

*Mr Robertson*

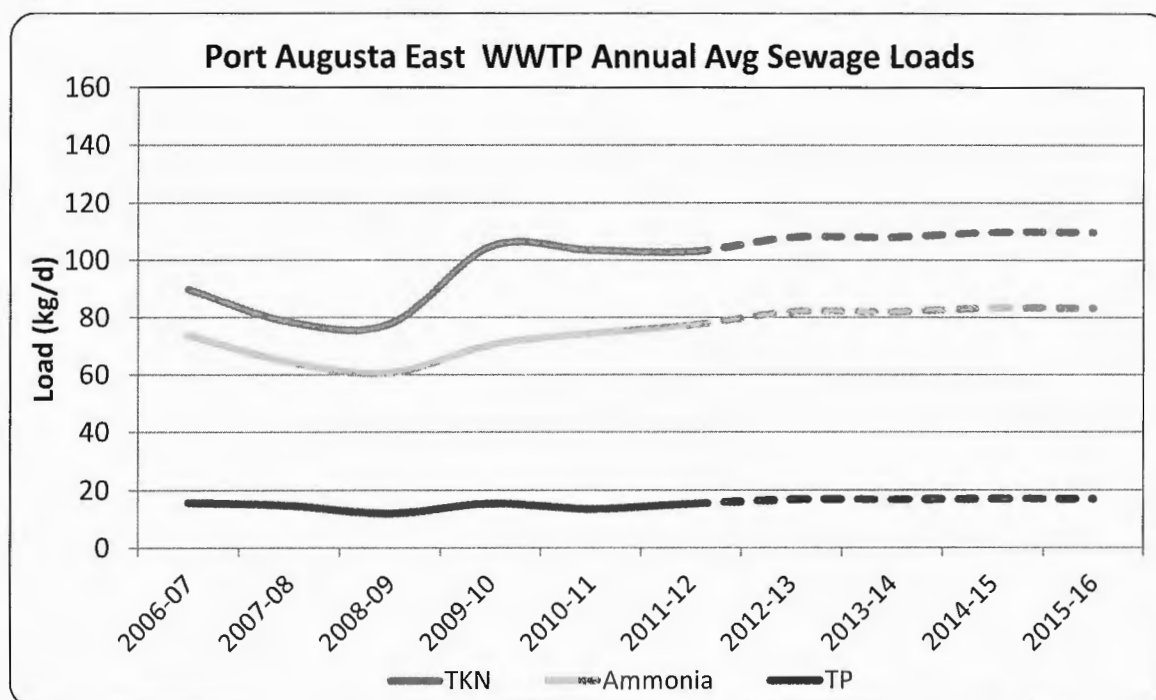
Attachment E.2

**SA Water  
Wastewater  
Treatment Plants  
and Catchments**

**SA Water  
Regulatory Business  
Proposal 2013**



Figure 171



## 22.2. Key points

- The City of Port Augusta is situated on both sides of the Upper Spencer Gulf and separate sewerage systems and wastewater treatment plants serve each side. Port Augusta East wastewater treatment plant was commissioned in 1980 and receives domestic and commercial wastewater from the eastern side of the City of Port Augusta. Design capacity was for a population of 14,000 and the current population served is about 7,336 (2011 Census).
- The plant is located to the south of the city and is surrounded on three sides by land owned by Alinta Energy, which operates the nearby power generation station. Alinta Energy uses the surrounding land as a fly ash disposal area. SA Water holds easements on an access road owned by Alinta Energy and on a portion of land abutting the northern boundary of the plant which is used for sludge drying. SA Water owns a portion of the land to the west of the plant on which the treated wastewater is discharged and flows into a tidal creek, through an area of mangrove and samphire to Spencer Gulf, about 500m away.
- The plant consists of two aerated lagoons operating in parallel, and two facultative lagoons operating in parallel. Each of the aerated lagoons is aerated by two floating surface aerators in continuous operation. The facultative lagoons allow settling and anaerobic digestion of sludge solids on the lagoon floor.
- Facultative lagoons are periodically dredged and the solids pumped to an informal containment area in the ash adjacent to the wastewater treatment plant. Subsequent depositions of fly ash encapsulates the biosolids.
- Due to the dumping of fly ash on land around the WWTP site, the land height is increasing at a rate of about 300mm/year and, after any new sludge storage area is created, it has a maximum of only five years before rising fly ash covers the area.

- SA Water has an agreement with Alinta Energy to dispose of sludge on Alinta's land and an agreement with EPA to dispose of sludge on SA Water owned land. The EPA considers that the agreement does not extend to Alinta Energy owned land. If the EPA objects to sludge disposal adjacent to the plant, then sludge will have to be mechanically dewatered and trucked to Port Augusta West WWTP.

**Key points - future:**

- The local prison has been connected to the SA Water sewer network and the pumping infrastructure is in the process of being commissioned. Planned future residential developments in the Stirling North area may increase loads on the Port Augusta East WWTP, but an agreement on the network augmentation strategy and associated costs is yet to be reached. Planning SA and local government have indicated a potential for strong growth in the area.
- The fly ash disposal surrounding the plant limits the long-term use of the current Port Augusta East site and land for a future new plant has been purchased. Planning investigations have been undertaken regarding an appropriate long-term strategy for wastewater treatment and sludge disposal at Port Augusta and a project is proposed for the regulatory period to expand sludge handling and drying facilities within the Port Augusta area.
- Port Augusta East wastewater treatment plant is ranked as a "tier 2"<sup>41</sup> treatment plant by the EPA. Under the current licence there is no requirement for an EIP.
- EPA has expressed concern in the past, that sludge disposal into the fly ash is not acceptable. However, they have allowed the practice to continue.
- The EPA has recently expressed concern regarding the treated wastewater discharge pollutant concentrations and loads from Port Augusta East WWTP and the impacts of future population growth. Discussions are continuing.

---

<sup>41</sup> Refer to notes to the attachment.