



THE UNIVERSITY  
OF QUEENSLAND  
AUSTRALIA

# GREEN LABS ANNUAL REPORT 2014

[www.uq.edu.au/sustainability](http://www.uq.edu.au/sustainability)

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## MESSAGE

### FROM THE MANAGER SUSTAINABILITY AND PROJECT OFFICER SUSTAINABILITY

In 2014 the Green Labs program continued to engage laboratory staff to promote sustainable practices within UQ laboratories. Sustainable practices encompassed everything from waste reduction, water conservation, energy saving, sustainable procurement and green chemistry. The program also provided representatives with the opportunity to attend ongoing training sessions, participate in promotional activities and engage with other Green Labs representatives.

The Green Labs program has continued to expand, welcoming another nine Green Labs representatives in 2014. A total of 31 reps from 20 different institutes, schools and centres across the St Lucia, Gatton and Herston campuses now make up the program. The program's success in enhancing the University's sustainable performance is evident through the 2014 assessment results which indicate that 80% of labs have substantially improved their sustainability rating since joining the program.

The 2014 Green Program Awards recognised Green Labs reps who have contributed significantly to UQ's sustainability commitment. While the award recipients play an important role in innovating and inspiring others to embrace sustainable change, all Green Labs reps are valued for promoting sustainable practices within their work place. We thank each one of our Green Labs representatives for their contributions in 2014.



*Stuart Green*  
Manager Sustainability



*Christine McCallum*  
Project Officer Sustainability

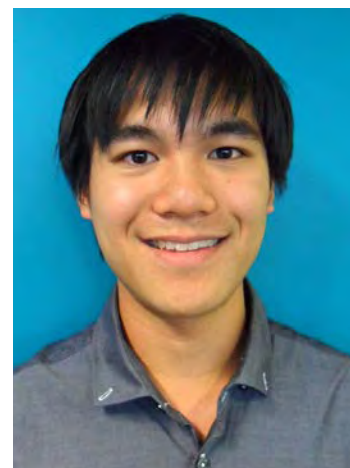


## GREEN LABS ASSISTANT

The Green Labs program is supported by the Green Labs Assistant. The position is held by a UQ student for a 12 month period, enabling them to gain valuable work experience. Jenyu Shaw was appointed to the position in May this year to assist in the administration of the program and to make his own unique contributions.

As a first year science student, Jenyu has already had the opportunity to work within the laboratory environment, gaining an understanding of the environmental impacts of labs and the barriers encountered in changing day-to-day operations.

In 2015 Jenyu hopes to continue encouraging and supporting our current Green Labs reps in their endeavour to create more sustainable laboratories. Jenyu also wishes to continue expanding the program's reach to cover new faculties and institutes.



*Jenyu Shaw, Green Labs Assistant*



# GREEN LABS REPRESENTATIVES



**Michael Tobe** *School of Geography Planning and Environmental Management*

Michael joined the program in 2014 and is the first Green Labs rep from the School of Geography Planning and Environmental Management (GPEM). GPEM has inherited a disused laboratory space and is in the process of redesigning this space to suit the school's requirements. Laboratory conditions such as a high demand on the air conditioning system due to the operation of fume cupboards, high plug loads to run the equipment and large water use provide many challenges and opportunities for designing a lab. Michael joined the Green Labs program in the hope of gaining resources and assistance to allow him to promote energy and water efficient design principles. Michael looks forwards to the construction of the lab and equipment procurement and is hopeful that some of the sustainability features incorporated within the design stage will pay off in the long run.



**Simon Nevin** *Centre for Advanced Imaging*

Simon is the OHS Manager in the newly built Centre for Advanced Imaging (CAI) building and joined the Green Labs program this year to improve sustainability practices within his workplace. Simon coordinated the CAI's involvement in the Institute's *Shut your Sash* Competition and was very encouraged when CAI staff began to lower fume cupboard sashes once educated on the significant operating costs of fume hoods.

In 2015, Simon would like to implement recycling strategies at CAI and promote staff to turn equipment off when not in use to reduce unnecessary electricity consumption. The biggest challenge Simon faces in building a culture of sustainability in his workplace is disseminating information about green practices to raise staff awareness.



**Luke Devitt** *UQ Diamantina Institute*

Luke, Lab Manager for Level 5 of the Translational Research Institute (TRI), initially joined the Green Labs program alongside Anthony Raphael to reduce the environmental footprint of their lab in the Diamantina Institute.

Luke coordinated the involvement of his lab in the Green Labs *Shut your Sash* Competition, where the use of awareness posters and stickers dramatically reduced fume hood sash heights. Luke was also able to de-clutter fume hoods, finding appropriate storage locations and changing work practices.

Luke looks forward to a continued involvement in the Green Labs program, participating in campaigns and initiatives that are cost effective and easy to implement within his lab.

# GREEN LABS ACTIVITIES

## Green Labs *Shut your Sash* Competition

Fume cupboards use large amounts of energy, making up approximately 16% of energy use in a typical lab. Fume cupboards also place a large energy load on the air conditioning system and, as a consequence, are probably responsible for another 30% of total lab energy use through increased air conditioning load. The *Shut your Sash* Competition demonstrated that energy savings can be made by simple changes and that these small changes will significantly reduce a lab's greenhouse gas emissions and provide a safer working environment for users.

*Shut your Sash* competitors reduced their sash heights by 40 per cent on average over the three week competition. Emilija Nicolosi from the School of Social Science won the prize for the lab with the lowest overall sash height and Luke Devitt from TRI won the prize for the lab that reduced sash heights the most throughout the competition.

## Waste Management Quiz

One of the objectives of the Green Labs program is to improve waste disposal and recycling within UQ labs. In May, Green Lab reps competed in a treasure hunt quiz on managing waste in labs. The quiz promoted the theme of waste management incorporating information on waste reuse, improved waste disposal techniques and recycling.

## New Green Labs Representative Training

Nine new representatives attended Green Labs training sessions held throughout the year, increasing the total number of Green Lab representatives to 31. Reps are now located within 20 different UQ faculties and institutes located across the Herston, St Lucia and Gatton campuses. Reps are also located within the UQ School of Pharmacy at Woolloongabba and the Diamantina Institute at the Princess Alexandra Hospital.

Current Green Labs representatives, including Jacky Hung (Institute of Molecular Bioscience), Sally Stockwell (CSIRO Animal, Food and Health Sciences) and Casey Pfluger (Centre for Clinical Research) were invited to speak at the 2014 training sessions, providing valuable insights into the role of a Green Labs Rep.

## Update Sessions – Advanced Engineering Building (AEB) Tour

Update sessions provide a media for representatives to reengage in the Green Labs program, as well as build contacts with other like-minded representatives. In May, Green Labs reps were invited to attend a tour of UQ's Advanced Engineering Building (AEB) with Peter Sampson, Manager Special Construction Projects, Property and Facilities Division. A 'living' laboratory, AEB offers innovative and contemporary design, achieving a 5 Star Green Star Design rating from the Green Building Council of Australia due to its focus on energy efficiency and waste treatment system. Green Labs reps were expertly guided through each level of the building and shown these unique design features.

During Sustainability Week Green Labs reps were invited to attend the opening presentation and luncheon. Professor Andrew Griffiths, Academic Dean and Head of the UQ Business School, presented on "Sustainability in Hard Times" and Geoff Dennis, Deputy Director of the Property and Facilities Division, spoke on UQ's recent achievements and ongoing sustainability projects.

## UQ Sustainability Promotions

Green Labs representatives were invited to participate in UQ's Sustainability Week activities in August. Events included lunchbox lectures on the benefits of community gardens and living sustainably, workshops on composting and recycling, bird-watching, tours of the solar array and the new Global Change Institute building and tree planting events.

Green Labs reps were also invited to swap the car trip for more sustainable transport options during the annual *Sustainable Commuting* Competition in November.



Green Labs reps on a tour of UQ's Advanced Engineering Building (AEB) with Peter Sampson, Manager Special Construction Projects, Property and Facilities Division

# INSTITUTES

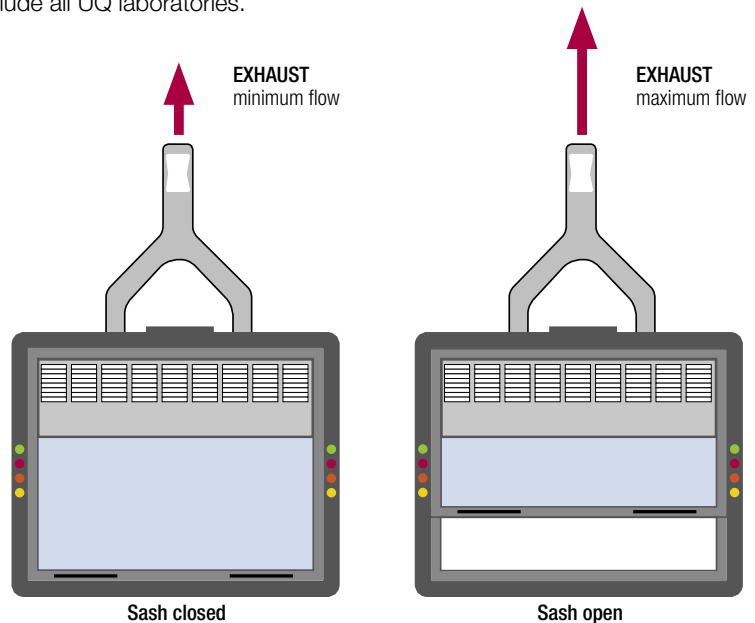
## *Shut your Sash*

# COMPETITION

In 2014 the Sustainability Office coordinated a UQ institute-wide *Shut your Sash* Competition. Five UQ institutes competed in the energy conservation competition designed to encourage fume cupboard users to lower sashes when cupboards are not in use. In several institutes Green Labs Reps completed the weekly spot checks, many thanks to Sally Stockwell, Simon Nevin and Colette Godfrey.

Competition results were impressive with competing labs reducing their sash heights by 78% on average over the three weeks, resulting in an energy cost savings of over \$7600. If each lab were to keep this up over the entire year \$130,000 would be saved while reducing UQ's greenhouse gas emissions by over 1000 tCO<sub>2</sub>-e.

Congratulations to our prize winners, **Diamantina Institute** Level 6 for the lab with the lowest overall sash height regardless of baseline heights and **CAI** for the Institute that reduced sash heights the most over the three weeks of competition. Both institutes received \$10,000 to go towards energy efficiency improvements in their labs or institutes. Due to the success of this trial competition, the Shut your Sash competition will continue to expand in 2015, to include all UQ laboratories.



Andrew Cumming accepting his prize and certificate, from left: Stuart Green (Manager Sustainability), Chris Collins (Energy Manager), Andrew Cumming, Christine McCallum (Project Officer Sustainability)



# GREEN LABS ANNUAL AWARDS

## Best New Area

In 2014 nine new representatives joined the Green Labs program. UQ's Archaeology Laboratory (representative: **Emilija Nicolosi**) and UQ Civil Structures Laboratory (representative: **Ruth Donohoe**) both received the highest baseline score of 73%, winning the *Best New Area* awards.

## Most Motivated Representative/Team

**Luke Devitt** from UQ Diamantina Institute was awarded the *Most Motivated Representative* for his outstanding contribution to the Green Labs Program in 2014. Over the year Luke Devitt and Anthony Raphael have improved sustainability practices within their lab in the areas of water, recycling and energy. Luke ran a successful *Shut your Sash* Competition over three weeks, substantially reducing sash heights and changing fume cupboard behavioural practices within his lab. Their lab's annual assessment indicated a 10% increase in the overall sustainability rating compared to the baseline rating. Luke is committed to raising awareness through Green Labs initiatives and improving processes to minimise environmental impacts within his workplace.

## Best Initiative

The *Best Initiative* award for 2014 was presented to **Casey Pfluger** of the UQ Centre for Clinical Research (UQCCR) – Neuroimmunology Lab. In 2014 Casey implemented a number of green initiatives including:

- The use of a tablet PC in place of paper in the laboratory.
- The creation and application of warm-up time stickers on equipment that was identified as being left on for long periods unnecessarily.
- The creation and use of laminated fume hood signs indicating the optimal and maximum sash heights.

These initiatives and other sustainable practices Casey has implemented over the past year resulted in an improvement of his lab's annual assessment overall sustainability rating compared to 2013.

The efforts of our Green Labs representatives were recently recognised at the Annual Green Programs Awards luncheon. Held on October 24, representatives and their invited guest were treated to lunch and a presentation by Bill Clarke, Professor and Remondis Chair in the Schools of Civil and Chemical Engineering, on the impacts of waste policy in Queensland. Geoff Dennis, Deputy Director of the Property and Facilities Division, also spoke on UQ's environmental sustainability projects.

The achievements of our Green Labs reps were celebrated, with awards presented to a small number of the most outstanding representatives.



Green Office and Green Labs Awards recipients from left: Donna Easton on behalf of Casey Pfluger GO and GL; Janet Sykens on behalf of Emilija Nicolosi for UQ Archaeology Lab GL; Luke Devitt GL; Frédérique Bracoud and Megan Sandaver for the School of Economics Team GO; Kirsten Hentschel and Amanda Buckley for Academic Administration GO

# GREEN LABS ASSESSMENTS

## ANNUAL ASSESSMENTS

Green Labs annual assessments enable existing representatives to track their lab's environmental performance over the course of a year. Conducted on a voluntary basis, these assessments are instruments which aim to encourage sustainable practices by revealing opportunities for improvement.

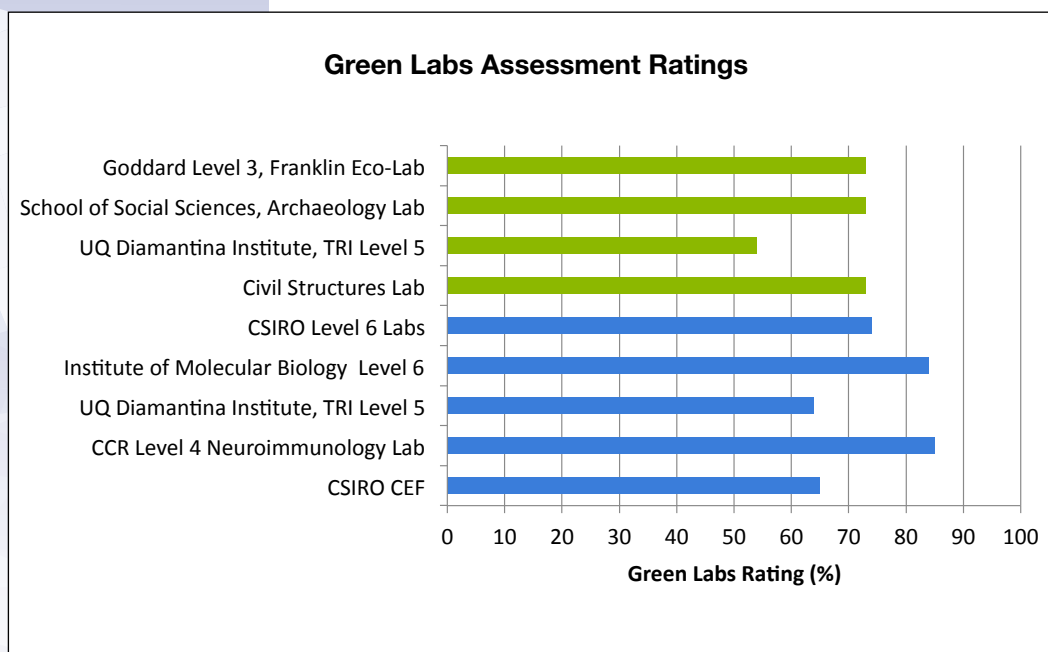
The 2014 assessment results indicate that 80% of Green Labs have substantially improved their sustainability rating since joining the program.

## Baseline Assessments

New Green Labs representatives are encouraged to conduct baseline assessments within their laboratories when they initially join the program. These assessments incorporate interviews with laboratory members, a walk-through survey to observe actual practice and an after-hours survey to monitor energy consuming equipment. Green Labs reps are encouraged to reflect on current environmental performance and monitor their progress in the areas of:

- Training
- Lighting
- Duty of care
- Housekeeping
- Sustainable procurement
- Water
- Energy
- Fume cupboards
- Chemical management
- Waste and recycling

Once completing the assessment the laboratories are assigned an overall Green Labs rating, an average score resulting from their performance in each assessed area. In 2014 four Green Labs baseline assessments were completed, with an overall average score of 69%. Green Labs baseline and annual assessment results are shown in Figure 1. Labs that joined the program in October 2014 are still to complete their baseline assessments.



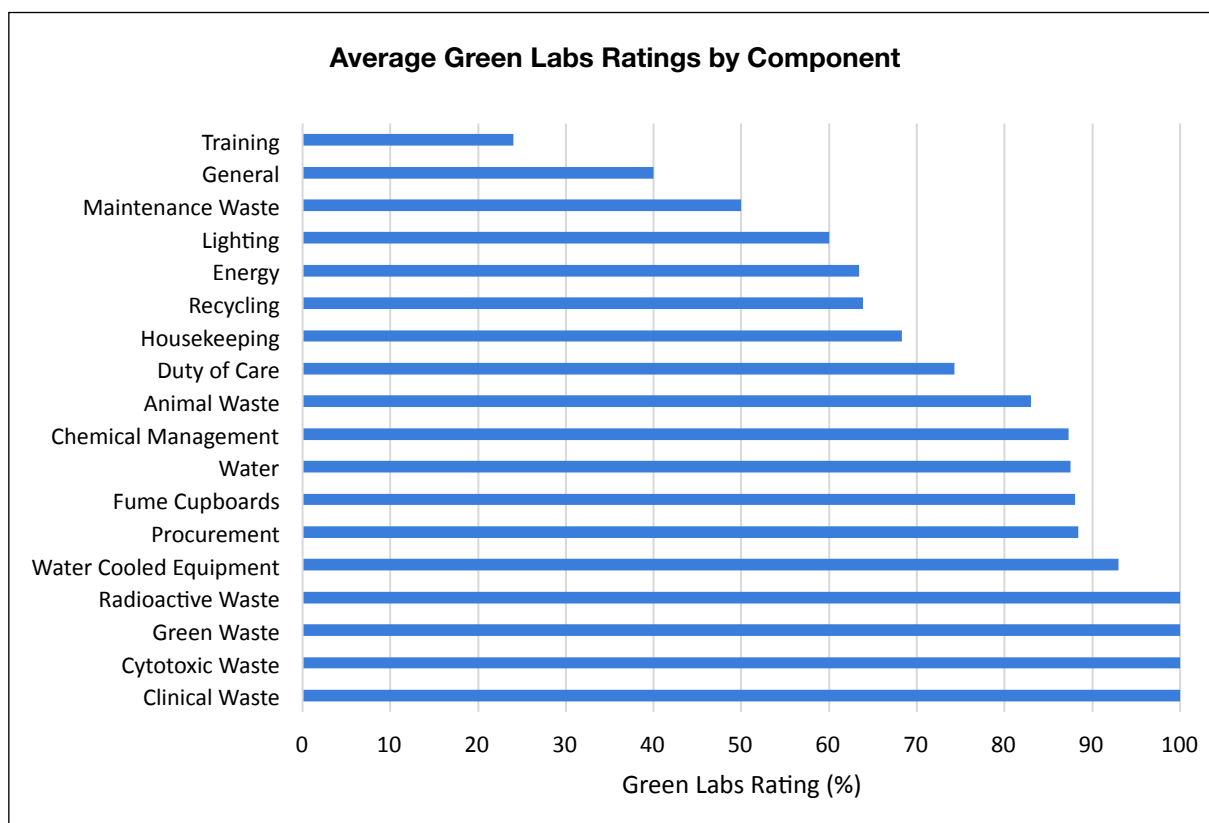
**Figure 1:** Overall Green Labs Rating for baseline (green) and annual (blue) assessments conducted in 2014.



# GREEN LABS ASSESSMENT RESULTS

Within both the baseline and annual assessments a number of sustainability components are assessed. Green Labs representatives should be congratulated for their high performance in relation to waste management, with Green Labs ratings for clinical, cytotoxic, green, maintenance and radioactive waste scoring the highest of all components

across both annual and baseline assessments (see Figure 2). In addition to waste, many other components saw significant rating increases compared to 2013 results, including fume cupboards, water, water cooled equipment and chemical management components.



**Figure 2.** Average Green Labs Ratings by component.



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