



2011 Greenhouse Gas Emissions Report

Emissions source	Consumption units	Consumption	Target emissions (tonnes) 2011	Actual GHG Emissions (tonnes) 2011	Actual GHG Emissions (tonnes) 2010	Change from 2010 %
Direct emissions (Scope 1)						
Natural Gas	GJ	60,607	2,830	3,111	3,045	2% ↑
Petrol for vehicles	kL	158	322	361	414	13% ↓
Diesel for vehicles	kL	32	41	86	51	69% ↑
Petrol for hire vehicles	kL	25	67	57	46	25% ↑
Total Scope 1			3,260	3,616	3,556	
Indirect emissions (Scope 2)						
Electricity	kWh	8,118,000	10,612	9,823	10,508	7% ↓
Optional Emissions (Scope 3)						
Electricity - transmission & distribution losses	kWh	8,118,000	1,253	1,218	1,196	2% ↑
Flights	km	3,468,109	1,900	1,283	923	39% ↑
Waste - landfill	tonnes	296	359	355	357	0%
Extraction of natural gas	GJ	60,607	221	242	237	2% ↑
Train travel	\$	23,261	16	135	137	2% ↓
Water consumption	kL	58,811	122	138	152	9% ↓
Paper consumption	reams	17,262	116	82	104	21% ↓
Emissions from fuel extraction for petrol	kL	158	30	33	40	17% ↓
Taxi travel	\$	28,989	5	6	7	0%
Emissions from fuel extraction for diesel	kL	32	4	7	4	0%
Total scope 3			4,026	3,499	3,157	
Scope 1 + 2 + 3			17,898	16,937	17,221	
Reduction measures						
AGL Green power	kWh	676,985	-998	-921	-369	
Net Emissions			16,900	16,017	16,852	5% ↓

Scope 1 – Greenhouse gas emissions from burning combustible fuels. These are emissions from burning natural gas and fuel for university owned vehicles.

Scope 2 – Emission from the consumption of electricity.

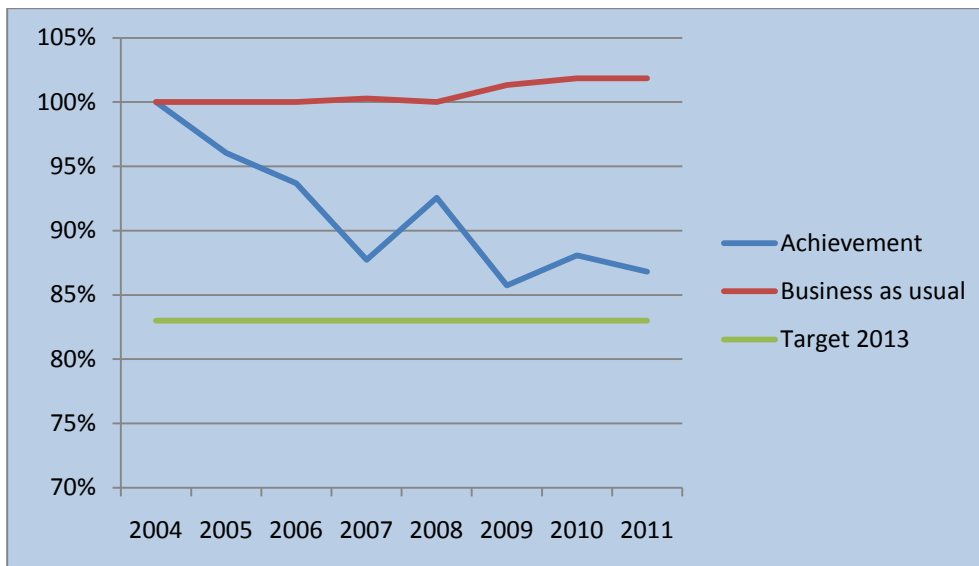
Scope 3 – Indirect emissions associated with running a University. Eg waste generation, staff travelling via public transport or air travel and consumption of paper and potable water.



Staff have continued to reduce the University's environmental impact in all activities. Our 2011 Sustainability Strategy set targets for energy consumption, waste, domestic travel, water consumption and greenhouse gas emissions. Although some areas are slightly higher than planned our total GHG emissions are 5% lower than the target. The following achievements have been made in 2011:

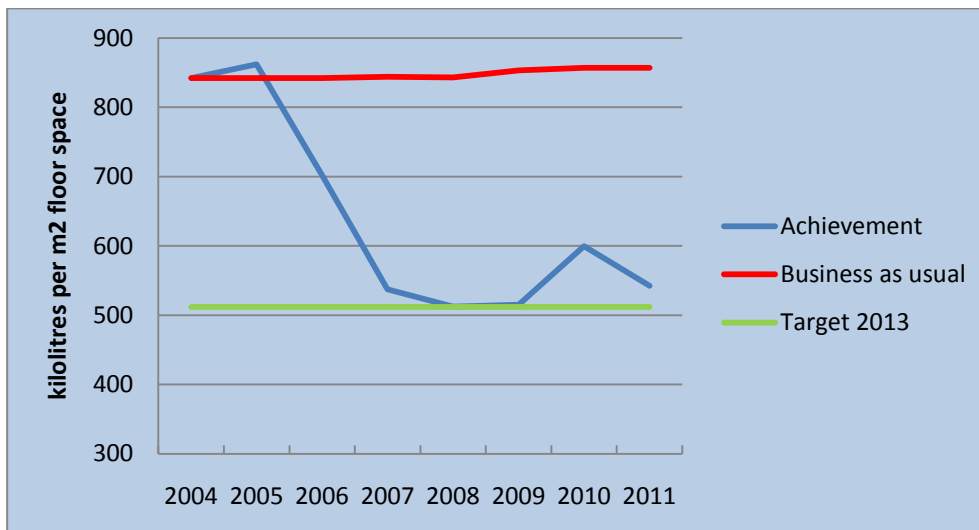
- Reduction in greenhouse gas emissions of 5%
- Reduction in electricity of 5%
- 0.5% increase in natural gas
- Reduced fuel consumption by 8,000 litres or 4%
- Reduction in paper of 21% or 4,453 reams
- Reduction in water consumption of 9%
- Reduced waste to landfill by 60 tonnes (17% reduction)
- Increase recycling rates to 32% of total waste (31% in 2010)

Energy consumption per m² of floor space 2004-2011



- In 2011 electricity consumption has fallen by 5% over 2010
- Natural gas rose by 0.5% over the same period.
- Since 2008 electricity consumption has fallen by 12%
- 2013 target to reduce energy consumption by 15% per m² of floor space (2008 baseline)

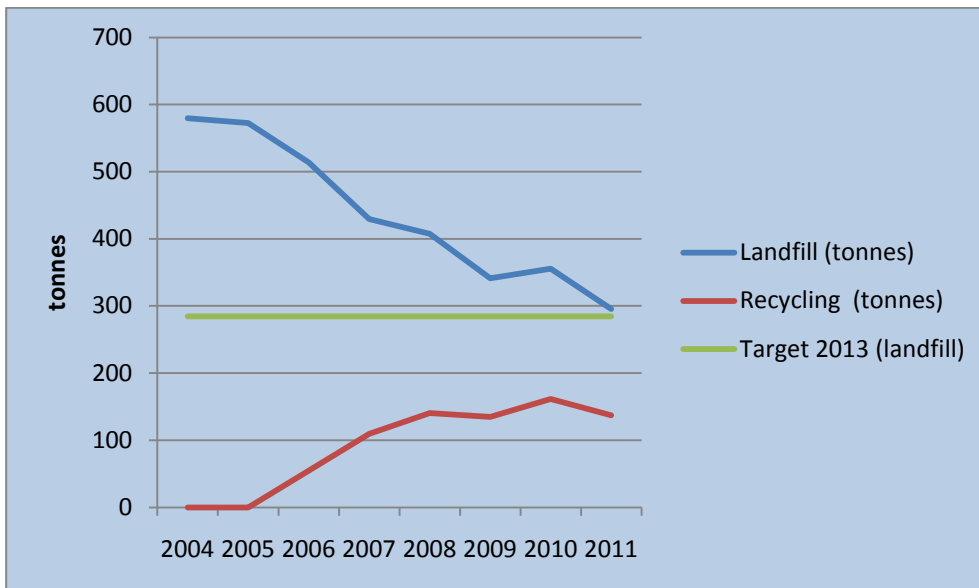
Potable water consumption per m² of floor space 2004-2011



- Potable water consumption reduced by 9% in 2011.
- 2010 consumption was unusually high due to major leaks at SMB campus.
- 2013 target to reduce potable water consumption to 512 litres per m² of floor space (currently 542 litres)

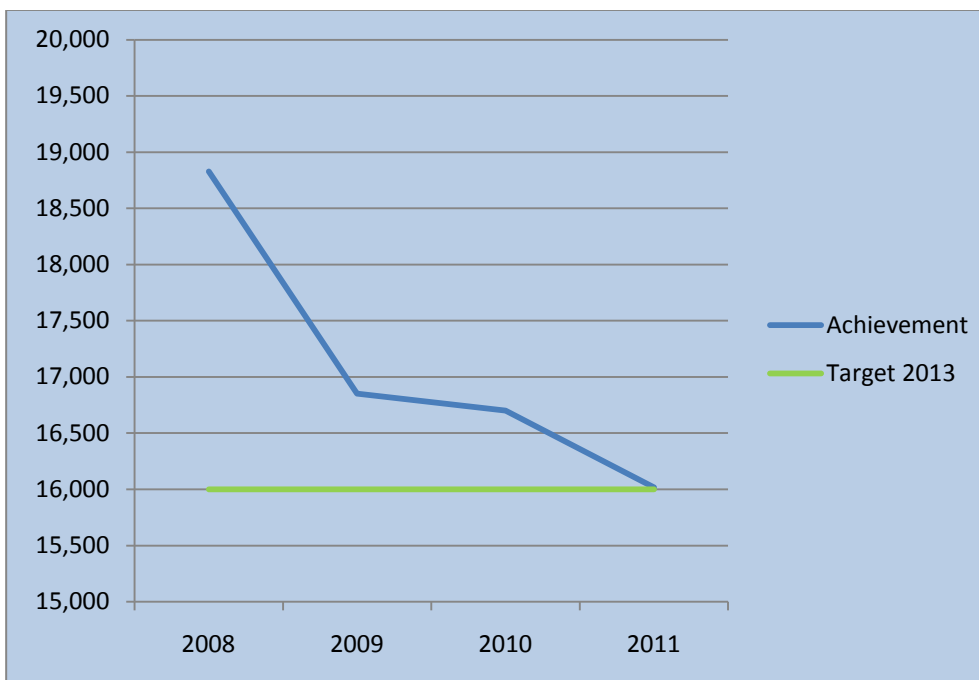


Waste and Recycling



- Recycling rates continue to improve with 32% of total waste now recycled.
- Waste to landfill has reduced by 50% over the past 7 years.
- 2013 target to reduce total landfill waste to 285 tonnes per year (currently 296 tonnes) and to increase recycling rates to 35% of total waste.

Total Greenhouse gas emissions (Co₂-e) all activities



- Total greenhouse gas emissions have fallen by 5% in 2011 and 15% since 2008
- In 2011 the TAFE division purchased 25% green energy in 2011 which saved 921 tonnes of GHG emissions.
- Although 2013 target has been achieved in 2011 we are anticipating an increase in emissions due to several new buildings coming online in 2013.

2011 Sustainability Report

Student Support & Services

University of Ballarat
Learn to succeed



Over 50 staff and students competed in the 2011 annual Ballarat Autumn Day (BAD) ride. Participants looked the part with new UB cycling tops provided for the event.

A number of staff helped to keep our campuses clean in 2011. From emptying recycling bins to cleaning up grounds and car parks. Through the contributions of staff our landfill waste is at record lows and waste being recycled is increasing.



UB's research fellows recently received new bins to help reduce landfill waste. The desktop bins help reduce landfill waste by 50% – 80%.



Over the past 4 years, our passenger vehicle fleet has been downsizing to 4 cylinder vehicles, switching to more efficient diesel engines and reducing the fleet numbers. The result has been a reduction in fuel consumption of over 8,000 litres or a 4% saving.

88% of the vehicle passenger fleet are now 4 cylinder. Our 2013 target is increase the 4 cylinder passenger fleet to 95%.

