

Water Management

FY18

Why this is important to Stockland

Water is essential for environmental and social health. It also enables us to develop and manage our assets and plays an important role in making our communities and assets attractive, healthy and efficient places in which our customers want to live and work.

Australia's climate is characterised by variability, featuring long-term drought, water scarcity (often resulting in water restrictions) and severe flooding. As a responsible property developer, we constantly consider where water is sourced, how efficiently it is used and how quantity and quality is managed. We maintain a strong focus on water management and quality in the development and operation of our assets, including improving the quality of rainwater runoff leaving our project sites, access to alternate water infrastructure and practical innovation to support more efficient water use.

Maintaining effective water management systems to minimise consumption and manage water quality is a key priority. Effective systems deliver significant benefits to the environment and promote performance and cost efficiencies across our projects and operations.

This Deep Dive document is a component of our FY18 sustainability reporting suite, which is publicly available on our [website](#). Our sustainability reporting is third-party assured and drafted in accordance with the GRI Standards.¹ The material in this Deep Dive is supported by a wider collection of performance metrics contained in our [Environmental Data Pack](#).

This Deep Dive is to be read in conjunction with our published approach to water management, available as part of our sustainability reporting suite at [Our Management Approach to Water Efficiency and Quality](#).



Our key achievements

- Reduced water intensity of our Retail Town Centre portfolio by five per cent compared to FY17.
- Reduced water intensity of our Workplace and Business Parks portfolio by 11 per cent compared to FY17.
- Exceeded our water efficiency targets in our built form product as modelled at Altrove (NSW) and Brightwater (Qld).
- Connected 15 of our sales offices and other facilities to either rainwater or centralised recycled water supply.

¹ The GRI Standards are global standards for sustainability reporting published by the Global Reporting Initiative (<https://www.globalreporting.org/standards/>).

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FY18 priorities and progress

Commercial Property

FY18 PRIORITIES	STATUS	FY18 PROGRESS
Reduce water consumption by five per cent by FY20 in our Retail Town Centre portfolio (against FY17 benchmark).	In progress	We achieved a water intensity reduction of five per cent against FY17 for our Retail Town Centre portfolio
Reduce water consumption by five per cent by FY20 in our Workplace and Business Parks portfolio (against FY17 benchmark).	In progress	We achieved a water intensity reduction of 11 per cent against FY17 for our Workplace and Business Parks portfolio.
Achieve a NABERS Water portfolio average of 3.5 stars for our Retail Town Centre portfolio by FY20.	In progress	Our NABERS Water average for our Retail Town Centre portfolio is 3.18 stars (slightly down from 3.20 stars at end of FY17).
Achieve a NABERS Water portfolio average of 4 stars for our Workplace and Business Parks portfolio by FY20.	In progress	Our NABERS Water average for our Workplace and Business Parks portfolio is 3.57 stars (down from 3.69 stars at end of FY17). The decline is largely attributable to increased vacancy in our Workplace portfolio.

Communities

Residential

FY18 PRIORITIES	STATUS	FY18 PROGRESS
Exceed relevant minimum water consumption compliance standards by five per cent by FY20 in our residential communities.	In progress	Based on modelling and analysis of the design of our built form product, at Altrove (NSW), we exceeded compliance requirements by 9.6 per cent, and at Brightwater (Qld), we exceeded compliance requirements by six per cent.
All new residential masterplanned communities and built form projects over 500 dwellings to deliver the following modelled water quality targets when discharging water from our site into natural water systems: <ul style="list-style-type: none"> • 45 per cent reduction in nitrogen • 65 per cent reduction in phosphorus • 85 per cent reduction in suspended solids 	Not achieved	We modelled the water quality performance of Edgebrook (Vic), Grandview (Vic), and Promenade (Qld). Two projects achieved nitrogen reduction targets, two projects achieved phosphorous reduction targets, and no projects achieved suspended solids reduction targets (although all projects achieved greater than 76 per cent reduction in suspended solids).
Continue to progress the feasibility study for Sienna Wood (WA) recycled water project.	In progress	A regional proposal to deliver recycled water to the area is currently in preparation, and we are also investigating recycled water initiatives specific to our Sienna Wood community.

Retirement Living

FY18 PRIORITIES	STATUS	FY18 PROGRESS
Establish a water efficiency program that embeds the recommendations derived from the sub-metering and monitoring program and seeks to achieve a five per cent water efficiency target for villages with sub-metering by FY20.	In progress	We have identified water efficiency opportunities resulting from the sub-metering and monitoring program currently underway. Our Sustainability and National Operations teams are working on a checklist that includes water efficiency recommendations for existing villages to implement.

Future priorities

Commercial Property

- Reduce water consumption by five per cent by FY20 in our Retail Town Centre portfolio, and in our Workplace and Business Parks portfolio (FY17 baseline).
- Achieve an average NABERS Water rating of 3.5 stars for our Retail Town Centre portfolio, and 4 stars for our Workplace and Business Parks portfolio by FY20.

Communities

Residential

- Exceed relevant minimum water consumption compliance standards by five per cent by FY20 in our residential communities.
- All new residential masterplanned communities and built form projects over 500 dwellings to deliver the following modelled water quality targets when discharging water from our site into natural water systems:
 - 45 per cent reduction in nitrogen
 - 65 per cent reduction in phosphorus
 - 85 per cent reduction in suspended solids.

Retirement Living

- Complete an operational efficiency review of our three most water intensive retirement living communities.

FY18 performance and case studies

Commercial Property

NABERS Water

Following the NABERS Water ratings undertaken in FY18 on our Retail Town Centre portfolio, the area weighted portfolio average has reduced slightly at 3.18 stars (3.20 stars in FY17). Seven assets out of 25 received an improved rating while two assets received a lower rating.

Following the NABERS Water ratings undertaken in FY18 on our Workplace and Business Parks portfolio, the area weighted portfolio average has reduced to 3.55 stars (3.98 in FY17) for our Workplace portfolio and has increased to 3.59 stars (3.48 in FY17) for our Business Parks portfolio. The reduction in the Workplace portfolio is due to several large buildings with lower ratings this year. The increase in the Business Parks portfolio is due to an increase in the rating for the Optus Campus which because of its large floor area, has a significant impact on the average despite one other location with a smaller floor area that had a reduced rating. Our combined portfolio average is 3.57 stars, which is a reduction on FY17 (3.69 stars) as a result of the decrease in our Workplace portfolio rating.

More information on our NABERS ratings is provided in our [Asset Rating and Certification Deep Dive](#).

Initiatives and performance metrics

In FY18 we maintained our comprehensive sub-metering network across our commercial property assets, enabling us to focus on leak detection and targeted water efficiency initiatives. Sub-metering has allowed us to focus on how water is being used for irrigation in Business Parks. In FY19 we will investigate further expanding our water sub-metering.

We track our water consumption on a per square metre intensity basis as a means of taking divestments and investments into account when considering our water consumption. The table below outlines our year-on-year water intensity in commercial property over the last five years.

COMMERCIAL PROPERTY WATER CONSUMPTION INTENSITY (kL/m²)

	FY18	FY17	FY16	FY15	FY14
Workplace and Business Parks	0.55	0.62	0.65 ²	0.58	0.63
Retail Town Centres	1.04	1.09	1.11	1.1	1.1
Commercial Property³	0.94	0.98	1.00	0.96	0.98

In FY18, our Retail Town Centre business and our Workplace and Business Parks business each committed to a five per cent water intensity reduction by FY20 (using FY17 baseline).

Across our Commercial Property portfolio, FY18 water consumption intensity decreased by four per cent against FY17. This result is attributable to changing water requirements of business park property landscaping (less water is required compared to when it was first planted in FY16) and major leak rectification. The table below outlines our year-on-year water intensity reductions over the last five years.

COMMERCIAL PROPERTY ANNUAL WATER INTENSITY CHANGE FROM PRIOR YEAR

	ANNUAL INTENSITY CHANGE (%)				
	FY18	FY17	FY16	FY15	FY14
Workplace and Business Parks	-11%	-5%	12%	-8%	0%
Retail Town Centres	-5%	-2%	0%	0%	7%
Total Commercial Property⁴	-4%	-2%	4%	-2%	7%

Communities

Residential

Residential contractor water data varies from year to year due to activities such as filling lakes in large developments and location-specific variables such as natural rainfall, project life cycles, market conditions, site management techniques and local landscaping requirements set by councils. Further, contractors self-report water data and we do not review each contractor's data collection processes. From FY16, we upgraded our contractor templates to enhance reporting processes and to notify contractors if water usage falls outside an expected range.

Water efficiency

Our current Residential water targets (set in FY17) focus on the performance of built form product which is under our control. These targets aim for a five per cent improvement in the performance of built form product, by FY20, compared with existing water reduction compliance benchmarks established by regulation within the states where we operate. We model and analyse the performance of our built form product in our residential communities to understand water-related initiatives we could include in our designs to exceed compliance requirements by five per cent or more. We investigated initiatives including use of recycled water, inclusion of water tanks, and water efficient appliances (such as showerheads, taps, and toilets).

We modelled and analysed the performance of Altrove (NSW) and Brightwater (Qld) in FY18. At Altrove we achieved a 9.6 per cent improvement over compliance, largely attributable to connecting water tanks to toilets, laundry and external taps, as well as installing water efficient native landscaping. At Brightwater we achieved a six per cent improvement over compliance, largely attributable to the installation of water efficient native landscaping and installation of water-efficient showerheads. We will begin to embed these initiatives into our built form product being designed from this year onward.

Other water efficiency initiatives delivered in FY18 include:

- connection of 15 of our sales offices and other facilities to either rainwater or centralised recycled water supply
- use of Australian native plants that are tolerant of low water environments in our landscaping, public open space and verges at Willowdale (NSW), Whiteman Edge (WA), Sienna Wood (WA), and Pallara (Qld)
- delivery of Western Australia Water Corporation Water Wise Garden Standards to our front gardens and display villages at Calleya (WA)

² Water usage increase in FY16 was due to various water leaks and an increase in irrigation due to new landscapes.

³ Consumption intensity data calculated based on Workplace and Business Parks, and Retail Town Centre consumption figures only. Does not include Logistics.

⁴ Consumption Intensity data calculated based on Workplace and Business Parks, and Retail Town Centre consumption figures only. Does not include Logistics.

- collection of water used for dust suppression by our contractor in retention or sediment ponds at Foreshore (Qld) and Vale (Qld), as well as maximising use of non-potable water for dust suppression
- continued delivery of recycled water to projects where feasible for example in Cloverton in Victoria we have delivered recycled water to all constructed lots
- education for new residents by providing information about water efficiency at selected display villages and as part of our welcome packs to new residents.

Water quality

We use water sensitive urban design (WSUD) strategies at our residential developments to minimise the impact these developments have on water quality. In FY18, WSUD strategies were completed for our residential developments at Edgebrook (Vic), Grandview (Vic), and Promenade (Qld). As shown in the table below, two of these projects will achieve the target 45 per cent or more nitrogen reduction, two projects will achieve the target of 65 per cent or greater phosphorus removal and none of the projects will achieve the target 85 per cent suspended solids removal although all three projects will achieve greater than 76 per cent suspended solids removal

RESIDENTIAL DEVELOPMENT WATER QUALITY MODELLED PERFORMANCE

	NITROGEN REDUCTION (%)	PHOSPHORUS REDUCTION (%)	SUSPENDED SOLIDS REDUCTION (%)
Edgebrook (Vic)	36	60	76
Grandview (Vic)	45	69	81
Promenade (Qld)	49	73	83

We also minimise pollution during construction through delivery of sediment and erosion control plans. Water runoff is captured in basins and treated with flocculants to allow suspended solids and pollutants to settle out of the water column.

Retirement Living

Our water sub-metering and monitoring pilot at Tarneit Skies (Vic) and The Willows (NSW) has continued to identify a number of opportunities to improve the operational performance of the villages, such as reviewing pool operations and improving detection and repair of water leaks. We have targeted a five per cent water efficiency improvement for the FY18 to FY20 target period for those villages included in the sub-metering pilot. Our sustainability team will continue to work closely with the National Operations and Village Management Teams to implement the recommendations and identify quick wins that can then be scaled across the portfolio.

Informal resident sustainability awareness sessions have been held at a number of villages including Golden Ponds (NSW) and Wamberal Gardens (NSW).



To access the complete list of documents in Stockland's Sustainability Deep Dive Series, [click here](#).