



Griffith University's Strategic Plan:

Our goal 'To be a sustainable university'

Sustainability Report



The Sir Samuel Griffith Centre on the Nathan campus, a revolutionary six star green star self-powered building using solar and hydrogen technologies.

Sustainability highlights – engaging with the community

In 2015 Griffith University became an official partner with Gold Coast 2018 Commonwealth Games Corporation (GOLDOC) for the Gold Coast 2018 Commonwealth Games. This partnership expresses Griffith's belief in a sustainable future for the Gold Coast, while celebrating what will be an extraordinary opportunity for Australia's sixth-largest city. Sustainability is a key strategy for GOLDOC, which promotes its commitment to leadership in sustainability and international best practice standards in sports events at home and around the world.

We are proud to be a member of the Sustainability Advisory panel of experts to assist in meeting this commitment, and for making a contribution to planning the legacy of the Games.

New light rail system opened in 2014

This major development was officially opened in July 2014. It is a vital transport infrastructure initiative leading to the Commonwealth Games in April 2018.

The \$1.1 billion project saw the construction and operation of 13 km of light rail in the heart of the Gold Coast. With two stations adjacent to Griffith's Gold Coast campus, the light rail system will play an important part in delivering staff and students to the University's doorstep.

In October 2015, funding was announced to extend the light rail from the Gold Coast University Hospital station (outside the entrance to the campus) to the Helensvale train station. This means there will be continuous rail services from Brisbane to Southport and more transport options.

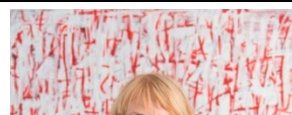
National Climate Change Adaptation Research Facility

In 2014 Griffith's National Climate Change Adaptation Research Facility (NCCARF) was funded by the Federal Government for Phase 2 of the National Climate Change Adaptation Research Program. NCCARF will work with national science agencies, academics, state and local governments, community organisations and businesses to develop a framework to help local governments make better decisions about managing risks from rising sea levels and more intense storm surges.

Our Sustainability Journey

Griffith's sustainability achievements recognised:

- Winner: Australian Coastal Awards 2015 - the Griffith Centre for Coastal Management (GCCM) won two major categories: Research and Community Engagement.
- Winner: Tertiary Access Group (TAG) Business Leadership Award 2015 (Closed Loop systems)
- Winner: Logan Eco Awards 2015 – Sustainable School Award (Slacks Creek Restoration project).
- Winner: 2015 Queensland iAwards – Research and Development (Biodiversity and Climate Change Virtual Lab (BCCVL)).
- Winner: The Ashley Goldsworthy Award for Sustained Collaboration between Business and Higher Education 2014. A successful partnership between the Griffith Centre for Coastal Management (GCCM) and the City of Gold Coast.
- Winner: Tertiary Access Group (TAG) – TAG Member Award – Sustainable Procurement 2014 (Vitamin G Café)
- Winner: Green Gown Awards



Griffith's initial Sustainability Plan contained goals, objectives, targets and accountabilities to continue to advance our sustainability commitment. This report provides an overview of our progress.

Sustainability goals include:

- Griffith University is recognised as embedding principles of sustainability that support the University's goals and strategies.
- To foster understanding of, and commitment to the principles of sustainability in the workplace.

Sustainability goals have been included in all University plans: Academic Plan 2013-2017, Research Plan 2013-2017, Engagement Plan 2015-2018, Griffith IT Plan 2013-2017.

A concerted effort has been made to cascade sustainability goals into all operational plans. Committees have been established in academic and administrative elements of the university to formulate strategies embedding sustainability.

In 2014 Griffith introduced a Sustainability Award offered every two years to staff in recognition of innovative approaches to leading sustainable practice. A second round of awards was made in 2016.

Sustainability has been incorporated into Griffith's staff induction process to raise awareness and commitment.



Staff Sustainability Award Winners. L-R Mr Jos Lamb, Mrs Katrina Medill, Ms Tanya Lindenberg, Mr Mark Ballantyne, Professor Catherine Pickering, Ms Delwyn Landon, Dr Michael Howes with Professor Martin Betts, Deputy Vice Chancellor, Engagement (fourth from left).



Teaching

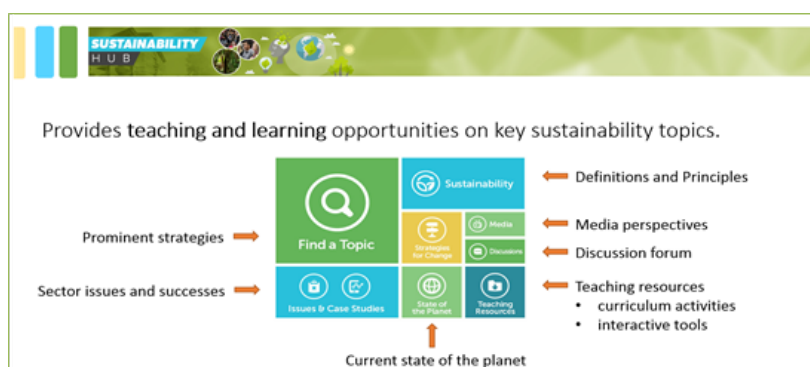
Goal: By including sustainability principles in Learning and Teaching programs we deepen our students' understanding of sustainability at local and global levels.

From our 46 000 enrolled students we aim to produce graduates who understand the challenges facing the world today, with superior skills in creating practical solutions.

Among its suite of programs Griffith offers interdisciplinary undergraduate and postgraduate programs that make connections between economic, social and environmental conditions.

Recent strategies to enhance learning and teaching:

- The Sustainability Teaching Network is one of the key strategies related to teaching in the University's Sustainability Plan. The Sustainability Teaching Network draws together representatives from transdisciplinary areas in environment, business, health, education, the arts and society.
- Griffith's Sustainability Teaching Network has developed Griffith's new Sustainability Hub for learning and teaching. Launched during Griffith's Sustainability Week 2015 and renewed in 2016, the Hub provides teaching and learning resources for staff and students in all disciplines. The Hub provides 440 up-to-date resources from organisations that address sustainability.

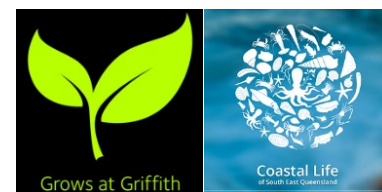


As a pioneer in the field, in 1975 Griffith launched Australia's first environmental science degree and since then has continued to lead in areas of environmental science, education, research and practice.

GrowsAtGriffith app

The GrowsAtGriffith app provides an interactive and easy-to-use flora database of 300 plants found on Griffith University's five campuses. It features more than 900 high-quality images. To date, the free app has been downloaded more than 6000 times.

It has become integral to environmental education in the region including Natura-pacific using the app to deliver environmental education programs to 160 schools in South East Queensland with their 47 000 students.



Coastal Life app

Jointly developed by Griffith University and the Queensland Museum, the Coastal Life app is designed as a handy, portable tool for high school and undergraduate students, as well as the interested naturalist and beach walker.

With over 540 species of marine plants and invertebrate animals from coastal habitats across South East Queensland, it is packed with information about the biology and ecology of each species.

Griffith's MBA has ranked inside Australia's top five in the 2015 Financial Review BOSS Magazine MBA survey. The MBA program is set apart from others because of our three core values: responsible leadership, sustainable business practice and global orientation with an Asia Pacific focus.

Research

Goal: Achieve a profile of excellence in world class research relevant to sustainability.

Griffith is a research intensive University with an established national and international profile for innovative and interdisciplinary research. Our world-class researchers work in collaboration with industry, government and the community to tackle the big issues of sustainability. Below are brief examples of our research expertise:

Griffith MicroGrid helps solve peak demand

Leading researchers from Griffith University's Research Engineering Centre (GUREC), together with power electronics company Elevare Energy and renewable energy engineers Sun State Solar have developed the first high performance grid- and household-based distributed energy storage system to deal with peak demand.



Australian Rivers Institute supports water management and research in China

The Australian Rivers Institute is supporting the work of government departments and research organisations in China, through its expertise in environmental water management, river restoration and aquatic ecosystem health assessment. The Institute pioneers environmental research for rivers, coasts and catchments and has established formal collaborations with the Chinese Academy of Science, leading universities and research institutes within the Ministry of Environment and Ministry of Water in China.



Solution at hand for saving Great Barrier Reef

The Australian Rivers Institute has identified thousands of hectares of rapidly eroding gullies in the rivers that feed fine sediment into the waters of the Great Barrier Reef. These giant alluvial gullies can be tens of hectares in area, each producing tens of thousands of tonnes of sediment to the reef each year.



The good news is that after six years of intensive field work, there is a solution for fixing these gullies and significantly improving the water quality of the Reef. Our rehabilitation pilot study has demonstrated that sediment run-off can be reduced by 75 per cent in two years.

Large alluvial gullies can produce tens of thousands of tonnes of sediment that flow into the Great Barrier Reef each

The **Griffith Climate Change Response Program** includes researchers who have expertise and are investigating climate change adaptation and mitigation problems and issues in the following fields:

- Urban and regional planning
- Coastal management
- Environmental and Ecological Sciences including a special focus on rivers, biodiversity and ecosystems
- Engineering and Architecture
- Governance, including policy, and
- Information technology, data information management, and decision support.



Sustainable Built Environment National Research Centre

Griffith University joined the Sustainable Built Environment National Research Centre (SBEnc) as a core member and lead Queensland research provider. The SBEnc is a key research broker between industry, government and research organisations servicing the built environment industry. There are three research streams focused on environmental, social and economic sustainability: Greening the Built Environment; People, Processes and Procurement; and Productivity through Innovation. These research program areas were identified by national industry stakeholders as key drivers of productivity and industry development in the built environment.

We are committed to fostering a sustainable society

Community engagement and partnerships

Goal: Contribute to a robust, equitable and environmentally sustainable society by fostering engagement and partnerships focused on sustainability.

Griffith has a longstanding commitment to community engagement and values its partnerships with local communities, business, industry and government at regional, national and international levels. Through mutually beneficial partnerships, the University responds to community need, exchanges knowledge and offers opportunities for staff and students to participate in community-based learning and research activities. Examples of engagement activities and partnerships include:

	<p>Griffith Centre for Coastal Management</p> <ul style="list-style-type: none"> The Griffith Centre for Coastal Management runs award winning BeachCare and CoastEd programs. More than 36 000 primary and secondary students have benefitted from the CoastEd program to date.
	<p>Griffith's EcoCentre</p> <ul style="list-style-type: none"> The EcoCentre promotes sustainability through collaborative public awareness education programs in partnership with industry, government and the community. Since 2001, almost 200 000 visitors have participated in a wide range of activities, of whom 56 000 attended school-based learning at the Toohey Forest Environmental Education Centre, a partnership between the University and the Queensland Department of Education and Training.
	<p>Griffith Centre for Sustainable Enterprise</p> <ul style="list-style-type: none"> The Griffith Centre for Sustainability Enterprise was set up to inform and assist development of sustainable enterprise through research, teaching and engagement. The Centre hosts a free Sustainable Enterprise seminar series designed to be interactive and promoting open discussion on a wide range of sustainability issues.
	<p>Water on Tap machine trialled on Gold Coast campus</p> <ul style="list-style-type: none"> A partnership between Healthy Waterways and Griffith's Gold Coast Student Guild resulted in the trial of a revolutionary new initiative. Water on Tap is the first vending machine in Australia to dispense both reusable water bottles and free chilled water. The machine is one of only three being piloted in South East Queensland.
	<p>Griffith hosts Logan Eco Action Festival (LEAF)</p> <ul style="list-style-type: none"> Griffith's Logan campus hosts the Logan Eco Action Festival (LEAF), held each year with over 6000 community members attending.
	<p>Australasian Campuses Towards Sustainability (ACTS)</p> <ul style="list-style-type: none"> Griffith University has hosted the secretariat for the Australasian Campuses Towards Sustainability (ACTS) since 2004. ACTS promotes and supports best sustainable practice in the Australasian higher education sector. The Secretariat is located in Griffith's EcoCentre.

Environmental Performance (Sustainability)

The University's Strategic Plan includes a commitment to environmental sustainability through 'building design, energy, water, and waste management practices'. The Sustainability Plan articulates this further through the development of actions and performance indicators. Campus Life's contribution to achieving these goals is through energy and water reduction, recycling and reducing waste to landfill, ensuring ecological issues are considered in the campus landscapes and adherence to the 'Grows at Griffith' strategy. The 'Green Labs' Pilot Program metres and reduces energy use.

Carbon Emissions

Each year the University measures and reports on its greenhouse gas (GHG) emissions.

KPI – CO₂ emissions are in line with the sector average (CO₂-e Scope 1&2)

- At 1.56 tCO₂-e per EFTSL + FTE Griffith emissions continue to track against the 2014 sector mean of 1.58 tCO₂-e and perform well against similarly sized universities.
- Griffith's emissions per sqm GFA of 134.61 kg/m² is below the sector mean of 136.9 kg/m² GFA, however is slightly above the similar sized universities average of 132.14 kg/m².

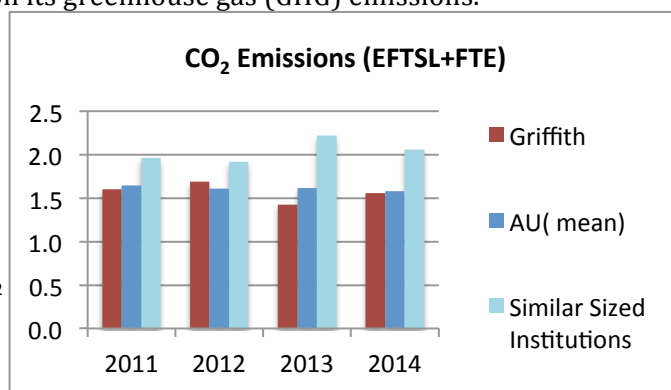


Chart 1: CO₂ Emissions per GFA (t/EFTSL) 2010/11 – 2013/4

Energy Consumption

KPI – Energy consumption per EFTSL is in line with the sector average

- Griffith continues to perform well in its consumption of energy, with 30% less energy consumption than the sector average, and 50% less than similar universities.
- Griffith's energy consumption, as a measure of GFA, in 2014, was 0.55 GJ/m² compared with the sector average of 0.71 GJ/m² and the similar university average of 0.78 GJ/m².

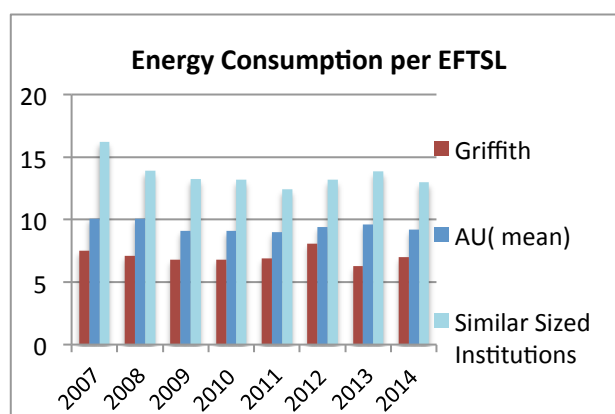


Chart 2: Energy consumption per EFTSL (Gj per EFTSL) 2007 - 2014

Water Consumption

KPI – Maintain water consumption below the sector average

- Griffith University's water consumption per sqm GFA is 0.55 kL/m² which is well below (30%) the 2014 sector average of 1.06 kL/m², and per EFTSL, Griffith University's consumption is 7.5 kL/EFTSL, in comparison to the sector average of 13.5 kL/EFTSL.

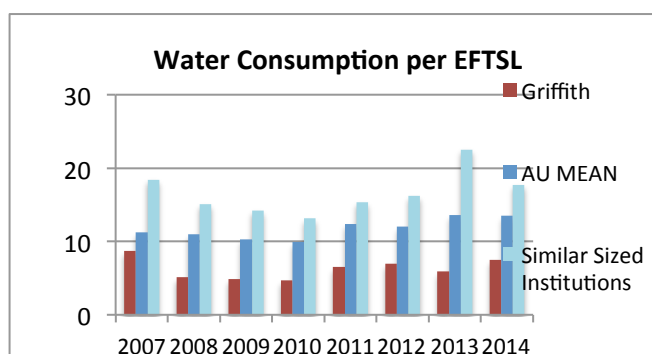


Chart 3: Water consumption per GFA (kL/EFTSL) 2007 - 2014

The University has invested \$1 million to meter all buildings on our five campuses. It has been a priority over the past three years to enable us to better target energy reduction measures.

Another sustainability drive within Griffith is the push to reduce energy consumption in our data centres by consolidation and virtualisation of infrastructure, as well as facilities upgrades.

Waste

KPI - 5% reduction in waste to landfill per EFTSL per annum

- Griffith waste to landfill reduced from 103.7kg/EFTSL in 2013 to 62.4kg/EFTSL in 2014 (40% decrease in waste). Although there has been a significant reduction in waste, it is still almost double that of similar sized institutions and sits well above the sector average of 38.8 kg/EFTSL. Further work is required.
- Recycled waste accounts for 13% of all waste generated which is up 1% on 2013 and 5% on 2012.

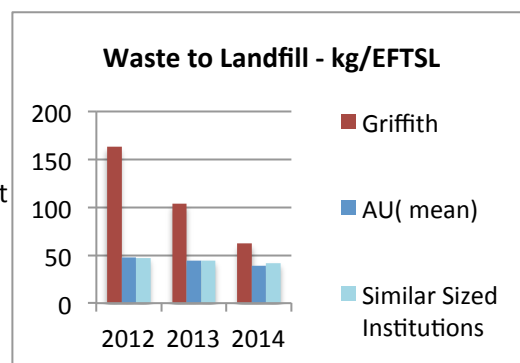


Chart 4: Waste to landfill (kg/EFTSL) 2012 - 2014

Over the past two years, small eco desk bins have replaced general waste bins in office areas.	Composting of organic waste is being systematically introduced in food outlets, College Dining areas and the wider university community. To date, the combined annual savings is 1.42 tonnes of organic waste diverted from landfill.	Reusable cups and water bottles are promoted to staff and students. Reusable cups save over 40 000 disposable cups going to landfill annually.
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Procurement

KPI – 5% reduction in university-wide paper usage

The University community has taken hold of our target to reduce paper usage resulting in reductions of 9.1% in 2013, 9% in 2014 and 13.4% in 2015. Printing of course packs was reviewed and printed learning resources ceased to be provided from Semester 1 2015.

Procurement strategies over recent years have included:

- Incorporating sustainability into the University's Procurement Policy.
- Continuing to implement sustainable procurement practices into all contracts and key supply arrangements as they fall due for re-tender.
- Promoting the use of technology to reduce paper usage.

Biodiversity – 'Grows at Griffith' strategy

KPI - Native species (appropriate to the local region) to be used in campus landscaping

A 'Grows at Griffith' strategy that focuses on species endemic to the local region continues to be rolled out on all campuses. This includes a rare and threatened plant walk on the Gold Coast campus and a native arboretum on the Logan campus.

- Since 2014 staff, students and visitors on the Gold Coast campus have been able to view six of south-east Queensland's rarest and most endangered native plants - from critically endangered bottle trees to the largest terrestrial orchid in Australia. The new Rare and Threatened Plant Walk includes signs with QR codes that provide links to videos and fascinating facts.
- In partnership with Logan City Council, CSIRO, Water and Carbon Group Pty Ltd and the Logan Golf Club, Griffith received a Biodiversity Grant of \$1.6 million from the Australian Government over five years for the restoration of Slacks Creek. Griffith's Logan campus is the largest project site with 8 hectares being revegetated, featuring a native arboretum. In the first phase of planting the arboretum was planted with over 7 000 trees.

We ensure campus expansion is sensitive to our natural environment

Planning and development

Goal: All planning and development considers the environmental sensitivity of our five campuses and incorporates principles of sustainability.

Griffith University has a deserved reputation for environmental responsibility and leadership. The University's Campus Master Plans ensure campus expansion is sensitive to our natural environment and preserves as much as possible of the surrounding ecosystems. Griffith University applies environmentally sustainable design to all new buildings and refurbishments.

The Sir Samuel Griffith Centre located on the Nathan campus. Occupied in July 2013, it is Griffith's capstone project in its 40 year history as a leader in environmental science. The 6 star green star building, powered by solar and hydrogen technology, is an example of genuine sustainable energy alternatives.

The Centre showcases Griffith's commitment to finding practical solutions to environmental issues. It is a model for off-grid and remote communities in Australia and internationally.



New Business Building leads the way for solar at Gold Coast campus

In 2014, The Griffith Business School (G42) became the location of the Gold Coast campus's first renewable energy source.

The 57kW solar array on the 7 storey building's roof provides approximately 25% of the building's net power consumption. Linked with low energy lighting and equipment and a high efficiency solar-glass facade the design creates a benchmark for the campus.



Griffith excels in creating \$23.3m 'green' carpark

Griffith's new Gold Coast campus Multistorey Carpark (G55) was completed in May 2015 and has been designed to be consistent with sustainability principles.

A simple choice to paint the ceiling white to increase reflectivity and use LED lighting, allows a reduction in light fittings by 25% with a commensurate reduction in energy use. An open, and striking, facade design allows cross ventilation, alleviating the need for mechanical ventilation while maintaining significant natural lighting levels.



On the roof a 100kW photovoltaic array provides day time energy production well in excess of that used by the car park itself and the surplus is exported for running other campus facilities. Also on the roof is a highly visible wind turbine providing additional energy after dark. This is the first of its type used at Griffith and one of very few in South-east Queensland.

Travel

Goal: To maximise sustainable transport options.

With multiple campuses spread over 80 kilometres and with the collaborative nature of university work involving interstate and international institutions, this can be challenging. To overcome these constraints and to reduce carbon emissions public transport, carpooling and cycling are encouraged as alternatives to private cars.

- A major development on the Gold Coast was the official opening of the new light rail system in July 2014. With two stations situated adjacent to the campus, the light rail system will play an important role in delivering staff and students to the University's doorstep.
- An intercampus bus provides services between Nathan and Mt Gravatt campuses and a subsidised bus, operated by the Student Guild, runs between the Gold Coast and Nathan campuses.
- We are working to reduce the impact of our vehicles. In 2015, more than 90% of the University's pool cars were 4 cylinder vehicles, exceeding our target of 85%. In 2016 and beyond we are in the process of replacing all our petrol cars with hybrids.



Unified Collaboration project

Griffith's Unified Collaboration project has significantly reduced our travel patterns. The project deployed over 6000 video phones and integrated them with a wide variety of collaborative technologies. This allows staff to collaborate in a more creative way by allowing easy connection to video conference rooms, mobile devices and external participants on campus or other locations.

Sustainability has been one of the key drivers behind this project. Integrated technologies have reduced travel times between campuses and increased productive time. As one example, the number of video conferences has doubled year on year. Estimated savings made from video conferencing in one year:

- 365,396 kms (distance saved)
- 22,747 hrs (time saved)
- 72.17 CO₂e saved (in tonnes)
- \$1,958,119 saved in staff & travel costs.

More than 1.2 million passengers were transported by Griffith's free shuttle bus between Nathan and Mt Gravatt campuses from 2013.

We have exceeded our target of 85% four cylinder cars in our fleet and are replacing petrol cars with hybrids.

Griffith's new Gold Coast carpark has solar panels and a wind turbine, and has been landscaped with native plants to create 'green walls'.

Strategies to engage the University community

It has been important to engage Griffith staff and students in the University's sustainability agenda:

- **Griffith's Staff Sustainability Awards** recognise innovative and effective sustainable practice at the university. Group and individual nominations and winners represent many areas of the university working to practice sustainability.
- **Griffith's Sustainability Commitment (pledge)** encourages staff and students to sign up to making small changes every day to help us to reduce our environmental impact.
- A **Sustainability newsletter** for staff and students highlights and celebrates sustainability initiatives at Griffith.
- **Griffith's annual Sustainability Week** engages staff and students and the community in Griffith's sustainability agenda.
- Griffith's Sustainability Teaching Network developed and launched a new **online Sustainability Hub for learning and teaching** during Sustainability Week 2015.

The diagram below shows Griffith's Sustainability communication and engagement strategies:



We will continue to mature our sustainability commitment

Future initiatives

The Sustainability Plan is a live Document. We have reviewed and taken it forward to 2020 and beyond and we will continue to review, plan and implement strategies to reduce our carbon footprint and contribute to sustainability.

Sustainability will continue to be incorporated into university activities:

- A Sustainability Awareness module for staff induction was launched in early 2016.
- Campus Life's Environmental Performance webpage with real time data and practical tips was launched in early 2016.
- A Green Labs Pilot Program was piloted in selected teaching and research laboratories in 2016.
- Griffith's Sustainable Transport Strategy is being developed.
- In August 2015 the University Council approved a new academic calendar for the University. From 2017 the current standard semester length will be reduced from 13 weeks to 12 weeks and teaching will be spread across three semesters each year. Sustainability will continue to be integrated in learning and teaching at Griffith.

Planning framework





Students enjoying Sustainability Week on the Gold Coast campus

Produced by Office of the Vice Chancellor - Griffith University