

Waste and Materials

FY18

Why this is important to Stockland

We understand we have a role to play in protecting and enhancing the natural, built and human environment. We acknowledge that the development and operation of buildings account for large quantities of waste and material usage, which we can manage to minimise negative impacts.

Waste treatment and disposal can have a major impact on the surrounding environment. Examples include nutrient pollution of groundwater and waterways, air quality issues from incineration, and greenhouse gas emissions from landfills. We take these impacts very seriously and are committed to managing our waste efficiently. We seek to reduce, reuse and recycle our waste whenever feasible, minimising our contribution to landfill.

We equally acknowledge that the use of virgin materials can have significant impacts on environmental and human health. By specifying the use of ecologically and health preferable materials and recycled materials in our developments, we are able to deliver tangible environmental, social and business benefits.

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 waste and materials, available as part of our sustainability reporting suite at [Our Management Approach to Waste and Materials](#).



Our key achievements

- Completed NABERS Waste ratings on three selected assets in our Office and Business Parks portfolio.
- Diverted 89 per cent of waste from landfill across our Commercial Property redevelopments.
- Diverted 94 per cent of waste from landfill across our Residential developments.
- Diverted over 90 per cent of waste from landfill at our Birtinya (Qld) retirement living development.

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
Achieve a minimum 45 per cent waste diversion from landfill for Retail Town Centre, Workplace and Business Parks operations (by FY20).	In progress	We achieved a diversion from landfill of 33 per cent for Retail Town Centres and 37 per cent for Workplace and Business Parks. We continue to enhance waste management across our Commercial Property operations in pursuit of our FY20 target.
Achieve a minimum 85 per cent waste diversion from landfill for Retail Town Centre, Workplace and Business Parks developments (by FY20).	Achieved	Our redevelopment of Stockland Green Hills (NSW) achieved a final landfill diversion rate of 89 per cent. Our development at Birtinya (Qld) has achieved a landfill diversion rate of 95 per cent to date and our redevelopment of Stockland Wendouree (Vic) achieved a 93 per cent.

Communities

Residential

FY18 PRIORITIES	STATUS	FY18 PROGRESS
Achieve a minimum 60 per cent waste diversion from landfill for all new residential construction contracts by FY20.	In progress	We achieved a diversion from landfill of 94 per cent across all residential developments.
Develop and embed sustainable timber and concrete specifications into new civil/landscape contracts.	In progress	We have developed a civil contractor sustainability schedule that specifies sustainability requirements for aspects such as materials, waste, and environmental management. We will apply the schedule to new civil contracts in FY19.

Retirement Living

FY18 PRIORITIES	STATUS	FY18 PROGRESS
Undertake a gap analysis to gather and analyse current waste and recycling data at a select number of retirement living communities and to develop initiatives to improve waste reporting and management.	Achieved	We undertook a Waste Management and Recycling Review at Cardinal Freeman (NSW) to identify opportunities to improve current waste and recycling practices. We will be seeking to implement those recommendations in FY19.

Future priorities

Commercial Property

- Achieve a minimum 45 per cent waste diversion from landfill for Retail Town Centre, Workplace and Business Parks operations (by FY20).
- Achieve a minimum 85 per cent waste diversion from landfill for Retail Town Centre, Workplace and Business Parks developments (by FY20).
- Achieve a minimum 90 per cent waste diversion from landfill for developments seeking Green Star – Design & As Built certification.
- Investigate the delivery of Pulpmaster organic waste management systems across more of our retail town centres.

Communities

Residential

- Achieve a minimum 60 per cent waste diversion from landfill for all new residential construction contracts by FY20.
- Expand application of our sustainability contractor schedule from civil contracts to include built form contracts.

- Develop partnership with an environmental organisation to develop and pilot resident operational waste management across our communities.

Retirement Living

- Undertake a portfolio waste and recycling review and identify the top three waste generating retirement living communities based on cost and quantity of waste diverted from landfill.
- Conduct a minimum of one LCA on a retirement living development project in FY19.

FY18 performance and case studies

Development waste

Commercial Property

Our Retail Town Centre development projects in FY18 included the final stages of Stockland Green Hills (NSW), the commencement of Stockland Birtinya (Qld) and the extension of Stockland Wendouree (Vic). Both Stockland Green Hills and Stockland Birtinya are registered Green Star projects so construction waste targets are a core commitment for the developments. Stockland Wendouree, due to the relatively small scale of the project in terms of floor area, did not pursue a Green Star rating, however still committed to construction waste targets among a range of other sustainability commitments for the project in lieu of a Green Star rating.

For these development projects, Stockland Green Hills, registered under the legacy version of Green Star (target diversion rate of 80 per cent), achieved a diversion rate of 89 per cent while Stockland Birtinya, registered under the more recent version of Green Star (target diversion rate of 90 per cent) achieved a diversion rate of 95 per cent. The diversion rate at Stockland Wendouree was 93 per cent (target 80 per cent).

RETAIL DEVELOPMENT WASTE PROFILE (TONNES)

	FY18	FY17	FY16	FY15	FY14
Total waste	4,371	1,396	3,253	6,428	4,453
Waste recycled	3,910	678	2,684	5,940	3,778
Waste to landfill	461	718	569	487	924
Diversion from landfill (%)	89%	49%	83%	92%	85%
Developments included (% by project value)	100%	96%	100%	100%	100%

Communities

Our FY18 diversion from landfill rate for Communities development was 94 per cent, which exceeds the target rate of 60 per cent. The total waste generated has continued to decline (compared to previous years) due in part to improved management of waste on site and because several larger residential community projects no longer require the export of large amounts of debris from site. We continue to investigate spoil and timber reuse in master planned development projects, for example at Willowdale (NSW) we have reused timber in the provision of community infrastructure and nesting boxes in the riparian zone.

The table below summarises the waste streams from our greenfield Communities developments.²

COMMUNITIES DEVELOPMENT WASTE PROFILE (TONNES)

	FY18	FY17	FY16	FY15	FY14
Total waste	19,625	41,237	35,424	82,033	80,135
Waste diverted from landfill	18,441	39,923	33,881	78,415	78,149
Waste sent to landfill	1,184	1,314	1,542	3,617	1,986
Diversion from landfill	94%	97%	96%	96%	98%

² Data on construction waste generated by contractors at sites where we do not have operational control (e.g. brownfield or sites with a single principal contractor) is not collected or reported. Note that due to the nature of greenfield developments, the waste figures generated on a per-year basis do not necessarily reflect the level of activity for that year as waste can be stored for a period of time onsite until reused, or exported offsite to landfill when the space becomes unavailable.



CASE STUDY

Our Better Business Partnership at Stockland Cammeray

Stockland Cammeray (NSW) participates in the Better Business Partnership, an initiative of the local councils of Ku-ring-gai, Willoughby, and North Sydney that focuses on enhancing the sustainability performance of local businesses and celebrating their achievements. While Stockland Cammeray focuses on all six pillars encouraged by the Better Business Partnership (waste, transport, sustainable purchasing, water, community support, and energy), a highlight has been a doubling of the waste diversion rate from landfill, which increased from 30 per cent in February 2017 to 60 per cent in early 2018.

Retailers were sent a 'Word on Waste' education memo that outlined their waste responsibilities, and have embraced the program and work with our centre management team to overcome challenges. Retailers and our cleaning contractors have noticed that since initiating the focus on waste diversion, the waste rooms have been more organised, cleaner, and easier to manage. Other initiatives contributing to the centre's enhanced waste management include:

- Training of cleaning staff to assist with increasing recycling rates
- Inclusion of 'Towards Zero Landfill' bins in the car park that encourage recycling of clothing, toys, footwear, and similar items
- Special bins and education focusing on paper recycling and organics recycling.

The centre also receives a monthly report from auditors that enhances the monitoring and tracking of general waste and recycling rates. Centre management is working to implement random internal waste audits to confirm retailers are sorting waste appropriately, as well as providing the capacity for organics composting on site.

Lisa Vaughan, Stockland Cammeray Centre Manager, said "I feel it is my responsibility, both corporate and personal, to drive sustainability at Stockland Cammeray." Thanks to our team's efforts, the centre was a finalist in the Better Business Partnership's 2018 Better Business Awards.

Operational waste

Commercial Property

In FY18, we continued to monitor and analyse our waste data streams to understand where opportunities exist to further improve the levels of recycling at our Retail Town Centre, Workplace and Business Parks sites. Our Retail Town Centre operations diverted 33 per cent of waste from landfill, while our Workplace and Business Parks operations diverted 37 per cent of waste from landfill. Our continued focus on waste management across our portfolio, combined with enhanced data quality and completeness from our waste contractors, will assist us to meet our FY20 target of 45 per cent diversion.

OPERATIONAL WASTE (TONNES)

	RETAIL TOWN CENTRES					WORKPLACE AND BUSINESS PARKS				
	FY18	FY17 ³	FY16	FY15	FY14	FY18	FY17 ³	FY16	FY15	FY14
Total waste	17,577	17,351	17,895	16,717	16,809	1043	1,193	1,182	1,298	1,607
Total waste to landfill	11,730	11,969	10,858	11,537	11,549	661	739	680	806	763
Total waste recycled	5,846	5,382	7,038	5,181	5,260	383	454	502	491	944
Diversion from landfill (%)	33	31	39	31	31	37	38	42	38	53
% portfolio reporting	97	95	95	95	95	85	85	100	80	100

The quality of our waste data is dependent on the quality of data provided to us by our waste contractors. We have been working closely with our waste contractors over the last year to incorporate the new Better Buildings Partnership (BBP) Operational Waste Reporting Guidelines, as developed by the City of Sydney into our future waste contracts. This provides consistency in the quality and standard of the data being reported across our portfolio. We will continue to engage a specialised waste consultant in FY19 to help monitor, reconcile and interrogate the waste data and further improve the accuracy and quality of the information that is provided by our contractors. We will also focus on opportunities in organics recycling to help improve waste diversion rates by the end of FY20.

In FY18 our teams at Stockland Wetherill Park (NSW) and Stockland Merrylands (NSW) installed Pulpmaster systems at their centres, following on from the successful pilot conducted at Stockland Cleveland (Qld) in FY17. Pulpmaster systems process

³ FY17 results restated due to contractor data reporting error.

organic wastes on site and enable cost reductions and improved diversion rates where they are used. In FY19 we will investigate the delivery of Pulpmaster systems to more retail town centres.

In FY18 we completed NABERS Waste ratings at 66 Waterloo Road (NSW), 601 Pacific Highway (NSW), and 16 Giffnock Avenue (NSW). More information on these ratings is provided in our [Asset Rating and Certification Deep Dive](#).

Retirement Living

During the year, we commissioned a waste management and recycling review of Cardinal Freeman (NSW). The review was initially undertaken to investigate alternative collection procedures that would improve on inefficiencies and traffic congestion associated with current kerbside waste collection. As part of this process, we also reviewed the current waste contract to understand if opportunities existed to improve the waste performance at the village and associated development. A key recommendation of the review was to explore alternative methods of waste collection that would reduce bin movements without significant changes to infrastructure. Discussions with the contractor have centred on the use of a small truck service to service bins directly from the waste room, with the aim of reducing costs and easing traffic congestion. This recommendation will be implemented in FY19.

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

Materials

There has been continued industry attention to the role of non-conforming and non-compliant building materials, both in the context of supply chain verification and asset management. In addition to working with our suppliers in relation to development and construction work, we undertake comprehensive due diligence for all new real estate acquisitions including in relation to construction materials. We have also been responsive to new and anticipated legislation relating to façade cladding on our existing asset portfolio.

Initiatives implemented in FY18 to reduce the impacts of materials in our developments include:

- Developing a sustainability contractor schedule that establishes a baseline suite of sustainability initiatives that we will require in new civil contracts. The schedule also includes opportunities for project-specific initiatives to be delivered through our contractor partners. The schedule enables us to be clear on our waste management and product and material selection expectations for each development. We have recently received positive feedback from our civil construction partners and will embed the schedule in a number of new contracts early in FY19.
- Began investigating options for substituting raw materials such as aggregates for coal by-products in our construction processes such as roadways and pavements. We will continue to work with suppliers in FY19 on product availability and appropriateness for use on selected projects.



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