

Appendix C
Methodology for Water Supply Capital Works

Water Supply augmentations were decided based on three studies carried out as following;

- Master Plan 2012
- System assessments carried out for Local Environmental planning (2018)
- DSP 2014

Master Plan 2012;

The strategy was developed with the consideration of current capacity, performance and future growth. The level of service was agreed by a technical memorandum which was based on WSAA (Sydney Water Edition).

Master Plan consisted of identification of infrastructure to serve the 2051 projected populations that consisted of Major developments, Centres and the infill within the suburbs as forecasted by Forecast.id. The analysis consisted of following two areas;

- Existing Service Area

The existing serviced area for master planning purposes generally comprised all properties, including vacant properties, within the general boundaries of the year 2010 serviced area. A major component of the development consisted of Gosford CBD area, Somersby Industrial Park and Mount Penang developments. The infrastructure identified for these areas have not been included in 2019 DSP.

- Potential Service Area

The system performance analysis has shown that new growth occurring as a result of the Wyoming, Narara, Kariong and Erina do not need major upgrades. Some local service extensions and link mains have been identified for these in 2014 DSP that have been included in 2019 DSP too. Details of the water mains identified under this category are given in Summary of Developer Strategies South 2019 (Appendix G).

Under Future Development areas identified in Master Plan 2012, water main amplification to Erina Heights along Hastings Rd has been identified. Servicing Narara Research Centre was identified initially under Master Plan and subsequently analysed under Narara Eco Village development and a new main along Research Rd has been proposed.

System assessments carried out for Local Environmental planning (2018);

A system performance assessment was carried out for the new proposed Local Environment Plan (LEP) to assess how the system performance would change with the introduction of the proposed LEP (new lot size 450m² instead of 550m²). The CCC south water network was assessed to identify the assets that need amplification for the current demand with the potential additional lots.

Max day demand analysis carried out for current scenario identified some mains that experience high head loss >10m/km and velocity around 2m/s. Some trunk mains and reticulation mains were identified for capacity restriction as per above criteria. These assets were included in 2019 DSP. More details of the mains identified under this system performance assessment are given in Summary of Developer Strategies South 2019 in Appendix G.

2014 DSP;

2014 DSP has identified some link water mains that were needed to enhance supply to some areas. These were mostly located in Narara and Lisarow DSP areas. These mains were included in the 2019 DSP. Summary of Developer Strategies South 2019 in Appendix G.
