



**STANDING COMMITTEE ON PUBLIC ACCOUNTS**

Elizabeth Kikkert MLA (Chair), Michael Pettersson MLA (Deputy Chair),  
Andrew Braddock MLA

**Inquiry into Annual and Financial Reports 2020-21**  
**QUESTION ON NOTICE**

Elizabeth Kikkert MLA: To ask the Treasurer

Ref: Icon Water 2020–21 Annual Report, p. 58

In relation to: Belconnen Trunk Sewer Upgrade and related matters

1. How many trunk sewers currently exist in Canberra, where is each located, and when was each built?
2. Have any other trunk sewers been upgraded prior to the upgrade to the Belconnen Trunk Sewer? If so, which ones?
3. Are there plans in place to upgrade any other trunk sewers?
4. Apart from projected population growth, did any other factors contribute to the decision to upgrade the Belconnen Trunk Sewer? (For example, is there anything wrong now with its condition and/or maintenance?)
5. What criteria determined the location of the new Belconnen Trunk Sewer? Does it deviate in any way from the existing line?
6. Which factors determine whether a sewer line will include odour control units and how many such units are needed?
7. Are there any existing sewer lines in Canberra that, using the same criteria as above, should include odour control units but do not?
8. Have odour control units ever been added to existing sewer lines in Canberra? If so, why and where?
9. What criteria determined the location of the four odour control units for the Belconnen Trunk Sewer Upgrade? Was prevailing wind direction considered in any way?
10. What is the distance between each planned odour control unit and the nearest house?
11. I understand that one or more odour control units in West Macgregor had their stacks raised after residents complained of bad smells. Can you please confirm a) the complaints and b) the raising of the stacks?
12. If a stack or stacks at West Macgregor were raised, what was the original height, and what is the current height?
13. Have residents complained to Icon Water about bad smells from any other existing odour control units? If so, which ones?
14. Apart from increasing the height of the stacks, what other measures can and/or have been used to reduce bad smells coming from odour control units? For example, can the filters be changed out more frequently?
15. Does Icon Water monitor odour control units for bad smells? If so, how often? And if not, why not?
16. Can Icon Water guarantee that the Belconnen Trunk Sewer odour control units will not result in bad smells being detected by a) residents and b) users of the reserves or park where they will be located?

ANDREW BARR MLA: I have sought Icon Water's advice and the answers to the Member's questions are as follows:—

1. Icon Water's trunk sewerage network services the entirety of Canberra's urban footprint. Typically, Icon Water's trunk sewers are defined as those with pipe diameters larger than or equal to 375mm. The age profile of these sewers dates back to the beginning of Canberra with a peak of construction coinciding with the large growth of the city in the 1960's and 1970's. An overview of the trunk sewerage network is shown below in figure 1, with size and age profiles shown in figures 2-3.

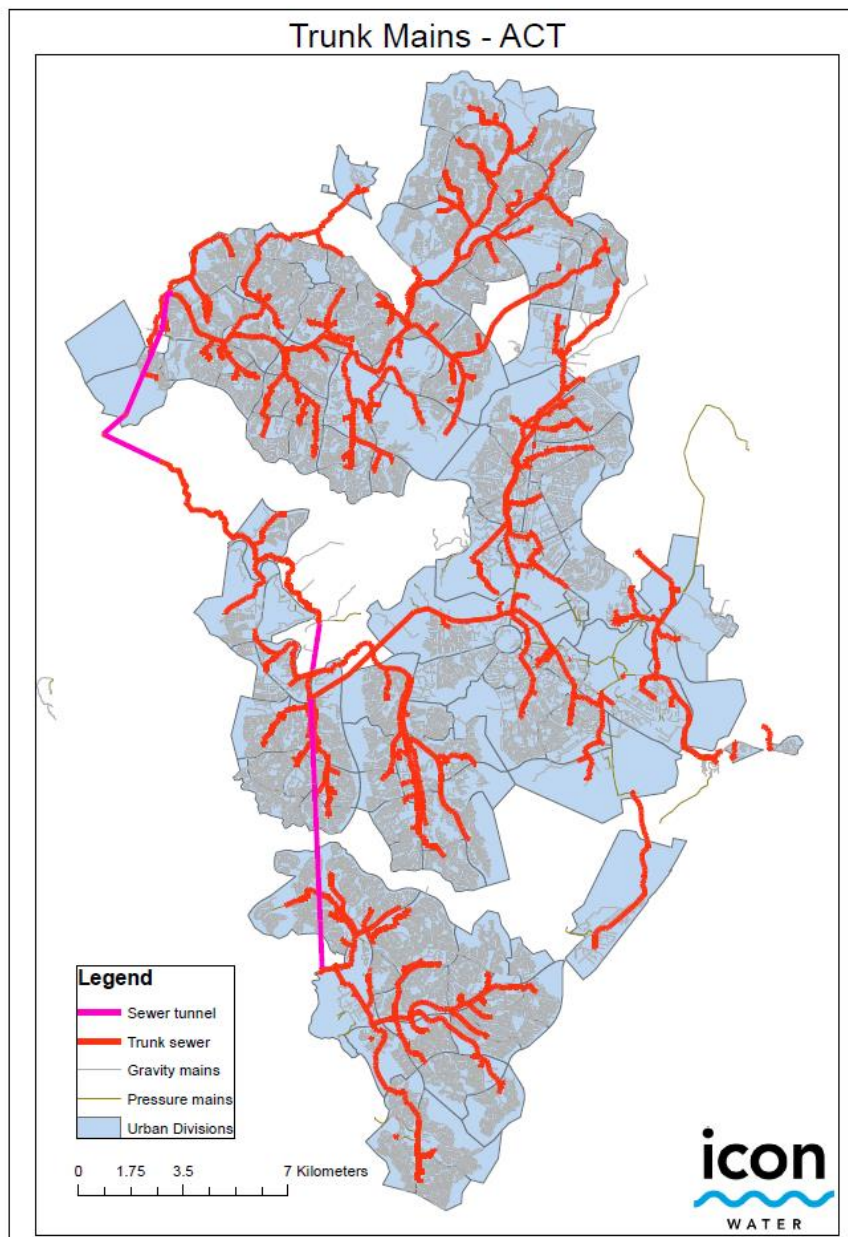


Figure 1 Trunk Sewerage Network Overview

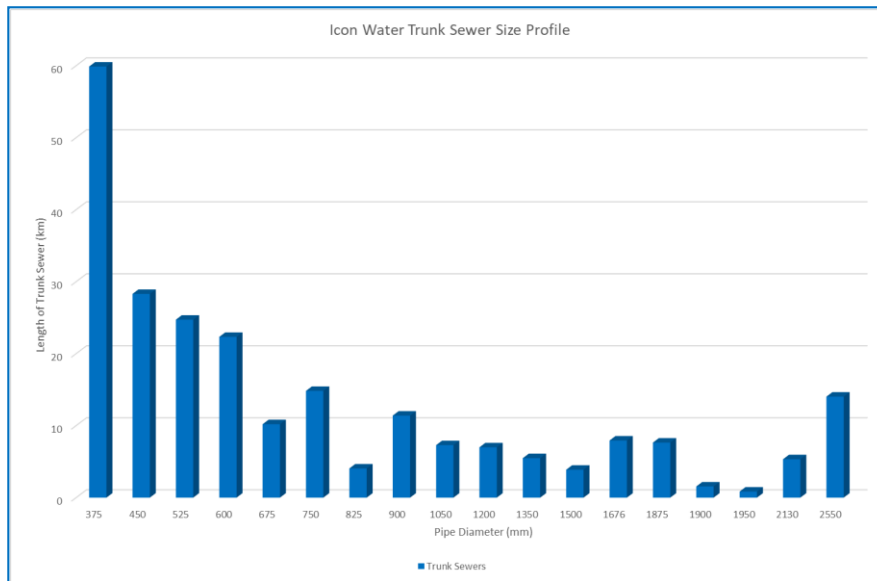


Figure 2 Trunk Sewer Size Profile

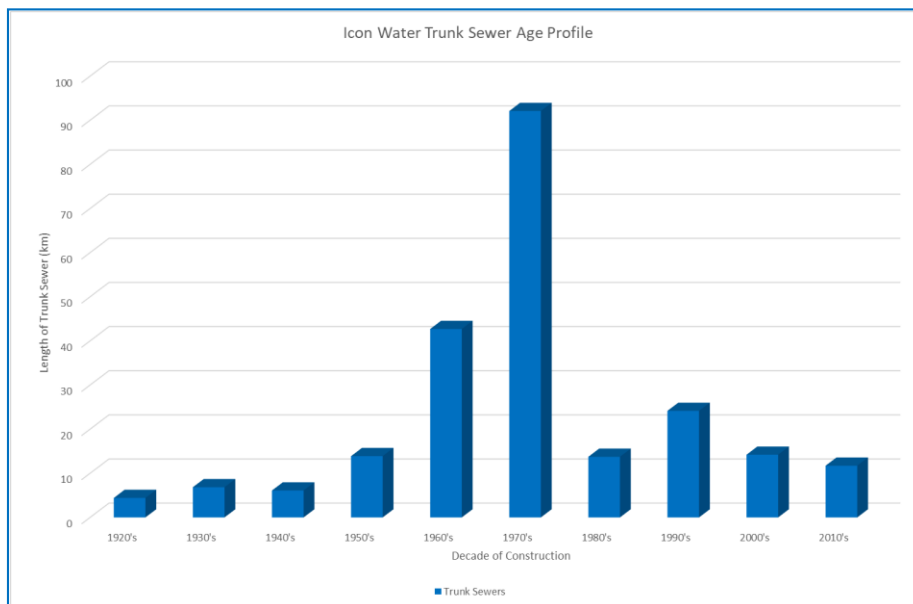


Figure 3 Trunk Sewer Age Profile

2. Yes, Icon Water has an ongoing service capability assessment process that compares current and predicted future demands against asset capability. Sewers where capacity issues are identified have augmentation projects initiated to determine and implement the most prudent solutions. Trunk sewer upgrades have occurred throughout Canberra dating back to the very beginnings of the city formation.
3. Yes, as above this is an ongoing process for Icon Water, with particular relevance due to the growing nature of our city.
4. Population growth was the main driver for the augmentation of the Belconnen trunk sewer with the existing sewer still in acceptable condition. The need to ultimately augment the Belconnen Trunk Sewer was considered during the design of the original sewer in the 1960s, with population growth uncertainty and infrastructure efficiencies behind the decision to build the original sewer as it was constructed.

5. The alignment of the new trunk sewer is broadly in line with the original augmentation plan of the 1960s with slight alterations and updates over time with consideration of development in the area and through planning assessments. The alignment of the new sewer was determined by hydraulic engineering requirements as well as with consideration of localised constraints such as environmental, planning and heritage.
6. The need to ventilate the sewer is based on asset objectives and engineering requirements including sewage age and characteristics as well as network hydraulics. Where ventilation is identified as being required, similar localised constraints as listed above are also considered. Where ventilation is required, odour dispersion models are used to determine the requirements for Odour Control Units (OCUs), which is informed by odour monitoring of the sewerage network over time. Achieving a 'negative pressure' within the sewer main provides an added level of control in containing gases within the system such that they are less likely to escape into the environment.
7. There are a number of OCUs currently being constructed or planned around Canberra as well as units that have been built in recent years. As the nature and odour emission profile of the sewerage network can change over time, identification of areas that require additional controls is an ongoing process.
8. Yes. Recent examples include Crace, North Weston, Molonglo Valley (planned), Weston Creek and the West Macgregor units.
9. The location of the OCUs was determined using the process listed above and the design has considered detailed odour dispersion models. Meteorological conditions are an integral part of the inputs for such modelling.
10. The approximate distance to the nearest residence property line is:
  - North Latham OCU: 80m (Macindoe Place)
  - Latham OCU: 70m (Denny Street) and 110m (Florey Drive)
  - Florey OCU: 100m (Kingsford Smith Drive) and 130m (Kreffft Street)
  - Evatt OCU: 185m (Cahalan Place)
11. (a) Not all complaints we receive are found to be attributable to an Icon Water asset. Icon Water carries out investigations of each complaint in an effort to confirm if an Icon Water asset is the source and then rectifies that cause. One odour complaint was received in 2021 from a West Macgregor resident and was confirmed as being attributed to the OCU. This issue was resolved by replacing the media (the carbon filter which removes odour generating gases) in November 2021 (refer also to Icon Water's responses to PAC QTON10 and QTON11).

On 17 February 2022<sup>1</sup> an odour complaint was received concerning an increase in odour in the West Macgregor area. Icon Water's Sewage Quality team are investigating all the assets in the vicinity to determine if Icon Water's network is the source of the identified odour. The customer has been contacted and their observations are being compared to the monitored data for any

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<sup>1</sup> An error was made by Icon Water with the customer case management system search parameters used to answer QTON10 and QTON11 (received by Icon Water on 23 February and submitted to CMTEDD on 28 February). When preparing the response to QON 3 (received by Icon Water on 8 March) a customer case management system search was repeated and Icon Water identified differing content within the three responses. This content related to the disclosure of a complaint that was received in February 2022.

patterns or trends. They confirmed that the odour was intermittent under certain weather conditions. The customer was satisfied that Icon Water was investigating and would rectify the issue if an Icon Water asset was found to be responsible (i.e. replacement of the media).

(b) None of the West Macgregor Odour Control Unit Vent stacks have been raised after their installation and commissioning, please see below in the response to question 12 regarding changes to vent stack height.

12. The current West Macgregor facility is meeting performance requirements and as a result there are no proposed alterations to the height of the stack. As noted above, none of the West Macgregor Odour Control Unit Vent stacks have been raised after their installation and commissioning. The West Macgregor OCUs are located at critical junctions of the sewerage network and have vent outlet monitoring systems that aid Icon Water in managing the facilities in-line with the performance requirements set out by the ACT Environment Protection Authority and outlined in the Sewerage Network Environmental Management Plan. The height of the stacks (approximately 20m) was determined through a detailed investigation and design process to meet the performance requirements of the facility. Any change in the physical layout of the vent would require more detailed modelling and would not necessarily result in any change to the performance of the facility.
13. In June and July 2021, Icon Water received two complaints regarding the Weston Vortex OCU. The carbon was replaced, the fan refurbished, the fresh air induct changed and the outlet H2S concentration was zero. These actions resolved the issue.
14. As per Icon Water's response to question 12 above and their responses to PAC QTONs 10 and 11, the West Macgregor OCUs are meeting performance requirements. OCUs are continuously monitored using sensors which measure the concentration of hydrogen sulphide gas. Measuring gas concentration indicates the proportion of odourous gas removed as the gases pass through the media. When the media reaches a saturation point and removal effectiveness declines, the media is replaced.
15. Each odour control unit has continuous monitoring sensors which measure the concentration of Hydrogen Sulphide gases which are the typical odour generating gas.
16. Icon Water is required to comply with concentration levels specified in the South Australian 2016 Environment Protection (Air Quality) Policy (as stipulated by the ACT Environmental Protection Authority (EPA)). The OCUs have been designed to remove the gases which are odour generating. A detailed Air Quality Impact Assessment has been completed and was lodged with Environment, Planning and Sustainable Development Directorate as part of the Development Application (DA). This assessment summarises the odour dispersion modelling that has been performed and confirms that odour and H2S ground level concentrations are within the EPA guidelines at the sensitive receivers.

**Approved for circulation to the Member and incorporation into Hansard.**

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**Andrew Barr MLA**

**Treasurer**

**Date:** 7-4-22

