

Our Management Approach to Waste and Materials

A. Purpose

This document sets out our approach to waste management and materials use across our business. It should be read in conjunction with our Waste and Materials Deep Dive (available on our [website](#)), where we report on progress against waste and materials priorities on an annual basis. Together, our management approach documents and deep dive reports comprise our sustainability reporting suite, which is prepared in accordance with the GRI Standards¹ and is third-party assured.

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.



B. Management approach

B.1 Management approach overview

The materials and equipment used within our assets have a significant bearing on the capital cost of our projects and on the operating cost and efficiency of the assets own and manage. We therefore endeavour to control aspects of the material supply chain by specifying minimum sustainability requirements wherever possible.

We have a national approach to waste management for each asset class under which waste is appropriately segregated, stored and disposed of in accordance with regulatory requirements. Waste and recycling management plans are prepared for each asset, both in operation and in construction, to successfully manage the environmental impacts associated with production and disposal of waste. The plans outline the waste and recycling systems employed at the asset for the disposal of waste produced during operation or in development.

Key objectives for the waste and recycling management plans are to:

- reduce the amount of general waste produced by office tenants, retailers, contractors and customers and encourage greater levels of recycling
- implement management systems to measure, record and monitor waste and recycling at the asset
- find ways to continuously improve on these metrics and benchmark against other assets
- provide training and education for tenants, contractors and our employees promoting good waste management habits.

¹ The GRI Standards are global standards for sustainability reporting published by the Global Reporting Initiative (<https://www.globalreporting.org/standards/>). The relevant standard for this management approach document is contained within [GRI 103: Management Approach](#).

The waste management plan outlines how various waste streams should be managed including:

- communal waste areas and recycling points
- solid waste
- liquid waste
- waste water
- hazardous waste
- special waste (e.g. clinical, pharmaceutical, drug or medicine waste)
- construction and demolition waste.

In addition to general waste management, our sustainability guidelines for each business unit outline the minimum standards and requirements with regard to waste diversion. It also sets minimum requirements for asset performance and natural resource consumption during the life of the asset, which further minimises wastage.

B.2 Active targets

We set targets to guide our waste management and materials use initiatives across the business. Active targets include:

- 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 60 per cent waste diversion from landfill for all new Residential construction contracts by FY20.

We report on additional targets and commitments, as well as progress against all targets, in our [Waste and Materials Deep Dive](#).

B.3 Development

Materials

Our sustainability guidelines and related standards guide materials selection in our development projects. We also use the Green Star – Design & As Built rating tool which covers materials selection such as timber, steel, concrete and PVC material.

Materials-related credits within Green Star aim to improve the environmental impacts of building products and materials by taking into consideration issues pertaining to the lifespan, lifecycle and end-use of these resources.² The Green Star Materials category consists of credits that facilitate and recognise the efficient use and management of building and fitout materials. Materials credits reward overall reductions to the amount of materials used, the reuse of building materials, the amount of waste materials sent to landfill and the specification of recycled and recyclable materials wherever possible.

All new Retail Town Centre, Workplace and Business Parks developments, as well as redevelopments exceeding 8,000 square metres, are required to achieve a minimum 4 Star Green Star – Design & As Built rating. As part of our commitment to deliver projects with sustainable materials practices, our development contracts incorporate our Green Star materials selection requirements. We produce sustainability plans for development projects across all business units to set the design parameters for our engaged contractors. The sustainability plans form part of the tender documents and specify minimum material sustainability requirements to achieve the minimum Green Star rating. Contractors are required to submit their design to GBCA for a design rating assessment. We also engage directly with contractors regarding their adherence to sustainability plans throughout development. The contract specifications also include the sustainability plans and standards set in the business-specific sustainability guidelines. Upon project completion, the contractor is required to submit the project for a Green Star Design & As Built rating.

We promote responsible material selection where possible through the following project initiatives:

- at least 95 per cent (by cost) of all architectural timber used in buildings is from a reused source or certified by a forest certification scheme that meets the Green Building Council of Australia's (GBCA) 'Essential' criteria (or a combination of both)³
- reduced use of toxic or harmful materials

² Green Star – Design & As Built v1.2 Submission Guidelines

³ Meeting the GBCA criteria requires a Chain of Custody certification, which provides assurance that the materials used are the materials we specified by assuring each person or group that has had possession of the material throughout its supply chain from composition, to delivery, to installation.

- use of materials that reduce heat load, including performance glazing and cool roofing materials, which offer the opportunity for substantial reductions in power consumption which equates to significant cost savings over the life of the asset
- re-use of recycled concrete and quarry materials
- low Volatile Organic Compound (VOC) products
- where appropriate, fly ash supplement is utilised in concrete to reduce the embodied energy (the energy used to produce cement) of the building development
- incorporation of locally sourced and manufactured materials.

Materials selection and use across the business is governed by our Materials Schedule, which provides guidance to projects and suppliers in selecting materials in accordance with our sustainability policy. The schedule is intended as an overview of the key requirements for projects to encourage environmentally responsible actions, and will assist projects to select materials that:

- avoid pollution
- are safe, and contribute to healthy environments for humans and ecosystems
- are responsibly sourced or have a sustainable supply chain
- are produced sustainably and transparently
- are recycled or reused
- have low embodied energy
- avoid resource depletion.

We have identified high-impact and common materials and issues for inclusion in this materials schedule, however encourage project teams to also identify further sustainability initiatives during the materials selection process. The materials schedule provides a consistent approach to materials selection and use across the business.

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.

We encourage contractors to use and recycle materials wherever practical, however as we are not responsible for sourcing materials, we do not capture data related to the weight, value, volume, or recycled content level of materials used.

Waste management

Our development projects set minimum construction and demolition management requirements in line with Green Star requirements to encourage practices that reduce the environmental impact of waste.

Minimum standards for construction waste recycling are outlined in our development contracts and aligned to core Green Star commitments. Our standards align with Green Star commitments by targeting waste diversion as a minimum of 90 per cent of total waste generated or a bespoke target of waste diversion compared to a reference building. Given recycling rates can vary from project to project depending on the types of materials recovered during demolition or used during construction, we set targets on a project by project basis depending on the predicted mass of waste being generated.

For redevelopments under 8,000 square metres where we typically do not pursue a Green Star rating, we establish a Green Plan for the project that adopts a number of sustainability design initiatives and targets for the project based on Green Star criteria. We will set a minimum construction waste landfill diversion target of 80 per cent for these small projects.

We require that contractors comply with all relevant environmental protection legislation including contamination and waste dumping. Contractors are required to provide a strategy during the tender process to outline how they will meet the minimum requirements and during the construction period, documentation is submitted to Stockland to validate their adherence to these standards. Our construction contracts in each of our business units require that an Environmental Management Plan (EMP) be developed by the relevant building contractor so that construction activities reflect the vision and design requirements and respond to policy and regulation appropriately. In addition, all of our contractors on projects seeking a Green Star rating with contracts over \$5 million (for Green Star – Communities) or \$10 million (for Green Star – Design & As Built) are required to have a valid ISO 14001 Environmental Management System accreditation prior to and throughout the duration of the project contract.

For our Commercial Property developments, we require the provision for suitable areas for tenant recycling facilities and encourage and support retailers undertaking a tenancy fitout in shopping centres to recycle as much of their construction waste as possible, as outlined in Stockland Tenancy and Delivery Guidelines. In our Retirement Living developments, we introduced recycling practices into the standard design guidelines for clubhouses and homes in all new developments.

We collect waste data from our Commercial Property and Communities development contractors to help us better understand volumes of waste from our sites that are sent to landfill and/or recycled. Ultimate waste disposal, including movements of hazardous waste and international shipments of waste, is controlled by contractors and thus not within the scope of material indicators included in our reporting.

B.4 Operations

Materials

The most significant opportunity we have to influence the materials used in the operation of our business is in our Commercial Property business, most specifically our Retail Town Centre portfolio. We are constantly exploring opportunities to enhance the materials used in the operation of our retail town centres to improve efficiency, enhance performance and minimise impacts on the environment.

While opportunities for influencing materials use and specification are much rarer in operations than in development, we constantly seek innovative approaches to promote to our retail town centres.

For workplace and retail town centre tenancy fitouts, we have specific guidelines for materials selection, set out in our Green Office Fitout Guide and the Retail Design and Fitout Guide. Our Workplace, Logistics and Retail Town Centre leases all contain clauses that encourage tenants to implement fitouts in line with these guides.

Waste management

We set minimum waste recycling targets for the operation of our Commercial Property business where we have a high degree of influence to help reduce waste and manage the use of materials. We will incorporate new waste reporting criteria into our waste contracts and adopt the Better Business Partnership (BBP) Operational Waste Guidelines, which will be a significant step towards providing more accurate data on waste recovery and disposal. This improved accuracy will allow us to better understand how waste is being managed and therefore develop appropriate strategies to increase diversions.

We work towards our business unit targets by setting specific diversion targets (per cent diversion from landfill) for each Commercial Property asset to facilitate achievement of our overall waste and recycling goals each year. We also require colour-coded signage on mall waste bins within a retail centre, as well as in loading dock areas. We do not set targets related to total waste generation because levels of waste are directly correlated to levels of visitation which is not within our direct control.

We continue to explore opportunities for more effective disposal of organic waste across our Retail portfolio. For example, at Stockland Cairns (Qld), our waste is taken to SITA's Advanced Resource Recovery Technology (ARRT) facility, which sorts non-organic materials from mixed solid waste. Dry materials are manufactured into alternative fuels that replace fossil fuels in industrial furnaces, and organic waste is processed in accordance with appropriate Australian standards to produce high quality compost, which is sold to local horticultural enterprises, such as sugarcane producers.

At our retirement living communities, residents' homes are generally serviced by local council waste services. We therefore have limited visibility or control of waste generation and recycling streams and are continuing to explore options with waste contractors that service our clubhouses.

C. Review and evaluation of the management approach

We review and report on our progress against our waste management and materials use priorities as part of our annual [Waste and Materials Deep Dive](#). In this reporting, we include:

- a status update and description of progress against our targets
- an explanation of progress on priority actions that contribute to the achievement of key targets
- the identification of future priorities
- highlights of initiatives implemented over the reporting period
- case studies that explore key achievements, usually at particular locations.

We continue to monitor industry standards regarding waste management and material specification and to identify best practice processes and procedures across our asset classes.

We stay informed of material and waste innovations for use in the design, development and operation of our assets and also collaborate with industry partners to identify, develop and/or trial innovative materials.

We engage with our development contractors to confirm adherence to the sustainability plans, their use of specified sustainable materials and to identify improvements to their construction waste management approach. Contractors' compliance with our sustainability and materials requirements are monitored via our quality assurance processes.

During the tender phase, contractors provide a strategy outlining how the specified minimum waste management requirements will be met. During the construction period, documentation is submitted to us to validate the adherence to these standards. Upon project completion of Green Star projects, the contractor is required to submit the project for a Green Star – Design & As Built rating and materials attributes are also considered within Green Star – Communities.



D. Responsibilities

The table below describes key roles and responsibilities related to our approach to waste management and materials use.

ROLE	RESPONSIBILITIES
Board Sustainability Committee	Oversight of approach to waste, recycling and materials selection, including targets and performance tracking
Chief Financial Officer	Responsibility at Group level for environmental performance, including waste, recycling and materials Reports directly to Managing Director and CEO
Group Executive and CEO Commercial Property Group Executive and CEO Communities	Responsible and sustainable materials sourcing and waste management by their teams, business units and within their activities and projects
National Manager – Group Sustainability	Waste management strategy development
National Sustainability Managers	Identification of risks and opportunities regarding materials use and waste/recycling initiatives Collaboration with business units on specifications for materials use
General Manager – Group Project Management and Direct Procurement	Incorporation and administration of minimum waste and material sustainability requirements into commercial property, residential and retirement living construction contracts
Development Managers and Asset Managers	Effective management of waste and recycling at a project and asset level Alignment with specifications and standards set by our policies and external certification requirements regarding materials used in development
Managing Director and CEO, COO, business unit CEOs, Development/Project/Asset Managers and functional staff	Achievement of key performance indicators relating to strategic waste and recycling reduction targets

E. Version control

REVISION	PUBLISHED	OWNER(S)	CHANGES
1	September 2018	General Manager – Sustainability and Corporate Procurement	
2	August 2019	National Manager – Group Sustainability	