



Annual Sustainability Report 2013/14

November 2014

1. INTRODUCTION

In 2013 Council adopted the *Shire of Capel Sustainability Strategy 2013-2018*. The Strategy includes information on historical energy, fuel and water use, waste diversion rates and greenhouse gas emissions, a list of activities to reduce environmental impacts and targets for improvements. This report describes sustainability achievements made in 2013/14, energy, fuel and water use, waste diversion rates and greenhouse gas emissions compared to previous years and progress towards meeting the targets set in the Strategy.

2. SUSTAINABILITY ACHIEVEMENTS 2013/14

- Install a 10.5kW solar power system on the Shire Administration building
- Install an additional 2.7kW solar power system on the Iluka Capel Library
- Replace fluorescent tubes in the work room of the Iluka Capel Library with LED tubes and adjust air-conditioner controls to turn units off earlier each day
- Install timer controls to the main air-conditioners at the Dalyellup Community Centre, to prevent them from being left on overnight or over weekends
- Install solar hot water systems at the Capel Country Club, Boyanup Bowling Club, Boyanup Football Club and Dalyellup Community Centre
- Adjust station run times, remove some bubblers on established trees and install a rain sensor to reduce water use for irrigation at Murtin Park
- Maintain Waterwise Council status
- Change electricity tariffs at the Iluka Capel Library, Dalyellup Community Centre and Wentworth sub-soil drainage, which will save around \$6,500 per year
- Introduction of the third kerbside bin for organic wastes, which in 2013/14 diverted about 1,500 tonnes of waste out of landfill, increased the recycling rate from around 30% to 47% and reduced greenhouse emissions by about 2,100 tonnes CO₂.



Timer control installed in air-conditioner at Dalyellup Community Centre



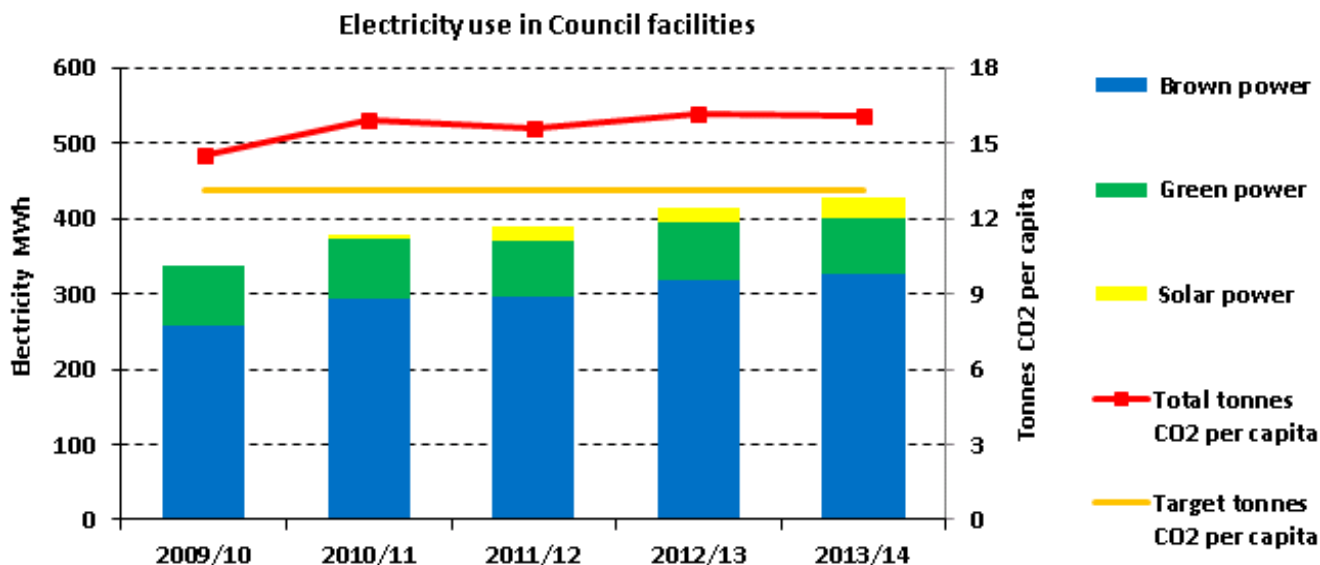
Gas-boosted solar hot water system at Capel Country Club

3. SUSTAINABILITY INDICATORS AND TARGETS

3.1 Energy

In 2013/14 429 MWh of electricity was consumed across Council facilities including:

- 325 MWh of imported coal and gas fired electricity
- 76 MWh of imported green power
- 29 MWh of solar power.

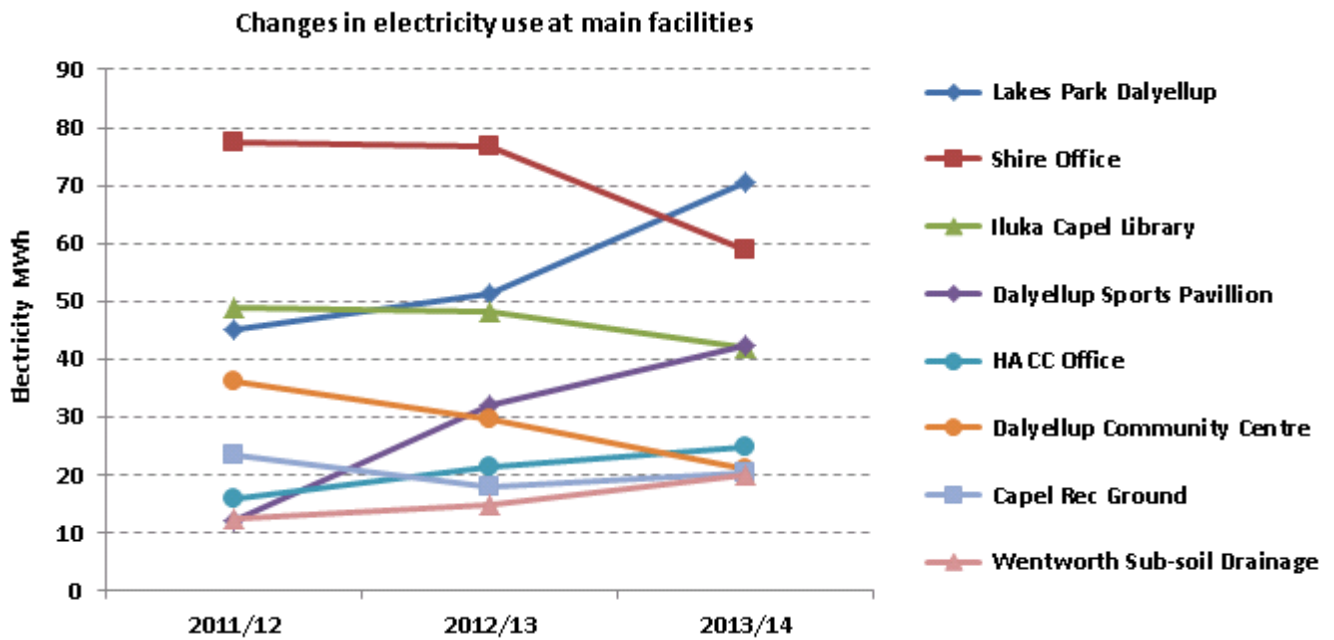


Consumption of imported electricity was about 5MWh or 1.2% higher than in 2012/13, due in part to increases in electricity use at some facilities such as:

- Lakes Park Dalyellup – electricity use increased from 51 MWh in 2012/13 to 71 MWh in 2013/14, as the pumps were run almost continuously for about 5 weeks to reduce flooding of the park around North Lake
- Dalyellup Sports Pavilion – increased from 32 MWh in 2012/13 to 42 MWh in 2013/14 due to increased use of the facility and in particular the sewerage treatment system which consumes most of the energy used at this facility
- Wentworth Sub-soil Drainage – increased from 15 MWh in 2012/13 to 20 MWh in 2013/14 due to higher rainfall and rising ground water level.

Consumption of imported electricity also decreased at various facilities including:

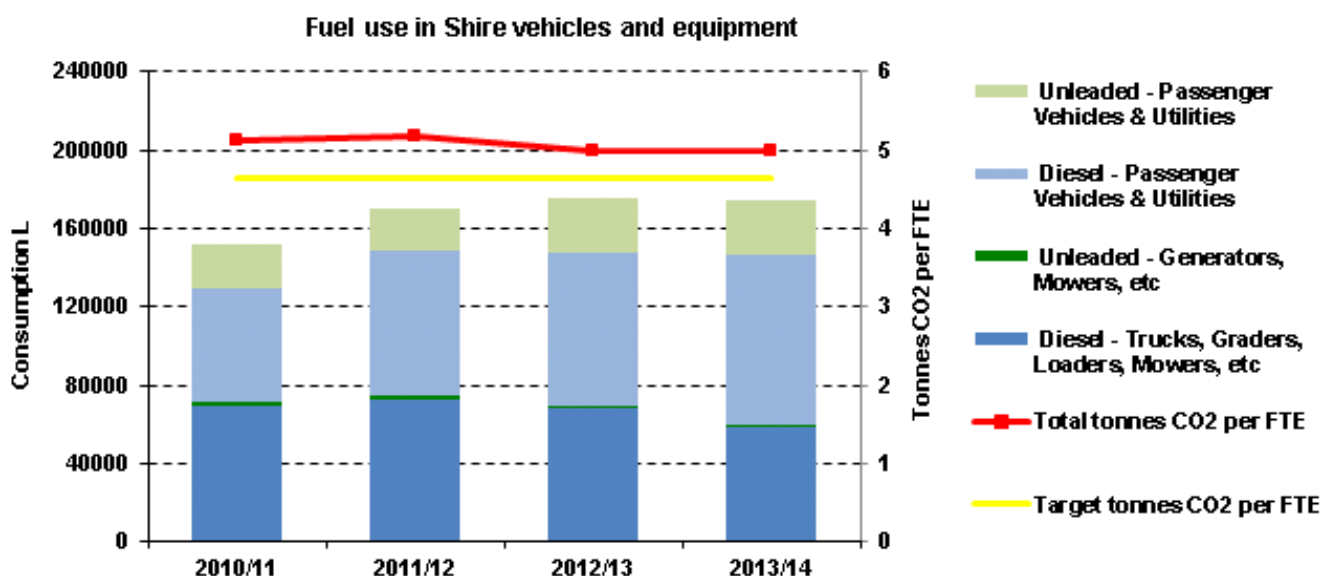
- Dalyellup Community Centre – decreased from 30 MWh in 2012/13 to 21 MWh in 2013/14, due in part to the installation of controls to prevent air-conditioners from being left on and repairs to the solar power system
- Shire Office – decreased from 77 MWh in 2012/13 to 59 MWh in 2013/14, due in part to the installation of LED lights and a solar power system
- Iluka Capel Library – decreased from 48 MWh in 2012/13 to 42 MWh in 2013/14, due in part to adjustments made to air-conditioner timer controls and the installation of additional solar panels and some LED lights.



Greenhouse gas emissions associated with electricity use in Shire facilities increased from 260 tonnes CO₂ in 2012/13 to 266 tonnes CO₂ in 2013/14. Per capita emissions remained about the same at 16.1 kg CO₂. The increase in electricity consumption at the Lakes and Wentworth Parks in Dalyellup has made it difficult to achieve reductions in overall greenhouse gas emissions associated with electricity use. While energy saving projects will continue to be implemented and provide further reductions in greenhouse emissions, purchasing more green power (possibly from a different source) or purchasing carbon offsets may be required to meet the target set in the *Sustainability Strategy*.

3.2 Transport

In 2013/14 29,317 litres of unleaded petrol and 145,121 litres of diesel were consumed in Shire vehicles and equipment. These levels of consumption are almost identical to levels of consumption in 2012/13, although significantly more diesel was used in passenger cars and utes in 2013/14 while significantly less was used in trucks, graders, etc.

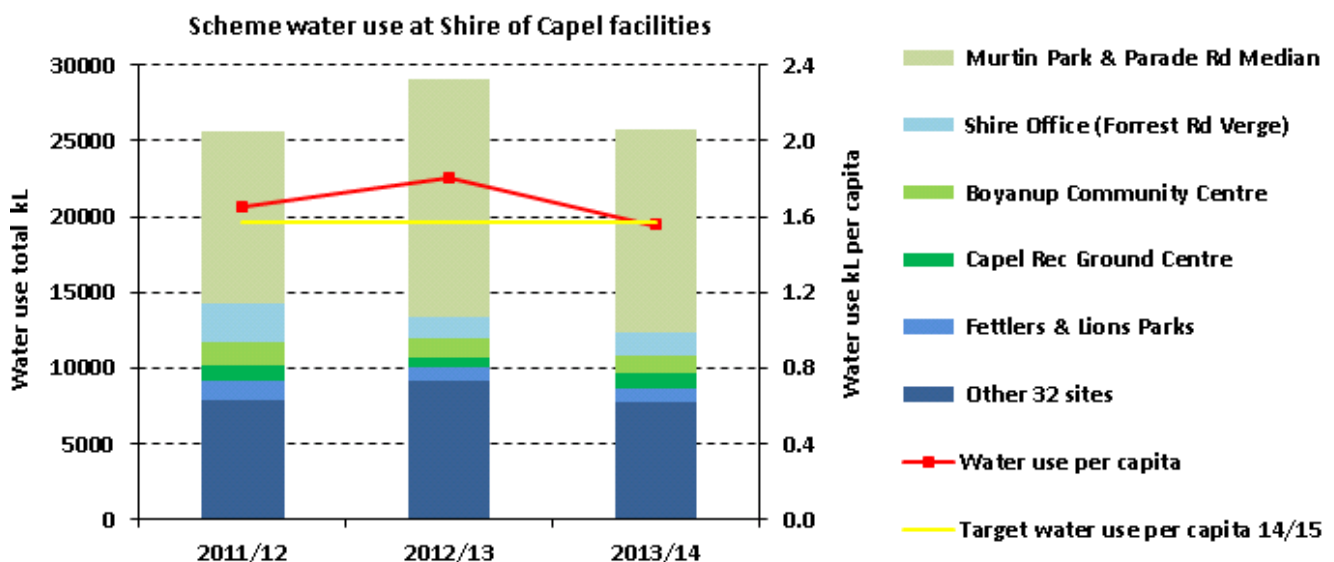


Greenhouse gases emitted through the consumption of petrol and diesel in Shire vehicles totaled 458 tonnes CO_{2e} (scope 1). Greenhouse emissions per full time equivalent staff member (FTE) remained at 5.0 tonnes CO_{2e} in 2013/14, still higher than the 2014/15 target of 4.65 tonnes CO_{2e} per FTE from the *Sustainability Strategy*. Carbon offsets will be purchased to enable the Shire to meet its target.

Influencing the approach taken to purchasing vehicles in favour of more fuel efficient ones is difficult because other factors tend to dominate purchasing decisions, such as upfront cost, likely resale value, type and features of vehicles and the preferences or expectations of staff members who have vehicles as part of their salary packages. Possible changes to purchasing procedures and permitted use of vehicles to reduce the Shire’s FBT and overall vehicle costs are also likely to result in significant reductions in greenhouse emissions.

3.3 Water

In 2013/14 25,740kL of scheme water was consumed at Shire facilities, about 11% less than in 2012/13. This was due mainly to water consumption for irrigation of Murtin Park decreasing significantly.



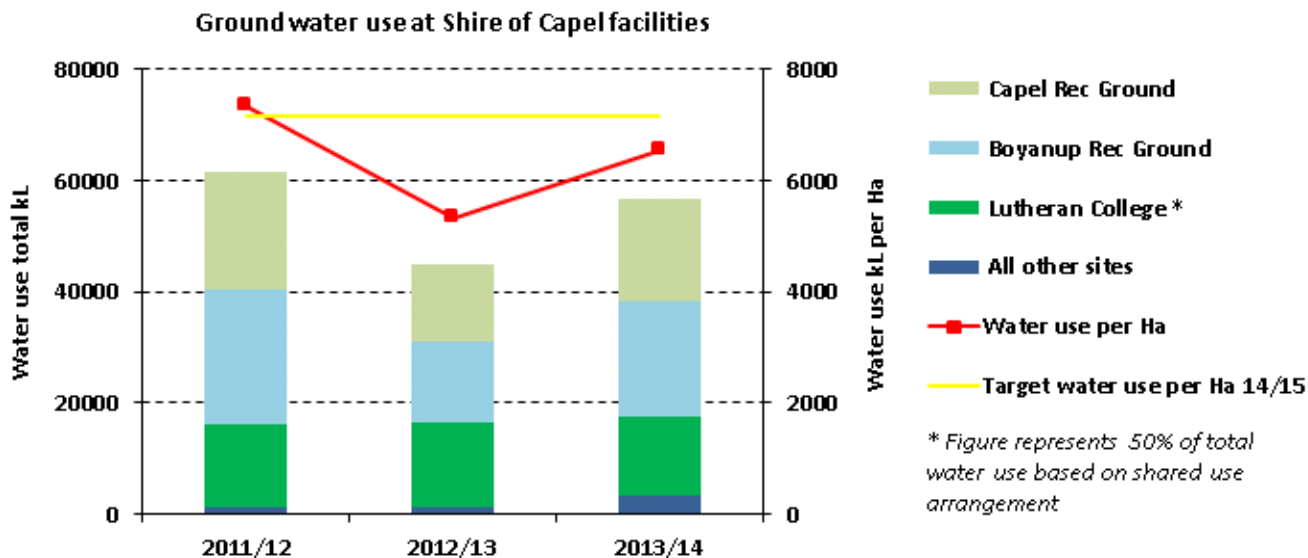
Scheme water consumption decreased at various sites from 2012/13 to 2013/14 including:

- Murtin Park – dropped from 15,642kL to 13,425kL mainly as a result of actions taken to reduce water consumption for irrigation.
- Boyanup Rail Reserve – decreased from 1,679kL to 52kL after a leak was repaired
- Peppermint Grove Beach Path Reserve – dropped from 539kL to 38kL as the native plants along the path are now fairly well established and require less water.

Sites that experienced higher water use in 2013/14 compared to 2012/13 included:

- Capel Park – increased from 566kL to 875kL
- Capel Kindy – increased from 551kL to 753kL as a result of more water being required to establish a new area of lawn
- Capel Recreation Ground – increased from 699kL to 932kL due to additional garden areas being developed around the new hard courts.

In 2013/14 ground water consumption at Shire facilities totaled 56,844kL, about 27% higher than in 2012/13. Ground water use includes 50% of total water use at Lutheran College oval, which is under a shared (50:50) use arrangement with the Shire. Note ground water use also includes surface water taken from the Capel River under license.



Water use for irrigation of the Capel and Boyanup sports grounds increased from the very low levels of consumption achieved in 2012/13. This was partly due to additional water being used to help the turf recover following rejuvenation works carried out in 2013.

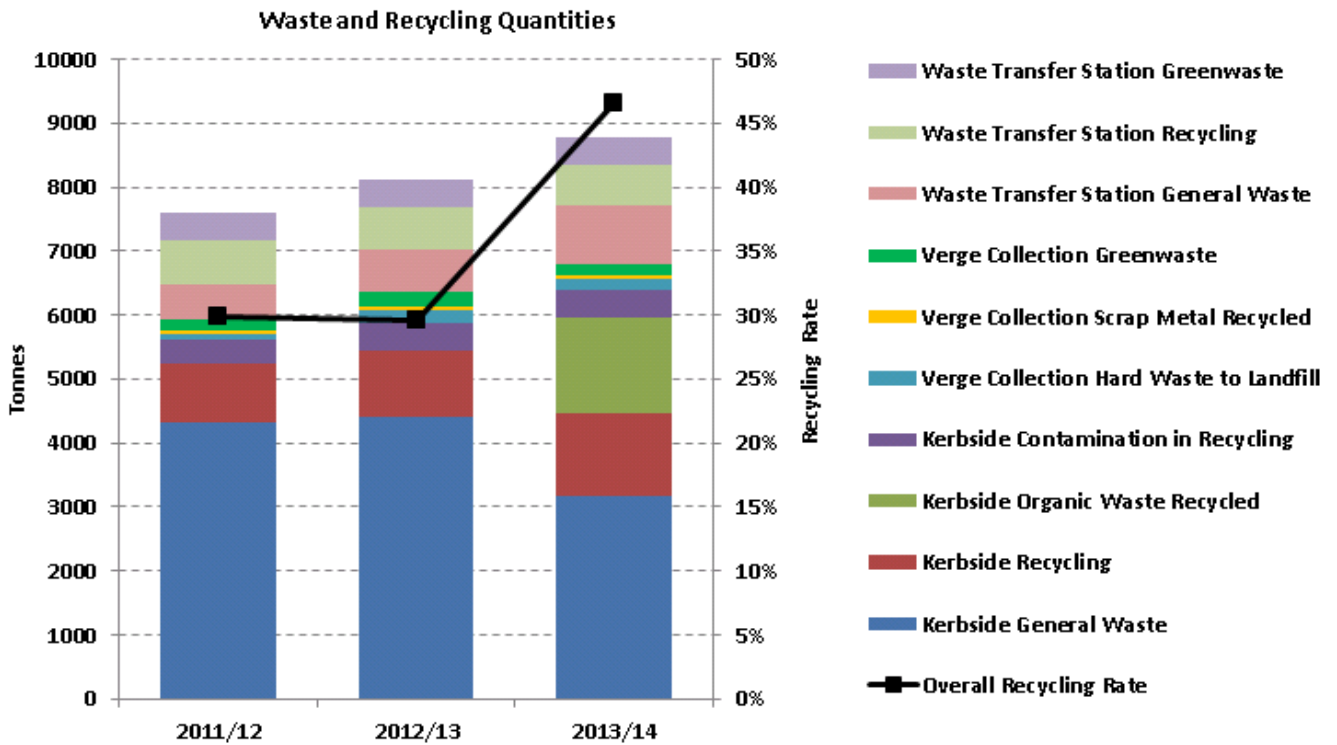
Scheme water use at Shire facilities per capita decreased from 1.8kL in 2012/13 to 1.55kL in 2013/14. This level of consumption is in line with the 2014/15 target set out in the *Sustainability Strategy*. Groundwater use per Ha increased from 5,325kL in 2012/13 to 6,546kL in 2013/14, although this is still lower than the target level.

Waste

In 2013/14 an estimated 8,778 tonnes of waste were collected through weekly or fortnightly kerbside collections, annual or six monthly verge collections and via the Capel waste transfer station. About 4,091 tonnes of this waste was recycled with the remainder going to landfill.

The dramatic increase in the recycling rate, from about 30% in 2012/13 to 47% in 2013/14, was almost entirely due to the introduction of the third bin. Diverting nearly 1,500 tonnes of organic wastes from landfill in 2013/14 reduced greenhouse gas emissions by about 2,100 tonnes CO₂.

The Shire's target is to recycle 30% of municipal waste by 2014/15. This target was easily achieved in 2013/14 following introduction of the third bin.



Carbon

No additional activities to reduce or offset carbon dioxide emissions were carried out in 2013/14, such as tree planting. However, some tree planting activities are planned to be carried out on Shire land in 2014/15. Providing support for revegetation activities in other parts of WA, through the purchase of carbon credits, is also planned for 2014/15.



Organic waste from the third bin being turned into compost