

Water Management and Quality

FY15

1. Introduction

This document forms part of our Disclosures on Management Approach (DMA) series, prepared in accordance with the Global Reporting Initiative's G4 Guidelines. The DMA series is designed to support and complement our annual corporate reporting by providing a detailed overview of our approach to managing key sustainability issues of significance to our business, our industry and our stakeholders (see Appendix A). The series will be reviewed annually with performance updates and progress against targets disclosed each year as part of our sustainability reporting process.

2. Water Management and Quality

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 fluctuating climate can lead to long-term drought, water scarcity (often resulting in water restrictions) and severe flooding. As a responsible property developer, it is important to constantly consider where water is sourced, how efficiently it is used and how the quality is managed. We maintain a strong focus on water management and quality in the development and operation of our assets, including improved access to alternate water infrastructure and practical innovation to support more efficient use of water.

We recognise the importance of effectively managing water consumption and the quality of rainwater run-off leaving our project sites. We equally acknowledge the significant benefits that arise from a strategic approach to water management and quality, as it enhances the efficiency, resilience, desirability and long term value of our assets and developments.

Ensuring effective water management systems are in place to minimise consumption and manage water quality is a key priority. Not only do they deliver significant benefits to the environment, but they also promote performance and cost efficiencies across our projects and operations.

3. Management Approach

Water management and quality is a key focus for Stockland. Consistent with our Group-wide management approach, minimum performance standards have been included in our sustainability policy and supporting environment toolkits.

As part of our sustainability requirements, projects are required to consider and plan environment initiatives, including water management and quality. This can be through the development of an environment plan (residential developments), while undertaking Green Star ratings (commercial property, residential and retirement living) or for operating assets through the asset or capital expenditure planning process (commercial property and retirement living).

The focus of our water management approach varies across business units due to the varying objectives and requirements of our different asset classes, as outlined in the table below.

Business Unit	Focus	Why?	How?
Commercial Property	Managing water consumption and ensuring operational efficiency across our assets.	Promotes more efficient operations, ensuring the ongoing viability of our assets as we move into a resource-constrained future. Also delivers cost savings to the business.	<p>We use the NABERS rating scheme to track water consumption across our office and retail assets.</p> <p>Given the current climatic conditions coupled with the price of water our office and retail programs have been focussed primarily on leak capture and management.</p>
Residential	<p>To construct and deliver projects that minimise water use and contribute positively to catchments in which we operate.</p> <p>The management of stormwater run-off and the ability to assure quality of water supply to our residents, as well as the quality of water which is then released to the environment.</p> <p>Provision of lower cost recycled/alternative water supply options.</p>	Effectively managing these aspects and integrating them into the design and development of our communities not only facilitates approvals processes, but also ensures the protection and preservation of ecosystems and climate resilience in and around communities.	<p>We monitor water use during both construction and delivery of our projects. The CCAP Precinct tool¹ is used to model the water use at all new masterplanned projects (over 600 dwellings) and new precincts (over 750 dwellings). The modelling is used to test options for reducing consumption in the completed community.</p> <p>We seek to mitigate the impact of our developments on natural ecosystems and water supplies through water sensitive urban design (WSUD). WSUD is a requirement on all new residential developments.</p>
Retirement Living	<p>The management of stormwater run-off and the ability to ensure quality of water supply to our residents, as well as the quality of water which is then released to the environment.</p> <p>Managing water consumption and ensuring operational efficiencies across our assets.</p>	<p>To reduce the footprint of potable water supply and reduce costs to residents.</p> <p>We also aim to have alternatives in place for when supply may be affected.</p>	<p>WSUD is a requirement on all new retirement living developments.</p> <p>Promoting and facilitating efficient water use practices.</p> <p>We monitor water use during both construction and delivery of our projects. At all new retirement living village developments, we use the CCAP Precinct tool to predict water use and test options for reducing consumption in the completed project.</p>

Design and Development

We use the Green Building Council of Australia's (GBCA) Green Star rating tools to support the design and delivery of water initiatives and to set a platform for optimal performance. All new commercial property and retirement living developments are required to achieve a minimum 4 Star Green Star rating. Green Star sets minimum standards for water management and efficiency in commercial property and retirement living assets.

We use the CCAP Precinct tool to help us manage the environmental impact of our projects. It is a mathematical planning tool that enables a project to model and test different design and technology options. The tool enables the most cost effective options to improve water management to be identified for inclusion in projects.

¹ We use the CCAP Precinct tool to help us manage the environment impact of our projects. It is a mathematical planning tool that enables a project to model and test different design and technology options. The tool enables the most cost effective options to improve water management to be identified for inclusion in projects.

During FY15, our residential business ran the CCAP Precinct tool on new bids to buy land. The Retirement Living business ran the CCAP Precinct tool on the Cardinal Freeman retirement village redevelopment in FY13, which identified water reduction opportunities compared to regional averages. In FY16 we will prepare the CCAP Precinct model for the Willowdale retirement village development which commenced construction in late FY15.

All our residential projects in NSW (such as Brookes Reach, Willowdale and Elara) are *BASIX* compliant and water tanks are typically provided to all homes to supply a combination of irrigation, toilets, and laundry. At our Bells Reach project, Queensland, we have mandated water tanks through a covenant placed on lots. A number of our Queensland projects are also connected to recycled water grids including Ormeau Ridge. In Victoria, most of our projects (including Eucalypt, Cloverton and Selandra Rise) are supplied with reticulated recycled water to supply irrigation requirements at a minimum.

Australian regulatory processes require permission from government authorities to extract water from water bodies. These authorities determine level of significance based on each development application. Developments are unlikely to gain approval if a water source is deemed to be significantly affected. Equally, regulatory process does not allow water discharge into significant areas of biodiversity unless it is demonstrated that there will be no significant impact. This is determined, monitored and enforced by the regulatory authority. As a minimum requirement for environmental approval on all projects, we have to reduce the pollutant load of any stormwater runoff before discharging water to receiving water bodies.

Water Sensitive Urban Design (WSUD) is also considered in all our developments. WSUD ensures sustainable management of water in urban areas through integration with the urban design and takes into account all of the elements of the urban water cycle including potable water, wastewater, rainwater, stormwater and groundwater. Many approval jurisdictions across the country require WSUD targets to be met when designing projects. We have a mandatory requirement to meet minimum standards for WSUD across all our projects regardless of local requirements. Residential projects are required to demonstrate what targets will be achieved and actions to be taken as part of their specific environment plan.

During construction, water is usually captured and reused on site, however as this is managed by a civil contractor we do not have control or visibility of percentage or total volume reused.

Operations

In **Commercial Property** operations, we undertake NABERS water ratings to benchmark the performance of our assets against industry standards and to measure the effectiveness of the initiatives and actions we have implemented. In our Office portfolio, we undertake NABERS ratings annually and have a long standing portfolio average target of 4.5 stars.

In our Retail business, we have taken a staged approach to NABERS ratings across the portfolio as the NABERS retail rating tool matures in the market. In FY15, we have undertaken ratings on all eligible retail assets excluding developments. In total, we have undertaken ratings for 15 out of 22 eligible retail assets and we will set a portfolio average target for FY17. Several locations could not be rated due to utility billing issues, faulty metering or absence of metering on bore water supplies. These issues will be rectified for the next rating cycle.

For many years, we have invested in water sub metering systems to monitor water consumption in our office and retail assets. Using consultant partners, data is monitored and analysed to provide useful information and insights to our operations management teams on where we need to target excessive water consumption. Water sub metering is a key tool for us to manage consumption and is critical to our ability to achieve our targets.

Water efficient landscaping is a feature of most of our residential communities projects across the country and this remains a key focus in Western Australia projects such as Amberton and Calleya, where summer rainfall is minimal and soils are sandy. At our North Shore project in Townsville, Queensland, we use rain sensors which can be controlled remotely to operate a drip irrigation system. The benefit of the system is that landscaped areas are only provided with the required amount of water and therefore reduce water wastage.

In our **Residential** business, we generally hand operational control (i.e. maintenance of public spaces) to Councils following project completion or as stages of our projects are completed. We retain operational control in some cases, such as our Vale project in Western Australia. We are responsible for maintaining the parks and public spaces at Vale and hold an historical license for a number of water bores from which we draw down water for the purposes of landscape maintenance. This explains why water consumption at our Vale project is always considerably higher than our other residential projects. We sometimes collect water for reuse in watering and maintaining parks and public spaces, however do not record the total volume captured before handing over control to Council.

In our **Retirement Living** business, upgrades to operational village clubhouses include water saving measures such as water-efficient tap fittings and toilets and utilising rainwater tanks for water collection and irrigation where possible.

Roles and Responsibilities

Our water management and quality approach, targets and performance tracking are overseen by our Board Sustainability Committee. Accountability for water management and quality delivery sits with various Executive Committee members, including the CEOs of Commercial Property, Residential and Retirement Living. Our Chief Operating Officer (COO) assumes ultimate responsibility at a group level for water management and quality performance and reports directly to the Managing Director.

Our National Sustainability Manager, reporting to the COO and supported by the business unit National Sustainability Managers, has responsibility for ensuring the effective implementation and evaluation of our water management and quality approach. This team guides the Residential, Retirement Living and Commercial Property asset teams in effective delivery of the Sustainability Policy and supporting toolkits. Our Development and Asset Managers are responsible for ensuring that water management and quality is effectively delivered and managed at the project and asset level.

Members of our Executive team, including the MD, COO and business unit CEOs, General Managers, project and asset managers and functional staff, have sustainability KPIs incorporating water management and quality.

4. Review and Evaluation

To evaluate the effectiveness of the management approach, we have a number of enablers and checkpoints in place that allow ongoing, progressive water management and quality performance tracking and review. Through application of policies and minimum standards, efficient water management is embedded in the design of our products. Setting targets for performance and using rating tools in design and operation ensures that a benchmark is set that can be tracked over time. With the assistance of sub metering and monitoring, data capture and management systems, we can readily check our progress against targets and identify areas of divergence that may require focussed attention.

We engage with industry bodies such as Green Building Council of Australia, Property Council Australia and other external stakeholders to stay informed of current trends, material issues and industry benchmarks. We also regularly assess our performance against that of our peers. Through regular reporting of our progress to senior leadership teams and to our Board, we are constantly reviewing our performance, ensuring that our approach remains relevant and effective. This ability to review progress against targets on an ongoing basis allows quick responses and easy adjustments to the management approach. Adjustments can be implemented at any time and formally embedded in policies and processes which are reviewed annually.

5. FY15 Update

Commercial Property

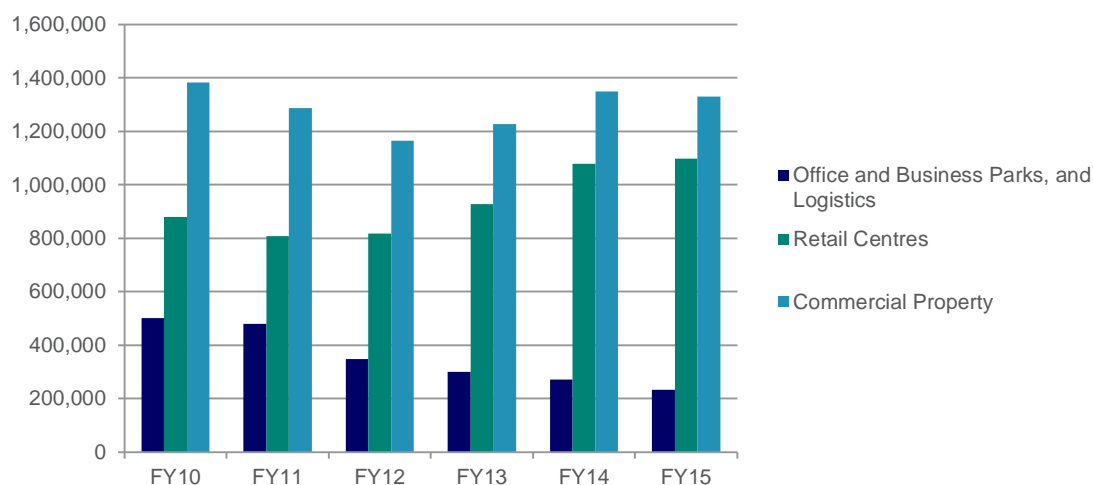
The table below outlines our year on year water intensity reductions over the last seven years.

Water consumption decreased in our Office and Business Parks portfolio in FY15 due to the rectification of water leaks in FY14 and divestment of properties. These results, however, were not replicated in Retail, which saw an increase in water consumption. This was largely due to the continuing shift in our retail tenant mix toward more high water intensity food retailers, gymnasiums and car washes and the upgrading of air cooled packaged HVAC systems to a water cooled central plant that consumes more water.

Commercial Property water consumption (kL)

	FY15	FY14	FY13	FY12	FY11	FY10	FY09
Office and Business Parks	232,249	271,905	299,122	347,865	478,646	502,191	552,248
Retail	1,096,808	1,077,563	928,198	818,058	807,636	880,490	746,485
Commercial Property	1,329,057	1,349,468	1,227,320	1,165,923	1,286,282	1,382,681	1,298,733

Water Consumption - Commercial Property (kL)

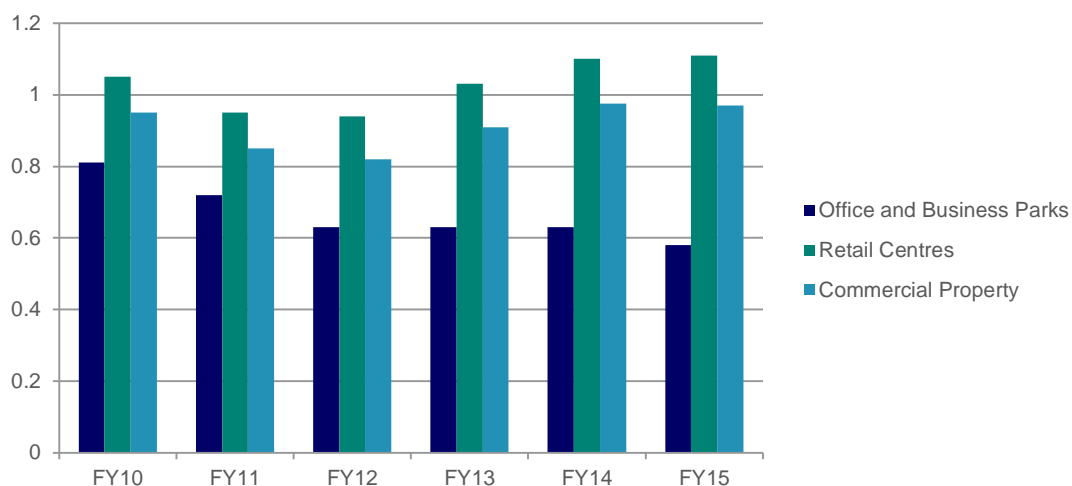


Water consumption intensity (kL/m²)

We track our water consumption on a per square meter intensity basis as a means to understand our water impacts while taking divestments and investments into account.

	FY15	FY14	FY13	FY12	FY11	FY10	FY09
Office and Business Parks	0.58	0.63	0.63	0.63	0.72	0.81	0.89
Retail	1.10	1.10	1.03	0.94	0.95	1.05	0.93
Commercial Property ²	0.96	0.976	0.91	0.82	0.85	0.95	0.92

Water Intensity - Commercial Property (kL/m²)



² Consumption Intensity data calculated based on Office and Business Parks, and Retail consumption figures only. Does not include Logistics.

Water consumption intensity reductions (%)

The table below outlines our year on year water intensity reductions over the last seven years. In FY15, our Commercial Property business committed to a five per cent retail water intensity reduction by FY17. Our office and business parks portfolio target is to maintain the same water intensity figures as FY14.

We achieved an 8 percent water consumption intensity reduction in our office and business parks portfolio in FY15. As outlined above this is predominantly due to the rectification of water leaks in FY14. These results however were not replicated in retail, which saw water consumption intensity held at the same level as FY14. This is a positive outcome considering the continuing shift in our retail tenant mix toward more high water intensity food retailers, gymnasiums and car washes and the upgrading of air cooled packaged HVAC systems to a water cooled central plant that consumes more water.

We will report each year on our progress against our FY17 targets.

Annual water intensity change from prior year

	FY15	FY14	FY13	FY12	FY11	FY10
Office and business parks	-8%	0%	0%	-13%	-11%	-9%
Retail	0%	7%	10%	-1%	-10%	13%
Commercial Property	-2%	7%	10%	-3%	-10%	4%

Case Study: Water Audits

The most challenging environmental target for us to reach in our commercial property portfolio is water. Whilst we exceeded our five year carbon target, we fell short of our water target for several reasons. Firstly, water is relatively inexpensive in Australia which makes it challenging for water projects to be financially viable. Secondly, we have an ageing water metering system that only monitors main water meters which makes it difficult to identify leaks when they occur. And finally, food is preferable to fashion in the current leasing environment and it has provided challenging to engage food based retailers on water due to the lack of metering to identify the amount of water consumed by each retailer.

The Property Management team has been aggressively pursuing strategies to improve water management within retail by upgrading meters and completing detailed water audits on challenging sites.

The first comprehensive water audits were completed in FY15 at our Stockland Baulkham Hills and Burleigh Heads shopping centres which detailed:

- Water consumption breakdown of major users;
- Identification and rectification of current water leaks;
- Updated hydraulic asset register;
- Proposed locations of additional sub-meters; and
- A list of potential water saving projects.

The total potential saving opportunities identified from the two audits equated to approximately \$160,000 with an ROI of 97% (1.06 years pay back).

We have budgeted to conduct water audits at 10 large water consuming retail assets in FY16 and all viable projects will be considered for implementation. This will help us on our journey to achieve 5% water reduction by FY17 (FY14 baseline).



Residential and Retirement Living

Residential and Retirement Living water consumption (kL)

	FY15	FY14	FY13	FY12	FY11
Residential sites	353,620	297,826	76,254	227,853	25,586
Retirement Living villages ³	48,500	162,930	152,065	391,734	4,156
Contractors - Residential	1,469,853	351,046	213,118	1,499,264	348,637
Contractors - Retirement Living	49,285	216,910	60,648	6,356	12,308
Total	1,921,259	1,028,712	502,085	2,125,208	390,687

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, which means we do not review each contractor's data collection processes. In FY 15 we completed a comprehensive review of data sets provided to us by contractors, which ensured a higher level of accuracy than in previous years.

During the period, we divested a number of operational retirement living and aged care assets. These assets were particularly water intensive due to the nature of their operations and collectively were responsible for upward of 60% of the total water consumption across the retirement living business.

At our Cardinal Freeman Retirement Village redevelopment in Sydney, the design includes an underground site detention tank to be used for irrigation of the common landscape area and low water usage appliances including dual flush toilets. WELS rated tap fittings and water efficient washing machines and dishwashers will be provided in common facilities and units.

At our Willowdale Retirement Village development in Sydney, the design includes as standard, low water usage/high efficiency appliances such as washing machines and dishwashers. Dual flush toilets and WELS rated tap fittings will also be provided in common facilities and units. A high efficiency filtration system will be provided for the pool.

³ Retirement Living water consumption for FY14 and FY15 are estimates only, based on total cost of water consumed.

6. Targets and Progress

FY15 Priorities		FY15 Performance
Commercial Property		
Retail		
5% improvement in retail FY14 water intensity by FY17	In Progress	Our water intensity has been maintained even though there has been a shift towards more water intensive retailing and water cooled HVAC systems. Moving forward, we will be completing comprehensive water audits with a greater focus on monitoring and tracking through improved sub-metering. This will provide greater visibility of where water is being consumed within the centres. We will report on our progress on the FY17 target in next year's report.
Conduct NABERS water ratings on all eligible retail assets by FY17	In Progress	Completed 15 out of 22 eligible assets to date. Will focus on remaining assets before FY17. We have set an FY17 portfolio average target of 3.0 stars. Current portfolio average 2.6 stars.
Office and Business Parks		
Maintain FY14 water intensity	Achieved	Office and business parks have further reduced their FY14 water intensity by another 3% in FY15.
Achieve 4.0 star NABERS water portfolio average	Not Achieved	Current portfolio average 3.8 stars.
Residential		
40% reduction in Potable water use in areas we control compared to regional average.	NA	With our expansion into medium density housing, we have further refined this target to focus on new projects with over 500 dwellings or precincts over 750 dwellings. No new projects over 500 dwellings or precincts over 750 dwellings were commenced in FY15. We will carry this target to FY16.
All new projects to deliver the following water quality targets when discharging water from our site and/or in the natural water systems: <ul style="list-style-type: none"> 45% reduction in nitrogen, 65% reduction in phosphorus 85% reduction in suspended solids. 	NA	With our expansion into medium density housing, we have further refined this target to focus on new projects with over 500 dwellings or precincts over 750 dwellings. No new projects over 500 dwellings or precincts over 750 dwellings were commenced in FY15.
Retirement Living		
20% reduction in water use in retirement villages compared to regional averages.	NA	We did not have any new retirement living villages through most of FY15, with the exception of Willowdale which commenced development in late FY15. Water efficiency requirements included within standard design.

FY16 Priorities

Commercial Property

- Rectify utility billing and metering issues that are preventing NABERS ratings being completed for some Retail sites.
- Conduct NABERS water ratings on all eligible retail assets by FY17.
- Conduct water audits at ten large water consuming retail assets in FY16.
- Achieve a 5% improvement in retail FY14 water intensity by FY17.
- Maintain FY14 water intensity for office and business parks (FY17).
- FY17 portfolio average target of 3.0 stars for retail.
- Achieve 4.0 star NABERS water portfolio average for office and business parks (FY17).

Residential

- 40% reduction in potable water consumption per residential lot incorporated into the design of newly developed projects (compared to regional averages) using CCAP Precinct (new projects are defined as those with over 500 dwellings and new precincts over 750 dwellings).
- All new master planned projects over 500 dwellings or new precincts over 750 dwellings to deliver the following water quality targets when discharging water from our site and/or into natural water systems by FY17:
 - 45% reduction in Nitrogen,
 - 65% reduction in phosphorus
 - 85% reduction in suspended solids.

Retirement Living

- Measure baseline performance for water consumption and set water efficiency targets across the portfolio.
- 20% reduction in potable water consumption per retirement unit incorporated into the design of newly developed projects (compared to regional averages) using CCAP Precinct.
- Update CCAP Precinct modelling for all developments that were new for FY15 to demonstrate progress against the target through the development process.

7. Appendix A

Complete list of documents in the DMA series:

Enrich Our Value Chain	1. Governance and risk
	2. Stakeholder engagement
	3. Supply chain management
	4. Employee engagement
	5. Human capital development
	6. Diversity and inclusion
	7. Health and safety
	8. Human rights
Optimise and Innovate	9. Energy and emissions
	10. Climate resilience
	11. Biodiversity
	12. Water management and quality
	13. Waste
	14. Materials
Shape Thriving Communities	15. Asset ratings and certification
	16. Community investment
	17. Community development
	18. Customer engagement
	19. Customer safety and security