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Independent Pricing and Regulatory Tribunal
PO Box K35
Haymarket Post Shop NSW 1240

6 August 2018

Attention: Scott Chapman

Dear Sir,

RE: Draft Report – Maximum Prices to Connect, Extend or Upgrade a Service for Metropolitan Water Agencies

The Independent Pricing and Regulatory Tribunal (IPART) is currently conducting a review of developer charges and related charges levied by Sydney Water Corporation (Sydney Water), Hunter Water Corporation (Hunter Water), and the Central Coast Council (formerly Gosford City and Wyong Shire Councils). IPART released an Issues Paper, *Developer charges and backlog sewerage charges for metropolitan water agencies* on 24 October 2017 and held a public hearing on 6 March 2018. In response to feedback from the issues paper and the public hearing, IPART published the draft report *Maximum prices to connect, extend or upgrade a service for metropolitan water agencies* on 25 June 2018 (the *Draft Report*). This *Draft Report* sets out IPART's decisions.

The *Draft Report* also indicates that the water, sewerage and stormwater developer charges for Sydney Water and Hunter Water are set at zero, while the Central Coast Council levies developer charges under IPART's 2013 determination.

Fire + Rescue New South Wales (FRNSW) previously provided comment on IPART's Issues Paper and attended the public hearing relating to the review of *Developer charges and backlog sewerage charges for metropolitan water agencies*. As well, FRNSW has considered IPART's *Draft Report* and welcomes the opportunity to provide further comment on the current proposals for water infrastructure funding. FRNSW's comments relate specifically to Chapter 5 *Prices for upgrading existing services for firefighting* of the *Draft Report*. This details a new type of charge to upgrade an existing service to an established property to increase water flow and pressure to facilitate firefighting.

This submission has been structured to provide an overview of the key issues FRNSW believes need to be considered by IPART in making its determination on the *Draft Report*, particularly the funding model detailed in Section 5. The implications and challenges of the methodology proposed for the upgrading of existing services are explored in this response. The submission concludes by offering several recommendations for consideration by IPART.



Issue 1: The disconnect between the rate of development and rezoning and water infrastructure renewal

As discussed in our response to the Issues Paper, FRNSW’s primary concern is the disconnect between the rate of development and rezoning in brownfield areas and the rate at which water infrastructure is renewed. This is best understood by looking at some of the provisions detailed in the *Water Supply Code of Australia (WAS 03 – 2011)* [see Table 1 below - published by the Water Services Association of Australia (WSAA)] and reviewing them in the context of developmental change within the built environment.

With regards to the Water Supply Code, the WSAA website indicates it ‘*continues to provide members and the urban water industry with best practice national codes and standards.* Central Coast Council, Hunter Water and Sydney Water are members of WSAA.

Table 1 – Selected Clauses from the Water Supply Code of Australia

<p><u>Clause 1.2.6 Design Life.</u> In part this clause states; <i>All water supply distribution systems shall be designed for a nominal asset life of at least 100 years without rehabilitation.</i></p> <p><u>Clause 3.1.2 Minimum pipe sizes.</u> In part this clause states; <i>Minimum pipe sizes shall comply with Table 3.1 except in the following locations where specific design requirements apply:</i></p> <p>(a) <i>Mains in dual water supply systems, see Clause 3.1.4;</i> (b) <i>Reduced sized mains for the purpose of maintaining water quality, see Clause 5.2.4.</i></p> <p><i>Minimum pipe diameters have been established to ensure adequate flow rates and residual pressures, including a contribution to basic fire-fighting capability.</i></p>																									
<p>TABLE 3.1 – MINIMUM PIPE SIZES FOR PARTICULAR DEVELOPMENTS</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2">ZONING / DEVELOPMENT</th> <th colspan="2">MINIMUM PIPE SIZE</th> </tr> <tr> <th><u>Cast iron outside diameter series</u></th> <th><u>ISO Series</u></th> </tr> </thead> <tbody> <tr> <td></td> <td>Low and medium density residential</td> <td>100⁽¹⁾</td> <td>125⁽¹⁾</td> </tr> <tr> <td></td> <td>High density residential (≥ 4 storeys)</td> <td>150</td> <td>180</td> </tr> <tr> <td></td> <td>Multiple developments of high density residential (≥ 8 storeys)</td> <td>200 or 225⁽²⁾</td> <td>250 or 280⁽²⁾</td> </tr> <tr> <td></td> <td>Industrial and commercial</td> <td>150</td> <td>180</td> </tr> </tbody> </table> <p>NOTES: (1) The Water Agency may authorise smaller pipe sizes to address issues such as water quality, provided that requirements for fire-fighting supply are otherwise met. (2) The Water Agency to nominate the preferred size.</p>					ZONING / DEVELOPMENT	MINIMUM PIPE SIZE		<u>Cast iron outside diameter series</u>	<u>ISO Series</u>		Low and medium density residential	100 ⁽¹⁾	125 ⁽¹⁾		High density residential (≥ 4 storeys)	150	180		Multiple developments of high density residential (≥ 8 storeys)	200 or 225 ⁽²⁾	250 or 280 ⁽²⁾		Industrial and commercial	150	180
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<p><u>Clause 3.1.5 Fire flows.</u> In part this clause states; <i>Unless otherwise required by a Water Agency’s operating licence, the water supply system shall not be designed for a specific fire-fighting capability. Where a specific fire-fighting allowance is required, the Water Agency shall specify design requirements.</i></p>																									

As indicated in Table 1, the Water Supply Code of Australia specifies that ‘all water supply distribution systems shall be designed for a nominal asset life of at least 100 years without rehabilitation’; however population planning does not forecast that far into the future. For instance, the Minister for Planning in the document *A Plan for Growing Sydney (2014)* states , “This plan presents a clear strategy for accommodating Sydney’s future population growth for the next 20 years” (p.3).

In relation to the challenges facing water infrastructure renewal and development, this is best understood using the concept of pipe size. Across broad parts of the Greater Sydney Area (GSA), water infrastructure is sized around low- and medium-density housing because in the past, Sydney's built environment consisted primarily of freestanding residential housing and low rise apartment blocks. As a result, much of the water supply infrastructure currently in situ is cast iron DN100 pipe. Rezoning in these brownfield areas is now occurring, with rezoning allowing for higher density residential development greater than four storeys in height. Under the provisions of Water Supply Code, depending on the zoning, if development of this kind uses cast iron pipe it would require minimum pipe sizes of either DN150, DN200 or DN225. As a consequence of piecemeal development in these areas, FRNSW is now seeing development greater than four (4) storeys being serviced by DN100 pipe. Where this occurs, the cost of installing on-site fire services can be significant.

Issue 2: Aged cement lined in situ pipe

The issue of aged cement line in-situ pipe was raised in the discussion on firefighting capacity at IPART's 6 March 2018 public hearing, . As part of this discussion ,Ms Kate Beatty (Sydney Water) made the following comment.

Public hearing transcript. Page 71. Line 15. MS BEATTY: My understanding is that we have not changed because that it is my understanding of what's in our operating licence, and that does not necessarily have enough for the firefighting capabilities, particularly in these older suburbs. It is the cement-lined in-situ pipes that are the problem.

FRNSW's initial submission to IPART was prompted by the issuing of a Fire Order by the local Council on a residential property at 40 The Crescent, Dee Why. To resolve the outstanding issue of fire hydrant protection to this property, an investigation into the reticulated water supply serving the street was undertaken. This found that the DN100 cast iron pipe was laid in 1926 and cement lined in the 1950s. The statement of available pressure and flow for The Crescent indicates the maximum permissible flow within the water main is 5 L/s at a pressure of 50 kPa. The main is now 92 years old and the matter is still unresolved.

To gain a greater understanding of the performance of a typical pumping appliance, FRNSW engaged Manly Hydraulics Laboratory to oversee the testing of an FRNSW fire pumper. The results from this testing indicate the maximum permissible flow rate of 5 L/s the town main in the Crescent provides insufficient pressure to enable FRNSW to undertake basic firefighting operations from this main. FRNSW are aware of other aged cement lined in-situ mains that provide similar pressures and flows.

Where cement lined in-situ pipes are installed that do not provide sufficient pressure and flow for firefighting, the cost implications for installing on-site fire services can be significant, as evidenced by the costings provided by Structured Project Management in its submission to IPART.

The Draft Report – Section 5: Prices for upgrading existing services for firefighting

FRNSW supports the proposal to introduce a new charging methodology to provide a more cost-effective solution for the community. Notwithstanding this comment, FRNSW believes that due to the nature and complexity of the problem, a singular charging methodology will not be able to address all of the issues and challenges to provide the most equitable outcomes for the people of NSW. As such and over the longer term, a multifaceted approach to resolve this issue should be developed. FRNSW's responses below explore specific aspects of Section 5 of the *Draft Report*.

Section 5.1.2 Localised upgrades may be the best approach

FRNSW is committed to working with Sydney Water and Hunter Water through the Memorandums of Understanding (MOUs) to develop the most cost-effective local solutions for residents and authorities, while at the same time aiming to provide the most appropriate level of fire safety and protection. In locations where areas of the reticulated water supply network are served by aged cement lined in situ pipe or where the rate and type of development results in undersized mains serving an area, a broader, more holistic approach may provide the most cost effective option. In cases where these scenarios do arise, the question 'What is a local solution?' becomes harder to define. Does it mean, for example, a single street? Or two streets? Or an area that encompasses many streets?

At the public forum for the end-of-term review of Sydney Water's Operating Licence (2010-2015), Chief Superintendent Greg Buckley, when questioned on clearly defined water pressure and flow objectives and targets by IPART secretariat member Mr. Matt Edgerton, stated 'As a rule of thumb, we'd probably say we would like to see 10 litres a second at 10 metre heads. Currently, the operating licence says 15' (15 metres head). In this regard, FRNSW is still of the belief that in the longer term, a pragmatic and sensible middle-ground position on fire flows should be sought and incorporated into a formal agreement. If adopted, this would form another element of the preferred multifaceted approach. Without such an approach though, it is likely that over the longer term NSW residents will bear a greater financial burden as the built environment transitions from predominately free-standing homes to one where apartments dominate the urban landscape.

Section 5.2.1 Upgrade of existing service is voluntary and priced at marginal cost

FRNSW believes the proposed funding methodology should take into consideration the age of the infrastructure and the remaining value of the asset proposed to be upgraded. For example, if The Crescent Dee Why is assessed against the Water Supply Code nominal minimum design life of 100 years, the water main in this street may only have another eight serviceable years before the water agency is required to fund the upgrade in its entirety. A change to the methodology that reflects the remaining design life of the asset would therefore ensure a more equitable sharing of costs between residents and the water agency.

FRNSW supports the proposal to share costs between equivalent tenements (ET), as this is likely to result in the most equitable distribution of costs.

Section 5.2.2 Annuity payment option for existing properties will facilitate take-up

FRNSW supports the proposal of the annuity payment option, as this is likely to minimise the financial impact on NSW residents.

Section 5.3 We have minimised procedural burden for funding upgrades

FRNSW supports the proposal not to impose any procedural requirements for upgrading services for firefighting at this time. In this regard, the establishment of MOUs with Sydney Water and Hunter Water provide forums in which to explore the issues associated with providing water for firefighting, and the effectiveness of the proposed funding methodology can be evaluated.

Challenges

From FRNSW's experience with both building owners and local Councils, it is expected there will be challenges with the implementation of this funding methodology. Some of these challenges are discussed below.

i. The differing provisions of the National Construction Code

In the streets where this funding methodology is likely to be applied, the typical streetscape will consist of a mix of freestanding residential homes (Class 1a buildings) and differing forms of apartment complexes (Class 2 buildings). In some instances, a mix of office (Class 5 buildings) and shops (Class 6 buildings) may also be found.

Under the provisions of the National Construction Code (NCC), different fire protection requirements are specified for Class 1a and Class 2 to 9 buildings. In the case of a Class 1a building there is no requirement to provide a fire hydrant system, while all Class 2 to 9 buildings having a floor area greater than 500 m², and where a fire brigade is available to attend are required to be provided with a fire hydrant system.

As the proposal to apply this funding methodology will, in most instances, be prompted by a fire related matter involving a Class 2 to 9 building, it is likely many Class 1a building owners will ask 'Why should I have to contribute to a problem that is not of my making and does not relate to me?'

ii. The financial situation of residents

Within many of the streets where this funding model is likely to be applied, it is likely a broad range of personal financial situations will be found. The ability of each building owner to accept an additional cost will depend on their different specific financial circumstances.

iii. The water supply network is a public asset

In FRNSW's experience, building owners and the greater community do not typically believe that problems with the town main network are their responsibility to resolve.

iv. Piecemeal development in brown field areas

Where this funding model is likely to be applied, a catalyst will be the piecemeal redevelopment of a street. Issues about the adequacy of the town main will only then come to the fore as development requires confirmation of water supply. In this case, current residents are likely to ask whether it is fair and reasonable for them to contribute to funding remediation of a problem that is not of their making and potentially improve the profitability of the developer?'

v. The issuing of multiple fire orders

Within many of the streets where this funding model is likely to be applied, the issuing of a fire order by a council on a single occupancy is likely to be the initial action that shines light on the problem of low pressure, low flow or both within the street's or area's town main(s). Once aware of this issue the possible requirement for the Council to serve multiple fire orders across many occupancies in the street 'for the greater good' is likely to be a particularly vexed one for the Council, particularly as all of the building owners vote.

vi. Not all of the building owners volunteer

Within many of the streets where this funding model is likely to be applied, it is likely that not all of the street's residents will volunteer.

vii. Redevelopment occurs after the town main has been upgraded

In circumstances where piecemeal redevelopment of a street begins after the funding methodology has been applied and the town main has been upgraded, those building owners who contributed to the upgrade may query the equality of the funding model. They may also be of the opinion that some of their costs should be reimbursed by those involved in the future redevelopment of the street.

Conclusion

FRNSW fully supports the proposal by IPART to make available a funding methodology that allows building owners the opportunity to reduce costs associated with the provision of fire safety protection. Due to the challenges faced with the implementation of the methodology, FRNSW believes the singular approach proposed may not have either the capacity or flexibility to address the broad range of challenges and issues associated with this matter. As such, FRNSW recommends that IPART continues to investigate this matter. FRNSW is keen to collaborate with all stakeholders to develop a multi-faceted approach that ensures the costs associated with the provision of water for firefighting is shared equitably among the water agencies, developers and the residents of NSW.

Yours sincerely

A black rectangular redaction box covering the signature of Mark Whybro.

Mark Whybro
A/Deputy Commissioner Field Operations
Fire + Rescue NSW