

Liverpool Water Reclamation Plant Report

Name of wastewater treatment plant	Liverpool Water Reclamation Plant

System Summary	Projected				
System Summary	2026	2031	2046	2056	
Liverpool WRP ADWF (ML/d)	57.0	61.4	66.7	70.4	
Liverpool load (EP _{COD})	360,613	390,299	425,246	449,951	

Treatment capacity constraints for 2022 – 2036	Estimated year of exceedance	
Biosolids processing reliability constraints – various processing including thickening and dewatering.	Current	
Inlet works and preliminary treatment capacity exceeded based on current wet weather peaking factor.	2023	
Biosolids digestion capacity exceeded - capacity insufficient during maintenance periods (current), future growth constraints also.	Current	

Summary of servicing strategy for 2022 - 2036

The planned SWGA diversion to new dedicated treatment facilities at Upper South Creek from 2026 has been adopted in the development of the demand profiles for Liverpool, Glenfield, and Malabar WWTP's for both the network and treatment assessments.

Preliminary treatment will be upgraded to 60 ML/d (120 ML/d hydraulic) and the existing CONVAS plant; de-rated /capped to a capacity of 12.5 ML/d ADWF (at 10d SRT) and additional secondary processes introduced to attain full secondary treatment.

The amplification of the Malabar System will necessitate upgrades to the preliminary treatment at all three plants (Malabar, Liverpool, and Glenfield), even with the above flow diversions. In addition to the preliminary treatment upgrades, all three plants are constrained in the solids stream and upgrades are required to increase biosolids processing capacity

Anticipated augmentation and upgrades for 2022-2036						
Year commissioned	Description	Approximate capital cost (\$M)	Impact on servicing capacity			
2025	Stage1A/1B plantwide upgrade-Full secondary-(in progress)	46.12**	Full secondary effluent			
2032	Stage2 upgrade (PEP cover- Additional primary)	17.9	Facilitate growth servicing beyond 2030.			

^{* *}remaining project cost for completion.

Further investigations

Malabar System Plan exercise underway – outcomes of the system plan and further detailed investigations will determine the required investments for growth servicing based on the identified preferred system configuration. Thus, may significantly change the above noted demand profiles and augmentation required.

Inlet works and preliminary treatment capacity constraints to be reviewed following Malabar System outcomes and further wastewater catchment modelling to define maximum instantaneous peak flows.

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