

Name of wastewater treatment plant	Castle Hill Water Reclamation Plant
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System Summary	Projected				
	2026	2031	2036	2046	2056
Castle Hill catchment ADWF (ML/d)	8.7	10.1	10.7	11.1	11.4
Castle Hill catchment load (EP _{COB})	58,096	67,332	71,201	73,727	75,654

Treatment capacity constraints for 2022-2036	Estimated year of exceedance
Dry weather constraints – particularly related to requirements for improve effluent quality.	2020
Dry weather constraints – related to requirements for further improved effluent quality and growth.	2023
Wet weather constraints – related to growth.	2023

Summary of servicing strategy for 2022 – 2036
<p>Castle Hill WWTP biosolids continued to be transferred to Rouse Hill influent stream.</p> <p>Stage1- Increase capacity to 7ML/d by 2023/24, targeting an effluent TN <6mg/L. Flows over 7ML/d will be transferred to Rouse Hill until stage 2 is completed.</p> <p>Stage2- Addition of 8ML/d MBR train and associated tertiary upgrade to cater for growth up to 2050</p> <p>Ultimate capacity 15ML/d</p>

Anticipated augmentation and upgrades for 2022 – 2036			
Year commissioned	Description	Approximate capital cost (\$M)	Impact on servicing capacity
2023/24	Stage-1 Plant modifications to increase capacity to 7 ML and meet effluent quality of <6mg/L TN, with addition of an anoxic and re-aeration zone to the bioreactor. Continuation of sludge transfer to Rouse Hill	8	Continue to service short term growth and improve effluent quality.
2036-37	Stage 2- Addition of 8ML/d MBR plant and associated tertiary upgrades	42.8	Improve effluent quality to meet new nutrient load limits to facilitate current future growth servicing to 2050

Further investigations
Northwest Treatment Hub project is in detail design and delivery stage – timing of planned completion may change. Following plants considered in servicing hub: Castle Hill WRP, Rouse Hill WRP and Riverstone WWTP.