

Westfield Warringah Mall

Waste Management Plan – proposed Stage 2

Scentre Group
June 2018



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1. Waste Management Objectives

The following Waste Management Plan (WMP) outlines the strategy for achieving SCentre Groups waste management programme objectives at Westfield Warringah Mall.

This WMP sets out the current processes in place for the management of waste produced through trading activity at Westfield Warringah Mall.

In addition to this the Plan sets specific objectives for the Centre and sets out necessary actions for improvement that will further the Centres ability to meet Scentre Groups sustainability objectives by produce clean and well segregated waste and recycling material through the proactive engagement of tenants, cleaners and service providers in order to deliver best practice in the following areas:

Tenant Engagement – Delivering a continuous engagement strategy that informs tenants of the Centres waste management procedures; explaining the concepts of recycling; avoidance and contamination; and promoting good practice and use of available waste facilities

Cleaner Engagement – Provide the Centres cleaning staff with the knowledge and tools to enable them to understand the Centres waste and recycling program and the ability to assist tenants in following correct recycling practices so that they can effectively monitor waste areas and address obvious issues of contamination, litter or misuse of the facilities

Operational Engagement – The Centre management commits to continuously expand their understanding of best practice in waste management and provide opportunities for recycling that can be safely and economically processed in as many locations on site as possible with facilities meeting industry standards for safety and efficiency

Away From Home Recycling – Provide visitors to the Centre easily accessible, clearly signed and colour coded away from home recycling facilities that act as an outward expression of the Centres commitment to best practice waste management

Best Practice – Ensure all waste systems meet Scentre Groups best practice requirements. This includes employing clear and easily recognizable signage to facilitate correct usage. A linkage of waste recovery and waste identification processes to Australian Standard colour codes for mobile waste containers. Ensuring waste room layout is supportive of recycling aims and easy to use. Provide adequate recovery capability for waste material through optimum infrastructure and equal access.

Waste Streams – Implement a continuous process of waste stream expansion that seeks to increase the quantities of recyclable materials recovered as well as increase the quantity of materials that can be recycled at the Centre.

Reporting – Contribute to the delivery of accurate reporting of all waste materials recovered at the Centre that have a material impact on the Centres environmental impact.

2. Land Use Details

Westfield Warringah Mall is located in the heart of the Sydney's Northern Beaches, approximately 15 kilometers from the CBD. It is one of the largest shopping Centres in the region with a trade area population of around 296,000 residents. The Centre is well serviced by public transport with a bus interchange located on site. The Centre has recently finished Stage 1 of a major redevelopment with a new 2-level mall adding around 70 specialty retail stores and a fully refurbished Myer department store. Stage 2 of the major development anticipates:

The Centre will have 476 retail tenants operating 7 days per week across a Gross Leasing Area (GLA) of 146,069m²

Table 1 – Breakdown of area use per level

Name	Level	Primary Use	GLAR m ²
Specialty Retail	Ground	General retail/Fashion	18,846
Food	Ground	Fresh Food/Café's	3,014
Majors	Ground	DDS/Large Retail	37,999
Specialty Retail	Level 1	General retail/Fashion	14,827
Food	Level 1	Fresh Food/Café's	1,444
Majors	Level 1	DDS/Large Retail	35,366
Food	Level 2&3	Fresh Food/Restaurants	3,792
Majors	Level 2&3	DDS/Large Retail	15,507
Cinema	Level 3	Entertainment	6,351
Lifestyle	Level 2	Lifestyle	951
Pad sites & other		Childcare/Medical/Hardware etc	7,972
TOTAL			146,069

3. Breakdown of Waste System Use

Table 2 – Breakdown by GLAR and tenancy type of tenants using centres waste and recycling infrastructure (GLAR not accounted for belong to tenants making use of their own waste and recycling infrastructure)

Tenancy Type	GLAR m ²
Restaurants/Bars/Eateries	8,250
Specialty Retail	33,673
Majors	88,872
Cinema/Other	15,301
TOTAL	146,069

4. Waste Generation

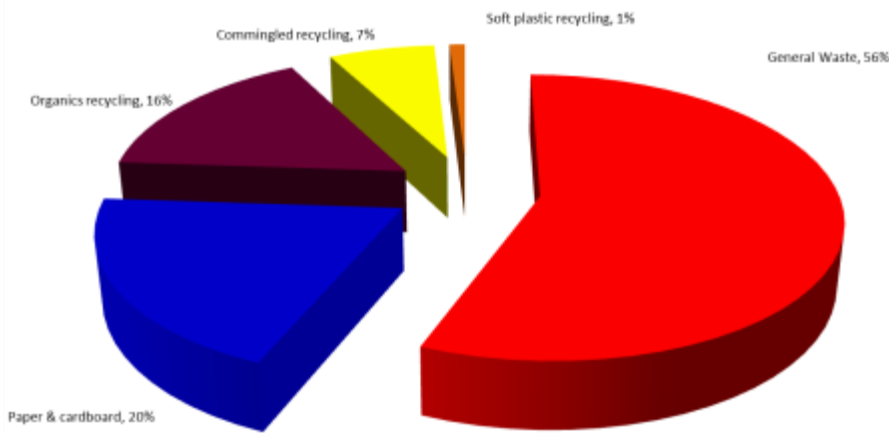
Table 3 below details the weekly waste generation by waste stream for the retail areas identified as using the centre waste and recycling infrastructure covering a GLAR of 146,096 m² (Stage 2). This is based on exact data capture from actual waste generation across the 12 month period of 2017 using the increased GLAR ratio.

Table 3 – Waste generation (tonnes)

Waste Stream	Monthly	Annual
Paper & cardboard	45.08	541
Commingled recycling	10.25	123
Organics recycling	12.31	147.7

Soft Plastic recycling	0.1	1
General Waste	115.75	1389

Chart 1– Percentage composition of retail waste generation by weight



5. Waste Costs

Waste generation has been determined based on performance data covering the 12 months of 2017. Included in this data is the costs charged for disposal, providing an actual baseline understanding of performance and operations at Westfield Warringah Mall at current tenancy levels and with the equipment currently onsite.

Table 4 – Waste Disposal Costs

Waste Stream	Monthly	Annual
Paper & cardboard	-\$893	-\$65,894
Commingled recycling	\$1,008	\$17,161
Organics recycling	\$2,625	\$24,184
Soft Plastic recycling	\$149	\$8
General Waste	\$29,427	\$482,813

Percentage cost of waste and recycling

The data in the graph below details the percentage cost of waste & recycling processed during 2017. From this we can see the correlation between increased costs of waste to landfill against the decreased cost of recycling.

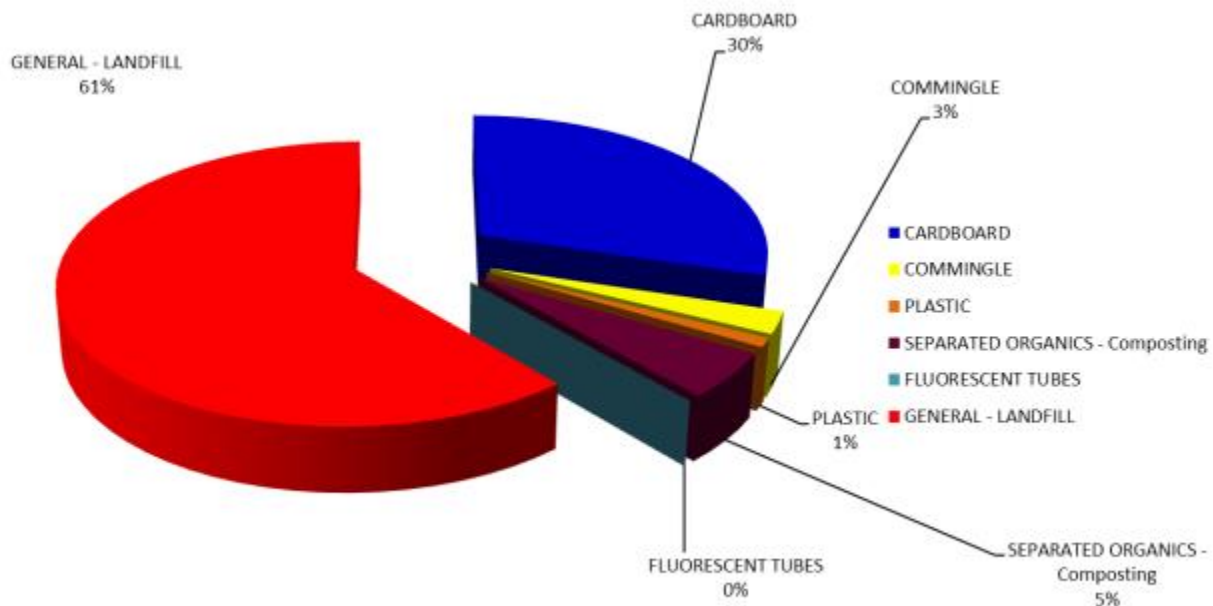


Table 5 – True Value of Recycling

2017	Annual Tonnes	Total Cost	Cost Per Tonne
Waste Stream			
Recycled Waste	812.7	\$44,090,	\$50.30
Landfill Waste	1389	\$482,813	\$347.60

For every tonne of waste recycled in FY 2017 Westfield Warringah Mall is charged \$50.30 per tonne. For every tonne of waste landfilled it cost the Centre \$347.60.

Alternatively, the value of recycling to the Centre for FY2017 is a savings of **\$297.30** per tonne of waste recycled at the Centre.

6. Waste Systems

CARDBOARD AND PAPER RECYCLING

This is intended to be the largest stream in a retail environment. A cardboard and paper recycling system should accept non – waxed cardboard all types of paper including newsprint, glossy paper and mixed office paper.

The Australian Standard colour for cardboard and paper recycling specifies the use of **blue**. It is recommended that all receptacles are coloured consistently in accordance with the standard, and that signage for this stream is developed using the same colour for ease of recognition.

All cardboard and paper recyclable material will be included in the cardboard recycling stream. Cardboard and paper will be captured on ground level and level 1. This cardboard captured will be transferred to Dock M, Coles Dock, Myer Dock and Woolworths Dock by tenants and cleaning staff.

Retail tenants are advised to flatten all cardboard boxes prior to transport to the dock, where cardboard and other paper material can be hand loaded into the compactor hopper for secure disposal. All cardboard and paper will be required to be free of any contamination prior to disposal in the compactor.

Operational training on use of the compactor will be mandated to all tenants as a condition of use if use is authorised. A contact number should be displayed in case of material overflow.

COMMINGLED RECYCLING

The Australian Standard colour for the commingled recycling stream specifies **dark green or black bin bodies** with a **yellow lid**. It is recommended that all receptacles are coloured consistently in accordance with the standard, and that signage for this stream is developed using the same colour for ease of recognition.

A clear bin liner is used for this stream however where an MGB is to be used directly to collect waste (as opposed to smaller bins which are then emptied into MGBs) discussions with the waste contractor will need to occur as bagged waste is regarded as contamination. If the bin liners are not tied off then this may not be an issue however if this is an issue then no liner will be used and bins will need to be cleaned regularly.

Tenants will be responsible for segregating their commingled waste within their tenancy before transporting to the waste and recycling locations. The bagged commingled will then be decanted into the 660L MGBs dedicated to commingle recycling. The bag will then be placed into the general waste bins.

660L or 1100L MGB will be sited in Myer Dock, Coles Dock and Woolworths Dock. This bin will be signed and highlighted with the appropriate AS colour code for the waste stream.

If tenants generate high volumes of commingled materials e.g. cafe or restaurant, smaller MGBs (120 L or 240L) may be required and should be stored in the tenants BOH areas where they will be responsible for transferring this to the waste and recycling area for decanting into the 660L MGB.

Clearance frequency for the commingled MGB will be determined in line with known waste generation volumes.

FOOD ORGANICS RECYCLING

Organic recycling bin should be colour coded with a **burgundy bin body** with a **burgundy lid**. It is recommended that all receptacles are coloured consistently in accordance with this standard, and that signage for this stream is developed using the same colour for ease of recognition.

Organic recycling bin should be colour coded with a burgundy bin body with a burgundy lid. It is recommended that all receptacles are coloured consistently in accordance with this standard, and that signage for this stream is developed using the same colour for ease of recognition.

Suitable collection containers should be located in the main food preparation areas of tenancies producing organics so all food waste can be captured and segregated from general waste. The containers will then be transferred to Dock M, Coles Dock, Myer Dock and Woolworths Dock for disposal into the organics bin, which could either be a 120L MGB or a 240L MGB bins.

Retail tenants will be responsible for segregating their organic waste (including coffee grounds) within their tenancy. If tenants generate high volumes of organic waste (e.g. cafe or restaurant, smaller MGBs (120L) may be required and should be stored in the tenants BOH areas where they will be responsible for transferring this to the waste area for collection.

Clearance frequency for the organic bins will be determined in line with known waste generation.

NOTE: Discussion should be held with the waste contractor / organics facility to determine which materials are acceptable in this waste stream.

COOKING OIL

It is anticipated that cooking oil will be used by the food and beverage tenants. This material cannot be disposed in the general waste stream, but can be recycled.

An oil vacuum drum will be used to collect used cooking oil. Tenants can take their used oil directly to the disposal point and vacuum it out of their oil tins. Empty oil tins can be disposed of into the commingled recycling streams located in Myer Dock, Coles Dock and Woolworths Dock.

A separate area will be allocated for a used oil facility which can be found Coles Dock and Woolworths Dock. This area will be isolated from other waste streams (i.e. bunded area) and the area kept free of spills. Non-slip mats and a spill kit will be required in this oil recycling storage area within the waste facility.

SOFT PLASTIC

Soft plastic materials (i.e. cling wrap & plastic film) are generated by fashion retailers and retailers receiving products on pallets. The material should be captured at the point of unpacking and consolidated within a collection point in the waste room or fed directly into a soft plastics baler. The Australian Standard colour for plastic is **orange**.

Collection points for soft plastics are available in Coles Dock and Myer Dock.

GENERAL WASTE

The Australian Standard colour for the general waste stream specifies **red**. It is recommended that all receptacles are coloured consistently in accordance with this standard, and that signage for this stream is developed using the same colour for ease of recognition.

All general waste material destined for landfill will be collected in the 660L MGB or 1100L MBG bins that can be found in all docks.

Retail tenants are advised to transport bagged general waste to the waste room where it can be disposed of in the available bins for transfer to the loading dock and disposal in the compactor.

Operational training on use of the compactor will be mandated to all tenants as a condition of use if a tenant is authorized to use the compactor. A contact number should be displayed in case of material overflow.

Clearance frequency for the compacted material will be determined in line with known equipment capacity of the compactor and operational requirements.

POLYSTYRENE

Polystyrene recycling is not estimated to be generated in large enough volumes to warrant a specific collection point.

Where possible tenants should inform all suppliers that a take back program needs to be implemented for all deliveries packaged in this material.

FLUOROTUBE RECYCLING

Expired fluoro tubes and light bulbs should be controlled through a take-back program with industry suppliers.

OTHER RECYCLING

Alternate waste streams that may be included in retail areas including:

- Bread and milk crates
- Ad-hoc recycling system such as metal recycling and wood recycling; and
- Used furniture recycling

7. Waste Management Practices

Westfield Warringah Mall and the Scentre Group are committed to best practice waste management procedures and deliver this in conjunction with their tenants and service providers.

Tenants Waste Disposal Responsibilities

1. Tenants are expected to sort their waste into the various waste streams prior to removing it to the waste disposal area in the dock.

2. Once at the dock tenants are to use the route signage and waste stream signage for guidance on the right location for their waste.
3. Waste disposal requirements:
 - a) Cardboard is to be broken down and disposed of uncontaminated into the appropriate receptacle
 - b) Commingled recycling should be emptied loosely and directly into the appropriate receptacle and not disposed of in a bin liner
 - c) Oil should be transported in a closed container to the disposal point and placed directly under the vacuum hose and its contents completely drained and spillage avoided
 - d) LDPE/Soft plastic should be clear and free from any colouring or contamination prior to being disposed of in the appropriate receptacle
 - e) Organics is to be disposed free of contaminants into the available collection bin.
 - f) Landfill waste must not contain any of the above recyclable material before being disposed in the appropriate receptacle
4. If waste is required to be disposed of in a compactor or in the case of oil vacuumed into a tank, the tenant must be trained on the operational procedures of the equipment concerned.
5. The tenant is responsible for disposing all large items such as shop fittings and displays independently of the centre waste disposal systems.
6. The tenant is responsible for ensuring all waste material associated with deliveries to their tenancies is removed from the dock areas in a timely manner, particularly in relation to milk and bread crates, and pallets.
7. Issues with equipment use, contamination, spillages and queries about waste in general should be directed to the operations team.

Centre Responsibilities

1. The Centre is responsible for ensuring all waste produced through trading activities is disposed of in an efficient and cost effective manner and in line with Scentre Groups sustainability commitments.
2. The Centre will provide tenants with best practice waste disposal facilities and will update these facilities as improved processes and equipment become available.
3. The Centre will ensure that all waste disposal equipment is signed and provides up to date and clear information on disposal methods
4. The Centre will ensure that all access points and routes to waste equipment are free and clear of vehicular and other hazardous traffic
5. The Centre will ensure all tenants are periodically trained on the use of all waste compaction and oil vacuuming equipment.
6. The Centre will ensure all waste equipment and bins are regularly maintained and meet relevant safety requirements
7. The Centre will ensure the waste disposal area is kept clean and free of clutter and vermin
8. The Centre will ensure receptacles are emptied in a timely manner so as to always make available to tenants adequate space for waste disposal
9. The Centre will make every effort to ensure contractors engaged in store fit outs are provided with options for the sustainable disposal of the waste material generated through this process.

8. Compaction Equipment, Bins Quantity, Size and Colour

Table 6 – Equipment Log

Waste Stream	Colour	Size & Quantity
Paper & Cardboard	Blue body	Dock D(Woolworths) 1 x 30m3 Compactor Dock J(Coles) 1 x 30m3 Compactor Dock M(Fruit Shop) 1 x 23m3 Compactor Dock J(Coles) 1 x 240L Bin Dock D(Woolworths) 1 x 660L Bin Dock (Myer) 1 x 30m3 Compactor
Commingled	Yellow lid	Dock D(Woolworths) 4 x 660L Bins Dock J(Coles) 4 x 660L Bins Dock M(Fruit Shop) 2 x 660L Bins Dock (Myer) 6 x 660L Bins
Food Organics	Burgundy accents	Dock M(Fruit Shop) 12 x 240L Bins Dock D(Woolworths) 2 x 240L Bin Dock J (Coles) 2 x 240L Bins Dock (Myer) 4 x 240L Bins
Soft Plastics	Orange accents	Dock M(Fruit Shop) 2 x LDPE Bale Frames Dock D(Woolworths) 2 x LDPE Bale Frames Dock J (Coles) 2 x LDPE Bale Frames Dock (Myer) 2 x LDPE Bale Frames
General Waste	Red body	Dock D (Woolworths) 1 x 23m3 Compactor Dock J(Coles) 1 x 23m3 Compactor Dock M (Fruit Shop) 1 x 23m3 Compactor Dock M (Fruit Shop) 4 x 660L GW Bins Dock J(Coles) 4 x 660L Bins Dock D(Woolworths) 4 x 660L Bins Dock (Myer) 1 x 25m3 Compactor Dock (Myer) 6 x 660L Bins
Security		Centre Management 1 x 240L Bin

9. Collection Frequency

Table 7 – Collection Frequency

Contract Description	WeeklyInt	Mon	Tuesd ay	Wed	Thurs	Friday	Sat
Dock D(Woolworths) CO 4 x 660L RL	1		1220R LV011		1220RL V011		
Dock J(Coles) CO 4 x 660L RL	1		1220R LV011		1220RL V011		
Dock M(Fruit Shop) CO 2 x 660L RL	1		1220R LV011		1220RL V011		
Dock Myer CO 6 x 660L RL	1		220RL V011		220RL V011		
Dock Myer ORG 4 x 240L RL	1					1220RL X096	
Dock M(Fruit Shop) ORG 12 x 240L RL	1	1220R L X096		1220RL X096		1220RL X096	
Centre Management 1 x 240L RL Security	On Call						
Dock J(Coles) CB 1 x 240L RL-Onsite							
Dock D(Woolworths) ORG 2 x 240L RL	On Call						
Dock D(Woolworths) CB 1 x 30m3 Compactor	2			1220HK X001			
Dock J (Coles) ORG 2 x 240L RL	1	1220R LX096		1220RL X096		1220RL X096	
Dock J(Coles) CB 1 x 30m3 Compactor	2	1220H KX001				1220HK X001	
Dock J(Coles) CB 1 x 30m3 Compactor	2			1220HK X001			
Dock M(Fruit Shop) CB 1 x 23m3 Compactor	2				1220HK X001		
Dock D(Woolworths) LDPE 2 x Bale Frame	On Call						
Dock J(Coles) LDPE 2 x Bale Frame	On Call						
Dock M(Fruit Shop) LDPE 2 x Bale Frame	On Call						
Dock Myer LDPE 2 x Bale Frame	On Call					On Call	
Dock D(Woolworths)PUT 1 x 23m3 Compactor	1					1220HK X001	
Dock J(Coles) PUT 1 x 23m3 Compactor	2		1220 HKX0 01			1220HK X001	
Dock J(Coles) PUT 1 x 23m3 Compactor	2						1220HK X001
Dock (Myer) CB 1 x 30m3 Compactor	0.5				1220HK X001		
Dock (Myer) PUT 1 x 23m3 Compactor	0.5				1220HK X001		
Dock M(Fruit Shop)PUT 1 x 23m3 Compactor	1					1220HK X001	
Gardeners Compound 6m3 HL General	On Call						

10. Waste Areas

Table 8 – Best Practice Checklist Summary

Item	Best Practice
Dock Layout	Clear identification of recycling in the layout of waste area
	Proximity of all waste streams from entrance of loading dock
	Fixed position of waste recovery equipment
Signage	Clear and visible directions to the waste area commencing 30 metres from waste area
	Clear and visible sign describing available waste recovery options located within 2 metres of waste area
	Waste stream signage at eye level above or on waste recovery equipment
	Clear imagery and succinct instructions of acceptable waste material – relevant to retail environment
	Clear and visible equipment instructions
Waste streams	Relevant recovery options in waste area for tenancies serviced by loading dock
AS colour coding	Waste stream signage is AS colour code compliant
	Mobile waste containers colour coded to AS 4123.7-2006 mobile waste containers - Part 7: colours, markings and designation requirements
	Other waste recovery equipment is AS colour code compliant
	Area around waste recovery streams are AS colour code compliant
Cleanliness	Floor and area free from waste material and other hazards
	Enclosed spaces ventilated and odour-free
	Hygienic equipment condition - compactors and volume based collections bins professionally cleaned periodically
	Putrescible waste prohibited from disposal in general waste recovery equipment - meat and bone/fish collections as specialised solutions for these streams
OHS	Waste areas with shared vehicle access have clearly demarcated areas for foot traffic and vehicular traffic
	Instructions for compaction machinery stating operation only permissible after training
	Access to compaction machinery is for authorised personnel only
	Video camera surveillance monitors practices in waste area

Dock Access (Tenant)

Westfield Warringah Shopping centre has four waste areas providing disposal options for landfill waste, mixed (commingle), soft plastic, cardboard, organics and oil recycling. The waste areas are located on Dock M, Coles Dock, Myer Dock and Woolworths Dock.

Dock Access (Waste Services Provider)

Waste equipment for the centre is stored at four locations accessible at Dock M, Coles Dock, Myer Dock and Woolworths Dock. Dock M is accessible from Condamine Street and Coles, Myer and Woolworths Docks are accessible from Old Pittwater Road.

Waste collections times will be communicated with our waste service provider and will be based on relevant local council regulations.

11. Waste Contractors

As part of Scentre Group the Centre is required to engage the services of a licensed waste management provider.

The service provider will ensure all equipment used in the waste management process whether leased or owned is compliant with relevant state and federal safety standards.

The service provider will ensure periodic checks on equipment and operational safety are conducted to ensure access to equipment and the Centre remain safe and risk free.

The service provider will report all issues concerning equipment and operational safety to the Centre immediately. The service provider will provide detailed reporting on costs and weights for each waste stream on a monthly basis.

Where necessary the service provider will assist in developing strategies for delivering the Centre's best practice objectives.

The service provider will also provide expert advice on delivering operational and financial efficiencies, as well as strategies to deliver improved recycling performance that will enable the Centre to meet its annual performance targets.

12. Diversion Target

Westfield Warringah Mall diverted 41% of the waste it produced through trade operations from landfill in the year 2015.

Waste diversion targets are specific for each Centre in Scentre Groups portfolio due to the various factors that influence a Centre's ability to recycle such as geographical location, available recycling options, cost effectiveness and site infrastructure.

Based on the continued implementation of processes set out in this plan a target of 50% diversion of waste from landfill has been set for 2018.

Main factors that determined the diversion target set for Westfield Warringah Mall are:

- Structured focus on retail waste monument
- Structured stakeholder engagement programme to be delivered
- Implementation of best practice waste management systems
- Expansion of waste stream recovery

Table 9 – Diversion Target

Centre	Current diversion rate	Diversion target
Westfield Warringah Mall	32%	50%

13. Reporting

Scentre Group has a commitment to Sustainable Waste management. This is supported by a national program for delivering best practice and efficiency in the areas of waste management.

At the core of this program is the reporting process that has been put in place that provides accurate verifiable data on costs and disposal waste for all waste streams across all the assets of the portfolio.

Reporting is a continual process summarized monthly and quarterly for use in ongoing monitoring of costs, performance and planning for future strategies to deliver greater improvement.

Weights for waste captured through compaction equipment are verified through weighbridge dockets that provide the data in tonnes. Weights derived from waste disposed in volume based systems are converted into tonnes through derived densities from extensive weigh offs of bins based on an assigned weight per cubic metre.