



Annual Information Return 2023

Reporter's Table Commentaries [Public Domain
Version]

November 2023

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1 Context

1.1 Introduction

The Reporter's Annual Information Return 2023 (AIR23) 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) AIR23 submission, for the financial year 2022-23, as identified through the Reporter's Audit Plan dated 24th March 2023.

1.2 Reporter's AIR23 Audit Scope

The scope of the Reporter's work is defined in the Utility Regulator (UR)'s letter dated 24th February 2023.

The scope is limited to the following AIR23 Tables with the associated UR guidance notes reproduced here for completeness.

- ☐ Table 5 Key Outputs (including new customer satisfaction measures) Lines 19 and 20. Lines 22, 23 and 24-25.
 - Lines 19 and 20 Total Contacts and Unwanted Contacts
- ☐ Table 11 Activities only (including additional output measures) and not the asset balance. Lines 2-10, Lines 11, 13-17, 18-21, 22-24, 25-26 and 27-28.
 - 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. Lines 3-13c, 16a-17b, 18-22, 23-25, 26-28, 29-33 and 34-35.
 - We audited delivery of nominated outputs and BU dates on a sample basis.
- ☐ Table 40 - Capital Investment Monitoring (CIM). All Lines/Columns.
 - 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. Columns 1-11.
 - We carried out an evidence-based enhanced audit of Table 40b following the approach described in our approved Audit Plan.
- ☐ Table 47 Development Outputs – 25No PC21 Annex T FD Development Outputs.
 - 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 introduces the Table commentaries.
- Section 2.2 describes the AIR23 Key Outputs Table audited.
- Section 2.3 highlights the AIR23 Non-Financial Tables audited.
- Section 2.4 presents the AIR23 Capital Investment & Drainage Area Plans (DAPs) and Integrated Environmental Models (IEMs) Delivery Tables audited.
- Section 2.5 describes the AIR23 Development Outputs Table audited.
- Appendix A presents the individual Table commentaries with audit findings and recommendations.

2 Table Commentaries

2.1 Introduction

The Table commentaries in this document are arranged in sequential order according to the following headings: key outputs, non-financial, capital investment, DAPs & IEMs delivery and the PC21 development outputs.

Our audit and reporting of Tables 5, 11, 16 and 40 follows a standard approach used for these Tables in previous years. The audits and reporting of Tables 40b and Table 47 are based on enhanced audit approach, which is evidence-based.

2.2 Key Outputs

The AIR23 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.

2.3 Non-Financial

The AIR23 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.

2.4 Capital Investment, DAPs & IEMs Delivery

The AIR23 Capital Investment and the DAPs & IEMs Tables audited were:

- Table 40 - Capital Investment Monitoring (CIM). All Lines.
- Table 40b - Delivery of Drainage Area Plans (DAPs) and Integrated Environmental Modelling (IEM). 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.

2.5 PC21 Development Outputs

The AIR23 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.





Appendices

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 2023

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 AIR24, or other noteworthy comment
	Minor exceptions
	Material exceptions
N/A	Not applicable to report

1. Key Findings

The key findings of the AIR23 Table 5 audit, against the AIR23 audit criteria are summarised below.

AIR23 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		The methodologies for all lines have stayed consistent since AIR22.
Assumptions – reasonableness and applicability		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, 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.
Clarity of audit trails – evidence of appropriate audit trail		Evidence of clear audit trails was provided.
Confidence grades – documentation of appropriateness and rationale		Confidence grades were reviewed at audit and are considered to be appropriate, with supporting rationale documented.
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.

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 AIR23 Table set [Table 5] submitted by NI Water to the UR. No changes were noted in the line methodologies for all lines from previous years.

3. Performance and Significant Events

Total contacts and unwanted contactsLines 19-20

The definitions of 'contact' and 'unwanted contact' were updated in AIR19 and remained unchanged in AIR21. 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	AIR23
Line 19 - Total contacts	257,866	250,753	252,844	190,729	182,029	201,170	192,044
Line 20 - Unwanted contacts	110,197	105,964	75,569	67,013	70,204	66,064	57,327

The total contacts (Line 19) are reported as 192,044 in AIR23, which is lower than in AIR22 (about a 5% decrease). The total unwanted contacts (Line 20) reported in AIR23 was also lower than in AIR22 (about a 13% 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.

The Company did not offer any specific reason for the decrease in total contacts in AIR23. At audit, it was highlighted that weather can have a significant impact on unwanted contacts (Line 20). The Company states that:

"The reduction in AIR23 unwanted contacts is primarily due to the implementation of several improvement initiatives targeting unwanted contacts delivered as part of NI Waters PC21 Customer Action Plan. Some of the initiatives delivered over this period include customer journey reviews to reduce the need for customers to contact NI Waters and minimise repeat calls, improvements to automated telephony systems, changes to billing processes and increased promotion of social media and web channel activities."

NI Water keep monitoring monthly performance against target values for unwanted contacts. The targets were generally met. It reported that about 38% and 50% of the total unwanted contacts related to Sewerage Services and Water Services, respectively, which is similar to AIR22 (36% and 52%). 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 AIR22.

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 Eco. 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 AIR23 reporting period. This has remained consistent with AIR22 and decreased from 15 in AIR21.

First Point of Contact Resolved (FPOCR)

Line 22

The definition of FPOCR 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 change was introduced 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: $(\text{FPOCR} / \text{Contacts}) \times 100$ 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 AIR23 Data Table was 84.0% , which is the same as the reported figure for AIR22. The drop in this figure compared to previous years 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 Line 22 remains appropriate, for the reasons stated for the numbers in the commentary against 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 AIR20 all customers interacting with NI Water are requested to complete the survey. The Company advised that since AIR20, the survey is conducted across all channels.
- 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.

The value reported for Line 23 can fall between -100 (worst score) to +100 (best score). The calculated value in AIR23 is 36, which is an increase from the value reported for AIR22 (32).

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-19 pandemic and associated restrictions, significant changes were adopted to the survey methodologies since AIR21. 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 1,600 panellists were registered, from which 985 survey responses were received (about 62%).

Non-domestic surveys were conducted via Computer Assisted Telephone Interviewing (CATI). 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, building quota requirements by region with a view to ensuring maximum geographical representativeness.

The sample size of domestic customers that responded (985) is comparable to AIR22 (885), 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. We report in the table below the calculation used to check the figure in the Data Table for Line 24.

From the numbers stated in the commentary, overall satisfaction in AIR23 was 72% for domestic customers (considerably down from 81% in AIR22) and 77% for non-domestic customers (increased slightly from 76% in AIR22). The combined score of 73.7% indicates that overall satisfaction has decreased by about 5.5% since last year (79.2% in AIR22). The primary reason provided for the decrease in satisfaction

for domestic customers is a perception of poor infrastructure and the disposal of raw sewage into water courses, covered in media reports over the last year.

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 1 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 AIR23 mean score for Line 25 is 7.5, which remains unchanged from AIR22.

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 AIR22 and responded to the questions on the draft Table 5 commentary provided pre-audit. We 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 Line 19, 20 and 22 and A1 for Line 23-25.

6. Challenges to the Company, Recommendations & Suggested Actions

We identified the following minor suggested corrections at the time of audit:

- ☐ Add statement in commentary confirming that target was met for Line 20.
- ☐ Add total percentage for unwanted contacts (Line 20) in commentary.
- ☐ Add statement in commentary confirming that there have not been any anomalies in the data for this reporting year (Line 20).





7. References

- a) NIAUR_air23_repreq_Sec2_Chap05 01.00.pdf. The UR Guidance for AIR22 Table 5.
- b) NIAUR_air23_repreq_Sec2_Chap05a 01.00.pdf. The UR Guidance for AIR22 Table 5a.
- c) NI Water Data Table: DT_Table5_L13-25.xlsx
- d) NI Water Commentary: CC_Table5_Lines13-25.Docx
- e) NI Water Methodology: LM_Table5_Lines18-25.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 2023

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 AIR24, or other noteworthy comment
	Minor exceptions
	Material exceptions
N/A	Not applicable to report

1. Key Findings

The key findings of the AIR23 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 AIR23 audit criteria are summarised below.

AIR23 Table Criteria	RAG	Assessment
Independent review of performance against PC21 target (where relevant)		No material issues.
Methodology – consistency with the reporting process with clear control points		Methodologies were found to be consistent with current processes.
Assumptions – reasonableness and applicability		Assumptions are generally reasonable and applied appropriately.
Source data – completeness		Line 6: lack of evidence for the 0.81km of pipeline linked to the Parkmore Scheme in the reporting period. Data from older scheme used. Lines 18 [% overall compliance with drinking water regulations], 19 [% compliance at consumers tap] and 20 [% iron compliance at consumers tap]: it is noted that COVID-19 was still affecting the sampling with main impact on the Line 20 reporting. This has had some impact on reported figures. We note that this is outside of the Company's control. NIW confirmed that sampling is now back to normal.
Clarity of audit trails – evidence of appropriate audit trail		Lines 2-10: Data were mainly provided by other teams which can be traced back to source. We recommend improved data validation to increase confidence in the data sets. Lines 13-17: Improve the Company's AIR reporting framework, systems and processes for tracking the progress (and effectiveness of NI Water's water infrastructure investment) and progress in maintaining network models.
Confidence grades – documentation of appropriateness and rationale		Confidence grades appear to have been appropriately assigned.
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 (7) separate audits were carried out remotely using Microsoft Teams with the key NI Water system holders between 12th May and 26th May:

Date	Lines	No. of Audits
12/05/2022	L18-21	1
22/05/2023	L28	1
22/05/2023	L25-26	1
26/05/2023	L11	1
26/05/2023	L2-10, 13-17	1
26/05/2023	L22-24	1
26/05/2023	L27	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, we completed audits for Table 11 lines with the exception of the asset balance lines 1 (Block A) and 12 (Block C).

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 2022/23 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

- a) PC21 Year-1 performance: For AIR23, NIW reported 123.33km length for this line which is less than the baseline target for the year (139.667km) but higher than the Year-1 report figure of 101.62km.
- b) Cumulative by the end of Year-2 of PC21 performance: The NIW PC21 cumulative target is 838km giving an annual average of 139.667km. By the end of Year-2, NIW delivered a total length of 224.95km.
- c) Remaining performance in PC21: without achieving target in the both Year-1 and Year-2, NIW has to deliver 613.05km in the next four years, with an average of 153.263km per year.

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

- a) PC21 Year-2 performance: For AIR23, NIW reported 1,873 lead pipes through its proactive lead replacement programme, meeting the baseline target for the year of 1,844. It is higher than last year's figure of 1,864.
- b) Cumulative by the end of Year-2 of PC21 performance: A total of 3,737 lead pipes has been replaced in PC21 by the end of Year 2.
- c) Remaining performance in PC21: NIW has a target of proactively replacing 11,064 lead communication pipes over the price control period. To meet this PC21 target, NIW has to proactively replace 7,327 lead pipes in the next four years, with an average of 1,832 per year.

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-2 performance: For AIR23, NIW collected 99,447 samples and achieved an overall compliance of 99.91%, which exceeded the baseline target for the year (99.83%) by 0.08%. It should be noted that sampling, over the report period, was still affected by the COVID-19 restrictions. Therefore, the reported numbers are not representative.
- b) Cumulative by the end of Year-2 of PC21 performance: Not applicable.
- c) Remaining performance in PC21: NIW aims to carry on meeting the annual baseline target of 99.83% in the next four years.

Line 19 - Percentage compliance at consumers tap

- a) PC21 Year-1 performance: For AIR23, NIW collected 50,156 samples and achieved 99.88% compliance at consumers tap, which exceeded the baseline target for the year (99.74%) by 0.14%. It should be noted that sampling, over the report period, was still affected by the COVID-19 restrictions where the customer tap samples were mainly collected at upstream 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% over the next four years.

Line 20 - Percentage iron compliance at consumers taps

- a) PC21 Year-1 performance: NIW achieved 99.15% of iron compliance at consumers tap for AIR23, which exceeded the baseline target for the year (98.62%) by 0.53%. It should be noted that sampling was still affected by the COVID-19 restrictions where the customer tap samples were mainly collected at upstream service reservoirs. The reported numbers are therefore not representative.
- b) Cumulative by the end of Year-2 of PC21 performance: Not applicable.
- c) Remaining performance in PC21: NIW aims to meet the annual baseline target of 98.62% over the next four 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 2022 with a total of 18 failures. 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-2 of PC21 performance: Not applicable.
- c) Remaining performance in PC21: NIW aims to meet the annual baseline target of 0.00% over the next four years.

Nominated Water Service Outputs (Lines 22-24)

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

Line 22 - Completion of nominated trunk main schemes

- a) PC21 Year-2 performance: Whitespots B Trunkmain achieved Beneficial Use in Year 2 (2022/23) (AIR23). As a result, NIW delivered 1 scheme this year as planned. As in AIR22, NIW delivered 1 scheme earlier, hence the total delivery at the end of Year-2 is 2 schemes, meeting the baseline target of 2 scheme for AIR23.
- b) Cumulative by the end of Year-2 of PC21 performance: NIW has delivered a total of 2 nominated trunk schemes in PC21, meeting the proposed target.
- c) Remaining performance in PC21: NIW's FD21 target is to deliver a total of 14 schemes in PC21. In the next four years, NIW's delivery profile is $1 + 5 + 2 + 4 = 12$ schemes - i.e. 12 schemes are planned to be delivered on top of the 2 delivered to date. The Auditee indicated that even though the Company is confident of meeting the FD target, NIW would consider approaching the UR through the Mid-Term Review (MTR) process with a view to restating the FD target by reducing the total number of schemes remaining to 11 (from 12).

Line 23 - Completion of nominated water treatment works schemes

- a) PC21 Year-2 performance: For AIR23, NIW completed 3 schemes which achieved Beneficial Use in Year 2: Derg Treatability Improvements, Derg WTW MCPA PEO and Dorisland WTW Treatability Recommended Improvements. This exceeded the baseline target of 0.
- b) Cumulative by the end of Year-2 of PC21 performance: NIW has delivered a total of 4 nominated WTW schemes by the end of Year-2, against the total baseline target of 1 scheme.
- c) Remaining performance in PC21: The Auditee indicated that the Company's PC21 target is to deliver a total of 22 WTW schemes over the PC21 period. We note that this is different from the 'PC21 Annex E - Outputs 02.00.pdf' document's Table 38 numbers (dated May 2021), which shows that the FD21 target is 19 WTW schemes. The Auditee advised that the targets have been amended through the Output Review Group (ORG) and that the entries in Table 40a show the amended target.

Based on the FD21 target of 22 schemes (i.e. the PC21 entries in Table 40a), NIW would need to deliver 18 schemes over the next four years. Like the line 22 report, the Auditee also indicated that although the Company is confident of meeting the amended target, NIW would consider approaching the UR through the Mid-Term Review (MTR) process with a view to restating the FD target by reducing the total number of schemes to be delivered 21 (from 22).

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

- a) PC21 Year-2 performance: For AIR23, as expected, NIW has not delivered against the baseline target of 0.
- b) Cumulative by the end of Year-2 of PC21 performance: NIW has delivered a total of 1 nominated scheme in PC21 against the baseline target of 1 scheme by the end of Year-2.
- c) Remaining performance in PC21: NIW has a target of completing 4 improvements in PC21. They aim to complete 3 nominated improvements (X) in 2025-26 to meet the baseline target and the PC21 FD commitments.

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-2 performance: For AIR23, 210 school visits were carried out, less than the AIR22 number of 299. The baseline target of 176 visits for the year was met.
- b) Cumulative by the end of Year-2 of PC21 performance: NIW has carried out a total 509 school visits against the cumulative baseline target of 352 visits, an outperformance of 157 visits by the end of Year-2.
- c) Remaining performance in PC21: NIW plans to carry out 1,056 school visits over the PC21 period. To achieve the target, NIW needs to carry out an average of 137 visits per year for the next four years.

Line 26 - Number of Other Educational Events

- a) Year-2 performance. For AIR23, 63 education visits were carried out, slightly less than last year (64). The baseline target of 57 visits for the year was met.
- b) Cumulative by the end of Year-2 of PC21 performance. NIW carried out a total 127 educational visits against the cumulative baseline target of 114 visits, an outperformance of 13 visits over the two-year period.
- c) Remaining performance in PC21: NIW plans to carry out 342 school visits over the PC21 period. To achieve the target, NIW needs to carry out an average of 54 visits per year for the next four years.

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-2 performance. Three catchments were delivered in AIR23 against the baseline target of 3 for the year.
- b) Cumulative by the end of Year-2 of PC21 performance. Three catchments in total have interventions implemented over the two year period.
- c) Remaining performance in PC21: NIW aims to meet the PC21 committed level of delivering the management plan recommendations in 20 catchments. For the next four years, NIW will deliver the remaining 17 catchments and aims to meet the annual baseline target.

Line 28 - Number of treatability studies completed

- a) PC21 Year-2 performance. One study was completed in AIR23 against the baseline target of 0 for the year.
- b) Cumulative by the end of Year-2 of PC21 performance. A total of one study was completed by the end of Year-2, exceeding the cumulative baseline target of 0.
- c) Remaining performance in PC21: To meet the PC21 committed target of delivering 12 studies, NIW will need to deliver the remaining 11 treatability studies by 2024-25 to inform its PC27 business plan investment requirements.

3.2. AIR22 to AIR23 Movements

Changes of note are summarised below:

- The total of new, renewed or relined mains (Line 6a) increased by 21.94km from AIR22 and the total new mains (Line 6) has increased by 22.68km.
- Between AIR22 and AIR23, lead communication pipes replaced (Line 9) reduced by 4% where no replacement was carried out as a consequence of water quality sample failures (Line 8a).
- The % Iron compliance at consumers tap reduced slightly since AIR22 due to customer tap samples being collected to a large extent from upstream service reservoirs.

4. Summary of Audit Checks

We have considered the Reporter guidance set out in the NIAUR AIR23 requirements in assessing NIW's Table 11 reporting. To fulfil the guidance requirements we have reviewed the following and make comments based on the findings of our audits.

1. Changes During Report Year (Lines 2-11)
2. Distribution Studies (Lines 13 to 17)
3. Water Quality Compliance Measures (Lines 18 to 21)
4. Nominated Water Service Outputs (Lines 22 to 24)
5. PC15 Additional Water Service Output Measures (Lines 25 and 26)
6. Additional Water Service Output Measures (Lines 27 and 28)

Details are given in the following sections.

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.

The Line 11 commentary highlights the number of mains bursts in different categories. Trunk main lengths are included in the totals in the commentary which is aligned with the UR reporting requirements. NIW source data that were provided after the audit were reviewed. This included a summary table from the AD teams, the CPMR water main lengths workbook with a count of lead pipe replacements.

Line 2: Mains renewed.

The AD team renewed 90.42 km of watermain and the CSD team delivered 0.44km of smaller schemes involving social housing redevelopments and minor mains diversions or realignments. The total mains renewed in AIR23 has therefore been reported as 90.86km.

Line 3: Mains relined.

Same as last year, NIW has not carried out any mains relined activity in AIR23. 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 AIR23 (2,240.24 km) is more than AIR22 (2,223.75km) and AIR21 (2,189.20km). The length is calculated based on the 0.317km per flush factor and the 7073no. of flushing which comprises a total count of 6751no. flushing MST's in Ellipse, minus 3no. flushing MST's identified as not having been carried out in the report year, plus 319no. reactive flushing jobs completed.

Line 6: New mains

NIW installed 101.62km new mains in AIR23, more than AIR22 (78.94km) and AIR21 (64.92 km). The CSD team delivered 53.95km of new mains with the remaining 47.67km delivered by the AD team in AIR23. This is in contrast to 56.62km and 22.68km in AIR22 vs. 43.27km and 21.65 km 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 192.48km in AIR23, more than AIR22(170.54km) and AIR21 (161.57 km). At audit, the sum was checked and confirmed to be correct and consistent with the line definition of the AIR23 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 is 123.33km, higher than AIR22 (101.62km) and AIR21 (104.13 km). This is derived from the Asset Delivery totals of 90.42km (higher than the AIR22 length of 78.94km) plus 32.91km (higher than the AIR22 length of 22.68km) of new mains funded by the Water Rehabilitation Budget.

Line 7: Mains abandoned and other changes.

NIW reported 112.91km this year, more abandoned mains compared to AIR22 (74.61 km) and AIR21 (89.05 km). Like the AIR22 report, the majority of the AIR22 number was reported by the AD (112.82 km) while the remaining (0.09 km) was reported by the CSD team. There are reductions in the CSD abandoned mains where NIW reported 0.34 km in AIR22 and 1.04 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.

For AIR23, NIW has not replaced any lead communication pipe as a consequence of water quality sample failures, set against the 37 in AIR22 and the 17 in AIR21.

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 and the reported value in AIR23 is 395, compared to the 470 in AIR22 and the 324 in AIR21.

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

The reported value for AIR23 is 34, increased from AIR22 (22) and AIR21 (28). The audited line commentary states that although this figure is up in comparison to the previous years, the 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 AIR23 number is 1,873, slightly higher than the AIR22 number (1,864) and the AIR21 number (1,675). The audited line commentary states that 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 AIR23 (2,302) 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 lower than AIR22 (2,392) but higher than AIR21 (2,044). The audited line commentary states that the decreasing numbers are primarily linked to the figures provided for line 8b – i.e. lead communication pipes replaced as consequence of customers notifying NI Water that they are replacing their lead supply pipes.

Line 10: Communication pipes replaced - other.

In AIR22, NIW replaced 2,898 communication pipes (other), which is slightly higher than the previous year of 2,881 but lower than the AIR21 report number of 3,739. The AIR23 number is built up from 1,767 from the AD team and 1,129 from the CSD team. NIW stated in the commentary 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.

Line 11: Mains bursts per 1000km.

The reported AIR23 number (92 mains bursts per 1000km), is same as AIR22 but 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 X 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 AIR23 number is comprised of 1,142 proactive repairs by the active leakage control team and 1,371 reported burst mains (non-proactive) repairs by CSD Networks Water team minus 17 bursts due to third party damage. We also note the NI Water internally audited total main length of 27,140.38km used in the calculation.

The number of bursts detected through pro-active actions has increased by 0.6% since AIR22. The number of non-proactive detection bursts has increased by 1.3%. The number of bursts due to third party damage is significantly reduced by 70% since AIR22. NIW explained in its commentary that the reasons are unclear but hope to have improvement in AIR24. The total number of reported bursts has increased by 7% from AIR20 (2,211) but is comparable to AIR18 (2,444) and AIR19 (2,467). We note that a robust process has been used to define the number of bursts. We also note that the process still involved a number of manual exercises. NIW indicated that there is a plan in place to improve this.

Distribution Studies (Lines 13 to 17)

For NI Water's AIR reporting of Distribution Studies [Table 11 L13-17], the current data table guidance is based on the traditional/historical "Zonal Study Methodology" which has now been superseded by the new "X" i.e. change of methodology which has resulted in a mismatch of information that is expected to be captured through Lines 13-17 and the information generated for the AIR.

The work to identify Water Rehabilitation Programmes now encompasses the use of WIIM and related model builds associated with the WIIM methodology. A Company review is underway to decide on how DRRM might be included in analysis for watermain rehabilitation and related work.

We identified that the development of a revised data table guidance (and formats), aligned to the new WIIM Methodology is a subject of discussion between NIW and the UR. Through our audits, we established the relevant recent correspondence on this matter as follows.

- NIW to the UR email dated 22nd November 2021, timestamp 16:53;
- The UR to NIW response email dated 28th January 2022, timestamp 17:16; and

- NIW to Reporter/Auditor advisory note dated 15th June 2022, timestamp 14:55. The NIW advice note explained the justification for the 'n/a' entries for Table 11 L13-17 in AIR22. We note that n/a entries have also been used for these reporting lines in AIR23.

In our AIR21 commentary we identified that the Company's report of the cumulative number of distribution zone studies completed has remained constant since 2012-13. We also noted that future AIRs, across the PC21 period, would be more meaningful if progress was to be reported against the watermain infrastructure investment model (WIIM) work packages.

Although the Company has provided a summary update on its AIR23 WIIM work packages through its Table 11 commentary, details of NI Water's framework, systems and processes for tracking the progress (and effectiveness of its water infrastructure investment) and its progress in maintaining network models are lacking. For example, we would have expected baseline model completion dates to be compared with current actual or projected completion dates for new model builds (where relevant).

Water Quality Compliance Measures (Lines 18 to 21).

NI Water states that:

"Due to Covid 19 restrictions, customer tap samples were collected at upstream Service Reservoirs from 1st January 2022, with some customer tap only parameters excluded. NI Water recommenced sampling at public buildings with effect from the week commencing 28th February 2022, and at private customer taps with effect from 14th March 2022".

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 AIR23 values for lines 18-20 exceed NIW's targets for the year. 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	2022
18	% Overall Compliance	99.86	99.83	99.86	99.88	99.90	99.90	99.94	99.89	99.91
19	% Compliance at consumer tap (including supply points)	99.78	99.74	99.77	99.81	99.83	99.84	99.91	99.82	99.88
20	% Iron compliance at consumer tap	98.95	98.40	98.66	98.85	98.94	98.89	99.56	99.35	99.15
21	% Service reservoirs with coliforms in >5% samples	0	0	0	0	0	0	0	0	0

Line 18: % overall compliance with drinking water regulations.

The reported AIR23 value (99.91%) is higher than the previous year's value of 99.89% and exceeds NIW's target of 99.83%. However, it is noted that customer tap samples being collected to a large extent at upstream of service reservoirs means that the AIR23 figure is not representative.

Line 19: % compliance at consumers tap.

The reported AIR23 value (99.88%) is higher than the previous year's value of 99.82% and exceeds the NIW's target of 99.74%. However, it is noted that customer tap samples being collected to a large extent at upstream of service reservoirs means that the AIR23 figure is not representative.

Line 20: % iron compliance at consumers tap.

The reported AIR23 value (99.15%) is lower than the previous year's value of 99.35% but exceeds the target of 98.62%. However, it is noted that customer tap samples being collected to a large extent at upstream of service reservoirs means that the AIR23 figure is not representative.

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

No service reservoir sites has 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 AIR23 where Whitespots B Trunkmain achieved Beneficial Use. As the Northern Zone resilience Phase 3 achieved Beneficial use in AIR22, this means that a total of 2 nominated trunk main schemes was achieved by the end of AIR23, meeting the committed target. NIW advised they will discuss with the Regulator to restate the total PC21 target to reduce the total FD21 number of nominated trunk schemes from 14 (FD21) to 11.

Line 23: Completion of nominated water treatment works schemes.

Three nominated water treatment works schemes achieved beneficial use in AIR23, giving a total of 4 schemes completed by the end of Year 2. NIW advised that the Company will discuss with the Regulator to restate the total PC21 target to reduce the total number of nominated water treatment works schemes from 22 (FD21) to 21.

By reference to Table 40a, there are three schemes carried forward from PC15 (X). Both X and X were completed in AIR23. The Auditee advised that NIW is planning to deliver two PC21 schemes (X) in PC27.

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

No service reservoirs or clear water tank projects achieved Beneficial Use in AIR23, giving a total of 1 scheme completed at the end of Year 2.

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

Line 25: Number of School Visits.

A total of 210 school visits were carried out in AIR23 against the annual baseline target of 176. NIW states all of these visits were carried out in person.

Like the AIR22 report, 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. We did not encounter any material issues from our sample checks. NIW indicated that the Company is planning to roll out a future booking system for AIR24 reporting.

Line 26: Number of Other Educational Events.

A total of 63 events took place in AIR23. 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 three catchments will be reported in AIR23 and NIW is planning to deliver another 4 catchments (X) next year. A robust process has been applied in defining the number of catchments delivered. At audit, the Auditee provided the necessary evidence in support of the AIR23 reports.

The measure of 'Engage with Abstraction Monitoring Project' was discussed with a note that NIW should highlight the work that have contributed to the report as opposed to tagging these as 'Not Necessary'.

Line 28 - Number of treatability studies completed

One study will be reported as completed in AIR23 where zero was reported in the AIR22. The Company is considering a re-profiling of the delivery of the 12 FD21 schemes highlighted in the FD21 Annex E (Table 38, Line 30). NIW's plan at AIR22 with the plan at AIR23 compared is shown below.

Output		2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Number of treatability studies completed	Plan at AIR22	0	3	4	3	2	0
	Plan at AIR23	0	1	7	3	1	0

5. Confidence Grades

We note that with exception of Line 27, confidence grades for the Table 11 lines have remained unchanged from last year. For Line 27 the confidence grade has moved from B3 (AIR22) to A2 (AIR23). 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

6.1. Challenges

The challenges are directly related to the actions raised through our audits and highlighted in Section 6.2.

6.2. Actions/Recommendations

We reviewed NI Water's record of the status of outstanding AIR22 actions set out in the Company's spreadsheet on file as "X". The Line references associated with the outstanding actions are outlined below, with our AIR23 audit **update** comments.

- a) Line 6: New mains. *AIR22 source data did not show the composition [new/renewed] of the length of new mains laid in report year. Recommend Company considers improvements to the source data to highlight the composition of new mains laid in the report year.*

AIR23 update: This action remains open as the components have not been separated in the AIR23 source data.

By reference to the UR guidance line definition, Line 6 should "include new mains and mains renewals involving upsizing whose prime justification is the requirement for additional capacity". The source data provided for our AIR23 audit shows the total length of new main laid and the abandoned length as an aggregate number. These are not separated into the new/renew elements. For example, the project X laid 3.598km new main with 1.194km abandoned. The data source does not show if the abandoned length is replaced with a new main and it is unclear whether it is to do with upsizing or downsizing the main. We suggest that NI Water considers improvements to the source data to highlight the composition of new mains laid in any AIR report year.

- b) 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. AIR23 update: This action remains open. But we note that the line report for AIR23 is zero.*
- c) Lines 22-24: Nominated Trunk Mains, WTWs & SRs/CWTs. *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. **AIR23 update: This action is now closed. The Auditee provided emails from the PM as evidence for achievement of beneficial use.**

- d) Line 28: Treatability studies completed [1]. *The line methodology 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. AIR23 update: method statement updated for AIR23 but see a new related action posted as item e below.*
- e) Line 28: Treatability studies completed [2]. Add check and approve features to the process diagram associated with the AIR23 method statement.
- f) Line 8d: [Lead Communication pipes replaced – Proactive lead replacement programme] and Line 10 [Communication pipes replaced – other]. The source data that supports the lead comm pipes replaced does not clearly indicate whether it is ‘other’ or ‘proactively replaced’. We suggest that the Company improves the basis of the reported data for audit purposes.
- g) Line 2 -10 [Block B]: The total lengths provided by the AD team and the CSD team were used directly to calculate the proposed figure for the relevant lines. However the data cannot be traced back to the original source e.g. the project data. We suggest that NIW considers improvements to the audit trails to allow the data to be traced back to the original source or to consider the introduction of a signed off confirmation from data providers to facilitate audit conformation of the accuracy and the reliability of audited data sets.
- h) Line 27 [Number of catchments where management plan recommendations have been delivered]: For the Line 27 report, we note that a robust process has been applied in defining the number of catchments delivered. We also note that the measure of ‘Engage with Abstraction Monitoring Project’ was tagged as ‘Not Necessary’. We therefore suggest that NIW should highlight the work that have contributed to the report as opposed to tagging these as ‘Not Necessary’.
- i) Improve the Company’s AIR reporting framework, systems and processes for tracking the progress (and effectiveness of NI Water’s water infrastructure investment) and progress in maintaining network models.
- j) Engage with the UR to develop a revised reporting format for Table 11 [Block D, Lines 13-17] titled Distribution Studies that align with the new “Water Mains Infrastructure Investment Model (WIIM) Methodology” as opposed to the old “Zonal Study Methodology” so that meaningful AIR report entries can be developed for future reporting of Distribution Studies.

7. References

Table 11 Line Reference	File Name	Pre / Post Audit	Date Received
Table 11	23-02-22 Recommendations - Reporter's AIR22 Report.xlsx	Pre Audit	11/05/2023
Table 11 L2-10_13-17	CC_Table11_Lines2-10_13-17.docx	Pre Audit	22/05/2023
Table 11 L2-10_13-17	DT_Table11_L2-10_13-17.xlsx	Pre Audit	17/06/2023
Table 11 L2-10_13-17	LM_Table11_Lines2-10_13-17.docx	Pre Audit	22/05/2023
Table 11 L11	CC_Table11_Lines11.docx	Pre Audit	12/05/2023
Table 11 L11	DT_Table11_L11.xlsx	Pre Audit	11/05/2023

Table 11 L11	LM_Table11_Lines11.docx	Pre Audit	12/05/2023
Table 11 L18-21	CC_Table11_Lines18-21.docx	Pre Audit	24/05/2023
Table 11 L18-21	DT_Table11_L18-21.xlsx	Pre Audit	24/05/2023
Table 11 L18-21	LM_Table11_Lines18-21.docx	Pre Audit	24/05/2023
Table 11 L22-24	CC_Table11_Lines22-24.docx	Pre Audit	18/05/2023
Table 11 L22-24	CC_Table40a_LinesAll.docx	Pre Audit	18/05/2023
Table 11 L22-24	DT_Table11_L22-24.xlsx	Pre Audit	05/06/2023
Table 11 L22-24	LM_Table11_Lines22-24.docx	Pre Audit	18/05/2023
Table 11 L25-26	CC_Table11_Lines25-26.docx	Pre Audit	17/05/2023
Table 11 L25-26	DT_Table11_L25-26.xlsx	Pre Audit	15/06/2023
Table 11 L25-26	LM_Table11_Lines25-26.docx	Pre Audit	17/05/2023
Table 11 L27	CC_Table11_Lines27.docx	Pre Audit	11/05/2023
Table 11 L27	DT_Table11_L27.xlsx	Pre Audit	11/05/2023
Table 11 L27	LM_Table11_Lines27.docx	Pre Audit	11/05/2023
Table 11 L28	CC_Table11_Lines28.docx	Pre Audit	18/05/2023
Table 11 L28	DT_Table11_L28.xlsx	Pre Audit	18/05/2023
Table 11 L28	LM_Table11_Lines28.docx	Pre Audit	17/05/2023
Table 11	AIR23_Table11.xlsx	POST-AUDIT	20/06/2023
Table 11 L27	CC_Table11_Lines27.docx	POST-AUDIT	17/05/2023
Table 11 L27	LM_Table11_Lines27.docx	POST-AUDIT	17/05/2023
Table 11 L22-24	AIR23 Table 11_L22-24.msg	POST-AUDIT	05/06/2023
Table 11 L28	Alpha CWT Cleaning Programme (May 2023).xlsx	POST-AUDIT	26/06/2023
Table 11 L18-21	CC_Table11_Lines18-21.docx	POST-AUDIT	15/06/2023
Table 11 L25-26	CC_Table11_Lines25-26.docx	POST-AUDIT	22/05/2023
Table 11 L28	CC_Table11_Lines28v2.docx	POST-AUDIT	26/05/2023
Table 11 L22-24	CC_Table40a_LinesAll.docx	POST-AUDIT	05/06/2023
Table 11 L28	DWI - Compliance Programmes - Enforcement Tracker - 25 May 2023.XLSX	POST-AUDIT	26/06/2023
Table 11 L28	DWI - PC21 Summary of Drinking Water Quality Outputs - Tracker - May 2023.xlsx	POST-AUDIT	26/06/2023
Table 11 L28	DWI Report May 2023.pdf	POST-AUDIT	26/06/2023
Table 11 L28	FW Compliance Programmes Triannual Meeting - 25 May 2023 - NIW updates - sent 23.5.2023.msg	POST-AUDIT	26/05/2023
Table 11 L28	FW_Table 11 Line 28 - Number of treatability studies completed .msg	POST-AUDIT	26/06/2023
Table 11 L28	LM_Table11_Lines28v2.docx	POST-AUDIT	26/05/2023
Table 11 L22	RE AIR23 Table 11 L22 - JR519 Whitespots B Trunkmain.msg	POST-AUDIT	05/06/2023
Table 11 L23	RE AIR23 Table 11 L23 - JA319 Dorisland WTW Treatability Recommended Improvements.msg	POST-AUDIT	05/06/2023
Table 11 L23	RE AIR23 Table 11 L23 - X and X Undertakings.msg	POST-AUDIT	05/06/2023
Table 11 L25-26	Re_Table 11 L25-26 audit.msg	POST-AUDIT	05/06/2023
Table 11 L11	Rechargeables Included.msg	POST-AUDIT	26/06/2023
Table 11 L28	Service Reservoir Summary - May 2023.xlsx	POST-AUDIT	26/06/2023
Table 11 L28	SR CWB Cleaning Tracker May 2023.xlsx	POST-AUDIT	26/06/2023
Table 11 L28	WTW Overview v5.xlsx	POST-AUDIT	15/06/2023
Table 11 L23	WTW Treatability Studies - May 2023 Update.xlsx	POST-AUDIT	26/06/2023
Table 11 L25-26	DT_Table11_L25-26.xlsx	POST-AUDIT	15/06/2023
Table 11 L2-10_13-17	CPMR Watermains Lengths SORTED BY RN for AIR 23.xlsx	POST-AUDIT	06/06/2023

Table 11 L2-10_13-17	CPMR-Comms Pipes Relaced 2022-23.msg	POST-AUDIT	26/05/2023
Table 11 L2-10_13-17	DT_Table11_L2-L10 (Networks Water) 22-23.xlsx	POST-AUDIT	05/06/2023
Table 11 L2-10_13-17	Feedback from Table 11 Audit -Friday 26 May 2023.msg	POST-AUDIT	26/05/2023
Table 11 L2-10_13-17	RE CSD Feedback - Commentary and Methodology for AIR 23- Table 11 Lines 2 to 10 .msg	POST-AUDIT	26/05/2023
Table 11 L2-10_13-17	Table 11 2 to 10 and 13 to 17 – AIR 23 Commentary With All Changes Made as Discussed at Today's Audit .msg	POST-AUDIT	05/06/2023
Table 11 L2-10_13-17	Table 11 2 to 10 and 13 to 17 – AIR 23 Data As Discussed at Today's Audit .msg	POST-AUDIT	05/06/2023
Table 11 L2-10_13-17	Table11_Lines2-10_13-17.docx X 26 May 23 (1).docx	POST-AUDIT	05/06/2023
Table 11 L2-10_13-17	Table11_Lines2-10_13-17.docx X 26 May 23.docx	POST-AUDIT	05/06/2023
Table 11 L2-10_13-17	WMRF Communication Pipes Replaced 2022-23.xlsx	POST-AUDIT	06/06/2023
Table 11 L11	DT_Table11_L11.xlsx	POST-AUDIT	06/06/2023
Table 11 L2-10_13-17	CC_Table11_Lines2-10_13-17.docx	POST-AUDIT	08/06/2023
Table 11 L2-10_13-17	DT_Table11_L2-10_13-17.xlsx	POST-AUDIT	08/06/2023
Table 11 L2-10_13-17	LM_Table11_Lines2-10_13-17.docx	POST-AUDIT	08/06/2023
Table 11 L2-10_13-17	CC_Table11_Lines2-10_13-17.docx	POST-AUDIT	15/06/2023
Table 11 L2-10_13-17	DT_Table11_L2-10_13-17.xlsx	POST-AUDIT	15/06/2023
Table 11 L18-21	CC_Table11_Lines18-21.docx	POST-AUDIT	15/06/2023





SUMMARY OF AUDIT FINDINGS








Table 16 – Lines 1-35

PREPARED BY	X
DATE	28 July 2023

1. Key Findings

The key findings of the AIR23 Table 16 audit, against the AIR23 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 AIR24, or other noteworthy comment
	Minor exceptions
	Material exceptions
N/A	Not applicable to report

AIR23 Table Criteria	RAG	Assessment
Independent review of performance against PC21 target (where relevant)		Delivery of outputs against run-rate target have slipped for Line 28 (Small WWTWs delivered as part of the rural wastewater investment programme). However, reg target is 36 by the end of PC21 rather than annual.
Methodology – consistency with the reporting process with clear control points		<p>Methodology found to be clear and reporting consistent with documented methods. Minor errors identified and corrected.</p> <p>12th June 2023. Significant increase in PE figures since AIR22 (approx. 21%) – we <u>recommend</u> validation of PE figures and clarification of any changes in methodology behind the increase.</p> <p>Update 16th June 2023: In the period between 12th and 16th June, NIW carried out the 12th June recommendation and checked the provenance of the revised PE figures. It was found that the PE for several catchments was triple counted in error, resulting in an inflated PE figure, and reducing the calculated figure in Line 22. Having corrected the PE figures, the reported Line 22 figure is 89.3%, compared to the AIR22 figure of 89.4%. The remaining marginal reduction of 0.1% between AIR22 and AIR23 is reasonably explained by small changes in population and trade effluent consents within some catchments.</p>
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. No CG changes since AIR22.
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 1-35 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
- Lines 12-13: X, X
- Lines 18-22: X
- Lines 23-25, 30: X, X
- Lines 26-28, 32-33: X, 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 AIR23 reporting methodology and figures against AIR22 to understand any material changes.

3. Performance and Significant Events

Line 3: 6.77km of new critical sewer was added to the network in AIR23. Critical sewers are defined as >600mm diameter. The additional network has been transferred from developer services schemes delivered during the period.

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

Line 4: 105.43km of critical sewers inspected, compared to 117 km in AIR22. 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 DAP programme.

Capital Delivery carried out 20.8km of CCTV work, with Asset Performance undertaking 30.76km 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 215.49km, 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 53.87km, bringing the total to 105.43km for Line 4.

Lines 5 & 6: Length of critical sewers renovated and replaced is 5.98 km (AIR22 = 2.24 km) and 2.91km (AIR22=2.11km) 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: 0.24km of abandoned critical sewer reported. Data collated from records following refurbishment or replacement projects where legacy pipework can be abandoned as part of investment in the network. Increase from AIR22 figure of 0.11km.

Line 8: 100.53km of non-critical sewers added to the network (compared to 98.64km in previous period). The methodology follows the same approach as that of Line 3 but for sewers with a non-critical designation.

Lines 9 & 10: Length of non-critical sewers renovated and replaced is 5.69km and 7.54km respectively (6.98km and 19.04km respectively in AIR22). Methodology and data sources as per Lines 5 & 6, but for sewers classified as non-critical.

Line 11: 130m of non-critical sewers were abandoned in the period. Equivalent methodology to line 7 but for sewers <600mm diameter.

Line 11a: Total length of sewer renovated and replaced is 22.12km. Calculated cell, sum of Lines 5, 6, 9 and 10.

Line 12: 77.5 sewer collapses per 1000km were recorded in AIR23, a slight increase from 74.9 in AIR22, but lower than 80.4 in AIR21. Reporting is consistent with Table 46. Collapse data is collated from Operations and involves manual review of work order feedback and monthly reporting of data from the Ellipse system. Contractors are responsible for collating and reporting monthly data, which is subject to NIW validation by field managers. This is reflected in the B3 confidence grade, which has not changed from the previous period. Total sewer network length is derived from GIS and includes any extension of the network carried out in AIR23.

Line 13: 695.2 sewer blockages per 1000km in AIR23, a reduction from 748.3 in AIR22. Figure is derived based on the same principles and source data systems 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 11,458, an improvement from 12,245 in the previous year which NIW attributes to ongoing work with contractors to resolve issues on the first visit. The total of 11,458 includes blockages < 6hours, 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. Numbers are confirmed by NIEA statement of need. Figures have increased in AIR23 due to completion of 5 further DAPs in the period. A total of 133 UIDs (excluding CSOs) were reported in AIR21, increasing to 323 in AIR22. The AIR23 reported figure is 417 (approx. 23% of the total number of discharging assets i.e. number of WwPS & WwTW CSOs of 1806), reflecting the new total of UIDs confirmed by NIEA. During AIR23, three UIDs were resolved at X, X and X. The 417 is inclusive of the reduction delivered by the 3 resolved UIDs.

Line 16b: Number of unsatisfactory discharges CSOs. Figures for Line 16b have increased due to the same reason as 16a above. The additional 5 DAPs have increased the UID CSO figure from 283 in AIR22 to 368 in AIR23 (approx. 52% of CSO assets i.e. number of 'network CSOs' of 706).

Line 17a: The number of overflows from within WwTWs has increased by 8 during AIR23 to 690. This is a result of changes on the ground with respect to the number of WwTW overflows since AIR22. The increase of 8 is due to capital investment in WwTW sites, and is the net effect of:

- 12 additional overflows delivered via the capital programme at small sites with no previous overflow arrangement
- 4 existing overflows withdrawn due to works upgrades.

Reported figure of 1792 in Line 17a excludes CSOs and is a sum of the total number of Wastewater Pumping Station overflows (1102) and the number of overflows from within WwTWs (690).

Line 17b: The number of CSOs is reported as 784, no change from AIR22.

Line 18: Cumulative number of DAPs completed is reported as 90, an increase of 6 since the previous year. The 5 DAPs delivered in the reporting period are for X, X, X, X and X drainage areas. The cumulative total of 90 DAPs includes 12 catchments where the DAP process has been repeated, therefore a total of 78 discrete catchments now have a DAP in place. 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.

The methodology for Lines 18 and 19 has been updated to reflect the addition of Table 40b. Data for DAP completion is derived from a Table 40b spreadsheet based on completion dates.

Line 19: 61 DAPs are currently in progress, a net decrease of 10 from the previous year. 6 were completed, 2 new DAPs were initiated (X and X), and 4 DAPs completed Stage 2 but were subsequently descope/cancelled. A further 3 were rescope as Rural Models Builds due to their small catchment size and not enough flow to support model validation.

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 reported value of 257 is two more than the AIR22 figure based on updates to the PE figures for each catchment.

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 32.9% in AIR22 to 35% due to changes in both Line 18 and 20 during the AIR23 period.

Line 22: % population/properties covered by completed DAP studies. All 6 of the DAPs delivered in AIR23 were revisions of previous DAPs and therefore do not increase the overall population covered by completed DAP studies. However, we note there has been a marked decrease in the Line 22 figure from 89% in AIR22 to 73.3% in AIR23. This is driven by a significant increase in Total PE figures over the period. Total PE was calculated at 2.46m for AIR22 but the AIR23 figure used in the calculation for Line 22 is 2.97m, which is a ~21% increase.

Recommendation 12th June 2023: While the Tables and commentary align with the updated PE figures, we recommend that validation of the PE figures is undertaken to determine whether any changes have been made to the Total PE calculation [See Section 6].

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 X (LIMS) and the monthly reports produced to track regulatory compliance against look-up table conditions. The reported figure is the same as AIR22, due to the same number of non-compliant sites with numeric consents.

Line 24: % of total PE served by WwTWs compliant with numeric standards is reported as 98.9 based on updated population records. This figure includes one site that failed upper tier limits only, in addition to those failing Look Up Table (LUT) criteria [defines how many samples will be taken at each site usually based on PE/size]. Line 24a calculates the same metric but excluding sites where only the Upper Tier (UT) was breached.

Line 25: % compliance for WwTW with descriptive consents is reported as 92.65, an increase from 92.02 reported in AIR22. 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. Figures are confirmed by the NIEA.

Line 26: Reporting consistent with Table 40a which sets out full details of the UID improvement delivery. Three UID outputs achieved beneficial completion in AIR23: X, X and X. Four UID outputs were not delivered as planned due to planning delays and reprioritisation of the programme following further modelling work. Two of these will be delivered in the 23/24 period (X and X), and the remaining two anticipated for completion in 26/27 (X). Confidence Grade A1 based on NIEA sign-off against guidelines on beneficial use.

Line 27: Six outputs delivered in AIR23, including X which was a carry-over scheme from year 1. Total outputs are in line with the target for year 2. All planned Year 2 schemes completed in-year at X, X, X, X and X.

Confidence Grade of A1 based on NIEA sign-off of two-week sample programme.

Line 28: Seven outputs achieved beneficial completion as part of the Rural Wastewater Investment Programme for sites <250 PE. 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. A total of 9 outputs have been delivered in years 1 and 2 against a PC21 target of 36 (6 per year), so an increased number of outputs will need to be delivered in future years. However, a further 4 sites have been completed to date and NIW is awaiting the results of a 14-day sampling trial prior to gaining NIEA sign-off. 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 A1 Confidence Grade.

Update 20th June: At the time of audit, sample results were not yet available to confirm Beneficial Use on 3 additional sites. However, on 20/06/23 NIW confirmed a further 3 outputs can now be claimed prior to AIR submission, in line with the UR guidance. The updated figure for Line 28 is 10 Rural WwTW schemes delivered, and we can confirm NIW has updated the Line Commentary, Table 16 and Table 40 to reflect the additional outputs.

Line 29: 83 Event Duration Monitors (EDMs) were installed at CSO sites during AIR23. This is an increase on the previous year (52 installed in AIR22). NIEA has agreed that all installation criteria have been met.

Line 30: No WwTWs were upgraded to comply with PPC Regulations during the period. Three outputs were achieved in the AIR21 year, and none in AIR22 or AIR23. An odour modelling plan is in place having been agreed with NIEA. Outputs of the odour modelling will inform prioritisation of work to address non-compliance. A target of 5 outputs is to be achieved by the end of PC21.

Line 31: 91,898m² of impermeable surface area was removed in 22/23 as part of the delivery of the PC21 storm separation programme. NIW has significantly ramped-up the programme since AIR22, where 1,200m² was achieved.

The AIR23 figure has been delivered via a combination of four projects, with a significant portion associated with the X (67,671 m²) and X (21,230 m²). The remaining 2,997m² was delivered by the X and X (400 m²).

Line 32: No sustainable WwTW solutions delivered for site >250 PE. No target. No change from AIR22. Investigation and solution/options analysis is ongoing for specific sites to determine the programme and priority for future years' delivery. NIW considering wetland solutions for selected sites.

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

Lines 34: New target for the PC21 period. Number of Economic Constraint Areas removed by PC21 investment. These are areas designated by the Councils where development is restricted due to lack of capacity in the wastewater network. The line records the number of AIR23 outputs as 0. All NIWs investment in AIR23 to relieve planning pressures was carried out in areas categorised under a different designation, which is reflected in Line 35 below.

Line 35: Similar to Line 34, this line reflects outputs claimed by NIW to enable planning restrictions to be lifted in key growth areas, but in this case, those designated as Serious Development Restriction areas. 6 outputs were delivered in AIR23: X (3 outputs) and X (1 output) were effectively completed (allowing planning restrictions to be lifted) in year 1, but the sign-off as beneficially complete to enable the output to be claimed slipped into AIR23. Two further outputs at X and X were delivered and claimed within year.

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.

We have considered the Reporter guidance set out in the NIAUR AIR23 requirements in assessing NIW's Table 16 reporting. There have been no policy changes related to Table 16 since AIR22, and methodologies remain consistent with previous periods. We have not seen any reported data that would suggest NIW's figures are an outlier compared to the rest of the industry. Neither have we found any unexplained variance in figures since AIR22 (except the PE calculation for Line 22 which NIW corrected following audit).

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. No confidence grade ratings have changed from AIR22 submission.

6. Challenges to the Company, Recommendations & Suggested Actions

6.1 Challenges

The challenges are directly related to the actions raised through our audits and outlined in Section 6.2 below.

6.2 Suggested Actions

Actions raised (now closed out)

- Line 4 – Figure not yet populated in the Table. Commentary missing the figures from Asset Performance team and the total. Required to derive the number in the Table. Action completed 2nd June and reflected in the Line 4 commentary above.
- Lines 3 & 8 - Action to amend the wording in the commentary to the following to avoid confusion: 'Total length of sewer added to the network in AIR23 is 107.3km, compared to 110.32km in AIR22'. Action completed 2nd June.
- Lines 16a and 16b – the numbers in the table and commentary didn't match. Now resolved and the documents updated. Action completed on 24th May and reflected in the Line 16 commentary above.
- Lines 34 and 35 – total number of outputs was duplicated in both lines. Action taken to confirm correct split and update the commentary and Tables 40 and 16 accordingly. Action completed on 23rd May and reflected in the Line 34 and 35 audit commentary above.

6.3 Recommendation

Recommendation 12th June 2023: Line 22 - While the Tables and commentary align with the updated PE figures, we recommend that validation of the PE figures is undertaken to determine whether any changes have been made to the Total PE calculation. Total PE figures used in the calculation have increased by 21% since AIR22.

Update 16th June 2023: In the period between 12th and 16th June, NIW carried out the 12th June recommendation and checked the provenance of the revised PE figures. It was found that the PE for several catchments was triple counted in error, resulting in an inflated PE figure, and reducing the calculated figure in Line 22. Having corrected the PE figures, the reported Line 22 figure is 89.3%, compared to the AIR22 figure of 89.4%. The remaining marginal reduction of 0.1% between AIR22 and AIR23 is reasonably explained by small changes in population and trade effluent consents within some catchments.

7. References

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

- NIAUR_air22_repreg_Sec2_Chap16.pdf
- CC_Table16_Lines12-13c.docx
- DT_Table16_L12-13c.xlsx
- LM_Table16_Lines12-13c.docx
- Final_AIR23 PEs.xlsx
- CC_Table16_Lines18-22.docx
- DT_Table16_L18-22.xlsx
- LM_Table16_Lines18-22.docx
- CC_Table16_Lines18-22_updated.docx
- DT_Table16_L18-22_updated.xlsx
- LM_Table16_Lines18-22_updated.docx
- CC_Table16_Lines23-25_30.docx
- DT_Small_Works_Compliance_2022_NIEA_Agreed.xlsx
- DT_Table16_L23-25_30.xlsx
- LM_Table16_Lines23-25_30.docx
- CC_Table16_Lines26-28_32-33.docx
- LM_Table16_Lines26-28_32-33.docx
- DT_Table16_L26-28_32-33.xlsx
- CC_Table16_Lines3-11a_16a-17b_29_31.docx
- LM_Table16_Lines3-11a_16a-17b_29_31.docx
- DT_Table16_L3-11a_16a-17b_29_31.xlsx
- CC_Table16_Lines34-35.docx
- LM_Table16_L34-35.docx
- DT_Table16_L34-35.xlsx
- DT_Table40a_LAll.xlsx
- CC_Table40a_LinesAll.docx





SUMMARY OF AUDIT FINDINGS







Table 40 – Capital Investment Monitoring (CIM), Lines 1-87

PREPARED BY	X
DATE	28 July 2023

1. Key Findings

The key findings of the AIR23 Table 40 audit, against the AIR23 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 AIR24, or other noteworthy comment
	Minor exceptions
	Material exceptions
N/A	Not applicable to report

AIR23 Table Criteria	RAG	Assessment
Independent review of performance against PC21 target (where relevant)		The commentary provided clearly sets out the level of performance against PC21.
Methodology – consistency with the reporting process with clear control points		The method statement provides an overview of the data reporting process followed, however does not provide enough detail to be able to clearly trace the steps undertaken to transfer and transform data source information to the reporting blocks/columns. We recommend writing the method statement in an instructional style to provide greater detail of the steps undertaken. Noted this is already underway.
Assumptions – reasonableness and applicability		Overall the application of CIDA guidance was shown as recorded in CPMR and iPAC. Some actions raised and resolved around holding line purpose and service cost allocations. These now reflect the schemes of the leakage programme.
Source data – completeness		The underlying data sources used are robust, audit actions to ensure full and correct population of some columns for PC21 schemes have been resolved. These were around baseline and beneficial use dates, regulatory sign off, nominated output label and the PC21 To Be Determined Projects block. Significant rising costs were also explained by the Auditee through iPAC and PC21 scope uncertainty calculations. Resolve 0% purpose allocation for JI229 in CPMR.
Clarity of audit trails – evidence of appropriate audit trail		Post audit review of CPMR, iPAC and PC21 scope uncertainty calculations have taken place resolving audit actions. Audit checks could be followed back to source data.
Confidence grades – documentation of appropriateness and rationale	N/A	
Governance – evidence of quality assurance and of final sign-off		Approvals are governed through the NIW's SharePoint tasks and approval system.

- 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.
- Significant improvements are noted in the completion of baseline information since AIR22. AIR22 feedback on integration of data from X with the existing CPMR system and the Table 40 reporting process have been addressed for AIR23.

2. Audit Scope

The initial audit was carried out on 22nd May 2023 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 AIR20 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.

Section 4.0 of Chapter 40 states:

4.1. Chapter 30 details the requirements for the Reporter in relation to the audit of the capital investment submission.

4.2. The Reporter should assess and comment on the projection of expenditure in 2022/23 based on a sample audit of projects with material expenditure in future years.

Section 4.0 of Chapter 30 states:

4.1 The Reporter should audit a sample of the project information included in Table 40. The selection should be sufficient to allow the reporter to:

- Assess the quality of future expenditure projections and completion dates as well as expenditure to date and the allocation of expenditure.*
- Confirm that the expenditure and service and purpose allocations for the Report Year are consistent with the allocations of capital expenditure reported in other tables.*
- Assess and comment on the accuracy and consistency of information included in other tables*

4.2 The Reporter should confirm the following with regard to the proportional allocation of expenditure:

- That the company has set rules for proportional allocation of expenditure and that these are reasonable and are followed for project expenditure above the thresholds given in the general guidance for the company.*
- The extent to which the company has used proportional allocation versus prime purpose allocation.*
- The types of schemes that were proportionally allocated giving examples of the split between categories where possible. The following area is of particular interest:*
- the proportional allocation of leakage expenditure;*
- the allocation of expenditure on watermains rehabilitation schemes;*
- the allocation of expenditure between quality, maintenance and growth for projects at treatment works;*
- the allocation of expenditure between quality, maintenance and growth for projects which include the replacement of unsatisfactory intermittent discharges.*

4.3 The Reporter should also:

- Comment on the company's progress with the delivery of PC21 outputs;*

- Evaluate the explanations for the variations in expenditure given in the company's commentary and express an opinion whether they are reasonable;
- Request explanations where none have been given by the company and confirm that the request has been made where no response is obtained; and
- Assess the company's comments on its ability to deliver outputs given any variation in actual expenditure from PC21.

The audit is based upon on Table 40 as well as the associated documents as provided to the Auditor on Thursday 18th May 2023, in advance of the audit:

- Draft Commentary - CC_Table40_LinesAll.docx
- Draft Data Table - DT_Table40_LAll.xlsx
- Draft Method Statement - LM_Table40_LinesALL.docx.

Sample selection

We sampled projects from Table 40 across scheme types and examined 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 AIR23 reporting. They 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 PC non-nominated schemes were chosen, as shown in Table TC_40_1 below.

Table TC_40_1: Sample schemes audited

Sub-Programme	Scheme Audited	PC Project Period
<i>Block A, Col 8</i>	<i>Block A, Col 3&4</i>	<i>Block K, Col 77</i>
Leakage (09)	X X	PC21 Non-nominated
Watermains rehabilitation (08)	X X	
	X X	
Wastewater treatment (new starts) (16)	X X	PC27 LWWP
	X X	PC21 Nominated
Sewerage (12)	X X	
	X X	PC21 Nominated
	X X	PC21 LWWP

3. Performance and Significant Events

3.1 Introduction

Findings from the audit are summarised in the sections below. Where an action or recommendation has been identified, a blue numbered marker can be found at the end of the paragraph (i.e. ¹). These correspond to the blue numbered markers at the end of paragraphs in Section titled '6. Challenges to the Company, Recommendations & Suggested Actions' which then details the action or recommendation.

3.2 Progress and Ability to Deliver PC21 Outputs

Comparison of expenditure data shows that NIW are successfully spending on PC21 delivery, with baseline expenditure of £136.667m (at 2018-19 prices) to date exceeded by actual expenditure of £230.953m (at 2022-23 prices).

The commentary for Table 40 identifies that over delivery in the water service programme is balanced by under delivery in the sewerage service programme. The commentary sets out four primary reasons for variance in the forecast for AIR23 submission. These largely relate to investment areas awaiting determination or with planned change control requests to go to the Utility Regulator – early investment in SP04, scope uncertainty in SP12 and SP16. Also, delivery requirements in SP20 and increased costs associated with CWTs in SP06 are under review by NIW cost managers.

In addition to scope uncertainty challenges currently being raised through the change control process, the commentary also notes higher inflation than forecast in PC21 FD which will have an impact on delivery.

NIW are managing variance where possible resulting in varied performance, with some schemes on track or delayed. De-prioritisation of non-nominated outputs and change control approaches are in progress.

3.3 PC21 Outputs for Delivery by the End of 2022-23

In the baseline programme there are 11 PC21 nominated or LWWP schemes planned for achieving beneficial use and completion in 2022-23.

Table TC_40_2 below shows actual/projected dates for submission at AIR23. The majority of schemes, 6 of 11, did not meet the baseline completion date with a range of projected dates set out indicating minor to multi-year variation.¹

Table TC_40_2: Key milestones for PC21 nominated/LWWP outputs with completing in 2022-23

PC21 Scheme			Beneficial Use Date		Completion	
Block A, Col 3	Block A, Col 4	Block K, Col 77	Block B, Col 13	Block F, Col 45	Block B, Col 15	Block F, Col 47
Code	Name	Type	Baseline	Current actual or projected	Baseline	Current actual or projected
X	X	Nominated	31/03/2023	31/03/2028	31/03/2023	31/03/2028
X	X			28/10/2024		28/10/2024
X	X			05/09/2023		05/09/2023
X	X			02/06/2023		02/06/2023
X	X			31/03/2023		16/01/2026
X	X			30/06/2022		24/08/2022
X	X	LWWP		31/03/2027		31/03/2027
X	X			31/03/2027		31/03/2027
X	X			03/10/2022		03/10/2022
X	X			26/08/2022		22/09/2022
X	X			31/03/2028		31/03/2028

4. Summary of Audit Checks

4.1 Column Completeness Checks

- Regulatory sign off required (Block A, Col 9) – It was noted that there are some blank and ‘N/A’ entries in this column. The Auditee explained that this field is populated with the relevant regulator code, but not necessarily where sign off is required.²
- End of Maintenance Period Dates (Block B, Col 16) – Entries in this field are either blank or contain an incorrect date of 01/01/1900.³
- Nominated Output (Block K, Col 77) – 30% of reporting lines have not been populated with a nominated or non-nominated status.⁴
- PC21 To Be Determined Projects (Block M, Col 80-84) – This reporting block was not populated at the time of audit. The Auditee explained that the information is now available to populate these columns.⁵
- Drainage Area Plan (Block N, Col 85) – This reporting block was not populated at audit.⁶
- IEM Reference (Block O, Col 86) – This reporting block was not populated at the time of audit.⁷
- iPAC codes (additional columns outside table) – The auditee explained that they have created additional columns outside the Table 40 reporting template to provide iPAC code information at the request of X of the Utility Regulator. It was noted there were blanks within this information currently.⁸

4.2 Audit Sample Checks

This section presents the audit checks undertaken on the audit sample identified in Table TC_40_1. 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 in audit sample

Scheme		Expenditure (£m)*		
Block A, Col 3	Block A, Col 4	Block D, Col 21-37	Block H, Col 54-70	Difference
Code	Name	Baseline**	Current Actual or Projected**	
X	X	26.897	33.598	6.701
X	X	8.371	6.343	-2.028
X	X	3.896	3.348	-0.548
X	X	73.173	159.687	86.514
X	X	22.891	73.906	51.015
X	X	4.671	6.383	1.712
X	X	5.382	10.800	5.418
X	X	25.033	57.072	32.039

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

**Price bases of 2018-19 and 2021-22 are applied to the baseline and current/actual/projected costs respectively.

- SP015** *SP09 PC21 Holding Line – Leakage and Leakage Enhancement*

This is the holding line for future leakage expenditure.

- Milestones** – As such baseline milestones are populated with completion assigned to 2027, at the end of the PC21 period.
- Service cost allocation** – The allocation of service cost is assigned 100% to water infrastructure both in baseline and current/actual/projected reporting blocks, as would be expected for a leakage programme. However, schemes already underway are usually allocated to 100% water infrastructure or 100% water non-infrastructure based on the nature of the scheme.⁹

- Purpose allocation – This has been consistently assigned 75% to base and 25% to Enhanced Service Level (ESL) across baseline and current/actual/projected reporting blocks in line with the FD submission. However, individual schemes already underway show the programme has so far included a number of schemes which are assigned 100% to growth. This occurs where study and optimisation scheme types take place.¹⁰
- Expenditure – There is £33.598m of projected expenditure allocated to this line. Individual projects under the leakage programme shows expenditure to date of £26.668m, with annual expenditure between £3-5m in recent years. This means that a significant increase in leakage expenditure is forecast by between 2024-2027, with over £8m annually.

• *J1227 PC21 DG2 Work Packages*

This scheme covers works to address low pressure issues experienced by customers.

- Milestones – The baseline completion date of the end of March 2027 was set in the PC21 FD. An improved completion date is shown at the end of March 2025, as populated from P6.
- Service cost allocation – Is assigned 100% to water infrastructure in both baseline and current/actual/projected reporting blocks which is correct for this type of scheme.
- Purpose allocation – 90% ESL and 10% base purpose allocation at baseline has changed to 100% ESL in the current/actual/projected reporting block as DG2s are not being considered as base expenditure.
- Expenditure – As would be expected for an ongoing area of investment, the scheme has profiled expenditure consistently across the PC period.

• *J1229 WIIM Western Superworkpackage*

- Milestones – The baseline completion date of the end of March 2027 was set in the PC21 FD. An improved completion date is shown as the end of 2025.
- Service cost allocation – Is assigned 100% to water infrastructure, in line with the type of scheme.
- Purpose allocation – At baseline the purpose allocation was set out as 33% quality, 52% base, 3% ESL and 12% growth. The current/actual/projected reporting block is now set to 95% base and 5% ESL. This did not align with the live CPMR system when checked during the audit. The Auditee noted the purpose allocation is currently under review and therefore evidenced correctly in CPMR.¹¹
- Expenditure – was reviewed noting a slight decrease in expenditure compared to baseline and consistent spend profiled across the PC period. The Auditee explained that the baseline information has been populated for the tracking benefit to NIW, rather than for submission to the UR for this scheme.

• *KR739 X*

- Milestones – Delays to the completion date for this scheme are already noted from the end of March 2028 at baseline to the end of September 2028 in the current/actual/projected reporting block.
- Service cost allocation – Is assigned 100% to sewerage non-infrastructure in CPMR, in line with the scheme type.
- Purpose allocation – The baseline reporting block was shown matching CPMR, a 1% change in allocation from base to growth is noted in the current/actual/projected reporting block.¹²

- Expenditure – The baseline expenditure totalled £73m and has increased significantly to £160m in the current/actual/projected reporting block. It was discussed that the increase is primarily due to changing scope, but also increases due to the differing price bases used.
- *KV244* *X*
- Milestones – Baseline and projected completion dates of the end of March 2027 are aligned which indicates that the scheme is on track at this early stage.
- Service cost allocation – Is assigned 100% to sewerage non-infrastructure in CPMR, in line with the scheme type.
- Purpose allocation – Has changed from 100% quality at baseline to 90% quality and 10% base before AIR23, however the CPMR record presents the baseline. The Auditee noted there are no further changes to allocations as NIW are awaiting the Utility Regulator feedback on the scheme and accepted there may be changes in future.¹³
- Expenditure – Costs of £22.891m (pre-efficiency) were identified at baseline which have increased significantly to £74.424m. The Auditee noted there are no further changes to costs as NIW are awaiting the UR feedback.¹⁴
- *KI716* *X*

This scheme is one of four lines in Table 40 each of which represents the year on year budget for sewer rehabilitation in the PC21 period.

- Milestones – Baseline and projected completion dates are both aligned at the end of March 2027, as would be expected for the conclusion of the expenditure in year 6 which has not yet begun delivery.
- Service allocation – Is assigned 100% to sewerage infrastructure, in line with the scheme type.
- Purpose allocation – Is assigned 100% to base in both baseline and projected reporting blocks.
- Expenditure – The auditee noted baseline expenditure has been populated for internal tracking. They explained the projected expenditure across the PC21 period was based on a run rate. The increasing year on year annual costs partially presents a back loaded programme as delayed projects concentrate towards the end of the PC period, but also note the increasing impact of inflationary pressures. The Auditee explained that a mid-term review of the sewer rehabilitation programme is planned to consider the budget by a further 10% and that the deliverability challenge is considered reasonable.
- *KC440* *X*
- Milestones – Baseline dates are set to the end of March 2027 with planned completion before this, by the end of September 2026.
- Service allocation – Is assigned 100% to sewerage non-infrastructure in line with the scheme type and shown consistently across the CPMR record, baseline and projected reporting blocks.
- Purpose allocation – The purpose allocation was shown in CPMR to reflect the project purpose allocation reporting block, which has changed from the baseline.
- Expenditure – Baseline expenditure of £5.4m at 2018-19 prices have increased to £10.8m at 2022-23 prices due to increasing scope. Further scope and budget changes may follow from the conclusions of mid-term review with the UR.¹⁴
- *KR632* *X*

- Milestones – The completion dates for this scheme of 20 May 2027 is behind the baseline date of the end of March 2026.
- Service cost allocation – Is assigned 100% to sewerage non-infrastructure in CPMR, in line with the scheme type.
- Purpose allocation – Has been adjusted from 100% quality at baseline to 75% quality and 25% base, as the scheme will replace an existing pumping station.
- Expenditure – Has increased significantly from £25m at baseline, now projected to £57m.

It was noted that this project is current assigned towards the end of the PC period (year 5/6 or 2025-2027). The Auditee explained that colleagues in the delivery team are investigating how to bring the scheme programme forward. The expenditure to date has been used on land purchase arrangements.¹⁴

5. Confidence Grades

Confidence grades are not applicable to Table 40 entries.

6. Challenges to the Company, Recommendations & Suggested Actions

6.1 Challenges to the Company

- Beneficial use and completion dates (Block F, Col 45 and 47)¹
We gave the Auditee an action to populate the missing beneficial use and completion dates for all for PC21 nominated / LWWP schemes. Specifically schemes SP022 and SP033 which were due for completion in 2022-23. Post audit these omissions were resolved in the latest version of Table 40 seen. Dates were populated for the two highlighted schemes and all appropriate PC21 schemes.
- Regulatory sign off required (Block A, Col 9)²
We gave the Auditee an action to ensure the column Regulatory sign off required (Block A, Col 9) is only populated where there is a sign off requirement, in line with the reporting definition. The Auditee responded post-audit to confirm the 'non UR references' had been removed and later we confirmed this was now correctly reported in line with the guidance set out in Annex B of the Utility Regulator's chapter 40 guidance which details the column definitions. This action was resolved post-audit.
- Nominated Output (Block K, Col 77)⁴
We gave the Auditee an action to populate all appropriate schemes with nomination status. Post-audit, the Auditee provided an updated version of Table 40 with all gaps now populated.
- PC21 To Be Determined Projects (Block M, Col 80-84)⁵
We gave an action to the Auditee to populate this reporting block at audit. The initial population contained errors due to external file path references, however this has been resolved in the latest version of Table 40 seen post-audit.
- Drainage Area Plan (Block N, Col 85)⁶
The Auditee completed an action to populate this reporting block.
- IEM Reference (Block O, Col 86)⁷
The Auditee completed an action to populate this reporting block.
- Service cost allocation for SP015 SP09 PC21 Holding Line – Leakage and Leakage Enhancement⁹
We gave an action to the Auditee to consider the service cost allocation for this holding line to reflect either the forecast projects or base this on the allocations applied to projects already underway (i.e. 50:50% might be more realistic than 100% water infrastructure). Post-audit, the forecast allocations for the individual projects were updated to 100% water infrastructure in almost all cases. This supports the decision to have the same allocation for the holding line, which resolve this action.

- Purpose allocation for SP015 SP09 PC21 Holding Line – Leakage and Leakage Enhancement¹⁰
We gave an action to the Auditee to review why none of the holding line is allocated to growth when a small but significant proportion of the schemes underway are assigned solely to growth. Post-audit, the allocations for the holding line was updated to reflect the individual projects to date, resolving this action.
- Purpose allocation for JI229 WIIM Western Superworkpackage¹¹
We gave an action to the Auditee to identify why CPMR was reporting 0% allocations for this scheme. Post-audit the auditee showed the CPMR record reporting correctly, resolving this action.
- Purpose allocation for X¹²
We gave an action to the Auditee to identify why the purpose allocation had changed by 1%. The auditee showed the allocation with the iPAC screenshot which aligns with the baseline, but not the forecast allocation. We confirmed this was not a rounding issue based on the decimal places presented in iPAC. Post-audit the Auditee confirmed this was likely a manual entry error, resolving the audit action.
- Purpose allocation for X¹³
We gave an action to the Auditee to review the CPMR record as this aligned with the baseline but not forecast purpose allocation. Post-audit, the Auditee showed that the forecast values aligned with the iPAC output.
- Evidence of changes in costs¹⁴
We requested evidence of cost increases from baseline to forecast reporting blocks for a selection of the audit scheme sample (X, X, X). The Auditee provided screenshots of iPAC costing outputs and baseline/forecast cost comparison information from PC21 scope uncertainty reports. Post-audit, the Auditee showed the PC21 scope uncertainty spreadsheet to demonstrate the calculation steps undertaken to apply price base and inflationary adjustments.

6.2 Suggested Action

- iPAC codes (additional columns outside table)⁸
We suggest separating this additional information from the Table 40 template as the reporting requirements state that additional columns should not be added.

6.3 Recommendations

- Decimal places for allocation reporting blocks
We gave an action to review the number of decimal places required for all allocation reporting blocks (purpose, service cost) as the column definitions set out in Annex B of the UR Chapter 40 guidance requires these to two decimal places. The populated table reports these to zero decimal places. Post-audit, the latest version of Table 40 was provided which does not contain two decimal places for the allocation blocks. For the expenditure reporting blocks values have been entered to three decimal places as required, however are only shown to two decimal places. We recommend revising the inputted allocation data to two decimal places and number of decimal places shown for the expenditure reporting blocks for AIR24.
- Line method detail
We recommend writing the method statement in an instructional style to provide greater detail of the steps undertaken. It was noted this is already underway for AIR24.
- End of Maintenance Period Dates (Block B, Col 16)³
The auditee completed an action to remove invalid dates assigned to some schemes (“01/01/1900”). We recommend populating this field with valid maintenance period end dates for AIR24.

7. References

Shown at audit:

- NI Water, Commentary: CC_Table40_LinesAll.docx

- NI Water, Data Table: DT_Table40_LAll.xlsx
- NI Water, Methodology: LM_Table40_LinesAll.docx

Received post-audit on 30th May 2023:

- NI Water, IPAC Screenshots & Scope Certainty.xlsx

Received post-audit on 1st June 2023

- NI Water, Commentary: CC_Table40_LinesAll.docx
- NI Water, Data Table: DT_Table40_LAll.xlsx
- NI Water, Methodology: LM_Table40_LinesAll.docx

Received post-audit on 12th June 2023

- NI Water, Data Table: DT_Table40_LAll Latest.xlsx

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 2023	X and X Supported by: X

1. Overview

1. Table 40b provides a statement of the Company's plans for delivering Drainage Area Plans (DAPs) and Integrated Environmental Modelling (IEM) for PC21. It provides a mechanism by which progress on delivery can be monitored.
2. We have reviewed NI Water's Table 40b submission and progress on the delivery of its DAP Model Build and Verification (MBV) and Needs and Options Reports (NORs) and Integrated Environmental Modelling (IEM).

We identified notable delays relative to what NIW described as "unrealistic, self-imposed targets" in its AIR22 submission, with 14 of 45 MBVs [31% complete], 6 of 23 NORs [26% complete] and 1 of 5 IEM studies [20% complete] completed in AIR23.

3. Reasons for delays include impact of PC21 scope certainty submissions and delays by NIEA regarding the environmental Statement of Needs.
4. To assess the PC21 capital programme delivery implications of the DAP MBVs, DAP NORs and IEMs not completed as planned in AIR23, we carried out a combined Table 40 and Table 40b audit focused on the capital projects and nominated outputs associated with the delayed DAPs/IEMs, evaluated the audit findings and discussed these with the Company.
5. We identified mismatches of some DAP-IEM associations between Table 40 and Table 40b data sets. Details are given in Appendix D.
6. The Company believes that the delays do not put the PC21 capital investment and nominated outputs programme at risk. We are unable to validate this claim due to material gaps in the risk register used by NI Water for its assessment of the residual risk of delivery of DAPs and IEMs.
7. Details of our audit findings, conclusions and recommendations are given in the following sections. The recommendations include suggestions for NI Water to improve its current assessment of residual risk of delivery by filling in material gaps in the risk register used for the assessment.

We also suggest that the Company validates its risk register on a quarterly basis, to inform future audits of the risk of delivery of DAPs and IEMs for the remaining report years of the PC21 period and for the PC27 Business Plan.

2. Introduction

Table 40b comprises of four blocks of information, identified as follows.

- ☐ **Block A** provides information on the individual DAPs being delivered.
- ☐ **Block B** captures information on planned and current actual or projected delivery dates for the DAP Model Build.
- ☐ **Block C** captures information on planned and current actual or projected delivery dates for the DAP Needs and Options Report.

- ☐ **Block D** captures planned and current actual or projected delivery dates for IEMs and provides information on the IEMs.

3. Audit Scope, Approach and Strength of Evidence Evaluation

3.1 Scope

The scope of our Table 40b reviews and audits is dictated by the UR's AIR23 Reporter Guidance specific requirements, outlined as follows.

- 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.*
- The Reporter should comment on the company's progress with the delivery of DAP and Integrated Environmental Modelling outputs.*
- 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 2023) and have not been delivered and the potential impact for the delivery of associated capital investment and nominated outputs.*
- 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.*

3.2 Approach

a) Introduction

Our audit approach is an evidence-based, sample audits, focussed on the UR's scope outlined in Section 3.1.

The method consists of seven separate but inter-related steps covering: development of an Audit Template to fulfil the UR's AIR23 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.

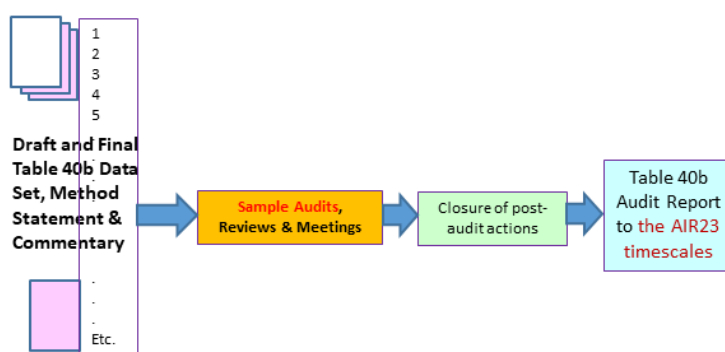


Figure TC_40b_1: Illustration of Audit Approach

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) Audit Sample

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 attributes of our audit scope.

The audited DAPs and the linked PC21 capital projects are listed in Table TC_40b_1.

Table TC_40b_1: Sample DAPs Audited

Table 40b Ref	Name	Linkage to PC21 Capital Projects and Nominated Outputs
DA0755	X	Linked to 4 PC21 project in Table 40 [X]. PC21 sub-programmes refs SP12a & 12b. [KF387] has no link to Table 40a.
DA0363	X	Linked to a PC21 project in Table 40 [X]. PC21 sub-programmes refs SP12b but no link to Table 40a.
DA0040	X	Linked to 1 PC21 Table 40 [X]. PC21 sub-programmes refs SP12b & 12d. [KH013] has no link to Table 40a.
DA0956	X	Linked to a PC21 project in Table 40 and Table 40a [X]. PC21 sub-programmes refs SP16a
DA0092	X	Linked to 3 PC21 projects in Table 40 [X]. PC21 sub-programmes refs SP12b & 12c. [X] have no link to Table 40a.
DA0002	X	Linked to 30 PC21 projects in Table 40 [X] and 4 are linked to Table 40a [X]. PC21 sub-programmes refs SP12a, 12b, 12d, 16a & 16b.
DA0134	X	Linked to 2 PC21 project in Table 40 [X] and both link to Table 40a. PC21 sub-programmes refs SP12b & 16a.
DA0844	X	Linked to a PC21 project in Table 40 [Project ID KL489] and links to Table 40a. PC21 sub-programmes refs SP14.

The audited IEMs and the linked DAPs and PC21 capital projects are listed in Table TC_40b_2.

Table TC_40b_2: Sample IEMs Audited

Table 40b Ref	Name	Linkage to DAPs & PC21 Capital Projects and Nominated Outputs
IEM01	X	<p>IEM01 [X] is linked to nine DAPs in Table 40b [DA0063, DA0064, DA0066, DA0073, DA0123, DA0134, DA1109, DA1165 & DA1176] and two DAPs [DA0134 & DA0063] in Table 40.</p> <p>The following PC21 capital projects are linked to IEM01 in Table 40. DA0064, DA0066, DA0073, DA1109, DA1169 & DA1176 do not have any linked project in Table 40.</p> <ol style="list-style-type: none"> 1. DA0063:X. [Table 40 ref: SP-16a, X, CIM Submission Reference 22_23 Q4, SQRT 603]. 2. DA0063:X, UIDs Upgrades. [Table 40 ref: SP- 12b, X, CIM Submission Reference 22_23 Q4, SQRT 997]. 3. DA0063: X. [Table 40 ref: SP- 16a X, CIM Submission Reference 22_23 Q4, SQRT 1006]. 4. DA0134: X. [Table 40 ref: SP-12b, X, CIM Submission Reference 22_23 Q4, SQRT 1047]. 5. DA0134: X. [Table 40 ref: SP-16a, X, CIM Submission Reference 22_23 Q4, SQRT 601].
IEM02	X	<p>IEM02 [X] is linked to two DAPs in Table 40b [DA330 & DA0008] and one DAP in Table 40 [DA0327]. The following PC21 capital projects are linked.</p> <ol style="list-style-type: none"> 1. DA0327: X, X - Networks Repairs. [Table 40 ref: SP-12a, X, CIM Submission Reference 22_23 Q4, SQRT 482] 2. DA0327: X. [Table 40 ref: SP-16a, X, CIM Submission Reference 22_23 Q4, SQRT 485] 3. DA0327: X. [Table 40 ref: SP-12b, X, CIM Submission Reference 22_23 Q4, SQRT 500] 4. DA0327: X. [Table 40 ref: SP-12b, X, CIM Submission Reference 22_23 Q4, SQRT 520]
IEM08	X	<p>IEM08 [X] is linked to eight DAPs in Table 40b [DA0145, DA0170, DA0230, DA0259, DA0274, DA0275, DA0309 & DA1097] and one DAP in Table 40 [DA0230]. The following PC21 capital projects are linked.</p> <ol style="list-style-type: none"> 1. DA0230: X. [Table 40 ref: SP-16a, X, CIM Submission Reference 22_23 Q4, SQRT 1044]. 2. DA0230: X. [Table 40 ref: SP-12b, X, CIM Submission Reference 22_23 Q4, SQRT 1046]
IEM12	X	<p>IEM012 [X] is linked to two DAPs [DA1177 and DA0590]. There are no links to Table 40 as this sample is a 'No planned study'.</p>

3.3 Strength of Evidence Evaluation

The DAP-IEM-PC21 capital projects and nominated output inter-dependencies are reflected through our audit samples – see Tables TC_40b_1 and TC_40b_2.

Through our audits, we noted a number of observations and identified a range of post-audit corrective actions. 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 across the DAP and IEM audit samples, that informed the conclusions and recommendations outlined in Section 6, is given in Table TC_40b_3. Further details are given in Appendix A.

Table TC_40b_3: 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]		Post Audit [Green] corrective actions closed out. Pre-Audit [Red] 6 out of 8 DAPs were red and required corrective actions. (See Appendix A, B)
Table Data: Block B. Model Build Report Dates		Post Audit [Green] corrective actions closed out. Pre-Audit [Red] 1 out of 8 DAPs was red and required corrective actions (See Appendix A, B)
Table Data: Block C. Needs and Options Report Dates		Post Audit [Green] corrective actions closed out. Pre-Audit [Red] 3 out of 8 DAPs were red and required corrective actions (See Appendix A, B)
Table Data: Block D. Integrated Environmental Modelling (IEM) Dates		Post Audit [overall Amber] as 1 of the 4 IEMs had an Amber rating. Mismatch of Carlingford [IEM08] AIR22 [Mar 23] and AIR23 [Dec 22] baseline dates. NI Water's method statement for compilation of Table 40b states that <i>"Baseline dates for milestone delivery of modelling projects were set at AIR22 and these dates are used to monitor progress for AIR 23 reporting. These dates should not be amended."</i> Pre-Audit [Amber] 4 out of 4 IEMs were amber and required corrective actions (See Appendix A, B).
Commentary: Risk of Delivery		Post Audit [Amber] . 8 out of 8 DAPs and 4 out of 4 IEMs are still Amber after corrective actions. Material gaps in risk register. Pre-Audit [Amber] 8 out of 8 DAPs and 4 out of 4 IEMs were Amber and required corrective actions (See Appendix A, B).
Clarity of DAP & IEM Deliverables		Pre-Audit [Green] No actions.

4. Table 40b, Table 40a and Table 40 Links

Table 40b provides a statement of the Company's plans for delivering Drainage Area Plans (DAPs) and Integrated Environmental Modelling (IEM) for PC21. It provides a mechanism by which progress on delivery can be monitored.

Through use of a unique DAP reference and a unique IEM reference in Table 40b, consistent with the identifiers entered in column 85 and 86 of Table 40, there is a link between the DAPs, IEM work and any associated capital investment projects and nominated outputs listed with unique project IDs entered in Tables 40 and 40a.

With this link, it is possible to carry out an audit assessment of how any movement in the planned delivery programme for either DAPs or IEM work could potentially affect the delivery of capital investment projects and associated benefits to consumers.

5. Audit Findings

5.1 General

1. **NI Water's Corporate system for reporting DAPs and IEMs.** The Company's corporate system used for internal reporting of DAPs and IEMs is the X.
2. **AIR23 Table 40b Data Table format.** The NIAUR (UR) prescribed Data Table format for Table 40b consists of 11 columns (Columns 1-3 for Block A, Columns 4-5 for Block B, Columns 6-7 for Block C, Columns 8-11 for Block D). The Table 40b was provided for our audit with additional columns in Block A. Columns 1-3 match the UR guidance document, however, Column 4 was mis-labelled, with all subsequent columns shifted.

As a post-audit action, we asked the Company to provide us with a Data Table which matches the UR prescribed format. NI Water provided an updated version of the Table 40b data in the NIAUR blank table format, as expected.

5.2 Table Data: Block A [DAP Information & Links with Table 40 and 40a]

1. **Omission of references/linkages to Table 40 and Table 40a.** We identified missing links between Table 40b, Table 40 and Table 40a. We raised and closed out post-audit actions associated with this audit finding. Details of our challenge and the Company's response/outcomes are given in Appendix C.
2. **Validation of the number of DAPs, IEMs and Drainage Areas.** An audit finding and recommendation left outstanding from AIR22, is for NI Water to validate the reported number of DAPs and IEMs in AIR23. To check if this recommendation has been addressed, we challenged the Company on the number of Drainage Areas vs DAPS vs IEMs.

Through our engagement with the Company, we checked the number of DAPs being reported through the AIR23 Table 40b. We counted 1069 rows within Table 40b of which 1063 are Drainage Areas. In response to this challenge, the Company included a section within its draft commentary and method statement, with a discussion of these numbers and the disaggregated catchments since AIR22 – these are the X, X and X DAPs.

Our summary records of drainage areas, DAPs and IEMs (completed and ongoing) are given in Appendix C.

3. **Population Served Discrepancies.** At audit, we viewed the Company's DAP APP [its corporate system used for internal reporting of DAPs & IEMs] to check the DAP names and population served numbers of the eight samples against those in Table 40b [Columns 2 and 3]. We found that 100% of the DAP names matched but 25% of the DAP population numbers were misaligned with the corresponding DAP APP numbers.

In addition to the sample population discrepancies, we also note that there is a change of 30% in the total population served numbers from AIR22 [2,381,074 excluding some TBC entries] to AIR23 [3,047,374]. We challenged the Company about the discrepancies in the sample population served numbers. Details of our challenge and the Company's response/outcomes are given in Appendix C.

5.3 Table Data: Blocks B, C [DAPs] & D [IEM]

1. **Sequencing of Dates.** By reference to the UR guidance for Table 40b [Section 3.3 and Section 1.3], we identified omission of the Company's explanation of the basis for the sequencing of dates in the Table 40b Data Table in the NI Water's draft commentary presented for audit.

As a post-audit action, we asked the Company to address this audit observation in an improved version of the commentary. NI Water provided an updated version of the Table 40b commentary that included notes on the sequencing of dates for the delivery of DAPs and IEMs.

2. **Mismatch of Baseline and Current Actual (or projected) Dates.** Through our audits, we identified that the AIR23 current actual or projected needs and options report completion date [Column 7] of Table 40b for two DAPs were misaligned (earlier) when compared with the baseline needs and options report completion date [Column 6]. We challenged the Company about this observation. Details of our challenge and the Company's response/outcomes are given in Appendix C.
3. **Missing dates for sample DAP X [DA0844].** Through our audits, we observed that the Need and Options Report's Table 40b's baseline and current completion date entries for DAP ref DA0844 in both the AIR22 and AIR23 Table 40b were blank. For AIR22, Table 40b had a note: *"DAP was not progressed beyond the MBV stage"*. We asked the Company to confirm if the AIR22 note is valid for the AIR23 Data Table. If valid, we asked NI Water to update the commentary to address this audit observation. Details of our challenge and the Company's response/outcomes are given in Appendix C.
4. **Missing current completion dates – DA0956 [X].** As part of our audits, for the DAP sample DA0956, we observed that the dates were missing in column [Current Actual or Projected Needs and Options Report Completion Date]. We asked the Company to investigate the blank dates for this DAP. Details of our challenge and the Company's response/outcomes are given in Appendix C.
5. **Missing dates for IEM12 [X].** We identified that sample IEM12 [X] had a missing baseline and current completion dates [Column 10 and Column 11 of Table 40b, respectively]. We challenged the Company to investigate the missing dates. Details of our challenge and the Company's response/outcomes are given in Appendix C.
6. **Missing dates for DAPs linked to IEM02 [X].** We identified that sample IEM02 [X] had missing link DAP dates in AIR23 Table 40b [Columns 4, 5, 6 and 7]. One DAP link, DA0327 [X], had all dates populated and another DAP link, DA0008 [X], was missing dates in Columns 6 and 7. The remaining seven (7) DAP links [DA0009, DA1175, DA0333, DA0044, DA0331, DA0339, DA0330] are missing dates in all columns.

We challenged the Company to investigate the missing dates. Details of our challenge and the Company's response/outcomes are given in Appendix C

7. **Mismatch of AIR22 and AIR23 dates for IEM02 [X].** Through our audits, we identified a mismatch with IEM ref IEM02's [X] baseline completion date of Mar 2023 [AIR22] set against baseline date of Sep 2022 [AIR23], both Column 10.

We challenged the Company to investigate this. Details of our challenge and the Company's response/outcomes are given in Appendix C

5.4 Table Data: Block D [IEM Information & Dates]

1. **Change of IEM unique reference IDs between AIR22 and AIR23.** Through our audits, we identified that the sample references for each IEM are different from AIR22 to AIR23. For example, X [AIR22 ref: IEM003, AIR23 ref: IEM08], X [AIR22 ref: IEM008, AIR23 ref: IEM02], X [AIR22 ref: IEM011, AIR23 ref: IEM18] and X [AIR22 ref: IEM014, AIR23 ref: IEM19]. Details of our challenge and the Company's response/outcomes are given in Appendix C
2. **IEM01 Dates – IEM01 Baseline and Completion Dates differ for AIR22/AIR23.** Through our audits, we observed that the IEM ref sample IEM01 (X) was missing completely from the AIR22 Table 40b submitted to the UR. As a result, we were unable to compare the baseline or current completion dates to assess potential AIR22 vs AIR23 date movements. Details of our challenge and the Company's response/outcomes are given in Appendix C
3. **Omission of IEM text in Commentary.** As part of our audits, we observed that one of the earlier versions of the Table 40b commentary did not have IEM related text in it. Ref: UR guidance,

NIAUR_air23_repreq_Sec2_Chap40b 02.00. Section 3.1 bullet point 2, Page 5 of 9). We challenged the Company about this observation. Details of our challenge and the Company's response/outcomes are given in Appendix C

5.5 Table 40b vs Table 40 Consistency and/or missing Project Outputs in Table 40a.

1. **DAP references not linked to Table 40.** As part of our audits, we observed that the sample DAP ref DA0363 [X] and sample IEM12 [X] could not be linked to Table 40, therefore, we were unable to determine the Project outputs linked to Table 40a. We challenged the Company about this observation. Details of our challenge and the Company's response/outcomes are given in Appendix C
2. **DAP references not linked to Table 40a.** Through our audits, we identified that a number of our audit DAP samples could not be linked to Table 40 and to Table 40a. We challenged the Company about this observation. Details of our challenge and the Company's response/outcomes are given in Appendix C

5.6 Clarity of DAP & IEM Deliverables

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.

We challenged the Company for evidence to substantiate completion of the AIR23 DAP and IEM deliverables highlighted through its commentary. Details of our challenge and the Company's response/outcomes are given in Appendix C

5.7 Residual Risk of Delivery of DAPs & IEMs – Material Gaps in Risk Register

In its Table 40b commentary, NI Water reported on delays to the delivery of planned AIR23 DAP and IEM programmes, with the planned vs delivered statistics outlined as follows, and confirmed with our audit evidence.

- ☐ 14 of 45 Model Build and Verifications delivered [31% complete]
- ☐ 6 of 23 Need & Options Reports completed [26% complete]; and
- ☐ 1 of 5 Integrated Environmental Modelling (IEM) studies delivered [20% complete].

We note that the Company's reasons for the delays include impact of PC21 scope certainty submissions, supply chain resourcing issues, flow surveys/investigations required to support scope certainty exercise and delays by NIEA with respect to generation of environmental Statement of Needs caused many of the DAP delivery programmes to be put on hold.

We assessed the implication of these delays for delivery of the PC21 investment programme. We then investigated compatibility of our assessment findings with the Company's own assessment of the residual risk of delivery of the DAPs and IEMs.

Our assessment and evaluation of the PC21 capital programme implications of the DAP MBVs (31 No), DAP NORs (17 No) and IEMs (4 No) not completed as planned in AIR23, identified the following.

- ☐ BU dates of PC21 capital projects, linked to DAP MBVs/NORs (and related IEMs) AIR planned completion dates, are not recognised in the risk register – see attached audit findings.

- ☐ There are mismatches of multiple DAP-IEM associations between the AIR23 Table 40 and Table 40b data sets [see Table D1-D2] – this introduces additional management risks that are not currently captured in the risk register; and
- ☐ The Company's assessment of the residual risk of delivery of DAPs and IEMs, required by the Utility Regulator [Section 3.1 of Table 40b NIAUR Guidance], is not currently linked to NI Water's corporate risks (where relevant). This means that risk interdependency that multiple risks may have on each other, how they interact and how they are managed is missing from the assessment.
- ☐ There are material gaps in the risk register used by NI Water for its assessment of the residual risk of delivery of DAPs and IEMs.

Further details are given in Appendix D.

6. Conclusions and Recommendations

6.1 Conclusions

We engaged with the Company to close out post-audit corrective actions. Details are given in Appendix B – the completed Audit Templates. In Appendix C, we documented our audit challenges and notes of how resolved, to finalise the Appendix B's audit template entries.

The conclusions drawn from our AIR23 audits of the NI Water's Table 40b submission set against the high level UR Reporter requirements are set out in Table TC_40b_4.

Table TC_40b_4: Table 40b Audit Conclusions

Scope Item (Ref Section 3.1)	UR Reporter Requirement	Conclusion
Section 3.1 a)	<i>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.</i>	We have reviewed NI Water's Table 40b submission and progress on the delivery of its DAP Model Build and Verification Reports (MBV) and Needs and Options Reports (NORs) and Integrated Environmental Modelling (IEM).
Section 3.1 b)	<i>The Reporter should comment on the company's <u>progress</u> with the delivery of DAP and Integrated Environmental Modelling outputs.</i>	<p>We identified <u>notable delays</u> relative to what NIW described as "unrealistic, self-imposed targets" in its AIR22 submission, with:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 14 of 45 MBVs <input type="checkbox"/> 6 of 23 NORs; and <input type="checkbox"/> 1 of 5 IEM studies completed in AIR23. <p>This means that the following outputs were not completed as planned in the report period.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 31 MBVs <input type="checkbox"/> 17 NORs; and <input type="checkbox"/> 4 IEM studies
Section 3.1 c)	<i>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</u></i>	We have assessed NI Water's comments on DAPs and IEMs which were planned to be completed by 31 st March 2023 and not completed as planned.

Scope Item (Ref Section 3.1)	UR Reporter Requirement	Conclusion
	<i>of the Report Year (by 31st March 2023) and have not been delivered and the potential impact for the delivery of associated capital investment and nominated outputs.</i>	<p>We note the Company's explanations for delays to the AIR23 planned outputs including the PC21 scope certainty submissions, NIEA delays, flow survey extensions and supply chain resource issues.</p> <p>The delay is likely to have a knock-on effect on the linked PC21 capital investment and nominated outputs as DAP delays would affect the dependent IEMs and both would affect planned delivery of associated PC21 capital projects and nominated outputs.</p> <p>NI Water states that <i>"In order understand potential delivery/programme risks associated with both DAPs and IEM studies, NIW has developed an Integrated Risk Register."</i> Through our audits, we reviewed the Company's DAP and IEM risk register and we identified material gaps.</p>
Section 3.1 d)	<i>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.</i>	<p>Through our audits, we highlighted material differences between the 'baseline' and 'current actual or projected' completion dates encountered through our audit sample. We identified post-audit corrective actions for these and closed out these actions with proof of evidence for resolution of the identified errors by the Company. Details are given in Sections 5.3-5.4 and Appendix C.</p> <p>Through our post-audit engagements with the Company, NI Water stated that <i>"...all DAPs needed to inform PC21 investment are complete. So, there is no risk to the PC21 investment programme"</i>. We refer to this as the Company's statement.</p> <p>Our evaluation of the implications of our audit findings (including the material gaps of the NI Water's risk register and issues with linking some Table 40b's DAP/IEM references to entries in Table 40/Table 40a), on the PC21 capital investment programme, concluded that the Company's statement is unproven when set against the evidence provided for our Table 40 and Table 40b audits.</p>

6.2 Recommendations

- Improve assessment of residual risk of delivery of DAPs and IEMs. Fill in material gaps in the risk register used for this assessment. Validate on a quarterly basis, to inform future audits of the risk of delivery of DAPs and IEMs for PC21 and for the PC27 Business Plan.
- Table 40b [Delivery of DAPs and IEMs] & Table 40 [Capital Investment Monitoring]: Improve co-ordination of AIR reporting across the Table 16 [the DAP related Lines 18-22], the Table 40 and the Table 40b reporting teams.
- Address mismatches of some DAP-IEM associations between Table 40 and Table 40b data sets – see Appendix D [Table D1 and Table D2].

- d) Table 40b design. We note that the linkage between Table 40 and 40a is via a unique project ID (Column 3 of Table 40). We suggest that NI Water works with the UR to add PC21 capital project IDs to the Table 40b design.
- e) Programming of DAPs and IEMs dates. We suggest that NI Water develops a Gantt chart type, integrated programme of DAPs, IEMs and capital projects and nominated output delivery dates to inform the Company's improved assessment of the residual risk of delivery, and assessment of implications for the PC21 capital projects and outputs.

An example of such programme is the one produced by NI Water's X for the delivery milestones of the PC21 Development Outputs.

- f) Population Served Discrepancies between the DAP APP (NI Water's corporate system for internal reporting of DAPs and IEMs) and Table 40b [Column 3].
 - ☐ We suggest that the Company carries out a thorough check on population served numbers in response to our AIR23 audit finding that 25% of our audit sample shows a misalignment between the DAP APP and the Table 40b [Column 3] population served numbers.
 - ☐ We also suggest a validation check on explanations of the AR22 to AIR23 movement in total population served numbers across the entire Table 40b entries. We note that there is a change of 30% in the total population served numbers from AIR22 [2,381,074 excluding some TBC entries] to AIR23 [3,047,374].

References

1. NIAUR, 2023. Annual Information Return 2022-23 (AIR23) – Reporter Letter with Table 40b Audit Guidance on file as “2023-02-24 AIR23 Reporter Letter.PDF”.
2. NIAUR, 2023. Annual Information Return Reporting Requirements and Definitions Manual for AIR23. Tables & Commentaries. Chapter 40b Delivery of DAPs and Integrated Environmental Modelling.
3. NI Water, 2023. Pre-Audit and Post-Audit versions of the AIR23 Table 40b Data Table and Commentaries.
4. NI Water, 2023. Pre-Audit and Post-Audit versions of the AIR23 Table 40b Methodology.
5. NI Water, 2023. Pre-Audit and Post-Audit versions of the AIR23 Table 40 Data Table.
6. NI Water, 2023. Pre-Audit version of the AIR23 Table 40a Data Table.
7. NI Water, 2023. Pre-Audit FW Actions from AIR23 Table 40b Introductory Audit Meeting.
8. NI Water, 2023. Post-Audit version of the AIR23 IEM Catchments [Matching of AIR22 IEM references with AIR23 IEM references].
9. NI Water, 2023. Post-Audit NIW IEM Breakdown work in progress for IEM
10. NI Water, 2023. Post-Audit 2022.04.04 Storm Optimiser Compliance Assessment Report
11. NI Water, 2023. Post-Audit 2022.10.07 DRAFT X Catchment Model Output Report
12. NI Water, 2023. Post-Audit NIW Rural DAPS_Rapid Model Build_Report_1
13. NI Water, 2023. Post-Audit NIW AIR23 Post-Audit Actions Table 47 Section 21
14. NI Water, 2023. Post-Audit Ballynahinch Optioneering Technical Note.
15. NI Water, 2023. Post- Audit NIW DA0051 X DAP MBV

16. NI Water, 2023. Post- Audit NIW MBV Reporting X
17. NI Water, 2023. Post- Audit DA0069_X_NIW MBV Reporting D06
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24. NI Water, 2023. Post- Audit X_NIW MBV Report_D3
25. NI Water, 2023. Post- Audit NIW MBV Report D05_X
26. NI Water, 2023. Post- Audit NIW MBV X_Final v1
27. NI Water, 2023. Post- Audit DA0159_X_NIW MBV Reporting D06
28. NI Water, 2023. Post-Audit NIW MBV Reporting X v3
29. NI Water, 2023. Post-Audit NIW MBV Reporting D05_X v3.
30. NI Water, 2023. Post-Audit NIW MBV and NO Apr 22 to Mar 23.
31. NI Water, 2023. Post-Audit 23022023 DAP Risk Register Final
32. NI Water, 2023. Post-Audit 16062023 DAP IEM Risk Register Final.
33. NI Water, 2023. Post-Audit email "[X's email on 1st June] RE 31.05.23 RE 30.05.23 Status of Post-Audit Actions RE Table 40b AIR23 Audit and Reporting"
34. NI Water, 2023. Post-Audit email "X 26.05.23Marked-Note of Actions from 18.05.23 Table 40b Introductory Audit v3"

Appendices

Appendix A: X

Appendix B: X

Appendix C: X

Appendix D: X



Appendix A: X



Appendix B: X



Appendix C: X



Appendix D: X

SUMMARY OF AUDIT FINDINGS

Table 47 – Delivery of PC21 Development Outputs

PREPARED BY	X / X	NI WATER AUDITEES
DATE	28 July 2023	Individual Owners of each of the 25No PC21 Development Outputs X [Development Outputs Co-ordinator], X [Programming] & X [linked PC21 & PC27 projects and programme], Support [X – Regulation Officer, X – Regulation Manager]

1. Overview

We have witnessed substantial improvements to NI Water's compilation of its Table 47 submission since AIR22. In response to last year's audit feedback, the Company has developed an integrated programme for delivery of the FD21 Annex T's PC21 Development Outputs (DOs), as scoped, with clear dependencies across the DO programmes.

We note that there has been no change to the original FD21 Annex T proposals for 16 of 25 DOs. The remaining nine DOs have had some changes with highlights provided in this report. For five of the remaining nine DOs, there are material changes to the original Annex T proposals. The findings of our audits are outlined as follows.

- ❑ Completeness of Information: the Table 47 reporting proformas are complete, with evidence of reported activities to date and planned next steps for delivery. All cost reporting issues identified through our audits have been resolved by Auditees, post-audit, and in advance of the AIR23 submission.
- ❑ Readiness for the Mid-Term Review (MTR): Documents for 23 of the 25 DOs are ready for the MTR. The remaining two DOs [DO10 - Event Duration Monitors WwPS/CSOs & DO12 - Storm Water Separation] need improved documents to support any proposals for new and/or proposed changes to PC21 targets, for the second part of the PC21 period.
- ❑ DO Outcome Impact on PC21 FD Targets: 21 of the 25 DOs have no defined impacts on PC21 FD targets. We identified that outputs of AIR23 reported work could potentially have impacts on the linked FD21 targets for four DOs namely: DO5 - Refresh of DG2 Register, DO8 - Smart Networks – ITS Strategy, DO10 - Event Duration Monitors and DO12 - Storm Water Separation.

2. Introduction

Individual Development Outputs (DOs) are referenced as individual sections of the NI Water's AIR23 Table 47 returns for the 25 DOs set out in the PC21 final determination. We have used the following representation in this commentary.

- ❑ DO1 refers to the Section 1 DO [ref 1 in FD21 Annex T and titled "Consumer Engagement"], DO2 is the Section 2 DO [ref 2 in FD21 Annex T and titled "Consumer Protection / Customer Care Register"] and so on up until DO25 [ref 25 in FD21 Annex T and titled "Addressing scope uncertainty for the Mid-term Review"].

3. Scope

The scope of the AIR23 Table 47 audits covers the 25No PC21 Development Outputs listed in Annex T of the UR's Final Determination 2021 (FD21). The scope is dictated by the UR's AIR23 Reporter Letter's specific requirements, outlined as follows.

- a) The Reporter should review the Company's 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 FD21.

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

4. Audit Approach and Audit Tests

4.1 Introduction

Our audit approach is evidence-based (see evidence summary in Appendix A), focussed on the scope of work outlined in Section 3. The method consists of seven separate but inter-related steps covering the following Tasks:

- development of an Audit Template (see completed Templates in Appendix B) to fulfil the UR's AIR23 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 [and a representative of the NI Water's DO co-ordinating team]
- provision of audit feedback to Auditees; and
- engagement with Auditees to close out any 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.

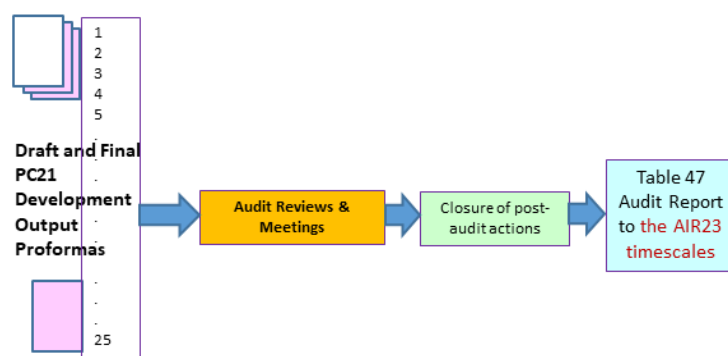


Figure TC_47_1: Illustration of Audit Approach

4.2 RAG Ratings

The RAG ratings applied in our Audit Templates (see Appendix B) 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).

4.3 Audit Tests

For our audit planning, the UR provided guidance on matters that should inform the Reporter's comment on progress being made by NI Water against the original FD21 Annex T proposals. The guidance used the "Storm

Water Separation” Development Output [DO12] example to highlight these considerations. For our audits, we expressed these factors through three Audit Tests as follows.

❑ Test 1: Completeness of Information

We applied Test 1 to check completeness of NI Water's Table 47 information and movements from AIR22 to AIR23. This involved checking and validation of the completeness of NI Water's AIR23 proforma and supporting information, set against FD21 Annex T information. For this we carried out assessments through our audit template Questionnaire criteria A-G, under the following headings – see Appendix B.

- A- Activity completed to date and its outcome
- B- Planned next steps for delivery
- C- Changes to Original Proposal (including movements from AIR22 to AIR23)
- D- Alignment with the UR Monitoring Expectation
- E- Risk of Delivery. Target Dates for Key Milestones for Development Objective
- F- Risk of Delivery. Target Dates for Key Milestones for Solution Investment
- G- Links between Development Objectives.

❑ Test 2: Readiness for the Mid-Term Review (MTR)

In Section 4.3 of the UR's PC21 MTR Approach Document, NI Water is required to present its consolidated mid-term review submission by end of September 2023. Test 2 examined the readiness of Table 47 outputs for the Company's MTR submission. The outputs examined through application of Test 2 include: development of business cases (where relevant), NI Water/UR engagement proposals, re-prioritisation of projects and progress that are expected to be made towards identification, costing and delivery of schemes.

❑ Test 3: DO Outcome Impact on PC21 FD Targets

Audit Test 3 involved checks on the anticipated DO outcomes on linked PC21 FD targets. Through this check, we examined references to PC21 targets in the Company's Table 47 AIR23 submission, and alignment with the PC21 targets listed in Tables 38—39 of Annex E (FD21) including the UID, DG3 and the DG5 targets.

5. Audit Findings

5.1 Introduction

Our Table 47 DO audit findings are summarised in Table TC_47_1. Details of our audit findings are documented in completed audit templates set in Appendix B. Important points from the audit findings are noted in the following sections.

5.2 Change to the original FD21 Annex T proposals

We note that there has been no change to the original FD21 Annex T proposals for 16 of the 25 DOs. The remaining nine DOs have had some changes with highlights provided in this report. For five of the nine remaining DOs, there are material changes to the original Annex T proposals covering aspects such as scope, scope attributes, addition of anticipated project outcomes and timeline for delivery of outputs.

5.3 Progress compared with programme

Of the 25 DOs, two are complete, one is complete but with PC21 targets to be revised by end August 2023, 16 are on-track, five are delayed and one is reliant on outcome of a trial.

5.4 DO Focus - PC21 or PC27 or PC21 & PC27

Eight DOs are being progressed to confirm PC21 solutions, two to inform PC27 solution costs and 15 are aimed at developing solution costs for PC21 and PC27 investment programmes.

5.5 Test 1: Completeness of Information

The Table 47 reporting proformas for the 25 DOs are complete, with audit challenges resolved post-audit and with supporting evidence – see Appendix A.

5.6 Test 2: Readiness for Mid-Term Review

We identified that 23 of the 25 DOs are ready for the MTR both in terms of the progress made and the documentation of work carried out to date. We note that the documentation for two DOs is ‘nearly ready’ for the MTR. The DOs associated with this observation are: DO10 [Event Duration Monitors WwPS/CSOs] and DO12 [Storm Water Separation].

5.7 Test 3: DO Outcome Impact on PC21 FD Targets

On the basis of the information provided through the AIR23 report of progress across the 25 DOs, we established that:

1. There are no material outcome impacts on the associated PC21 FD targets for 18 of the 25 DOs. For 3 DOs [see Point 2 below] Test 3 is not applicable. For 1 DO [see Point 3 below], there is a defined impact. For 1 DO [see Point 4 below], the impact is thought to be minimal. For 2 DOs [see Points 5-6 below], the impacts are currently undefined.
2. For three DOs [DO4 – DWD Recast & Emerging Issues Study, DO14 – Urban Drainage Modelling - Live Models for IOC ...the DO is a research project and DO 15 - Innovation Initiatives ...the DO is innovation related], there are no associated PC21 FD targets. So, Test 3 is not applicable.
3. For DO5 [Refresh of the DG2 Register], there is a defined impact on the PC21 DG2 targets. Auditees informed us that the PC21 DG2 targets are to be revised through engagement with the UR by end of August 2023.
4. For DO8 [Smart Networks – ITS Strategy], the possible impact on the linked PC21 FD targets is currently undefined but potential impacts are thought to be minimal. We identified the need for NI Water to articulate its position on possible introduction of customer minutes lost target and to engage with the UR about this.
5. For DO10 [Event Duration Monitors WwPS/CSOs], the impact on FD21 Target Nr 13 [Table 39, FD21 Annex E] is currently undefined. We note that there is a need for the Company to develop outline proposals for new PC21 targets for “number of CSO and EO discharges at which event and duration monitoring equipment is installed/fully optimised, and meet NIEA requirements”.
6. For DO12 [Storm Water Separation], the impact of the AIR23 DO report on the Annex T’s PC21 target of “estimated 218.72 Ha of impermeable area” is currently undefined. We identified that there is a need for NI Water to develop outline proposals for a new PC21 target to replace the PC21 target of 218.72 Ha if a revised target was to be proposed for the Company’s MTR engagements with the UR.

6. Conclusions and Recommendations

6.1 Conclusions

- a) In response to last year’s audit feedback, the Company has developed an integrated programme for delivery of the FD21 Annex T’s PC21 DOs, as scoped, with clear dependencies across the DO programmes.
- b) There has been no change to the original FD21 Annex T proposals for 17 of 25 DOs. For five of the eight remaining DOs, there are material changes to the original Annex T proposals.
- c) The Table 47 reporting proformas are complete, with evidence of reported activities to date and planned next steps for delivery. All cost reporting issues identified through our audits have been resolved by Auditees, post-audit, and in advance of the AIR23 submission.

- d) The Development Outputs work for four DOs [DO5, DO8, DO10 & DO12] could potentially impact the linked PC21 targets.

Two of the four DOs [DO10 and DO12] need improved documents to support any proposals for new and proposed changes to PC21 targets for the second part of the PC21 period.

Table TC_47_1: Summary of Table 47 Audit Findings

DO Ref [Annex T Output ID]	Title	PC21 Capital Programme Sub-Prog Reference	TEST 1 [Completeness of Information] <i>[Notes of Pre-Audit/Audit Assessments in Appendix B]</i>	DO to confirm solution spend in PC21 only or PC27 only or PC21 & PC27?	Progress vs Programme [On- Track/Delayed?]	TEST 2 [Readiness for PC21 Mid-Term Review submission 30.09.23]	TEST 3 [Outcome impact on PC21 Target]	Notable Comment
01	Consumer Engagement	N/A	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 only	On Track	Yes	No impact	Complete proforma with evidence. No change to original proposals in Annex T. Evidence provided to support agreed changes to customer measures and metrics in advance of PC21 MTR.
02	Consumer Protection / Customer Care Register	N/A	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 only	On Track	Yes	No impact	Complete proforma with evidence. No change to original proposals in Annex T. No impact on PC21 outputs/targets.
03	NI Water Alpha Ltd - WTWs Treatability Improvements	SP04a	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	On Track	Yes	No impact	Complete proforma with evidence. No change to original proposals in Annex T. No impact on PC21 outputs/targets.
04	DWD Recast & Emerging Issues Study	SP04z	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC27 only	Delayed	Yes	N/A	Complete proforma with evidence. No change to original proposals in Annex T. No decision to date on requirement for new Drinking Water Regulations in Northern Ireland.
05	Refresh of DG2 Register	SP08z	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	Complete (Revisions to PC21 Target planned)	Yes	Impact on PC21 DG2 targets	Complete proforma with evidence. No change to original proposals in Annex T. PC21 DG2 targets to be revised by end August 2023.
06	Targeted Mains Renewals in High Leakage Areas	SP08z	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	On Track	Yes	No impact	Complete proforma with evidence. No change to original proposals in Annex T. No impact on PC21 outputs/targets.

DO Ref [Annex T Output ID]	Title	PC21 Capital Programme Sub-Prog Reference	TEST 1 [Completeness of Information] <i>[Notes of Pre-Audit/Audit Assessments in Appendix B]</i>	DO to confirm solution spend in PC21 only or PC27 only or PC21 & PC27?	Progress vs Programme [On- Track/Delayed?]	TEST 2 [Readiness for PC21 Mid-Term Review submission 30.09.23]	TEST 3 [Outcome impact on PC21 Target]	Notable Comment
07	Leakage Innovation	SP09z	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC27 only	On Track	Yes	No impact	Complete proforma with evidence. No change to original proposals in Annex T. No impact on PC21 outputs/targets.
08	Smart Networks – ITS Strategy	SP09z	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	On Track	Yes	Currently undefined. Minimal impact	Complete proforma with evidence. No change to original proposals in Annex T. No impact on PC21 outputs/targets. Need to articulate position on possible introduction of customer minutes lost target.
09	WwPS / CSO Quality (UID) and WwPS (Capacity increase)	SP12b & 12c	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 only	On Track	Yes	No impact	Complete proforma with evidence. Change of UID numbers from Annex T with a point of clarification which states that "The Final Determination targets the delivery of 136 UIDs, not 94 (as outlined in Annex T). Of these 25 are PC15 carryover schemes, with the remainder, 111 to be confirmed through scope certainty Batch submissions". No impact on PC21 outputs/targets.
10	Event Duration Monitors WwPS/CSOs	SP12b	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	Delayed	Nearly ready for MTR.	Impact on FD21 Target Nr 13 [Table 39, FD21 Annex E] currently undefined.	Complete proforma with evidence. Change to original proposals in Annex T. Develop outline proposals for new PC21 targets for "number of CSO and EO discharges at which event and duration monitoring equipment is installed/fully optimised, and meet NIEA requirements".
11	Cranfield Catchment, Kilkeel Storm Separation	SP12g	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 only	Complete	Yes	No impact	Complete proforma with evidence. The only change to the original proposals in Annex T is the solution cost.

DO Ref [Annex T Output ID]	Title	PC21 Capital Programme Sub-Prog Reference	TEST 1 [Completeness of Information] <i>[Notes of Pre-Audit/Audit Assessments in Appendix B]</i>	DO to confirm solution spend in PC21 only or PC27 only or PC21 & PC27?	Progress vs Programme [On- Track/Delayed?]	TEST 2 [Readiness for PC21 Mid-Term Review submission 30.09.23]	TEST 3 [Outcome impact on PC21 Target]	Notable Comment
12	Storm Water Separation	SP12g	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	Delayed	Nearly ready for the MTR	Impact on PC21 target of “estimated 218.72 Ha of impermeable area” currently undefined.	Complete proforma with evidence. Change to original proposals in Annex T. Develop outline proposals for a new PC21 target to replace the PC21 target of 218.72 Ha if a revised target was to be proposed for MTR engagements with the UR.
13	Real Time Network Modelling	SP12z	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	Delayed	Yes	No impact	Complete proforma with evidence. Material change to the original project outcome in Annex T for reasons explained in the proforma.
14	Urban Drainage Modelling - Live Models for IOC	SP20g	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 only	Reliant on outcome of a trial	Yes	N/A. The DO is a research project	Complete proforma with evidence. Material change to the original Annex T scope for reasons explained in the proforma. Needs a programme of engagement with the UR on completion of trial. Annex T cost unchanged.
15	Innovation Initiatives	SP20g	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 only	On Track	Yes	N/A. The DO is innovation-related	Complete proforma with evidence. No change to original proposals in Annex T. Aspects of programme delayed due to the research nature of the DO.
16	Urban Drainage Modelling - Studies to Inform PC27 - Top 271 Priority Drainage Areas	SP20g	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	On Track	Yes	Impact on FD21 Target 8 [Table 39, FD21 Annex E] currently undefined.	Complete proforma with evidence. No change to original proposals in Annex T. DO is largely PC27-driven

DO Ref [Annex T Output ID]	Title	PC21 Capital Programme Sub-Prog Reference	TEST 1 [Completeness of Information] <i>[Notes of Pre-Audit/Audit Assessments in Appendix B]</i>	DO to confirm solution spend in PC21 only or PC27 only or PC21 & PC27?	Progress vs Programme [On- Track/Delayed?]	TEST 2 [Readiness for PC21 Mid-Term Review submission 30.09.23]	TEST 3 [Outcome impact on PC21 Target]	Notable Comment
17	Raw Water Trunk Main Rehabilitation	SP20 & 23c	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	On Track	Yes	No impact	Complete proforma with evidence. Material change to the original scope in Annex T for reasons explained in the proforma. Needs a plan of engagement with the UR on completion of some condition assessments on the highest priority raw water truck mains.
18	Culmore DA KL554 - Skeoge Link Road	SP24a	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 only	Delayed	Yes	No impact	Complete proforma with evidence. No material change to the original scope in Annex T but it has been reinstated in the proforma. Additional anticipated project outcome added and cost increased with reason explained in the proforma.
19	LWWP Networks	SP 12b & 12d	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	On Track	Yes	No impact	Complete proforma with evidence. No change to original proposals in Annex T. Business cases for solution, including costs and justifications submitted to UR for determination.
20	LWWP Wastewater Treatment Works	SP16b	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	On Track	Yes	No impact	Complete proforma with evidence. No change to original proposals in Annex T. Business cases for solution, including costs and justifications submitted to UR for determination. Exception was the three business cases relating to Belfast WwTW, which are to be submitted as part of the MTR.
21	AD - Asset Strategy Wastewater Asset Performance Modelling	SP20g	Audit challenges resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	Initial delays, now 'On Track'	Yes	No impact	Complete proforma with evidence. No change to original proposals in Annex T.

DO Ref [Annex T Output ID]	Title	PC21 Capital Programme Sub-Prog Reference	TEST 1 [Completeness of Information] <i>[Notes of Pre-Audit/Audit Assessments in Appendix B]</i>	DO to confirm solution spend in PC21 only or PC27 only or PC21 & PC27?	Progress vs Programme [On- Track/Delayed?]	TEST 2 [Readiness for PC21 Mid-Term Review submission 30.09.23]	TEST 3 [Outcome impact on PC21 Target]	Notable Comment
22	AD - Asset Strategy - Water Asset Performance Modelling	SP20g	Audit challenges partly resolved. Evidence of work completed to date provided post-audit.	PC21 & PC27	On Track	Yes	No impact	Complete proforma with evidence. Material change to the original scope in Annex T for reasons explained in the proforma.
23	Facilities H&S Compliance	SP20e	Audit challenges partly resolved. Evidence of work completed to date provided post-audit.	PC21 & PC27	On Track	Yes	No impact	Complete proforma with evidence. No change to original proposals in Annex T.
24	Smart Meters	SP19	Audit challenge resolved post-audit with supporting evidence. Proforma information is complete.	PC21 & PC27	On Track	Yes	No impact	Complete proforma with evidence. No change to original proposals in Annex T. No impact on PC21 outputs/targets.
25	Addressing scope uncertainty for the Mid-term Review	SP12 & 16	Audit challenge resolved post-audit with supporting evidence. Proforma information is complete.	PC21 only	Complete	Yes	No defined impact at the time of writing	Complete proforma with evidence. No change to original proposals in Annex T.

Notes to Table TC_47_1 Entries

- Columns 1-3: Taken from the PC21 FD Annex T for each of the 25 Development Outputs [DOs].
- Column 4: Notes from our audit template questionnaire assessment of the application of Test 1. For details, see Appendix A [Evidence Summary] and Appendix B [Completed Audit Templates].
- Column 5: Information focus of individual DOs are taken from completed NI Water's AIR23 proformas – the entries are PC21 only or PC27 only or PC21 & PC27.
- Column 6: Our assessment of programme vs progress was based on a review of NI Water's integrated programme on file as "Master DO Programme v0 07-07-23.PDF" and the Company's "PC21 Development Objectives Dashboard 06 06 23.PPTX" document.
- Columns 7-8: Notes from our application of Test 2 and Test 3 described in Section 4.3 of the commentary.
- Column 9: Notable comments derived from our evaluation of audit assessment outputs, discussion with NI Water Auditees and the audit documentation compiled in Appendices A-B.

6.2 Recommendations

- a) Use outputs of AIR23 reported work for three DOs [DO5, DO10 and DO12] to discuss and agree targets for the second part of the PC21 period with the UR (if required).
- b) Improve documentation for two DOs [DO10 and DO12] to support any proposals for new and/or proposed changes to the linked PC21 targets, for the second part of the PC21 period.

References

1. NIAUR, 2023. Annual Information Return 2022-23 (AIR23) – Reporter Letter with Table 47 Audit Guidance on file as “2023-02-24 AIR23 Reporter Letter.PDF”.
2. NIAUR, 2023. Annual Information Return Reporting Requirements and Definitions Manual for AIR23. Tables & Commentaries. Chapter 47 Development Outputs Covering: Delivery of Development Outputs.
3. NI Water, 2023. Pre-Audit and Post-Audit versions of the AIR22 Completed Proformas for Table 47 Submission.
4. NI Water, 2023. Evidence Provided alongside Post-Audit versions of Completed Proformas for Table 47 Submission – see summary in Appendix B.

Appendices

Appendix A: X

Appendix B: X



Appendix A: X



Appendix B: X

