

PC21 Information Requirements

Chapter 3 – Capital Investment

Annex 3C – Asset Inventory Submission

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Contents

Annex 3C - Asset Inventory Submission	1
3C.1 Introduction	1
3C.2 General Guidance	2
3C.3 Table 3C.1 – Impounding Reservoirs	4
3C.4 Table 3C.2 – Water Treatment Works	5
3C.5 Table 3C.3 – Water Pumping Station	5
3C.6 Table 3C.4 – Service Reservoirs	6
3C.7 Table 3C.5 – Water Mains	6
3C.8 Table 3C.6 – Sewerage	7
3C.9 Table 3C.7 – Sewage Pumping Stations	8
3C.10 Table 3C.8 – Wastewater Treatment Works	8
3C.11 Table 3C.9 – Miscellaneous	8
3C.12 Reporter Guidance	9

Information Requirement Tables

3C.1	Impounding Reservoirs
3C.2	Water Treatment Works
3C.3	Water Pumping Station
3C.4	Service Reservoirs
3C.5	Water Mains
3C.6	Sewerage
3C.7	Sewage Pumping Stations
3C.8	Wastewater Treatment Works
3C.9	Miscellaneous

Annex 3C - Asset Inventory Submission

3C.1 Introduction

3C.1.1 The requirement for an asset inventory submission is set out in Section 3.8 of Chapter 3. This annex sets out the information requirements for an asset inventory in more detail.

3C.1.2 The requirement to complete an asset inventory as part of the Business Plan submission has been introduced for the first time in PC21. In previous price controls we have asked NI Water to provide an assessment of its asset inventory and costing systems with a view to providing an asset inventory and asset valuation in future price controls. In our Approach to Asset Maintenance we concluded that the PC21 Business Plan submission should include an asset inventory developed so that:

- it is based on information collected by the company to manage its business;
- has a level of granularity which can be used to apply cost curves to support an asset valuation;
- reflects the information used to develop the Plan for Asset Maintenance for PC21; and,
- it distinguishes between data which is known and data which is estimated, setting out how estimated data has been in-filled to provide a complete picture.

3C.1.3 This submission is an initial step in the collection of summary asset data to inform the Utility Regulator's decisions on funding and outputs. At this stage we have not asked for either:

- an assessment of residual asset lives; or,
- a total or net asset valuation.

3C.1.4 We will consider whether such further submissions are useful and when they can be delivered once we have reviewed the asset inventory submission with the company.

3C.1.5 The PC21 asset inventory submission shall comprise:

- a data submission consisting of 9 tables which provide summary information on assets by asset type, by size band and by age profile; and,
- supporting commentary.

3C.1.6 The nine tables forming the capital investment submission are:-

- Table 3C.1 – Impounding Reservoirs.
- Table 3C.2 – Water Treatment Works.

- Table 3C.3 – Water Pumping Station.
- Table 3C.4 – Service Reservoirs.
- Table 3C.5 – Water Mains.
- Table 3C.6 – Sewerage.
- Table 3C.7 – Sewage Pumping Stations.
- Table 3C.8 – Wastewater Treatment Works.
- Table 3C.9 – Miscellaneous.

3C.1.7 A draft of the asset inventory submission should be submitted by the 18th October 2019 with a final submission provided as part of the Business Plan.

3C.1.8 We have not provided individual line entry definitions for this submission. In line with our intention that the asset inventory submission is based on information collected by the company to manage its business, we expect the company to use asset definitions from its Corporate Asset Register to define the submission.

3C.1.9 Guidance for completing Business Plan tables and the provision of supporting information is set out below.

3C.2 General Guidance

3C.2.1 To the extent possible, the asset inventory data provided should be complete and mutually exclusive. The company should aim to provide a comprehensive return, using the commentary to advise on the scope of assets it has covered in each table. For example:

- The information on water mains should include all water mains including raw-water aqueducts and non-potable mains.
- Sewerage should include rising mains and the length of outfalls.

3C.2.2 Every attempt has been made to maintain consistency between the asset inventory and the information in other regulatory submissions such as the Annual Information Returns and other sections of the Business Plan. However, it may be necessary to collect information to different definitions to meet specific needs (for example information used for inter-company comparison and benchmarking). Where this is the case, specific information requirements including detailed definitions will be issued by the Utility Regulator.

3C.2.3 The asset inventory tables are structured around key asset groupings such as impounding reservoirs and water treatment works. It is expected that the company can identify these broad asset functions in the same way as they are identified in its Corporate Asset Register. The company should comment where this approach diverges from other regulatory definitions (for example the definition and treatment of terminal pumping stations).

3C.2.4 The tables do not require the detailed itemisation and segregation of the asset base available in the Corporate Asset Register or from other sources which may be necessary to fully understand the value of the assets and future asset maintenance costs. For example:

- Sewerage data is captured by length for different diameter bands. Further detail such as the frequency of manholes, surface category are not captured and are implicit in the reported data.
- Water mains data is captured by length for different diameter bands. Further detail such as surface category and the frequency of fittings and chambers is not captured and are implicit in the reported data.

The company should advise if it considers it necessary to provide a greater level of granularity to summarise its asset inventory. If this is the case, the company should add additional sub-tables to Table 3C.9 to cover the information it considers appropriate.

3C.2.5 The asset inventory should exclude PPP assets. The company should provide commentary on its plans to collect asset data for Alpha PPP works consistent with the Corporate Asset Register following the buy-out of the Alpha PPP concession through Project Clear. The company should provide commentary on its plans to collect data on Omega PPP and Kinnegar PPP consistent with the Corporate Asset Register when these PPP concessions reach their service completion date.

3C.2.6 Where the requirements ask for a count of '**assets**' by type (ICA, mechanical, electrical and civils), by size band and year, the term '**asset**' is intended to reflect the '**asset**' level in the NI Water asset hierarchy. The types of '**asset**' included in this count should be agreed with the UR in advance of the submission.

3C.2.7 The four asset types (ICA, mechanical, electrical and civils) used in the asset count are intended to be complete and mutually exclusive. The company should advise the UR of other asset types which are necessary to provide a complete submission and agree an approach for including these asset types with the UR in advance of the submission being made.

3C.2.8 Unless indicated otherwise in the individual table requirements below, the asset inventory should be limited to assets which are maintained by NI Water and used by the company to deliver regulated water and sewerage services. Assets categorised as decommissioned or abandoned (or similar) should not be included. The company should identify how the operational status of assets are defined in its Corporate Asset Register and agree with the UR which categories of assets (in terms of operational status) will be included in the asset inventory submission.

3C.2.9 The assets types of ICA, mechanical, electrical and civils are intended to be broadly representative of nominal and/or depreciation asset lives. In advance of preparing its submission, the company should engage with the Utility Regulator, set out the range of assets it intends to include in each asset type and provide information on the nominal and/or depreciation asset lives of these assets. The company should group assets in each asset type to achieve broad alignment between asset types and their depreciation asset lives.

3C.2.10 Each asset age profile includes a lower limit with all assets before that date counted as one group. These limits have been established with a view to the likely life of the assets. The quantity of assets included in the age band below the lower limit is intended to be small. The company should undertake an initial review of the quantities of assets below the lower age bands to ensure that the quantity of assets below these limits are small. Following this review, any proposed changes to the lower limits should be discussed and agreed with the Utility Regulator in advance of the submission.

3C.2.11 Where appropriate, the tables include a category of “unknown” for age and asset size. This is intended to capture data which has been captured as unknown in the Corporate Asset Register. We expect NI Water to review the ‘unknown’ data and describe the steps it has taken in advance of the asset inventory submission and the further steps it plans to take to populate these unknowns.

3C.2.12 The company is expected to populate the asset inventory submission from the Corporate Asset Register. We recognise that the Corporate Asset Register is an operational system subject to continuous updates. We expect the company to retain a copy the data abstracted from the Corporate Asset Register to populate the asset inventory submission and any subsequent attribution to ensure that any further requests for a more granular view of the data can be addressed (for example the ability to generate asset age profiles by year if required).

3C.2.13 The company should describe the primary sources of asset inventory information and the confidence in the reported asset quantities, size and age profile.

3C.3 Table 3C.1 – Impounding Reservoirs

3C.3.1 The asset inventory submission shall include a statement of the numbers of impounding reservoirs by size bands and construction age profile.

3C.3.2 The storage volume of the reservoirs should be that used in the latest draft of the Water Resource Management & Supply Resilience Plan, any difference should be explained in the commentary. The company should state how the storage volumes have been determined.

3C.3.3 While Table 3C.1 should be limited to impounding reservoirs owned and maintained by NI Water for the purpose of water supply, the supporting data table described below should include other impounding reservoirs owned by NI Water or which NI Water retains a complete or partial responsibility for under the Reservoirs Act (Northern Ireland) 2015. The supporting information should identify the operational status of these reservoirs.

3C.3.4 The submission should include a supporting data table in excel format itemising:

- the reservoirs included in the submission with CAR ID;
- the storage volume of each reservoir;
- the construction date; and,
- the operational status of the reservoir.

3C.4 Table 3C.2 – Water Treatment Works

3C.4.1 The asset inventory submission shall include:

- Table 3C.2A: the number of water treatment works by normal maximum output capacity.
- Table 3C.2B: the age profile of different asset types in water treatment works by nominal maximum outputs capacity size bands.

3C.4.2 In advance of the submission, the company should provide the Utility Regulator with a definition of the normal maximum output capacity for water treatment works. The normal maximum output capacity should be that used in the latest draft of the Water Resource Management & Supply Resilience Plan, any difference should be explained in the commentary.

3C.4.3 The information reported in Table 3C.2 should be limited to operational water treatment works supplying water in 2018 (as agreed with DWI for the purpose of annual water quality monitoring in 2018).

3C.4.4 The submission should include a supporting data in excel format itemising:

- the water treatment works included in the submission with CAR ID;
- other abandoned or decommissioned water treatment works; and,
- the normal maximum output of each water treatment works.

3C.4.5 The definition of 'assets' included in the asset count is covered in the general guidance above.

3C.5 Table 3C.3 – Water Pumping Station

3C.5.1 The asset inventory submission shall include:

- Table 3C.3A: the number of water pumping stations by installed power.
- Table 3C.3B: the age profile of different asset types used in water pumping stations by pumping station size bands.

3C.5.2 The installed power of the pumping stations is the sum of the power of the pumping plant including standby pumps.

3C.5.3 The definition of assets included in the asset count is covered in the general guidance above.

3C.6 Table 3C.4 – Service Reservoirs

3C.6.1 The asset inventory submission shall include:

- Table 3C.4A: the age profile of service reservoirs by size bands.
- Table 3C.4B: the historical profile of service reservoir refurbishment by size band.

3C.6.2 In advance of the submission, the company should provide the Utility Regulator with a definition of the working volumes of service reservoirs. The working volume should be that used in the strategic assessment of water storage volumes being undertaken by the company and any difference should be explained in the commentary. The company should state how the working volumes have been determined.

3C.6.3 The information reported in Table 3C.4 should be limited to operational service reservoirs supplying water in 2018 (as agreed with DWI for the purpose of annual water quality monitoring in 2018). This should include clear water tanks at or adjacent to water treatment works which act as service reservoirs. The company may choose to include other categories of treated water tanks including non-operational assets in the submission of additional information described below.

3C.6.4 The submission should include a supporting data table in excel format itemising:

- a list of service reservoirs included in the submission and any additional treated water tanks with CAR ID;
- the storage volume of each reservoir or tank;
- the construction date; and,
- the operational status of the reservoir or tank.

3C.7 Table 3C.5 – Water Mains

3C.7.1 The asset inventory submission shall include:

- Table 3C.5A: the age profile of the length of water mains by material type.
- Table 3C.5B: the age profile of the length of water mains by diameter bands.

3C.7.2 The submission shall include all types of water mains including raw water aqueducts and non-potable mains. The company should identify the length of mains which are not potable mains in the data table and calculate the net length of potable mains. The company should itemise the different categories of raw water and non-potable mains in the commentary and state their total length.

3C.7.3 It is expected that the company will use the material types identified in its Corporate Asset Register when completing the asset inventory for water mains. The company should consider the reliability, materiality and relevance of different material

types and group materials where appropriate. The company should identify how material types included in the Corporate Asset Register have been grouped for the purpose of completing the data submission in the commentary and state the length of each material type included in the Corporate Asset Register.

3C.7.4 The pipe diameter is intended to be the diameter of the pipe bore. However the Utility Regulator recognises that the information on the Corporate Asset Register could include nominal diameters, imperial to metric conversions and common usage of external diameters to report pipe sizes. The diameter bands have been set to allow similar size pipes to be collected into bands irrespective of how the pipes have been reported and few pipes are expected to have diameters immediately above the upper limit of a size band. The company should check that this is the case and state where there is a material length of water main immediately above the upper limit of a size band.

3C.8 Table 3C.6 – Sewerage

3C.8.1 The asset inventory submission shall include:

- Table 3C.6A: the age profile of the length of sewers by material type.
- Table 3C.6B: the age profile of the length of sewers by diameter bands.
- Table 3C.6C: the length of sewerage graded by condition grade following a survey.

3C.8.2 It is expected that the company will use the material types identified in its Corporate Asset Register when completing the asset inventory for sewerage. The company should consider the reliability, materiality and relevance of different material types and group materials where appropriate. The company should identify how material types included in the Corporate Asset Register have been grouped for the purpose of completing the data submission in the commentary and state the length of each material type included in the Corporate Asset Register.

3C.8.3 The pipe diameter is intended to be the diameter of the pipe bore. However the Utility Regulator recognises that the information on the Corporate Asset Register could include nominal diameters, imperial to metric conversions and common usage of external diameters to report pipe sizes. The diameter bands have been set to allow similar size pipes to be collected into bands irrespective of how the pipes material have been reported, and few pipes are expected to have diameters immediately above the upper limit of a size band. The company should check that this is the case and state where there is a material length of sewerage immediately above the upper limit of a size band.

3C.8.4 The length of sewerage graded by condition grade should be that subject to a consistent and structured grading methodology in line with the Sewerage Rehabilitation Manual used to inform pro-active asset maintenance decisions and investment.

3C.9 Table 3C.7 – Sewage Pumping Stations

3C.9.1 The asset inventory submission shall include:

- Table 3C.7A: the number of sewage pumping stations by installed pump power.
- Table 3C.7B: the age profile of different asset types used in sewage pumping stations by pumping station size bands.

3C.9.2 The installed power of the pumping stations is the sum of the power of the pumping plant including standby pumps.

3C.9.3 The definition of 'assets' included in the asset count is covered in the general guidance above.

3C.10 Table 3C.8 – Wastewater Treatment Works

3C.10.1 The asset inventory submission shall include:

- Table 3C.8A: the number of wastewater treatment works by works size bands.
- Table 3C.8B: the age profile of different asset types in wastewater treatment works by treatment works size bands.

3C.10.2 Table 3C.8A duplicates Table 17d of the AIR and the AIR definitions apply. The table should replicate the AIR19 submission.

3C.10.3 The size bands in Table 3C.8B are the size bands used in Table 3C.8A based on the reported load on the works in AIR19.

3C.10.4 The definition of '**assets**' included in the asset count is covered in the general guidance above.

3C.11 Table 3C.9 – Miscellaneous

3C.11.1 The asset inventory submission shall include:

- Table 3C.2A: the number of itemised miscellaneous assets.
- Table 3C.2B: the age profile of water meters.

3C.11.2 The company should add to this table where it considers this necessary to provide a complete asset inventory, as a prompt for a future asset valuation and to support particular asset maintenance business cases in the Business Plan submission.

3C.11.3 Table 3C.2B makes provision for a report on numbers and age profiles of water meters. The company should review the meter categories identified and add additional categories if required to provide a complete report on meters. The company should identify all meter categories in its Corporate Asset Register and show how these have been mapped to the table lines. In advance of the submission, NI Water should provide information on the numbers and sizes of non-revenue meters and agree size bands with the Utility Regulator for use in the submission.

3C.12 Reporter Guidance

3C.12.1 Reporter guidance may be issued following the initial draft submission of the 18th October 2019.