

PC21 Information Requirements

Chapter 3 – Capital Investment

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Chapter 3 - Capital Investment

3.1. Introduction

3.1.1. This chapter sets out the information requirements for NI Water's submission to the Utility Regulator in respect of capital expenditure (Capex) in the PC21 period at project and sub-programme level.

3.1.2. The information requirements are based on the PC15 information requirements and include key changes which are summarised below:

- A requirement to provide an asset inventory as part of the Business Plan submission.
- The preparation of an unconstrained programme including investment currently being planned under the Living with Water Programme.
- The identification of investment scenarios based either the company's view of affordability and/or investment constraints as advised by DfI through the PC21 Planning Assumptions or Social & Environmental Guidance.
- A statement of current and projected development constraints setting out how these have been assessed and addressed in the Business Plan.

3.1.3. The PC21 capital investment submission shall comprise:

- A data submission consisting of 6 tables setting out historic and proposed capital investment in PC13, PC15, PC21 and PC27 at project and sub-programme level.
- Supporting business cases to explain and justify the proposed investment.
- A statement of the variance between the PC15 final determination and the actual capital investment out-turn for the PC15 period.
- An asset maintenance plan.

3.1.4. The six tables forming the capital investment submission are:-

- Table 3.1 – Inflation indices.
- Table 3.2 – Capital budget statement for 2013-14 to 2029-30.
- Table 3.3 – The proposed expenditure by project or by sub-programme.
- Table 3.4 – Gross and net capital expenditure summary.
- Table 3.5 – Capital grants and contributions for water and sewerage service.
- Table 3.6 – Additional Opex and supporting project information.

3.1.5. Individual line entry definitions are set out in Annex 3A. Guidance for completing Business Plan tables and the provision of supporting information is set out below.

3.1.6. Further information and guidance on specific topics is given in:

- Annex 3B – Asset Maintenance Submission.
- Annex 3C – Asset Inventory Submission.

3.1.7. The format of the capital investment submission is based around identified sub-programmes of work. It is expected that the company's submission will follow this subdivision of the programme, with the commentary on each sub-programme making reference to other programme allocations such as purpose or service allocation.

3.2. Scope of the capital programme

3.2.1. The Business Plan should include the activities and expenditure necessary to deliver the services which consumers, the environment and the economy requires and then build the financial case for investment.

3.2.2. The Business Plan capital submission should include the latest best estimate of the Living with Water Programme and outputs broken down into individual project estimates and outputs. The company should highlight any issues raised by possible interdependencies and interactions with the PC21 programme such as base maintenance allocation, opex from capex and commitments to consumers.

3.2.3. The Business Plan should include the work necessary to address any lack of capacity which is constraining current or planned development. As part of its submission, the company should identify investment linked to addressing development constraints setting out the area or community affected. The company should set out the growth in flow and load which leads to the development constraint and describe the methodology it has used to estimate the capacity of the existing plant. The company should comment on how it has estimated future flows/loads and the reliability of the source data used in this analysis. The company should set out its methodology for allocating investment as development needs are confirmed and how it has moderated its investment plan accordingly.

3.2.4. We recognise that a primary constraints on the price control will be the level of funding available to NI Water from public expenditure. We will ask the Department for Infrastructure to provide a working assumption for the annual capital budget for the price control period as part of the Social & Environmental Guidance and ask for these assumptions to be updated for the draft and final determinations. The Business Plan submission should include a scenario which identifies the outputs which can be delivered for the constrained capital budget. The company may wish to include other scenarios based on its view of affordability. Provision has been made in Table 3.3 to highlight different investment scenarios.

3.3. Treatment of Inflation

3.3.1. Actual and projected capital expenditure should be expressed in nominal prices (money of the day) unless stated otherwise. Selected sections of the summary tables require expenditure to be converted to 2018-19 base year prices which should be consistent with the data entered in the financial model.

3.3.2. In Table 3.1, the company is required to provide its estimate of future output price inflation for capital investment which it has used to convert between nominal prices and real prices at 2018-19 baseline prices. The company's estimate of future output price inflation for capital investment should be consistent with the costing methodologies used to estimate the nominal costs of sub-programmes and projects included in the Business Plan. The company shall describe how the various estimating techniques used to prepare the Business Plan produce nominal prices at a common price base in any one year and demonstrate that this is consistent with the future inflation indices in Table 3.1.

3.3.3. The company's commentary should describe how it has estimated output price inflation for capital investment relative to the retail prices index.

3.4. Planning for PC27

3.4.1. The company should set out its plans to maintain the continuity of investment into PC27. The company's Business Plan should include:

1. An estimate of the expenditure in the first three years of PC27 for any discrete project where the company plans to start construction in the PC21 period. The company is expected to provide firm estimates where possible for this expenditure which may form part of the PC21 determination.
2. Indicative estimates of rolling sub-programmes of work such as asset maintenance or new connections into the PC27 period. This investment will not form part of the PC21 determination but will be reviewed and determined in the PC27 Price Control.
3. Indicative estimates for discrete projects expected to start construction in the first three years of PC27. Priority projects for the first three years of PC27 should be agreed with the relevant regulator or supported by reference to other assessments such as the Water Resources Management Plan. This investment will not form part of the PC21 determination but will be determined in the PC27 Price Control.
4. Estimates of the development, design, approval and any other preparatory work such as surveys or land purchase necessary in PC21 to facilitate the start of construction in the first three years of PC27 for the work outlined in items 2 and 3 above. The company is expected to provide firm estimates for this expenditure which may form part of the PC21 determination. The company should demonstrate that the cost of this work is in addition to any

other investment included in the business plan including estimates based on the historic run rate of programmes of work.

3.4.2. The estimates outlined above should be included in the Business Plan tables.

3.4.3. The objectives of the information outlined above are:

1. To ensure that expenditure committed in PC21 which carries over into PC27 can be included in the PC21 determination.
2. To ensure that the funding necessary to develop the early stages of the PC27 capital programme is identified through the PC21 determination.
3. To prompt early planning of the transition between PC21 and PC27 to ensure that priorities are identified and continuity of investment is maintained.

3.4.4. In addition to providing the detailed project information set out above, the company should:

- consider the objective of maintaining continuity of investment into PC27;
- describe how its Business Plan aims to achieve this objective;
- outline any barriers it sees to achieving this objective; and,
- suggest steps which the company or other stakeholders could take to overcome the barriers it has identified and manage the transition between Price Control periods effectively and efficiently.

3.5. Business Cases

3.5.1. The company should provide business cases which explain and justify the proposed investment at project or sub-programme level. As a minimum, a separate business case should be provided for each sub-programme providing more detailed project information as appropriate. The company should provide individual business cases for major projects or where the individual projects within a sub-programme require substantially different supporting information.

3.5.2. As a minimum the Business Cases provided for the PC21 Business Plan should include information on the following:

- Linking investment to outputs.
- Assessing the scope of work.
- Costing estimating systems.
- Assessing deliverability and project expenditure profile.
- Assessment of Opex from Capex.

- Purpose allocation.
- Service allocation.
- Carbon impact of investment.
- Innovation.

3.5.3. Further guidance on each of these headings is set out below.

3.5.4. NI Water should determine the format for the supporting business cases which should, where possible, draw on internal processes and existing methodologies. Where possible the company should submit data and supporting calculations as spreadsheets referenced to the business case to ease analysis of the submission. Where possible, the individual Business Cases should refer to and not repeat information which can be readily established from other sections of the Business Plan.

Linking investment to outputs

3.5.5. The project or sub-programme Business Case should set out the need for the proposed investment and provide a clear link to the outputs it will deliver. This assessment should:

- Demonstrate that the outputs are consistent with any Social and Environmental Guidance issued by the Department for Infrastructure including the PC21 Investment Priorities annexed to the guidance.
- Identify outputs required by the water and environmental quality regulators and set out the detailed requirements for and timing of the implementation of new consent conditions or other improvement.
- Demonstrate how the company has determined appropriate activity rates for water mains and sewerage to maintain performance, improve quality, support investment and accommodate growth.
- Demonstrate the need for the improvement for all outputs not specifically required by an external stakeholder (for example new trunk mains or new or increased service reservoir or clear water tank capacity).

3.5.6. Where possible, the company should identify individual outputs in Table 4.4 of the submission. If it is not possible to identify individual outputs by project or sub-programme, the company should provide an aggregated balancing line in Table 4.4, of the submission by sub-programme to ensure that Table 4.4 provides a complete listing of relevant outputs. Where the company provides an aggregated output balancing line in Table 4.4, the company should describe how it calculated the aggregated output quantity against the proposed level of investment without identifying individual outputs and projects.

3.5.7. Each project or sub-programme Business Case should include sufficient information to define the scope and scale of the nominated outputs included in the Business Plan. For example:

- Wastewater treatment works improvements should include information on the current and future consent (including storm tank volume) and the current and future design population equivalent and/or full flow to treatment (FFT).
- UID upgrades should include information from the regulatory Statement of Need defining the output including a statement of the storage volumes, pass forward flows and screening requirements for each discharge. If the estimate is based on a developed solution, the Business Case should include a plan showing the layout of the sewerage system and the UID improvements proposed.
- Trunk main schemes should include a schedule of pipe length and diameters, details of the size of associated assets such as pumping stations and service reservoirs. A drawing should be provided showing the intended route of the trunk main, the location of associated assets and the location of connections to the existing systems.
- Improvements to water treatment works should include the current and future design flow of the works and the water quality parameters to be addressed by the improvement.
- The existing and new capacity of any proposed new service reservoir should be identified.

3.5.8. Where possible, the company should identify specific projects which will improve supply pressure and reduce the risk of sewer flooding. The company should provide a link between these projects and the properties to be removed from the low pressure register and the property flooding register.

3.5.9. Where the output is justified through a separate internal regulatory or statutory process undertaken by the company (such as the Water Resources Management Plan or the Economic Level of Leakage assessment), the company shall provide the supporting information required in this section for the project unless this detailed information has already been submitted to the Utility Regulator. The company shall describe how its proposals address any issues raised by the Utility Regulator in response to the previous submission or process.

3.5.10. The guidance for Chapter 4 of these information requirements (Outputs) requires the company to provide all information necessary to explain its assessment of the proposed links between the proposed expenditure, outputs and serviceability. This supporting information may be submitted as part of the capital investment business cases or should be referenced to the capital investment business cases.

Assessing the scope of work

3.5.11. The company shall describe the options it has considered to identify the least whole life cost to deliver the required PC21 output.

3.5.12. The company shall describe how it has defined the scope of works for the options considered and how it developed the scope of works priced for each project or sub-programme of work.

3.5.13. The company shall describe how it has taken account of potential synergies between different projects and sub-programmes of work when assessing the minimum cost required to deliver the programme. This consideration should include potential synergies arising from: the integration of asset maintenance and enhancement works; and, potential synergies from integrated procurement.

Costing estimating systems

3.5.14. The company shall describe the cost estimating systems used to develop the PC21 estimates for each project or sub-programme of work.

3.5.15. The description of the cost estimating system should highlight how the various components of the cost estimate have been developed, including:

- Base costs.
- Contractor's on-costs.
- NI Water costs including management costs and land purchase.
- Any risk or estimate to out-turn adjustment.

3.5.16. In its description of the cost estimating systems the company should demonstrate that:

- The various components included in the cost estimating system are complete and mutually exclusive.
- The total cost estimate is reasonable and consistent with NI Water's current costs including benchmarking with historic out-turn costs of completed work.
- Any component of the cost estimating systems which rely on tender or out-turn costs for other regions have been adjusted to take account of regional price variations.
- Nominal costs estimates have been prepared to a constant cost base for each year which is consistent with the inflation indices entered in Table 3.1.

3.5.17. In each Business Case the company shall quantify the capital efficiency challenge applied to each project or sub-programme of work to convert the estimated cost based on NI Water current prices to a PC21 out-turn estimate.

Assessing deliverability and project expenditure profile

3.5.18. The Business Case should include an assessment of the impact of risk on project delivery and expenditure profile. This should include an assessment of the key 3rd party risks which impact on project definition and development, and inhibit start of construction on site, including:

- land purchase and access arrangements;
- agreement of consent with NIEA (in particular the completion of DAPs to determine storage volumes at intermittent discharges and agreement of the same with NIEA);
- power supply;
- planning permissions;
- buildability;
- environmental studies and permissions; and,
- social and political constraints.

3.5.19. During the development of the Business Plan submission, the company should consider the status and potential impact of 3rd party risks and discuss these with the relevant stakeholder responsible for the output. Where possible the company should plan to prioritise schemes with a low 3rd party risk in preference to schemes with a high 3rd party risk.

3.5.20. The company should profile project development and start of construction to reflect the assessment of 3rd party risk. The Business Case should highlight significant 3rd party risks and describe how these have been taken into account when determining the project or sub-programme expenditure profile and the milestone dates included in Table 3.3.

Assessment of Opex from Capex

3.5.21. The company shall describe the methodology and key cost parameters used to estimate the impact of capital investment on operational expenditure for each project or sub-programme of work. The additional opex from capex shall be identified in Table 3.6.

Purpose allocation

3.5.22. The company should describe the methodology used to determine the purpose allocation of each project or sub programme.

3.5.23. Where the purpose allocation is based on allocations derived from a set of previous projects, the company should define how the allocation was calculated and state why it is reasonable to apply this to the future projects.

3.5.24. Where the purpose allocation is based on an average of a set of projects in PC21, the company should identify the projects used to calculate the average allocation and state why it is reasonable to apply to the projects under consideration.

3.5.25. The methodologies used by the company to allocate expenditure by purpose should reflect specific methodologies adopted for PC15 including leakage and water mains rehabilitation. If specific methodologies or key parameters used for purpose allocation for PC15 are revised for PC21, the company should highlight this in the Business Case and set out the reason for adopting a revised methodology.

Service allocation

3.5.26. Where a project or sub-programme is allocated across more than one of four service areas, the company shall outline the basis of the service allocation in the Business Case.

Carbon impact of investment

3.5.27. The company should include the cost of carbon in the whole life costing assessments for material schemes in PC21. The company should outline its methodology for including the cost of carbon in its whole life costing assessments and how it has identified material schemes. The company should identify where the cost of carbon has had an impact on the least whole life cost scheme proposed in PC21 and whether the company has proposed to invest additional capital as a result of including carbon in the whole life cost assessment.

Innovation

3.5.28. Innovation and the productivity improvements it delivers is a key driver for improved service and efficient delivery. The purpose of any innovation must be to reduce costs and/or to improve outputs that benefit customers. Therefore we would normally expect that any costs will be funded within the overall price control package and not from increased prices.

3.5.29. Where NI Water proposes that innovation is funded through increased prices for customers, we would regard the bar as being set high in terms of the evidence it would need to provide to justify such a request.

3.5.30. Firstly we would expect NI Water to set out clearly in its business plan submission why the cost of innovation, balanced by the cost reduction delivered, cannot be delivered within the overall price control package and articulate its rationale for it being funded through higher prices.

3.5.31. Our criteria for assessment of NI Water rationale will include, and may not be limited to, the following:

- quantified and robust costs and benefits;
- need for, or rationale in support of, additional funding;
- how NI Water has arrived at their chosen bid for innovation(s) and how this interacts with other innovation investments it plans to deliver under the normal price control regime;
- how such a bid was identified/prioritised and justified in consultation with consumers and NI Water's wider stakeholders;
- why a barrier exists towards innovation which requires some form of regulatory action to allow it to progress and the consequences of the innovation(s) not happening;

- what deliverables may be expected for local consumers from research and development or trials;
- the proposed treatment of risk and reward;
- a description of how successful innovation(s) would be efficiently rolled out and how NI Water's innovation strategy would be reviewed and updated across PC21; and,
- how innovation planned for PC21 is different to anything that has occurred previously, whether within N Water or within the wider water sector.

3.5.32. NI Water should address these criteria in any Business Case relating to innovation funding.

3.5.33. The six year cycle of price controls, with a mid-term review, provides a framework for the development and testing of innovation proposals in one 3 year period, moving to implementation in the next. Innovation projects should be identified as development outputs with a defined scope, outcome and timelines.

3.6. PC15 Out-turn Report

3.6.1. The company shall also provide a report on the actual and projected outcome of the PC15 period comparing expenditure and outputs with the PC15 final determination and providing an explanation of the variance. The assessment of expenditure and outputs should be presented at sub-programme level. The level of detailed explanation of the variance from the PC15 final determination should reflect the level of detailed definition of outputs included in the PC15 final determination.

3.6.2. The assessment of expenditure and variance from the PC15 final determination should be 2012-13 prices, consistent with the base year for the PC15 final determination. Inflation of construction output prices shall be assessed using the latest COPI index published by the Building Cost Information Service (BCIS) and the indices used should be consistent with the indices included in Table 3.1.

3.6.3. For each sub-programme the company should:

- Assess the baseline and out-turn expenditure in 2012-13 prices and calculate the variance.
- Assess the baseline and out-turn purpose allocation in 2012-13 prices and calculate the variance.
- Identify any material changes in the allocation of expenditure by purpose between PC15 final determination baseline and out-turn.
- Provide an explanation of the variance between the PC15 final determination baseline and out-turn including an assessment of the quantum of the variance attributed to the following:
 - An increase or reduction of expenditure on a project or sub-programme in the 2012-13 resulting in a change in carry over to the PC13 period.

- A delay in the delivery of project or sub-programme outputs in the PC15 period resulting in a reduced expenditure in PC15 and increased carry over to PC21.
- The addition, deletion or change of an output dictated by an external stakeholder such as the quality regulator.
- A change in the cost of the output over the life of the project (taking account of changes in carry over from PC15 into PC21).

3.6.4. Where the company identifies an additional output or change to an output dictated by an external stakeholder the company should maintain sufficient information to:

- Identify the scope of the change and the reason for the change.
- Demonstrate that the output was not part of the PC15 final determination and that the costs identified for the change are the net cost of the new obligation.
- Demonstrate that it has reviewed the options open to meet the new obligation and chosen an efficient and cost effective option.

3.6.5. The company should highlight the impact of additional expenditure incurred in 2012-13 which was not taken into account in the PC15 final determination. The company should identify the additional outputs delivered for the additional investment. We will log-up the efficient delivery of additional outputs associated with this investment in our determination for PC21.

3.6.6. The Utility Regulator will review the PC15 Outturn assessment based on the Q2 2020-21 CIM submission. The company is encouraged to provide an update of its PC13 Outturn submission with the Q2 2020-21 CIM to inform that assessment.

3.7. Asset Maintenance Submission

3.7.1. The company should submit a plan for asset maintenance which sets out its approach to asset maintenance planning and explains how it has assessed the changes in operational practice and investment required to at least maintain serviceability to consumers during PC21.

3.7.2. The Utility Regulator set out its approach to asset maintenance in October 2018. The approach document describes a range of techniques which are likely to be used when developing a plan for asset maintenance. We expect the company to develop its assessment in a practical way based on improving information quality. It is for the company to decide how it can best make this assessment taking account of its data, systems and capability.

3.7.3. Within its plan for asset maintenance we expect the company to:

1. Assess and report on its asset maintenance planning capability. To make this assessment, we expect the company to adopt a recognised

methodology which it considers to be relevant and useful. We expect the company to advise us of its preferred methodology for our approval.

2. Provide historical information on asset maintenance expenditure and explanatory data to allow us to reassess the econometric level of asset maintenance investment. The information requirements for this information submission are set out in the PC21 Efficiency Analysis Information Request.
3. Provide an assessment of serviceability. The requirements for a serviceability assessment are set out in Chapter 4 – Outputs.
4. Provide an assessment of its asset inventory and costing systems.
5. Set out its assessment of future asset maintenance needs, describing and critically appraising the techniques, methodologies and data used to make this assessment.
6. Set out its plan to improve its asset planning capability taking account of any weaknesses identified through its planning for PC21.

3.7.4. Further details of our requirements for an asset maintenance submission are set out in Annex 3B of these information requirements.

3.8. Asset Inventory Submission

3.8.1. The company shall provide an asset inventory submission which summarises the quantity and age profile of its asset base banded by asset size.

3.8.2. 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.

3.8.3. 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.

3.8.4. 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.

3.8.5. Details for our requirement for an asset inventory submission are set out in Annex 3C of these information requirements.

3.9. Planning Sustainable Solutions

3.9.1. In our approach to PC21, the Utility Regulator set out the need to consider how sustainable solutions can be delivered in the context of a changing environment. We noted that it was unlikely that the best solutions to these emerging issues will be delivered by NI Water in isolation. We noted that a key barrier to the delivery of integrated sustainable solutions is the time it can take to plan, test and assess solutions which may have uncertain outcomes and require the support or active participation of a number of stakeholders. We highlighted the need for careful planning of strategic investigations, trial projects and solution development (including planning permission and land acquisition) leading up to project delivery.

3.9.2. In its Business Plan, the company should set out how it has:

- Considered interventions in a single catchment to ensure that outputs have been prioritised to promote catchment based solutions.
- Identified opportunities to develop integrated sustainable solutions.
- Assessed the risks and benefits of progressing integrated sustainable solutions including engagement with the key stakeholders whose support or active participation will be required to deliver them.
- Identified outputs which cannot be delivered as part of an integrated solution or where the barriers to progressing an integrated solution out-weigh the potential benefits.
- Planned early investment in schemes where an integrated solution is not deemed to be viable.
- Set out a clear programme of strategic studies, pilot trials and other work necessary to develop and test potential integrated solutions including an indicative timescale for next making a decision on whether or not to revert to a substantive capital investment intervention.
- Identified the appropriate level of investment which water consumers should make when developing and delivering integrated solutions, respecting the polluter pays principle.
- Confirmed that other stakeholders can commit to the timescale and funding necessary to deliver an integrated solution.

3.9.3. The individual plans to develop integrated catchment based solutions, including the programme of development measures, will form nominated outputs for PC21.

3.9.4. The company should include an initial assessment of this work in the Outline Capital Programme submission in June 2013. The company should continue to engage with stakeholders to develop these opportunities as it develops its Business Plan submission.

3.9.5. The company should continue to consider how the funding provided in the PC15 determination to develop the PC21 programme can be prioritised to prompt the development of integrated sustainable solutions.

3.10. Long Term Investment Need

3.10.1. In support of its long term strategy, the company should provide an estimate in respect of Regulated Asset Expenditure required to be made by the company over a 24 year period from the 1 April 2021. In the past, the company has indicated that it would need to increase investment to improve consumer service, to maintain its assets generally, to replace aging water mains, to replace water mains which affect water quality, to address perceived historic under-investment in the sewerage service, to address the risk of flooding, to meet current and future wastewater discharge consents for continuous and intermittent discharges, to release development constraints, to provide for growth and development, to improve the resilience of the water supply system, to mitigate the impact of climate change and adapt to climate change. The company should breakdown its estimate in respect of Regulated Asset Investment to identify these categories and other categories of investment necessary to provide a complete breakdown of asset investment.

3.10.2. The company should provide sufficient commentary to describe how it has estimated investment over a 24 year period including how the need, solutions and level of activity have been assessed and how the indicative solutions have been costed. In particular, where the company believes it is necessary to increase the level of future investment in any area, the company should describe how it has arrived at this conclusion and set out the evidence supporting its conclusion.

3.10.3. The company's estimate should consider known issues. For example, the company should identify the work necessary to meet the requirements of existing directives such as the Water Framework Directive or the Bathing Waters Directive. We do not expect the company to speculate about the impact of changes in legislation or standards which cannot be foreseen. Where appropriate, the company should state its assumptions in respect of issues which are uncertain. For example, the company should state the scenario it plans to work to in respect of climate change and the assumptions it has made about continuing growth and development. Where possible, the company should draw on existing long term plans such as the current Water Resources Management Plan or describe why this is not appropriate and how it has arrived at an alternative planning assumption.

3.10.4. Where the company is not able to estimate future need, the company should set out why this is the case and the steps it needs to take to establish the right level of long

term investment. The company should show how the steps it has identified to establish long term need will be delivered through PC15 or have been included in the PC21 Business Plan.

3.10.5. Within its current governance model, the level of investment is dictated by Public Expenditure funding. Taking account of its estimate of long term investment need and medium term Public Expenditure limits, the company should describe how it has struck the right balance between competing demands for investment in the PC21 period. The company should identify any statutory outcomes or immediate consumer needs it will not be able to deliver in the PC21 period and estimate the cost of meeting those needs.

3.11. Outline Capital Programme Submission – June 2019

3.11.1. NI Water should submit an Outline Capital Programme for PC21 by the 14th June 2019. At the same time, the company should copy the Outline Capital Programme to the Principal Stakeholders – CCNI, DfI, DWI, and NIEA.

3.11.2. The outline capital programme should take account of:

- Any draft or final Social and Environmental Guidance which DfI has issued to the Utility Regulator.
- The information provided by stakeholders on the general and specific outputs which will be included in the PC21 Business Plan taking account of the work of the PC21 working groups on Social Policy, Environmental Quality, Drinking Water Quality and Consumer Engagement.

3.11.3. The outline capital programme submission should include commentary in sufficient detail to inform stakeholders how the company has struck a balance between competing demands for capital investment.

3.11.4. To support the outline capital programme, NI Water should provide an assessment of the outputs it will deliver in PC21. The company should include information on the proposed quality outputs using the formats agreed with the relevant quality regulator. The company should outline the changes in service levels it plans to deliver over the PC21 period and show how this links to capital investment or changes in operational practice.

3.11.5. Where possible, the company should refer to the relevant tables and schedules of outputs to identify the quantum and detail of the outputs it will deliver. Where this is not possible, the company should provide an additional schedule of outputs setting out the objective it plans to achieve and describing and quantifying the outputs it plans to deliver.

3.11.6. The company should identify opportunities to develop integrated and sustainable solutions. The company should set out the work which would be necessary to deliver these opportunities and describe how it has programmed outputs and investment to allow these opportunities to be realised.

3.11.7. The company should highlight further work required from other stakeholders and identify further studies and investigations it will undertake to better define the PC21 outputs and investment programme. The company should set out a programme for this work.

3.11.8. The company should submit the following Business Plan tables to support the outline capital submission:

- PC21 Table 3.2 – Capital Budget Statement.
- PC21 Table 3.3 – Proposed Expenditure by Project or Sub-programme.
- PC21 Table 3.4.A – Gross Capital Expenditure Summary.
- PC21 Table 4.1 – Water Provision and Service Outputs.
- PC21 Table 4.2 – Sewerage Provision and Service Outputs.
- PC21 Table 4.4 – Outputs delivered by PC21 Capital Projects and Programmes of Work.

3.11.9. In respect of Tables 4.1 and 4.2, the company should identify any additional outputs it believes would be useful to define and monitor the services it will deliver to consumers in PC21.

3.11.10. The company should include an indication of issues which it cannot address within the level of funding available in PC21 including: WWTW upgrades to achieve current consents or meet new consents; unsatisfactory intermittent discharges which it cannot upgrade; hydraulic improvements to address sewer flooding which will not be delivered; development constraints which will not be alleviated.

3.12. Table 3.1 – Inflation indices

3.12.1. Actual and projected inflation indices for RPI should be submitted in Table 3.1.

3.12.2. Figures presented in this table should agree with those submitted as part of the financial model tables.

3.12.3. The company's estimate of output price inflation for capital investment in percentage terms from 2018-19 Inflation of construction output prices shall be entered in Table 3.1

3.12.4. The company's commentary should:

- Set out the sources of information and other analysis it has used to estimate future RPI indices.
- Describe how it has estimated output price inflation for capital investment relative to the retail prices index, including how it has taken account of real price effects and future productivity improvements.

3.12.5. The company should provide a copy its calculation of output price inflation for capital investment relative to the retail prices index in excel format.

3.13. Table 3.2 – Capital budget statement

3.13.1. A capital budget statement is required for each year from 2013-14 to 2029-30; the PC13, PC15, and PC21 periods; and the first three years of PC27.

3.13.2. NI Water shall confirm the capital expenditure budget as advised by Dfl and provide a statement of any adjustments necessary to arrive at the revised capital expenditure stated on a basis consistent with the regulatory accounting guidelines, PC15 and GAAP accounting standards.

3.13.3. The statement should be provided in Table 3.2 and include the following items:

- The PE capital budget as advised by Dfl.
- The PE capital expenditure which NI Water proposes to use.
- Any allocation for Alpha PPP maintenance.
- Any allocation for the residual interest off-balance sheet in respect of the PPP concessions.
- Any adjustment to account for different treatment depreciation, infrastructure renewals charge between the IFRS and UK GAAP accounting standards.
- Any other adjustments identified by NI Water to explain the difference between the PE capital budget and the NI Water capital budget net of grants and contributions.
- Capital grants and contributions.
- Capital grants and contributions transferred to deferred credits.

3.13.4. Expenditure for 2019-20 and 2020-21 should be the current best estimate of out-turn expenditure the completion of PC15.

3.13.5. All expenditure should be stated so that the sum of the data equals the NI Water gross capital budget.

3.13.6. The company should provide a description of each adjustment made to the PE capital budget to arrive at its estimate of the “NI Water’s gross capital budget” with supporting calculation for the submitted values.

3.13.7. Any adjustment to account for different treatment depreciation, infrastructure renewals charge between the IFRS and UK GAAP accounting standards should be off-set by a consistent adjustment in the operational budget statement.

3.14. Table 3.3 – Proposed expenditure by project or sub-programme

Overview

3.14.1. Table 3.3 - proposed expenditure by project or sub-programme - consists of a single excel worksheet and mirrors that of the capital investment monitoring (CIM) submissions.

3.14.2. The company should provide data for all projects and sub-programmes of work expected to incur expenditure in PC15, PC21, and beyond. Projects which were complete in PC13 or before and for which no further expenditure is expected to be incurred should not be included. The submission should include information on proposed investment for relevant projects or sub-programmes for:

- All actual investment in PC13.
- All actual and projected investment in PC15.
- All projected investment in PC21.
- An estimate of the expenditure in PC27 for any discrete project where the company plans to start construction in the PC21 period. The company is expected to provide firm estimates for this expenditure which may form part of the PC21 determination.
- Indicative estimates of rolling sub-programmes of work such as asset maintenance or new connections in the PC27 period. This investment will not form part of the PC21 determination but will be reviewed and determined in the PC27 Price Control.
- Indicative estimates for discrete projects expected to start construction in the first three years of PC27. Priority projects for the first three years of PC27 should be agreed with the relevant regulator or supported by reference to other assessments such as the Water Resources Management Plan. This investment will not form part of the PC21 determination but will be reviewed and determined in the PC27 Price Control.
- Estimates of the development, design, approval and any other preparatory work such as surveys or land purchase necessary in PC21 to facilitate the start of construction in the first three years of PC27 for the work outlined in items 2 and 3 above. The company is expected to provide firm estimates for this expenditure which may form part of the PC21 determination. The company should demonstrate that the cost of this work is in addition to any other investment included in the business plan including estimates based on the historic run rate of programmes of work.

3.14.3. The structure and order of the data table should be maintained. Additional data columns should not be introduced. The blank table has been provided with 10 data rows. Before completing the table, the company should insert sufficient additional rows in the data block to ensure that the data fits within the defined area. Additional blank rows or descriptive rows should not be introduced into the data.

3.14.4. The data should be submitted in the required format. Where appropriate zero entries should be entered as zero as opposed to blank cells. Where it is appropriate to leave a cell blank, it should be blank and not include a text space or other entry which might be interpreted as data.

3.14.5. The spreadsheet is formatted to present data to an appropriate number of decimal places. However, if the data are generated by the company to a greater number of decimal places it is not necessary to round the data before they are entered into the table.

3.14.6. Table 3.3 consists of 7 sections (Blocks A to H):

- A. Project identification.
- B. Current actual or projected milestone dates.
- C. Current actual or projected service allocation.
- D. Current actual or projected capital expenditure profile.
- E. Current actual or projected purpose allocation.
- F. Current actual or projected IRE.
- G. Nominated output identification.
- H. Scenario markers.

3.14.7. Guidance on the content of each block of Table 3.3 is set out below.

Project Identification.

3.14.8. The submission will consist of a series of project or sub-programme lines.

3.14.9. The level of granularity in Table 3.3 should reflect at least the level of granularity in the company's internal capital monitoring system. The company should not aggregate data from discrete projects on its capital management system for the Table 3.3 submission unless this has been agreed with the Utility Regulator in advance.

3.14.10. The level of granularity of projects in the Table 3.3 submission should be sufficient to allow PC21 outputs to be attached to individual projects and to allow relevant milestone dates to be reported.

3.14.11. The expenditure submission should cover the complete programme of capital expenditure by NI Water. Sufficient projects and sub-programmes of work should be reported to meet this requirement.

3.14.12. Each project line entry shall be tagged with a PC period identifier as set out in Table 1.

Table 1 – PC Period Identifiers

PC Period Identifier	Definition
00	A rolling project which delivers outputs on a continuous basis which can be allocated to different price control periods, for example the water-mains rehabilitation programme.
01	Not used <<< A project completed before the start of PC13 with no allowance made for carry over expenditure into the PC13 period or beyond in the company's PC13 Business Plan submission. >>>
02	Not used <<< A project planned to begin in the PC10 period or before which was included in the PC13 Business Plan submission as a specific carry over project. >>>
03	A project planned to begin in the PC13 period and to deliver its outputs in the PC13 period.
04	A project planned to begin in the PC13 period but to deliver its outputs in PC15.
05	An additional PC13 project where the company plans to commit expenditure in the PC13 period which was not identified in the PC13 Business Plan and determination.
06	Not used <<< Any PC15 project not included in the categories above. >>>
07	A project planned to begin in the PC15 period and to deliver its outputs in the PC15 period.
08	A project planned to begin in the PC15 period but to deliver its outputs in PC21.
09	An additional PC15 project where the company plans to commit expenditure in the PC15 period which was not identified in the PC15 Business Plan and determination.
10	Any PC21 project not included in the categories above.

3.14.13. The majority of projects where base maintenance is the largest individual driver are expected to be reported under period identifier 00 (i.e. rolling programme). However, where a significant maintenance project is identified as a nominated output, it should be allocated with the period identifier which indicates when it will be delivered.

3.14.14. Each project shall be tagged with a primary asset category to identify the main asset type where the investment is taking place. An allocation between asset categories is not required. The primary asset categories are set out in Table 2 below. The asset categories are consistent with the definitions for Table 32 of the AIR.

Table 2 – Primary Asset Categories

Primary asset reference	Description
01	Water resource facilities
02	Water treatment works
03	Water distribution mains
04	Service reservoirs and water towers
05	Water pumping stations
06	Water management and general
07	Sewerage
08	Sea outfalls and head-works
09	Sewage treatment works
10	Sludge treatment works
11	Sludge disposal
12	In-line sewage pumping stations
13	Terminal sewage pumping stations
14	Sewerage management and general
15	Management and general (not allocated to a specific service area).

3.14.15. Each project shall be tagged with a sub-programme identifier which is set out in Table 3. The sub-programme identifiers broadly align with the sub-programmes used in the analysis of the capital programme in the PC15 final determination with some aggregation and dis-aggregation of sub-programmes. The table includes commentary indicating our expectations on the content and project disaggregation of each sub-programme.

Table 3 – Primary Investment Sub-Programme Identifiers

Ref	Name	Commentary
00	Capitalised salaries and on-costs	A single line entry would be sufficient. The business case for this sub-programme should set out how the costs have been assessed and provide further granularity.
01	Base maintenance (water)	<p>Projects or sub-programmes in PC15 known to carry forward into PC21 should be itemised.</p> <p>Sub-programmes of work the company intends to carry out should be itemised and the scope and purpose of these sub-programmes included in the business case.</p> <p>Specific projects identified by DWI (say as part of the DWSP or major WTW upgrades) should be itemised. These may be included as nominated outputs.</p> <p>A balancing item should be included for unallocated work if necessary.</p>
02	Base maintenance (sewerage)	<p>Projects or sub-programmes in PC15 known to carry forward into PC21 should be itemised.</p> <p>Sub-programmes of work the company intends to carry out should be itemised and the scope and purpose of these sub-programmes included in the business case.</p> <p>Specific projects identified by NIEA (say membrane plant or specific failing works) should be itemised. These may be included as nominated outputs.</p> <p>A balancing item should be included for unallocated work if necessary.</p>
03	Water resources	Specific line should be included for impounding reservoir maintenance and specific resource or treatment capacity scheme arising from the WRMP (other than trunk main schemes which has a separate allocation).
04	Water treatment works	Upgrades to WTWs to meet drinking water quality which are required by the DWI should be itemised.
05	Water trunk mains	<p>Individual trunk mains should be itemised. The need for each main should be clearly set out in the business cases and consistency with the WRMP or other driver established.</p> <p>Trunk main projects might include linked outputs such as service reservoirs or pumping stations. The company should confirm whether these are included in the trunk main sub-programme or identified under other sub-programmes.</p>
06	Service reservoirs and clear water tanks	Individual projects to provide new service reservoirs or increase the capacity of existing service reservoirs should be included.

Ref	Name	Commentary
07	Service reservoir rehabilitation	The sub-programme covers the rehabilitation of service reservoirs.
08	Water mains rehabilitation	This sub-programme should cover the planned water mains rehabilitation programme. A separate sub-programme (23) has been created to cover minor <i>ad hoc</i> new and renew programme of mains work. Work should be identified by individual projects with a balancing line or lines for work yet to be identified.
09	Leakage	A breakdown of items of work should be provided in either the business case or Table 3.3 of the submission.
10	Ops capital (water)	The PC21 Business Plan (BP) should provide greater granularity of sub-programmes to identify the scope of work included under the Ops capital programme. For example: connections work, lifting equipment regs, electrical regs, etc with the balance of minor maintenance clearly identified. To include: <ul style="list-style-type: none"> • Water mains on developments. • New connections.
11	Named sewerage projects	This sub-programme is retained for the defined set of SBP carry over projects only. New projects will be carried out under sub-programme 12 with appropriate period identifiers.
12	Sewerage programme:- <i>sewerage maintenance work (N&R);</i> <i>DG5 flooding programme;</i> <i>UID programme</i>	This sub-programme should cover the planned programme of sewerage schemes to include the UID programme and the flooding programme. Individual projects should be identified with defined outputs with a balancing line or lines for work yet to be identified. These projects may also deliver other outputs including sewer repairs and connections. A separate sub-programme (24) has been created to cover minor <i>ad hoc</i> new and renew programme of mains work.
13	DG5	Now included in sub-programme 12.
14	UID	Now included in sub-programme 12.
15	Wastewater treatment (carry-over projects)	This sub-programme is retained for the defined set of SBP carry over projects only. New projects will be carried out under sub-programme 16 with appropriate period identifiers.
16	Wastewater treatment (new starts)	This will become the main sub-programme for wastewater treatment works projects to deliver defined quality improvements or major upgrades to address growth and release development constraints. Individual projects supported by the quality regulator should be identified.

Ref	Name	Commentary
17	Small wastewater treatment works	The programme should be reported as the individual projects of the PC21 BP. Where the total planned expenditure is greater than the sum of the individual projects the balance may be reported as a single line entry.
18	Ops capital (sewerage)	The PC21 BP should provide greater granularity of sub-programmes to identify the scope of work included under the Ops capital programme. For example: connections work, lifting equipment regs, electrical regs, etc with the balance of minor maintenance clearly identified. To include new connections.
19	Metering programme.	Sub-programme 19 has been redefined as a metering programme.
20	Management & General	Individual projects or programmes should be identified Table 3.3 with further breakdown included in business cases.
21	Additional outputs programme	The “additional outputs” programme in PC21 should not be used. “Additional outputs” identified in PC21 should be allocated to the relevant sub-programmes above. The appropriate PC identifier should be allocated to the projects.
22	Management adjustment	It is expected that there will be no adjustments submitted against this category for the PC21 Business Plan. The sub-programme identified is retained for future monitoring purposes.
23	Water mains new and renew	Sub-programme 23 should include the minor ad hoc new and renew programme of mains work separate from the planned water mains rehabilitation sub-programme 08. Work will include:- <ul style="list-style-type: none"> • Water main requisitions • Public realm work • Diversions including diversions due to road works and development. • Other <i>ad hoc</i> work not included under sub-programme 08 Planned work should be identified in as much detail as possible with a balancing line or lines included for work yet to be identified.

Ref	Name	Commentary
24	Sewerage new and renew	<p>Sub-programme 24 should include the minor ad hoc new and renew programme of sewerage work separate from the individual project identified under sub-programme 12.</p> <p>Work will include:-</p> <ul style="list-style-type: none"> • Sewer requisitions • Public realm work • Minor diversions • Other <i>ad hoc</i> work not included under sub-programme 12 <p>Planned work should be identified in as much detail as possible with a balancing line or lines included for work yet to be identified.</p>

3.14.16. Where regulatory sign-off is appropriate, the project will be tagged to indicate the relevant regulator which would be responsible for sign-off. The regulator identifiers are set out in Table 4 below.

Table 4 – Regulator sign-off identifier

NIEA	Northern Ireland Environment Agency
DWI	Northern Ireland Drinking Water Inspectorate
Dfi	Department for Infrastructure
UR	The Utility Regulator

Project milestone dates

3.14.17. Project milestone dates shall be reported for “current actual or projected” programme reports.

3.14.18. Seven project milestone dates shall be reported as follows:

- A1 project inception date.
- Project approval, with project released to the delivery team.
- Start on site, identifying the substantive start of work on site.
- Beneficial use, when all the work required to deliver the benefits of the project outputs is complete. In PC21, this shall be taken as the output delivery date unless the project does not subsequently achieve regulatory sign-off.
- Regulator sign-off date, when projects delivering quality outputs are planned to achieve sign-off by the appropriate regulator.

- Completion of construction, when all substantial construction work is complete as identified by the start of the maintenance period.
- End of the maintenance period. This should be the end of the project maintenance period. We expect that all expenditure should be complete at this stage with appropriate accruals made for any residual liabilities.

3.14.19. For PC21, projects should be reported at a level of granularity that allows milestone dates to be reported which are in a logical sequence and relate to the PC21 project investment and outputs. Milestone dates entered in Table 3.3 should correspond with dates submitted in Table 4.4 of the submission.

3.14.20. It is recognised that it will not be possible to report project milestone dates for sub-programmes which deliver multiple or continuous outputs and have not been developed into individual projects.

Service allocation

3.14.21. The project allocation by service (water and sewerage, and infrastructure and non-infrastructure) shall be reported for the baseline and “current actual or projected” programmes. The allocation by service shall be consistent with the Regulatory Accounting Guidelines 2.03 and the approach adopted by the company for the Annual Information Return.

Capital expenditure

3.14.22. Any project or sub-programme of work which has expenditure in the PC13, PC15, PC21 periods or the first three years of PC27 should be reported in the table. Expenditure should be reported as nominal post efficiency.

3.14.23. Projects which are not expected to incur expenditure in PC13, PC15, PC21 or PC27 periods should not be included in the detailed data submission.

3.14.24. Capital expenditure should be reported before the deduction of capital grants and contributions.

3.14.25. The Programme total expenditure reported in Excel spreadsheet line 9 of columns 19 to 32 (PC13, PC15, PC21, PC27 periods) should reconcile to Table 3.2 line 9.

Purpose allocation

3.14.26. The project allocation by purpose (quality, base, enhanced service and growth (supply demand balance)) shall be reported for current actual or projected programmes. The allocation by purpose shall be consistent with the Ofwat Regulatory Accounting Guidelines 2.03 and the approach adopted by the company for the Annual Information Return.

Nominated output identification

3.14.27. Where a project is either an existing PC15 nominated output or a PC21 proposed nominated output, this shall be identified by inserting either “PC15” or “PC21” as appropriate into the relevant project line under Block G column 39. Where a project is not linked to a nominated output the cell should be left blank.

3.15. Tables 3.4 – Gross and net capital expenditure totals

3.15.1. In addition to the detailed project and sub-programme information, the company should provide expenditure totals for each cost category identified in Tables 3.4A and 3.4B.

3.15.2. The gross expenditure in Table 3.4A should reconcile to an extension of the expenditure, purpose allocations and service allocations in Table 3.3.

3.15.3. The net capital expenditure in Table 3.4B should reconcile to data in Tables 3.4A and 3.5. The company should provide a statement of the allocation of enhancement grants and contributions by the four service areas required to calculate the entries in Table 3.4B and provide an explanation of how these grants and contributions were allocated between infrastructure and non-infrastructure.

3.15.4. Data submitted in Table 3.4B (2018-19 prices) should be the same as the data submitted in the business plan financial model table A3. The company should confirm that this is the case or provide a reconciliation between the data in Table 3.4B and the data in Table A3.

3.16. Table 3.5 – Capital grants and contributions for water and sewerage service

3.16.1. The submission shall include a statement of the company’s estimate of capital grants and contributions for each year from 2013-14 to 2029-30.

3.16.2. The statement should be provided in Table 3.5 and include the following items:

- Grants and contributions in respect of infrastructure and non-infrastructure maintenance.
- Grants and contributions in respect of enhancement sub-divided by: infrastructure charge receipts; requisitions, grants and contributions; and, other categories which NI Water may identify.
- A statement of the capital grants and contributions treated as deferred credits.

3.16.3. The company should provide supporting calculations for its assessment of grants and contributions, relating the level of capital income to development activity.

3.17. Tables 3.6A and 3.6B – Assessment of additional Opex

3.17.1. The company should provide a statement of the additional Opex arising from delivery of the capital programme. Additional Opex (prior to any company efficiency challenge) should be estimated relative to the base year 2018-19 and should include additional Opex arising from the completion of the capital investment in the two years of the PC15 period.

3.17.2. The company should ensure that base year opex from capex does not carry forward into the figures for future years in Table 3.6B. This opex will have already been captured in the baseline opex figure for 2018-19.

3.17.3. It is likely that additional Opex will arise from the creation of new assets to meet enhancement drivers. The company need not provide information on individual projects or groups of project which do not result in an aggregate change in Opex.

3.17.4. Where the delivery of a project results in a reduction in operating expenditure, these savings should also be identified and reported.

3.17.5. Additional Opex resulting from the delivery of M&G projects should be in the submission with the additional opex associated with individual M&G activities and initiatives itemised.

3.17.6. Table 3.6A provides a summary of the additional Opex from Capex by service. Block A, in nominal prices, should reconcile to the sum of detailed project information in Table 3.6B. Block B, in base year prices, is calculated from Block A using RPI as a deflator. Block B should reconcile to the total additional Opex from Capex in Section 2 of the submission.

3.17.7. Table 3.6B provides a detailed breakdown of additional Opex by project or sub-programme. The project reference, project name, sub-programme identifier and service allocation should cross reference to the project information in Table 3.3. Opex data should be completed for:

- The Opex profile by year. The Opex profile should be cumulative. Where the additional Opex starts part way through a year, the proportion of additional Opex should be entered in the first year and the full additional Opex entered in the next and subsequent years.
- A breakdown of Opex by type should be completed for based on the first full year the additional Opex is incurred.

3.17.8. The company should provide supporting calculations for individual projects or sub-programmes which result in a major change in Opex.

3.17.9. If the Opex change is material, we may seek further detailed supporting information to allow us to challenge the company's assessment.

3.18. Reporter Guidance

3.18.1. The Reporter should liaise with the company to prepare an assessment of the company's plans for capital investment for PC21 before preparing an audit plan. The Reporter should assess the quality of the information available and assess the material issues and level of testing which will be necessary to challenge the company's plans and output and expenditure projections. The Reporter should then advise the Utility Regulator on the scope and timing of the audit taking account of the quality of information available. Where necessary, the company shall liaise with the Regulator and Reporter to provide sufficient information to allow a robust audit plan to be developed.

3.18.2. The reporter shall base his audit of capital investment on the Business Cases provided by NI Water, assessing and commenting on:

- The link between investment and outputs.
- The development of the scope of work.
- The cost estimating systems used.
- The assessment of risk, deliverability and expenditure profile.
- The impact of capital investment on operating expenditure.
- Cost allocation.

3.18.3. The reporter shall:

Link between investment and outputs.

- Challenge and comment on the company's assessment of the outputs which will be delivered by the capital investment.
- Confirm that all outputs of the proposed investment are clearly stated and check that they are consistent with the outputs in Section 4 of the Business Plan.
- Identify any additional information which the reporter considers would be appropriate to include in any business case to provide sufficient information to define the scope and scale of any output included in the Business Plan.

Development of the scope of works

- Assess and comment on how the company has determined the scope of works selected to deliver the outputs included in the Business Plan.
- Assess and comment on the range of options (including options other than capital investment) considered by the company to ensure that the least whole life cost scope of works has been selected to deliver the outputs included in the Business Plan.
- Comment on the potential for value management and value engineering as schemes are developed and describe how the company has taken account of these opportunities in the development of its Business Plan.

- Assess and comment on how the company has taken account of potential synergies between different projects and sub-programmes when assessing the minimum cost required to deliver the outputs included in the Business Plan.

Cost estimating systems.

- Assess and comment on the cost estimating systems used to develop the PC21 estimates.
- Assess whether the methodology and data sources used by the company to develop its cost estimates are complete and mutually exclusive.
- Describe how the reporter has confirmed that the total estimates are reasonable and consistent with NI Water's current cost, including any external cost benchmarks used by the reporter.
- Assess and comment on whether the company has prepared the 'nominal' expenditure figures presented in the Business Plan to a common cost base consistent with the COPI indices entered in Table 3.1.

Assessing deliverability and expenditure profile

- Challenge and comment on the company's assessment of 3rd party risk which impact on project definition and development and inhibit the start of construction on site.
- Challenge the company's planned expenditure profiles and comment on whether these reflect previous experience of NI Water and are reasonable in light of the reporter's experience.

Opex from Capex

- Comment on the company's methodology for assessing additional opex arising from capital investment, including the opportunity for cost savings from investment in improvements to capital assets.
- Challenge and comment on the unit rates used by the company to estimate additional opex and confirm that these are consistent with the company's current cost base.
- Confirm whether the company's bottom up estimates of additional opex is reasonable in the light of previous experience in NI Water and consistent with the reporter's experience.

Cost allocation

- Comment on the allocation of costs by service and purpose.
- Challenge and comment on any change in the company's methodology for cost allocation from the PC21 Business Plan and/or AIR19 or any material change in the cost allocation of individual projects or groups of projects.

Grants and contributions

- Challenge and comment on grants and contributions entered into Table 3.5.
- Confirm that the data used to calculate grants and contributions are based upon historic trends, unit cost rates and forward projections for new development.
- Confirm that development numbers or activity rates used to calculate grants and contributions are consistent with those used to estimate expenditure on growth and development.

PC15 Out-turn Report

- On a sample basis, comment on the reasonableness of the scope and cost of the additional investment reported by the company in the PC15 period in response to new obligations imposed on the company.

Continuity into PC27

3.18.4. The reporter's audit should address the company's plans to maintain continuity of investment into PC27. The reporter should:

- Ensure that the audit covers a sample of projects which bridge the PC21-PC27 transition and projects planned to start at the start of PC27.
- Comment on the quality of these cost estimates in relative to PC21 projects.
- Comment of the allowance made by the company to develop projects planned to start in PC27 and the profile of this investment.

General guidance

3.18.5. The reporter shall also:

- Describe how the reporter has assessed the investment submission. This description should include a table setting out the level of audit of each Business Case and each set of supporting information provided by the company.
- Confirm that expenditure figures in Table 3.2 are an extension of the detailed information in Table 3.3.
- Identify where other processes (such as the Water Resources Management Plan or the ELL assessments) are used as a basis of investment proposed in the Business Plan and highlight any concerns the reporter may have had on the previous submissions relevant to these outputs.
- Comment on the methodology used by the company to identify the level of future growth included in the development of individual schemes and confirm that this is consistent with growth estimates in other parts of the Business Plan (customer numbers and volumes for example) and the growth estimates included in other submissions such as the Water Resources Management Plan.