



THE UNIVERSITY OF  
MELBOURNE

# **GREEN GOWN AWARD WINNER – INTEGRATING SUSTAINABILITY AT MELBOURNE – A WHOLE OF UNIVERSITY APPROACH**

[sustainablecampus.unimelb.edu.au](https://sustainablecampus.unimelb.edu.au)



## Awards

Green Gown Awards

- Continuous Improvement
- Facilities and Services
- Student Engagement



# SUSTAINABLE CAMPUS

## About UniMelb

3



- **UoM ranks among the top universities in the world**, placed number one in Australia and 33 in the world for the Times Higher Education World University Rankings 2015-16
- **42,653 students and 8,075 staff** (full-time equivalents), 338,000 alumni internationally
- **UoM has 7 campuses** in Melbourne and rural Victoria (Parkville has been the centre of UoM for over 160 years)

## SUSTAINABLE CAMPUS

# Australasian Campuses Towards Sustainability

4



- Green Gown Awards is managed by Australasian Campuses Towards Sustainability (**ACTS**) – [www.acts.asn.au](http://www.acts.asn.au)
- ACTS is a **non-profit member based**

**organisation** representing HE & FE institutions within Australia and New Zealand.

- ACTS aims to inspire, promote and support

change towards **best practice sustainability** within the operations, curriculum and research of the tertiary education sector.

# Green Gown Awards Australasia



## Green Gowns

- Green Gown Awards governed by cross sector [steering group](#) – 9 organisations, including **TEFMA**, **ATEM** and Universities Australia.
- **International Awards** founded in 2012 between UK, Australasia, French-speaking Europe and Canada.
- **Open to ALL** tertiary education institutions – including universities, TAFE, polytechnic and RTO's.
- **Aim of the Awards:**
  - Recognise and reward leading institutions
  - Raise the profile of sustainability issues
  - Disseminate and share best practice
- **Broad range** of sustainability categories and high level of sector engagement. Over 65 judging organisations.



# SUSTAINABLE CAMPUS

## Embedding Sustainability

6

Energy & Emissions



Water Conservation



Waste Minimisation



Sustainable Buildings



Transport



Bees@UniMelb



C16 Design Hack



Ride2Uni



Fairtrade Market



Open Day

# SUSTAINABLE CAMPUS

## Embedding Sustainability

7

Research



Teaching & Learning



Sustainability Report



Campus as a Living Lab



Biodiversity



Fair Trade



Community Garden



Sustainability Tour



Community



Green Innovation Fund





# Energy Savings

Since 2008 the University has:

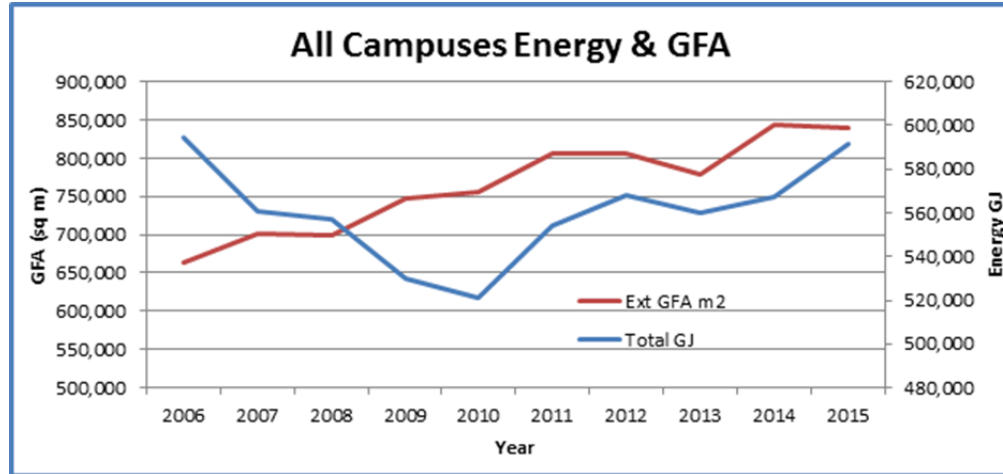
- Implemented 300 energy reduction projects at a cost of **\$9.07M**. Including **210 kW of solar panels** and more than **5,800 LED light** replacements.
- Achieved annual **reductions of 33,000 tonnes of CO<sub>2</sub>**, (over 200,000 tCO<sub>2</sub>e in total)
- Reached annual savings from these projects of **\$3.13M**





# SUSTAINABLE CAMPUS

## Energy



- GFA increased by 26.2% since 2006
- Demand still below 2006 consumption due to energy efficiency initiatives
- Since 2006 additional demand; Data Centre at 11 Barry St, PDI, MBC, Spot building, MSD

# Energy

- **2015 Energy Consumption:** 187,400 MWhr
- **2015 Energy Cost:** \$ 15.7m
- **Carbon Footprint:** 145,000 TCO<sub>2</sub>
- **CEFC Project:**
  - \$9.1m Project (2016-2018)
  - 7,750 MWhr annual saving
  - \$930k PA savings
  - 9,100 TCO<sub>2</sub> PA
  - Payback Period: 8 years



# Water Savings

Water, saved 164ML/pa (30%)  
below 2006 base line:

- 65 Olympic swimming pools
- 218 million bottles of red wine

Well exceeding our target of 20%  
below 2006 despite University  
expansion.



# Drinking Water Fountains

- 72 Water Fountains installed across campuses
- Encouraging the use of refillable water bottles



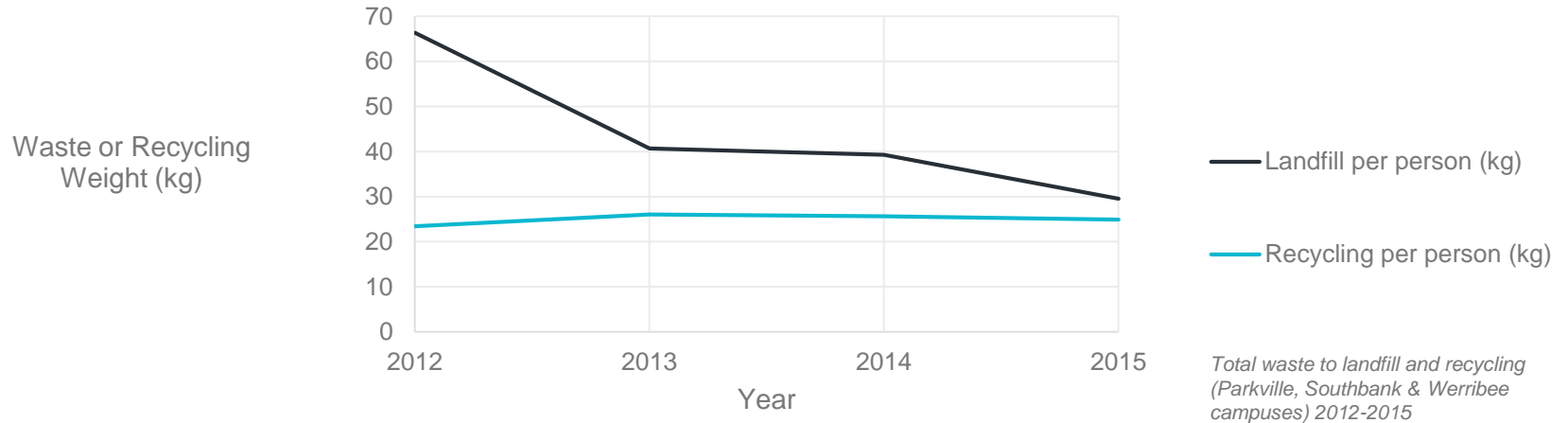


# Waste & Recycling Management

- Infrastructure for waste and recycling increased recycling rates significantly.
- 22,000 internal and 40+ external bins deployed since 2010.



# Waste to Landfill

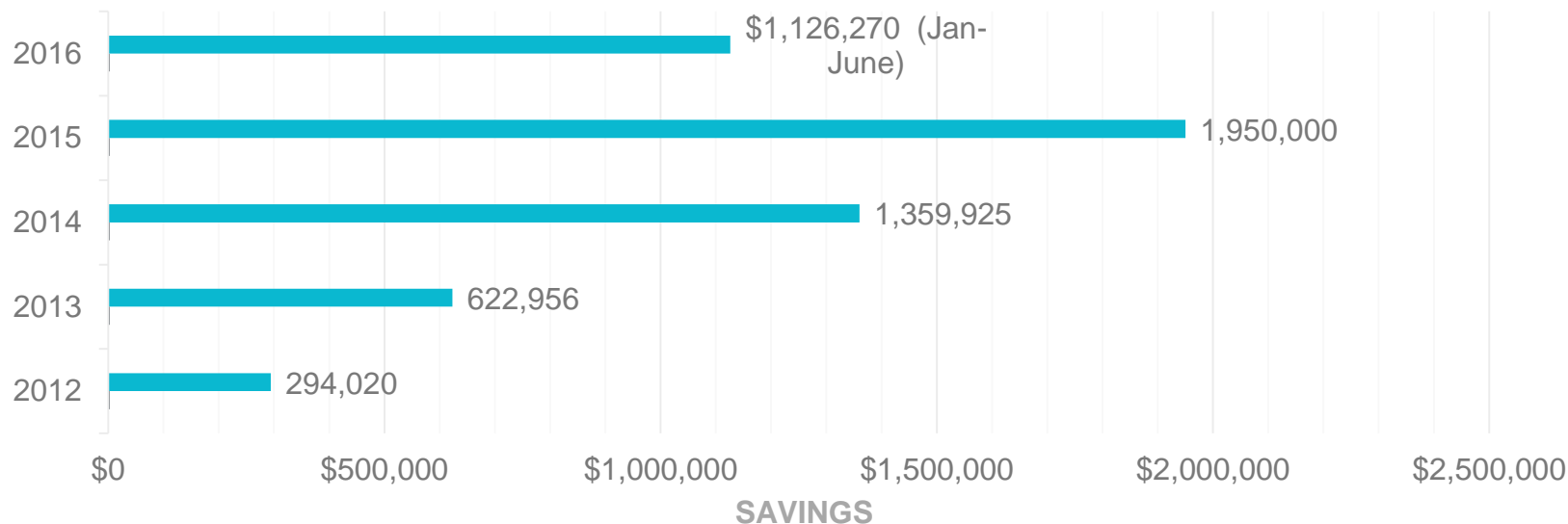


- Since 2012 the amount of landfill has been reduced per person by 50% while recycling has remained steady.
- The target by 2020 will be to reduce waste to landfill per person by 70% from the baseline of 66.35 kg per person in 2012



# Furniture and Equipment Reuse Service

Estimated Retail Replacement Value from 2012 to June 2016. **Total: \$5,353,171**



# SUSTAINABLE CAMPUS

## Sustainable Buildings

16



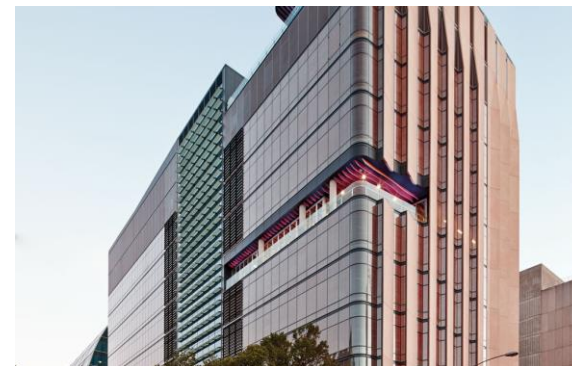
### Faculty of Business & Economics

- Chilled beam technology
- 46% less energy than comparable building
- blackwater recycling plant treats 30,000 litres per day



### Melbourne Brain Centre

- Mixed-mode ventilation system
- co-gen plant reduces emissions by 55%
- 50,000-litre rainwater tank



### The Peter Doherty Institute

- co-generation plant saves 2,475 tonnes CO2 per year
- 100,000-litre rainwater tank
- Greywater filtration system on roof

# SUSTAINABLE CAMPUS

## Sustainable Buildings

17



### Faculty of Architecture, Building & Planning

- 6 Star Green Star Rating for new Architecture Building
- Extensive LED lighting
- Laminated timber beams
- 750,000-litre rainwater tank



### Arts West

- 5 Star Green Star Rated including Energy sub-metering and Student cycling facilities
- Part of the new building is constructed over the previous 1960's building to reuse materials
- Object-based learning includes integrated Museum and landscaping - around the theme of plants found on all southern hemisphere continents between Latitude 30 and 40 degrees south



### Leicester St Student Accommodation

- 5 Star Green Star – Multi Unit Residential Design v1 Certified Rating
- High performance insulation and glazing systems



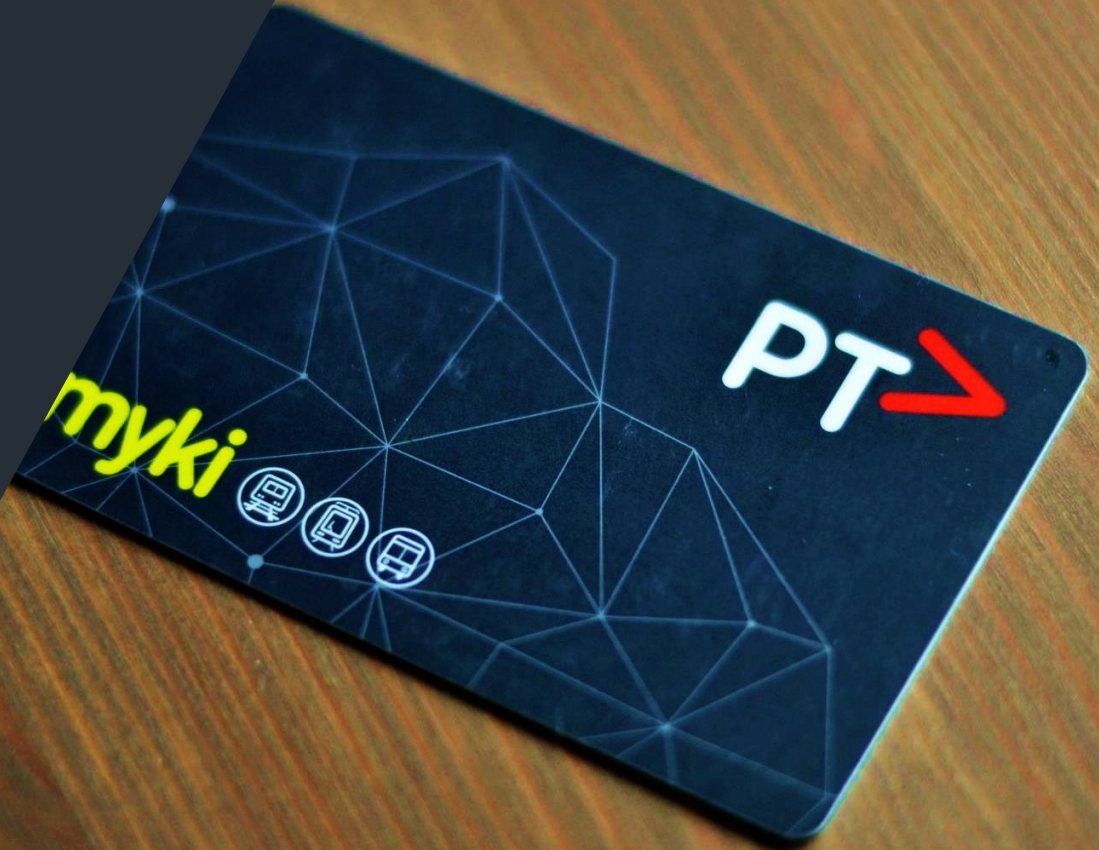
# Cycling

- 2,200 bike spaces now available on Parkville campus
- The Melbourne Bike Share - on-campus stations have been located at University Square and North Court at Parkville Campus and outside VCAM on St Kilda Rd



# Transport Options

- Staff Commuter Club
- Discounted annual myki passes
- 427 have registered from July 2013 to March 2015.
- Carpooling and Carshare





# SUSTAINABLE CAMPUS

## Biodiversity

20



**Management Plan** for all campuses by the end of this year.

**Biodiversity Tours** held round campus  
[sustainablecampus.unimelb.edu.au/key-areas/campus-grounds/tours](https://sustainablecampus.unimelb.edu.au/key-areas/campus-grounds/tours)



**WILDVERSITY App** – developed by a team of students following the C15 Hack

[sustainablecampus.unimelb.edu.au/key-areas/biodiversity/wildversity](https://sustainablecampus.unimelb.edu.au/key-areas/biodiversity/wildversity)



**System Garden** – 160 year old botanic garden – a hotbed of biodiversity!



# Bees@UniMelb

Started in January 2016, a great initiative where operations provided the facilities for Research, teaching and learning purposes.



# C16 Design Hack

In its third year of running – with students from **UniMelb & RMIT**.

13 teams are looking to create solutions for social and environmental problems as diverse as engaging new international students to selling cricket protein bars to reduce emissions.





# Ride2Uni

- Happens four times per year
- The last event had over **150 riders attend**





# Fairtrade Market

- Organised predominantly by students
- In May had **over 800 attendees**





# Open Day

Sustainable Possum with the Vice  
Chancellor and the Provost on  
Open Day 2016



# SUSTAINABLE CAMPUS

## Embedding Sustainability

26



### Growing Esteem

University Strategic Plan



### Sustainability Charter

Enduring visions and principles



### Sustainability Plan

Priority, goals and actions



### Sustainability Report

Annual performance progress



# SUSTAINABLE CAMPUS

## Challenges for Continuous Improvement

27



Defining where sustainability sits within an institution can be complex. It's a journey.

It's important to work with leadership and understand the process.



Working with other departments, such as Procurement, presents tremendous opportunity for reducing consumption and embedding sustainability at all levels.



Roles and responsibilities around sustainability need to be clearly defined.

Accountability is an imperative.

# The Future – Carbon Neutral Campus 2030



**More engagement** with staff/students and community to shape the sustainability agenda



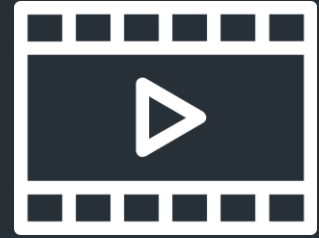
**Innovation in Operations:**

- Campus-wide Solar (CEFC Funding)
- Campus as a Living Lab
- Water Plan
- Biodiversity



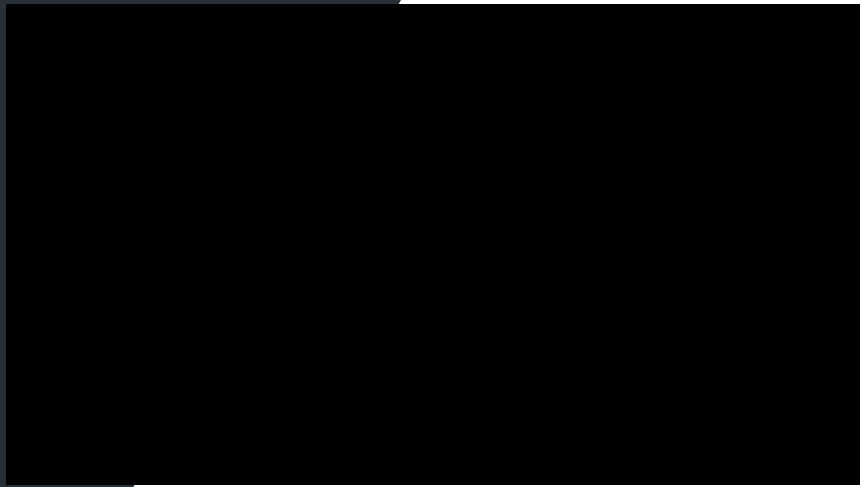
**More collaboration** with other institutions and organisations





## Sustainability at the University of Melbourne

<https://youtu.be/XrAINarUCGA>





# Benefits of Winning the Green Gown Awards



‘External recognition from our peers has reinforced and legitimised the internal recognition’, Sustainability Team.

Internal recognition from staff members, many emails, phone calls, comments of congratulations for what some called an award well deserved.

External recognition from other universities – with comments like ‘We see Melbourne University as a benchmark for reuse’.

The staff feel the award acknowledges the hard work they have put into Sustainability at Melbourne.

# SUSTAINABLE CAMPUS

## Spread the word!

32

