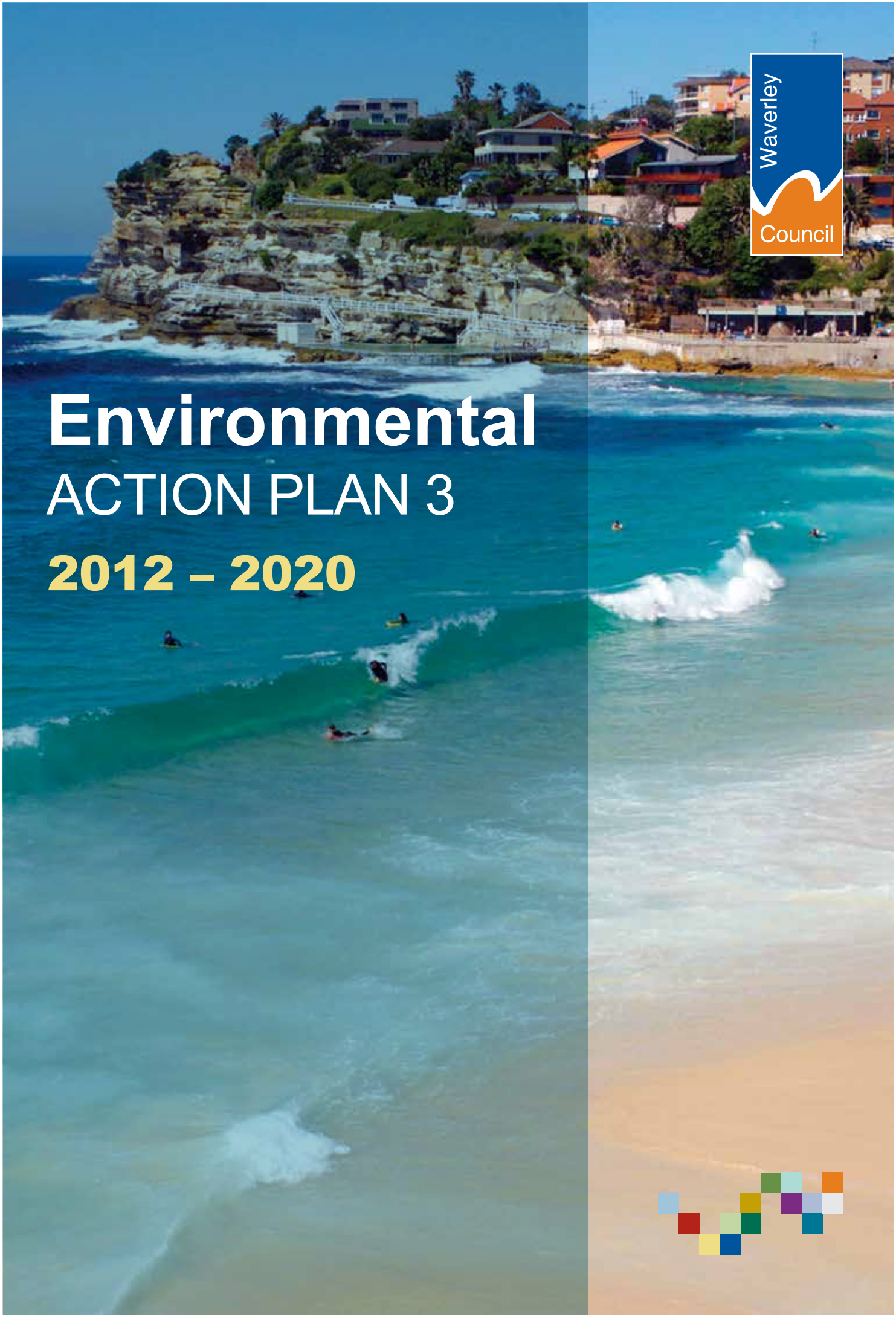


Environmental
ACTION PLAN 3
2012 – 2020

Contents

Mayoral Message

The environment is one of the top priorities at Waverley Council and we are dedicated to working to ensure we preserve it for generations to come. This Environmental Action Plan is our eco-roadmap. It sets out the goals and the steps we plan to take towards ensuring a sustainable future for our community.

Our community places significant value on our natural assets and the social, cultural and economic benefits enjoyed by living and working in Waverley, so by continuing to work together, Council and the community can make a significant contribution to future sustainability on a local scale, and on a State and national level, too.

This year Waverley Council received a coveted Green Globe Award for our achievements in sustainability over the last 10 years. This Award is in recognition of the past and current work taking place across Council operations as well as in the wider community in waste reduction and reuse, climate change, water, biodiversity, transport, community engagement and education, and our high-level integrated strategic planning.

We are extremely proud of our successes to date. These success stories include on-the-ground initiatives such as the expansion of water reuse and solar power systems and cost-effective energy-saving retrofit projects. As well as this, we launched our community 'Go Solar' campaign, car-share and schools partnerships, and rolled out the extensive Green Links network of walking and bike routes.

Every day, Council strives to be innovative in how we deliver our programs, benchmarking mechanisms and strategic analysis. Waverley was the first Council to implement a centralised carbon data management system. This groundbreaking technology is a fantastic monitoring tool to review our carbon emissions from all Council's assets and across the community and to enable us to effectively work out how we are going to meet our targets.

Council's environmental education workshops and events attract over 4,000 participants each year.

We are on track to cut our organisation's carbon footprint by at least 30 per cent by 2020. Amounts of waste collected from residents and public space is decreasing and water consumption in the local government area is stabilising.

Whilst we reflect on these many achievements, we remain mindful that there is still much work that needs to be done. We are continuously on the move and finding new ways to improve our environment and reach our ambitious medium- and long-term targets.

In devising this action plan, we sought views and advice from the community through focus groups and online portals, meetings and other consultation avenues.

Collaboration, conversation and open communication are the key to the success of our strategy. Council is working to engage the major stakeholders and foster partnerships with the private sector, government bodies at all levels, industry organisations and the local residential community.

We hope to add value to our already established partnerships with the Eastern Suburbs Business Program, Garage Sale Trail, Grow it Local and Regional Eco-footprint Project while continuing to strive to forge new relationships.

With our strategic vision set, we have a fresh focus on practical and smart implementation to make our goals become a reality.

We appreciate the community's support as we travel this challenging and exciting journey together.

Sally Betts
Mayor of Waverley Council

Environmental Action Plan 3 Structure

Waverley Council's Environmental Action Plan 3 (EAP 3) was completed as part of an integrated process to develop Council's strategic plan, Waverley Together 3 (WT3). EAP3 forms part of a suite of plans that inform Council's Resourcing Strategy, Delivery Program and Operational Program. Progress against environmental targets is reported annually as part of Council's Annual Report.

EAP3 is structured around eight key environmental management activity areas:

- greenhouse
- transport
- waste
- water saving
- water quality
- biodiversity
- integrated strategies, and
- monitor, review and report.

EAP3 will be reviewed and updated every four years.

EAP3 has evolved from a review of EAP2 and an assessment of progress against EAP2 environmental targets. For EAP3, environmental targets have been refined and strategies focused to achieve more effective progress and better environmental outcomes for both the Waverley Local Government Area (LGA) and Waverley Council operations.

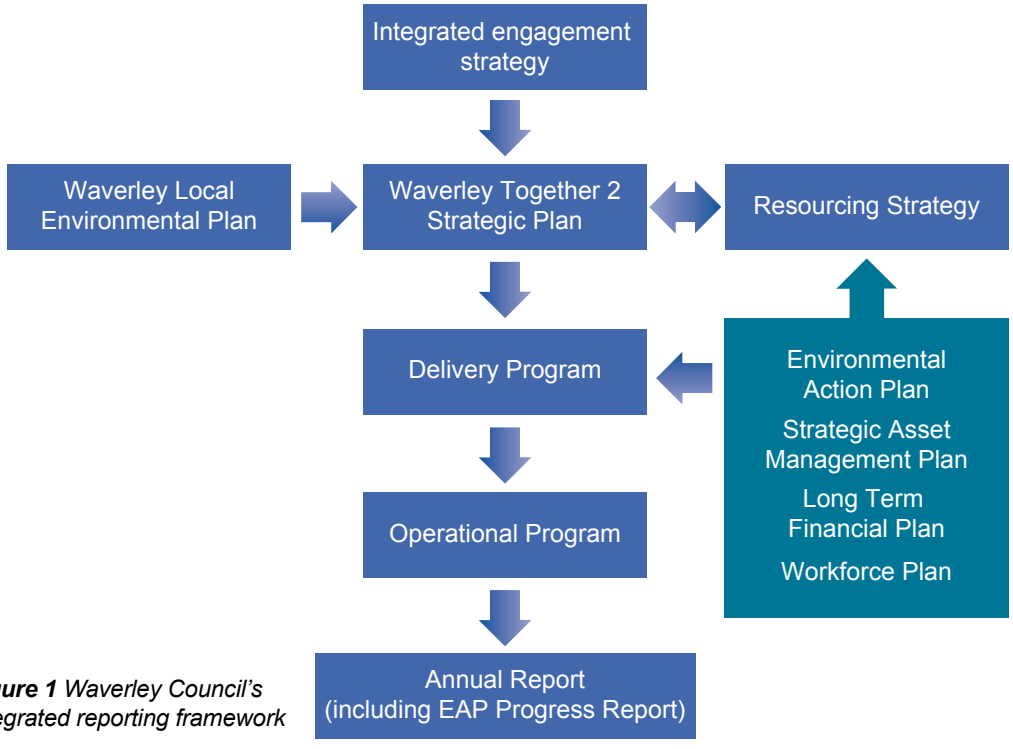


Figure 1 *Waverley Council's integrated reporting framework*

Waverley Together 2

(WT2) Directions

E1	Waverley's community contributes to the reduction of greenhouse gas emissions
E2	Waverley and its community is well prepared for the impacts of climate change
E3	Waverley's community, including its visitors, reduces the amount of waste it generates and increases the amount it reuses and recycles
E4	Water is used carefully and sparingly in Waverley's buildings, gardens, businesses and Council operations
E5	The waterways and beaches are clean and free of pollutants
E6	A network of parks and coastal reserves, street trees and other plantings provides a habitat for a thriving local ecology
E7	Our coastal waters provide a habitat for a thriving marine ecology
E8	Waverley is an environmentally educated and committed community
L6	People frequently walk and ride their bikes, particularly for local trips.
L7	People frequently use public transport, particularly for trips to work.

Action Timeframes

EAP3 actions are identified for completion within the following timeframes:

High priority actions will be completed within 1-3 years

Medium priority actions will be completed within 3-6 years

Low priority actions will be completed within 6-10 years

Our targets

Waverley LGA

Greenhouse Gas Emissions

- 30% reduction of 2003/04 levels by 2020
- 70% reduction of 2003/04 levels by 2050

Waste

- No net increase of 2004/05 waste generation levels by 2020
- 75% resource recovery of residential and commercial waste by 2020

Transport

- 40% of total daily distance travelled by residents is by public transport, walking or cycling by 2020
- Average daily kilometres travelled by Waverley residents by private car declines by 15% on 2007 levels by 2020

Water

- Zero increase of 2005/06 levels of mains water consumption by 2020

Water quality

- Minimise sediments and suspended solids in stormwater discharged into waterways by 2020
- Minimise bacterial pollution in stormwater discharged into waterways by 2020
- Minimise nutrients in stormwater discharged into remnant vegetation by 2020

Biodiversity

- Ensure no loss of remnant vegetation based on 2009/10 levels
- 40% of remnant vegetation is in good condition by 2020

Note that Waverley LGA refers to the whole Waverley community. This refers to the management of the combined environmental impacts of Council operations with residential, commercial, educational and recreational impacts.

Waverley Council operations

Greenhouse Gas Emissions

- 30% reduction of 2003/04 levels by 2020

Water

- 50% reduction of 2005/06 levels of mains water consumption by 2020

Reducing our greenhouse gas emissions – Waverley Council

Street lighting accounts for 29 per cent of Council greenhouse gas emissions (gge). It is owned and maintained by AusGrid but the electricity and maintenance bills are paid by Council. Council continues to work with AusGrid and the Southern Sydney Regional Organisation of Councils (SSROC) Street Lighting Improvement Program to improve the energy efficiency of AusGrid owned street lighting in Waverley. Energy efficient compact fluorescent, high pressure sodium, and light emitting diode (LED) street lights are being installed and/or trialled throughout the LGA.

Council buildings account for over 50 per cent of Council gge. Energy efficient lighting, lighting sensors and timers, hot water boiler timers, appliance timers as well as heating, ventilation and air conditioning efficiencies are currently being implemented across 11 Council sites. Council's vehicle fleet accounts for the remaining 19 per cent of gge. The Waverley Council Sustainable Fleet Action Plan 2011 is currently being implemented. Council is seeking to improve the fuel efficiency of its heavy vehicle fleet such as garbage compactors and recycling trucks, as well as passenger vehicles.

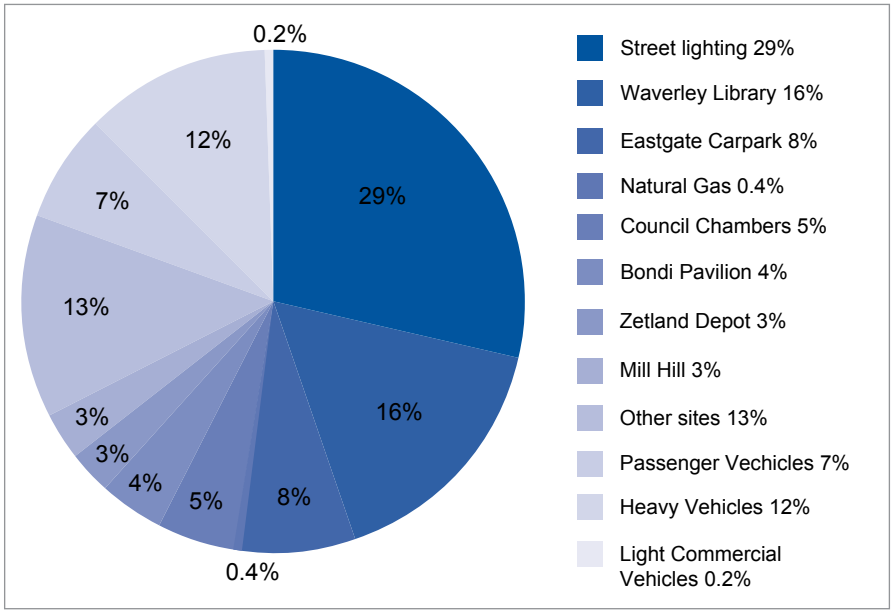


Figure 2 *Waverley Council greenhouse gas emissions by sector 2010/11 (percentage of tonnes CO2-e) (Data source CCAP. Note that 2011/12 electricity use was unusually low due to the library chiller ceasing operation and being replaced. Therefore, 2010/11 data is shown above as it reflects normal operations.)*

Target: 30% reduction in Council greenhouse gas emissions by 2020 based on 2003/04 levels

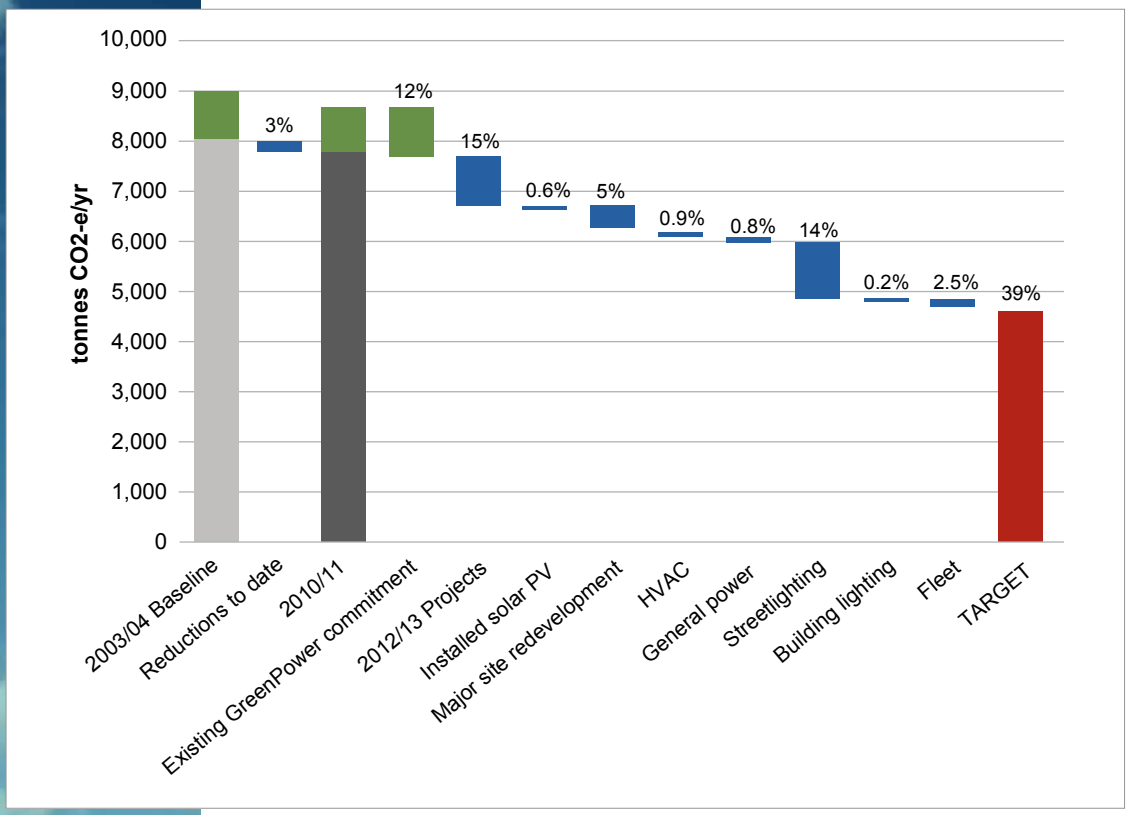


Figure 3 *Waverley Council operations greenhouse gas emissions reduction potential (Source Kinesis 2012 Waverley Council – Updated Emissions Reduction Waterfall Chart)*

To achieve the 30 per cent reduction target on the 2003/04 base year, Waverley Council's annual gge need to be reduced to 5,619 t CO2e. Figure 3 identifies cost effective strategies to exceed the target and reduce gge to 4,722 t CO2e. This equates to a 59 per cent reduction on the 2003/04 base year or a 39 per cent reduction on 2010/11.

Waverley Council has reduced gge from its operations and assets by three per cent since 2003/04. Council's purchase of GreenPower (for a quarter of the electricity requirements of the Waverley Library, Eastgate Carpark, Council Chambers, Bondi Pavilion and Zetland Depot) reduces gge by another 12 per cent annually.

A 15.6 per cent reduction in gge is anticipated as a result of energy saving retrofit projects and solar power systems implemented in 2012/13. Opportunities for heating, ventilation and air conditioning (HVAC), lighting and timer retrofits of energy-using devices at remaining sites have the potential to achieve another 1.9 per cent reduction in gge.

Opportunities for significant emissions reductions (19 per cent) exist through the redevelopment of Council sites in Bondi Junction and improving the energy efficiency of street lighting. The success of both of these strategies relies on successful partnerships with developers and utilities owners.

EAP Target: 30% reduction of 2003/04 levels by 2020

WT2 Reference: E1, E8

Measures:

- tonnes CO2-e generated
- kWh electricity/MJ gas/kL fuel consumed
- kWh solar power generated
- average grams CO2-e/km travelled
- Cost saving

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
GC1	High	Undertake an energy efficiency building retrofit (of assets not already retrofitted)	ES, BSP, POSO, MC
GC2	High	Undertake an energy efficiency retrofit of Council owned public lighting	ES, TS, POSO, MC
GC3	High	Implement the Waverley Energy Efficiency Plan 2011 management actions	ES, BSP, POSO, CCS, MC, HROD
GC4	High	Review and implement energy efficient street lighting opportunities following completion of the LED street light trial	ES, TS
GC5	High	Review the cost effectiveness of the purchase of GreenPower compared to other gge abatement options	ES, FISS
GC6	High	Develop strategies such as contractual terms to ensure best practice (including consideration of trigeneration) redevelopment of Council sites in Bondi Junction	ES, PCG
GC7	Ongoing	Continue to participate in the Street Lighting Improvement Program to advocate for Ausgrid to provide cost-effective, energy efficient street lighting	TS, ES
GC8	Medium	Investigate trigeneration ownership and operating models including documentation requirements for Bondi Junction	ES, PCG
GC9	Medium	Develop and implement procedures to hand over responsibility for maintenance of solar power assets to property managers	ES, BSP
GC10	Ongoing	Allocate responsibility in scorecards/work plans of relevant staff for maintenance of solar power assets to ensure maximum generation	BSP, ES

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
TC1	High	Model the greenhouse gas emissions and cost effectiveness of different vehicle fleet options to achieve an average of: · 200 g CO2-e / km for passenger and light commercial vehicles · 1,160 g CO2-e / km for heavy fleet vehicles	ES, BS
TC2	Medium	Review the Waverley Sustainable Fleet & Plant Policy 2011 based on the outcomes of the fleet modelling	ES, BS
TC3	Ongoing	Implement the Waverley Sustainable Fleet Action Plan 2011	ES, BS, FISS, HROD, MC, TS

Electricity and gas used in our homes, workplaces, schools, services and places of recreation is the largest generator of LGA greenhouse gas emissions (73 per cent). The largest electricity users in the Waverley LGA are non-residential and consume, per site, more than one hundred times the electricity used by the average household in Waverley.

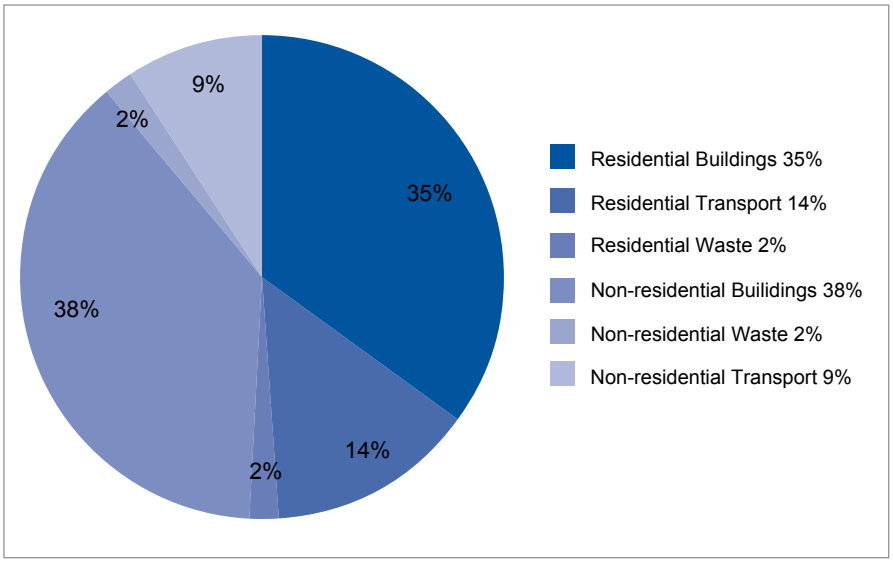


Figure 4 *Waverley LGA greenhouse gas emissions by sector 2011/12 (tonnes CO2-e) (Data source CCAP)*

Table 1 *Waverley LGA average electricity use per customer*

PROPERTY	TOTAL KWH 2010/11	NO. CUSTOMERS	AVERAGE KWH 2010/11 PER CUSTOMER
Residential	184,182,466	32,862	5,605
Non-residential Small Sites (<160,000 kWh pa)	69,336,973	3,312	20,935
Non-residential Med-Large Sites (>160,000 kWh pa)	115,411,204	172	669,066

(Data source Ausgrid. Note that electricity used by common areas of strata buildings is counted towards non-residential electricity use.)

Target: 30% reduction of 2003/04 levels of Waverley LGA Greenhouse Gas Emissions by 2020

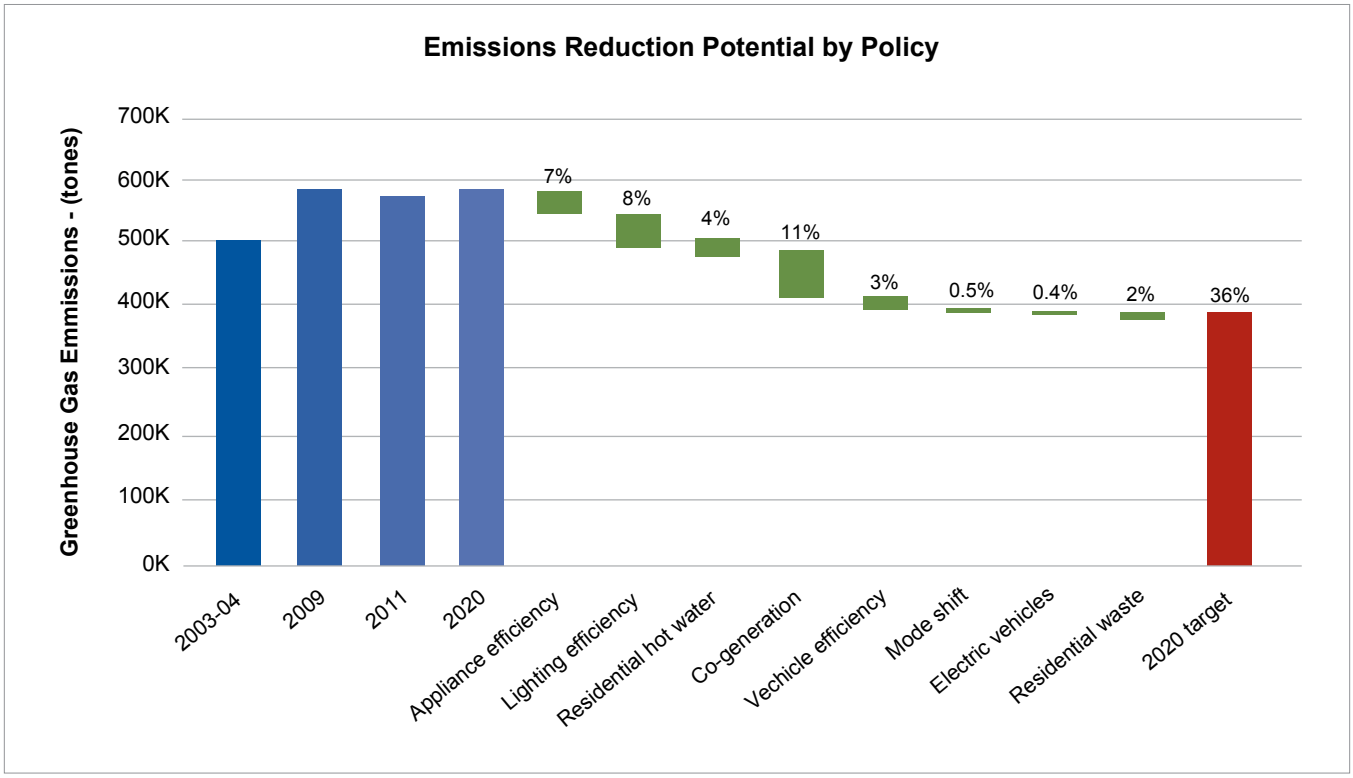


Figure 5 *Waverley LGA greenhouse gas emissions reduction potential (Source CCAP)*

To achieve the 30 per cent reduction target on the 2003/04 base year, Waverley LGA's annual gge need to be reduced to 346,500 tonnes CO2-e. Figure 4 identifies cost effective strategies to progress towards achieving the target and reduce gge to 377,641 tonnes CO2-e. This equates to a 24 per cent reduction on the 2003/04 base year or a 36 per cent reduction on 2011/12. The six per cent deficit will be addressed through investigation of emerging technologies and efficiencies as they are proven and become more cost effective over time.

Increases in commercial and residential building floor areas (in accordance with NSW Government requirements) have contributed towards the 17 per cent increase in Waverley LGA gge since the base year. Council completed the Bondi Junction Greenhouse Gas Review in 2011 which identified opportunities to reduce gge from buildings through co-generation, other low carbon technologies and efficiencies (appliance, lighting, hot water etc.). As a result, Council is investigating strategies for implementation of these technologies and efficiencies as part of a redevelopment of some Council sites into new mixed development, in Westfield Bondi Junction and in buildings with high energy use. A collaborative approach will be required to implement these national, state and local government initiatives.

Opportunities also exist to reduce gge through vehicle and waste efficiencies.

EAP Target: 30% reduction of 2003/04 levels by 2020

WT2 Reference: E1

Measures:

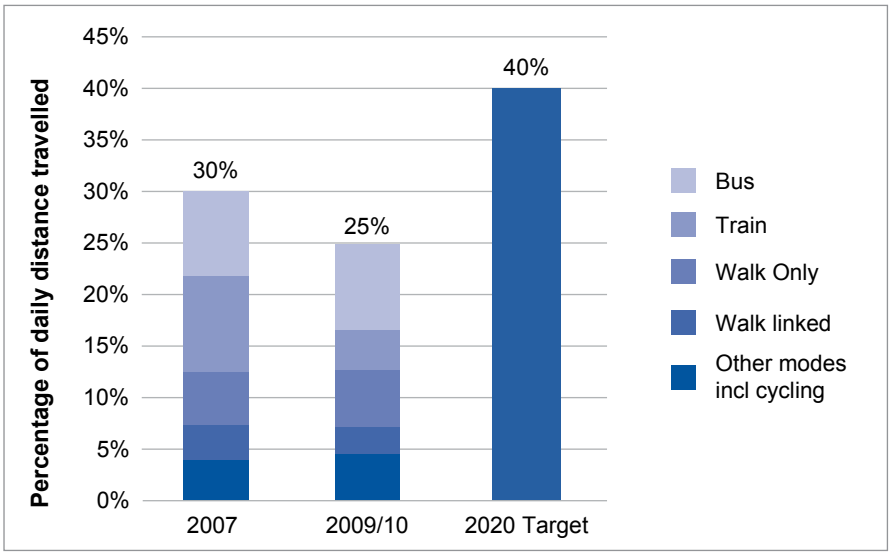
- tonnes CO2-e generated
- kWh electricity/MJ gas/kL fuel consumed
- Cost saving

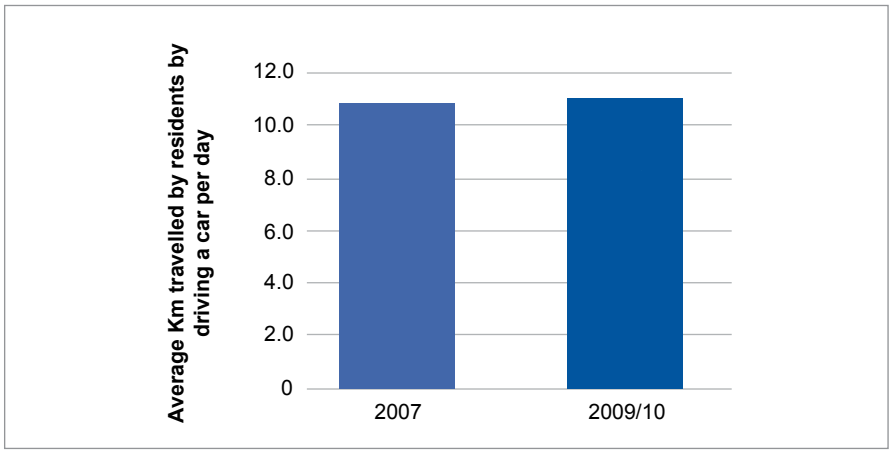
PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
GL1	High	Engage with Westfield Bondi Junction to encourage uptake of low carbon technologies (based on the findings of the Bondi Junction Greenhouse Gas Review 2011)	ES
GL2	High	Develop and deliver an engagement program to reduce non-residential electricity use, prioritising medium to high electricity using sites with a focus on energy efficient retrofits and building management, uptake of low carbon technology and fuel switching	ES, MCE
GL3	High	Investigate the feasibility of undertaking, and if feasible, undertake thermal imaging and on the ground micro-climate monitoring as a regional project	ES
GL4	Medium	Develop and implement micro-climate management actions based on the outcomes of the investigations	ES, RCPP
GL5	Low	Develop and deliver an engagement program to reduce residential electricity use	ES, MCE
GL6	Low	Develop and deliver an engagement program to increase awareness of the Australian Government's phase out of electric hot water systems and the options for an efficient hot water system	ES, MCE
GL7	Low	Advocate for the Australian Government and Government Agencies to release GreenPower consumption data and/or information by LGA	ES
GL8	Ongoing	Continue to investigate the feasibility of emerging low carbon technologies and efficiencies such as fuel cells, mini combined heat and power and energy management systems	ES

Reducing our car use – Waverley LGA

Target: 40% of total daily distance travelled by residents is by public transport, walking or cycling

Target: Average daily kilometres travelled by Waverley residents by private car declines by 15% on 2006 levels by 2020





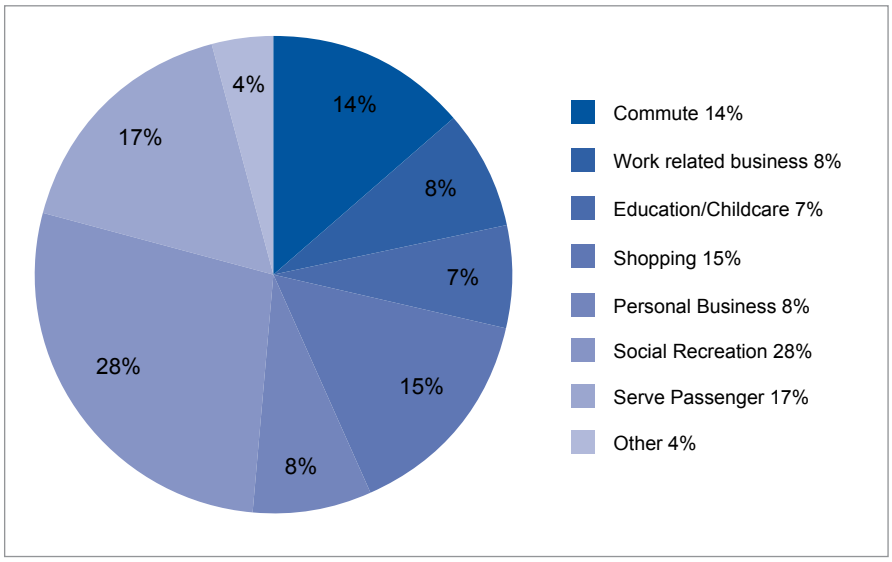


Figure 6 *Waverley LGA residents' daily distance travelled by mode**

Figure 7 *Waverley LGA residents' average daily kilometres travelled by car**

Figure 8 *Waverley residents' reason for travel (percentage of trips) 2009/10**

The NSW Government controls public transport infrastructure, services and strategies. Waverley Council continues to work to improve local footpaths, bicycle lanes and facilities, as well as advocate for improved local public transport services. Waverley residents are using the train less, resulting in a decline in the percentage of daily distance travelled by public transport, walking and cycling from 30 per cent in 2007 to 25 per cent in 2009/10 as shown in Figure 5. The average daily distance driven by residents has remained steady at 10.7 km. Social and recreational purposes account for 28 per cent of travel with commuting and work related business accounting for 22 per cent combined.

**Data source: NSW Government 2009/10. Caution must be taken when interpreting this data due to small sample size.*

EAP Target:

- 40% of total daily distance travelled by residents is by public transport, walking or cycling by 2020
- Average kilometres travelled by Waverley residents per day by private car declines by 15% on 2006 levels by 2020

WT2 Reference: E1, L7, L8, E8

Measures:

- Daily distance travelled by mode
- Vehicle kilometres travelled
- Tonnes CO2-e generated

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
TL1	High	Investigate the feasibility of light rail to service the key transport routes of Waverley LGA	ES, SLUP
TL2	High	Develop and deliver an engagement program to reduce private vehicle use and increase sustainable transport	ES
TL3	High	Finalise and implement the Waverley Bike Plan 2012	ES, TS
TL4	Medium	Undertake a LGA transport network analysis to consolidate and prioritise transport maps, works program and ensure consistent communications	ES, SLUP
TL5	Medium	Investigate the effectiveness of incentives/disincentives to reduce private vehicle use	ES
TL6	Medium	Identify opportunities to and incorporate electric car recharge points into Council infrastructure	ES, BSP
TL7	Ongoing	Implement the Waverley Transport Plan 2011	ES, SLUP, TS

Recycling and recovery of resources – Waverley LGA

Target: No net increase on 2004/05 levels of residential waste generation by 2020

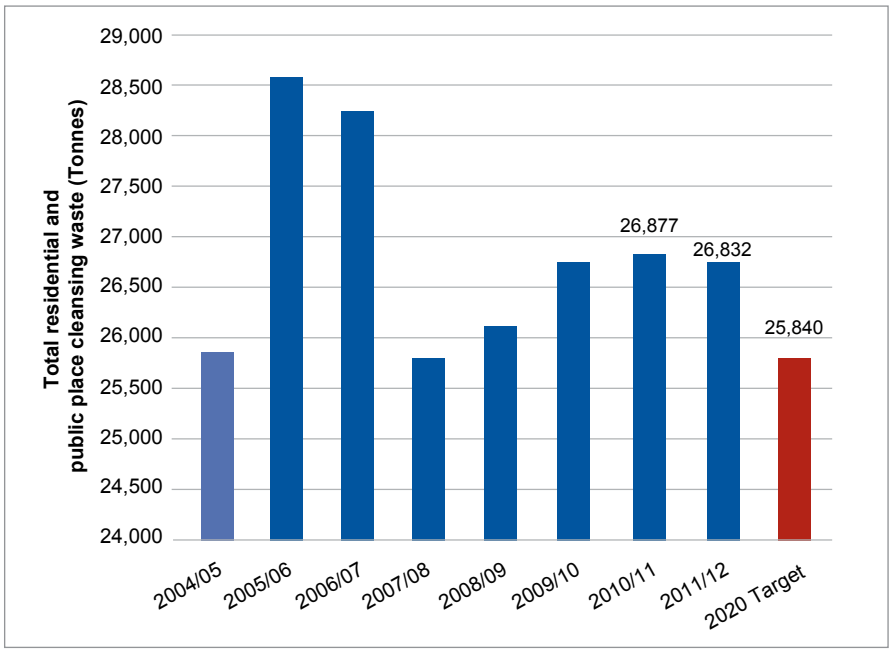


Figure 9 *Total Waverley LGA residential and public place waste generation*

The overall amount of waste collected from Waverley residents and public places has been decreasing in recent years. A further four per cent reduction is required to achieve the target.

Organic matter accounts for 60 per cent of Waverley LGA's residential general (red bin) waste. Organics include food, garden green waste and other organics such as textiles, wood and soiled paper. Opportunities to recover these resources are dependent on available treatment technologies, NSW Government regulations and market demand for the recycled product.

Waverley Council provides bins, and collects and disposes of container and paper recycling, green waste and general waste from all Waverley households. In accordance with NSW legislation, ratepayers pay a waste levy that contributes towards the cost of this service.

Council has been working to increase resource recovery of residential and public place waste. It has increased from 20 per cent in 2004/05 to 37 per cent in 2011/12.

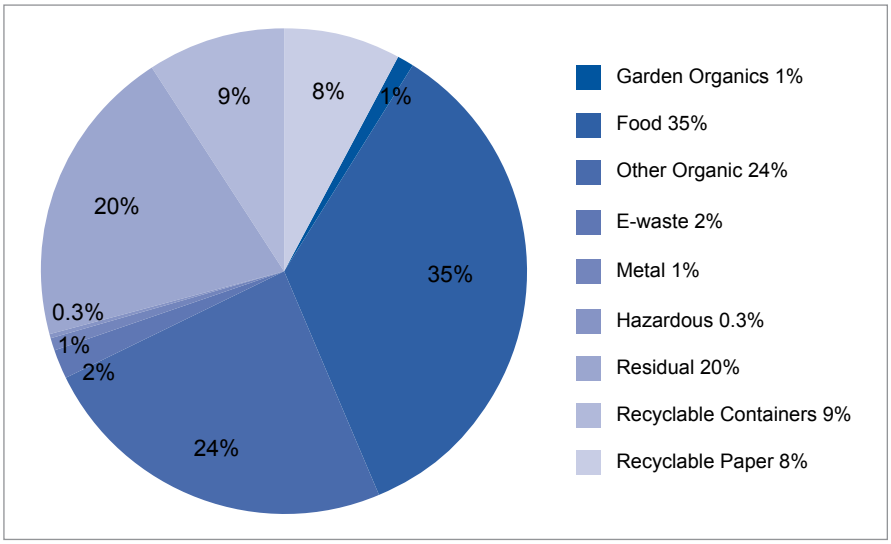


Figure 10 *Waverley LGA residential waste composition by weight (Data source APC 2011)*

There is potential to recover a maximum of 48 per cent of business as usual (BAU) waste utilising effective bin configurations, collection systems and education (source separation). Recovery rates are improved through use of alternative waste treatment (AWT) technologies on residual waste, including food waste. There is potential to achieve at least an additional 32 per cent resource recovery of BAU waste through the SSROC AWT tender. Energy from waste (Efw) technologies can potentially recover greater amounts of residual waste (thereby avoiding a deficit), but are yet to be proven in Australia. The opportunity exists for Waverley Council to continue to explore Efw technology as it becomes available in Australia.

Target: 75% resource recovery of residential waste by 2020

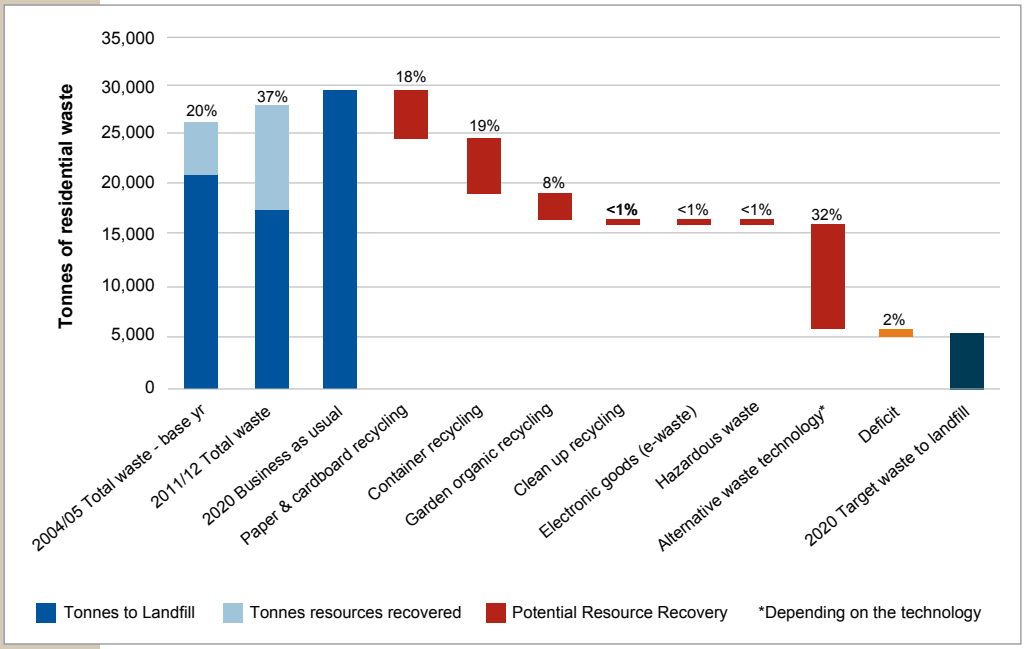


Figure 11 *Waverley LGA residential and public place cleansing resource recovery opportunities (Data source APC 2011 Kerbside Domestic waste Audit for Waverley Council)*

Waverley Council's commercial waste service provides recycling for all local business clients. In 2011/12, 22 per cent of resources were recovered.

There is potential to recover a maximum of 32 per cent of the waste utilising effective bin configurations, collection systems and education (source separation). There is potential to recover an additional 31 per cent of BAU waste with treatment of residual waste including food, textiles, wood and vegetation through the SSROC AWT tender.

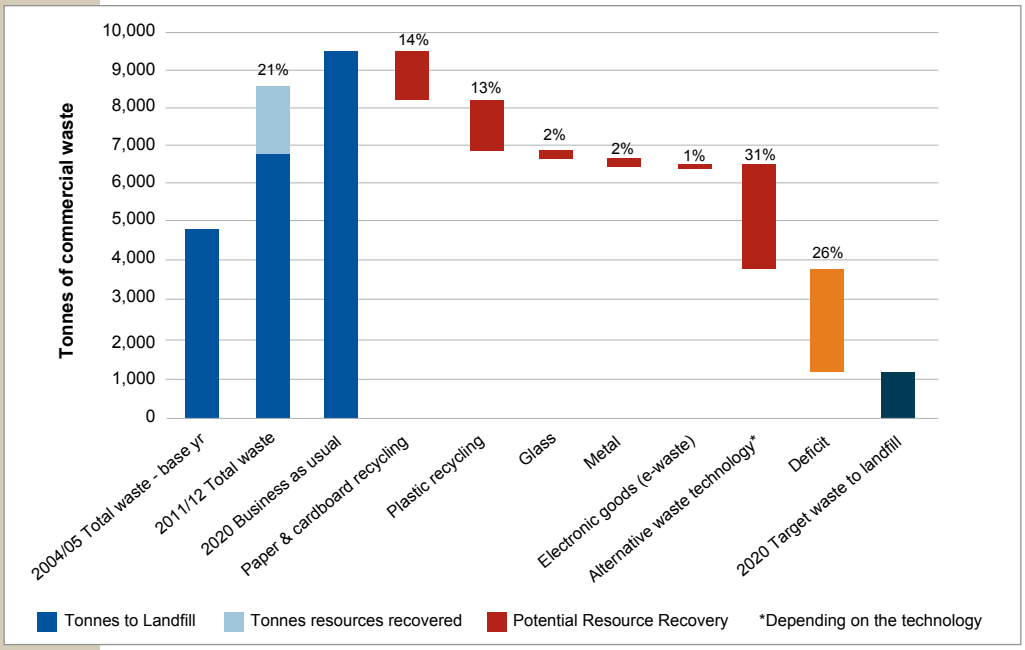


Figure 12 *Waverley Council commercial waste service resource recovery opportunities (Data source DECCW 2009 Disposal Waste Survey C& I Stream Sydney)*

EAP Target:

- 75% resource recovery of residential and commercial waste by 2020
- No net increase of 2004/05 waste generation levels by 2020

WT2 Reference: E3, E1, E8

Measures:

- Tonnes CO2-e
- Tonnes of waste
- Percentage resource recovery (diversion from landfill)
- Cost saving

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
RRR1	High	Develop and deliver an engagement program to maximise residential recycling	ES, RRPPC, MCE
RRR2	High	Include resource recovery KPIs in scorecards/work plans of staff involved in residential waste management	ES, RRPPC
RRR3	High	Develop in collaboration with industry a wastes of concern collection system (including permanent collection point) to recover e-waste, chemicals, etc.	ES, RRPPC
RRR4	High	Develop key MOU conditions and ensure that they are included in MOUs with partner organisations for the delivery of waste programs and services	ES
RRR5	High	Include wastes of concern and additional waste program KPI's in the scorecard/work plan of relevant Council staff	ES, RRPPC
RRR6	High	Review residential bin configuration, volume, collection frequency and cost to minimise general waste volumes and maximise resource recovery (with regard to the treatment options and NSW Government policy)	ES, RRPPC
RRR7	High	Develop and deliver a community engagement program to reduce littering and illegal dumping	RRPPC, ES, C, PM
RRR8	Medium	Investigate energy from waste opportunities	ES
RRR9	Medium	Develop in collaboration with industry a residential engagement program to recover wastes of concern	ES, RRPPC, MCE
RRR10	Medium	Develop locally relevant KPIs for the delivery of wastes of concern and additional waste programs and services	ES, RRPPC, BS
RRR11	Medium	Develop and deliver a community engagement program for the delivery of additional waste services such as mattress recycling, Garage Sale Trail etc	ES, RRPPC
RRR12	Low	Develop and deliver an engagement program to minimise residential contamination	ES, RRPPC, MCE
RRR13	Ongoing	Continue to implement the Waverley Littering & Illegal Dumping Action Plan 2011	RRPPC, ES, C, PM

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
CRR1	High	Develop and deliver a commercial client engagement program to maximise commercial recycling	ES, BS, MCE
CRR2	High	Review commercial bin configuration, volume, collection frequencies and costs to incentivise resource recovery (having regard to the treatment options and NSW Government policy)	ES, BS
CRR3	High	Include resource recovery KPIs in scorecards/work plans of staff involved in commercial waste management	ES, BS
CRR4	High	Develop and deliver a Council staff engagement program to increase resource recovery	ES, RRPPC
CRR5	Medium	Expand the current free school commercial recycling service to childcare centres and surf life saving clubs	BS
CRR6	Medium	Develop and deliver an engagement program to maximise the number of and effectiveness of schools, childcare centres and surf life saving clubs utilising free commercial recycling	ES, BS
CRR7	Medium	Include resource recovery KPIs in scorecards/work plans of staff involved in event waste management	PM, CCS
CRR8	Medium	Develop in collaboration with industry a commercial engagement program to recover wastes of concern such as e-waste, chemicals etc.	ES, BS, MCE
CRR9	Medium	Develop and deliver a Council staff engagement program to reduce contamination	ES, RRPPC
CRR10	Medium	Include waste KPIs/responsibilities in scorecards/work plans of Council staff involved in management of waste from Council operations	ES, RRPPC, BSP, MC, POSO
CRR11	Low	Develop and deliver a commercial client engagement program to minimise contamination	ES, BS, MCE

Reducing our water use – Waverley LGA

Target: Zero increase in Waverley LGA's 2005/06 levels of mains water consumption by 2020

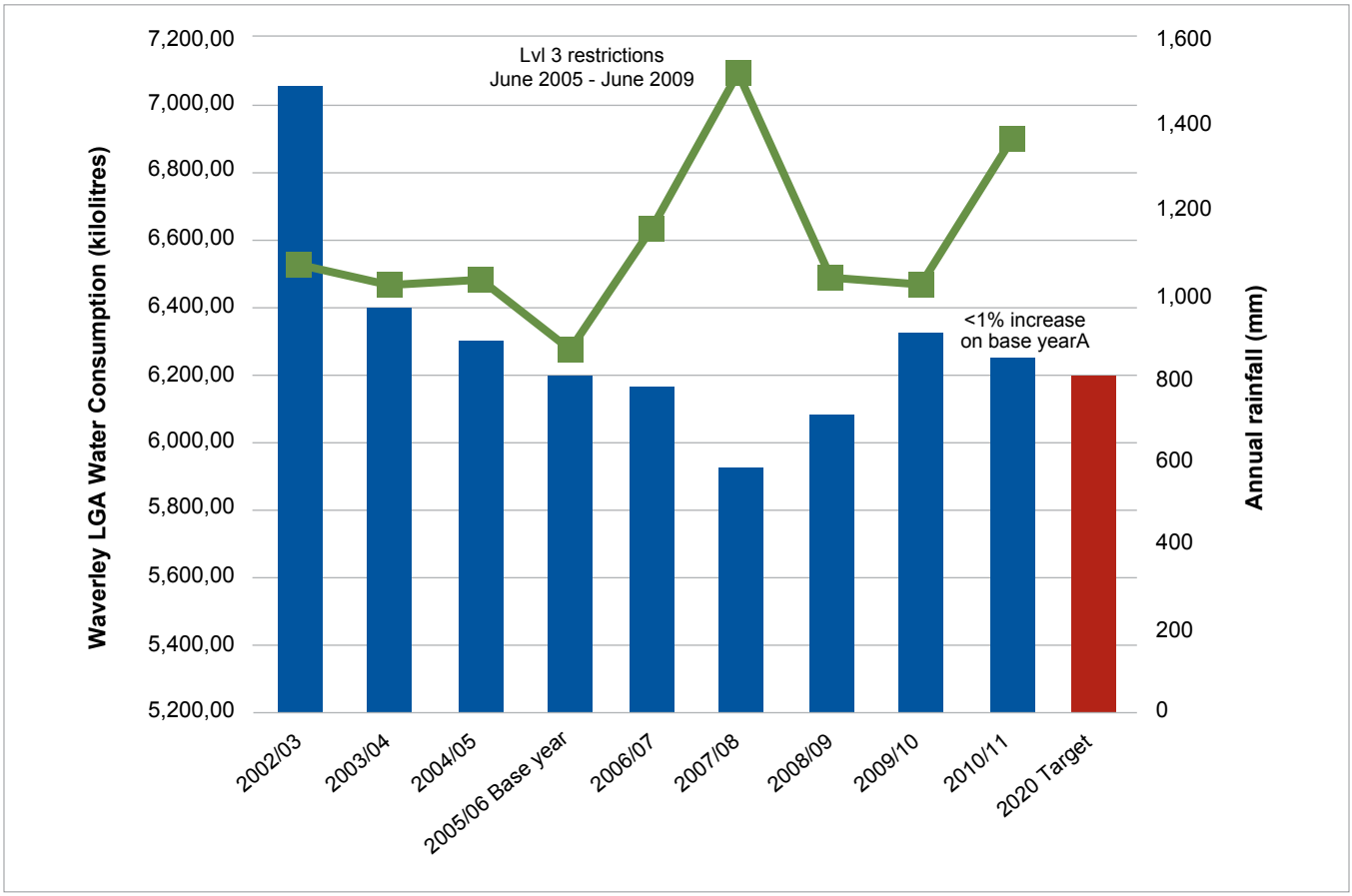


Figure 13 *Waverley LGA mains water consumption (Data sources Sydney Water & Bureau of Meteorology)*

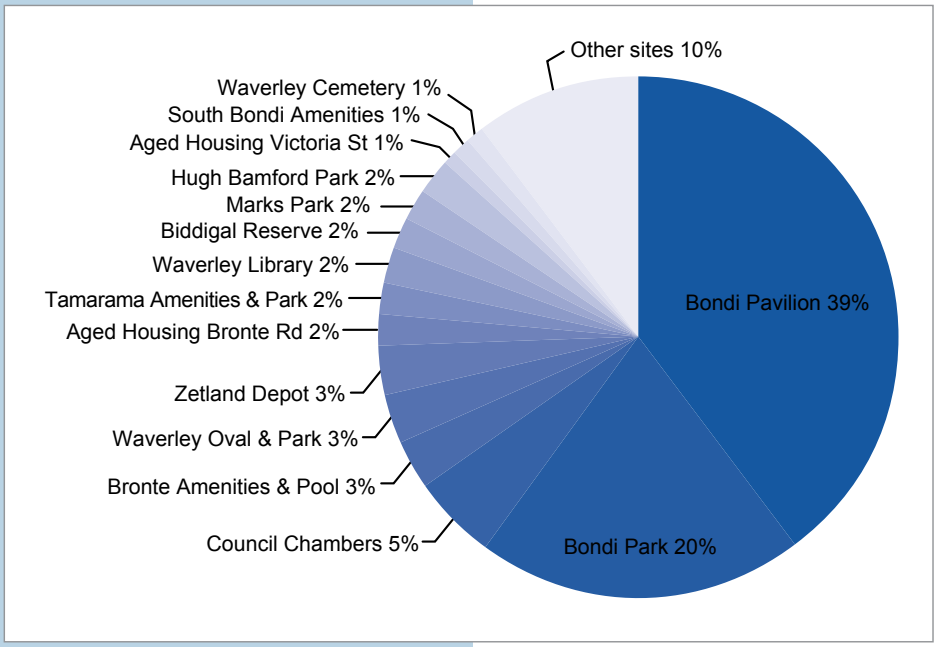
EAP Target: Zero increase of 2005/06 levels of mains water consumption by 2020

WT2 Reference: E4, E8

Measures:

- kL mains water
- Cost saving

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
WUL1	High	Advocate for individual water meters to be installed as part of new strata buildings (both residential and commercial)	ES
WUL2	Medium	Develop and deliver an engagement program to reduce water use by medium to high water users	ES, MCE



Bondi Park and Bondi Pavilion combined accounted for 59 per cent of Council's mains water use in 2011/12. Recycled stormwater is now being used for irrigation and toilet flushing at these sites thanks to the completion of the Bondi Stormwater Harvesting project.

Water leaks also plagued the Bondi Pavilion's aged pipe infrastructure in 2011/12. An automated leakage detection system is being sought in order to more quickly identify and fix water leaks across all of Council's assets.

Figure 14 *Waverley Council mains water consumption by site 2011/12 (kL) (Data source CCAP)*

Mains water use in Council operations was 76 per cent higher in 2011/12 than the base year (set during level 3 water restrictions). Historically, mains water use has varied according to water restrictions and rainfall.

In order to provide a more sustainable and consistent water supply, recycled water and groundwater systems have been installed by Council.

Substantial reductions in future mains water use are anticipated as a result of Council's recycled water systems (Bronte, Bondi and Waverley Park), groundwater systems (Barracluff Park) and rainwater tanks. These systems not only replace mains water use but also allow for increased irrigation, improving turf health and amenity.

Opportunities exist to reduce water leaks, retrofit more water saving devices and investigate the feasibility of further recycled water infrastructure. It is anticipated that improved data management will also result in water savings, but these are difficult to quantify.

Target: 50% reduction in Council's mains water consumption from 2005/06 levels by 2020

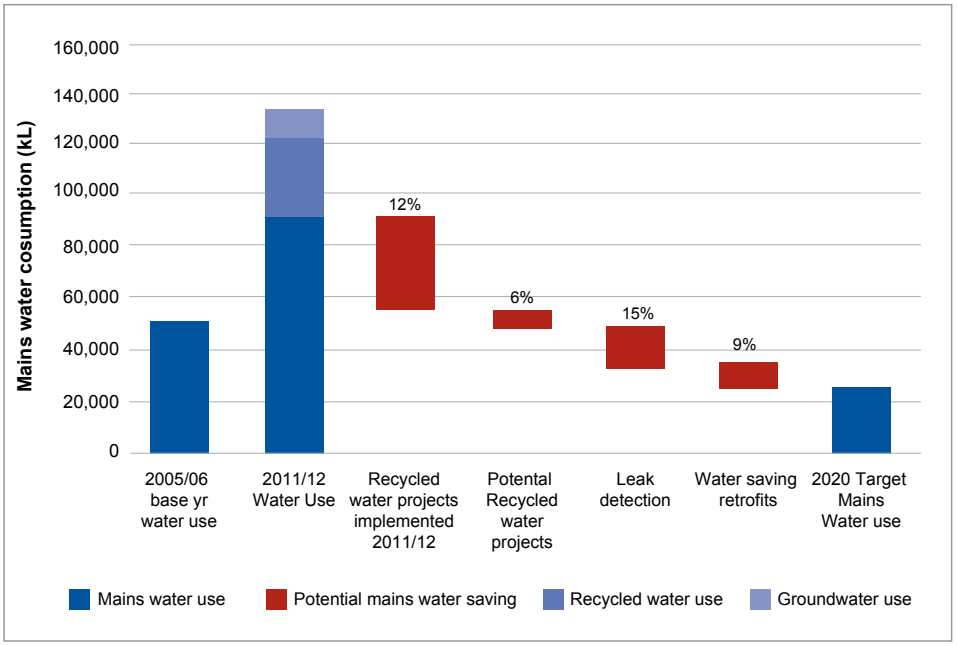


Figure 15 *Waverley Council mains water consumption reduction opportunities*

EAP Target: 50% reduction of 2005/06 levels in mains water consumption by 2020

WT2 Reference: E4

Measures:

- kL mains water
- kL recycled water
- kL ground water
- Cost saving

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
WUC1	High	Implement Waverley Water Efficiency Plan 2011 management actions	ES, BSP, POSO, MC, CCS,
WUC2	High	Implement water leak detection systems on all Council sites (prioritising sites with older infrastructure)	ES, BSP, POSO, MC
WUC3	High	Isolate mains top up and manage irrigation of Waverley Oval, sports fields and park with recycled water (using mains only in emergencies)	ES, POSO
WUC4	High	Insert water use KPIs in scorecards/work plans of relevant staff, including those supervising relevant contractors	ES, POSO, BSP, MC
WUC5	High	Include water use KPIs and/or provisions in contracts with relevant contractors	POSO
WUC6	High	Develop and implement a procedure to hand over recycled water and ground water assets to site managers	ES, POSO
WUC7	High	Connect major Council asset water users to Council recycled water systems e.g. Bronte Surf Life Saving Club, Bondi Surf Life Saving Club	ES, POSO
WUC8	Medium	Investigate the feasibility of and implement (where feasible) recycled water systems for Marks Park, Tamarama Park and Hugh Bamford Reserve	ES, POSO
WUC9	Medium	Undertake a water efficiency building retrofit (of assets not already retrofitted)	ES, BSP
WUC10	Medium	Allocate responsibility for maintenance of recycled water and groundwater assets in scorecards / work plans	POSO
WUC11	Medium	Identify skills required for long-term maintenance of recycled water and ground water assets in the workforce plan	POSO, MC

Keeping the water clean – Waverley LGA

Target: Minimise sediments and suspended solids in stormwater discharged into waterways by 2020

Target: Minimise bacterial pollution in stormwater discharged into waterways by 2020

Target: Minimise nutrients in stormwater discharged into remnant vegetation by 2020

STORMWATER CATCHMENT BOUNDARIES IN WAVERLEY

Figure 16 *Waverley Council catchments (Source Equatica 2012 Waverley Music Modelling Draft Report)*

Bondi, Bronte and Tamarama beaches receive stormwater discharge from North Bondi, South Bondi, Bronte, Clovelly and Tamarama catchments.

Sydney Harbour receives stormwater discharge from Double Bay, Rose Bay North and South.

Centennial Park Musgrave Pond and Yacht Pond receive stormwater discharge from their respective catchments across Bondi Junction, Queens Park and Charing Cross.

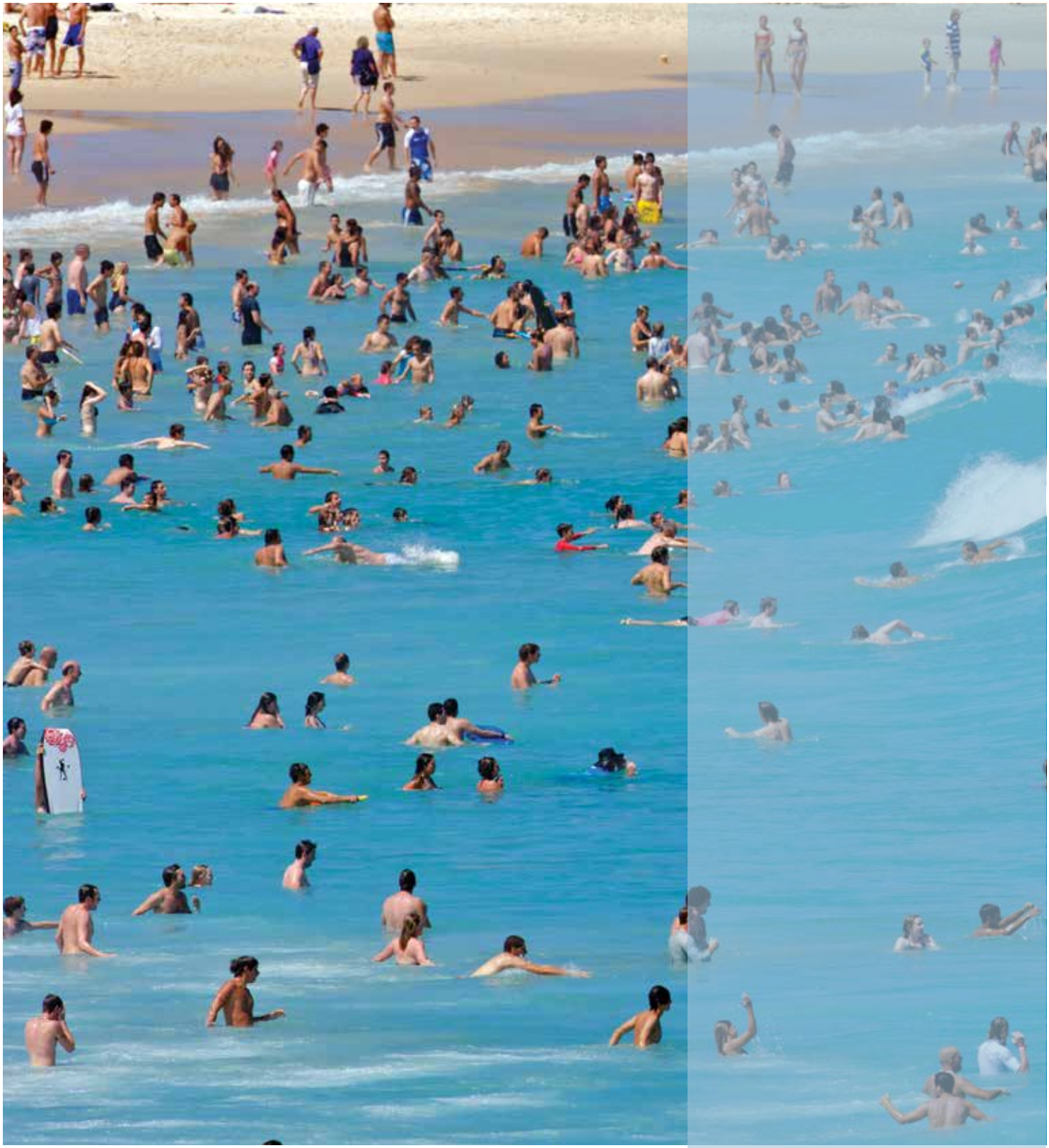
Stormwater from Dover Heights and Vaucluse is discharged onto the rock platforms that lead to the ocean.

Wastewater (i.e. sewage) undergoes primary treatment at Sydney Water's North Bondi Sewage Treatment Plant before being discharged via long ocean outfalls, although some wastewater is disposed of untreated from Sydney Water infrastructure at Diamond Bay. Faecal pollution primarily occurs when untreated wastewater is discharged into the ocean and when wastewater enters the stormwater drainage system instead of the sewer system.

Faecal pollution is generally controlled by Sydney Water and impacts on water quality at local beaches and ocean pools.

Gross pollutants (floatable litter and vegetation), total suspended solids (sediment, sand, organic and inorganic particles) and total nitrogen (nutrients from leaf litter, animal faeces and garden fertilisers) are the main pollutants in Waverley. By minimising these pollutants, other pollutants which attach themselves to particles are also removed, i.e. heavy metals, oil and vehicle hydrocarbons.

Waverley Council undertakes engagement programs, business



inspections, street cleaning and maintains seven gross pollutant traps to prevent litter, leaves and sediment from being transported by stormwater to Bondi, Tamarama and Bronte Beaches and the ocean near Dover Heights.

Council advocates for Sydney Water to minimise faecal pollution discharged into the stormwater system and ocean. Sydney Water has an obligation to manage discharges and overflows from the wastewater system and the resulting pollution. Council ensures that wastewater from private properties does not enter the stormwater drainage system. Council also installed the Bondi and Bronte stormwater reuse systems which remove faecal and nutrient pollutants from millions of litres of stormwater each year. Filtration of nutrients will also occur as part of the planned biofiltration system (also known as a raingarden) for Bondi Junction.

Chemical pollutants such as paint are also problematic when illegally discharged into the stormwater system. Council supports NSW Government chemical clean days to enable the safe disposal of chemicals.

EAP Target:

- Minimise sediments and suspended solids in stormwater discharged into waterways by 2020
- Minimise bacterial pollution in stormwater discharged into waterways by 2020
- Minimise nutrients in stormwater discharged into remnant vegetation by 2020

WT2 Reference: E5, E8

Measures:
to be determined

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
WQ1	High	Develop an exponare map showing catchment and sub-catchment boundaries and names	ES, SLUP, TS
WQ2	High	Develop an exponare map showing the location and type of Council's water quality improvement assets (including GPTs, stormwater treatment, filtration, pit baskets)	ES, SLUP, TS
WQ3	High	Allocate in scorecard/work plan of relevant Council staff responsibility for maintenance of information on water quality improvement assets	TS
WQ4	High	Develop and implement an integrated water quality improvement strategy to identify appropriate mitigation strategies addressing the pollutants of concern for each receiving area, including remnant vegetation	ES, TS, RCPP, POSO
WQ5	High	Review and update Council's Pollution Incident Procedure	ES, C, MC
WQ6	High	Allocate responsibility in scorecard/work plans for maintenance of spills equipment and staff training	MC, HROD
WQ7	Medium	Develop and deliver a community engagement program to increase awareness of Sydney Water's progress on the untreated wastewater and sewer overflow events	ES, MCE
WQ8	Medium	Develop and implement a dry weather sewer leak investigation and rectification program	ES, C
WQ9	Medium	Develop and deliver a community engagement program to reduce stormwater pollution	ES, C, MCE
WQ10	Medium	Develop and deliver an engagement program for Council staff and contractors to avoid pollution of stormwater from Council operations	ES, MC, POSO, RCPP
WQ11	Ongoing	Continue to advocate for Sydney Water to address the untreated wastewater being discharged from the Sydney Water sewer system via the Diamond Bay ocean outfall	ES
WQ12	Ongoing	Monitor and advocate for the number of Sydney Water wastewater overflow events to be within their licence conditions	ES

Conserving our biodiversity – Waverley LGA

Biodiversity, or biological diversity, is the variety of all living organisms from all sources including terrestrial, aquatic, marine and other ecosystems.

Waverley's 5.93 hectares of remnant vegetation supports:

- 15 distinct native plant communities
- One endangered plant community, the Eastern Suburbs Banksia Scrub
- 123 indigenous plant species and eight additional planted native species
- 69 locally rare plant species, with small populations of three or less
- One endangered plant species, the Sunshine Wattle (Acacia terminalis subsp. terminalis)
- 66 native terrestrial vertebrate species including four frog species, 11 reptile species, 38 native bird species and four mammal species
- One threatened animal species, the Grey-headed Flying Fox (Pteropus poliocephalus)
- One regionally significant bird, the Yellow-rumped Thornbill (Acanthiza lineata)

Prior to endorsement of EAP2, areas of remnant vegetation were being lost as a result of development and degradation. Remnant vegetation and habitat corridors have now been mapped and included in planning instruments, along with controls to protect them. Improving the condition of remnant vegetation is a priority for EAP3.

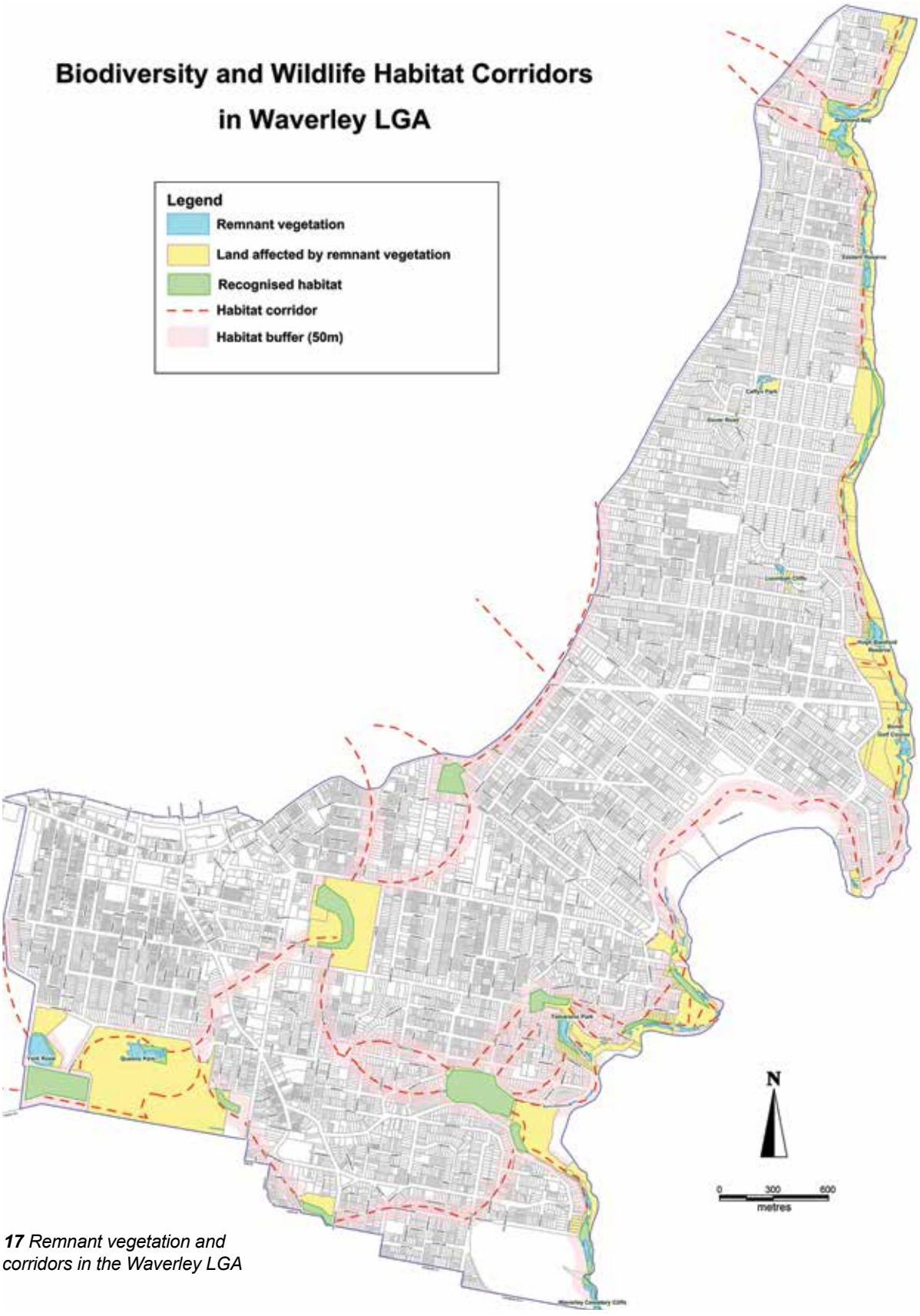


Figure 17 *Remnant vegetation and habitat corridors in the Waverley LGA*

Target: Ensure no loss from 2009/10 levels of remnant vegetation

Table 2 *Waverley LGA main areas of remnant vegetation (Data source Sydney Bush Regeneration Company 2010)*

LOCATION OF MAIN AREAS OF REMNANT VEGETATION	2010 AREA (m2)
Diamond Bay Reserve, Vaucluse	7,800
Eastern Reserve, Dover Heights	4,800
Caffyn Park, Dover Heights	1,100
Raleigh Reserve, Dover Heights	1,600
Loombah Road Cliffs, Dover Heights/North Bondi	1,036
Hugh Bamford Reserve, Dover Heights/North Bondi	4,500
Tamarama Park, Tamarama	3,500
Waverley Cemetery Cliffs, Bronte	3,100
York Road Bushland, Queens Park (Council road verge & Centennial and Moore Park Trust land)	11,000

Target: 40% of remnant vegetation is of good condition by 2020

Table 3 *Waverley LGA remnant vegetation condition (Data source Sydney Bush Regeneration Company 2010)*

REMNANT VEGETATION CONDITION ZONING	TOTAL AREA OF CONDITION ZONE (HA)	TOTAL AREA OF CONDITION ZONE (%)	NUMBER OF INDIVIDUAL AREAS OF CONDITION ZONE
Good	0.2726	4.6	9
Fair	1.2046	20.3	16
Poor	0.5428	9.1	23
Very poor	3.9147	66.0	88
TOTAL	**5.9347**	**100**	**136**

Sixty five per cent of the Waverley LGA's remnant vegetation occurs within nine sites located across the LGA (as shown in Table 2). The remaining 35 per cent exists in 127 micro-remnants that occur mostly along cliffs. Resourcing long term regeneration and revegetation works in the nine main areas will achieve a vast improvement in the percentage of remnant vegetation in good condition.

EAP Target:

- Ensure no loss of remnant vegetation based on 2009/10 levels
- 40% of remnant vegetation is of good condition by 2020

WT2 Reference: E5, E8

Measures:

- m2 remnant vegetation
- condition of remnant vegetation

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
B1	High	Develop and implement a Biodiversity Action Plan by mapping, analysing and developing: · remnant vegetation areas and condition map · revegetated areas and areas proposed for revegetation map · habitat corridors and areas proposed for habitat creation map · weed and pest animal distribution / species map · water catchments and sub-catchments map · water quality improvement assets map · land use map · action plan to improve the condition of each area of remnant vegetation · action plan to improve and/or expand areas of revegetation · action plan to improve habitat corridors and/or create habitat · action plan to remove/reduce targeted weed and pest animal species across the LGA	ES, RCPP, POSO
B2	High	Integrate the Biodiversity Action Plan into parks Plans of Management	RCPP, ES
B3	High	Integrate the relevant actions from the Biodiversity Action Plan into the Street Tree Master plan and Tree Management Plan	POSO, RCPP, ES
B4	High	Incorporate remnant vegetation into Council's asset management system	TS, ES
B5	High	Integrate the Biodiversity Action Plan into the Strategic Asset Management Plan	TS, ES
B6	High	Develop and deliver a staff remnant vegetation engagement program to increase awareness of species, their location, regeneration strategies being implemented and how staff can deliver their operations to protect remnant vegetation	ES, POSO
B7	High	Develop and deliver a community engagement program to increase planting of native species and decrease weed species on private property, prioritising sites in areas of and/or affected by remnant vegetation and/or habitat corridors	ES, RCPP, POSO
B8	High	Develop and deliver a community engagement program to attract and retain Waverley Bushcare volunteers	RCPP, ES
B9	High	Review and update Council's Footpath Gardens Policy and Guidelines to: · specify the plant species that can be utilised for verge gardens in areas of and/or affected by remnant vegetation and/or habitat corridors · identify local weed species and prohibit their use in verge gardens · encompass community gardens as well as verge gardens	ES, RCPP
B10	High	Review and update Council's Pocket Parks program to: · specify the plant species that can be utilised for pocket parks in areas of and/or affected by remnant vegetation and/or habitat corridors · identify local weed species and prohibit their use in pocket parks · expand the program to include laneways and streetscapes to encourage planting of native species and decrease weed species in these areas	RCPP, ES
B11	Medium	Integrate the Biodiversity Action Plan maps into the proposed Integrated Open Space Strategy	RCPP, ES

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
B12	Medium	Integrate the proposed micro-climate map (thermal imaging and ground monitoring) into the proposed Integrated Open Space Strategy	RCPP, ES
B13	Medium	Map existing and potential sites for community gardens, verge gardens and pocket parks for integration into the proposed Integrated Open Space Strategy	RCCP
B14	Medium	Develop and deliver a community engagement program to encourage food growing on private property as part of the proposed Integrated Open Space Strategy	RCCP, ES
B15	Medium	Map Green Links routes for integration into the proposed Integrated Open Space Strategy	SLUP
B16	Medium	Develop and deliver a staff weeds and pest animals engagement program to increase awareness of species, their location, control strategies being implemented and how staff can deliver their operations to support pest management	ES, POSO
B17	Medium	Develop and deliver a community engagement program to attract and retain Pocket Parks volunteers to improve biodiversity	RCPP, ES
B18	Medium	Collaborate with the NSW Government on their development of management plans for the Intertidal Protected Area and Bronte to Coogee Aquatic Reserve	ES, RCPP, C
B19	Medium	Develop and deliver a community engagement program to increase awareness of the value of the Intertidal Protected Area and Aquatic Reserve as well as their restrictions	ES, RCPP, C
B20	Ongoing	Implement the Biodiversity Action Plan	ES, RCPP, POSO

Integrated strategies – Waverley Council operations and Waverley LGA

The way we use land, consume resources and dispose of resources have inter-related environmental impacts. Therefore, strategies that address multiple or complex environmental issues are sometimes required in order to effectively manage risks and engage with people who live, work or play in the Waverley LGA.

EAP Target: All

WT2 Reference: E1, E2, E3, E4, E5, E6, E7, E8, L6, L7

Measures:

- Tonnes CO2-e
- kWh electricity/MJ gas/kL fuel
- Cost saving
- Tonnes of waste
- Percentage resource recovery (diversion from landfill)
- kL mains water
- kL recycled water
- kL ground water
- m2 remnant vegetation
- condition of remnant vegetation

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
IS1	High	Implement the recommendations of the Waverley Coastal Risk & Hazards Vulnerability Study	ES, SLUP, RCPP, POSO, DA, MC, TS, HROD
IS2	High	Revise and update Waverley Council planning instrument(s) with regards to: · coastal inundation risk and geotechnical risk · energy assessments · low carbon plant floor space · water management · water quality management · commercial waste conditions · air quality including wood heaters	ES, SLUP
IS3	High	Develop Waverley Council branded design guidelines for consistent communication of EAP3 projects and engagement programs and clear association with Waverley Council	ES, MCE
IS4	High	Investigate and implement compatible electronic newsletter subscriber and content management system	ES, FISS
IS5	High	Review the branding of the monthly community environmental electronic newsletter in accordance with the GreenWave design guidelines	ES, MCE
IS6	High	Review criteria for environmental grants to focus on activities that contribute towards achievement of EAP3 targets and complement EAP3 community engagement programs	ES, RCPP
IS7	Medium	Review criteria for business awards, garden awards and community awards with regard to EAP3 targets	ES, RCPP
IS8	Low	Develop and implement a climate change adaptation plan	ES, TS, RCPP, POSO, MC, SLUP, DA, HROD
IS9	Ongoing	Continue to develop and deliver the monthly electronic newsletter	ES, MCE
IS10	Ongoing	Continue to facilitate the Eastern Suburbs Sustainable Schools Network to support local educational institutions to improve their environmental performance	ES
IS11	Ongoing	Continue to deliver the Waverley Sustainable Procurement Action Plan 2011	ES, FISS, BSP, BS, GIP, POSO, RCPP, TS, MC
IS12	Ongoing	Continue to support and provide resources to local organisations and individuals to deliver engagement programs and/or projects that contribute towards achievement of EAP3 targets (e.g. community grants, training or other support)	ES
IS13	Ongoing	Support and provide resources to Council staff to deliver engagement programs and/or projects that contribute towards achievement of EAP3 targets (e.g. training and tools to deliver waste audits, construct biofiltration systems etc.)	ES
IS14	Ongoing	Review and update the Waverley Council website environmental content with regard to the design guidelines and EAP3	ES, MCE
IS15	Ongoing	Review and update the Waverley Council intranet environmental content with regard to the design guidelines and EAP3	ES, MCE

Monitor, review and report – Waverley Council operations and Waverley LGA

EAP Target: All

WT2 Reference: E1, E2, E3, E4, E5, E6, E7, E8, L6, L7

Measures:

- Tonnes CO2-e
- kWh electricity/MJ gas/kL fuel
- Cost saving
- Tonnes of waste
- Percentage resource recovery (diversion from landfill)
- kL mains water
- kL recycled water
- kL ground water
- m2 remnant vegetation
- condition of remnant vegetation

Waverley Council completes both statutory and voluntary reporting on environmental indicators and activities to Councillors, the community and NSW Government departments. Effective monitoring and data management systems are required in order to measure the effectiveness of projects, continuously improve environmental performance and complete reporting requirements.

A four yearly review of this EAP will be undertaken in line with integrated reporting requirements. The review will consider progress against environmental targets, environmental trends, benchmarks, technologies, management and consultation.

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
MRR1	High	Develop and deliver energy and water quarterly reporting to the Executive Team	ES, BSP, POSO, MC
MRR2	High	Procure and maintain an environmental data management system to measure progress against Council EAP3 targets and manage asset consumption and/or generation of: · greenhouse gas emissions · electricity · gas · mains water · recycled water · ground water · renewable energy	ES, BSP, POSO, MC
MRR3	High	Install and/or configure sub-metering and/or inverter and wireless data loggers where required to record Council operations and assets: · water leaks · recycled water consumption · ground water consumption · solar power generation and consumption	ES, BSP, POSO, MC
MRR4	High	Ensure data logger specifications, operating instructions and procedures are easily accessible on TRIM	ES
MRR5	High	Assign responsibility in scorecard/work plans for collation and/or maintenance of the Council environmental data management system and to regularly review the effectiveness of management	ES, BSP, POSO, MC
MRR6	High	Develop and deliver an engagement program to build staff and contractor capacity to use the Council environmental data management system to: · identify, respond to and report on anomalies for individual assets · measure the effectiveness of implemented efficiency projects at individual assets · measure progress against Council targets · understand the methodology for measuring progress against Council targets	ES
MRR7	High	Assign responsibility in scorecard/work plans for maintenance of energy and greenhouse data for all Council assets and to regularly review the effectiveness of management	ES
MRR8	High	Assign responsibility in scorecard/work plans for maintenance of water data for all Council assets and to regularly review the effectiveness of management	ES

PROJECT REF.	PRIORITY	PROJECT	RESPONSIBILITY
MRR9	High	Procure and maintain a data management system to measure progress against community EAP3 targets across greenhouse gas emissions, water, waste and biodiversity	ES, RRPPC, RCPP, SLUP
MRR10	High	Assign responsibility in scorecard/work plans for collation and/or maintenance of the community environmental data management system and to regularly review the effectiveness of management	ES, RRPPC, RCPP, SLUP
MRR11	High	Develop and deliver an engagement program to build staff capacity to use the community environmental data management system to: · measure progress against community targets · update assumptions · understand the methodology for measuring progress against community targets · model strategies	ES
MRR12	High	Ensure the methodologies for calculating progress against EAP community and Council targets are easily accessible on TRIM to ensure consistency and transparency in reporting	ES
MRR13	High	Develop and implement a methodology for measuring water quality baseline and progress against target in collaboration with other councils	ES
MRR14	High	Assign responsibility in scorecard/work plans to manage water quality data and to regularly review the effectiveness of management	ES, C
MRR15	High	Assign responsibility in scorecard/work plans to maintain the biodiversity data and to regularly review the effectiveness of management	ES, RCPP
MRR16	Medium	Develop a methodology for measuring the volume of waste generated and resources recovered by Council operations and services	ES, RRPPC
MRR17	Medium	Measure the volume of waste generated and resources recovered by Council operations and services a minimum of every four years	ES, RRPPC
MRR18	Medium	Identify opportunities and install electricity/gas/mains water sub-metering to identify efficiency measures	ES, BSP, POSO, MC
MRR19	Medium	Review the effectiveness of current water quality monitoring (i.e. ocean pool) with regard to the developed methodology	ES, C
MRR20	Low	Investigate opportunities to develop and deliver a community volunteer biodiversity monitoring program	ES, RCPP
MRR21	Ongoing	Review and continue to deliver monthly waste reporting to Council	RRPPC
MRR22	Ongoing	Review the Waverley Water Management Plan every four years in accordance with NSW Government requirements	ES
MRR23	Ongoing	Review the Waverley Energy Efficiency Plan every four years in accordance with NSW Government requirements	ES
MRR24	Ongoing	Review the Biodiversity Action Plan every four years	ES, RCPP
MRR25	Ongoing	Undertake remnant vegetation assessments every four years to measure progress against target	ES, RCPP
MRR26	Ongoing	Complete annual Waste and Sustainability Improvement Program (WASIP) reporting requirements on delivery of waste services and implementation of key environmental plans	ES, RRPPC
MRR27	Ongoing	Complete environmental target progress report annually as part of Council's Annual Report	ES, RRPPC, RCPP
MRR28	Ongoing	Review EAP targets every four years with regard to best practice and progress to date	ES, RRPPC, RCPP, SLUP, POSO
MRR29	Ongoing	Review and update the Waverley Environmental Action Plan every four years in association with the Waverley Strategic Plan update	ES, RRPPC, RCPP, SLUP, POSO

Abbreviations and Terminology

AWT - Alternative waste treatment

CO2-e - Carbon dioxide equivalent

EAP2 - Environmental Action Plan 2

Efw - Energy from waste

g - Grams

gge - Greenhouse Gas Emissions

GreenPower - Electricity from a renewable energy source purchased from an accredited provider

HVAC - Heating, ventilation and air conditioning

Kg - Kilogram

kL - Kilolitre

kW - kilowatt

kWh - kilowatt hour

LED - Light emitting diode

LGA - Local Government Area

m2 - square metres

SSROC - Southern Sydney Regional Organisation of Councils

T - Tonnes

WT2 - Waverley Together 2

ES - Environmental Services

SLUP - Strategic Land Use Planning

C - Compliance

DA - Development Assessment

MCE - Media & Community Engagement

HROD - Human Resources & Organisational Development

BS - Business & Services

MC - Maintenance & Construction

RRPPC - Resource Recovery & Public Place Cleansing

POSO - Parks & Open Space Operations

FISS - Finance & Information Systems & Services

GIP - Governance & Integrated Planning

TS - Technical Services

BSP - Business, Services & Property

PS - Parking Services

CCS - Cultural & Community Services

RCPP - Recreation Community Planning & Partnerships

LCS - Library & Customer Services

PM - Place Management

This Waverley Environmental Action Plan 3 has been prepared by Wileco in accordance with the scope and requirements set by Waverley Council. The information contained within this report is based on staff consultation and analysis of information provided by Waverley Council and their service providers. Estimates and assumptions have been applied where necessary. Wileco accepts no liability or responsibility for any use or reliance upon this report by any third party.

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Appendix A: Cost Table

Indicative costs are provided below for budgeting purposes only and are based on estimates and information provided by Waverley Council. Individual project budgets have been consolidated under categories in accordance with Waverley Council budget practices.

PROJECT REFERENCE	PROJECT	One-off project capital and/or start-up costs ($)	Ongoing costs recurring annually for 10 yrs. ($)	Ongoing costs recurring annually for 9 Yrs. ($)	Ongoing costs recurring every 2 yrs. ($)	Ongoing costs recurring every 4 yrs. ($)
GC1, GC2, GC3, GC4, GC6, GC7	Energy/greenhouse saving - Council operations	670,000	10,000	0	0	0
GL2, GL3, GL4, GL5, GL6	Energy/greenhouse saving - community	100,000	5,000	50,000	0	0
TL1, TL2, TL3, TL4, TL5, TL6, TL7	Transport strategy and works	828,000	0	318,000	0	5,000
RRR1, RRR9, RRR11, RRR12, RRR13, RRR3, RRR8	Resource recovery strategy and engagement - residential & public place	20,000	35,000	0	0	5,000
CRR1, CRR4, CRR6, CRR8, CRR9, CRR11	Resource recovery strategy and engagement - commercial & Council	0	19,000	0	0	7,000
RRR7, RRR13	Littering & dumping	83,000	81,000	0	0	0
WUC1, WUC2, WUC3, WUC8, WUC9	Water saving & recycled water - Council operations	2,317,000	15,000	0	0	0
WUL2	Water saving - community	50,000	0	20,000	0	0
WQ4, WQ7, WQ8, WQ9	Water quality improvement	40,000	5,000	60,000	5,000	0
B1, B6, B7, B8, B14, B16, B17, B19, B20	Biodiversity conservation works	60,000	15,000	400,000	14,000	0
IS11	Sustainable procurement - Council operations	5,000	10,000	0	2,000	0
TC1, TC3	Sustainable vehicle fleet - Council operations	40,000	7,000	0	0	10,000
IS1	Coastal risk management	205,000	0	0	0	0
IS8	Climate change strategy	35,000	0	0	0	0
IS2, IS3, IS4, IS10, IS12	Integrated environmental strategies - community engagement strategies	20,000	30,000	0	0	0
IS13	Integrated environmental strategies - Council engagement strategies	0	5,000	0	0	0
MRR2, MRR3, MRR6, MRR9, MRR11, MRR13, MRR18	Environmental monitoring and management systems	65,000	64,000	0	0	0
MRR17, MRR22, MRR23, MRR24, MRR25, MRR29	Environmental review & reporting	0	0	0	0	135,000
SUB-TOTAL ESTIMATED COSTS OVER 10 YRS		**4,538,000**	**3,010,000**	**7,632,000**	**105,000**	**324,000**
TOTAL ESTIMATED COSTS OVER 10 YRS		**15,609,000**				