd over the AIR21 figure of 153 m.hd.

Sewerage Data

Lines 28 & 29: Total length of sewer & Total length of critical sewer respectively. Applies to two sites in the Omega Contract: Ballynacor and North Down.

Lengths have been derived from "as-built" sewer records and have not changed from previous years (21.13km total).

Sewage Treatment & Disposal

Line 30: Population equivalent of total load received.

The data is provided by the Omega & Kinnegar Contractors. The line is derived from measured total load (Line 31) by applying a standard industry factor of 60g BOD per person per day.

There has been an increase in both Lines 30 and 31 from AIR21 to AIR22. This has been driven by a significant increase in the load measured at Kinnegar inlet during the period. It should be noted that NIW is investigating operational practices and the volumes of sludge held on-site by the contractor. We have seen a copy of the contractor report submitted in response to NIW's request for further information and investigation, which we understand does not fully address NIW's concerns. While lower levels of rainfall

(resulting in more concentrated load received at the works) and possible double-counting of high-strength storm tank returns at the inlet are both potential contributory factors, the details of the increase are as yet unconfirmed. We note that the Company has assigned a Confidence Grade of C5 to Lines 30 and 31, due to the impact of the uncertainty of the Kinnegar figure on the overall line total.

We note that although the Lines are scored as C5, confidence in the data from the sites under the Glen Water contract remains the same as last year (B3). It should also be noted that there is no lack of confidence in the accuracy of the analytical samples. Rather, the low confidence grade reflects uncertainty as to whether the load figure is representative of influent load at Kinnegar works (due to potential double-counting of high-strength storm returns).

Line 31: Load received by STW's.

The total load is based on analytical data derived from samples taken from the inlet of all the PPP wastewater treatment works. Source data and methodology for deriving the figures was demonstrated during the audit.

Please refer to the commentary for Line 30 above with regard to Kinnegar load increase and impact on confidence grade. The same rationale applies. Confidence Grade of C5 is only due to the uncertainty of the Kinnegar figure. As with Line 30, confidence in the data from the sites under the X contract remains the same as last year (B3).

Lines 32-36: STW Consent Data

These lines are related to the consents data namely: Suspended Solids, BOD5, COD, Ammonia and Phosphates for the associated works. The consents data are derived from the Water Order Consent held by the Contractor for each of the sites which have been provided by the Northern Ireland Environment Agency. The Water Order Consents are set on lower and upper tier limits with pass/ fail being based on look up tables, a breach of the upper tier limits being classed as a failure. NI Water advised the Auditor that there has been no material change to the Water Order Consents since AIR20. The applied confidence grades of A1 are deemed appropriate for these lines.

Line 37: Classification of Treatment Works.

There has been no change to the treatment facility classifications. These are reported in line with the AIR treatment categories and is consistent with the methodologies for Table 17C and D.

Line 38: Size band of sewage treatment works.

This is related to the size band based on BOD loading for each site. No change in the reporting year.

Sludge Treatment & Disposal

Line 39: Total Sludge imported from NI Water.

This is the amount of sludge imported from the NI Waters operated sites (non-PPP sites) in the report year expressed in thousands of tonnes of dry solids (TTDS). The NI Water sludge is received at two sludge treatment sites, Ballynacor Sludge Disposal Facility and Duncrue St Sludge Facility. The total sludge measured for AIR22 is 30.645 TTDS, a reduction from the AIR21 figure of 34.750 TTDS. The difference of 4.105 TTDS is primarily due to a significant reduction in the volume of Duncrue Indigenous Sludge since AIR21, which is under investigation by NIW and related to the Omega claim referenced in Line 19 narrative above.

It should be noted that Kinnegar is not included in this Line.

Line 39a: Total Sludge Imported from other PPP Facilities

This is a new line for AIR22 to report transfer of sludges from other PPP sites. Armagh and Richhill sludge is routinely delivered to Ballynacor for cake processing prior to incineration/disposal. Other movements from North Ards and Ballyrickard sites to Ballynacor were necessary during the year due to operational issues at Duncrue Street.

Line 40: Sludge produced by the PPP facility.

This is the amount of sewage sludge resulting from the treatment of sewage on the PPP facility in the report year expressed in thousands of tonnes of dry solids (TTDS). All sludge from the Kinnegar site is transferred to the incineration plant at Duncrue Street. A back calculation is used to establish the indigenous sludge at Ballynacor by subtracting the import logger data (which records both inputs from NI Water and PPP facilities at North Down Ards, Ballyrickard, Richhill and Armagh) from the exported cake transferred to Duncrue Street.

The AIR22 value is 6.304 and excludes grit and screenings collected at Kinnegar and Omega sites. The NIW Commentary shows the breakdown for each site including sludge, grit and screenings.

While total sludge production is broadly consistent with AIR21, some material variations between AIR21 and AIR22 levels at a site level should be noted:

- Ballynacor: clear increase from 2.398 (AIR21) to 2.687 (AIR22). As the treatment process has not changed, and compliance has been maintained, the variation is likely due to changes in the load from within the catchment or in the imported sludges.
- Kinnegar: a significant decrease from 0.580 (AIR21) to 0.275 (AIR22). The cause is attributed in part to the impacts of asset failures and operational issues on site, including blockages and scraper gearbox failures in the swirl tanks, and failures of the decant arms on the SBR units. These issues are under investigation.

The values are consistent with the NI Water's supporting document 'Table 42 Sludge Mass Balance AIR22.xlsx'.

Line 41: is the Sludge exported to Duncrue Incinerator.

This is the amount of sewage sludge exported from the PPP sites to the PPP facility at Duncrue Street in the report year expressed in thousands of tonnes of dry solids of sludge produced. All sludge is delivered to Duncrue Street Sludge Treatment Facility, including all Company and PPP sludge, for either incineration or for disposal through other alternative routes. Grit and screenings are excluded from this volume, as these go to landfill. All NI Water's sludges are not included in this line but are captured in Table 42 Line 39.

The main reasons for the variance from the previous year are captured in the Line 40 section above.

Line 42: Sludge Exported to Other PPP Facilities.

Reported as 0 in previous years, for AIR22 this line records the transfer of sludge from Armagh, Richhill, North Down and Ballyrickard WwTWs to Ballynacor WwTW.

Line 43: Sludge exported to NI Water.

The contract does not have provision for PPP sludges to be exported to NI Water. Zero entries were recorded in this line - no change from AIR21.

Line 44: Sludge disposed of from site to - Farmland Untreated.

Reported as nil. No sludges are disposed of via this route.

Line 45: Sludge disposed of from site to - Farmland Conventional.

As above for Line 44.

Line 46: Sludge disposed of from site to - Farmland Advanced.

This reflects volume of raw cake delivered to lime treatment sites across the UK. The PPP Contractor disposed of 0.876 TTDS in the reporting year, in increase over 0.707 TTDS reported in AIR21. The treated sludge is spread on farmland in compliance with the Sludge Use in Agriculture Regulations 1989 and the Safe Sludge Matrix.

Line 47: Sludge disposed of from site to Incineration.

This is the amount of sewage sludge disposed of, to incineration from the PPP facility in the report year expressed in thousands of tonnes of dry solids of sludge produced. This value is calculated as the total sludge received at Duncrue minus total of sludge disposed off-site.

The AIR22 value is reported as 36.015 TTDS, a decrease from 39.764 TTDS reported in AIR21.

It was noted during audit that the reported figures for Ballynacor on Line 41 and Line 47 are not the same. This was due to a single tanker-load of liquid sludge moved from Ballynacor to Duncrue at approx. 1.8 TDS, which accounts for the difference between 8.298 (Line 47) and 8.3 (Line 41).

Line 48: Sludge disposed of from site to – Landfill.

This is the amount of sewage sludge disposed of to landfill from the PPP facility in the report year expressed in TTDS. No treated dewatered sludge was disposed of to landfill in AIR22. The reported figures comprise the grit and screening from the Kinnegar and Omega contracts. The Kinnegar Contractor disposed of some 0.032 TTDS of screenings (no grit produced) while the Omega Contractor disposed of 0.162 TTDS of screenings and grit. The total disposed to landfill from Kinnegar and Omega during the report year was 0.194 TTDS, an increase since AIR21 (0.185 TTDS).

Line 49: Sludge disposed of from site to – Compost.

No sludge was disposed of via this route in AIR22. The AIR21 value was 0.129 TTDS with a confidence grade of B3 due to values being reliant on data from contractors which cannot be justified. Due to the nil return for AIR22, the confidence grade has reverted to A1 (as per NIW's AIR20 reporting).

Line 50: Sludge disposed of from site to - Land Reclamation.

No sludge was disposed of via this route in AIR22 (raw cake to industrial sites for the purpose of land rehabilitation). The AIR21 value was 0.503 TTDS via this disposal route during AIR21. Confidence grade of A1.

Line 51: Sludge disposed of from site to - Other (Willow Coppice).

This line was previously titled 'Other (Willow Coppice)' but has been renamed 'Other (Forestry)' to reflect a broader application. 0.055 TTDS of raw sludge cake was supplied to forestry plantations during the AIR22 period.

Line 52: Sludge disposed of from site – Total.

This is a calculated line and the sum of Lines 44-51. The value reflects the total amount of sewage sludge disposed through all discharge routes by the PPP concessionaire for the report year expressed in TTDS, excluding any sludge returned to NI Water for further treatment or disposal.

4. Summary of Audit Checks

We have reviewed all the Word documents (commentary and methodology files) and Excel tables provided by NI Water during and following the audit, including the sludge mass-balance model and other workbooks containing source information and the calculations underpinning the figures reported in Table 42.

5. Confidence Grades

Confidence grades are deemed appropriate, and where changes have been made to CG since AIR21, the rationale is clear and documented.

As stated in the relevant commentary sections, low confidence grades of C5 have been applied to Line 30 and 31 due to the circumstances outlined at Kinnegar. While there is no lack of confidence in the accuracy of the inlet sampling, there is low confidence that the values for Kinnegar are an accurate reflection of the true load to the WwTW due to potential double-counting of storm returns.

6. Challenges to the Company

Actions related to limited and minor inconsistencies between the commentary and Tables have been actioned and resolved by NIW.

More information was provided post-audit with regard to the sludge mass-balance data to understand variations related to anomalies at Duncrue (decrease in indigenous sludge) and Kinnegar (decrease in sludge production).

Action to align confidence grade for both Line 31 and Line 30, as the same rationale applies. Tables 15, 17D & 42 updated and Commentary doc updated to fully reflect the rationale.

7. References

The following documentation was provided by NIW and reviewed as part of the audit:





- a) NI Water Commentary: CC_Table42_Lines7-20.docx
- b) NI Water Methodology: LM_Table42_Lines7-20.docx
- c) NI Water Data Table: DT_Table42_Lines7-20.xlsx
- d) NI Water Commentary: CC_Table42_Lines23-24.docx
- e) NI Water Methodology: LM_Table42_Lines23-24.docx
- f) NI Water Data Table: DT_Table42_Lines23-24.xlsx
- g) NI Water Commentary: CC_Table42_Lines23-24.docx
- h) NI Water Methodology: LM_Table42_Lines23-24.docx
- i) NI Water Data Table: DT_Table42_Lines23-24.xlsx
- j) NI Water Commentary: CC_Table42_Lines21-22_25-52.docx
- k) NI Water Methodology: LM_Table42_Lines21-22_25-52.docx
- l) NI Water Data Table: DT_Table42_Lines21-22_25-52.xlsx
- m) Table 42 Sludge Mimic 202122.pdf
- n) Table 42 Sludge Reconcil 202122 A.xlsm
- o) AIR18-22 p.e. comparison ACTUAL.xlsx
- p) Table 12 Methodology 11 May 2022 AIR22 FINAL.doc
- q) Glen Water Sludge Volumes Compensation Event (£X valuation) – Supporting Evidence of Liability & Quantum
- r) NIW1264 Sludge Service – Sludge Volumes.pdf
- s) S28 Authority Sludge Volumes 21 Feb 2022.pdf
- t) EC BAU March 2022 – Belfast WWTW Sludge Transfers V3.docx
- u) 4.1 PPP Exceptions Report.docx
- v) T42 T43 variances AIR21vAIR22.xlsx

- w) Finance Lease Repayments – All Contracts (v2).xlsx
- x) AP8 03 0010 Income Statement Charge Test 2021-22.xlsx
- y) Updated NI Water Data Table: DT-Table 42_L21-22_25-52.xlsx
- z) Updated NI Water Commentary: CC_Table42_Lines21-22_25-52.docx

SUMMARY OF AUDIT FINDINGS






Table 43 – PPP Operational Costs, Lines 1-15

PREPARED BY	X
DATE	28 July 2022

Rating	Meaning
	No material exceptions and compliant with requirement
	Content with the reported data but supporting information needs to be complete and/or improvement identified for AIR23, or other noteworthy comment
	Minor exceptions
	Material exceptions
N/A	Not applicable to report

1. Key Findings

The key findings of the AIR22 Table 43 audit [Lines 1-15], against the AIR22 audit criteria are summarised below.

AIR22 Table Criteria	RAG	Assessment
Independent review of performance against PC15 target (where relevant)	N/A	
Methodology – consistency with the reporting process with clear control points		Methodology is consistent with the reporting process and remains unchanged from AIR21
Assumptions – reasonableness and applicability		Assumptions are appropriate. This applies to a number of figures where cost data is not available at site level and a proportional split has to be made on the basis of factors including site area, flow treated etc. In all cases, these are reasonable.
Source data – completeness		Detailed source data has been provided and reviewed during the audit meetings.
Clarity of audit trails – evidence of appropriate audit trail		Evidence of appropriate audit trail.
Confidence grades – documentation of appropriateness and rationale	N/A	No confidence grades are required for Table 43 Lines 1-15
Governance – evidence of quality assurance and of final sign-off		We have seen evidence of appropriate governance and sign-off.

2. Audit Scope

The scope of this audit covers Operational Costs related to Public–Private Partnership (PPP) sites, recorded in Lines 5-15 of Table 43. An interview was conducted on June 13th with X.

During the audit, methodologies and commentaries were reviewed, and a range of supporting documents were audited to verify source data and ensure alignment with the Utility Regulator's guidance notes. We also compared the AIR22 reporting methodology and figures against AIR21 to identify changes to methodology or material variance.

3. Performance and Significant Events

Line 5: Payment to Concessionaire

Line 5 records payments made for each of the Alpha, Omega and Kinnegar sites by the concessionaire to the operating company. The figures include operating costs and profit. Total reported values are as follows:

- Water (Alpha): £8.188m
- Wastewater: £12.133m (Omega £11.037m, Kinnegar 1.096m).

Figures vary from year to year depending on changes in volumes delivered/treated, indexation and deductions.

Omega and Kinnegar data is provided by the PPP contractor. Since Alpha sites were brought back in-house, data is provided by internal transfer. Figures reported in Line 5 are consistent with Table 21, Line 22a and Table 22, line 21a which reflect the same payment costs. The line is limited to Operational costs and therefore capital maintenance and other capital/financial charges are not included.

Reporting methodology remains unchanged from AIR21, and the rationale for gaps in the Table also remains unchanged:

- Scheme 5 was delivered as a link main from Castor Bay WTW under the DBF&O contract and therefore the Operational Costs are built-into Scheme 2.
- Schemes 6 & 7 were delivered under a Design, Build, Finance & Handover contract, and while there are ongoing Capital payments, there are no recurring operational costs.
- Scheme 14 - Ballynacor Lagoons were an existing asset and the scheme included an obligation on the concessionaire to remediate as part of the scope. The work was carried out, and no further operational costs apply.

Line 6: Power

Power data for each site is derived from the relevant meter point reference numbers (MPRN) and invoicing data recorded in the Oracle system. All sites have a single MPRN, with the exception of Ballinrees where a total is derived from two MPRNs.

Power is not reported against Kinnegar WwTW, as NI Water is unable to split out the power costs for the site as they are paid by the operating company from the monthly payment from the concessionaires.

The variance in power costs between AIR21 and AIR22 is significant, due to significant increases in power rates.

Power costs for Omega sites rose from £3.703m in AIR21 to £7.639m in AIR22. Similarly, cost of power at Alpha sites rose from £5.6m in AIR21 to £12.415m in AIR22.

Duncrue Street has a single meter point which includes Belfast WwTW, operated by NI Water, and the Sludge Incinerator site, operated under PPP. Therefore, NI Water applies a standard methodology to calculate the split between power consumption at the Incinerator and Treatment sites based on throughput and flows. This method attributes 55% of the metered costs to the incinerators and 45% to Belfast WWTW for the reporting year, the same split applied in AIR21.

We confirm that totals for Water and Sewerage (columns 20 and 21) are consistent with line 2 totals in the PPP only section of tables 21 and 22.

Line 7: Other Direct Costs

This line captures costs associated with abstraction licences and is therefore only applicable to some Alpha sites. Inflationary increases only have been applied by NIEA to licence charges, increasing the total from £89k in the previous year to £90k (~1.1% increase).

Line 8: Calculated line - sum of Lines 6 & 7.

Line 9: General and Support expenditure

Total expenditure for the reporting year is £298k, and increase from £273k in AIR21, with a split of £201k for Wastewater and £97k for Water sites. This reflects the general administration costs of managing the PPP contracts by the NIW team and data comes directly from project cost centre codes. Hours are

allocated proportionally across the 3 contracts and equally between different sites within contracts. The majority of cost is staff cost but figures also include procurement of consultancy services.

Line 10: Calculated line - Sum of Lines 8 & 9.

Line 11: Scientific Services

Laboratory costs associated with the monitoring of wastewater quality parameters amounted to £127,366. The increase from £105k in AIR21 is largely due to an increase in the number of samples taken. 5852 samples were taken in AIR22 on PPP sites, up from 4850 in AIR21. The majority of costs are related to Omega sites (£103k) with £24k for sampling at Kinnegar.

Costs are calculated from the Scientific Services spreadsheet where the total number of samples taken at PPP sites is used to derive the total proportion of NI Water's sampling costs incurred at each PPP site. The methodology remains unchanged from AIR21.

Values are zero for Alpha sites as the costs are paid directly as part of the Unitary Charge.

Line 12: Rates

Rates for Alpha sites are based on Water Distribution Input (DI) values – i.e. the volume of water supplied to the network from each PPP site. For AIR22 rates have increased by approx. 4.6% from AIR21 to £7.864m.

Rates at Wastewater sites are taken directly from rates bills and total £1.421m, which reflects a 1% increase over AIR21.

For the Incinerator site at Duncrue, the method applied remains unchanged from AIR21, where 15% of the rates are applied to the PPP on the basis that the Incinerator area is 15% of the Belfast WwTW site area. A similar principle is used to split the costs for the Wastewater and Sludge elements at Ballynacor, with 65% of costs applied to Wastewater and 35% to Sludge.

Line 13: Terminal Pumping Station Costs

As per Line 6, terminal pumping costs are calculated from Meter Point Reference Number (MPRN) data and invoicing data held in the Oracle system. North Down and Ballynacor WwTWs are the only PPP sites with terminal pumping stations. North Down receives flow from 5 pumping stations, with a total pumping cost calculated at £498k. Ballynacor receives flow from 2 pumping stations, with a total pumping cost calculated at £288k.

Therefore, total power costs for Terminal Pumping Stations in AIR22 is £786k, compared to AIR21 costs of £469k. Despite reduced rainfall and therefore lower flows in the catchment during AIR22, the rise in power rates has caused a significant increase, as per Line 6.

Line 14: Estimated sludge costs.

This line records the total costs associated with the Omega PPP sludge sites at Duncrue Street and Ballynacor. The figure is the sum of Lines 5, 10, 11 & 12, and therefore shows the same figure for both sites as Line 15. The methodology to estimate the sludge costs remains consistent with AIR21, and reported cost for AIR22 is £10.63m, an increase from AIR21 (£8.761m).

Line 15: Total PPP Operating Expenditure

This is a calculated line and the sum of Lines 5, 10, 11 & 12 and records total operating expenditure associated with PPP assets including Operator costs and profit for each site (concessionaire payment) and associated costs incurred by NI Water.

The estimated sludge costs for Ballynacor and Duncrue Street shown in line 14 are not included to avoid double counting.

AIR22 totals are £28.654m for Water (AIR21 = £21.3m) and £21.521m for Wastewater (AIR21 = £17.84m). The increase over AIR21 figures is primarily due to the effect of power cost increases.

4. Summary of Audit Checks

We have reviewed the Word and Excel files provided by NI Water during and following the audit, including review of workbooks containing source information and the calculations underpinning the figures reported in Table 43.

5. Confidence Grades

There are no requirements to record confidence grades for Table 43, Lines 5-15.

6. Recommendations & Suggested Actions

No actions or recommendations were identified.

7. References

The following documentation was provided by NIW and reviewed as part of the audit:

- a) NI Water Commentary: CC-Table43_Lines4_6-15.docx
- b) NI Water Methodology: LM-Table43_Lines4_6-15.docx
- c) NI Water Data Table: DT-Table43_Lines4_6-15.xlsx
- d) NI Water Commentary: CC_Table43_Lines5.docx
- e) NI Water Data Table: DT_Table43_L5.xlsx
- f) NI Water Commentary: LM_Table43_Lines5.docx
- g) AP8 03 0010 Income Statement Charges 2021-22
- h) T43 variances AIR21vAIR22.xlsx
- i) IAUR_air21_repreg_Sec2_Chap43 01.00.pdf
- j) AIR21 Table 43 Line 5 – Contractor Payments.doc
- k) Glen Water – AIR22 – Table 42.xlsx
- l) Abstraction Licence Charges PPP 21-22.xls
- m) Cumulo Rates Split – AIR22.xls
- n) PPP Power Cost Table 22, AIR22

SUMMARY OF AUDIT FINDINGS

Table 47 – Delivery of PC21 Development Outputs

PREPARED BY	X	NI WATER AUDITEES
DATE	28 July 2022	Individual Owners of each of the 25No PC21 Development Outputs – see Xs [Appendix C]

1. Overview of Audit Observations and Recommendation

1.1 Observations

1. **Programming issues.** We identified a number of programming issues related to the consistency of the sequence of actions (and timelines) for the delivery of the PC21 Development Outputs (DOs).

This observation may have implications for the scope of business cases and solution investments for the PC21 Mid-Term Review and re-assessment of cost forecasts.

2. **Cost reporting issues.** We note that there is no Company process for providing updates of cost information originally submitted in NI Water's Business Plan (and the UR's FD21's Annex T), with respect to the delivery of the Development Outputs and the associated solution investments.
3. **Consistency of progress reporting issues.** There are links across and between a number of the DOs. For these DOs, there should be consistency of the reported project milestones to inform the PC21 mid-term review.

1.2 Recommendation

We suggest that NI Water:

- ☐ Appoints a PC21 Development Output Coordinator, with responsibility for internal and external progress and cost reporting activities and to lead NI Water's engagement with the UR on delivery of DOs as the **Table 47 owner**.

1.3 Differences between Post-Audit versions of Proformas and the NIW to UR version (Submission)

Some sections of the final version of the compiled Table 47 proformas submitted by NI Water to the UR and dated 8th July 2022 are different when set against the audited versions of the individual proformas.

Some of the differences are material, others are non-material.

The material differences introduced through NI Water's compilation of the individual audited post-audited proformas, with the post-audit corrective actions applied, are outlined as follows.

1. FD21 Annex T Ref 3 [NI Water Alpha Ltd - WTWs Treatability Improvements]. The project reason box is missing. Only a small part of the post-audited version of the 5 page-proforma is included.

On 20th July 2022, following NI Water's review of the draft version of the Reporter's report, the Company provided the following email notes: "X, Attached is the final version of the Table 47 S3 Development Output which Conor submitted to X back in June. It does not seem to have made its way onto SharePoint and, consequently, was not in the final AIR sent to the UR.

We plan on reissuing the Table 47 commentary to the UR this week, with this version of Dev. Output #3 text included.

Your report on the AIR states: Some sections of the final version of the compiled Table 47 proformas submitted by NI Water to the UR and dated 8th July 2022 are different..... The material differences introduced through NI Water's compilation of the individual audited, post-audited proformas, with the

post-audit corrective actions applied, are outlined as follows. 1. [FD21 Annex T Ref 3 \[NI Water Alpha Ltd - WTWs Treatability Improvements\]](#)..... Hopefully, the reissue of Table 47 with the latest text eliminates this problem. Regards, X

We have also seen the NIW/UR correspondence dated 20th July 2022 titled “AIR21 and AIR22 errata”, with a note of post-audit changes to Section 3 of Table 47 [\[NI Water Alpha Ltd - WTWs Treatability Improvements\]](#). The email incorporates an attachment on file as “CC_Table47.PDF” as a replacement for the NIW’s Table 47 submission dated 8th July 2022.

2. FD21 Annex T Ref 5 [Refresh of DG2 Register]. Half of the post-audit version of the 5 page-proforma is included.
3. FD21 Annex T Ref 10 [Event Duration Monitors WwPS/CSOs]. Milestone date of "Submit updated programme to UR" changed from 2021-27 [post-audit version of proforma] to Jul 22 [final version submitted to the UR].

In addition, Target date for milestone "Delivery of first 41 sites" changed from "Mar-2022" [post-audit version of proforma] to "Pdu#55#" [final version submitted to the UR].

4. FD21 Annex T Ref 15 [Innovation Initiatives]. Material mismatch of five milestones in the post-audit version of proforma set against the final version submitted to the UR.
5. FD21 Annex T Ref 17 [Raw Water Trunk Main Rehabilitation]. Half of the post-audit version of the 3 page-proforma is included. Justifications for some target dates removed.
6. FD21 Annex T Ref 18 [Culmore DA KL554 - Skeoge Link Road]. Omission of milestone titled 'Engage with UR staff on the timing of additional engagement, reviews and the determination of any outcomes flowing from the successful completion of the development stages.' in the final version of proforma submitted to the UR.

2. Audit Scope and Approach

2.1 Context

NI Water’s activities on its PC21 Development Outputs [£60m worth of surveys, investigations, studies, tools development, trials and innovation] represent the work which the Company undertakes to develop its capability and introduce new techniques for the long term development of the services it provides to consumers and the **cost** of those services. Delivery of the work aims to ensure that NI Water is able to identify and balance investment priorities and maximise the benefits delivered to consumers.

For the PC21 period, a set of 25 objectives (aligned to the Development Outputs) was established as part of the price control process and set out in Table 3.3 of the Utility Regulator (UR)’s PC21 final determination. In its PC21_Appendix_4.3_PC21_Development_Outputs, the Company proposed 23 Development Outputs. Table 47 of the Annual Information Return provides a structure for NI Water to report progress on the delivery of development outputs associated with the agreed development objectives for the PC21 period.

2.2 Scope

The scope of our Table 47 reviews and audits is dictated by the UR’s AIR22 Reporter Guidance specific requirements, outlined as follows.

- a) The Reporter should review the company submission and compare this to the information submitted in ‘PC21_Appendix_4.3_PC21_Development_Outputs’ of its business plan submission and presented in Annex T of the UR’s PC21 FD.

- b) The Reporter should comment on progress against the original proposals and highlight any areas where the company's plans have changed materially, both in terms of the scope/extent of the work being undertaken and the timeline for delivery.

2.3 Approach

Our audit approach is **evidence-based**, focussed on the UR's scope outlined in Section 2.2.

The method consists of seven separate but inter-related steps covering the following Tasks:

- development of an Audit Template (**see Xs in Appendix C**) to fulfil the UR's AIR22 specific requirements
- review of NI Water's draft submission
- audit meeting with each of the Company's Auditees for each of the 25 PC21 Dos
- provision of audit feedback to Auditees
- closure of post-audit corrective actions (where appropriate) to the audit programme timescales and finalisation of the Audit Templates and related commentaries.

The approach is illustrated in Figure TC_47_1.

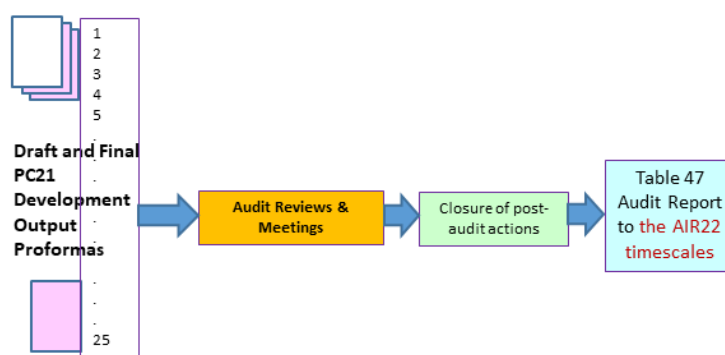


Figure TC_47_1: Illustration of Audit Approach

The RAG ratings applied to determine the strength of evidence provided by NI Water for our reviews and commentary against the audit scope are defined as follows.

Red = Insufficient evidence/material issue (s) for aspects of submission related to alignment with the UR monitoring expectation outlined in the UR's Annex T of the FD21 and/or material changes to the original Development Output proposal (set out in NIW's PC21_Appendix_4.3_PC21_Development_Outputs).

Amber = Needs further evidence to prove alignment with the UR monitoring expectation and/or material changes to the original Development Output proposal (set out in NIW's PC21_Appendix_4.3_PC21_Development_Outputs).

Green = Good evidence underpinning alignment with the UR monitoring expectation outlined in the UR's Annex T of the FD21 and/or material changes to the original Development Output proposal (set out in NIW's PC21_Appendix_4.3_PC21_Development_Outputs).

3. Strength of Evidence Evaluation

3.1 Introduction

Individual Development Outputs are referenced as individual Sections of the NI Water's AIR22 Table 47 returns for the 25 Development Outputs set out in the PC21 final determination.

Therefore in the Reporter's AIR22 audit commentary for Table 47, S1 refers to the Section 1 Development Output or DO [ref 1 in FD21 Annex T and titled "Consumer Engagement"], S2 applies to ref 2 in FD21 Annex T [Consumer Protection / Customer Care Register] and S3 relates to ref 3 in FD21 Annex T [NI Water Alpha Ltd - WTWs Treatability Improvements] etc.

3.2 Strength of Evidence Evaluation

Through our initial audit meetings with NI Water's Auditees, we found that there were incomplete or missing evidence in the NI Water's pre-audit proformas for its 25No, PC21 DOs, being reported through the AIR22's Table 47 submission.

We suggested a number of post-audit corrective actions to address specific gaps to demonstrate alignment with the UR's monitoring expectation outlined in the UR's FD21 Annex T and the scope of our audits.

A summary of the evidence provided for each of the PC21 Development Outputs audited is given in Appendix B.

Late Evidence Note:

On 25th July 2022, 28 days after the last call for the Table 47 Section 11 [S11] evidence (on 27th June 2022) and following NI Water's review of the draft version of the Reporter's report, the Company provided a late evidence note through email correspondence, copied as follows.

*"X, Due to staff leave, this is a little late. But, for completeness, I have uploaded the Cranfield DAP needs and options report to the extranet site. This was referenced in your AIR report as "missing evidence".
Regards, X."*

An overview of our strength of evidence evaluation is shown in Table TC_47_1. **Details are given in Appendix A.**

Table TC_47_1: Overview of Table 47 Strength of Evidence Evaluation

RAG Assessment Template Heading	RAG	Note against the Amber RAG item
Activity Completed to Date and its Outcome	Amber	Missing evidence for claim of "activity completed" – see notes to Table TC_47_1
Planned Next Steps for Delivery	Green	
Changes to Original Proposal	Green	
Alignment of Commentary with UR Monitoring Expectation	Green	
Risk of Delivery of Target Dates for Development Output	Green	
Target Dates for Solution Investment	Green	
Commentary on Link between Development Outputs	Green	

Note to Table TC_47_1

- ☐ The following PC21 Development Outputs reported in the AIR22 Table 47 submissions are missing evidence for claims of "activity completed".
 - a) S11 - Cranfield Catchment, Kilkeel Storm Separation [SP12g]
 - b) S19 - LWWP Networks [SP 12b & 12d]
 - c) S20 - LWWP Wastewater Treatment Works [SP16b]

d) S25 - Addressing scope uncertainty for the Mid-term Review [SP 12 & 16]

4. Audit Findings including Challenges to the Company

4.1 Overview

1. **Activities Completed to Date and its Outcome.** We checked gaps in reports of NI Water's activities completed to date and outcomes and the strength of evidence of claims on work done. We are broadly satisfied with the evidence provided in support of activities completed to date and outcomes. The exceptions being the missing evidence for 5 of the 25 Development Outputs highlighted through the notes to Table TC_47_1.
2. **Planned Next Steps for Delivery.** We identified issues related to links between key milestones and commentary on planned next steps for delivery. We also identified issues related to lack of clarity on what the UR expected programme update on delivery of Development Outputs should look like – timeline or Gantt chart?
3. **Changes to Original Proposal.** We identified material changes in Company plans for some Development Outputs both in terms of the scope/extent of the work being undertaken and the timeline for delivery. We also identified lack of commentary on the appropriateness of the original cost estimates set against activities completed and planned, and changes to the DO and solution investment milestones/progress status notes.

We can confirm that Auditees closed out the identified post-audit actions in this regard.

4. **Alignment of Commentary with UR Monitoring Expectation.** Some of the Company's AIR22 reports are not aligned to the UR monitoring expectations highlighted in Annex T of the FD21. We raised corrective actions in this regard.

We can confirm that where we identified post-audit actions, these actions have been closed out to finalise the AIR22 returns.

5. **Risk of Delivery of Target Dates for Development Output.** Uncertainties introduced through removal of the FD21 Annex T milestones and addition of new ones may result in increased risk of not meeting the target delivery dates for the Development Outputs. We identified that some milestones due for completion by 31st March 2022 were taken out of the AIR22 report without justifications. We raised corrective actions in this regard.

We can confirm that Auditees have closed out the identified post-audit actions concerning this aspect of our scope.

6. **Target Dates for Solution Investments.** We note that some FD21 Annex T milestones for solution investment have been removed from the AIR22 report. A solution milestone was planned to be delivered by the end of the AIR22 report year, but the milestone was changed in the AIR22 report to "unknown".

NI Water addressed our feedback points in this regard.

7. **Commentary on Link between Development Outputs.** We identified missing information on links between some of the Development Output activities.

For example, there is a link between S16 (Urban Drainage Modelling - Studies to Inform PC27 - Top 271 Priority Drainage Areas), S09 (WwPS / CSO Quality (UID)), S19 (LWWP Networks), S20 (LWWP Wastewater Treatment Works), S25 [Addressing scope uncertainty for the Mid-term Review]. We can

confirm that where we identified post-audit actions, these actions have been closed out to finalise the AIR22 returns.

4.2 Programming Issues

Our review of the Company's post-audit AIR22 Table 47 return proformas for its DOs, identified a number of programming issues, with some examples outlined as follows.

1. The pre-audit version of the proforma for Section 3 (S3) of NI Water's Table 47 submission [Development Output titled "NI Water Alpha Ltd - WTWs Treatability Improvements"] assumed that the AIR22 proforma milestones represent the FD21 Annex T's UR monitoring expectation item stated as *"Develop and submit an updated programme for the delivery of this objective"*. **[Target: June 2022][Status: Complete]**, with no evidence to prove that the milestone is complete. **We challenged the Company about this observation.**

In the post-audit version of the S3 proforma, NI Water changed the target date and status of the "Develop and submit an updated programme for the delivery of this objective" milestone to **[Target: Sept 2022][Status: On Target]**.

2. The pre-audit version of the proforma for Section 4 (S4) of NI Water's Table 47 submission [DWD Recast & Emerging Issues Study] incorporates a milestone titled *"Submission of programme to UR"* **[Target: June 2022][Status: On target]** aimed at fulfilling the FD21 Annex T's UR monitoring expectation item stated as *"Develop and submit an updated programme for the delivery of this objective"*. In the absence of any evidence to demonstrate availability of the programme at audit, **we challenged the Company about this audit observation.**

In the post-audit version of the S4 proforma, and in response to our audit challenge, NI Water added another milestone to its final proforma titled *"Submit updated programme to UR"* **[Target: 31 Dec 2022][Status: On target]**.

3. The post-audit version of the S9 [WwPS / CSO Quality (UID) and WwPS (Capacity increase)] AIR22 proforma incorporates a "Develop and submit an updated programme for the delivery of this objective" milestone **[Target: July 2022][Status: On target]**.
4. The post-audit version of the S22 [AD - Asset Strategy - Water Asset Performance Modelling] AIR22 proforma had a "Submit updated programme to UR" milestone **[Target: March 2023][Status: On target]** as a response to the FD21 Annex T's UR monitoring expectation item stated as *"Develop and submit an updated programme for the delivery of this objective"*.

Across each of our 22 individual DO audits [for which the UR's monitoring expectation of *"Develop and submit an updated programme for the delivery of this objective"* applies], we note that there is a confusion over what the Annex T's UR monitoring expectation for DO delivery programmes looks like – whether this is a simple timeline or Gantt charts with dependencies highlighted.

4.3 Cost Reporting Issues

The pre-audit versions of the NI Water's AIR22 proforma returns did not have any statements of any changes to the original FD21 Annex T proposals. For example (by reference to Section 2.6 of the UR guidance on Table 47 on file as "NIAUR_air22_repreq_Sec2_Chap47 01.00.PDF") in terms of scope, cost and timelines for delivery ref. **We challenged this observation and suggested post-audit corrective actions.**

In its response, the Company provided post-audit versions of the proforma documents across the 25 FD21 DOs, with a range of statements as updates of the cost information originally submitted in NI Water's Business Plan (and reproduced in the FD21). Examples of the cost update statements provided by the Company are noted as follows.

1. The S23 [Facilities H&S Compliance]'s return incorporated a statement of the FD21 Annex T's estimated spend on Development Objective of £10m, updated for inflation and 4% efficiency to £10.5m. Estimated Capital Investment on Solution is TBC.
2. The S18 [Culmore DA KL554 - Skeoge Link Road]'s return stated that updates to Annex T costs are to be determined going forward but will change as the project moves through the NIW Capital Works Programme Gateways.
3. The S4 [DWD Recast & Emerging Issues Study] proforma noted that the Annex T cost stated as "spend on the Development Objective" (£0.283m) should remain.
4. The S9 [WwPS / CSO Quality (UID) and WwPS (Capacity increase)]'s return confirmed that the Annex T's estimated spend on Development Objective remains unchanged (£14m).

Through our reviews and audits, we note that there is no Company process for providing updates of cost information originally submitted in NI Water's Business Plan (and the FD21 Annex T), with respect to the delivery of the Development Outputs and the associated solution investments.

4.4 Consistency of Progress Reporting Issues

The UR's PC21 FD Annex T identified links between DO refs 09 (WwPS / CSO Quality (UID) and WwPS (Capacity increase)), 19 (LWWP Networks), 20 (LWWP Wastewater Treatment Works) and 25 (Addressing scope uncertainty for the Mid-term Review).

Our review of the Company's post-audit AIR22 Table 47 return proformas for its DOs, highlighted consistency of progress reporting issues particularly where there are links between DOs, with specific examples outlined as follows.

1. There are links across and between the S9 [WwPS / CSO Quality (UID) and WwPS (Capacity increase)], the S16 [Urban Drainage Modelling - Studies to Inform PC27 - Top 271 Priority Drainage Areas] and the S19 [LWWP Networks] Development Outputs. Two key milestones from the S19 Development Output [LWWP Networks]'s AIR22 return are:
 - ☐ Outcome (Needs Stage) of Drainage Area Plans or DAPs [**Target: Q1 2021**][**Status: Complete**]; and
 - ☐ Outcome (Needs Stage) of Integrated Environmental Modelling or IEM [**Target: Q4 2021**][**Status: Complete**].

We know from our audit of Table 40b AIR22 returns on Delivery of DAPs and IEMs that there is a mismatch between the S19's stated target dates and status reports when set against the Table 40b returns. We therefore note that there is an inconsistency of the reported project milestones from the S19 return compared with the dates incorporated into the Company's Table 40b submission. **We also note that there is a need for better alignment of the target dates and status updates notes in the S19 and S20 AIR22 returns for Table 47 with the dates in the Company's Table 40b returns.**

2. The S15 [Innovation Initiatives] is linked to the S16 [Urban Drainage Modelling - Studies to Inform PC27 - Top 271 Priority Drainage Areas], the S9 [WwPS / CSO Quality (UID) and WwPS (Capacity increase)] and the S25 [Addressing scope uncertainty for the Mid-term Review] DOs. Although the post-audit version of the S15's AIR22 Table 47 return proforma recognises these links and their inter-dependencies, the return lacks details of how these DOs relate to each particularly with respect to the sequencing of the target milestones that reflects these associations.
3. The S3 [NI Water Alpha Ltd - WTWs Treatability Improvements] DO's new milestone titled "Ballinrees – Pilot Study" [**Target: Feb 22**][**Status: Complete**] does not reflect the association with the S15 [Innovation Initiatives]'s linked milestone titled "Ballinrees Filter Media trials to establish metal removal and THM reduction", with a target date of **Jul 22 to Dec 22** [**and Status note of "On going"**]. We identify

a need for better alignment of the target dates and status updates notes in the S3 and S15 AIR22 returns for Table 47.

There are links across and between a number of the DOs. For these DOs, there should be consistency of the reported project milestones to inform the PC21 mid-term review.

5. Recommendations

1. Appoint a PC21 Development Output Coordinator, with responsibility for internal and external progress and cost reporting activities and to lead NI Water's engagement with the UR on delivery of DOs as the Table 47 owner.
2. Prepare a method statement (with details of the procedures, systems and validation checks used) for the compilation of the NI Water's AIR22 Table 47 submission.
3. Address issues raised through the Reporter's Team audit of the Company's Table 47 submission (see Section 4) namely: programming issues, cost reporting issues and consistency of progress reporting issues.

References

1. NIAUR, 2022. Annual Information Return 2021-22 (AIR22) – Reporter Letter with Table 47 Audit Guidance on file as "2022-04-15 AIR22 Reporter Letter.PDF".
2. NIAUR, 2022. Annual Information Return Reporting Requirements and Definitions Manual for AIR22. Tables & Commentaries. Chapter 47 Development Outputs Covering: Delivery of Development Outputs.
3. NI Water, 2022. Pre-Audit and Post-Audit versions of the AIR22 Completed Proformas for Table 47 Submission.
4. NI Water, 2022. Evidence Provided alongside Post-Audit versions of Completed Proformas for Table 47 Submission – see summary in Appendix B.

Appendices

Appendix A: Strength of Evidence Evaluation for Each Development Output

Appendix B: Summary of Evidence Provided for Each Development Output

Appendix C: Xs



Appendix A: Strength of Evidence Evaluation for Each Development Output

Table 47 Audits – Delivery of PC21 Development Outputs

Strength of Evidence Evaluation

Rating	Meaning
G	Good evidence underpinning alignment with the UR monitoring expectation outlined in the UR's Annex T of the FD21 and/or material changes to the original Development Output proposal (set out in NIW's PC21_Appendix_4.3_PC21_Development_Outputs).
A	Needs further evidence to prove alignment with the UR monitoring expectation and/or material changes to the original Development Output proposal (set out in NIW's PC21_Appendix_4.3_PC21_Development_Outputs).
R	Insufficient evidence/material issue (s) for aspects of submission related to alignment with the UR monitoring expectation outlined in the UR's Annex T of the FD21 and/or material changes to the original Development Output proposal (set out in NIW's PC21_Appendix_4.3_PC21_Development_Outputs).

Pre-Audit:

Reviewed NI Water's AIR22 25No Development Output submissions

Audit:

Audit meeting: Auditor/Auditees

Post-Audit:

NI Water's Auditees addressed post-audit (corrective) actions to the AIR22 audit programme timescale

Auditor closes out post-audit actions (where appropriate) to finalise Audit Template and report.

Table 47 Audits

Highlights of the Reporter’s Team Audit Findings: RAG Assessment
















































































































































































Development Output Section [Sub-Programme ID]		Activity Completed to Date and its Outcome	Planned Next Steps for Delivery	Changes to Original Proposal	Alignment of Commentary with UR Monitoring Expectation	Risk of Delivery of Target Dates for Development Output	Target Dates for Solution Investment	Commentary on Link between Development Outputs	Comment against RED or AMBER items
1	Consumer Engagement [N/A]								
2	Consumer Protection / Customer Care Register [N/A]								
3	NI Water Alpha Ltd - WTWs Treatability Improvements [SP04a]								
4	DWD Recast & Emerging Issues Study [SP04z]								
5	Refresh of DG2 Register [SP08z]								
6	Targeted Mains Renewals in High Leakage Areas [SP08z]								
7	Leakage Innovation [SP09z]								
8	Smart Networks – ITS Strategy [SP09z]								
9	WwPS / CSO Quality (UID) and WwPS (Capacity increase) [SP 12b & 12c]								Missing evidence – ‘activity completed’
10	Event Duration Monitors WwPS/CSOs [SP12b]								
11	Cranfield Catchment, Kilkeel Storm Separation [SP12g]								Missing evidence – ‘activity completed’
12	Storm Water Separation [SP12g]								
13	Real Time Network Modelling [SP12z]								
14	Urban Drainage Modelling - Live Models for IOC [SP20g]								

Table 47 Audits

Highlights of the Reporter’s Team Audit Findings: RAG Assessment

Development Output Section [Sub-Programme ID]		Activity Completed to Date and its Outcome	Planned Next Steps for Delivery	Changes to Original Proposal	Alignment of Commentary with UR Monitoring Expectation	Risk of Delivery of Target Dates for Development Output	Target Dates for Solution Investment	Commentary on Link between Development Outputs	Comment against RED or AMBER items
15	Innovation Initiatives [SP20g]								
16	Urban Drainage Modelling - Studies to Inform PC27 - Top 271 Priority Drainage Areas [SP20g]								
17	Raw Water Trunk Main Rehabilitation [SP 20 & 23c]								
18	Culmore DA KL554 - Skeoge Link Road [SP24a]								
19	LWWP Networks [SP 12b & 12d]								Missing evidence – ‘activity completed’ /DO update reason
20	LWWP Wastewater Treatment Works [SP16b]								Missing evidence – ‘activity completed’
21	AD - Asset Strategy Wastewater Asset Performance Modelling [SP20g]								
22	AD - Asset Strategy - Water Asset Performance Modelling [SP20g]								
23	Facilities H&S Compliance [SP20e]								
24	Smart Meters [SP19]								
25	Addressing scope uncertainty for the Mid-term Review [SP 12 & 16]								Missing evidence – UR agreement to defer projects

Appendix B: Summary of Evidence Provided for Each Development Output

FD21 Annex T Ref	DO Section (S) in AIR22 Table 47 Submission	Evidence Doc Ref	File Type	File Name	NOTES e.g. Post Audit Proforma or Audit Template Questions Etc.
1	S1	S1-1	Word	12. DMB VoC Mar22	Section A - Ref 1
1	S1	S1-2	Word	12. WPL VoC Mar22	Section A - Ref 1
1	S1	S1-3	Word	12. WWPL VoC Mar22	Section A - Ref 1
1	S1	S1-4	PDF	22-007930 NI Water Omni Research Report v5 240322 IntCIUuseOnly.potx	Section A - Ref 1
1	S1	S1-5	Email	FW NI Water Codes of Practice Review 2021	Section A - Ref 1
1	S1	S1-6	Email	RE CMSAT Meeting #1 PC21	Section C - Ref 10
1	S1	S1-7	Email	RE NIW Codes of Practise Review	Section C - Ref 10
1	S1	S1-8	Email	RE Post-Audit Actions Table 47 Section 1 and Section 2	Email with 11 attachments
2	S2	S2-1	Email	RE Post-Audit Actions Table 47 Section 1 and Section 2	Email with 11 attachments
2	S2	S2-2	Screenshot	Screenshot_20220609-130522_Chrome	Supporting information
2	S2	S2-3	PDF	3622123 - Pre-certification Assessment Report - BS 18477 remote	A-1 & C-10
2	S2	S2-4	PDF	696301 NIW CUSTOMER CARE LEAFLET - FINAL Crystal Mark	Supporting information
2	S2	S2-5	Email	Best Practice Framework programme	C-10
2	S2	S2-6	Presentati on Slides	CMAST 110422v3.pptx	A.1
2	S2	S2-7	Email	RE CMSAT Meeting #1 PC21	A.1
2	S2	S2-8	PPTX	NIW Response to BPF 29 Apr 2022	C-10
3	S3	S3-1	Word	CC_Table47_Section_3_Alpha_Treat ability v6	Post Audit Proforma
3	S3	S3-2	Word	DWI NIW Compliance Programmes Meeting 27.01.2022 - Final Minutes	A-1
3	S3	S3-3	Email	FW Ballinrees WTW - Regulation 31(4)(b) Notices (MCPA and TO)- Ballinrees WTW Capital Solution Briefing Note - sent 03.03.2022	E-13
3	S3	S3-4	Zip	JL759 - Ballinrees WTW - Capital Solution - Reg 31 Notices - MCPA and T&O.zip	E-13
4	S4	S4-1	Word	CC_Table47_Section_4_DWD_Recast - post audit 10.06.2022	Post Audit Proforma
4	S4	S4-2	Excel	Summary of Highlighted Activities and Dates for Indicative Programme_AMcM response 31.05.2022	A-1
5	S5	S5-1	Word	CC_Table47_Section_5_DG2_Refresh _Post_Audit	Post Audit Proforma
5	S5	S5-2	Excel	DG2 Register 20.21_Pre Refresh	A-1
5	S5	S5-3	Excel	DG2 Register 21.22_During Refresh	A-1

FD21 Annex T Ref	DO Section (S) in AIR22 Table 47 Submission	Evidence Doc Ref	File Type	File Name	NOTES e.g. Post Audit Proforma or Audit Template Questions Etc.
5	S5	S5-4	Excel	DG2 Register 22.23_Post Refresh	A-1
5	S5	S5-5	PPTX	DG2 Register Refresh_Overview and Example	A-1
5	S5	S5-6	Excel	DG2 Register_Summary of Refresh	A-1
6	S6	S6-1	Word	CC_Table47_Section_6_Targeted_Leakage	Post Audit Proforma
6	S6	S6-2	Excel	Leakage Summaries	A-1
6	S6	S6-3	PPTX	PC21 Leakage Innovation Table 47 Section 6	A-1
7	S7	S7-1	Word	CC_Table47_Section_7_Leakage_Innovation	Post Audit Proforma
7	S7	S7-2	Excel	PC21 Leakage Innovation Table 47 Section 7 v2	C-9
7	S7	S7-3	PPTX	Satellite POI Defects - trial analysis	E-13
8	S8	S8-1	Word	CC_Table47_Section_8_Smart_Networks V6	Post Audit Proforma
8	S8	S8-2	PPTX	AIR Report Smart Networks Table 47 Section 8 Final V3	A-1 & E-13
8	S8	S8-3	Word	Approval Extracts	A-1
8	S8	S8-4	Word	BC C&OD Capital Final 2021-22 Extracts	A-1 & E-13
8	S8	S8-5	PDF	WBS Smart Controls FDS Rev 4 Feb22	A-1
8	S8	S8-6	Word	WPL MTM - ITS Report 30-05-22	A-1
9	S9	S9-1	Word	AIR DEVELOPMENT OBJECTIVES 9,13,16 Final R1	Post Audit Proforma
10	S10	S10-1	Word	CC_Table47_Section_10 Event Duration Monitors v3	Post Audit Proforma
10	S10	S10-2	Excel	Copy of EDMs in Beneficial Use	A-1
10	S10	S10-3	Word	KI696Small Business Case	A-1
10	S10	S10-4	PPTX	Typical EDM WwPS and CSO Overflows	A-1
10	S10	S10-5	Word	EDM SubGroup Draft Minutes	A-1
10	S10	S10-6	Word	ToR EDM Sub Group	A-1
10	S10	S10-7	Email	EMD Sub-Group meeting placeholder	A-1
10	S10	S10-8	Excel	Copy of EDMs Output Report	B-1
10	S10	S10-9	PPTX	EDM Update	B-1
10	S10	S10-10	PPTX	EDM Presentation NIWater	B-1
11	S11	S11-1	Word	CC_Table47_Section_11_Cranfield_Catchment - JG June 2022	Post Audit Proforma
12	S12	S12-1	Word	CC_Table47_Section_12_Storm Water Separation v4	Post Audit Proforma
	S12	S12-2	Word	KS874 Small Business Case	A-1
13	S13	S13-1	Word	AIR DEVELOPMENT OBJECTIVES 9,13,16 Final R1	Post Audit Proforma

FD21 Annex T Ref	DO Section (S) in AIR22 Table 47 Submission	Evidence Doc Ref	File Type	File Name	NOTES e.g. Post Audit Proforma or Audit Template Questions Etc.
14	S14	S14-1	Word	CC_Table47_Section_14_Live_Network_Models_for_IOC-updated 24th June 12.29	Post Audit Proforma (NIW advised of the name change: [FD21 Annex T name] - Urban Drainage Modelling - Live Models for IOC (Updated name) - Live Network Models for IOC Note: change control will follow)
14	S14	S14-2	PDF	2022-04-11_Technical_Analysis_FLOW North Coast	A-1
14	S14	S14-3	PDF	BH4024-RHD-ZZ-XX-RP-Z-North Coast 0001_Final (003)	A-1
14	S14	S14-4	PDF	Monitoring FLOW North Coast 20211007	A-1
14	S14	S14-5	Email	Evidence follow up	A-1
15	S15	S15-1	Word	PC21 Development Outputs summary milestones - Post Audit Response V3 20220621	Post Audit Proforma
15	S15	S15-2	PDF	Innovation Monthly Catch up 14 Dec 2021	A-1
15	S15	S15-3	PDF	Innovation Monthly Catch up 18 Oct 2021	A-1
15	S15	S15-4	PDF	Innovation Monthly Catch up Nov 2021	A-1
15	S15	S15-5	PDF	NIEA NIW Investment Group - Monthly meetings	A-1
15	S15	S15-6	PDF	NIW_Report summary FOG 500 Trial June 2022	A-1
15	S15	S15-7	PDF	PC21 Environmental Quality Group Team Meeting Invitation for 24th June 2022	A-1
15	S15	S15-8	Email	RE AIR 21 - Reporter - Innovation Development Output	A-1
15	S15	S15-9	PDF	2020.12.17 Dundrum IEM State of Play	A-1
15	S15	S15-10	PDF	20220614 FW_ Innovations Pages	A-1
15	S15	S15-11	PDF	Innovation Meeting with AD Director 23 Sep 2021	A-1
16	S16	S16-1	Word	AIR DEVELOPMENT OBJECTIVES 9,13,16 Final R1	Post Audit Proforma
17	S17	S17-1	Word	13 JUNE POST AUDIT RAW WATER	Post Audit Proforma
17	S17	S17-2	Excel	NIW Raw Water Risk & Consequence Model	B-4
18	S18	S18-1	Word	CC_Table47_Section_18_Culmore_D A_KL544 - JG June 2022 Ver 2	Post Audit Proforma
19	S19	S19-1	Word	CC_Table47_Section_19_20_LWWP V4 240622	Post Audit Proforma

FD21 Annex T Ref	DO Section (S) in AIR22 Table 47 Submission	Evidence Doc Ref	File Type	File Name	NOTES e.g. Post Audit Proforma or Audit Template Questions Etc.
20	S20	S20-1	Word	CC_Table47_Section_19_20_LWWP V4 240622	Post Audit Proforma
21	S21	S21-1	Word	CC_Table47_Section_21_Ww_Asset_Perf_Modelling V3	Post Audit Proforma
22	S22	S22-1	Word	20th JUNE VERSION DO SUDIT	Post Audit Proforma
22	S22	S22-2	Word	AUDIT JI215 Small BC 9th FEB V2.docx	A-1
22	S22	S22-3	Word	M Glackin AIR 22 WIIM and DRRM Text Update.docx	A-1
22	S22	S22-4	email	RE Trunk Main Risk & Consequence Model - Ranked GIS Table.msg	A-1
22	S22	S22-5	email	RE Valve Operability Phase 2 VIEW.msg	A-1
23	S23	S23-1	Word	Table47_Section_23_Facilities_HS_C compliance	Post Audit Proforma
23	S23	S23-2	Excel	DS_H&S Strategy Work Programme 2020-2025	A-1
23	S23	S23-3	PPT	EC BAU Slides - 3rd May 2022	A-1
24	S24	S24-1	Word	CC_Table47_Section_24_Smart_Meters	Post Audit Proforma
24	S24	S24-2	email	Queens Smart Trial	A-1
24	S24	S24-3	Excel	Queens New Meters.xlsx	A-1
24	S24	S24-4	Excel	Queens Hourly.xlsx	A-1
24	S24	S24-5	Excel	Queens 15min.xlsx	A-1
24	S24	S24-6	PPT	NIW update 08032022.pptx	A-1
24	S24	S24-7	Email	FW Diehl Smart Metering Trials.msg	A-1
24	S24	S24-8	Excel	Connectivity_20220610_164043.xlsx	A-1
24	S24	S24-9	PDF	Queens Uni Network Proposal v4	A-1
25	S25	S25-1	Word	CC_Table47_Section_25_Mid_Term_Review_Scope_Uncertainty	Post Audit Proforma
25	S25	S25-2	Excel	DT_Table40_LAI workings	A-1
25	S25	S25-3	PDF	PC21 Scope Certainty Batch 2 Summary Report	C-8
25	S25	S25-4	Excel	PC21 Scope Certainty Batch No1 Report Appendix B IPAC Costs Rev2.1	A-1
25	S25	S25-5	Excel	PC21 Scope Certainty Batch No2 Report Appendix B IPAC Costs	A-1
25	S25	S25-6	Email	Table 47 Section 25 Evidence	A-1
25	S25	S25-7	Email	RE_ Outstanding Actions_ Post-Audit Actions_ Table 47 Section 25	A-1 & C-7
25	S25	S25-8	Excel	Scope Certainty Tracker.xlsx	C-7



Appendix C: Xs

