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Memo Details

Project #: 118517
Project Name: 40 The Retreat, Bringelly
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BASIX Certificate Number: 1749831M

Client Details

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Disclaimer

The BASIX Water program helps reduce water use in new homes by assigning a score based on several factors. These include location (local government area), type of building, water-saving fixtures, and recycling options. The score is displayed along with a breakdown of the proposed estimated water usage and how different activities contribute to it.

There are some limitations to consider, such as:

- The availability of water-saving options in your area.
- Fixed design choices that may affect water use.
- The availability of water-saving products in the market.
- Plans for future water infrastructure by Sydney Water.
- BASIX derived/fixed backend calculations and algorithms that are used to obtain the water score.

Introduction

The Western Sydney Aerotropolis Precinct (WSAP) Plan aims for a water score of 60% reduction in water usage compared to a benchmark project, exceeding the mandatory 40% reduction legislated in the Environmental Planning and Assessment Regulation 2021 and State Environmental Planning Policy (Sustainable Buildings) 2022.

As seen from the tables below, despite utilising all feasible water-saving options, the project currently achieves a 56% reduction, making it a substantial improvement over the legislated requirement but falling short of the ambitious WSAP target. This target is currently not feasible for this project.

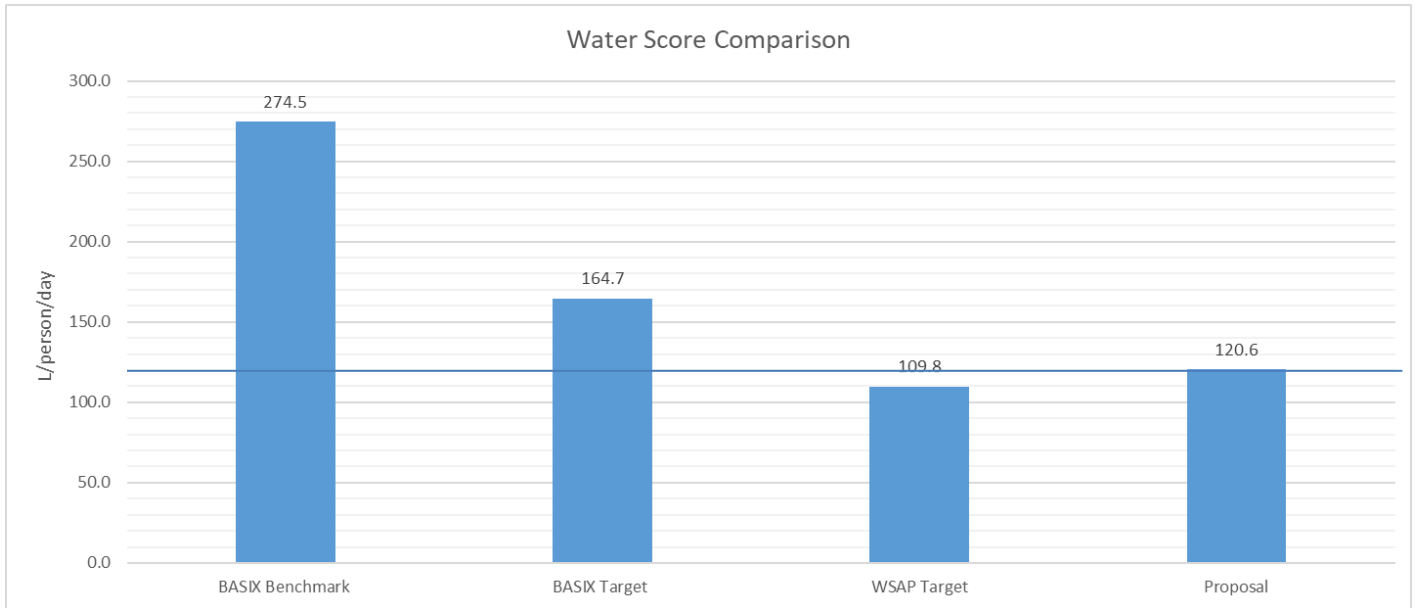
However, significant potential exists to reach the 60% target by connecting to the planned Local Advanced Water Recycling Centre (AWRC) once it becomes operational in 2026. Currently, BASIX does not recognise the AWRC, but when this option becomes available, the project is expected to meet the WSAP goal within the BASIX framework.

1749831M Proposed Water Saving Breakdown

ACHIEVED Water Score: 56%		
TARGET BASIX Water Score: 40%		
TARGET WSAP Water Score: 60%		
Feature	Specification	Limitations and Comments for WSAP compliance
Rainwater Tanks (RWT)	<p>RWT 1 – Blocks A, B, C 50kL Collection water from roof of Blocks A, B, C (2,572m²)</p> <p>RWT 2 – Blocks D, E, F 30kL Collection water from roof of Blocks D, E, F (3,064m²)</p> <p>Rainwater tank water use for</p> <ul style="list-style-type: none"> - All non-low water use landscape, - 1 Car washing bay, and - All unit toilets. 	<p>Practically sized RWTs (80kL total) to capture and service the below:</p> <ul style="list-style-type: none"> - Supply: Maximised capture roof area. Seasonal dependant - Demand: Landscape, car wash, and all unit toilets. <p>Water score unchanged with increased RWT size as supply and demand is unbalanced. Demand is constant and higher than the supply from available roof capture area which is seasonal.</p> <p>Score can be improved by connecting to future reticulated recycle system. The local Advanced Water Recycling Centre (AWRC) facility will be operable in 2026 and is intended to be connected to the project site via top-up of RWTs during periods of low rain fall pending hydraulic detailed design.</p> <p><i>Note – At this stage BASIX does not provide an option to connect to the AWRC. Connecting the RWT to a laundry tap provides no additional benefit as the most water efficiency washing machines are already being provided.</i></p> <p>No further improvement attainable <u>at this stage.</u></p>
Common Landscape	<p>Lawn: 1,058m²</p> <p>Garden: 7,541m², of which 3,371m² are low water use species</p>	<p>Garden and low-water species areas have been finalised to adhere to ESD responsibilities as per WSAP planned provisions.</p> <p>Substituting garden with further low-water species does not contribute to further water saving measures as the usage contribution for common area landscaping is just 0.47%.</p> <p>No meaningful improvement attainable.</p>
Private Landscape	Nil or very minor planting – will not impact water score	
Fire Sprinkler Systems	All closed loop test systems	<p>Test water stored within closed loop.</p> <p>No further improvement attainable.</p>
Bathroom Taps	6 Star	<p>As showering, clothes washers, dishwasher, and tapware contribute to the largest L/person/ day the highest ratings possible have selected.</p> <p>No further improvement attainable.</p>
Kitchen Taps	6 Star	
Showerheads	4 Star (4.5-6.0L/min)	
Dishwasher	6 Star (Water)	
Washing Machine	5 Star (Water)	
Toilet Flusher	4 Star	<p>4 Star toilets are the highest practical rating for conventional residential usage.</p> <p>5+ Star toilets have an integrated basin within the toilet and are not suitable for residential use.</p> <p>No further improvement attainable</p>
Common Pool	Maximum 160kL	<p>Decreasing the volume of the common pool does not contribute to further water saving measures as the usage contribution for common pool is just 0.27%.</p> <p>No meaningful improvement attainable.</p>

Green (86% usage)	Maximum allowable water saving measures have been incorporated into BASIX. No further improvement attainable.
Orange (less than 1% usage)	Changes do not lead to further water saving measures as the usage contribution percentages are insignificant. No meaningful improvement attainable.
Blue (4.5% saving)	Maximum rainwater capture, tank size, and demand usage. No further improvement attainable at this stage. Further improvement possible upon the completion of future reticulated recycle system in 2026.
Grey (13% usage)	Other uses and losses that are unable to be viewed or edited within BASIX

SCORE CONTRIBUTIONS - WATER		
Multiple-dwelling project: breakdown by end-uses	Proposal L/person/day	Percentage contribution to water score (%)
common area landscaping	0.6	0.47
common pools and spas	0.3	0.27
common area fixtures	0.0	0.00
fire sprinkler test water	0.0	0.00
common area car washing	0.6	0.49
private landscaping	0.0	0.00
showers	29.1	23.03
toilets	30.5	24.16
baths and bathroom basins	13.2	10.43
clothes washing	28.8	22.75
kitchen sink & dishwasher	6.6	5.23
other uses	16.6	13.16
alternative water	-5.7	-4.55
total	120.6	95.44



Summary

The proposed development exceeds on the mandatory BASIX compliance by a significant 44.1L/person/day. This represents a substantial 153.9L/person/day improvement compared to a benchmark project.

As seen from the tables within this memo, despite utilising all feasible water-saving options, the project currently achieves a 56% reduction, making it a substantial improvement over the legislated requirement but falling short of the ambitious WSAP target. It is our expert opinion that further improvement not feasible for this project at this stage.

However, significant potential exists to reach the 60% target by connecting to the planned Local Advanced Water Recycling Centre (AWRC) once it becomes operational in 2026. Currently, BASIX does not recognise the AWRC, but when this option becomes available, the project is expected to meet the WSAP goal within the BASIX framework.