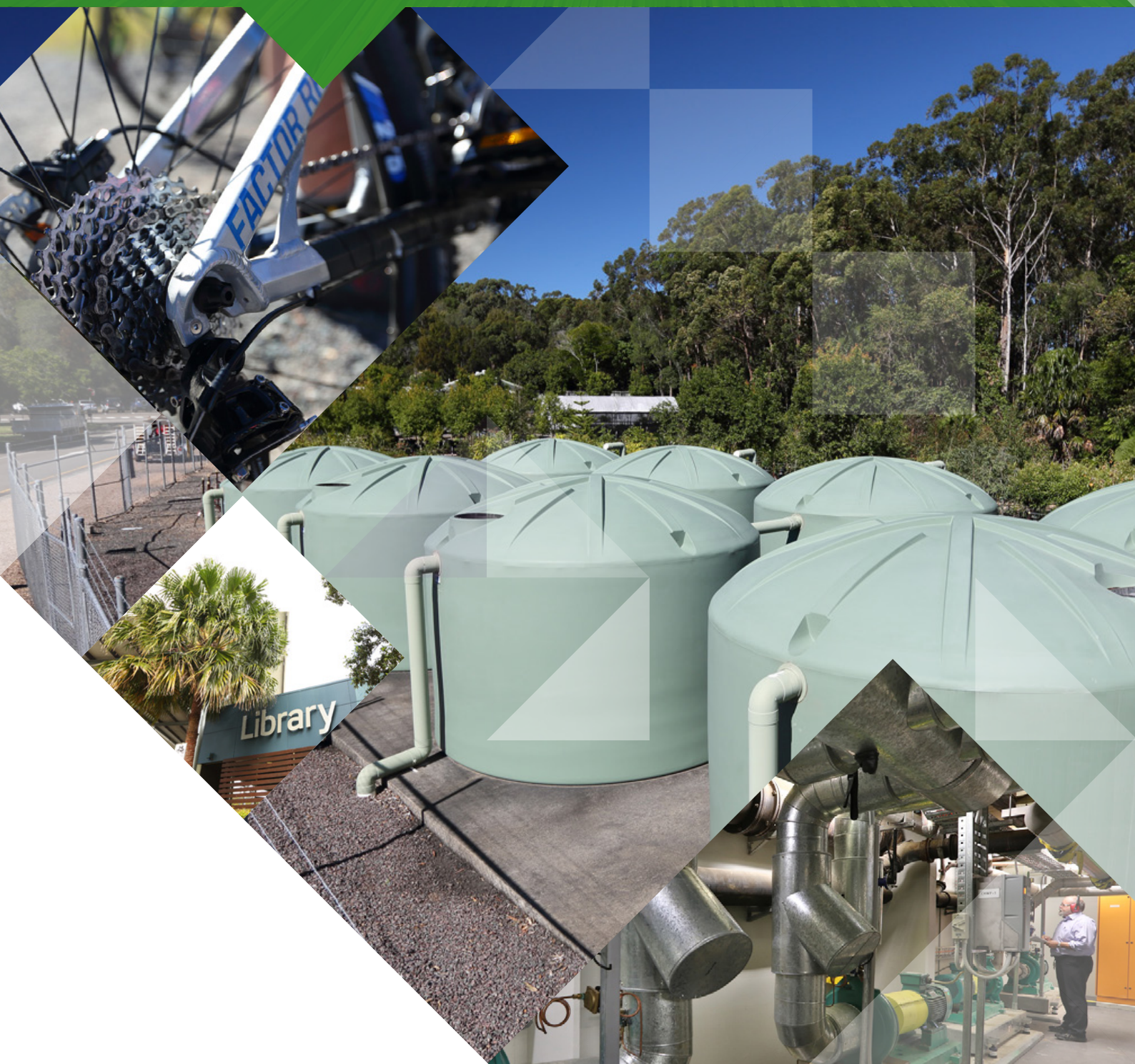
Sunshine Coast COUNCIL

Sunshine Coast Council's Organisational **Environmental Sustainability Benchmarking** 2015/16



What is benchmarking?

Benchmarking is the process of comparing 'like for like' over time. It requires establishing what to measure, and how to measure it, to produce, in this case, a meaningful annual sustainability snapshot. Each yearly snapshot can then be compared to previous or future snapshots to detect changes over time (e.g. increases or decreases in energy consumption). In this instance, Sunshine Coast Council will compare its organisational environmental sustainability results from financial year to financial year.

Why benchmark?

The main purpose of benchmarking is to improve business efficiency. It will allow council to understand trends, changes and why some areas of environmental sustainability might be going well while other areas need improvement. Council resources can be altered, applied, maintained or withdrawn accordingly. This will result in more focused efforts, cost savings for council and better sustainability outcomes.

Benchmarking benefits

- Provides an indication of how much work and investment might be required to improve current environmental sustainability outcomes to meet specified targets
- Provides evidence-based insights into business performance that can be used to develop or adjust targets, actions and resources
- Allows Sunshine Coast Council to lead by example, share best practice and promote the great outcomes within the organisation, the community and with other councils.

Approach to benchmarking

The following benchmarking report for the 2015/16 financial year measures Sunshine Coast Council's performance on environmental sustainability within the organisation.

In this report, Sunshine Coast Council's organisational performance is measured against baseline data collected in a background study done in the 2014/15 financial year.

The areas measured and indicators used only relate to environmental sustainability within the organisation. Social, financial, economic, biodiversity and conservation aspects of sustainability were omitted as these are monitored by other areas of council.

One key area of environmental sustainability that has been measured is the organisation's carbon footprint. The carbon footprint provides an overarching indication of the organisation's environmental sustainability status. However, it does not fully capture some organisational activities that contribute towards generating emissions, emission reductions and achieving environmental sustainability. Therefore, this benchmarking exercise also includes waste, energy, transport, water, green buildings, environmental sustainability programs and environmental sustainability embedded into systems and processes. For each area measured, several indicators were developed. Some indicators (primary indicators) give a better snapshot of environmental sustainability at Sunshine Coast Council than other indicators. However, all of the indicators collectively give a comprehensive picture of trends and changes. Accordingly, results are presented for both primary and other indicators.

The data used to measure the indicators was not originally collected for the purpose of sustainability benchmarking. It is data that is collected by the organisation for day-to-day business operations. The data has been standardised wherever possible. This means that it is able to be compared 'like for like' to future data sets, regardless of changes in the organisation. Full time equivalent (FTE) figures were used to standardise the data (Table 1). An FTE is the unit that is used to measure the workload of full time, part time, contracted or casual employees[1].

Table 1: Sunshine Coast Council population and FTE figures

State	2015/16 Financial Year Population	2015/16 Financial Year Number of FTE	Own and operate landfills?[2]	Water and sewage service part of council?
QLD	289,389	1553 FTE[3]	✓	✗

Note: FTE – Full Time Equivalent

1 One FTE is equal to one full-time workload which might be conducted by one full-time employee or two part-time employees (each doing half of a full-time workload).

2 Both of these activities influence organisational sustainability outcomes. For example, the carbon footprint will be much greater if council owns and operates landfills or provides water and sewage services to the community. Therefore, consideration of landfills and water and sewage services has been given in this report to provide a better understanding of Sunshine Coast Council's sustainability achievements in relation to other councils' achievements.

3 This figure represents FTE hours paid for all established, non-established positions and agency staff for the financial year.

Sunshine Coast Council's Organisational Environmental Sustainability Snap Shot for 2015/16

Carbon (greenhouse gas) emissions

Indicators	Snap Shot Results 2015/16			Put in perspective
	Total	%	Per full time equivalent	
Primary indicators				
Greenhouse gas emissions (*including* emissions from community waste)[4]	143,047 tonnes CO_2e	–	92 tonnes CO_2e	As an organisation, Council's greenhouse gas footprint has reduced by 20,151 tonnes CO_2e since the benchmark year 2014/15
Change in Greenhouse gas emissions between the 2014/15 and 2015/16 financial years	20,151 tonnes CO_2e reduction since 2014/15 (163,198 tonnes CO_2e in 2014/15)	12.3% reduction since 2014/15	20 tonnes CO_2e reduction since 2014/15 (112 tonnes CO_2e in 2014/15)	
Methane captured and flared at Nambour and Caloundra landfills[5]	41,000 tonnes CO_2e	Nambour landfill flaring at 36% and Caloundra landfill flaring at 26%[6]	26 tonnes CO_2e	
Change in methane captured and flared at Nambour and Caloundra landfills between the 2014/15 and 2015/16 financial years	19,576 tonnes CO_2e increase in flaring since 2014/15 (21,424 tonnes CO_2e flared in 2014/15)	In 2014/15, Nambour landfill was flaring at 6% and Caloundra landfill was flaring at 25%	11 tonnes CO_2e reduction since 2014/15	52% increase in flaring since 2014/15 due to more infrastructure installed at both landfills has contributed to a reduction in overall emissions

Sunshine Coast Airport – Level 3 of International Airport Carbon Accreditation program

Sunshine Coast Airport has joined an elite number of international airports leading the way in carbon reduction, gaining accreditation under the Airport Carbon Accreditation program at Level 3 - Optimisation.

Sunshine Coast Airport now ranks alongside the likes of Hong Kong, Gatwick and San Francisco International Airports, in being certified at Optimisation Level under the program.

Sunshine Coast Airport achieved Level 1 Mapping in 2013, Level 2 Reduction in 2014 and Level 3 Optimisation in 2016.

Carbon reduction initiatives at the airport have included:

- low energy lighting and air conditioning
- waste reduction and recycling programs
- an organic waste system (OSCAR) powered by solar
- water sensitive urban design
- water usage reduction and water harvesting
- Smart Tracking technology that guides aircraft along precise flight paths using flight management systems and satellites to reduce the distance travelled and fuel consumption.

airport carbon accredited OPTIMISATION

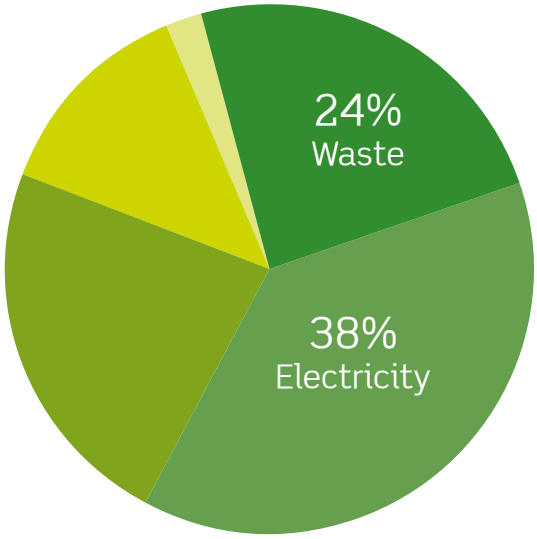
4 Council emissions include emissions from waste generated by council activities, electricity, liquid petroleum gas, fuel and streetlights. Emissions from waste generated by council activities were calculated to be 9860 tonnes based on the volume of waste to landfill from 2014/2015 and factoring in lag time of waste emissions. Emissions are generated from waste landfilled at Caloundra and Nambour landfills.

5 The gas flared was from emissions generated from both community waste and waste generated by council activities.

6 These percentages refer to the total amount of emissions generated from each landfill site.

Sunshine Coast Council's 2015/16 greenhouse gas footprint

Excluding emissions from community waste (Total: 40,907 tonnes CO_2e)



Waste 24%
9860 tonnes of greenhouse gas generated from waste from council activities

Electricity 38%
15,730 tonnes of greenhouse gas

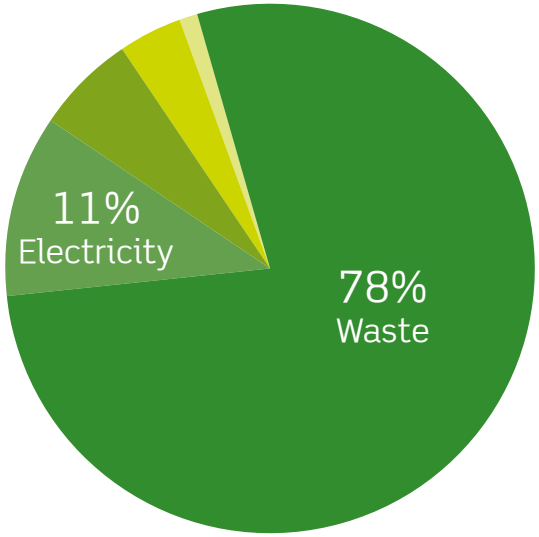
Street lights 23%[7]
9194 tonnes of greenhouse gas

Fuel 13%
5212 tonnes of greenhouse gas

Liquid petroleum gas 2%
911 tonnes of greenhouse gas

Figure 1: Sunshine Coast Council's greenhouse gas footprint (tonnes CO_2e) for the 2015/16 financial year *excluding* emissions from community waste

Including emissions from community waste (Total: 143,047 tonnes CO_2e)



Waste 78%
112,000 tonnes of greenhouse gas generated from community waste and waste from council activities

Electricity 11%
15,730 tonnes of greenhouse gas

Street lights 6%
9194 tonnes of greenhouse gas

Fuel 4%
5212 tonnes of greenhouse gas

Liquid petroleum gas 1%
911 tonnes of greenhouse gas

Figure 2: Sunshine Coast Council's greenhouse gas footprint (tonnes $C0_2e$) for the 2015/16 financial year *including* emissions from community waste as well as emissions from waste generated by council activities

7 Street lighting has been separated out from 'Electricity' as it is a significant source of greenhouse gas emissions and is reported on as a separate item within the Corporate Plan.

Waste

Indicators[8]	Snap Shot Results 2015/16			Put in perspective
	Total	%	Per full time equivalent	
Primary indicators				
Waste generated by council activities	6885 tonnes	–	4 tonnes	
Change in waste generated by council activities between 2014/15 and 2015/16 financial years	3431 tonne increase since 2014/15 (3454 tonnes in 2014/15)	100% increase however more diverted	2 tonne increase in waste generated	Waste generated can fluctuate from year to year depending on development, construction and demolition projects within the region While waste increased 100% since 2014/15, most of this was construction and demolition waste which was diverted away from landfill for reuse
Other indicators				
Waste generated by council activities diverted from landfill	4039 tonnes	59%	3 tonnes	
Change in waste generated by council activities diverted from landfill between the 2014/15 and 2015/16 financial years	2170 tonne increase in diversion of waste from landfill since 2014/15 (1869 tonnes in 2014/15)	5% increase in waste diverted since 2014/15	2 tonne increase in waste diverted since 2014/15	

Waste generated by council activities

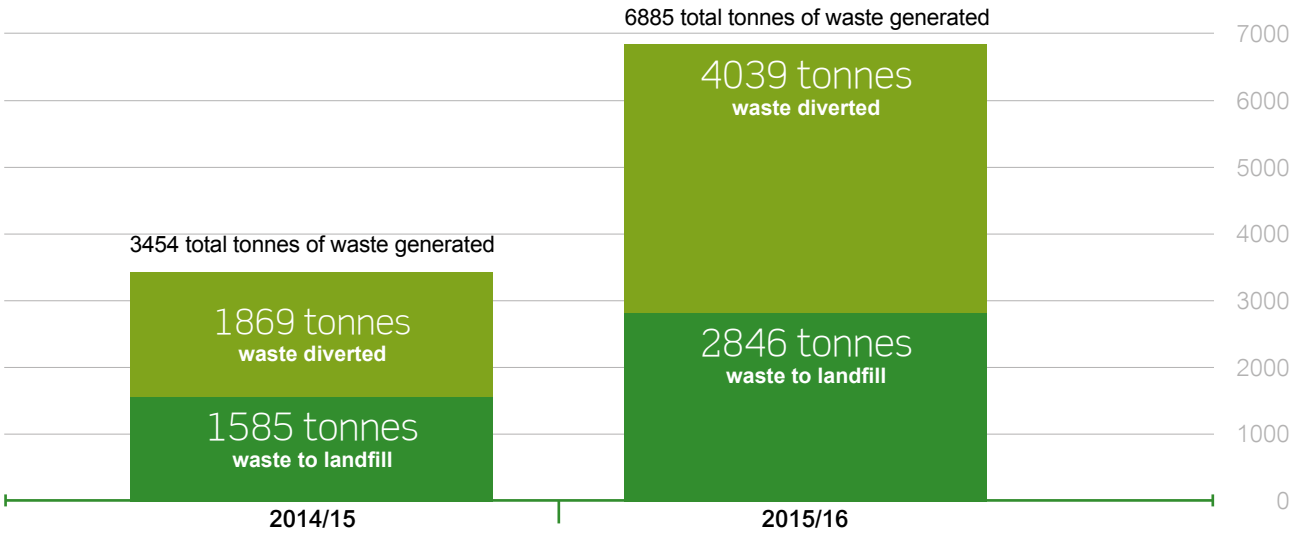


Figure 3: Change in waste generated by council activities between 2014/15 and 2015/16 financial years

8 Waste generated by council activities for contract collected waste is calculated based on bin size, service frequency and regional audit data. Self-haul waste generated by council's activities is based on actual weighbridge data; however it excludes some green waste and construction and demolition waste that is handled separately at council depots.


green
waste
Kitchen waste including fruit and vegetable scraps
animal droppings
general recycling and rubbish
large logs, branches and stumps


RECYCLING
PAPER & CARDBOARD

Energy (electricity)

Indicators	Snap Shot Results 2015/16			Put in perspective
	Total	%	Per full time equivalent	
Primary indicators				
Electricity consumption (excluding street lights)	19,912 MWh	–	12,822 kWh	
Change in electricity consumption (excluding street lights) between the 2014/15 and 2015/16 financial years	121,710 kWh increase since 2014/15 (19,790 MWh in 2014/15)	0.62% increase since 2014/15	826 kWh reduction since 2014/15	A number of electricity reduction opportunities were indentified in the 2014/15 benchmarking process and will help reduce consumption rates over the coming years
Other indicators				
Street lighting consumption	11,638 MWh	–	7494 kWh	
Change in street lighting consumption between the 2014/15 and 2015/16 financial years	353 MWh increase since 2014/15 (11,285 MWh in 2014/15)	–	287 kWh reduction since 2014/15	
Total electricity costs (including all costs such as network charges and excluding street lights)	$4,282,000		$2757	
Change in electricity costs (including all costs such as network charges and excluding street lights) between the 2014/15 and 2015/16 financial years	$618,000 reduction since 2014/15 ($4,900,000 in 2014/15)	–	$622 reduction since 2014/15	
Capacity of solar (PV) panel systems on council buildings and facilities	158 kW	–	0.1 kW	
Change in capacity of solar (PV) systems on buildings and facilities between the 2014/15 and 2015/16 financial years	No change from 2014/15	–	–	
Electricity generated by solar (PV) panels[9]	242,214 kWh	1.22% of council's electricity consumption	156 kWh	
Change in electricity generated by solar (PV) panels between the 2014/15 and 2015/16 financial years	No change from 2014/15	1.22% of council's electricity consumption in 2014/15	–	

9 This is an estimated figure calculated according to the Clean Energy Council who state that a 1kW solar (PV) panel will generate about 4.2kWh of electricity per day in the Brisbane area.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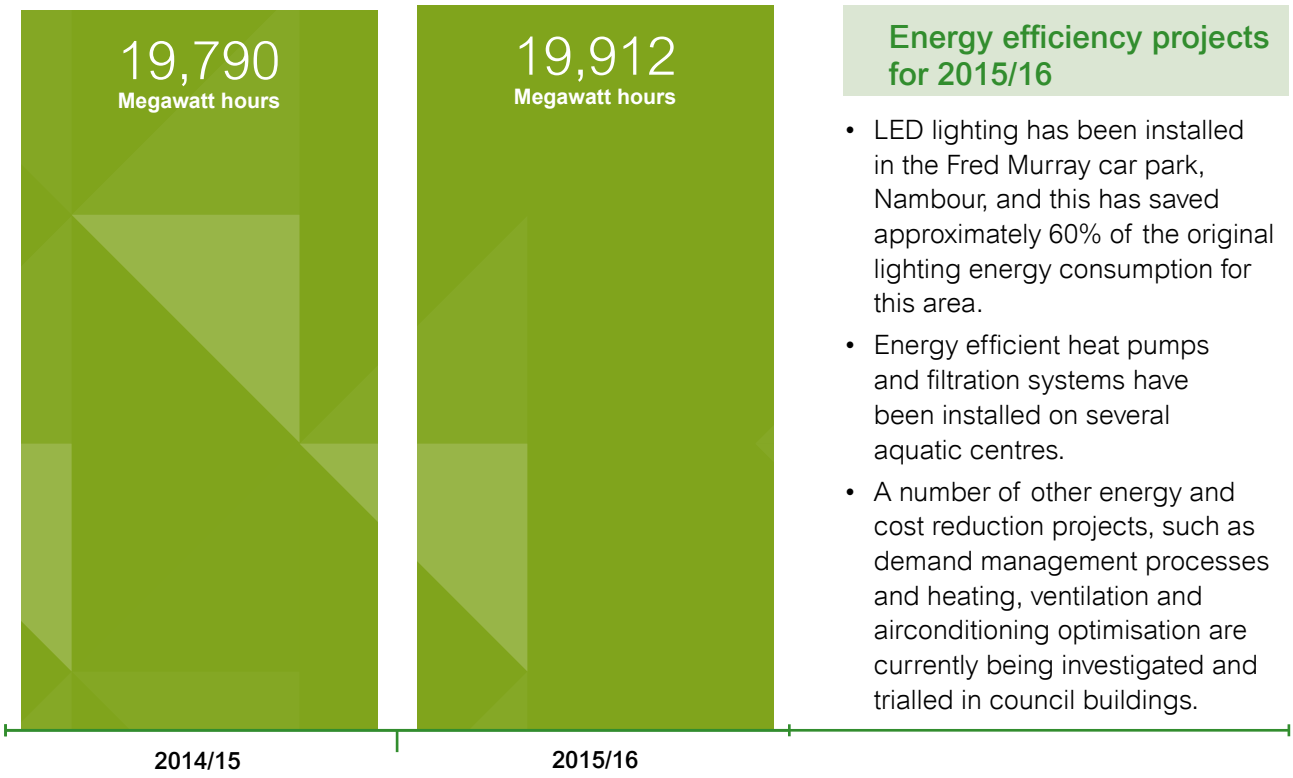
Switch OFF

Sunshine Coast Council's total electricity usage as an organisation



Energy efficiency projects for 2015/16

- LED lighting has been installed in the Fred Murray car park, Nambour, and this has saved approximately 60% of the original lighting energy consumption for this area.
- Energy efficient heat pumps and filtration systems have been installed on several aquatic centres.
- A number of other energy and cost reduction projects, such as demand management processes and heating, ventilation and airconditioning optimisation are currently being investigated and trialled in council buildings.

Figure 4: Sunshine Coast Council's electricity use for both the 2014/15 and 2015/16 financial years.


CHWP-1
Bilsom
Comfort

Energy (fuel)

Indicators	Snap Shot Results 2015/16			Put in perspective
	Total	%	Per full time equivalent	
Primary indicators				
Litres of fuel used[10]	1,935,783 L	–	1246 L	Sunshine Coast Council has reduced its fuel consumption by 6% from 2014/15 benchmark year. Fuel consumption has reduced consistently by more than 5% each financial year since 2010
Change in litres of fuel used between the 2014/15 and 2015/16 financial years	130,134 L reduction since 2014/15 (2,065,917L in 2014/15)	6.3% reduction since 2014/15	179 L reduction since 2014/15	Rates of fuel consumption continue to decline with a 6% reduction since 2014/15
Other indicators				
Fuel costs	$2,034,332	–	$1310	
Change in fuel costs between the 2014/15 and 2015/16 financial years	$543,179 reduction since 2014/15 ($2,577,511 in 2014/2015)	–	$468 reduction since 2014/15	Sunshine Coast Council reduced its fuel costs by $543,179 since the 2014/15 financial year
Alternative-fuel and advanced-technology fleet vehicles	Two of 485 vehicles	0.4%	–	Sunshine Coast Council has two electric cars in its fleet
Change in alternative-fuel and advanced technology fleet vehicles between the 2014/15 and 2015/16 financial years	No change	–	–	

10 Fuel includes diesel, unleaded petrol for vehicles and bulk diesel used by heavy plant and equipment such as graders, rollers, tractors and mowers.

Sunshine Coast Council's total fuel usage as an organisation

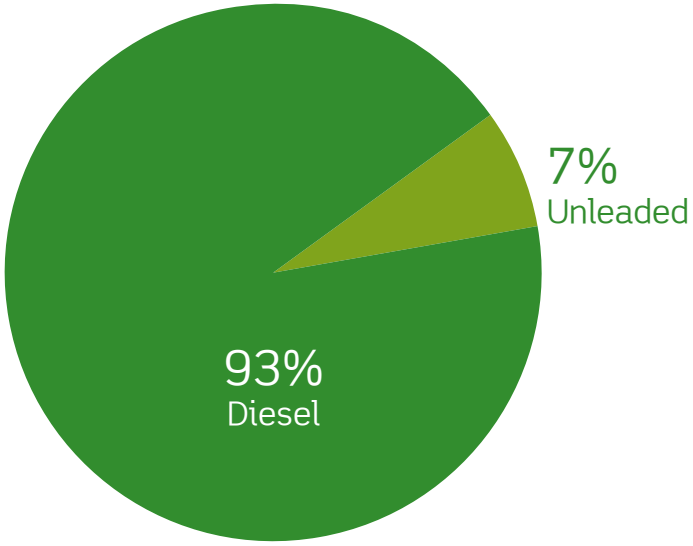


Figure 5: Sunshine Coast Council's fuel usage 2015/16 financial year

Fuel reduction projects for 2015/16

- Since 2010, Council's fleet streamlining project has reduced the number of fleet vehicles to 485
- 90% of fleet vehicles are diesel
- 73% of fleet are four cylinder vehicles
- Vehicle monitoring project which is online, real-time monitoring to improve management and utilisation of Council's fleet

Transport

Indicators	Snap Shot Results 2015/16			Put in perspective
	Total	%	Per full time equivalent	
Primary indicators				
Fleet vehicles[11]	485 vehicles	–	0.31 vehicles	
Change in fleet vehicles between the 2014/15 and 2015/16 financial years	Vehicles reduced by 17 since 2014/15 (502 vehicles in 2014/15)	3.4% reduction	No measurable change	Sunshine Coast Council continues to reduce its fleet which is saving money and reducing emissions
Other indicators				
Fleet vehicles that are four cylinder	354 of 485	73%	–	
Change in fleet vehicles that are four cylinder between the 2014/15 and 2015/16 financial years	Four cylinder vehicles reduced by 24 since 2014/15 (378 in 2014/15)	6% reduction in four cylinder vehicles since 2014/15	No measurable change	
Travel distance saved by staff using alternative transport (car-pooling, cycling, walking or public transport)	172,763 km[12]	–	111 km	In the 2015/16 financial year, Sunshine Coast Council staff registered in Green Travel program saved: • 57,011.69 kg of greenhouse gas • 18,485.61 L of fuel • $22,182.73 in travel costs.[13]
Change in travel distance saved by staff using alternative transport (car pooling, cycling, walking or public transport) between the 2014/15 and 2015/16 financial years	Kilometres saved by staff increased by 65,573 since 2014/15 (107,189 kms in 2014/15)	62% increase in kms saved since 2014/15	Kilometres saved by staff increased by 37 kms per FTE	

11 This figure includes passenger and light commercial vehicles as well as two hybrid (electric/fuel) passenger vehicles.

12 This was the result of Travel Smart's 'Green Travel' program for staff. Alternative transport, outside of what has been registered through this program, has not been included.

13 These figures are estimated by Travel Smart, 2016.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Water

Indicators	Snap Shot Results 2015/16			Put in perspective
	Total	%	Per full time equivalent	
Primary indicators				
Water consumed by council[14]	528,237 kL	–	340 kL	As an organisation, Sunshine Coast Council has over 500,000 litres in rainwater harvesting capacity in tanks situated across council facilities reducing the need to draw from town water
Change in water consumed by council between the 2014/15 and 2015/16 financial years	9196 kL increase since 2014/15 (519,041 kL in 2014/15)	2% increase* since 2014/15	18 kL reduction since 2014/15	*The 2% increase in water consumption correlates with an increase in FTE's

14 Water consumed includes the potable water that council is billed for by a water supply and sewage service company (Unitywater). It does not include the use of water from other sources such as rainwater tanks.

Green buildings

Indicators	Snap Shot Results 2015/16			Put in perspective
	Total	%	Per full time equivalent	
Primary indicators				
Assets that are NABERS or Green Star rated	Three of the major administration buildings are NABERS rated[15]	75%	–	
Change in assets that are NABERS or Green Star rated	No change	–	–	
Other indicators				
Administration buildings at 4 star NABERS rating or more for energy, waste or water[16]	Three buildings rated at four stars or more for water	–	–	Initial NABERS ratings at Sunshine Coast Council administration buildings occurred in May 2015. These will provide a baseline for future improvements
Change in administration buildings at 4 star NABERS rated or more for energy, waste or water	No change	–	–	

15 NABERS, or the National Australia Built Energy Rating System, is a national rating system that measures the environmental performance of buildings. It measures the energy efficiency, water usage, waste management and indoor environment quality of a building and its impact on the environment. The rating scale is from one to six stars to demonstrate performance. One star means the building can improve its impact on the environment considerably. The rating process takes into consideration: Climatic conditions in which the building operates, hours of operation, level of service provided, energy sources used and size and occupancy of the building. The ratings that the buildings achieve and recommendations for improving star ratings were given in a report. Reassessment may occur to determine improvements over time.

16 The administration buildings include one at Caloundra and two at Nambour.

Environmental sustainability programs within the organisation

Indicators	Snap Shot Results 2015/16			Put in perspective
	Total	%	Per full time equivalent	
Primary indicators				
Staff participating in workplace sustainability programs and events (about waste, water, energy, greenhouse gas and transport)	691 staff	44% participation rate	–	The number of staff participating in sustainability programs and events within the organisation has increased considerably suggesting a positive change in attitudes and behaviour towards sustainability
Change in staff participating in work place sustainability programs and events between the 2014/15 and 2015/16 financial years	251 staff in 2014/15	27% increase in staff participation	–	
Other indicators				
Number of workplace sustainability events and programs[17]	9 programs and events	–	–	The number of workplace sustainability events and programs at Sunshine Coast Council have increased since 2014/15 • Sunshine Coast Council's Information Communication Technology Services (ICTS) have run a number of events and programs promoting business efficiences that result in a reduction of energy usage • A number of events were held for council staff for Earth Hour including raising awareness about renewable energy (i.e. batteries for energy storage) and sustainable food production in domestic gardens
Change in number of work place sustainability events and programs between the 2014/15 and 2015/16 financial years	1 more program in 2015/16	–	–	

17 Staff environmental sustainability programs and events included the Smart City Framework Launch (a regional overview of council systems to enable more efficient use of resources, Knowledge Market Pilot, Australian Smart Communities Summit, 'Ignite', an event promoting digital business, 'Energy Savers' and 'Coffee Cup' program, Paper cut incentive campaign, three Earth Hour presentations and workshops and a waste workshop.


STAFF

Environmental sustainability embedded into systems and processes

Indicators	Snap Shot Results 2015/16			Put in perspective
	Total	%	Per full time equivalent	
Primary indicators				
Whole of organisation systems and processes that enable environmental sustainability outcomes (including procurement, human resources, governance, corporate knowledge and information and assets)	10 systems and processes	–	–	
Change in whole of organisation systems and processes that enable environmental sustainability outcomes between the 2014/15 and the 2015/16 financial years	Increased by 3 since 2014/15	–	–	For example: • A new cloud based IT environment to only run during office hours and shut down overnight and at weekends to reduce carbon footprint and cost of hosting • The Digital Connect Platform – providing one place for the community, business, agencies and staff to connect with council, reducing council's carbon footprint with increasing online interactions
Other indicators				
New contracts, approved for award by the Corporate Governance Committee, exceeding the value of $200,000, that were evaluated with regard to environmental criterion[18]	75 of 79 contracts	95%	–	
Change in new contracts between the 2014/15 and the 2015/16 financial years (approved for award by the Corporate Governance Committee, exceeding the value of $200,000, that were evaluated with regard to environmental criterion)	64 of 65 contracts in 2014/15	98% in 2014/15	–	

18 In many cases environmental criteria are applied to the request for quote (RFQ) evaluation process for contracts under $200,000. These are not all captured in a central location by Sunshine Coast Council, so have been omitted.

Indicators	Snap Shot Results 2015/16			Put in perspective
	Total	%	Per full time equivalent	
Other indicators *continued*				
Number of information technology tools used in council to measure and monitor energy, waste, water, greenhouse gas, transport, environmental sustainability programs or green buildings	Four tools[19]	–	–	Sunshine Coast Council has doubled the use of IT tools to measure and monitor organisational environmental performance since 2014/15. The new tools include a mobile app for undertaking food licensing inspections and 'Paper Cut' – a software program to manage council's paper usage
Change between the 2014/15 and the 2015/16 financial years	Number of tools increased by 2 since 2014/15	–	–	
New employees who have completed a local induction checklist at the local business area where they were informed of and encouraged to embrace council's vision of being Australia's most sustainable region	68 of 173 new employees	39%	–	
Change between the 2014/15 and the 2015/16 financial years	68 out of 206 new employees in 2014/2015 (33%)	6% increase since 2014/15	–	
New permanent employees who have participated in a corporate orientation program where they were informed of and encouraged to embrace council's vision of being Australia's most sustainable region	46 of 75 new permanent employees[20]	62%	–	
Change between the 2014/15 and the 2015/16 financial years	86 of 103 new permanently appointed employees in 2014/15 (83%)	21% reduction since 2014/15	–	

19 These tools include the Carbon Reporting Platform, Business Intelligence Dashboard, Mobile Food Licencing Inspection mobile app and 'Paper cut' – which is software to manage paper usage.

20 Not all casual (27) and temporary (71) employees are required to attend Corporate Orientation and as such are not included in this calculation.

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