

Water Management and Quality

FY17

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 managing 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.

An overview of our management approach is provided on page 8.



Our key achievements

- Achieved a 45 per cent reduction in potable water usage based on the design of newly developed retirement homes (compared to regional averages) using CCAP Precinct (target was 20 per cent).
- Achieved a 30 per cent reduction in predicted potable water use per home across 12 projects between FY15 and FY17. Individual projects are modelled using the CCAP Precinct tool and compared against regional averages. Whilst this result is positive for Stockland it falls slightly short of our target of a 40 per cent reduction.
- All new residential communities achieved our target of 45 per cent or better reductions in nitrogen discharge, five out of six projects achieved our target of 65 per cent or better reductions in phosphorus discharge, and three out of six projects achieved our target of 85 per cent or greater reduction in suspended solids discharge (for suspended solids, all projects exceeded 80 per cent reduction).
- Exceeded a NABERS Water portfolio average target of 3.0 stars for our Retail portfolio.
- Connected 12 of our sales offices across the country to rain tanks or recycled water to supply activities suitable for non-potable water use.

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FY17 priorities and progress

Commercial Property

FY17 PRIORITIES	STATUS	FY17 PROGRESS
Five per cent improvement in Retail FY14 water intensity by FY17.	Not Achieved	In FY17 our Retail portfolio reduced its FY14 water intensity by one per cent. This target has proved challenging due to increases in food tenancies (which are water intensive) and longer hours of operations. We will continue to monitor and implement water savings initiatives in FY18.
Retail NABERS Water portfolio average target of 3.0 stars by the end of FY17.	Achieved	Our NABERS Water portfolio average for Retail is 3.20 stars (up from 2.85 stars in FY16).
Maintain FY14 water intensity levels for Office and Business Parks by FY17.	Achieved	We reduced our Office and Business Parks portfolio water intensity by 1.6 per cent against FY14. The main drivers for the decrease were improved management of irrigation and rectification of various water leaks from taps and toilets.
Achieve 4.0 star NABERS Water portfolio average for Office and Business Parks by the end of FY17.	Not Achieved	Our Office and Business Parks portfolio average for NABERS Water is 3.69 stars, which is a small increase on FY16 (3.66 stars).
Install and commission approximately 200 additional water submetering points across 60 per cent of our Retail portfolio in FY17. This will assist our asset management team in managing their water usage by providing greater clarity and visibility into where water is being consumed.	Achieved	We have installed and commissioned over 200 additional water metering points across 25 out of 41 centres (61 per cent of the portfolio). This has provided greater visibility into where water has been utilised in our centres and allow the quicker rectification of leaks.
Conduct NABERS water ratings on all eligible retail assets by FY17.	Not Achieved	We have undertaken new ratings on our existing centres and included new ratings for centres that have recently come out of development. In FY17 we were not able to complete water ratings for Stockland Merrylands (NSW), Stockland Wetherill Park (NSW), Stockland Cairns (Qld) and Stockland Gladstone (Qld). The reasons for some assets being unable to achieve a rating include metering issues and incomplete utility data. We aim to resolve these complications in time for the next rating cycle in FY18.
Rectify utility billing and metering issues that are preventing NABERS ratings being completed for some retail sites.	In Progress	We rectified issues that had been identified at the start of FY17. Over the year we have identified a number of new issues that we will continue to resolve as part of ongoing management in time for the next rating cycle in FY18.

Residential

FY17 PRIORITIES	STATUS	FY17 PROGRESS
All new residential masterplanned projects to achieve a 40 per cent modelled reduction in total potable water use on a per lot basis using CCAP Precinct (new projects are defined as those with over 500 dwellings and new precincts over 750 dwellings) by FY17.	Not Achieved	12 projects were modelled over the FY15-17 period with a weighted average score of 30% reduction in predicted potable water use. Zero out of six projects achieved a 40% reduction in potable water use. Factors limiting our capacity to meet this target include the removal of regulatory requirements for rainwater tanks by the responsible authority and a lack of water recycling schemes operated by local utilities where our developments are located.
All new residential masterplanned 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. <ul style="list-style-type: none"> 45% reduction in nitrogen 65% reduction in phosphorus 85% reduction in suspended solids 	Partially Achieved	We modelled the following projects Pallara (Qld), Foreshore (Qld), Newport (Qld), Bokarina Beach (Qld), The Address (Vic) and Stamford Park (Qld). All projects achieved or exceeded nitrogen reduction targets. Five out of six projects achieved phosphorus reduction targets. Three out of six projects achieved or exceeded suspended solids target.



FY17 PRIORITIES	STATUS	FY17 PROGRESS
Complete a feasibility study for at least one recycled water partnership to be delivered into a master planned community in FY17.	In Progress	We are conducting feasibility of delivering recycled water to our Sienna Wood (WA) project. We are continuing to work with local authorities and local land owners to maximise the opportunity of bringing recycled water to the project and surrounds.

Retirement Living

FY17 PRIORITIES	STATUS	FY17 PROGRESS
Measure baseline performance for water consumption and set water efficiency targets across the Retirement Living portfolio.	Achieved	We have measured and benchmarked baseline performance on the projects involved in the sub-metering pilot to inform this target. Water efficiency targets have been set for FY18 to FY20 targeting five per cent water efficiency improvement across villages and clubhouses with sub-metering.
All new Stockland developed retirement villages to achieve a modelled (using CCAP Precinct) 20 per cent reduction in potable water use on a per unit basis.	Achieved	We achieved an average reduction per residence in potable water of 45%. Individual project results were: Affinity (WA) 62%, Calleya (WA) 63%, Newport (Qld) 29%, Mernda (Vic) 27%, Birtinya (Qld) 29%, Selandra Rise (Vic) 38%, Willowdale (NSW) 61%.
Complete a water sub-metering and monitoring pilot at two retirement living villages in FY17 for potential rollout across other villages.	Achieved	We completed a water sub-metering and monitoring pilot at Tarneit Skies (Vic) and The Willows (NSW). This pilot will continue into FY18 with key recommendations derived from the first 18 months of baseline data to be implemented across portfolio in the second half of FY18.
Establish a resident 'Green Ambassador' initiative in FY17 to promote sustainable living throughout three selected villages, including awareness sessions that communicate water efficiency tips, cost saving opportunities and the value of sustainability rating tools.	In Progress	Informal Resident Sustainability Awareness sessions have been held at a number of villages including Pine Lake (Vic), Affinity (WA), Gillin Park (Vic) and Tarneit Skies (Vic).

Future priorities

Commercial Property

- Reduce water consumption by five per cent by FY20 in our Retail operations, against the FY17 benchmark.
- Achieve a NABERS Water portfolio average of 3.5 stars for our Retail portfolio by FY20.
- Reduce water consumption by five per cent by FY20 in our Office and Business Parks operations, against the FY17 benchmark.
- Achieve a NABERS Energy portfolio average of 4 stars for our Office and Business Parks portfolio by FY20.
- Focus on leak identification and consumption management with continued commitment to water efficient design in developments and major amenities upgrades.

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, and
 - 85 per cent reduction in suspended solids.
- Continue to progress the feasibility study for **Sienna Wood** (WA) recycled water project.



Retirement Living

- 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.
- Target enhancements in water outcomes through new developments using Green Star (achieve minimum 3 out of 6 credits for Water Credit 1 – WAT1).
- Continue to hold Resident Sustainability Awareness sessions at selected villages to promote sustainable living, including awareness sessions promoting water conservation and efficiency tips, cost saving opportunities and the value of sustainability rating tools.

FY17 performance and case studies

Commercial Property

NABERS Water

Considering our Retail portfolio, we completed 18 NABERS Water ratings in FY17. These ratings cover our existing centres and new ratings for centres that have recently come out of development. We were not able to complete NABERS Water ratings for Stockland **Merrylands** (NSW), Stockland **Wetherill Park** (NSW), Stockland **Cairns** (Qld) and Stockland **Gladstone** (Qld).

The reasons for some assets being unable to achieve a rating include metering issues and incomplete utility data. In some cases we were unable to complete a rating in time for annual reporting and these ratings will be completed later in 2017. In other cases, it is expected that we will rectify metering and data issues in time for the next rating cycle in FY18.

Based on the ratings that have been undertaken, the Retail portfolio average for NABERS Water is 3.20 stars (up from 2.85 stars in FY16). This means we have exceeded our NABERS Water portfolio average target of 3.0 stars for our Retail portfolio for FY17.

NABERS Water ratings have been undertaken for the Office and Business Parks portfolio, however in FY17 we did not complete a NABERS Water rating for **2 Victoria Avenue** (WA), which was exempt under the BEED Act due to vacancy, and for two buildings in the **Mulgrave** (Vic) complex due to data collection issues. No NABERS Water rating was possible for **Durack Centre** (WA) due to billing data estimates. It is expected that we will rectify metering and data issues in time for the next rating cycle in FY18. This year we are required to obtain a NABERS energy rating for **40 Cameron Avenue** (ACT) due to the expiry of an exemption under the BEED Act, however we have been unable to achieve the rating in FY17.

The NABERS Water average for our Office portfolio has improved to 3.98 stars (from 3.71 stars in FY16) mainly due to improved performance at **77 Pacific Highway** (NSW). The NABERS Water average for our Business Parks portfolio has reduced to 3.48 stars (from 3.60 stars in FY16). The reduction is due to the ratings that have not been achieved for the **Mulgrave** complex and the combined rating this year for the three **Trinit** (NSW) buildings. Our combined Office and Business Parks portfolio average is 3.69 stars (up from 3.66 stars in FY16), and thus we did not achieve our target of 4.0 stars for the combined portfolio average by the end of FY17.

Initiatives and performance metrics

In FY17, we expanded our water sub-metering across our retail portfolio and implemented various recommendations from the water audits that were completed in FY16.

The additional water meters have provided the following benefits to our asset teams:

- The ability to effectively and efficiently locate and eliminate water leaks,
- Clarity in water use activities and areas, and
- Educating our tenants on their water usage

Following the installation of submetering numerous leaks have been detected and rectified which has improved our process of managing water usage.

Water consumption decreased in our Office and Business Parks portfolio in FY17 due to the reduction of irrigation at our Business Parks assets and increased vacancy rates at our Perth office assets. While water consumption has decreased in Retail, this is predominantly due to the rectification of leaks. Ongoing water reduction continues to be a challenge in our Retail portfolio because of the continued shift in our retail tenant mix toward more water-intensive uses such as food retailers, gyms and car washes. Extensions to trading hours at some assets also put upward pressure on water use.



The table below outlines our commercial property portfolio water consumption over the last five years.

COMMERCIAL PROPERTY WATER CONSUMPTION (kL)

	FY17	FY16	FY15	FY14	FY13
Office, Business Parks and Logistics	223,328	220,704	232,249	271,905	299,122
Retail	1,112,672	1,153,565	1,096,808	1,077,563	928,198
Total Commercial Property	1,336,000	1,374,269	1,329,057	1,349,468	1,227,320

Water consumption intensity (kL/m²)

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.

	FY17	FY16	FY15	FY14	FY13
Office and Business Parks	0.62	0.65	0.58	0.63	0.63
Retail	1.09	1.11	1.10	1.10	1.03
Total Commercial Property¹	0.98	1.00	0.96	0.98	0.91

Water consumption intensity reductions

In FY15, our Retail business committed to a five per cent retail water intensity reduction by FY17. While we decreased Retail portfolio water consumption intensity in FY17 by 1.8 per cent against FY16, we did not meet our three-year FY15 – FY17 target.

Our Office and Business Parks portfolio committed to maintain the same water intensity figures as FY14 through FY17, which is a target we met by achieving a two per cent decrease (FY14 – FY17). FY17 water consumption intensity decreased by 4.6 per cent against FY16, which is related to changing water requirements of business park property landscaping (less water is required compared to when it was first planted in FY16).

The table below outlines our year-on-year water intensity reductions over the last five years. We will report each year on our progress against our targets.

ANNUAL WATER INTENSITY CHANGE FROM PRIOR YEAR

	CHANGE FROM BASELINE YEAR	ANNUAL INTENSITY CHANGE				
	FY17 FROM FY14	FY17	FY16	FY15	FY14	FY13
Office and business parks	-2%	-5%	12% ²	-8%	0%	0%
Retail centres	-1%	-2%	0%	0%	7%	10%
Total Commercial Property³	0%	-2%	4%	-2%	7%	10%

¹ Consumption Intensity data calculated based on Office and Business Parks, and Retail consumption figures only. Does not include Logistics.

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 Office and Business Parks, and Retail consumption figures only. Does not include Logistics.



CASE STUDY

Water sub-metering drives savings

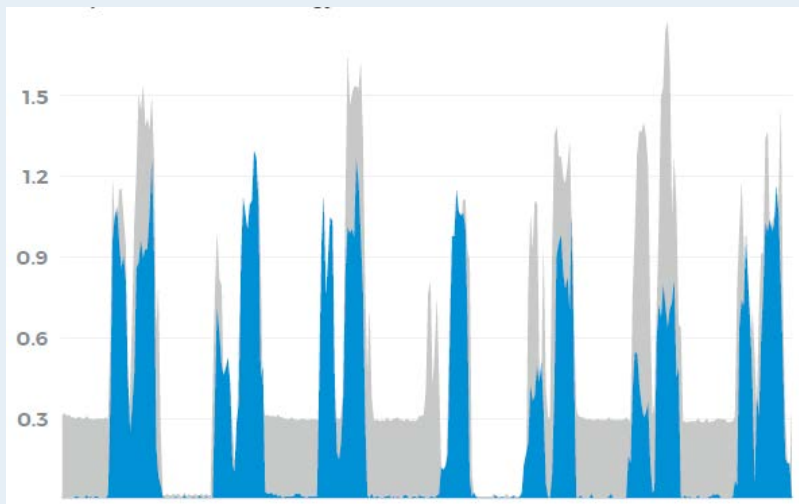
We regularly scan for opportunities to improve the systems we use to track resource use and identify efficiency opportunities across our portfolio. Over the past year, we expanded the installation of water submetering across almost all of our retail centres. Installation of water submetering means that instead of only being able to track water use of an entire site, we are able to track the water use of individual tenancies, common areas, amenities, and equipment such as cooling towers.

We initiated the submetering rollout so that we could better understand water use in our centres and quickly identify how we can partner with our tenants to achieve water efficiencies.

Efficiencies achieved at Stockland **Baulkham Hills** (NSW) showcase the benefits that submetering will provide across our portfolio into the future. Our centre at **Baulkham Hills reduced its water use by one million litres and saved \$3,000**. The submetering enabled us to identify particular tenancies with whom we could partner to take advantage of efficiency opportunities unearthed by the submetering data.

For example, we worked with a centre restaurant to shift it to air cooling technology (instead of water cooling), to install 10-second timers on taps, and to reduce its overnight water usage from 20 per cent of evenings to only one evening per month. These initiatives alone have saved approximately 5kL of water per day and have a return on investment period of less than twelve months.

Other benefits of the submetering include prompt leak detection and correction, as well as daily alarms that escalate issues on site to the engineering team.



Water consumption of a tenancy at Baulkham Hills Shopping Centre over a seven-day period before (grey) and a seven-day period after (blue) the installation of sub-metering and subsequent implementation of water efficiency initiatives.

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 conservation

We have been working to a Residential business target of a 40 per cent reduction in water use compared to local metropolitan averages (FY15 – FY17 target). Over the twelve projects analysed using water performance modelling, we have achieved a weighted average reduction of 30 per cent (FY15 – FY17 performance). We generally achieve higher rates of reduction where the local utilities either provide centralised recycled water or establish strong compliance requirements.



Water reductions for projects modelled in FY17 are indicated in the table below.

RESIDENTIAL DEVELOPMENT WATER USE MODELLED PERFORMANCE

	WATER USE REDUCTION (%)
Pallara (Qld)	3
Foreshore (Qld)	4
Newport (Qld)	3
Bokarina Beach (Qld)	4
Edgebrook (Vic)	2
Stamford Park (Vic)	27

Water quality

All residential communities assessed using water quality modelling in FY17 reported achieving 45 per cent or better reductions in nitrogen discharge levels. Five out of six projects achieved 65 per cent or better phosphorus reduction, with the remaining project, **Bokarina Beach** (Qld), achieving a 60 per cent reduction. Three out of six projects achieved 85 per cent or greater reduction in suspended solids, with all projects exceeding 80 per cent reduction in accordance with local development approval requirements.

RESIDENTIAL DEVELOPMENT WATER QUALITY MODELLED PERFORMANCE

	NITROGEN REDUCTION (%)	PHOSPHORUS REDUCTION (%)	SUSPENDED SOLIDS REDUCTION (%)
Pallara (Qld)	45	65	86
Foreshore (Qld)	45	71	80
Newport (Qld)	71	80	91
Bokarina Beach (Qld)	53	60	81
The Address (Vic)	46	72	84
Stamford Park (Vic)	77	84	93

Retirement Living

Our water sub-metering and monitoring pilot at **Tarneit Skies** (Vic) and **The Willows** (NSW) has identified a number of opportunities to improve the operational performance of the villages:

- improved detection and repair of water leaks,
- seasonal recommendations to adjust HVAC settings to efficiently operate throughout the year, and
- reviewing pool operations and gas heating.

Our Retirement Living 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.

We used the data from this pilot as a benchmark to set a target five per cent water efficiency improvement for the FY18 – FY20 target period. We will measure performance against these targets in FY18.



We undertook a sustainability review of the clubhouse at **Affinity** (WA) to identify opportunities for improvements to the operational efficiency and overall cost of the building. Some key findings were as follows:

1. The clubhouse performs in line with what is expected from the 4 Star Green Star design for electricity and water;
2. The single largest driver for efficiency and utility cost is the swimming pool operation and opportunities to trial a liquid pool blanket are being explored in FY18;
3. Improvements to the functionality and user interface of the building management system will provide the village management team greater control over the day-to-day operational performance of the clubhouse and allow the team to be more responsive to the energy and water demands of the building; and
4. The residents consulted in the review were very engaged with the process and keen to be involved in future discussions.

The retirement living design guidelines encourage reductions in water use and improved water efficiency. Our standard design requires water efficient appliances and fittings, rainwater harvesting where possible, and drought tolerant landscaping and efficient irrigation. At several villages including **Affinity** (WA), **Gowanbrae** (Vic), **Tarneit Skies** (Vic) and **Oak Grange** (Vic), resident-led 'monitoring' groups devote their own time to ensure that the village clubhouse and other common areas are operating as efficiently as possible. This includes identifying running or leaking taps and fixtures that are not in use.

Contamination and remediation

There were no significant spills to report in FY17.⁴

Some of our undeveloped residential sites contain land that was contaminated before we acquired them. Contamination sources include asbestos, methane, acid sulphate soils, copper chromium arsenate and general agricultural waste. Seven sites have been confirmed contaminated, two have been remediated and five are partially remediated. Total area of contaminated land that has completed remediation is 21.6 hectares with approximately 2 hectares still to be remediated.

Management approach

Management approach overview

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

As part of our sustainability requirements, projects consider and plan environment initiatives, including water management and quality. This can be through the development of an environment plan, while undertaking Green Star ratings or for operating assets through the asset or capital expenditure planning process.

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 commercial property 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 benchmark water consumption and performance across our office, business parks and retail assets.</p> <p>Given the current climatic conditions coupled with the cost of water, our office and retail programs in operations have been focused primarily on leak identification and consumption management. We integrate water-efficient design in our developments and major amenities upgrades using specified products and minimum standards aligned to achieve Green Star ratings</p>

⁴ Significant spills are spills that result in liabilities for our organisation (as defined in the GRI G4 Sustainability Reporting Guidelines: Implementation Manual).



Residential	<p>To construct and deliver projects that minimise water use and contribute positively to the catchments in which we operate.</p> <p>The management of stormwater run-off and the ability to maintain the quality of water supply to our residents, as well as the quality of water that is then released to the environment.</p> <p>Provision of lower cost recycled/alternative water supply options.</p>	<p>Effectively managing these aspects and integrating them into the design and development of our communities facilitates approvals processes and ensures the protection and preservation of ecosystems and climate resilience in and around communities.</p>	<p>We monitor water use during both construction and delivery of our projects. The CCAP Precinct tool⁵ is used to model the water use at all new master planned 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). Stockland requires a WSUD 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 retirement living 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 CCAP¹ Precinct tool to predict water use and test options for reducing consumption in the completed project.</p> <p>In operations, piloted water sub-metering and monitoring at two villages with the view to apply the strategies to the wider Retirement Living portfolio.</p>

Design and development

We use the Green Building Council of Australia (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. Our Residential business for example, ran the CCAP Precinct tool on new bids to buy land. The Retirement Living business uses the CCAP Precinct tool on new retirement village developments or redevelopments, which enables the business to identify water reduction opportunities compared to regional averages.

All of our residential projects in NSW are BASIX compliant, and water tanks are typically provided at all homes to supply a combination of irrigation, toilets and laundry. At our **Bells Reach** project in 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**, **The Grove**, **Highlands** and **Selandra Rise**) are supplied with reticulated recycled water to supply irrigation requirements at a minimum. In WA, most of our water used on site is supplied via a bore and managed through a water extraction license.

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 processes do not allow water discharge into significant areas of biodiversity unless it is demonstrated that there will be no significant impact (and thus we do not report on bulk discharge separately). 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.

⁵ We use the CCAP Precinct tool to help 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 and identifies the most cost-effective options to improve water management.



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 Australia require WSUD targets to be met when designing projects. We have a mandatory requirement to meet minimum standards for WSUD across all of our projects regardless of local requirements. Residential projects are required to demonstrate what targets will be achieved and actions will be taken as part of their specific environmental plan. At our **Birtinya** (Qld) project we have installed signage wherever water treatment areas and biopods have been installed. The purpose of the signage is to explain the role and community benefit of the water treatment infrastructure. On most of our projects where we have waterways traversing our site, we undertake riparian land restoration works and vegetation rehabilitation. On our **Willowdale** (NSW) project, such activities undertaken through the year have helped to stabilise creeks, provide habitat for native species and improve water quality.

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. Whilst our contractors preferentially use recycled water, this is often 'topped up' with other water and metrics on these levels are not available. Therefore, we do not report the amount of water recycled within residential and retirement living. This is an opportunity for our operating properties and we are investigating metering to capture this in future.

Operations

In Commercial Property operations, we undertake NABERS Water ratings on our Retail, Office and Business Parks portfolio to benchmark the performance of our assets against industry standards and to measure the effectiveness of the initiatives and actions we implement.

For many years, we have invested in water submetering systems to monitor water consumption in our office and retail assets. Data is monitored and analysed to provide useful insights on where we need to target excessive water consumption. Water submetering is a key tool for us to manage consumption and is critical to our ability to achieve our targets. This has provided improved clarity on where water is being consumed and assisted our asset management teams to rectify wastage more efficiently.

In our Residential business, water efficient landscaping is a feature of most of our communities 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** (Qld) project in Townsville, we use rain sensors that can be controlled remotely to operate a drip irrigation system and have specified drought resistant Zoysia grass for all roadsides and parks. We also require drought resistant species in residents' sales covenants. The use of this drought-tolerant species saves around 40 per cent of the water required to irrigate Buffalo or Couch grasses.

The benefit of the system is that landscaped areas are only provided with the required amount of water and therefore reduce water wastage. At **Willowdale** (NSW) we have been designing no-irrigation landscaping, and **McKeachies Run** (NSW) included a 100-kilolitre tank to service irrigation needs.

We generally transfer 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 at our other residential projects. We sometimes collect water for reuse in watering and maintaining parks and public spaces, however we do not record the total volume captured before handing over control to Council.

In our Retirement Living business, upgrades to operational village clubhouses and common areas include water saving measures such as water-efficient tap fittings and toilets and utilising rainwater tanks for water collection and irrigation where possible. When renovating independent living units for resale, they are refitted with water efficient appliances and fittings to improve their saleability and reduce water demand for the new resident.

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 the Commercial Property, Residential and Retirement Living business units. 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 and CEO.

Our General Manager Sustainability, 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 Committee, including the Managing Director and CEO, COO and business unit CEOs, General Managers, project and asset managers and functional staff, have sustainability KPIs incorporating water management and quality.

Review and evaluation process

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 ensure that a benchmark is set that can be tracked over time. With the assistance of submetering and monitoring, data capture and management systems, we can readily check our progress against targets and identify areas of divergence that may require attention.

We engage with industry bodies such as GBCA, Property Council of 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 that are reviewed annually.



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