Stockland

Waste and Materials

FY19

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 acknowledge the finite nature of resources and the limited opportunities to dispose of waste. As such, we seek opportunities to implement and transition to a more circular economy, closing material loops through recognising that waste has a value and designing for reuse and regeneration. 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 FY19 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

- Diverted 94 per cent of waste from landfill across our Retail Town Centre developments, outperforming our waste target.
- Diverted 98 per cent of waste from landfill across our Residential developments, outperforming our waste target.
- Diverted over 90 per cent of waste from landfill at our Birtinya (Qld) and Newport (Qld) retirement living developments.

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

In this document you will find:

FY19 priorities and progress

Commercial Property

FY19 PRIORITIES	STATUS	FY19 PROGRESS
Achieve a minimum 45 per cent waste diversion from landfill for Retail Town Centre, Workplace operations (by FY20).	In Progress	Currently at 38 per cent for Retail Town Centres and 29 per cent for Workplaces. A new waste contract will see greater landfill diversion rates across multiple waste streams in FY20.
Achieve a minimum 90 per cent waste diversion from landfill for developments seeking Green Star – Design & As Built certification.	Achieved	Diverted 94 per cent per cent of waste from landfill across our Commercial Property Retail Town Centre redevelopments at Birtinya (Qld) and Baringa (Qld).
Investigate the delivery of Pulpmaster organic waste management systems across more of our retail town centres.	In Progress	We are investigating the performance of the Pulpmaster systems at Stockland Merrylands (NSW) and Wetherill Park (NSW) to gain an understanding of its operations in a larger retail asset.

Communities

Residential

FY19 PRIORITIES	STATUS	FY19 PROGRESS
Achieve a minimum 60 per cent waste diversion from landfill for all new residential construction contracts by FY20.	In progress	Diverted 98 per cent of construction waste from landfill across our Residential communities in FY19.
Develop and embed sustainable timber and concrete specifications into new civil/landscape contracts.	Complete	We have developed a civil contractor sustainability schedule that specifies sustainability requirements for aspects such as materials, waste, and environmental management.
Expand application of our sustainability contractor schedule from civil contracts to include built form contracts.	In Progress	During the year we embedded our energy and water sustainability targets into our built form design and delivery templates. The next step will be to expand to other environmental and social initiatives.
Develop a partnership with an environmental organisation to develop and pilot resident operational waste management across our communities.	Achieved	During the year we fostered partnerships with Compost Revolution, the O Initiative, and Terracycle and will pilot the partnerships during FY20.

Retirement Living

FY19 PRIORITIES	STATUS	FY19 PROGRESS
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.	Achieved	In preparation for a new waste and recycling contract to be implemented as of 1 July 2019, a portfolio review of 31 villages was undertaken. The remainder of the villages will be reviewed and rolled into new contract upon completion of existing contracts.
Conduct a minimum of one life cycle assessment (LCA) on a Retirement Living development project in FY19.	Not Applicable	There were no new Retirement Living development projects for FY19, therefore no opportunity to deliver this priority.

Future priorities

Group

- Develop our next phase of long term waste and materials targets (FY21-23).

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.
- Embed new waste contract with Waste Options and track performance against contract criteria for reporting and landfill diversion.
- Review operational waste and recycling performance and opportunities across Sydney Head Office.

Communities

Residential

- Achieve a minimum 60 per cent waste diversion from landfill for all new residential construction contracts by FY20.
- Extend our application of our sustainability contractor schedule from civil contracts to include Stockland built form contracts.
- Develop a partnership with an environmental organisation to pilot resident operational waste management across our communities.

Retirement Living

- Embed new contract with Waste Options and implement three new initiatives across portfolio.
- Set a portfolio waste diversion target for FY21 across villages included in Waste Options contract.

FY19 performance and case studies

Development waste

Commercial Property

Our Retail Town Centre development projects in FY19 included the final stages of construction at Stockland Birtinya and the commencement of construction at Stockland Baringa, both on the Sunshine Coast (Qld). Both are registered Green Star Design and As-Built projects targeting 5 stars, so construction waste targets are core commitments for the developments, with a target diversion rate of 90 per cent.

Stockland Birtinya achieved a rate of 97 per cent of construction waste diverted at the completion of the project. While not due for completion until late 2019, Stockland Birtinya has achieved a waste diversion rate of 93 per cent to date.

RETAIL DEVELOPMENT WASTE PROFILE (TONNES)

	FY19	FY18	FY17	FY16	FY15
Total waste	878	4,371	1,396	3,253	6,428
Waste recycled	829	3,910	678	2,684	5,940
Waste to landfill	50	461	718	569	487
Diversion from landfill (%)	94%	89%	49%	83%	92%
Developments included (% by project value)	100%	100%	96%	100%	100%

Communities

Our FY19 diversion from landfill rate for residential masterplan developments was 98 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 have a number of excellent individual project results, such as Aura (Qld), where 100 per cent of plastic was able to be recycled.

Examples of waste reduction and diversion through civil and landscape works include:

- Timber: Timber is commonly mulched and reused for landscape establishment, weed management and stabilisation. Timber is also reused on site to create nature play spaces, such as at Sienna Wood (WA), or to create landscape furniture, such as at Stoneridge (Qld). Timber and excess rock has also been used in natural area rehabilitation works at Whiteman Edge (WA), and as riparian corridor restoration and nesting box construction at Willowdale (NSW).
- Topsoil and fill materials: We also manage materials onsite through reuse of fill materials, for example at Vale and Foreshore (Qld), where civil works materials were balanced across the site. We also reuse topsoil removed from roadways and construction areas to improve soil quality and depth at landscape and open space areas. Where we have surplus concrete or asphalt, we have crushed and reused it onsite, for example in retaining walls and in the construction of community gardens, such as at Calleya (WA).
- Buildings and materials: We will often reuse or repurpose our sales centres instead of removing them once no longer required. For example, we have recently rebranded our North Lakes (Qld) retirement living village sales and information centre, to support our residential Promenade project at Rothwell (Qld).

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

COMMUNITIES DEVELOPMENT WASTE PROFILE (TONNES)

	FY19	FY18	FY17	FY16	FY15
Total waste	41,093	19,625	41,237	35,424	82,033
Waste diverted from landfill	40,430	18,441	39,923	33,881	78,415
Waste sent to landfill	663	1,184	1,314	1,542	3,617
Diversion from landfill	98%	94%	97%	96%	96%

[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

Showcasing waste at Sustainable Park

Our Highlands community, nestled in the heart of Melbourne's northern outer ring suburb of Craigieburn, has a long history of demonstrating leading sustainability initiatives. One winding street, known as Sustainable Drive, is dedicated to bringing to life various opportunities for residents to demonstrate their community commitment to living greener. Among the initiatives are 7 star energy efficient homes, solar and battery offers for residents, and homes demonstrating Livable Housing Australia Gold Standard accessibility ratings.

Waste management and reuse of materials is also a big ticket at Sustainable Drive, including through the design and construction of Sustainable Park. The recently opened Sustainable Park, located on Sustainable Drive, is a 1.5 hectare public park and playground for the community that has been constructed from recycled materials from in and around the community. The playground's centre piece is called "The Nest", a spiral staircase tower surrounded by stick cladding collected from around Highlands. Concrete steps, timber animals, carved logs, tree sculptures, musical instruments and tyre spinners make up the play space. The park makes use of and recycles old construction materials such as rocks, reclaimed house bricks, concrete pipes and pillars and tyres.

Opportunities for residents to manage their own waste is also a key theme on Sustainable Drive. A local business "Big Bio", focuses on 'Circular Food'. They turn food waste into fertiliser using industrial worm farms. For Sustainable Drive residents, Stockland is offering packages to each home of products from Big Bio including a compost bin, a worm farm and organic fertiliser.

Operational waste

Commercial Property

In FY19, 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 Park sites. Our Retail Town Centre operations diverted 38 per cent of waste from landfill, while our Workplace and Business Parks operations diverted 29 per cent of waste from landfill, falling short of our 45 per cent diversion targets.

To improve our waste diversion in FY20 we have embedded a new waste contract with Waste Options and will track performance against contract criteria for reporting and landfill diversion. The principle contract arrangement allows for standardised reporting across the portfolio and optimisation of costs.

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					WORKPLACES				
	FY19	FY18	FY17[3]	FY16	FY15	FY19	FY18	FY17[3]	FY16	FY15
Total waste	17,265	17,577	17,351	17,895	16,717	1,007	1043	1,193	1,182	1,298
Total waste to landfill	10,768	11,730	11,969	10,858	11,537	712	661	739	680	806
Total waste recycled	6,497	5,846	5,382	7,038	5,181	295	383	454	502	491
Diversion from landfill (%)	38	33	31	39	31	29	37	38	42	38
% portfolio reporting	97	97	95	95	95	85	85	85	100	80

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 engaged 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 continue to focus on opportunities in organics recycling to help improve waste diversion rates by the end of FY20.

[3] FY17 results restated due to contractor data reporting error.

In FY19 we continued our operation of Pulpmaster systems at Stockland Wetherill Park (NSW), Stockland Merrylands (NSW) and Stockland Cleveland (Qld). Pulpmaster systems process organic waste on site and enable cost reductions and improved diversion rates where they are used. In FY20 we will investigate opportunities for more organics recycling at our Retail Town Centres.

Retirement Living

In FY19, we completed a national tender to engage a head contractor responsible for waste and recycling services under an integrated waste management services agreement for those retirement communities, retail town centres and workplace and logistics assets that have current contractual arrangements expiring at the end of the financial year. As part of this process, we incorporated the Better Buildings Partnership (BBP) Operational Waste Reporting Guidelines, which was developed through an industry partnership with the City of Sydney; 31 retirement communities were included in the tender.

In FY20 we will establish a portfolio performance baseline to monitor, reconcile and interrogate the waste and recycling data and further improve the accuracy and quality of the information that is provided by our contractors. This information will be used to develop portfolio-wide diversion targets and assess organics and battery recycling opportunities to help improve waste diversion rates by the end of FY21.

Materials

There has been continued industry attention to the role of non-conforming and non-compliant building materials as well as materials that carry a lower environmental footprint, both in the context of supply chain verification and asset management. We undertake comprehensive materials verification processes in our construction projects, including using a materials verification register. This materials register outlines the minimum verification and certification requirements in regard to the materials' quality, human rights practices, environmental standards and health standards. We have also been responsive to new and anticipated legislation relating to façade cladding on our existing asset portfolio.

Initiatives implemented in FY19 to reduce the impacts of materials in our developments include:

- Completion of our sustainability contractor schedule 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. The schedule is now being piloted on our Calleya (WA) project in Western Australia and will be rolled out at one New South Wales and one Queensland project in FY20.
- On our Western Australia projects, we utilise "Green Concrete" or concrete where traditional aggregates are substituted for Fly Ash. Similar products, Ultramax and E-crete, are being used at Cloverton and Highlands (Vic). We began investigating options for substituting raw materials such as aggregates from coal by-products and recycled plastics in our construction processes such as roadways and pavements. We will continue to work with suppliers in FY20 on product availability and appropriateness for use on selected projects.
- Other products being trialled and increasingly being used in our projects include biodiesel substitute in lieu of traditional diesel. At our North Shore (Qld), Altrove (NSW) and Highlands (Vic) projects we are installing recycled plastic landscape elements such as garden edging bollards and seating. At Foreshore we have successfully trialled a water based prime in paving construction instead of traditional oil based prime, reducing contamination risk to the surrounding wetland.
- In partnership with the Supply Chain Sustainability School we developed the "Sustainable Procurement for your Supply Chain" online education module aimed at project teams who want to improve their knowledge of Sustainable Procurement opportunities.

CASE STUDY

Empowering residents in the war on waste

Creating and shaping sustainable, resilient communities that thrive now and into the future means we need to put our customers at the heart of our decisions, involving them in the process from start to finish. In our residential developments, we are empowering residents in their communities to make a tangible different in fighting the war on waste, with three new initiatives at Highlands.

The O Initiative - a global movement providing water refill fountains which double as a work of art.

O fountains are beautifully designed sculptures that provide filtered water, to encourage the use of reusable bottles. At Stockland Highlands, we invited local artists to express their interest in transforming a blank O Initiative fountain into a piece of art, with community members voting on their favourite design. Artwork submissions were required to align with Stockland's core values, and make reference to themes of community, health, environment and conservation.

James Westh, Project Director, said the Highlands O fountain would encourage conversation and community engagement at Highlands, while providing a platform for a local artist to showcase their work. "The concept of the O Fountain is to encourage residents and visitors to use refillable water bottles or top-up dog bowls when they are out, to help reduce the need for single use plastic water bottles that end up in landfill and pollute our oceans and waterways."

The first O initiative refill station at a Stockland community will be installed at the new Sustainable Park in Spring 2019, with more planned for roll-out during FY20.

Compost Revolution - delivering composting gear to the doors of our residents

Since 2012, over 42,000 households across Australia have joined the Compost Revolution by diverting their food scraps from landfill, diverting an average of 2.3kg of food waste per household per week. Not only has this saved an estimated $2.1 million in waste collection costs for councils and ratepayers, but has also prevented over 18,000 tonnes of greenhouse gases being released into the atmosphere in the form of methane (which drives climate change 25 times faster than carbon dioxide).

We are joining forces with Compost Revolution as part of a 12 month pilot, providing residents in our communities the opportunity to obtain free equipment to begin their composting journey. Residents at Elara and Altrove (NSW), Cloverton (Vic) and Calleya (WA) will have the opportunity to sign up for a product of their choice and an online tutorial program to provide education and support along the journey to reducing both food wastage and their carbon footprint.

Terracycle – solutions for 'hard to recycle' items

When a resident in our 6 Star Green Star Community at Cloverton (Vic) asked our team whether we could explore TerraCycle as a recycling option, we didn't hesitate. TerraCycle is an organisation that through a variety of recycling platforms, help find solutions for almost all waste. Our Cloverton residents completed a survey to determine the top ten items that they would like to see recycled, with top answers including toothpaste tubes, coffee pods, and batteries.

A prototype design is now underway to provide residents with a simple and easy way to drop off such items. Once a box is filled, it is shipped to TerraCycle who ensure the items are appropriately recycled, such as being 'upcycled' into new products. The unit will be launched in late 2019, with an opportunity for residents to earn TerraCycle points which are redeemable for charitable gifts, TerraCycle products, or a donation to a school or non-profit of the community's choice.


To access the complete list of documents in Stockland's Sustainability Deep Dive Series, click here.