# Griffith University Nathan Campus Tour

## Nathan Campus

Home to world-class expertise in the environment, corporate sustainability, Asia and the emerging bio-sciences, Nathan is the original Griffith campus.

With more than 13,900 students and situated in tranquil, native bushland on the edge of Toohey Forest, Nathan campus is a short walk or bus ride from the Mt Gravatt campus or a 10 minute drive from central Brisbane.

Public transport connects the campus to Mt Gravatt, Garden City shopping centre, and the Brisbane CBD.

There are many handy services right on campus, such as banking, post, medical, welfare and student guild services.



## Visit 1: Sir Samuel Griffith Centre

Griffith is home to Australia's first teaching and research facility relying entirely on photovoltaic arrays and hydrogen-metal hydride storage technologies to keep it off the power grid. The innovative, 6 star green star rated Sir Samuel Griffith Centre was occupied in July 2013. It will officially open in 2014.

As an example of genuine sustainable energy alternatives, the Centre showcases Griffith's commitment to finding practical solutions to environmental issues. It also provides a model that could be incorporated into isolated buildings in remote, such as schools in rural communities.

The concept for the \$40 million Centre derives in part from Griffith research by Professor Evan Gray, leader of the principal node of the <u>National Hydrogen Materials Reference</u> <u>Facility</u>, headquartered at Griffith, is a state-of-the-art reference laboratory that focuses on hydrogen storage materials. With funding from the Australian Research Council, the NHMRF supports research collaborations between a number of prestigious universities in Australia and overseas.

The Centre honours the progressive traditions of the University's namesake, Sir Samuel Griffith.

#### 6 star green star rated

The Sir Samuel Griffith Centre has been awarded a 6 star green star rating by the Green Building Council of Australia. Green Star is a comprehensive, national, voluntary rating system that evaluates the environmental design and construction of buildings.

# Solar power

The Centre is covered by 1124 solar panels. The panels, which convert sunlight into energy to store in batteries, provide a stable power supply over any 24-hour period. Energy not used during the day is either be storied for later use, or used for running the air conditioning systems the next day. The Centre only needs to use the electricity grid for power during unusually long periods of rain or cloud cover.

### Hydrogen power

The Centre has a second, innovative energy storage system for, quite literally, a rainy day, with hydrogen fuel cells designed to kick in when the first batteries run down to a certain level. The Centre is the first building to run a hydrogen storage process on this scale.

# Interactive learning space

The Sir Samuel Griffith Centre is home to the <u>Red Zone</u>, a new learning space featuring interactive technology and massive projection displays. Showcasing the latest research and teaching expertise across Griffith University, the Red Zone is open to staff, students and the wider community.

## Air-conditioning

At night, excess energy is used to chill water for the main air-conditioning system to run the next day. Another air-conditioner unit, separate from the main system, delivers personal levels of temperature and air flow through outlets at each desk or workstation. This reduces the workload of the primary system and provides personal level of comfort.

### Water harvesting

Water is collected from the roof and stored in a large water tank for use in landscape irrigation and toilet flushing.

## **Construction materials**

The Centre has been constructed from glass, aluminium, concrete, steel, bricks and fibro-cement sheeting.



## • Visit 2: <u>EcoCentre</u>



The Griffith University EcoCentre opened on World Environment Day, 5 June 2001 and is nestled within the Toohey Forest on Nathan campus.

The EcoCentre was designed and constructed to strict 'eco-design' principles. This involved a total life cycle approach focussed on the environmental impacts during construction, ongoing daily operations and demolition phases.

The design of the building is in line with a key principle of sustainability - the need to live more lightly on the Earth, and serves to educate our community. The EcoCentre minimises environmental impacts through:

- use of solar energy
- ambient ventilation and lighting
- rammed earth walls for temperature regulation
- rainwater collection for greywater functions
- carpets reconditioned (post-consumer) modular carpet system
- wet composting toilets
- aerated concrete floor panels
- heat and glare reflective smart glass.

In 2011 the EcoCentre celebrated its 10th birthday. Over 150,000 people have visited the centre since its opening. In that time a wide range of people and organisations have participated in environmental education activities, exhibitions and launches or attended seminars and workshops including:

- International visitors
- School children
- Conference delegates
- Industry representatives
- General public
- Community groups