



ICRC

independent competition and regulatory commission

Draft decision

Water and Sewerage Capital Contribution Code

Report 8 of 2017, 29 September 2017

The Independent Competition and Regulatory Commission is a Territory Authority established under the *Independent Competition and Regulatory Commission Act 1997* (the ICRC Act). The Commission is constituted under the ICRC Act by one or more standing commissioners and any associated commissioners appointed for particular purposes. Commissioners are statutory appointments. Joe Dimasi is the current Senior Commissioner who constitutes the Commission and takes direct responsibility for delivery of the outcomes of the Commission.

The Commission has responsibilities for a broad range of regulatory and utility administrative matters. The Commission has responsibility under the ICRC Act for regulating and advising government about pricing and other matters for monopoly, near-monopoly and ministerially declared regulated industries, and providing advice on competitive neutrality complaints and government-regulated activities. The Commission also has responsibility for arbitrating infrastructure access disputes under the ICRC Act. In discharging its objectives and functions, the Commission provides independent robust analysis and advice.

The Commission's objectives are set out in section 7 and 19L of the ICRC Act and section 3 of the *Utilities Act 2000*.

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Foreword

In March 2017, Icon Water submitted a proposed code (Water and Sewerage Capital Contributions Code) for the Commission's consideration as an industry code, under Part 4 of the *Utilities Act 2000* (ACT). The Commission published Icon Water's proposal and sought public submissions between April and May 2017.

The Capital Contributions Code seeks to formalise arrangements for contributions that new developments (that increase network demand) in established suburbs pay towards future augmentations. In effect, urban infill developments will pay a new fee of \$1,200 for each increase in 'equivalent population'. Existing customers will continue to contribute to augmentation costs through the regulated tariff. New developments will not bear the full cost of the augmentations, paying an incremental contribution only based upon increased demand.

The Commission has prepared a draft decision on the code and, subject to section 60 of the *Utilities Act 2000*, is undertaking public consultation prior to making its final decision. Formal submissions on the draft code will close on 3 November 2017, 30 days after the public notice advertising the draft code was published in the Canberra Times on 3 October 2017.

Joe Dimasi
Senior Commissioner
29 September 2017

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Executive summary

On 30 March 2017, the Independent Competition and Regulatory Commission (the Commission) received from Icon Water a proposed Water and Sewerage Capital Contribution Code. The Code was submitted to the Commission for consideration under Part 4 of the *Utilities Act 2000* (Utilities Act). Icon Water was proposing to introduce new capital contribution arrangements for water and sewerage infrastructure upgrades that are triggered through development projects.

The original proposal was for the Code to apply to development projects from 1 July 2017. Given that the code was submitted at the end of March, Icon Water was advised that the Commission's evaluation would not be complete in time for a 1 July 2017 commencement. Consequently Icon Water notified interested parties that the Code would not be operational until the Commission's approval had been obtained.

To expedite the Commission's consideration, the Commission released Icon Water's proposed code for public comment in April 2017. Submissions received raised a number of issues including if there had been sufficient consultation, whether the proposed charging model was the most appropriate, and if the distinction between developments within and outside of defined precincts was adequately addressed. The Commission noted that some submissions supported the proposed Code as an improvement from the current arrangements and from Icon Water's original multi-precinct proposal.

The proposed Capital Contributions Code has been drafted to partially fund Class 2 infrastructure augmentations that will be required due to urban infill over the next 20 years. The Commission's modelling estimates that contributions collected over the 20 year period are in the vicinity of \$77.15m (in today's terms). The charges under the proposed Code are based upon a concept of 'equivalent population' that a development is expected to yield. A contribution is only paid when the development results in an increase to the equivalent population on a site.

In making this draft decision, the Commission has considered:

- Icon Water's proposal against the current arrangements;
- Capital Contribution arrangements in other jurisdictions;
- Equitable charging structures and methods for calculating network demand;
- Potential community impacts of the charge; and
- Issues raised in submissions during the first public comment period.

The Commission is satisfied that the proposed Capital Contributions Code represents a more equitable and transparent charging regime than the current arrangement. Additionally, the Commission is satisfied that the proposed contributions are broadly aligned with other jurisdictions, and that charging developments within the precinct a contribution towards network augmentation for increased demand is reasonable.

By releasing this draft decision, the Commission is seeking further submissions from the public on the single precinct model, and any additional issues that may not have been addressed by the Commission.

Index of key considerations.

In preparing this draft decision the Commission was required to evaluate aspects of the proposed Code, as well as the overall constitution of the Code. In exercising its judgement the Commission is guided by Section 3 of the Utilities Act.

The Commission considered the following key points in arriving at its draft decision:

1. The proposed Code's alignment with other Australian jurisdictions.
(Chapter 2.2)
2. The geographical assignment of the proposed Code's charges.
(Chapter 3.4.1)
3. The determination of the Code's proposed map.
(Chapter 3.4.2)
4. The appropriate pricing metric for determining capital contribution charges.
(Chapter 4.3)
5. The level and calculation of a capital contribution charge.
(Chapter 5.3)
6. The prudence and efficiency of Icon Water's capital expenditure.
(Chapter 6.4)
7. The current 'last person standing' arrangements for the ACT.
(Chapter 7.1.2)
8. The transitional period for the implementation of the Code.
(Chapter 7.1.4)
9. Community concerns regarding housing affordability.
(Chapter 7.1.5)
10. Alignment with ACT Government policy regarding "Mr Fluffy" properties.
(Chapter 7.2)

1 Overview

Introduction

Icon Water is proposing a development capital contribution framework (referred to as the Capital Contribution Code or CCC) in the form of an industry code under Part 4 of the *Utilities Act 2000* (Utilities Act). Icon Water anticipates significant increases in capital expenditure will be required in coming years to fund infrastructure upgrades necessitated by urban infill and redevelopment in established areas. The proposed CCC is designed to recover from developers a contribution to the costs associated with these infrastructure upgrades.

The need for a CCC arises primarily because forecast 20 year capital and operating expenditure exceed revenue over this period. The reason for this revenue shortfall is the significant capital expenditure required to upgrade networks in established areas due to urban redevelopment. The proposed CCC is a means to recover a contribution to the cost of infrastructure augmentation from developers whose developments in established suburbs ultimately place more demand on the network. The proposed CCC will place a new charge on all developments in a precinct on the basis of the associated change in demand new developments will place on the network. The proposed CCC is broadly consistent with practices in other jurisdictions.

1.1 Background

The current ACT arrangements for developer contributions to infrastructure are not formalised and were developed decades ago with a focus on new suburbs - being areas with no water and sewerage infrastructure ('outside of precinct'). These informal arrangements can see developers pay 100 per cent of the cost of any augmentation to service their development. As discussed in chapter 2.2, this approach seems to be widely accepted in new land developments, but can be problematic when applied to augmentation or re-development in established suburbs ('within precinct'), particularly in areas involving multiple developments over time, such as along Northbourne Avenue.

Icon Water cites¹ the following specific issues with the current arrangement:

- Inefficient augmentation practices, where sub-optimal, and therefore more frequent augmentations may be undertaken, rather than a single augmentation covering anticipated growth in the area;
- Unfair charging practices where the development that necessitates the augmentation paying the entire cost of augmentation, with all preceding and subsequent developments incurring no cost. This is referred to as the '*last person standing issue*'; and

¹ Icon Water (2017a), pp. 8 & 35.

- Uncertainty over cost and process for developers, causing delays and protracted negotiations.

The proposed CCC seeks to overcome these issues and addresses pre-project uncertainty for developers around actual utility costs. The proposed CCC has the following features:

- Icon Water continues to pay for and recover (through the regulated price) costs associated with Class 1 headwork assets;
- Icon Water and developers² make a 50:50 contribution to Class 2 shared assets in established areas (as an estimate of the augmentation costs Icon Water considers it could not recover from fees received from future use of the upgraded asset), and
- Developers continue to pay 100 per cent of Class 3 reticulation assets.

Developer contributions towards the cost of upgrades to infrastructure in the utility sector are not unusual. In the ACT, developer capital contribution charges for gas and electricity are well established. Water and sewerage developer contributions are also established in many other Australian jurisdictions. Commonwealth and State regulatory literature also supports the implementation of capital contributions charges, provided they meet set criteria (see 3.1).

Icon Water developed the proposed CCC and undertook public consultation on various versions of the code. A previous version of the CCC was developed where the ACT was covered by multiple precincts. In this version each precinct was associated with a separately determined charge, reflecting the forecast costs of augmentation in that precinct. The Commission understands this attracted a level of concern from developers and on further review was deemed operationally impracticable by Icon Water. Consequently the CCC, as submitted to the Commission, was simplified with a single precinct covering the ACT, and a single fee applicable to all developments within the precinct.

The Commission received Icon Water's draft CCC on 30 March 2017. The Commission called for public submissions on the draft code between 5 April and 12 May 2017. Six submissions were received by the Commission during this process.

Several submissions identified as an issue the adequacy of the consultation process undertaken by Icon Water. In particular, the extent of the consultation was limited to those parties interested in, or having the opportunity to engage in, the process. This could have restricted the consultation process to predominately engaging with developers, and prevented Icon Water's process from benefiting from broader community views.

² The Class 2 infrastructure charge under the proposed code is payable by the 'Customer'. For the purposes of this determination, the Commission assumes that the developer will be the landholder and 'Customer'.

1.2 The Commission

The Independent Competition and Regulatory Commission (the Commission) is established under the *Independent Competition and Regulatory Commission Act 1997* (ICRC Act) to regulate pricing, access and other matters in relation to declared regulated industries, to independently investigate competitive neutrality complaints and government regulated activities.

Section 7 of the ICRC Act sets the Commission’s objectives as:

- (a) To promote effective competition in the interests of consumers;
- (b) To facilitate an appropriate balance between efficiency and environmental and social considerations;
- (c) To ensure non-discriminatory access to monopoly and near-monopoly infrastructure.

The ICRC Act establishes that the Commission’s functions include those given under the *Utilities Act 2000*³.

Under the Utilities Act, the Commission is responsible for managing the licensing framework for non-National Energy Retail Law (NERL) utility service providers in the ACT, including issuing licences and monitoring of licence compliance. The Commission also has responsibility for industry codes of practice and approving some standard customer contracts. The Commission also has a function to determine fees and levies paid by utilities in the Territory in respect of the regulatory functions undertaken by the Commission and other Territory bodies.

The Commission’s role in determining industry codes is set out in Part 4 of the Utilities Act and is explained in more detail in 1.3 below.

In exercising its judgement the Commission is guided by the general objectives of Section 3 of the Utilities Act which are to:

- (a) encourage the provision of safe, reliable, efficient and high quality utility services at reasonable prices;
- (b) minimise the potential for misuse of monopoly power in the provision of utility services;
- (c) promote competition in the provision of utility services;
- (d) encourage long-term investment, growth and employment in utility service industries;
- (e) promote ecologically sustainable development in the provision of utility services;
- (f) protect the interests of consumers;

³ Section 8 (1) (g) *Independent Competition and Regulatory Commission Act 1997*

- (g) ensure that advice given to ICRC by the ACAT is properly considered;
- (h) ensure the Government’s programs about the provision of utility services are properly addressed; and
- (i) give effect to directions of the Minister under section 19.

In considering these objectives the Commission will consider what is reasonable and appropriate given the circumstances presented.

1.3 Industry codes and their role

The Utilities Act provides a regulatory framework for utilities in the ACT. Section 101 of the Utilities Act allows a utility to charge a capital contribution, provided it is in accordance with a relevant industry code.

Provisions relating to industry codes are set out in Part 4 of the Utilities Act. An industry code ‘*may set out practices, standards and other matters about the provision of a utility service*’ including connections to a network, the development of a network and the provision of utility services generally⁴.

An industry code sets out specific rules and practices to be followed by a utility when specific activities are being undertaken. By extension, a code can place obligations and requirements on persons wanting to utilise, or have access to, a utility service.

An industry code can be used to clarify services and ensure consistent approaches are made to service provision. This helps to create a level of comfort to persons and businesses requiring access to utility services, as they can be assured of the process prior to requesting services.

Industry codes differ to Technical Codes. Technical Codes are made under the *Utilities (Technical Regulation) Act 2014*, and whilst similar in form and function, their focus is on the operational aspects of the network and its performance.

Examples of current industry codes include:

- Electricity Feed-in Code; and
- Consumer Protection Code.

It is important to note that a Gas Network Contribution Code and an Electricity Network Contributions Code existed as industry codes under the Utilities Act until 2012, when they were replaced by the national energy market arrangements. Under the new national energy market arrangements capital contributions are still paid by developers for gas and electricity developments in the ACT.

The Commission’s role in determining industry codes is set out in Part 4 of the Utilities Act:

⁴ Section 55(2) *Utilities Act 2000*.

- the scope of an industry code (section 55);
- to whom it applies (section 56);
- who can develop them (section 57);
- the consultation process (section 58, 59 and 60);
- the Commission’s role in approving or determining an industry code (the former in section 58 where the code is submitted by a utility and the latter in section 59 where the Commission itself determines a code);
- the arrangements for varying a code (section 61); and
- the procedural requirements for making a code a disallowable instrument (section 62).

Under Section 57 of the Utilities Act, the Commission must consider an industry code if it is submitted for approval by a utility. Icon Water submitted a draft industry code to the Commission on 30 March 2017, therefore enacting Section 57.

It is important to note that, under section 61 of the Utilities Act, once an industry code is operational, the Commission may seek to vary an industry code if it deems it necessary. For the purposes of this determination, this will allow the Commission to monitor the operation of the code and make changes if its application is operating outside of the Commission’s expectations.

1.4 Timeline of the review

Table 1.1 below outlines the Commissions timeline for the review of the proposed code.

Table 1.1 Review timeline

Icon Water submission of draft code to Commission	30 March 2017
Publication of Icon Water’s proposed code	5 April 2017
Notice published in Canberra Times calling for submissions	7 April 2017
Public submissions closed	12 May 2017
Release of draft decision	3 October 2017
Submissions due date	3 November 2017
Release of final determination	05 December 2017
Commencement date of the capital contribution code	01 January 2018

1.5 Structure of this report

The remainder of this report is structured as follows:

- **Chapter 2** – provides a high-level summary of Icon Water’s proposed CCC. It describes how the CCC will operate, what costs will apply for developments within the precinct and how these costs are determined.

- **Chapter 3** – describes the proposed CCC’s single precinct approach. It also provides the precinct map, discusses submissions received and the Commission’s evaluation of the issue.
- **Chapter 4** – discusses the methodology of an equivalent population (EP) used to determine the charge applicable to augmentations triggered by development. This chapter also discusses comments from submissions and the Commission evaluation of the issue.
- **Chapter 5** – discusses how the proposed CCC treats contributions to new and common assets. The chapter also discusses comments from submissions and the Commission evaluation of the issue.
- **Chapter 7** –discusses regulatory oversight of the charges recovered, as well as prudence and efficiency measures relating to capital expenditure.
- **Chapter 7** - discusses the Commission’s consideration of other issues raised in submissions.
- **Chapter 8** – discusses community impacts of the proposed CCC.
- Appendix 1– Draft decision on Draft Code
- Appendix 2 – Summary of submissions received

2 Summary of Icon Water’s proposal

Icon Water has submitted a draft Capital Contributions Code (CCC) for consideration under Part 4 of the Utilities Act. The proposed code seeks to formalise arrangements for contributions that developers should pay towards water and sewerage infrastructure upgrades necessitated by urban redevelopment and increased housing density in established suburbs (within precinct). The proposed code does not seek to change the arrangements that are currently in place for new suburbs/new areas with no established network infrastructure (outside of precinct).

The essential principle of the proposed CCC is the recovery of the cost of infrastructure upgrades from the developments that make the upgrades necessary, rather than placing the entire burden on existing customers through increased tariffs.

2.1 The proposed code

Icon Water’s proposed CCC provides the framework for the payment of capital contributions by developers for water and sewerage services network augmentations triggered by developments within precinct. The proposal specifies a single precinct for the ACT. The code as drafted does not directly specify a methodology or process for outside of precinct developments; rather it allows for recovery of any costs if Icon Water is required to undertake any works itself on those sites. In this manner the proposed CCC represents a continuance of the current arrangements, as discussed below.

Clause 9 of the proposed CCC provides a formula for charges applicable to developments within the precinct. The precinct is any area where development has already taken place, and water and sewerage network connections are available. As shown in the precinct map (Chapter 3.2), this covers most of urban Canberra; making all new developments in established suburbs subject to the proposed code. The single precinct model sets a single rate to calculate the contribution for each development within the precinct.

Areas that are not identified on the precinct map are excluded from the predetermined capital contribution charge and remain subject to the current outside of precinct arrangement⁵, described in Chapter 2.2.

The proposed CCC specifies the circumstances under which the provisions of the code are triggered (Clause 2.3, 4, 6, 8 and 9), the infrastructure to which a developer is required to contribute (Clause 5, 6, 7 and 8), the methodology for calculating the contribution charge for sites within precinct (Clause 9.1), ownership of the assets

⁵ Clause 9.2 of the proposed CCC allows the Utility to recover Costs (a defined term) for Class 2 Infrastructure outside of the precinct.

(Clause 10.3), and requirements for the publication and update of the precinct map (Clause 9.4 and 9.5).

An important feature of the proposed code is that it sets out the infrastructure augmentation obligations of developers and the classification of the assets that are covered by the code⁶. The code categorises assets into 3 classes, and only specifies contributions related to Class 2⁷ infrastructure.

Icon Water remains responsible for any augmentation to the large-scale headwork assets such as dams, pumping stations, bulk supply mains, treatment plants and large scale gravity directed sewers. The CCC describes these as Class 1 infrastructure.

Current practices for Class 3 assets (reticulation assets required to connect a customer to the water and sewerage services such as small water mains, pressure reducing systems, and onsite assets such as tanks and internal pumps) are unchanged by the CCC. The developer remains responsible for the design, construction and gifting of these assets and no financial capital contribution (payable to the utility) is required.

A capital contribution charge only relates to Class 2 infrastructure. Class 2 infrastructure includes water mains larger than 200mm in diameter, water reservoirs, pumping stations, and the like. This is shared infrastructure and can service multiple customers and multiple developments.

Whilst not specified in the proposed code itself, the supporting documentation from Icon Water supports the contention that the charge relates solely to the recovery of the uneconomic component of Class 2 infrastructure augmentations. To this end, Icon Water has calculated the costs⁸ of anticipated Class 2 infrastructure upgrades required due to urban renewal within precinct over the next 20 years. The uneconomic component (see Chapter 2.1.1 below) of these augmentations is calculated at approximately 50 per cent. The charges paid under the CCC seek to recover the uneconomic component from all within precinct developments within the Territory.

The contribution of each new development to the cost of augmentation is based upon the net change in equivalent population (EP). This is detailed in Chapter 4.

2.1.1 Purpose of capital contributions

Under Icon Water’s proposal, the purpose of capital contributions is to recover the uneconomic component of Class 2 augmentations within precinct from within precinct developments over a 20 year period. An uneconomic augmentation is where the

⁶ Class 1, 2 and 3 infrastructure is defined in the Schedule of the proposed CCC.

⁷ Class 1, 2 and 3 infrastructure is defined in the Schedule of the proposed CCC.

⁸ Projects and costing will be subject to ICRC prudence and efficiency considerations in the 5-yearly price review. See Chapter 6.

average prices paid by customers serviced by the augmentation (new and existing) would not be sufficient to recover the full cost of the augmentation itself.

Outside of precinct contributions are treated differently and, under current practice and custom, the developer pays 100 per cent of the Class 2 cost, usually by building the new network as part of the development, and gifting it to Icon Water to maintain once the development is completed. The proposed CCC does not seek to change this arrangement, the Commission does note however that this process is not specifically captured by the code as drafted.

Precinct capital contributions ensure that new customers pay for the net incremental costs⁹ of connecting them to the network. This achieves two things: first, it ensures that existing customers are not disadvantaged (with higher costs or reduced amenity) by the connection of new customers, and second, it provides a price signal to prospective developers that is broadly reflective of the infrastructure costs associated with urban infill developments across the Territory. Icon Water's proposal has the following key attributes:

- No change to the existing outside of precinct arrangements. Icon Water maintains the ability to charge 100 per cent for Class 2 and Class 3 infrastructure outside of precinct, however custom and practice will allow developers to continue to build the infrastructure and gift it to the utility if acceptable to all parties. Where land is not wholly within precinct, the entire development is assumed to be outside the precinct and subject to the outside of precinct arrangement.
- A single precinct within the Territory (updated on an annual basis), with the same base rate used to calculate the contribution regardless of where the development is located (See Chapter 3);
- The precinct charge is calculated from the percentage of developer cost recovery from the 20 year capital expenditure program, divided by the number of total incremental EP for within precinct residences and businesses. The use of the EP is discussed in Chapter 4;
- It recovers the uneconomic Class 2 augmentation costs¹⁰ that arise from Icon Water's 20 year capital works program within precinct. Discussion of the model and calculation of the uneconomic component is contained in Chapter 5;
- Where a proposed development necessitates relocation, removal, protection or changes to the existing water or sewerage network, the developer pays the full

⁹ Incremental costs are the costs associated with producing one additional unit of a good or service, in this case, augmentation of the network required to connect the proposed development.

¹⁰ The proportion of costs recovered from developers is based on the present value difference of incremental revenue net of incremental operational expenditure, subtracting the present value of the 20 year capital expenditure program. This present value 'deficit' is then calculated as a percentage against the present value of the 20 year capital expenditure program - to yield a percentage recovery figure from developers

cost of carrying out the works, regardless of infrastructure class or whether or not it is within the precinct. Chapter 7 discusses this aspect.

2.2 CCC compared to the current arrangements

There is no formalised water and sewerage capital contribution code for developments in the ACT. Icon Water contends this is in contrast with water, electricity and gas networks in other jurisdictions¹¹.

With the introduction of self-government in 1989, an arrangement was put into place to provide a mechanism to fund water and sewerage infrastructure across the Territory. This arrangement in the main applies to outside of precinct developments where construction of new infrastructure is required and has been undertaken on a large-scale development basis.

In outside of precinct developments, the developer pays for all of the Class 2 and 3 water and sewerage infrastructure, usually by building the infrastructure and then gifting it to Icon Water to maintain. As the drivers of the need for investment, development of new suburbs, and the developer are well known, Icon Water argue that the arrangements for outside of precinct developments are understood and accepted by developers.

In the case of infill and re-development within precinct, applying the outside of precinct practice creates difficulties. As the water and sewerage service already exists, the impact of development on the existing infrastructure is incremental; the developer only pays for the costs associated with servicing their development proposal. If capacity is available in the network, costs will be confined to installing the immediate reticulation system (Class 3 as defined in the proposed CCC) and the connection to the network. If there is no capacity in the network, and in consequence augmentation is required, the developer triggering the augmentation is required to pay for those augmentation costs as well.

As discussed throughout this draft decision, the current arrangements for within precinct development;

- may encourage incremental augmentation – which could result in higher costs over time compared to building capacity in a predetermined way to meet future development needs;
- may create an incentive for developers to follow the first wave of development in order to minimise potential capital contributions (and create a disincentive for subsequent developments);

¹¹ Icon Water (2017a).

- creates uncertainty for developers in assessing the economics of a development proposal as capital contribution charges may or may not apply depending on the available network capacity;
- result in a ‘last person standing’ problem where the last developer to come along pays for the full cost of augmentation, yet does not capture the value of that augmentation as subsequent developments in the area may be able to free-ride;
- may result in protracted delays to projects that are subject to significant augmentation costs, as it is likely the developer will attempt to negotiate to reduce the proposed cost or delay their development in the expectation that other developments may be proposed, and therefore the costs of augmentation may be shared between those developments; and
- has the potential to encourage development locations to be based upon expected capital contribution charges rather than where the development is actually demanded.

The proposed CCC seeks to address each of these issues by:

- outlining a known charge that applies to all within precinct developments, allowing developers to calculate and factor the charge into their economic assessments;
- ensuring all within precinct developments pay an incremental contribution towards future augmentations, eliminating the last person standing issue;
- applying a single per EP charge across the entire precinct map, ensuring developments are not focused on areas with lower capital charges rather than where they are in highest demand; and
- providing Icon Water with the required capital to optimally invest in augmentations for future growth.

2.3 Issues raised by the proposed Code

The Commission called for public submissions on Icon Water’s proposed CCC in April 2017. The proposed CCC raised several issues for consideration. The issues outlined in Chapter 2.3 are, in the Commission’s assessment, the main aspects of the code that require review. In highlighting these issues the Commission is not foreshadowing that these issues require satisfactory resolution for the CCC to be approved, only that they are matters which will impact upon the operation of the code. Further to these primary concerns, additional issues were raised in submissions and these are considered in Chapter 7.

2.3.1 Precinct proposal

Chapter 3 of this draft decision considers the issues raised by Icon Water’s proposal to specify a single precinct for the Territory. Icon Water’s original proposal was that the CCC be applied across multiple precincts, aligned with sewerage catchments. This would involve the Territory being covered by multiple precincts, each with a different capital contribution charge depending on the underlying augmentation needs.

Whether the code should be a single precinct as currently proposed, or a multi-precinct as was originally envisaged, depends on two key decisions:

- the weight given to providing a locality specific price signal for future development; and
- the administrative (for Icon Water) and transaction cost (for developers) burden associated with creating, updating and understanding the different capital contribution charges that a multi-precinct model requires.

2.3.2 Level of contribution and basis for the calculation of the charge

Icon Water is proposing that developers pay for localised Class 3 assets and make a 50 per cent contribution to Class 2 assets. Under the proposed CCC the utility is responsible for Class 1 assets. Additional ‘Other Charges’¹² may be charged to a developer should the development necessitate removal, relocation or protection of the existing network. Any such charge would be on a cost recovery basis.

A consideration is the basis upon which the charge is calculated. The proposed CCC uses an EP measure as a means to capture expected network load. Chapter 4 describes the use of EP and calculation of the contribution.

2.3.3 Assets covered by the contribution charge?

The proposed CCC describes the circumstances where a developer pays for all or part of water and sewerage services infrastructure asset investments triggered by their development. Chapter 5 covers this in more detail.

The proposed CCC uses an approach of assigning incremental revenue to cover the incremental augmentation costs associated with a development, and recovering the remaining 50 per cent directly from developers. The Commission must consider whether this approach is reasonable compared to the counterfactuals of either not charging at all, or charging the full costs associated with augmentations.

2.3.4 Distinction between outside of precinct and within precinct

As illustrated on the map in Chapter 3.2, the Territory’s urban areas are predominantly within precinct; any area that is not shown on the precinct map is outside of precinct.

¹² Clause 8 of the CCC

The Commission notes that Icon Water’s briefing material and information pack utilised the terminology “brownfields” and “greenfields”. This terminology is not used within the proposed CCC itself. The Commission believes that the use of this terminology in the public consultation material may have caused some confusion, as their use was not in accordance with common usage of these terms. The proposed CCC only makes reference to land being inside or outside (“brownfields” or “greenfields” in Icon Water material) of the precinct. The precinct map was developed by Icon Water in accordance with the below definitions¹³.

Outside of precinct

Land outside of precinct falls into 2 general categories: firstly, land with no underlying water and sewerage infrastructure, often agricultural, grasslands and on the current urban fringe. Secondly, new suburb development where the developer or utility is in the process of building Class 2 water and sewerage infrastructure, but it is not yet connected to the existing network. It typically converts to within precinct upon the issuance of a Provisional Certificate of Operation.

Inside precinct

Land within precinct is any land where a connection to water and sewerage infrastructure exists or is available. A within precinct land parcel may not necessarily have had a building development on it in the past, but a connection to the water and sewerage network is available should a development occur on that site.

Indirectly raised in a submission from Canberra Airport was the relationship between the two precinct types. In particular, when does an outside of precinct site become within precinct? Precinct conversions usually occur in line with new suburb stage releases; once an area has been initially developed by the land developer with the necessary underlying water and sewerage infrastructure installed and connected to the utility mains it becomes within precinct. In areas where the land developer builds the water and sewerage infrastructure this will occur at the point the utility issues a Provisional Certificate of Operation and connects the area to the mains¹⁴. In a new suburb this would usually be in the vicinity of 50-100 blocks at a time.

It is the view of the Commission that the proposed CCC terminology relates solely to whether a development falls within the bounds of the ‘Precinct’; which is defined as the map published by the Utility within the proposed code. Further, the Commission’s consideration of whether a utility should be able to determine the precinct map itself is discussed in Chapter 3.4.2.

¹³ Definitions are provided for guidance only and are not contained within the proposed CCC

¹⁴ Icon Water (2017a), p.55

2.3.5 Prudence and efficient costs

Another issue raised in some submissions is whether the proposed infrastructure charge is subject to any prudence and efficiency test. The proposed CCC sets the charge applicable to developments within precinct, and codifies that Class 2 infrastructure works outside of precinct are charged on a cost recovery basis. The utility (as the code will apply to all utilities which have water and or sewerage service functions under the Utilities Act) retains the discretion under the code to decide whether infrastructure is required consistent with the utility’s standards and applicable law¹⁵. Chapter 6 explores prudence and efficiency concerns surrounding the implementation of the proposed CCC.

2.4 Submissions received

Icon Water submitted its formal draft code proposal to the Commission on 30 March 2017. The proposed code and information paper (provided by Icon Water) was then published for public submissions and sent to ACT Government stakeholders, with the final date for submissions being Friday 12 May 2017. The Commission received submissions from the following people or organisations:

- ACT Water Rewards Co-operative (AWRC);
- Andrew Barr MLA (in his capacity as a local member);
- Canberra Airport (CA);
- Canberra Business Chamber (CBC);
- SMEC – Australia & New Zealand Division (SMEC); and
- Housing Industry Association (HIA).

Further to the submissions, Commission officers have also met with Environment, Planning and Sustainable Development Directorate technical regulation. It is a legislative requirement to consult with the Minister and with the technical regulator. The Commission also met with Stephen Byron and Stephen Carson from Canberra Airport.

The Asbestos Taskforce advised the Commission that they had requested Icon Water to consider a waiver from any charges related to homes where “Mr Fluffy” affected residents had repurchased their land and were building dual occupancy premises. Icon Water subsequently requested a formal exemption for these properties (see Chapter 7.2).

Issues that the Commission considers pertinent are addressed in Chapters 3 through 6. Chapter 7 covers all other issues not elsewhere discussed in this draft decision.

¹⁵ Clause 10.1 of the proposed CCC

Appendix 2 contains a table summarising each submission, issues raised therein, and Chapters within this draft decision that address the issues raised.

3 Precinct proposal

Icon Water’s proposed Code is broadly consistent with standard practices in other jurisdictions. It differs most substantially in three points: it is a single-precinct scheme, it is a shared-cost scheme, and it is a scheme that covers only Class 2 infrastructure.

This Chapter discusses the proposed single precinct scheme, where each additional EP (discussed in Chapter 4) within precinct in the ACT is associated with a \$1,200 capital contribution charge.

3.1 Precinct options

There is substantial variation across Australian jurisdictions in applying any capital contribution charges for water and sewerage. A common feature of such charges within jurisdictions is that they vary on the basis of location. Such variation is supported by the Productivity Commission’s 2011 analysis: “[charges can] encourage efficient patterns of development by signalling to developers the infrastructure costs associated with development in different locations”¹⁶. The Productivity Commission further noted that “upfront developer charges should be used where the ... benefits accrue mainly to those in the development. Where, as in the case of urban infill, the benefits also accrue to incumbents, costs should be spread across all users”. Finally, the Productivity Commission noted that developer charges provide “a means of recovering the costs incurred in extending or upgrading infrastructure”.

Icon Water released a ‘Water and sewerage capital contributions’ information paper in late 2016. This paper proposed a multi-precinct based system of charges, where charges varied on the basis of the “true cost of [a] development”¹⁷. Icon Water argued that these true costs of development were a result of different areas of Canberra having different growth rates and levels of excess capacity.

As the sewerage networks were anticipated as forming the primary target of future spending, Icon Water set up 11 precincts based on 11 sewerage catchment areas. As part of the modelling exercise, Icon Water also calculated the proposed cost for a single precinct arrangement.

The precinct charge is calculated from the percentage of developer cost recovery (50 per cent) from the 20 year capital expenditure program, divided by the number of total additional EP developments (for residences and businesses). Icon Water calculated the single precinct equivalent charge would be \$1,200, the calculation of which is discussed in ‘Contributions to new and common assets’. The Commission has independently confirmed the modelling and estimation of this charge.

¹⁶ Productivity Commission (2011) Vol 1, pp. 150-153

¹⁷ Icon Water (2016).

Precincts and their proposed costs, are given in Table 3.1 below.

Table 3.1 Precinct charges, as advised by Icon Water 2016

Sewerage Precinct	Charge per EP (\$), Multiple precinct	Charge per EP (\$), Single precinct ¹⁸
Belconnen	1400	1200
Civic and North Canberra	1800	1200
Gundagerra	0	1200
Gungahlin	0	1200
Fyshwick	1500	1200
Hume	0	1200
Molonglo Valley	0	1200
South Canberra	0	1200
Tuggeranong	0	1200
Weston Creek	0	1200
Woden	3000	1200

Table 3.1 demonstrates substantial variation in per EP charges applied to within precinct developments in the ACT under the single as compared with the multiple precinct system. The charges were applied depending on the anticipated level of needed augmentation. Areas where infrastructure was relatively new and the need for augmentations low had lower or zero dollar costs per EP compared to areas where augmentation were anticipated to be needed.

The Icon Water calculation of a fixed \$1200 charge as being appropriate under a single precinct system implies that developments in the precincts of Gundagerra, Gungahlin, Hume, Molonglo Valley, South Canberra, Tuggeranong and Weston Creek would be subsidising developments in Belconnen, Civic and North Canberra, Fyshwick and Woden.

Icon Water reported that feedback from stakeholders did not favour a multi-precinct model as the locational price signals was seen as complex, potentially inequitable and introduce increased charge volatility¹⁹.

Further analysis provided to the Commission by Icon Water indicated a series of further issues with operationalising a multiple precinct system. These issues were not viewed by Icon Water as readily quantifiable, but were viewed as substantial.

These issues, as provided by Icon Water to the Commission, included:

- Sewerage precinct level population data is liable to frequent revision, due to an inability to be reliably forecast. This would create pricing volatility issues.
- Multiple precinct modelling would increase Icon Water’s internal management, billing and assurance costs.

¹⁸ Icon Water calculations, independently verified by the Commission

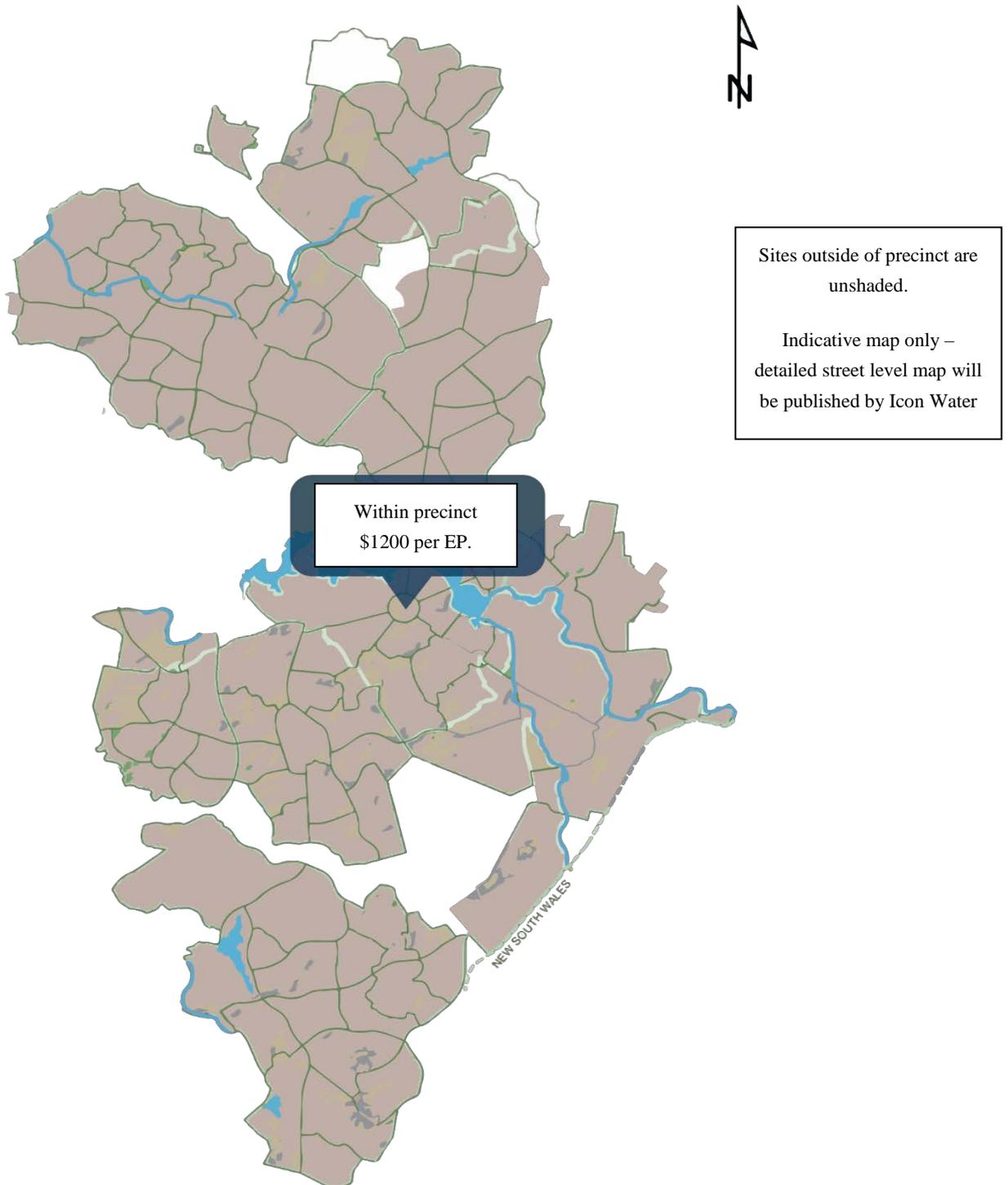
¹⁹ Icon Water (2017b) and Icon Water (2017a)

- Disputes were viewed as more likely to arise, due to precinct boundary definitions, with concomitant legal and management costs.
- Icon Water would be required to prepare a larger number of communication materials to inform the public about the larger number of precincts.

Based on stakeholder feedback and internal analysis of incremental organisational effort, Icon Water proposed a CCC set on the basis of a single precinct. Icon Water argued this would be simpler for developers to understand, was perceived to be fairer compared to charges varying from precinct to precinct, would result in less volatile charges as the costs are smoothed over the Territory and be less subject to recalculation as a result of the ACT Government's infill plans. Icon Water argued it would also entail substantially lower incremental organisational and administrative costs.

The single precinct system of charges provides administrative simplicity and greater certainty as the developer charge for augmentations. Icon Water noted that a single precinct also has less granularity: it is unable to send a pricing signal to a developer as to the true augmentation costs associated with a development. The developer faces the same charge for the same development regardless of the location of the proposed development and, with the exception of Class 3 costs, to the underlying augmentation requirements of a particular locale.

3.2 Precinct map



3.3 Submissions received on precinct arrangements

Few submissions received by the Commission directly addressed the issue of single versus multiple precincts. Those that did raise the issue expressed the view that a common charge based on a single precinct was an improvement over the multiple precinct model first proposed by Icon Water.

Andrew Barr MLA

Mr Barr’s submission supported the proposed code as the current last person standing approach to funding augmentations is uncertain and inequitable. While the single precinct design was not separately identified, the submission noted that the code will ensure all developments contribute to the cost of infrastructure investments, resulting in greater transparency and accountability in relation to augmentation costs.

CA

The submission from CA did not comment on the single precinct other than noting that Icon Water had changed its approach in light of developer concerns. However, it did express concern about the flexibility in the CCC to allow Icon Water to change the precinct map and therefore, the potential for precinct based charges to be reintroduced without consultation.

CBC

CBC commented that the move from a multiple precinct attracting different charges to a single precinct with a universal charge is an improvement. However, the CBC believe that a 12 month review of the proposed charges is appropriate to allow time to explore alternative models.

HIA

HIA noted that the proposed CCC with a single precinct appeared to be more equitable than the multi-precinct model that was first proposed by Icon Water, however also noted it increased costs for some areas.

3.4 Commission’s consideration

Icon Water argued that the proposed CCC will codify the augmentation arrangements for within precinct developments, providing clarity around the categorisation and the associated charges. Further Icon Water argued that the ACT Government’s policy of having 50 per cent of new dwellings constructed in established areas will place pressure on existing infrastructure. This gave extra weight to formalising the current arrangements. Given the incremental nature of development within precinct, Icon Water argued that the proposed CCC avoids the prospect of an incremental development triggering the requirement for the developer to fund the full costs of network augmentation, the last person standing issue.

3.4.1 Single versus multiple precinct

The advantages of a multiple precinct approach compared to a single precinct are well discussed by the Productivity Commission. The Commission must determine whether these intrinsic advantages are sufficient to outweigh the implementation difficulties and additional administrative costs of using multiple precincts identified by Icon Water. Further there was no support for a multi precinct model in the submissions made to the Commission.

It can be argued that multiple precincts have the following advantages over a single precinct model:

- Improved equity (where equity is defined as the beneficiary paying for the costs in producing those benefits).
- Reduced cross-subsidisation outcomes, where each precinct is charged on the basis of its own costs rather than (partly) paying for or having costs paid by another precinct.
- Superior cost reflectivity as the charge for each precinct is related to the underlying costs associated with network augmentation in that precinct.

The principal disadvantage identified in using multiple precincts is the administrative burden of tracking the precinct charge of respective multiple precincts compared to a single, unitary charge in a single precinct. This burden is compounded by boundary issues, in correctly attributing changing capital works that sit on the boundaries of precincts, or where common use infrastructure crosses one of more precinct boundaries.

Icon Water advised the Commission that the administrative burden of tracking the precinct charges would be associated with increases to pricing volatility, increases to public communication costs and increases to dispute resolution costs.

In considering this matter, the objectives of the Utilities Act direct the Commission to consider the provision of high quality utility services at reasonable prices; minimise the potential for monopoly power in the provision of utility services and to encourage long-term investment in utility service industries. It is clear that the move to a simple flat and uniform capital contribution charge applicable to all established areas in the Territory will remove the potential for charges to be set in a discriminatory fashion between suburbs within the Territory. A single precinct is also administratively simple to implement and for developers and the community to understand.

On balance the Commission is satisfied that the proposed single precinct is appropriate and that it is consistent with the provisions of Section 58 of the Utilities Act.

3.4.2 The approval of changes to the precinct map

CA’s submission raised concerns that the proposed CCC provides a mechanism that allows Icon Water to unilaterally alter the precinct map. CA argues that this could allow the reintroduction of different precinct charges (multiple precincts) without needing to consult affected stakeholders.

The Commission understands CA’s concern, but believes it would be highly unlikely for Icon Water (or another licenced water utility in the Territory for that matter) to unilaterally amend the precinct map in this fashion without consultation. Some flexibility must be included in the code to accommodate changes in the map as areas are developed and, over time, become included in the precinct. Under Clause 9.5 of the proposed CCC, a utility may only update the precinct map once per year, and the calculation of any charge is based upon the precinct map in place on the date the application for development approval was lodged.

Icon Water’s proposal²⁰ included a methodology for changes (expansion) to the precinct; being when an outside of precinct development has its Certificate of Operations signed by Icon Water and the area is connected to the Icon Water mains. Icon Water has separately confirmed to the Commission that this is the basis upon which any future updates to the precinct map will be made.

It is the Commission’s expectation that any significant precinct boundary changes would only occur following community consultation and advice to the Commission that a change in the map is required. Further, an industry code can be reviewed at any time by the Commission, particularly if the code is administered in a way inconsistent with the Commission’s understanding.

In regards to CA’s specific concern regarding the potential ability for the utility to reintroduce multiple precincts and varying charges per-precinct; under the price direction Icon Water must apply to the Commission to vary charges on the miscellaneous charges schedule, any such change would be subject to the Commission’s approval.

The Commission has made an amendment to the proposed CCC to clarify expectations on precinct map availability, quality, and effective dates²¹.

In conclusion, the Commission does not believe it is necessary to require an amendment to the code to remove the utility’s discretion to amend the precinct map annually. If the Commission were to approve the precinct map, it would need to rely upon advice from the utility as to the status of developments outside of the precinct and if a provisional Certificate of Operations had been issued.

²⁰ Icon Water (2017a), Page 55

²¹ Clause 9.4 CCC

3.5 Draft decision

It is the Commission’s opinion that a single precinct code is an improvement on the current approach to funding of augmentations in within precinct developments.

The Commission believes that Icon Water is the appropriate entity to determine the precinct map. The Commission invites submissions if parties believe the provisions relating to precinct updates require further clarification, and specifically what, if any, clarifications are required to the code regarding precinct updates.

4 Equivalent population (EP)

4.1 The proposed equivalent population methodology

EP is an engineering concept most commonly used in sewerage planning. It is used to measure part of the demand loadings a development places on a network and seeks to provide a common measure for assessing demand loadings from different types of developments (linked back to the expected demand from a person in a residential household).

EP frameworks are used by water utilities across the world, having been included in recognised United Nations environmental statistics since at least 1997²². In Australia most standards are localised versions of the Water Services Association of Australia's framework²³, first established in 2002.

Examples of the use of EP by Australian governments, councils and water utilities in identifying capital contribution charges, mandating design principles and discussing project scope include:

- Yarra Valley Water – Sewerage design principles²⁴
- Hunter Water – Sewage treatment plant metrics²⁵
- Sydney Water – Pipe sizing and grading tables²⁶
- Power and Water Corporation – Design manual²⁷
- Queensland Government, Department of Energy and Water Supply – Planning guidelines for water supply and sewerage²⁸
- Brisbane City Council – Sewerage infrastructure contributions planning scheme policy²⁹
- Yass Valley Council – Yass Sewerage Augmentation³⁰
- Wyong Shire Council – Work package W03 Sewerage System Planning³¹

²² UN (1997)

²³ WSA (2014)

²⁴ Yarra Valley Water (2009)

²⁵ Hunter Water (2017)

²⁶ Sydney Water (2006)

²⁷ PowerWater (2011)

²⁸ QLD Government (2014)

²⁹ Brisbane City Council (2009)

³⁰ Yass Valley Council (2017)

³¹ Wyong Shire Council (2014)

- SA Water – Regulatory Business Proposal 2013³²

4.2 Submissions received on EP

The following submissions discussed the proposed charge either generally or specifically in relation to how the EP is calculated in the code.

CBC

CBC raised several concerns about the charging regime in the proposed CCC including:

- that the new charges will comprise a larger portion of total development costs for a commercial project compared to a residential project as a result of using the proposed EP formula;
- the multipliers in the code allocate a significantly lower water and sewerage load for office buildings compared to residential. Further work needs to be undertaken to ensure the proposed multipliers do not impact on future development and investment decisions;
- the multiplier for housing should not be based on the type but on the number of bedrooms. A one bedroom unit should pay one fifth of the precinct charge of a 5 bedroom house.

CA

The submission from CA made a number of comments on the charging regime in the proposed CCC:

- Different EPs for commercial and residential developments results in commercial development paying a higher capital contribution compared to residential development assuming the same site and scale. This is despite residential development placing a heavier burden on water and sewerage services compared to commercial use;
- A more effective methodology would use the number of pedestals as the basis for calculating the charge as this has a direct relationship to the load on the infrastructure.

³² SA Government (2013)

SMEC

The submission from SMEC commented that the proposed code may discourage the uptake of innovative waste water technologies. Further while the supporting documentation makes reference to incentivising decentralised solutions, there is no indication in the code that a discount on the EP charge is available for developers who adopt innovative solutions.

AWRC

AWRC submission noted that they believed the EP charge was discriminatory as it only applied to new developments and was not applied to existing water and sewerage services customers.

4.3 Commission’s consideration

The Commission noted concerns regarding the impact of EP in creating differential costing on the basis of building use. In particular, concerns were registered regarding the increase in charges for commercial buildings in comparison with residential buildings (when EP-metrics were used instead of bedroom-count or pedestal-count metrics).

The Commission notes that one aim of a CCC is to provide a price signal to developers regarding the true cost of the development, once increases in water and sewerage demand loads are taken into account. The Commission further notes that overall demand is driven by a combination of development types on a network, and that EP is a standard metric designed to account for these demand variations.

The Commission notes that a fixed charge (such as EP) removes the incentive for developers to invest in developments that would reduce variable water demand. The Commission further notes that the ACT’s current water tariff structure provides a strong price signal to consumers regarding water consumption.

The Commission disagrees with AWRC assertion that the charge is discriminatory. Existing customers do, and will continue to, contribute toward augmentations within the precinct through the general tariff. EP is used as a way to calculate the incremental changes (demand) that new developments place on an existing network.

4.4 Draft decision

While there are several different approaches that could be used to calculate the charge to be applied for development applications, Icon Water’s approach aligns with standards set by the Water Services Association of Australia in the use of EP. EP is widely used in Australian jurisdictions as a sewerage demand metric, including in the calculation of capital contributions.

4–Equivalent population (EP)

In order to recommend against a widely-used technical standard, the Commission requires strong evidence of a beneficial alternative. No such evidence was submitted to the Commission.

The Commission therefore supports the use of EP as a pricing metric in the proposed CCC.

5 Contributions to new and common assets

5.1 Proposed contribution methodology

The proposed CCC sets charges that endeavour to recover from developers the costs that arise from Icon Water’s 20 year capital works program, where these costs cannot be recovered from the general tariff associated with the incremental works within precinct. In other words, the need for the CCC arises because the revenue received over 20 years from Class 2 incremental infrastructure within precinct is less than the associated CAPEX and OPEX.

In their submission, Icon Water provided a detailed framework for the funding arrangements of shared Class 2 assets in water and sewerage infrastructure projects. This framework consisted of two estimation models detailing the methodology behind the single precinct charge: the first model forecast the capital expenditure cost, and the second estimated the uneconomic component of these costs to be recovered by the CCC charge.

The first Infrastructure Funding Arrangement Cost-Benefit Analysis (IFA/CBA) model determines the proportion of costs recovered from developers – the net income required from a CCC. It estimates the present value³³ of incremental revenue, net of summed incremental OPEX and the present value of the 20 year capital expenditure program. This present value ‘deficit’ is then calculated as a percentage against the present value of the 20 year capital expenditure program – to yield a percentage recovery figure from developers (approximately 48 per cent).

The second IFA model, or the IFA/Arup Model, estimates the recovery of the necessary income required from a CCC. This model uses the 48 per cent recovery figure from the IFA/CBA model to estimate the CCC charge on a per-EP basis. The final estimate is \$1,175 per EP, rounded up for simplicity of estimation to \$1,200 per EP.

These models are described in greater detail below.

5.1.1 Introducing and validating the IFA/CBA Model

The Commission understands that the purpose of the IFA/CBA is to ensure the costs of precinct infrastructure augmentation are recovered from within precinct developments. It also seeks to estimate these costs, and to ensure the incremental within precinct

³³ This is the current worth of a future sum of money or stream of revenue given a specified rate of return. The value of this future stream is discounted by a discount rate representing the interest rate (rate of return) that the future cash flows would earn. So the higher the discount rate the lower the value of that money in today’s dollars. For example a value of \$110 in 12 months’ time may be equal to \$99 today assuming a discount rate of 10 per cent.

developments contribute only to the infrastructure of water and sewerage within precinct. The Commission’s analysis of the IFA/CBA indicated that it was effectively constructed, reasonably specified, and capable of delivering on its objectives.

The IFA/CBA model relied upon a series of key inputs and assumptions (Table 5.1). On the revenue side, Icon Water assumes that high density households are a relevant proxy for anticipated development patterns, and hence set the basis for the water consumption per customer of 130kL/year. In calculating revenue and evaluating expenses, Icon Water has consistently applied water and sewerage supply costs based on 2015 prices. The maintenance cost was assumed to be 3.5 per cent annually, and discount rate utilized the real vanilla WACC of 4.59 per cent. The Commission believes these decisions to be reasonable.

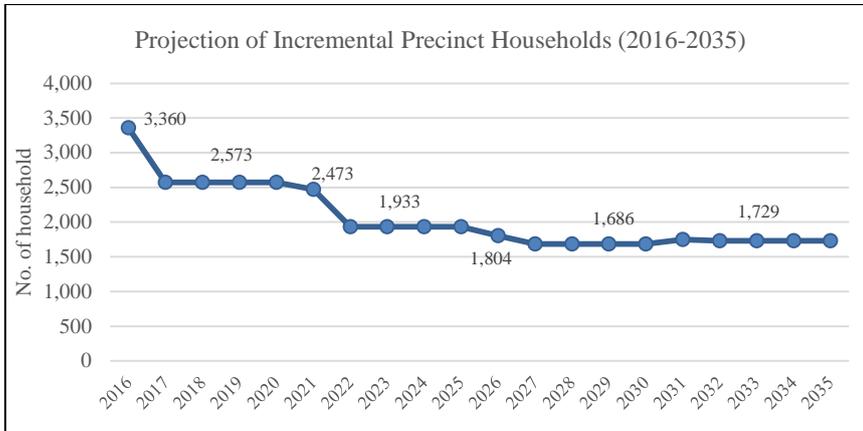
Table 5.1 Key Inputs and Assumptions of Icon Water’s IFA/CBA Model

Category	Inputs	Units	Value
Revenue	New high density household water consumption	kL / household / year	130.00
	Household water revenue	\$ / household / year	\$439.14
	Household sewer revenue	\$ / household / year	\$523.18
Expenses	Water supply costs	\$ / mL / year	\$110.00
	Water supply costs	\$ / kL / year	\$0.11
	Water supply costs	\$ / household / year	\$14.30
	Sewer supply costs	\$ / household / year	\$35.10
	Water Abstraction Cost	\$ / kL / year	\$0.59
	Maintenance costs	%/year	3.50%
Discount Rate	WACC (real vanilla)	%	4.59

Source: Icon Water 2017

The other essential component of Icon Water’s IFA/CBA model is the projection of incremental households within precinct. This projection determines revenue collection and associated costs from water and sewerage services. Icon Water advised the Commission that the data used referred to the ACT government’s projection of new residential and commercial buildings within precinct between 2016 and 2035. In the latest update, submitted by Icon Water, the number of incremental households within precinct was taken from all areas except for Molonglo Valley, West Belconnen and parts of Gungahlin, for which data was not available (Figure 5.1).

Figure 5.1 Incremental households within precinct



Sources: Icon Water 2017, ACT Government Projection

After calculating the residual between the revenue collections under a general water and sewerage tariff and the funding requirements of a 20 year capital expenditure program, Icon Water calculated a Cost-Revenue test, reflecting a ratio between the NPV of net result and NPV of capital expenditures. The attributes of this calculation are;

$$\text{CostRevenue Test} = \frac{\text{NPV Net Result}}{\text{NPV CAPEX}} = \frac{\text{NPV (IR - IO - IC)}}{\text{NPV(IC)}}$$

Where:

IR = Incremental Revenue. The revenue collected from water and sewerage bills paid by the incremental households within precinct.

IO= Incremental Operating Expenditures. The OPEX has two components. First, from the extra water and sewerage supply costs from incremental households within precinct. Second, from extra water and sewerage maintenance costs from the incremental CAPEX. The second figure is set as 3.5 per cent of the incremental CAPEX.

IC= Incremental Capital Expenditures. Icon Water defined the Cost-Revenue Test to estimate the proportion of required capital expenditure to be shared between Icon Water and developers. The Net Present Value (NPV) calculations of revenue (net of IR and IO) indicate a net result of \$149.8 million, while the NPV of OPEX is \$288.7 million.

The final result of this the Cost-Revenue Test indicates that 52 per cent of anticipated incremental capital expenditure within precinct will be recovered from net incremental revenue associated with this extra expenditure. An alternative phrasing would state the uneconomic component of CAPEX within precinct is 48 per cent.

The Commission considers the 48-52 outcome from the test is reasonable, and can be reliably used to calculate the CCC. (Table 5.2).

Table 5.2 CAPEX Arrangement from the IFA/CBA Model

Category	Note	Share	Total (\$million)
NPV CAPEX	The Required Capital Expenditure within precinct in 20 years	n/a	\$288.7
NPV Revenue-OPEX	Capital Expenditure Covered by incremental revenue from in precinct growth areas	48%	\$138.9
Cost-revenue test	Capital Expenditure not funded by incremental revenue	52%	\$149.8

Source: Icon Water and the ICRC calculation

5.1.2 Calculating the CCC

Icon Water has listed the infrastructure projects for Class 2 assets only in the model. The projects comprise of 7 sewerage projects in North-Canberra, Woden, Belconnen, and Fyshwick, and only one water project in North-Canberra (Table 5.3). With the 50-50 share of capital contribution, from the total CAPEX of \$154.29 million, Icon Water and Developers share the same amount of \$77.15 million.

Table 5.3 Water and Sewerage Projects of Capital Contribution

Water and Sewerage Projects	Estimated Project Timeframe	Total (discounting) in \$million ³⁴
Belconnen Trunk Sewer Augmentation	2017-2020	Commercial-in-Confidence
Constitution Avenue Sewer Upgrade	2020	Commercial-in-Confidence
Fyshwick SPS Augmentation	2020-2022	Commercial-in-Confidence
North Canberra Sewer Augmentation Stage 1	2020-2022	Commercial-in-Confidence
North Canberra Sewer Augmentation Stage 2	2025-2027	Commercial-in-Confidence
Phase 1 – Campbell and Ainslie Water Storage	2027-2029	Commercial-in-Confidence
Woden Valley Sewer Augmentation	2029-2031	Commercial-in-Confidence
North Canberra Sewer Augmentation Stage 3	2034-2036	Commercial-in-Confidence
	Total Water Projects	Commercial-in-Confidence
	Total Sewerage Projects	Commercial-in-Confidence
	Total Water and Sewerage	\$154.29

50-50 Share of Capital Contribution	CAPEX (in \$million)
Icon Water Capital Contribution	\$77.15
Developers Contribution	\$77.15

Source: Icon Water 2017

³⁴ Non-aggregate figures are used by the Commission in its analysis, but treated by the Commission as Commercial-in-Confidence, and not distributed.

To determine the recovery cost from the Developer share, Icon Water proposed a methodology consisting of two key concepts and a transition period;

The EP concept allows a forward-looking estimate of the sewerage requirements of additional population, when matched with ACT Government forecast data of residential and non-residential building types. The forecast data is a 30-year projection of population and employees within precinct.

The incremental EP within precinct is determined by subtracting the total EP in the current year (residential and non-residential) from the total EP in the previous year (residential and non-residential);

$$\text{Incremental EP}^{\text{brownfield}} = EP_t^{\text{brownfield}} - EP_{t-1}^{\text{brownfield}}$$

In addition to the net EP calculation within precinct, the second concept used by Icon Water was the Water Supply and Sewerage Standard (AWSSS). The standard measures the average EP in residential and non-residential building types (Table 5.4). The net EP calculation is based on the estimated population in every building type, multiplied by the EP multiplier.

Table 5.4 EP Multiplier for Residential and Non-Residential Building Types

Dwelling Types	Equivalent Population (EP) Multiplier
Free standing houses	3.6
Row and terrace houses	2.5
Apartments, units and flats	2
Per employee	0.3

Source: Icon Water 2017

5.1.3 Transition Period to the Implementation of CCC

Consistent with the proposed submission, the IFA/Arup Model set up a transition ramp-up profile. Transitional arrangements are specified in Clause 2.3 of the proposed CCC. The transition profile is based upon the date of contract exchange for property purchases, with the full charge being applied in Year 3 (Table 5.5).

Table 5.5 Transition Profile for the Net EP Calculation

	Year 0 (current year)	Year 1	Year 2	Year 3	Year 4+
Transition ramp up profile for the CCC Charge	0%	5%	95%	100%	100%

Source: Icon Water 2017

5.1.4 Estimation of the capital contribution charge

The estimation of the proposed CCC charge requires a series of key inputs. Firstly, the net EP of that would be serviced by 20 years of the capital program need to be estimated. The Commission has confirmed that, inclusive of the transition profile, which resulted the total net EP of 65,660 within precinct in the ACT over this period.

Secondly, the charge per EP (in 2017 Australian dollars) is estimated via comparison with the identified uneconomic component of CAPEX over the 20 year period.

The Commission’s calculations indicated a CCC charge of \$1,175, comprising \$97 for water infrastructure projects and \$1,078 for sewerage infrastructure projects (2017 \$AUD). The number is rounded to \$1,200 for simplicity (Table 5.6). Put simply, the CCC charge multiplied by total net EP will cover the 50 per cent developer share of \$77.15 million.

Table 5.6 The CCC charge per EP Calculation

Infrastructure Projects	Total WSCCC Nominal CAPEX (B)	Developer Share 50%, per annum over 20 years
Total Water and Sewerage Projects 2017-2036	\$154,290,474	\$408,284
Total Net Incremental EP within precinct (2017-2036)	65,660	4212

Total CCC Charge	\$1,175
Rounded CCC Charge	\$1,200

5.1.5 Cross-model validation

When linking the IFA/CBA model and the IFA/Arup model, the Commission identified a variation between the total capital expenditure (in discounted form) between the two models. The total calculation from IFA/CBA of 20 years capital program was \$149.8 million, while the IFA/Arup model was \$154.3 million. The Commission understand that a planning forecast horizon issue is the cause:

- The 20 year timeframe of the IFA/CBA model is between 2016 and 2035, while the IFA/Arup model time frame is between 2017 and 2036.
- The additional CAPEX of Class 2 assets only in 2036 totalled \$6.55 million, with cross-model variation due to discounting.

5.1.6 Annual updates of the charge

Icon Water has proposed that the CCC charge will be adjusted annually, if necessary, based on updated population data and CAPEX data. In the IFA/Arup model, Icon Water provided the calculation of the charge following the annual forecast of CPI of 2.5 per cent. The resulting inflation is associated with a significant increase in the CCC charge from \$1,200 in 2017 to \$1,900 in 2036.

Table 5.7 CCC Charge with the forecast CPI

Year	CCC Charge with forecast CPI 2.5%	Rounded
2017	\$1,175	\$1,200
2018	\$1,204	\$1,200
2019	\$1,234	\$1,200
2020	\$1,265	\$1,300
2021	\$1,297	\$1,300
2022	\$1,329	\$1,300
2023	\$1,363	\$1,400
2024	\$1,397	\$1,400
2025	\$1,432	\$1,400
2026	\$1,467	\$1,500
2027	\$1,504	\$1,500
2028	\$1,542	\$1,500
2029	\$1,580	\$1,600
2030	\$1,620	\$1,600
2031	\$1,660	\$1,700
2032	\$1,702	\$1,700
2033	\$1,744	\$1,700
2034	\$1,788	\$1,800
2035	\$1,832	\$1,800
2036	\$1,878	\$1,900

Source: Icon Water 2017, IFA/Arup Model 2017

5.2 Submissions received

A variety of Industry Submissions were received regarding the modelling of the appropriate charge, including the proportion of 52 per cent of incremental cost recovery of the 20 year capital works program. The submissions are from CA, HIA, CBC, and SMEC.

CA

CA raised several concerns relating to modelling and calculation of the charge. The issues raised included:

- A lack of disclosure for Icon Water’s proposed Pricing Model, and a lack of information regarding basis of charge and the proportions of water and sewerage expenditure included.
- The timing of the new revenue compared to investment, where the latter can be deferred. CA suggest revenue should be collected as capital expenditure is incurred, and that Icon Water should not be paid prior to costs being incurred.

4–Equivalent population (EP)

- That no program of works has been articulated and no supporting costing information. CA argue this may allow imprudent and inefficient investment as it is impossible to fully assess the new charges.
- Deviation from accepted Building Block principles without adequate justification.
- Existing users do not contribute to additional infrastructure capacity.
- The imposition of a CCC in addition to the existing pricing regime (following consideration of returns on capital, cost of regulated service and forecast demand, etc). CA argue this may lead to over-collection of revenue.
- Suggest the proposal is equivalent to 50 per cent of investment costs being paid by customers in advance.
- Suggest Icon Water should only be entitled to earn a fair return over the life of the assets per current regulated pricing. CA further suggest this should be funded through a mix of debt and equity, instead of by capital contributions from customers and future use.

CBC

CBC suggest:

- That the proposal unfairly levies the cost of necessary infrastructure upgrades on new development, when all users will benefit;
- The charge will negatively impact housing affordability, and unfairly disadvantage different forms of development; and
- The costs associated with augmentation investment be recovered via water rates generally.

HIA

- HIA argue the new change in the water infrastructure funding is an attempt to shift the cost burden for shared public assets onto new home buyers.
- HIA note the proposed CCC was unclear in the scope of augmentation work, both in the actual facilities and broadly in infrastructure upgrades.
- The proposed code is considered by HIA to potentially reduce new housing stock, as it will be added to the structure of house prices.
- In consequence, HIA argue the code will be impact housing affordability in the ACT. The HIA referred to the data in December 2016, in which the affordability in the ACT dropped by 10.6 per cent.
- HIA argue the proposed code lacks a clear explanation of the impact on house prices based on all cost components in the price. HIA estimates suggest that the code could potentially increase the cost of a new home by \$7,500.

SMEC

SMEC raised concerns with the EP approach to the charge calculation. In particular, the issue of transparency and how EP charges may be applied in real-world scenarios. SMEC argue transparency is important when considering the feasibility of development plans, as water technologies are primarily cost driven.

AWRC

- AWRC are concerned the calculation is economically inefficient, as Icon Water has a lower cost of capital than either developers or final customers.
- AWRC suggest the CCC is a levy that is unfairly imposed on new customers instead of additional customers.
- AWRC argue the CCC may risk double-charging.
- AWRC suggest increasing Icon Water revenue by a system in which customers pre-pay for water use, and the interest earned by Icon Water on this unearned revenue be applied to cover augmentation investment costs.

5.3 Commission’s consideration

In evaluating the proposed CCC the Commission sought to examine the constitution of the underlying modelling and satisfy itself of the validity of any decisions or assumptions made in creating the model.

The Commission engaged substantially with Icon Water’s calculations. Considerable time and resources were devoted to fully evaluating the models provided by Icon Water to detail the identification and construction of the proposed CCC charge.

As a result of this process the Commission has separately verified the constitution and construction of all calculations used by Icon Water in the modelling process. Whilst there are a number of modelling approaches possible in establishing a CCC, the Commission believes the CCC as constructed by Icon Water is reasonable and likely to deliver on its objectives. In particular:

- The Commission considers the 48-52 outcome from the Cost-Revenue test is reasonable, and can be reliably used to calculate the CCC (Table 5.2). This split indicates that the uneconomic component of precinct Class 2 CAPEX is close to 50 per cent, and accordingly the Commission also supports a simplifying 50-50 split between income from the proposed CCC charge revenue and from net incremental infrastructure tariff revenue (with excess collection being removed from Icon Water’s allowed revenue by the overs and unders mechanism).
- The Commission believes that the assumptions Icon Water made in the modelling are reasonable. These are: that high density households are a relevant proxy for anticipated development patterns, water and sewerage

supply costs can be reasonably based on 2015 prices, and maintenance costs can be assumed to be 3.5 per cent of CAPEX annually.

- With regard to the transition ramp-up, the Commission views this transition profile of this ramp-up as being steep (i.e. being spread over a short period of time). The Commission believes the steepness of this profile is justified given the proposed period of notice. It represents a reasonable implementation strategy that does not unfairly disadvantage market participants.
- As discussed in Chapter 4, the Commission agrees that EP is the relevant industry standard, and has been appropriately applied in Icon Water’s modelling.
- In the Commission’s estimation the between-model variations do not substantially impact the accuracy of calculations concerning the proposed CCC charge amount or share of uneconomic CAPEX.
- The Commission supports a CPI-based indexing method, noting that the annual charges will be further adjusted to account for over- or under-recovery of revenue associated with CPI and/or CAPEX forecast variations. The Commission will accept submissions from Icon Water annually detailing the need for and constitution of the CCC charges variations in advance of approving the altered charge.
- It is the Commission’s opinion that timing differences between charges collected by Icon Water and CAPEX undertaken is reasonably accounted for the Icon Water proposal. Early charges are booked as a prepayment, and not recognised as revenue until the later CAPEX has been incurred. Costs are recovered on an average incremental basis with some timing differences for prepayments, receivables and fluctuations in the progress of capital works from the programmed schedule. Any over-recovery will be netted off in the subsequent period using the unders and overs mechanism.
- In further timing considerations, the Commission has not identified any gain or loss for developers on the timing of payments to Icon Water. This is a result of the CCC being constructed on a present value basis and inflated with a standard proxy for the real value of money (CPI).
- As proposed, the Commission is satisfied that the proposed CCC is calibrated to ensure there is no ‘double up’ over and above the existing Regulatory Asset Base regime. Any incidental excessive cost recovery that occurs due to timing or CAPEX requirement variation will be subsequently deducted from Icon Water’s allowable revenue as part of an over-recovery adjustment.
- The Commission has not considered implementing a pre-payment system for water rates by which Icon Water could earn a return that covers investment costs. The Commission notes this approach would embody a substantial variation from generally accepted regulatory practice in Australia, and so embody substantial regulatory uncertainty.

It is important to note that the following key aspects of the proposed CCC have not been independently confirmed by the Commission, as these would require an inefficient duplication of effort. Most notably, the Class 2 CAPEX projects identified by Icon Water as being necessary within precinct in the next 20 years have not been examined for prudence and efficiency as yet. This examination forms a standard part of the Commission’s 5-yearly Price Reviews, and will be undertaken with independent consultants as part of this project.

Similarly, the Commission has not independently confirmed the estimated population and development growth within precinct during the 20 year period of this CCC. The Commission has relied upon figures provided by Icon Water, sourced from the ABS and the ACT Government. As is standard practice, should future prudence and efficiency reviews indicate a disconnect between required infrastructure and invested infrastructure the Commission will accordingly alter Icon Water’s allowed revenue.

The Commission notes that the overs and unders mechanism will alter Icon Water’s allowed revenue, essentially implying a transfer between developers paying the proposed CCC charge and the general Icon Water customer base. As the direction of this transfer is necessarily uncertain (both unders and overs are possible), and there is no easily identifiable incentive for Icon Water to either over or under-collect revenue, the Commission is satisfied that such a mechanism is reasonable and appropriate given current information.

Finally, the Commission notes stakeholder concerns around housing affordability, and the associated potential increase in new house prices associated with the proposed CCC. This aspect is considered in more detail in Chapter 8. The Commission agrees that a developer levy on developments within precinct (where these are associated with increased EP per site densities) will increase the cost of these properties. But as this levy is on average directly associated with these new developments, the Commission believes it would be unreasonable and inequitably for either Icon Water’s broader customer base or for an unfortunate last person standing developer to bear all of these costs. The Commission therefore supports the modelling of the proposed CCC as provided to it by Icon Water.

5.4 Draft decision

It is the Commission’s opinion that a CCC charge of \$1200 should be levelled on a per-EP basis on all developments within precinct.

6 Prudence and efficient costs

Icon Water’s water and sewerage services prices are subject to regulation by the Commission, and its capital expenditure subject to a test for prudence and efficiency. For other utilities, if they exist, it will depend on whether they are regulated and if so, the form of regulation. Further, the proposed CCC provides that the precinct capital contribution charge can be updated annually subject to the approval of the Commission.

6.1 Augmentation projects

As outlined in Chapter 5, Icon Water has currently identified eight projects with an estimated total value of \$154.29m over the next 20 years. The proposed CCC as calculated is seeking to raise \$77.15m towards these projects. The inclusion of these projects in the calculations does not indicate the Commission’s agreement or otherwise of the necessity of these projects. The Commission’s assessment of these projects will be undertaken at each relevant 5-yearly price review.

The 5-yearly price review is a significant project wherein the utility is required to submit detailed OPEX and CAPEX information for the pricing period for extensive and rigorous review. The Commission will receive information regarding any planned augmentation projects for the period and they will be subject to prudence and efficiency examinations at that time. During this process, the utility would also provide information of all credits received under the CCC. It would be an unnecessary duplication of the Commission’s effort to evaluate these projects outside of this process.

The projected cost information of these projects has been viewed by the Commission, and has been treated as Commercial-in-Confidence. Publishing project ‘budget’ information at this stage could jeopardise the competitiveness of offers received when Icon Water releases whole, or part(s), of these projects to the market. In the event that project costs come in under budget, this would be reflected in future contribution and tariff determinations.

6.2 Accounting for contributions collected

The amounts collected under the proposed CCC will be separately accounted for by the utility, and will be reported to the Commission on an annual basis as part of the utility annual licence report (which will be made available to the public). Additionally, as outlined above, any amounts collected under a CCC will be considered in the 5-year pricing determination.

As outlined in Chapter 5, the contributions (and associated capital expenditure) will be monitored and any under-or over collection will be reflected in future price determinations.

6.3 Submissions received on prudency and efficiency

CA

CA questioned whether the CCC would result in a double recovery of costs as the current regulatory pricing period already compensates them for forward works.

6.4 Commission’s consideration

In evaluating the proposed CCC the Commission reviewed the mechanisms that are in place and available for ensuring Icon Water’s capital expenditure costs were prudent and efficient. The Commission will continue to test Icon Water’s capital expenditure, and projects associated with the CCC, during each 5-year price determination, which will also account for any contributions received.

The Commission noted its capability to request and publish amounts collected under a CCC through the utility annual licence report, and will commence collecting and publishing this information once a CCC becomes operational.

6.5 Draft decision

It is the Commission’s opinion that the existing mechanisms for evaluating the prudency and efficiency of Icon Water's capital expenditure remain appropriate.

7 Other issues raised in submissions

Submissions identified a number of issues related to the proposed capital contributions code. A summary of these are described in the following sections.

7.1 Criticisms by industry

7.1.1 Moral hazard

CA argued they upgraded localised infrastructure at their own cost to cater for their estimates of future demand. CA are concerned that the proposed CCC would result in further costs to them, despite these upgrades.

The Commission notes that this situation will remain a possibility for any developer of out of precinct areas once the land transitions into the precinct, as out of precinct Class 2 augmentations are fully funded by the developer and within precinct Class 2 augmentations are subject to the CCC. The Commission has discussed a solution to this concern, in the form of introducing the CCC as a multiple-precinct charge, where charges are allocated precisely on the basis of the cost and demand profiles of each sewerage-catchment location.

As discussed in Chapter 3, on balance the Commission is satisfied that the proposed single precinct determination is appropriate and that it is consistent with the provisions of Section 58 of the Utilities Act. The Commission further notes that, if the CCC were not introduced, developers would be required to fund 100 per cent of the augmentation cost should insufficient capacity be available in the network at the time of development. The proposed CCC represents a transparent charging arrangement for future developments that developers can factor into their economic assessment of a site; the Commission believes this is an improvement to the current arrangement.

7.1.2 Economically inefficient

AWRC and CA both suggested that the charge is economically inefficient as the cost of raising funds by developers and their customers is more than Icon Water. CA also raised a concern that work undertaken by Icon Water cannot be confirmed to be necessary or lowest price.

In relation to the necessity and costing of augmentation works, the Commission refers back to efficiency and prudence measures undertaken during the price direction process in Chapter 6.

The Commission suggests the principles of economic efficiency would suggest that costs be attributed where they are incurred, rather than on the basis of lowest-cost access to capital. On this basis, the CCC as proposed by Icon Water appears an improvement over either a last person standing approach, or having Icon Water directly

fund the Class 2 augmentations within precinct and then recover these funds through the general consumer base.

7.1.3 Consultation

The Commission received several submissions relating to Icon Water’s consultation process. Issues regarding consultation included:

- a) Lack of information regarding required augmentations
- b) Lack of information regarding pricing model
- c) Timing of consultation period

Several submissions raised concerns regarding a lack of transparency for the planned works that the CCC is being introduced to fund. Icon Water had not released details of required projects, their estimated timings or their anticipated cost. A list of projects is now available (Chapter 5.1.2). The pricing model and basis of the charge is detailed in Chapter 5. In order to evaluate the CCC, the Commission was provided with precise project costings under a Commercial-in-Confidence arrangement by Icon Water.

Several submissions noted Icon Water’s consultation period occurred over the Christmas period, when many interested stakeholder are in a ‘shut down’ period. The Commission notes that Icon Water did extend its original consultation period for a month, however stakeholders still felt they did not have adequate information to assess the proposed code.

The Commission notes that the Commission undertook its own round of consultation on Icon Water’s CCC from 30 March 2017 to 12 May 2017, receiving 6 submissions. The Commission will undertake a later round of consultation on its draft decision from 3 October 2017 to 3 November 2017.

The Commission acknowledges stakeholder concerns that more consultation was desirable at the time the code was developed. However, as a matter of practicality the Commission cannot address this other than ensuring that the proposed code has had a suitable public airing during the Commission’s approval processes. In circulating the code at the end of March and again as a draft decision, the Commission is satisfied that the degree of consultation on the CCC is now reasonable and appropriate.

7.1.4 Transition arrangements

The Commission received several submissions noting insufficient transition timeframes relating to the introduction of the code. The Commission notes that an earlier version of the code had suggested an implementation date of 1 July 2017, with the transition completed by 1 July 2019. The Commission is proposing that the CCC becomes operational from 1 January 2018, with a transitional period of 18 months. The outcome of this change, is that all persons who own or purchase land before 1 January 2018 will have 18 months to lodge their application for development approval and avoid being subject to charges under the CCC (instead they will be subject to the current arrangement, unless they choose to opt in). Persons who buy land from 1 January 2018 will be subject to the charges under the CCC. The Commission has made changes to Clause 2.3 of Icon Water’s proposed CCC to clarify the transition criteria.

CA suggested that existing landholders should be protected by limiting contributions to the regime that existed at the time they purchased the land. They argued that prospective buyers would be able to consider the prevailing regime before they make a decision, but an existing landholder who does not have a development application, would have no ability to commercially protect themselves.

The Commission notes that the aim of a CCC is not to punitively raise funds, but to recoup the uneconomic costs associated with Class 2 augmentation within a precinct. CA’s suggested protections would be administratively difficult to administer, could result in last person standing augmentation costs for those properties, would be unfair in its application, and would likely result in a higher cost per EP. Existing landholders who wish to develop their land will have until 1 July 2019 to submit a development application and avoid being subject to a contribution under the code. The Commission accepts the proposed implementation transition profile as appropriate.

7.1.5 Housing affordability and government policy

Concerns were raised by HIA and CA regarding potential detrimental impacts on housing prices and loan costs. These submissions also noted that the proposal appeared to be contrary to ACT Government urban infill objectives.

The Commission notes stakeholder concerns around housing affordability, and the associated potential increase in new house prices associated with the CCC. The Commission agrees that a developer levy on precinct developments (where these are associated with increased EP per site densities) will increase the cost of these properties (see Chapter 8.2). But as this levy is on average directly associated with these new developments, the Commission believes it would be unreasonable and inequitable for either Icon Water’s broader customer base or for a last person standing developer to bear all of these costs. The Commission therefore supports the modelling of the CCC as provided to it by Icon Water.

The Commission does not believe the proposed CCC itself will affect the ACT Government’s urban infill objectives. Whilst the Commission notes that it is a new

charge for developments within established suburbs; it ameliorates the last person standing issue; creating more cost certainty for developers.

7.1.6 Charging regime for land transitioning into the precinct – original EP determination

CA raised a concern regarding sites as they transition into the precinct map. CA specifically referred to Denman Prospect which they believed had recently been included in the precinct, but individual blocks within the suburb will be built upon over several coming years. CA's concern is a lack of transparency for the charging regime on these properties and when they will be subject to a CCC. The Commission sought specific advice from Icon Water regarding:

- the initial EP determination for individual blocks in new suburbs; and
- the basis upon which areas new are included into the precinct map (expansion).

The basis for expansion of the precinct map has been explored in Chapter 2.3.4 and 3.4.2. Icon Water have advised that the initial EP for a block of land in a new suburb, will be determined based upon the suburb masterplan at the time the underlying water and sewerage infrastructure was connected; usually the time of issuance of Provisional Certificate of Operation to the land developer. In such a case, any building within that suburb that builds in accordance with the masterplan in place at that time, will not incur a CCC charge. If a development within a new suburb sought to change the land use approved by the masterplan, the landowner would be subject to the proposed CCC. The Commission notes this application is consistent with the objectives of the proposed CCC.

The Commission has considered the objectives of the proposed CCC, the method of determining the original EP, and the process by which the precinct map will be updated. As vacant land blocks in new suburbs will have their EP determined in accordance with the suburb masterplan, the Commission understands properties in new suburbs being built upon after their inclusion in the precinct map will not incur a charge, unless the development changes the EP.

7.1.7 Other Charge (Clause 8 – CCC)

Clause 8 of the proposed CCC allows the utility to recover the full costs associated with any removals, relocations or network protections necessitated by a development, regardless of which Class of infrastructure they fall within. CA noted that this charge was inconsistent with the utility being responsible for Class 1 assets, and was concerned about an additional charge at the same time as charging a contribution. The Commission believes it is reasonable, if a developer requests a utility to move assets so it can optimise its development on a site, the utility should be able to recover its reasonable costs of undertaking the works requested by the developer. In the event that the utility deemed works were necessary to protect the network due to a proposed development, the Commission's expectation is that the utility would consult with the developer regarding required works and costs.

The Commission will monitor the incidences of this charge being applied through the utility licence annual report.

7.1.8 Does not encourage investment in innovative technology

SMEC's submission noted that the proposed CCC did not offer any discount or formula for developers who install decentralised systems.

The purpose of the proposed CCC is to partially fund augmentations based upon an anticipated future demand on the network. Whilst the Commission understands SMEC's concern, the Commission believes the code is not the appropriate place to deal with these matters. The Commission believes that this matter would be better dealt with through the regulated tariff structure and would welcome a submission during the price review, December 2017, on differing tariff structures for properties with decentralised systems. Additionally, the Commission notes that Icon Water's proposal stated it would allow decentralised systems to be considered in their calculation for any charges, and would therefore encourage Icon Water to publish developer guidelines in this regard.

7.1.9 End date

CA noted that the proposed CCC was calculated based off a 20 year capital expenditure plan, however the code did not have an end date. The Commission notes urban infill projections will continue to be developed into the future. This will allow the ongoing need for additional precinct augmentations, and any associated CCC, to be assessed accordingly.

7.1.10 Last person standing augmentations

HIA were concerned that the proposed CCC was being introduced to replace an unfair last person standing charging regime, but had insufficient evidence of payments being made by private developers.

The Commission notes that the last person standing issue is a concern for future developments. The Commission further notes the ACT Governments urban infill policy will necessitate future augmentations, which would likely result in increased last person standing payments for augmentations under the current arrangements.

7.2 “Mr Fluffy” properties

In August 2017, Icon Water approached the Commission with a request to include an exemption from the charge for ‘eligible former owners’ of “Mr Fluffy” properties, who choose to build two dwellings (dual occupancy) on their blocks. The Commission notes that Icon Water requested this exemption after the Asbestos Taskforce requested Icon Water directly to consider a waiver on compassionate grounds, and that the request was likely to affect no more than ten properties. The Commission also notes that neither the Asbestos Taskforce nor other representatives of the ACT Government approached the Commission to seek a formal exemption from the code.

The Commission’s preliminary position on this matter is that it is not an issue for inclusion in the code, and that as a matter of community service policy it is better dealt with directly by Icon Water. The Commission would welcome comments and submissions on this approach.

7.3 Draft decision

The Commission is satisfied that the proposed CCC represents a more equitable and transparent charging regime than the current arrangement. Additionally, the Commission is satisfied that the proposed contributions are broadly aligned with other jurisdictions, and that charging new developments within precinct a contribution towards network augmentation for increased demand is reasonable.

8 Community impacts

The Commission is committed to considering the community impact of any variation in policy. With regard to the proposed CCC, the Commission has considered the following impacts:

- 1) Impact on water and sewerage tariffs for all consumers; and
- 2) Impact on the cost of new housing.

The Commission notes that these costs should be considered in comparison with the costs of the current arrangements. In particular, the potential expense and resulting uncertainty associated with ‘last person standing’ arrangements.

8.1 Impact on the cost of water and sewerage services

The proposed CCC aims to ensure the costs of augmented infrastructure necessitated by new developments is borne by the developments (and their customers), rather than all by all water and sewerage consumers.

The proposed CCC charge recovers 50 per cent of these augmentation costs directly. The second 50 per cent is recovered via the tariffs paid on the augmented infrastructure by its users.

This methodology will ensure that there is no direct impact to consumers via their water and sewerage tariffs from the charge.

In contrast, if no CCC charge were levied, Icon Water would need to increase its network charges to all customers to cover the augmentation necessitated by urban infill. If this were the case, consumers could expect to see network charge increases, specifically related to urban infill needs, with associated bill inflation over the next 20 years.

8.2 Impact on development cost and prices

8.2.1 Impact on development cost

An important concern regarding any potential CCC implementation is the impact on within precinct property prices. As 50 per cent of augmentations will be funded by the developers, the cost from a CCC is likely to be passed on to the new customers in the purchase price of the property.

The impact of these price rises can be demonstrated by examining five common scenarios, set in 2017. These case studies use the information discussed in Chapters 4 and 5, summarised below in Table 8.1.

Scenario 1: replacing a free-standing house with two townhouses.

The new development will create 5 EP (2 townhouses at 2.5 EP). Subtracting the original property usage of 3.6 EP will produce a net EP of 1.4, corresponding to a total charge \$1,680. The additional cost levied by the proposed CCC on each townhouse will be \$840.

Scenario 2: replacing two terraced houses with four flats.

The development of four flats will create 8 EP (4 flats x 2 EP). Subtracting two terraced houses of 5 EP will generate a net EP of 3, corresponding to a total charge \$3,600 in 2017. The additional cost levied by the proposed CCC on each flat will be \$900.

Scenario 3: replacing a house with four shops.

In this new development each shop is assumed to have 5 employees. For commercial buildings we calculate the EP based on employee numbers - 4 shops with 5 employees in each shop will generate 6 EP (20 employees x 0.3 EP). Subtracting the original house EP of 3.6 will produce a net EP of 2.4, corresponding to a total precinct charge of \$2,880. The additional cost levied by the proposed CCC on each shop will be \$720.

Scenario 4: replacing four houses with a three-floor building of 15 apartments.

The new apartments will produce 30 EP (15 apartments x 2 EP). Subtracting the original 4 houses of 14.4 EP will produce a net EP of 15.6 or total precinct charge of \$18,720 in 2017. The additional cost levied by the proposed CCC on each apartment will be \$1,248 in 2017.

Scenario 5: Scenario 5: replacing a car park with a 1,200 worker office block.

The new office block will produce 360 EP (1,200 workers x 0.3 EP). Subtracting the original 0 EP of the car park will produce a net EP of 360 or total precinct charge of \$432,000 in 2017.

These estimated costs should be contrasted with the current arrangements where the costs would be borne by the development that triggers the upgrades, and consequently the costs on those developments would be much higher.

Table 8.1 Scenario of community impact on property prices in precinct areas, 2017-2031.

Scenarios	Net EP	2017		2021		2026		2031	
		Total Charge	per building						
A house becomes two town-houses	1.4	\$1,680	\$840	\$1,820	\$910	\$2,100	\$1,050	\$2,380	\$1,190
2 terrace houses become 4 flats	3	\$3,600	\$900	\$3,900	\$975	\$4,500	\$1,125	\$5,100	\$1,275
A house become 4 shops with 5 employees each	2.4	\$2,880	\$720	\$3,120	\$780	\$3,600	\$900	\$4,080	\$1,020
4 houses become 15 apartments	15.6	\$18,720	\$1,248	\$20,280	\$1,352	\$23,400	\$1,560	\$26,520	\$1,768
A car park becomes a 1,500 worker office block	360	\$432,000	\$432,000	\$468,000	\$468,000	\$540,000	\$540,000	\$612,000	\$612,000

Source: Icon Water 2017, ICRC calculation

8.2.2 Impact of CCC on housing prices

The Commission acknowledges the potential impact of the proposed CCC on house prices, as outlined in the previous section. In seeking to evaluate the actual impact on house prices, the Commission conducted a ratio analysis. By comparing the maximum possible charge with median houses prices within precinct, the Commission was able to estimate impacts magnitudes.

As displayed in Table 8.2, the proposed CCC charge impact on median house prices in 2017 is between 0.31 per cent and 0.70 per cent. The impact on median unit prices in 2017 is between 0.41 per cent and 0.59 per cent.

Table 8.2 Ratio of maximum precinct charge to median house prices

District	Median Price June 2017 (\$)		Maximum Impact Charge on prices in 2017 (%)	
	Houses	Units	Houses	Units
North Canberra	826,000	465,000	0.52%	0.52%
Belconnen	617,617	406,900	0.70%	0.59%
South Canberra	1,375,000	534,000	0.31%	0.45%
Woden	875,000	588,000	0.49%	0.41%

Sources: ACT Government 2017, the ICRC calculation, Icon Water 2017

The Commission notes the present value of augmentations for which the proposed CCC seeks a contribution is small compared to the overall costs of investing in and maintaining Icon Water's Water and sewerage services networks. Consequently, the

price impact on within precinct housing prices is not likely to be significant compared to other development and purchase costs.

Appendix 1 Draft decision – draft code

1. INDUSTRY CODE

The Water and Sewerage Capital Contribution Code (Code) is an **Industry Code** determined by the **ICRC** under Part 4 of the **Act**.

2. APPLICATION AND PURPOSE OF THIS CODE

2.1 Application

- (a) This Code applies to a **Water Utility** in relation to its **Water Network** and to a **Sewerage Utility** in relation to its **Sewerage Network**.
- (b) It is a requirement under section 25(2) of the **Act** and the **Utility's** licence that a **Utility** comply with an **Industry Code** relevant to the licensed service.

2.2 Purpose

The purpose of this Code is to outline the principles and procedures by which a **Water Utility** and a **Sewerage Utility** may require a **Customer** to contribute towards the development or augmentation of the **Water Network** or **Sewerage Network**, in connection with a **Development**.

2.3 Transition

No **Class 2 Infrastructure Charge** is payable for a **Development** inside a **Precinct** that is undertaken by a **Customer** (or a **Developer** on behalf of a **Customer**) if:

- (a) the date of the contract for the acquisition by the **Customer** of the land on which the **Development** is being undertaken is before [1 July 2017 – go live date]; and
- (b) the application for **Development Approval** for the **Development** is lodged before 1 July 2019,

unless the **Customer** agrees that the **Class 2 Infrastructure Charge** will be payable for that **Development**.

3. DICTIONARY

The dictionary at the end of this Code is part of this Code.

4. PAYMENT OF CAPITAL CONTRIBUTION CHARGE

Where a **Capital Contribution Charge** is payable, it will become payable by the **Customer** at the earlier of:

- (a) the date on which the **Utility’s** connection fee for the **Connection** associated with the **Development** is payable; and
- (b) the date on which a **Certificate of Occupancy** is issued in relation to the **Development**.

5. CLASS 1 INFRASTRUCTURE

A **Utility** will construct any **Class 1 Infrastructure** required at its own expense and without requiring payment of a Capital Contribution Charge under this Code, subject to any amount payable by a **Customer** as a **Capital Contribution Charge** under clause 8 of this Code.

This clause 5 applies regardless of whether the **Class 1 Infrastructure** is inside a **Precinct** or outside a **Precinct**.

6. CLASS 2 INFRASTRUCTURE

6.1 Payment of charge

Where a **Customer** undertakes or causes a **Developer** to undertake a **Development** the **Customer** must pay a **Capital Contribution Charge** to the relevant **Utility**, calculated in accordance with clause 9.1 or clause 9.2 (as applicable).

7. CLASS 3 INFRASTRUCTURE

In connection with a **Development**, a **Customer** will (or will cause a **Developer** to) design and construct at the **Customer’s** own cost any required **Class 3 Infrastructure**.

No **Capital Contribution Charge** is payable under this Code by a **Customer** in connection with the design or construction of **Class 3 Infrastructure**.

This clause 7 applies regardless of whether the **Class 3 Infrastructure** is inside a **Precinct** or outside a **Precinct**.

8. OTHER CHARGES

8.1 Removals, relocations and specific requirements

If, in connection with a **Development**, a **Customer** requests a **Utility** to, or a **Utility** determines that it is necessary to, remove, relocate, provide protection or make changes to any part of a **Utility’s** existing **Sewerage Network** or **Water Network** to:

- (a) permit construction, operation, use or enjoyment of the proposed **Development** or to enable continued provision of **Water Services** or **Sewerage Services**; or
- (b) reduce the risk that the **Sewerage Network** or **Water Network** may constitute an **Environmental Nuisance** to any person where such risk is increased due to the construction, operation, use or enjoyment of the proposed **Development**,

the **Utility** may charge, and the **Customer** must pay, the full **Costs** incurred in carrying out such works.

8.2 Application of clause 8.1

Clause 8.1 applies regardless of:

- (a) whether the works include **Class 1 Infrastructure**, **Class 2 Infrastructure** or **Class 3 Infrastructure**;
- (b) whether the **Infrastructure** is inside a **Precinct** or outside a **Precinct**;
- (c) the age or utilisation of the asset; and
- (d) any previous contribution towards the cost of installing those assets.

8.3 No credit or allowance

The **Utility** will not provide any payment, credit or other allowance for assets removed, relocated or changed.

9. CALCULATION OF INFRASTRUCTURE CHARGES AND PRECINCTS

9.1 Calculation of Class 2 Infrastructure Charge – inside a Precinct

- (a) The **Class 2 Infrastructure Charge** payable for a **Development** inside a **Precinct** is calculated in accordance with the formula:

$$C2IC = (\text{net increase in EP}) \times C$$

Where:

'C2IC' is the **Class 2 Infrastructure Charge** for a **Development** inside a **Precinct**

'net increase in **EP**' is determined by the **Utility** in accordance with the principles in clause 9.1(b)

'C' is the **Precinct Charge**

- (b) The **Class 2 Infrastructure Charge** payable under this Code for a **Development** inside a **Precinct** will be based on a determination by the **Utility** of the net increase in **EP** in accordance with the following principles:
- i. where the **Development** involves the disconnection of a **Connection (Existing Connection)** and the re-connection of either the same or a new **Connection (New Connection)**, the net increase in **EP** will be calculated by taking the **EP** of the **New Connection** and deducting the **EP** of the **Existing Connection**;
 - ii. if the **EP** of the **New Connection** is equal to or less than the **EP** of the **Existing Connection**, then the net increase in **EP** is taken to be zero; and
 - iii. the **EP** will be determined taking into account the size, scale and nature of development permitted under the **Development Approval** for the **Development** rather than the size, scale or nature of development permitted under the crown lease, Territory Plan or National Capital Plan.
- (c) When calculating the **Class 2 Infrastructure Charge**:
- i. the **Precinct Charge Schedule** that applies will be the version in force as at the date on which the application for the **Development Approval** was lodged or (if no **Precinct Charge Schedule** was in force at that date) the first **Precinct Charge Schedule** issued in relation to this Code; and
 - ii. if it is more than 12 months after the date the application for the **Development Approval** was lodged, the **Precinct Charge** will be increased by an amount of 2.5% per annum, with an increase for any part year calculated on a daily pro-rata basis.

9.2 Calculation of Class 2 Infrastructure Charge – outside a Precinct

The **Class 2 Infrastructure Charge** payable under this Code for a **Development** located outside a **Precinct**, is an amount determined by the **Utility** to cover the **Costs** of the **Class 2 Infrastructure** for the **Development**.

Where the land on which **Development** may occur is not wholly within a **Precinct**, the **Class 2 Infrastructure Charge** will be determined on the basis that the entire **Development** is outside the **Precinct**.

9.3 Updating the Precinct Charge Schedule

A **Utility** will review, and may, subject to approval by the ICRC, update its **Precinct Charge Schedule** annually.

The new **Precinct Charge Schedule** will apply to the calculation of the **Capital Contribution Charge** for any **Development** inside a **Precinct** for which the

application for the **Development Approval** was lodged on or after the date specified in the new **Precinct Charge Schedule**.

9.4 The Precinct Map

The **Map** must;

- (a) Be publicly available at no charge directly from the **Utility**;
- (b) Be of sufficient quality and resolution to enable identification of individual parcels of land; and
- (c) Contain a clearly identifiable version number and date/s of effect.

9.5 Updating the Precinct Map

A **Utility** will review, and may update, its **Map** annually.

The new **Map** will apply to the calculation of the **Capital Contribution Charge** for any **Development** for which the application for the **Development Approval** was lodged on or after the date specified in the new **Map**.

10. DETERMINATION OF REQUIRED INFRASTRUCTURE

10.1 Required Infrastructure

Whether **Infrastructure** is required is a matter within the discretion of the relevant **Utility** unless the **Utility** is specifically required by law to construct **Infrastructure** assets of a particular type or capacity. **Infrastructure** will be of a standard consistent with the **Utility's** standards and applicable laws.

10.2 Assessment of capacity and reliability

The assessment of the reasonable capacity and reliability of **Infrastructure** is a matter within the discretion of the **Utility** unless the **Utility** is specifically required by law to construct **Infrastructure** assets of a particular type or capacity.

10.3 Ownership of assets and Infrastructure

The payment of any **Capital Contribution Charge** does not confer on the person paying that charge any ownership in, or other legal or equitable right in respect of, any asset or **Infrastructure** to which that charge may relate.

DICTIONARY

Definitions

- (1) “**Act**” means the *Utilities Act 2000*;
- (2) “**Capital Contribution Charge**” means:
 - a. a **Class 2 Infrastructure Charge**; and
 - b. any amount payable by a **Customer** under clause 8 of this Code;
- (3) “**Certificate of Occupancy**” means a certificate of occupancy issued under the *Building Act 2004 (ACT)*;
- (4) “**Class 1 Infrastructure**” has the meaning set out in Schedule 1;
- (5) “**Class 2 Infrastructure**” has the meaning set out in Schedule 1;
- (6) “**Class 2 Infrastructure Charge**” is determined in accordance with clause 9.1 or clause 9.2 as applicable;
- (7) “**Class 3 Infrastructure**” has the meaning set out in Schedule 1;
- (8) “**Connection**” means a connection or re-connection to a **Sewerage Network** or **Water Network** or replacement of a water meter (where the water meter replacement is as a consequence of the **Development**) and “**Connected**” has the corresponding meaning;
- (9) “**Costs**” means the amount incurred by a relevant Utility in:
 - a. making **Sewerage Services** or **Water Services** available to parcels of land not already connected to a **Sewerage Network** or **Water Network**;
 - b. varying the capacity of a connection to a **Sewerage Network** or **Water Network**;
 - c. removing, relocating, providing protection to or making changes to a **Sewerage Network** or **Water Network**; and
 - d. all necessary ancillary work,
including design, labour, materials, plant, transport, overhead and administration costs, plus a reasonable profit margin;
- (10) “**Customer**” has the same meaning as in the **Act**;
- (11) “**Developer**” means a person undertaking a **Development**. A **Developer** may also be a **Customer**;
- (12) “**Development**” means subdivision, consolidation, use, building, altering or demolishing a building or structure and **Developed** has a corresponding meaning;
- (13) “**Development Approval**” means, in relation to a **Development**, an approval from the relevant authority including a development approval under the *Planning and Development Act 2007 (ACT)* or a works approval under the *Australian Capital Territory (Planning and Land Management) Act 1988 (Cth)*;
- (14) “**Environmental Nuisance**” means an unreasonable interference with the enjoyment by the public, a section of the public or a person of a place of area, if the interference is caused or likely to be caused by:

- a. dust, fumes, noise, odour or smoke; or
 - b. an unhealthy, unsightly or otherwise offensive condition because of pollution;
- (15) “**EP**” means ‘equivalent population’ which is determined by the **Utility** based on the information available at [\[insert web address\]](#) and forms part of the calculation of a **Class 2 Infrastructure Charge**;
- (16) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1997* (ACT);
- (17) “**Industry Code**” means a code determined by the **ICRC** under the **Act**;
- (18) “**Infrastructure**” means any or all of Class 1 Infrastructure, Class 2 Infrastructure and Class 3 Infrastructure, as the context permits;
- (19) “**Map**” means the map, as updated from time to time, available from the **Utility** and published on their website;
- (20) “**person**” includes a natural person, a firm, an unincorporated association or body corporate;
- (21) “**Precinct**” means the area identified as a precinct on the **Map**;
- (22) “**Precinct Charge**” means the charge payable per **EP** for a **Development** in a **Precinct**;
- (23) “**Precinct Charge Schedule**” means the schedule which sets out the **Precinct Charge**, as updated from time to time, available at [\[insert\]](#);
- (24) “**Sewerage Network**” has the same meaning and functions as defined under the **Act**;
- (25) “**Sewerage Utility**” is a person licensed under the **Act** to provide **Sewerage Services**;
- (26) “**Sewerage Services**” means those services as defined in the **Act**;
- (27) “**Territory**” means the Australian Capital Territory;
- (28) “**Territory Plan**” means the plan prepared under section 46 of the *Planning & Development Act 2007* (ACT)
- (29) “**Utility**” means:
- a. the relevant **Water Utility**, in respect of its **Water Network**, **Water Services** and the **Water Utility’s** associated functions under the **Act**;
or
 - b. the relevant **Sewerage Utility**, in respect of its **Sewerage Network**, **Sewerage Services** and the **Sewerage Utility’s** associated functions under the **Act**;
- (30) “**Utility Service**” has the same meaning as defined under the **Act**;
- (31) “**Water Network**” has the same meaning and functions as defined under the **Act**;
- (32) “**Water Services**” means those services as defined in the **Act**; and
- (33) “**Water Utility**” is a person licensed under the **Act** to provide **Water Services**.

Interpretation

In this Code, except where the contrary intention is expressed:

- (a) the singular includes the plural and vice versa;
- (b) another grammatical form of a defined word or expression has a corresponding meaning;
- (c) a reference to a document or instrument includes the document or instrument as novated, altered, supplemented or replaced from time to time;
- (d) a reference to a person includes a natural person, partnership, body corporate, association, governmental or local authority or agency or other entity;
- (e) a reference to a statute, ordinance, code or other law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them;
- (f) the meaning of general words is not limited by specific examples introduced by **including, for example** or similar expressions; and
- (g) headings are for ease of reference only and do not affect interpretation.

SCHEDULE – CLASS 1, 2 AND 3 INFRASTRUCTURE

(1) “**Class 1 Infrastructure**” means large scale headwork assets required by a **Utility** in order to provide services to **Customers** including:

- a. for a **Water Utility**, works relating to provision of the following infrastructure:
 - i. dams, weirs and associated assets;
 - ii. raw water pumping stations, pipelines and associated assets (upstream of a treatment plant);
 - iii. water treatment plants;
 - iv. bulk supply mains that feed the first reservoir or pressure management infrastructure from the treatment plant (pump station or valve farm);
 - v. any other infrastructure the **Water Utility** deems to be headwork assets;
- b. for a **Sewerage Utility**, works relating to provision of the following infrastructure:
 - i. gravity sewers that are 750mm diameter or greater and associated assets (including ventilation systems, etc);
 - ii. sewerage treatment plants and associated assets;
 - iii. treated effluent outfalls and associated assets; or
 - iv. any other infrastructure the **Sewerage Utility** deems to be headwork assets.

(2) “**Class 2 Infrastructure**” means the shared assets that are not Class 1 Infrastructure or Class 3 Infrastructure and which are required by a **Utility** to provide services to one or more **Customers** in connection with one or more Developments, including:

- a. for a **Water Utility**, works relating to provision of the following infrastructure:
 - i. water mains downstream of Class 2 Infrastructure and greater than 200mm diameter and associated assets
 - ii. water reservoirs and pressure management systems;
 - iii. water pumping stations and associated assets that are deployed on Class 1 Infrastructure and Class 2 Infrastructure pipe assets or feeding from Class 3 Infrastructure to a water reservoir in another pressure zone;
 - iv. any other infrastructure the **Water Utility** deems to be shared assets;
- b. for a **Sewerage Utility**, works relating to provision of the following infrastructure:
 - i. sewers that are between 300mm diameter and 750mm diameter and associated assets (including ventilation systems, etc);

- ii. sewage pumping stations and associated assets;
 - iii. emergency storage and flow attenuation tanks and associated assets;
 - iv. any other infrastructure the **Sewerage Utility** deems to be shared assets.
- (3) “**Class 3 Infrastructure**” means the reticulation assets required by a **Water Utility** or a **Sewerage Utility** to connect a **Customer** to water and sewerage services including:
- a. for a **Water Utility**, works relating to provision of the following infrastructure:
 - i. water mains that are 200mm or less in diameter;
 - ii. water pumping stations and associated assets that do not meet the Class 2 Infrastructure definition;
 - iii. pressure reducing assets on the Water Utility’s Class 3 Infrastructure;
 - iv. onsite assets including water tanks and associated assets; or
 - v. any other infrastructure the **Water Utility** deems to be reticulation assets; or
 - b. for a **Sewerage Utility**, works relating to provision of the following infrastructure:
 - i. sewers that are less than 300mm in diameter;
 - ii. onsite assets including sewage storage capacity and internal sewage pumping stations; or
 - iii. any other infrastructure the **Sewerage Utility** deems to be reticulation assets.

Appendix 2 Summary of submissions received

The Commission received 6 submissions during the initial public submission period held between 5 April and 12 May 2017. A summary of each submission is outlined below. Further Table A3.3 highlights the specific issues raised and the chapters wherein they are discussed.

A2.1 SMEC

SMEC raised one primary concern in relation to the proposed CCC. They believe that the code as presented does not provide any certainty, nor incentive, for developers to invest in decentralised solutions, or future sewer and wastewater innovations. SMEC request investigation into how other jurisdictions deal with decentralised systems and calculations of developer charges, and formalisation of a discount structure into the CCC.

A2.2 ACT Water Rewards Cooperative

AWRC raised four areas of concern relating to the proposed introduction of a CCC. The issues highlighted were:

- No competitive tension for augmentations (cost-control)
- Economically inefficient – as both developers and customers have to obtain loans and pay interest, which would be higher than a single loan by Icon Water
- Increased cost of development and property
- Discriminatory as it only applies to new customers

AWRC suggested that an alternative method to raising capital would be a low cost loan in the form of pre-payments (at a significant discount) of water and sewerage rates by customers.

A2.3 Canberra Business Chamber

It should be noted that CBC's submission was drafted prior to the Commission's publication of the draft CCC with a single precinct. CBC's submission raised six areas of concern.

- Poor consultation
- Visibility of augmentation forecasts and costs

- Multi-precinct application would be counter to ACT Government policy on densification along the light rail corridor
- Insufficient transition time
- Quantum of charges and impact on housing affordability and feasibility of projects
- Unfair application of charges (commercial projects have a higher burden, and existing users don't pay a charge even though they benefit)

A2.4 Canberra Airport

CA provided a comprehensive written submission and also met with Commission staff. CA raised several objections to the introduction of the code, with the primary areas of concern being noted as:

- Poor consultation
- Lack of visibility of pricing model, assumptions and forecasts
- Prudence and costs imposed outside of the regulatory cycle
- Determination of the 'precinct' and its expansion
- Transitional arrangements do not sufficiently protect existing landholders
- Use of EP unfairly burdens commercial developments
- Icon Water's ability to make "Other Charges"

A2.5 Housing Industry Australia

HIA provided the Commission with a copy of their submission to Icon Water regarding the multi-precinct code. In their submission they clarified some areas of the code that had been updated when it was provided to the Commission. HIA's submission disagreed with the implementation of a charge upon developments and suggested that costs should be borne by all customers through increased water and sewerage rates. HIA's submission centred around these primary concerns:

- Visibility of forecast augmentation projects and cost
- Calculation of the charge
- Impact on housing affordability and disparity between new and existing homes
- Inconsistent with Government infill strategy

A2.6 Andrew Barr MLA

Mr Andrew Barr wrote to the Commission in his capacity as a MLA and was not indicating a formal position of the ACT Government. Mr Barr was supportive of the principles underlying the proposed CCC and noted that it appeared to be more equitable and certain than the current approach. Mr Barr wished to emphasise a clear distinction between the purpose of the Lease Variation Charge (LVC) and the CCC, noting that the LVC is not designed to recover infrastructure costs. In relation to housing affordability concerns, Mr Barr noted that the Affordable Housing Strategy and related targeted policy responses have been designed to deal with this broader, and more complex, issue.

Table A3.3 Issue/Response summary

Submitter	Issue summary	Discussion (Chapter)
CA, CBC	Lack of consultation	7.1.3
CA, CBC, HIA	visibility of forecasts, assumptions	5
CA	Into Precinct Transition / charging arrangements	7.1.4
CA	Lack of oversight on funds collected	6.2
CA, CBC, HIA	No program of work	5.1.2, 6.1
CA	No end date to charge	7.1.9
CA, CBC	Timing of code introduction / transition	7.1.4
CA, AWRC	'Double recovery' from regulated price which includes a CAPEX component and the CCC	5.3
CA	Moral hazard: CA has invested in local infrastructure to cater for its future demand	7.1.1
CA	Precinct classification / map determination	2.3.4, 3
CA, AWRC, HIA	Consideration of charging alternatives	Error! Reference source not found., 5.3
CBC	Use of equivalent population (EP)	4
CA, AWRC	Inefficient way to raise capital	6, 7.1.2
SMEC	No incentive / discount for decentralised systems	7.1.8
AWRC, CA, HIA	Cost of augmentations	5.1.2, 6.1
AWRC, CBC, HIA	impact – cost of housing & development feasibility	7.1.5
AWRC, CBC, HIA	Application of charge (discriminatory)	4.3
HIA	Last person standing – evidence of payments	7.1.10
HIA, CBC	Inconsistent with Government development policy	7.1.5
CA	Other Charge (Clause 8 of CCC)	7.1.7

Abbreviations and acronyms

ACAT	ACT Civil and Administrative Tribunal
AWRC	ACT Water Rewards Co-operative
CA	Canberra Airport
CAPEX	capital expenditure
CBA	Cost-Benefit Analysis
CBC	Canberra Business Chamber
CCC	Capital Contribution Code
Commission	Independent Competition and Regulatory Commission (ACT)
CPI	consumer price index
EP	Equivalent population
HIA	Housing Industry Association
Icon Water	Icon Water Limited ABN 86 069 381 960
ICRC	Independent Competition and Regulatory Commission (ACT)
ICRC Act	<i>Independent Competition and Regulatory Commission Act 1997</i> (ACT)
IFA	Infrastructure Funding Arrangement
kL	kilolitre
mL	megalitre
NPV	Net present value
OPEX	operational expenditure
Utilities Act	<i>Utilities Act 2000</i> (ACT)
WACC	Weighted average cost of capital

References

- Brisbane City Council (2009) *Sewerage infrastructure planning scheme policy – July 2009*, Brisbane City Council, Brisbane
- Hunter Water (2017) viewed on 06 September 2017 from <https://www.hunterwater.com.au/Water-and-Sewer/Wastewater-Systems/Wastewater-Treatment-Works/Wastewater-Treatment-Works.aspx>
- Icon Water (2016) *Water and sewerage capital contributions: Information paper*, Icon Water Limited, Canberra
- Icon Water (2017a) *Water and Sewerage capital contributions: Information Paper (Attachment B)*, Icon Water Limited, Canberra
- Icon Water (2017b) *Water and Sewerage capital contributions: Report on the outcomes of stakeholder consultation on Icon Water’s proposal (Attachment C)*, Icon Water Limited, Canberra
- Sydney Water (2006) *Pipe Sizing and Grading Tables*, viewed 06 September 2017 <https://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq2/~edisp/dd_046237.pdf>
- PowerWater (2011) *Waste Stabilisation Pond Design Manual*, Power and Water Corporation, Northern Territory
- Productivity Commission (2011) *Australia’s Urban Water Sector*, Report No. 55, Final Inquiry Report, Canberra
- QLD Government (2014) *Planning Guidelines for Water Supply and Sewerage*, Department of Energy and Water Supply, Brisbane
- SA Government (2013) *SA Water Regulatory Business Proposal 2013: Attachment E.2 SA Water Wastewater Treatment Plants and Catchments*. Viewed 6 September 2017 <http://www.escosa.sa.gov.au/ArticleDocuments/482/121011-E2_SAWaterWastewaterTreatmen.pdf.aspx?Embed=Y>
- UN (1997) *Glossary of Environment Statistics, Studies in Methods, Series F, No. 67*, United Nations, New York
- WSA (2014), *WSA 02-2014 Gravity Sewerage Code of Australia Version 3.1*, Water Services Association of Australia
- Wyong Shire Council (2014) *Work Package W03- sewerage system planning wastewater loading rate assumptions for Wyong Shire*, Wyong Shire Council, Wyong

Yarra Valley Water (2009) *Sewerage Design Principles*. Viewed 06 September 2017
<<https://media.yvw.com.au/inline-files/Sewerage%20Design%20Principles.pdf>>