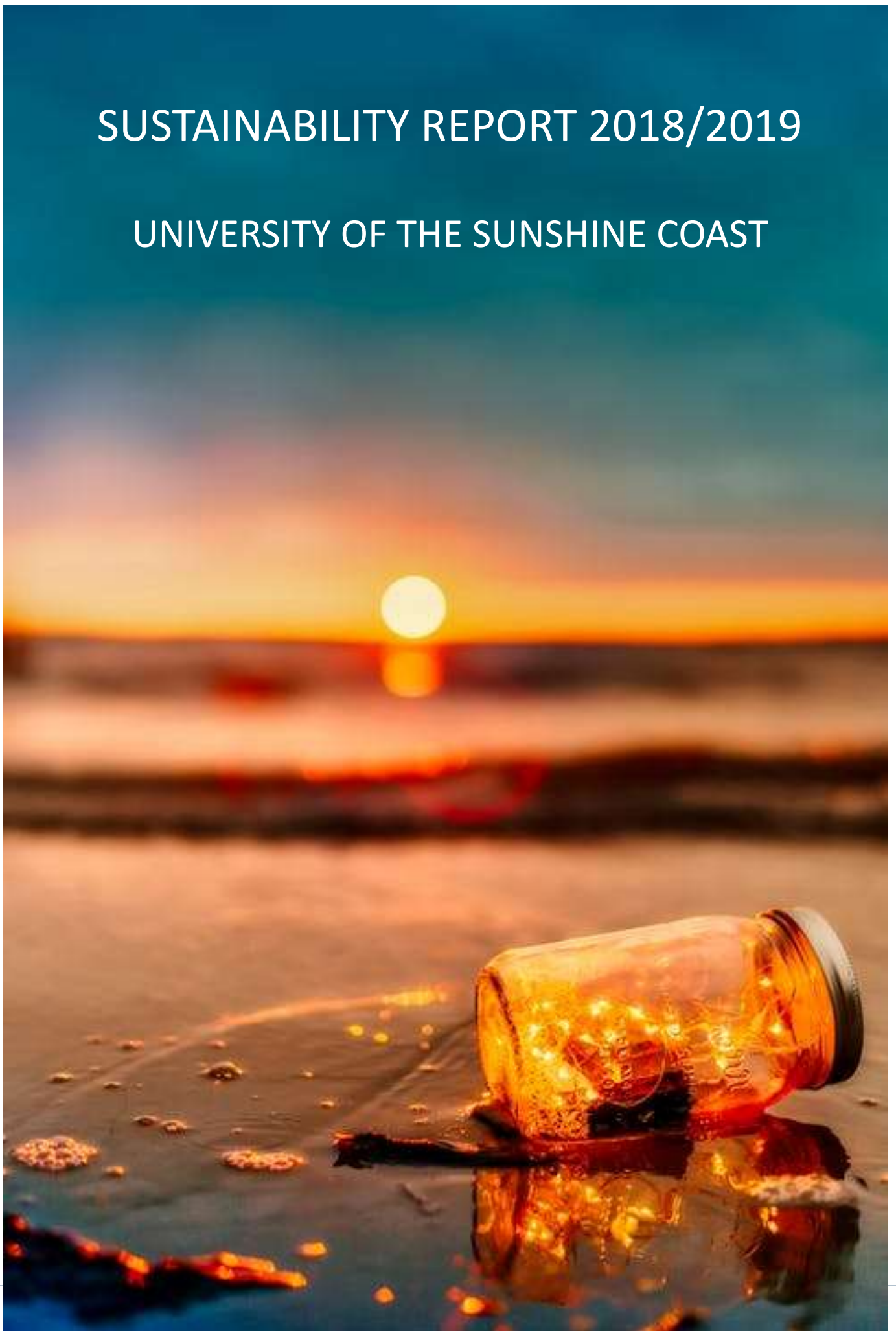


SUSTAINABILITY REPORT 2018/2019

UNIVERSITY OF THE SUNSHINE COAST



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Introduction

The University of the Sunshine Coast has committed to “provide leadership in the pursuit of sustainability through its core activities of research, teaching and engagement.”

-- USC Sustainability Governing Policy

The principles that underpin the University’s sustainability policy include:

- Incorporating sustainability principles into University activities and decision-making at all levels;
- Creating and promoting a sustainable and responsible culture across the University’s community;
- Utilising the University’s education, knowledge and research in sustainability to guide and support the regional community to respond to sustainability challenges; and,
- Producing graduates who are able to contribute to a knowledge economy and sustainable futures.

ABOUT THE REPORT

This sustainability report builds on the annual reporting that USC submits to the Tertiary Education Facilities Management Association (TEFMA) and aligns with the priorities set out in USC’s Carbon Management Plan and Strategic Plan.

This report is structured to capture core, operational and engagement activities related to sustainability during the period of January 2018 – December 2019. The consumption data for this report was captured by USC staff and submitted to Balance Carbon Pty Ltd for entry into Trellis, a software platform that was used to calculate emissions.

This period signaled an important accomplishment for the University, with the launch of its ‘water battery’ and continuation of numerous projects that allow USC to punch above its weight in terms of sustainability.



Sustainability means
the *enhancement* of communities
into the indefinite future
without impinging on
the *value* of natural systems.

It is achieved through *promoting equity*
within and between generations,
conservation of biodiversity
and natural systems
and the *wise use* of resources.

Sustainability enhances
the interdependency and resilience
of economic, environmental and
social systems.

AWARDS WON

GLOBAL DISTRICT ENERGY CLIMATE AWARDS (2019)

Out of the Box – Renewable District Cooling, Sippy Downs, Queensland, Australia

Alongside resource management company Veolia, USC won the Out of the Box category of the [Global District Energy Climate Awards](#) for the partnership’s ‘water battery’, featuring over 6,000 solar panels and a thermal energy storage tank that is estimated to cut the Sunshine Coast campus’ grid energy use by 40 percent. Supported by the United Nations Environment Programme, the awards recognize world class environmentally sustainable and innovative District Energy schemes.

TERTIARY EDUCATION FACILITIES MANAGEMENT ASSOCIATION CLEVER CAMPUS AWARDS (2019)

Practitioner of the Year – Dennis Frost, USC Manager Infrastructure and Energy

Dennis, who drove the Energy Efficiency through Innovation project from concept to completion, was named *Practitioner of the Year* at the [Tertiary Education Facilities Management Association Clever Campus Awards](#). The Practitioner of the Year Award recognizes a member that has displayed excellence in a significant aspect of the management of property and/or facilities of a member institution.

GREEN GOWN AWARDS AUSTRALASIA & AUSTRALIAN CAMPUSES TOWARDS SUSTAINABILITY AWARDS OF EXCELLENCE (2019)

ACTS Award of Excellence Staff – Dennis Frost, USC Manager Infrastructure and Energy

Dennis Frost, thanks in part to his innovative approach to the Energy Efficiency through Innovation project, won the *Award of Excellence* at the [ACTS Awards of Excellence](#). The University of the Sunshine Coast was also named as a finalist in the *2030 Climate Action* category at the Green Gown Awards Australasia.

INSTITUTE OF AUSTRALIAN GEOGRAPHERS (2019)

Fellowship of the Institute of Australian Geographers – Professor Tim Smith, USC Professor of Sustainability Science

USC Professor of Sustainability Tim Smith has been named a Fellow of the Institute of Australian Geographers (IAG) in recognition of more than two decades of human geography research. The Fellowship is awarded for sustained service to the geography profession in Australia. Professor Smith was recognised for over 20 years of research into the social dimensions of coastal management and climate change adaptation.

COMMITMENTS & ACCREDITATIONS



USC is a member of [Australasian Campuses Towards Sustainability \(ACTS\)](#), an organization representing higher education institutions that aims to inspire, promote and support change towards best practice sustainability within the operations, curriculum and research areas of its members.



USC has signed on for a national pilot of the [Carnegie Community Engagement Classification](#), which recognises university commitments to the communities they serve. The cohort of universities engaged in the pilot will complete the existing application and identify adjustments to the classification and recommended solutions to better represent the Australian context.



USC is the only Australian University to hold full EnviroDevelopment accreditation from the Urban Development Institute of Australia for achieving elements of sustainability across six categories—ecosystems, waste, energy, materials, water and community. EnviroDevelopment certification recognises a range of campus initiatives, including waste management actions, a stormwater harvesting system and the design of buildings to minimise artificial climate control.



USC is a signatory to the [Talloires Declaration](#) which sets out ten actions agreed by Vice Chancellors worldwide to reduce the natural resource consumption and emissions produced as a result of the University’s activities. University Leaders for a Sustainable Future is the Secretariat for Talloires Declaration signatories.

Sustainable USC at a glance



usc.edu.au | Rise, and shine.

1st Australian university to adopt a total waste streaming system that includes onsite processing of green/organic waste in 2013



50 tonnes of organic waste

can be processed by OSCA (On-Site Composting Apparatus) each year* representing a reduction of

↓ **60 tonnes of CO₂e** entering the Earth's atmosphere

* at capacity



Over **30+** awards have been won for planning, architecture and construction of USC Sunshine Coast campus buildings

15 hectares of **rare** and **endangered** Boronia and Acacia **species** were relocated from a nearby development site in 2013

Over **75** courses include environmental or sustainability components



Development and commissioning of **energy efficiency** through Innovation Project – Clean Energy System (Water Battery)



6,000+ solar panels (2.1 megawatt solar system)



4.5 megalitre thermal energy storage tank



Saves over **100,000 tonnes of CO₂**



Over **\$100 million** saved in energy costs over 25-year life of the system



Powers **four** electric vehicle charging stations with capacity to expand to over **20**



Four cafés

at the USC Sunshine Coast campus offer a discount for using your own cup, sell reusable cups or provide a range of mugs that can be borrowed

Australians throw out approximately 2.7 million single-use/disposable coffee cups every day

50% energy saving

Smart CO₂ sensor controls adjust air-conditioning supply based on the amount of CO₂ in large lecture theatres



USC saves over **20,000 litres** of mains water daily

Recycled water from campus lakes is treated and used in campus chillers and pools



USC is the only Australian university to receive full **Enviro Development accreditation** from Urban Development Institute of Australia across all six categories



9 native species use over **40** nest boxes around campus

Including rainbow lorikeets, brushtail and ringtail possums and gliders (squirrel, feathertail and sugar)

USC Sunshine Coast campus is a **Land for Wildlife** member with over 100 hectares of flora and fauna reserve



USC diverted over **45%** of its recycled and composted waste (**113.8 tonnes**) from landfill

About Us / Governance

OUR CONTEXT

The University of the Sunshine Coast first opened at its Sunshine Coast campus in 1996. It has since grown from a single-campus university catering to an intake of 524 students to a university with five campuses and multiple study hubs that are home to over 17,500 full and part-time students. A sixth campus, Moreton Bay, will be added in 2020.

USC is committed to environmental sustainability for the benefit of students, staff and the wider community. The University has an active program of sustainability initiatives that address both large-scale issues such as energy, waste, recycling and the campus environment, and targeted activities such as the development and use of green cleaning practices.

The University's goal is to be carbon neutral by 2025. It is intended that USC's ambition will also increase over time by widening the scope of emissions sources included and expanding the facilities and services accounted for. To measure carbon emissions, data was collected in consultation with staff and suppliers. Site-specific sources such as electricity, stationary fuel use, paper and waste were allocated to the individual site. However, sources such as passenger vehicles and business travel emissions are considered as whole-of-USC. While the scope and scale of emissions sources at sites is known with accuracy, other emissions data, such as for student travel, may be improved over time.

USC also recognises that there are two major drivers of growth in energy use and carbon emissions that need to be considered in terms of achieving carbon neutrality:

Continued increase in student numbers and facilities at the Sunshine Coast campus; and,
Opening and expansion of the planned Moreton Bay campus.

As data for this growth, as well as additional emissions sources, is collated and included, forecasts will be refined along with future carbon-neutral obligations.

Emission Scopes

Carbon emissions are categorised into three Scopes in accordance with greenhouse gas accounting and classification systems:

- Scope 1 – Direct emissions are those generated directly by the organisation (e.g. the use of fuel, burning gas or company-owned vehicles).
- Scope 2 – Indirect emissions are those generated outside of the organisation's boundaries to provide energy (e.g. purchased electricity from the grid).
- Scope 3 – Indirect upstream and downstream emissions: Upstream emissions are those from third parties in direct relation to the organisation (e.g. purchased goods, business travel, employee business travel). Downstream emissions include waste, leased assets, and investments made by the organisation.

GOVERNANCE

Strategic Plan

The USC Strategic Plan 2019-2022 commits the University to becoming: a primary engine of capacity building in the region; a comprehensive multi-campus university growing towards 35,000 students; and, positioned globally as a top-500 university and a top 100 university under 50 years of age. One of the seven ‘Values in Action’ established by the Strategic Plan is sustainability. This value establishes sustainability and capacity building across social, economic, cultural and environmental domains as core responsibilities of the University. The Plan identifies six imperatives, each with multiple priorities and key results.

STRATEGIC PLAN 2019-2022: SIX IMPERATIVES

1. *USC will increase student enrolments and improve student success.*

Associated social priorities include expanding access and pathways into USC, focusing on initiatives and support to enhance student engagement and diversifying international student enrolments.

2. *USC will increase research productivity and impact*

Associated social and environmental priorities include creating research partnerships that lead to meaningful research outputs and applications.

3. *USC will fulfill the potential of its expanded geographic footprint*

Associated social and environmental priorities include implementing sustainable academic, resourcing and development plans for the campus network and ensuring the University is a valuable and valued anchor institution for the diverse communities in that network.

4. *USC will improve institutional effectiveness*

Associated social and environmental priorities include attracting staff who are committed to the University’s vision and values, effecting responsible and innovative management of resources, developing and implementing plans to underpin institutional sustainability and improving systems, processes and structures to secure efficiency gains.

5. *USC will embrace and strengthen its role as a driver of capacity building*

Associated social and environmental priorities include implementing strong environmental sustainability deliverables, partnering with government and industry to contribute to the development and sustainability of the region and developing a better understanding of the University’s contribution to economic, social and environmental sustainability in the region in order to use this information in planning and decision making.

6. *USC will strengthen engagement with its communities*

Associated social priorities include developing a vision for engagement of staff and students and developing and strengthening meaningful partnerships with Aboriginal and Torres Strait Islander Elders and their communities.

Carbon Management Plan

The University of the Sunshine Coast developed a Carbon Management Plan (CMP) as an acknowledgement of its core responsibility to act on sustainability. The overarching goal set out in the CMP is to be certified as carbon neutral by 2025 through Australia's National Carbon Offset Standard. USC has determined the initial focus should be on measurable carbon abatement efforts through in-house initiatives before turning to off-site actions, such as purchasing renewable energy, developing renewable energy generation or carbon offsets. The Plan includes three key action areas that will enable identification and implementation of abatement opportunities:

- Improve data collection and tracking/reporting on carbon emissions sources and expand the collection of carbon emissions sources over time across all campuses.
- Develop action plans to implement sustainable procurement, sustainability learning, and awareness initiatives and events that will underpin efforts to build the University's culture of sustainability and lower future emissions.
- Include staff and student engagement actions (i.e. annual Sustainable USC Day, integrating sustainable practices into position descriptions, 'switch-it-off' campaigns to save energy, sustainability and carbon reduction as a part of HR inductions, staff updates and, in events and marketing materials, sustainable purchasing and procurement; real-time sustainability performance dashboard displays; reusable-cup incentive program; end-of-trip cycling facilities; electric vehicle charging points; composting machinery; ride-sharing services and/or an app with real-time transport planning).

The subsequent goals identified in the CMP establish boundaries and form a roadmap of how to achieve carbon neutrality.

Being sustainability-focussed means recognising the interdependence between economic, social and ecological systems and having the ability to evaluate how different practices will affect outcomes across these domains. It requires the comparison of alternative actions against social, economic and ecological objectives with the goal of achieving a balance that would provide for the needs of both current and future generations. Achieving sustainable outcomes necessitates a process of iterative analysis and decision making, often in the face of considerable uncertainty and with limited information. It is value-based and is informed by ethical frameworks whether they are explicit or implied. It includes consideration of path dependencies, cross-cultural realities, heritage, governance and institutional arrangements, capacity building, irreversible consequences, long-term planning horizons and competing views of reality.

At USC we know that being sustainability-focused is complex,
cross-disciplinary and essential to achieving a balance
between meeting our needs today and
considering future generations.



Core Activities

TEACHING/SCHOLARSHIP

Sustainability-focused is one of the University of the Sunshine Coast’s graduate attributes, which puts it at the center of each program of study. Focus on sustainability creates awareness of how individual disciplines and fields of study all play a role in shaping future outcomes: social, health, environmental, and economic. Sustainability-focussed teaching and assessment practices encourage students to look at broader issues, community contexts, possible externalities and potential impacts of their field of practice.

USC has developed innovative and rigorous courses and programs of study to advance sustainability through research and practice. It is at the heart of a range of courses that span from climate change and environmental science to public health and civil engineering. Specific programs and study sequences that are focused on sustainability include:

- Bachelor of Health Science
- Bachelor of Environmental Science
- Master’s in Climate Change Adaptation by Research
- Major in Sustainability – Society
- Minor in Sustainability
- Minor in Climate Change Adaptation
- Minor in Indigenous Studies

Beyond specific degrees, every USC School includes sustainability-focused courses:

School of Creative Industries	Communications-CMN; Design-DES; Drama-DRA; Fashion-FSH; Politics and International Studies-INT <i>e.g. CMN120 Public Relations Contemporary Perspectives</i>
School of Education	Outdoor Education Studies-OES; Education-EDU <i>e.g. EDU206 Sustainability through Play and Pedagogy</i>
School of Health and Sport Sciences	Biomedical Science-BIM; Nutrition and Dietetics-NUT; Public Health-PUB <i>e.g. PUB262 Environmental Health Risk Management</i>
School of Law and Criminology	Criminology-CRM; Law-LAW <i>e.g. LAW406 Planning and Environment Law</i>
School of Nursing, Midwifery and Paramedicine	Nursing-NUR <i>e.g. NUR121 Health, Culture and Society</i>
School of Science and Engineering	Animal Ecology-ANM; Civil Engineering-CIV; Engineering-ENG; Environmental Science-ENS; Geography-GEO; Biotechnology-MBT <i>e.g. ENS300 Environmental and Resource Economics</i>
School of Social Sciences	Development-DEV; Environment and Planning Studies-ENP; Geography-GEO; History-HIS; Politics and International Studies-INT; Social and Community Studies-SCS; Sustainability-SUS; Social Work-SWK <i>e.g. ENP236 Regions, Change and Sustainability</i>
USC Business School	Accounting-ACC; General Business-BUS; Digital-DIG; Executive Master of Business Administration-EMB; Entrepreneurship-ENT; International Business-IBS; Management-MGT; Marketing-MKG; Property Economics and Development-PED; Tourism-TSM <i>e.g. EMB761 Corporate Governance, Business Ethics and Corporate Social Responsibility</i>

RESEARCH

Research staff and higher degree by research students at the University of the Sunshine Coast are encouraged to incorporate consideration of sustainability issues as integral to their research design, implementation and dissemination. The *sustainability-focused* graduate attribute is supported through the concentration of expertise at USC’s research centres, particularly in the core areas of sustainability, aquaculture and forestry.

AQUACULTURE AND AGRICULTURE	
Genecology Research Centre (GRC)	The GRC brings together a multidisciplinary team organised around six themes: aquaculture; forestry and plant sciences; ecology; functional genomics and proteomics; microbiology; and, molecular engineering.
Tropical Aquaculture Research Team	The research team combines science, economics and social science to develop industries and programs that are profitable, sustainable and culturally appropriate. The research is conducted through collaborative research partnerships with governments across the Pacific (i.e. Fiji, Indonesia, Kiribati, New Caledonia, Papua New Guinea, the Philippines, Samoa, Tonga, Vietnam) and beyond (i.e. Mexico, Tanzania).

FORESTRY	
Forest Industries Research Centre (FIRC)	FIRC focuses on the forestry value chain and the economic and environmental sustainability of forest industries. This includes research into how various disciplines (i.e. genomics, pest management, biomass harvest and timber processing) interact with each other in real ways.
Tropical Forests and Peoples Centre (TFAPC)	The Centre focuses research on community and smallholder forestry in the tropics. The specific issues covered are understanding and managing secondary tropical forests, K’gari-Fraser Island forest dynamics and Indigenous forestry. TFAPC adopts an inter- and trans-disciplinary approach to examine social, economic, biophysical and policy issues related to forestry.
National Centre for Timber Durability and Design Life (NCTDDL)	The goal of the Centre is to revitalise Australia’s standing as a hub of world-class research on timber durability. USC is working with the University of Queensland, the Queensland Department of Agriculture and Fisheries and Forest and Wood Products Australia to achieve this goal, using a two-pronged approach. First, create coordinated research in timber durability. Second, educate a new generation of research scientists to carry out the work across Australia.
Note: A Forest Research Institute will subsume FIRC, TFAPC and NCTDDL at the start of 2020.	

SUSTAINABILITY	
Sustainability Research Centre (SRC)	SRC focuses on understanding the social dimensions of environmental change by examining societal responses to the impacts of local and global climate change. The Centre’s collaborative, transdisciplinary approach is focused on understanding the relationships between people, place and change, and is broadly aligned with the fields of human geography and environmental management. Specific areas of study include natural resource management, cultural resilience and vulnerability, climate change adaptation and indigenous knowledge and community livelihoods. The SRC works with research partners in Europe, North America and Asia.
Australian Centre for Pacific Islands Research (ACPIR)	ACPIR works with Pacific Islanders on social and scientific research in the areas of land, water and people. The research focuses on how to support sustainable livelihoods and economic development. The research spans the disciplines of agriculture, aquaculture, climate change, food security, forestry, health, heritage and sustainability.

OTHER SUSTAINABILITY-RELATED RESEARCH THEMES AND CENTRES	
Indigenous Studies Research Theme (ISRT)	ISRT focuses on the cultures, histories, interests, knowledges, perspectives and rights of Indigenous peoples throughout the world. The current research themes include: the intersection of indigenous peoples and sustainable livelihoods, protected areas and climate change; cultural, heritage and identity studies in nature, literature and art; the systems that affect Indigenous peoples in education, industry and government; identification of pathways; and, enterprise.
Sunshine Coast Herbarium	The herbarium houses a collection of plant specimens donated by the Queensland Forestry Research Institute in a purpose-built space within the Library.
Global Change Ecology Research Group (GCERG)	GCERG focuses on fundamental and translational research relating to the impacts of anthropogenic change on biodiversity and ecosystems. This work spans several fields of ecology (quantitative and computational, animal, conservation, marine and fisheries), bioinformatics, genetics and genomics, ornithology, geospatial techniques and modelling, bioacoustics, physical geography and ecophysiology. The research questions focus on the consequences of habitat loss and degradation, the ecological consequences of climate change, animal adaptation to threats, technology to track and monitor animals, conservation and restoration, primary industry adaptation to ecosystem changes, eco and sustainable tourism and the effective communication of science.
Animal Research Centre (ARC)	The ARC focuses on animals in relation to the factors that determine their health, the forces that shape their evolution, the role of their behaviours within ecosystems and the potential to conserve their habitats and diversity.
Marine and Coastal Ecology Research Theme	Primary research areas of the Marine and Coastal Ecology theme include connectivity, coastal geomorphology, global change, sandy beaches and scavengers. This work spans the marine environment from the beach out to the deep-sea.
Partnership with the National Climate Change Adaptation Research Facility (NCCARF)	USC is a partner in the NCCARF, a national interdisciplinary effort to generate the information needed by decision-makers in government, vulnerable sectors and communities to manage the risks associated with the impacts of climate change.

TRAINING

Teaching and studying sustainability goes beyond USC’s students and researchers. It is a core value of the University that applies to all staff. A new onboarding session was launched in 2019 in order to assist staff to embody sustainability just as courses and research enable students to embody sustainability. The Onboarding for Sustainability session includes a presentation outlining USC’s sustainability achievements and initiatives in the areas of energy, buildings, waste, transport, environment, water and the core focus of teaching, learning and research. The presentation outlines actions and activities that staff can use to help the University reach its sustainability goals and the steps that the University is taking to support staff to achieve those actions and activities. The steps cover paper, energy and water use, waste management, transportation, purchasing, kitchens and leadership and scholarship. The onboarding session concludes by directing the staff member to a checklist with actions they can take on a regular basis to become a sustainable employee.

USC has committed to supporting the creation of a sustainable future and to embedding sustainability principles and practices throughout learning and teaching, research, community engagement and operational activities.



Operations

The University of the Sunshine Coast has enacted sustainability initiatives aimed at both achieving carbon neutrality (i.e. energy, transport and waste actions) and promoting sustainability to staff, students and the wider community. These initiatives focus on the operational aspects of the University, from buildings and grounds to resource use to communications.

ENERGY

USC has developed an integrated approach to energy management. In addition to the smart meters and Building Management System that enable efficient use of energy, the University has taken an innovative approach to energy generation at its largest campus.

USC worked with an external partner, Veolia, to create the first thermal energy storage battery powered on-site by renewables in Australia. The project, which went live in September 2019, consists of more than 6,000 solar panels that are chilling water held in a 4.5 megalitre thermal energy storage tank. That chilled water is pumped through air conditioners across campus. This is estimated to reduce energy consumption from the grid by 40%, which should reduce emissions by more than 100,000 tonnes of CO₂ over 25 years. The innovation extended to the BOOT (Buy-Own-Operate-Transfer) model used to fund its development. Veolia covered the cost of the infrastructure's development and construction and will own and maintain it for the first 10 years of operation, recouping its investment by charging USC for the solar energy produced during that time. At the 10-year mark, ownership will transfer to USC for the remainder of the project's 25-year lifespan.



The innovation of this project extends to each component of the system:

- A plant room with Photovoltaic-integrated roofing;
- Solar panels with individual sensors to track performance on a cell-by-cell basis;
- A smart monitoring system that shifts energy between solar, mains and thermal energy based on weather conditions;
- A TRANE centrifugal chiller that uses a low-carbon risk refrigerant (hydrofluoro olefin);
- Multiple carparks with solar PV roofing and four electric vehicle charging stations, with the infrastructure to expand as demand grows;
- Integration with the water treatment plant to draw make-up water from the USC lakes;
- Connection with the Building Management System to enable real-time performance monitoring; and,
- A tank design that consists mostly of water and minimises waste at its end-of-life by replacing old chillers that have high Global Warming potential (R134a and R123) with efficient new Trane Centrifugal Chillers that use an environmentally friendly refrigerant (hydro-fluoro olefin).

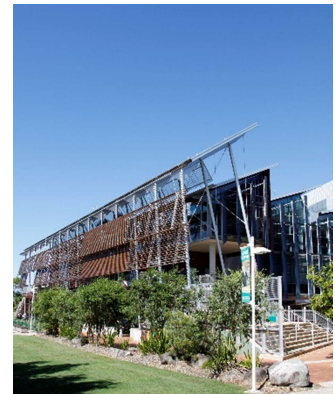
The innovation carries through to the use of the space, and the greater project design, as a teaching resource. The plant and control rooms have been designed to provide ample space for students and staff to learn about the project and observe operations. Every aspect of the project is being studied by USC students, from how it was funded to how it was built to how it operates. The project has already been used as a hands-on case study for business, science, engineering and sustainability students.



BUILDINGS & GROUNDS

USC has incorporated environmentally sustainable design (ESD) principles when designing University buildings and grounds. The subtropical climate of the Sunshine Coast is accompanied by hot, humid summers and temperate winters, alternating droughts and large rainfall events, strong Westerly winds and cooling sea breezes and, on average, seven hours of sunshine each day. In order to take advantage of the ample sunshine and breezes, the University utilises the following design features:

- Atriums, breezeways, louvers, thermal chimneys and high loft ceilings to source natural ventilation and move warm air away from work and teaching spaces;
- Screen, fins, sun shelters and tree plantings to reduce direct sunlight on buildings while providing a passive lighting source; and,
- Lightweight building fabric and low maintenance materials that help to insulate buildings and regulate temperatures.



USC also employs smart technology and resources to amplify the sustainability of campus buildings. These technologies range from efficient lighting (i.e. LED streetlights) to variable speed pumps that move chilled water through the air-conditioning system at an appropriate rate to CO₂ and movement detection sensors that feed into the air-conditioning and lighting systems. The most important technology to ensure the campus is running efficiently is the centralised Building Management System, which tracks energy and water consumption in real-time. The BMS is useful to identify issues (i.e. leaks, malfunctions, broken connections) and trends in power and water consumption. It can be adapted to bring new systems on board, such as the solar-PV array and thermal energy storage tank that became operational at the Sunshine Coast campus in August 2019. The system is easily accessed and the information it generates is displayed on public monitors at key points across campus.



The University grounds at the Sunshine Coast campus have also been designed using ecologically sustainable development (ESD) principles. ESD principles are focussed on development that meets the needs of the present without compromising the ability of future generations to meet their own needs. As the campus is the low point in the greater Sippy Downs area, an integrated catchment system is in place to direct stormwater run-off through a series of swales and creeks before being collected in two onsite lakes. This system protects the local Mooloolah River National Park's waterways from high nutrient levels and sediment run-off and captures water that can be reused across campus to reduce the University's reliance on mains water.

The University grounds at the Sunshine Coast campus have been deliberately planned to mimic a native bushland setting using local endemic drought tolerant plant species that do not require irrigation or fertilisers. Irrigation is used sparingly on sports fields and some high priority lawns and is managed in conjunction with an onsite weather station to ensure that the bare minimum is used in accordance with local weather conditions.

BIODIVERSITY

Flora



The USC Sunshine Coast campus is a flora and fauna reserve of over 100 hectares, 15 hectares of which is translocated wet heath from a nearby residential development site. In addition to the environmental value of the land the flora on campus has cultural significance, with many plant species that are important to Indigenous peoples as food and natural medicines.

The University’s policy is to use native plants throughout the campus, with significant native trees, shrubs and grasses planted since the campus opened. These tree plantings serve a social purpose as they connect USC with the wider community. For instance, eighty Year 6 students from Siena Catholic Primary School joined USC’s Asset management Services to plant 250 native trees and shrubs along the creek line dividing the two schools in June 2019.

Irrigation systems that take the current weather into account are used at key locations across the Sunshine Coast campus. The University minimises the need for fertiliser by choosing appropriate native species. When a fertiliser is used, an extra-pelletised product is selected to minimise impacts on USC waterways.

Fauna

As a Land for Wildlife member, the University has committed to preserving large tracts of the Sunshine Coast campus as a habitat for the many beetles, butterflies, caterpillars, kangaroos, possums and water birds that call it home. Monthly wildlife audits are conducted by the Wildlife Preservation Society of Queensland. The September 2019 survey found 45 species of birds, 11 kangaroos and a Large Grass Yellow butterfly. The University also maintains a series of nest boxes across its Sunshine Coast campus. The most recent audit of these nest boxes showed that 64% of the nesting boxes were in use by nine native species (i.e. sugar bag bees, brushtail possums, squirrel glider, rainbow lorikeets).



USC worked in partnership with Sunshine Coast Council to address the issue of wildlife being injured or killed on the roads between the University and the Mooloolah River National Park. The Council, in the second half of 2018, installed an acoustic fence and purpose-built electronic signs designed to change both kangaroo and driver behaviour. The acoustic fence is activated by vehicle headlights, causing the posts to emit an acoustic signal and light which encourage kangaroos to stop or slow down before crossing the road. The electronic signs serve as a reminder to drivers to slow down and watch out for kangaroos.

WATER

The University’s Sunshine Coast campus has a system of lakes, swales, streams and settling ponds on campus to capture the storm run-off in the greater Sippy Downs area. This water serves many purposes, from reuse across campus facilities to providing a habitat for local wildlife and highlights the commitment to water conservation that USC has made.



Recycled Water

A campus-based water treatment plant takes water from the lakes, removes solids and produces potable water that meets the Australian Standard. This water is used as make-up water to the two USC pools and all chillers at the Sunshine Coast campus. The pools also use an efficient electronic chlorinator. This initiative saves well over 20,000 litres of water daily and will save over 800ML of potable water over the 25-year life of the ‘water battery’.

In addition to the water recycling efforts, USC is implementing a range of smart water initiatives.

eWater

USC Sunshine Coast uses non-toxic eWater solutions in the cleaning regime to replace the use of commercial cleaning chemicals. eWater is produced by applying an electrical charge to a mixture of tap water and salt, which splits the salt water mixture into positive and negative ions. The results are two safe, effective solutions:

- An alkaline solution (detergent and degreaser) for cleaning; and,
- An acidic solution that serves as an antimicrobial sanitiser with antibacterial and fungicidal properties.

These solutions are used across the Sunshine Coast campus to clean windows, desks, floors, bathrooms, labs and kitchens.



Water Refill

USC Sunshine Coast is a Water Refill campus, which means it doesn’t sell single-use bottled still water. In place of selling bottled water the University provides multiple options to access water, from Go2Zone and Water3 machines that dispense chilled water to free bottle refill stations to more than fifty water bubblers across campus. USC also provides reusable bottles for purchase from the Brasserie, two cafes and the Go2Zone and Water3 machines.

Both the eWater and Water Refill initiatives have the added benefit of reducing waste by encouraging the use of refillable spray and water bottles.

Conservation

USC’s Asset Management Services undertakes several regular actions to conserve water, from surveys to locate leaks, to installing water saving taps and fittings to removing hot water taps from toilet facilities. Solar hot water is also used at the K’gari-Fraser Island Research Centre.

WASTE

One of the pillars of USC's sustainability commitment is the total waste-streaming system that has been in place since 2013. The system uses a combination of infrastructure, incentives and education to reduce the level of waste sent to landfill. Four colour-coded bins are used across the Sunshine Coast campus: Green for organic waste that is compostable; Yellow for co-mingled recycling (i.e. plastic, glass and aluminium); Blue for paper and cardboard; and, Red for general landfill waste. The red, blue and yellow bins are in place at the remaining USC study hubs. No under desk rubbish bins are provided at any USC campus, meaning staff need to take their waste to communal waste stations for proper sorting. Signage is provided above or on each bin that displays what to dispose of in each bin, which reduces the level of contamination across all waste streams and helps break down confusion amongst staff, students and visitors. Waste is collected on a stream-by-stream basis in public view throughout the day as a means of reducing public scepticism that each stream is managed



separately.

The key feature of this waste-streaming system is that composting is managed on site at the Sunshine Coast campus using OSCA (On-Site Composting Apparatus). OSCA is capable of processing up to 50 tonnes of organic waste each year, signifying a savings of 60 tonnes of CO₂ annually. This occurs through a low-energy, silent and odourless process that uses augers to aerate, agitate and move waste through the system over two weeks. Within OSCA, the waste is exposed to beneficial bacteria and temperatures exceeding 60-degrees Celsius in order to effectively pasteurise it.



OSCA takes food scraps, paper hand towels and corn starch-based cups, plates and cutlery, which are used across all Sunshine Coast campus food and beverage outlets. However, USC sells approximately 250,000 coffee cups and lids each year, which is more than OSCA can process. In order to reduce this waste, the University operates a Rethink Your Drink campaign which offers incentives for using keeper cups or borrow ware. These incentives include discounts for using keeper cups at two Sunshine Coast campus cafes and pre-loved mugs for use at a third café.

These programs have been running successfully for years at the Sunshine Coast campus. However, some new initiatives have been introduced in late 2019 to expand how and what USC recycles. Some small initiatives are in place to capture recyclable items that might otherwise end up in landfill. These include a Mobile Muster bin at the Sunshine Coast campus library for students and staff to recycle their old mobile phones, as well as donation points across each USC study hub for milk and soda container lids. Those lids are sent to Envision where they are turned into filament and used to print prosthetic hands and arms for kids. The Sunshine Coast and Caboolture campuses also have Container Refund Scheme bins that capture eligible drink containers and provide funding to groups aligned with USC's Values in Action and sustainability priorities.

PROCUREMENT/TENDERS

One of the best ways to reduce waste is not to generate it in the first place. A series of guidance documents have been developed to help University staff to be more sustainable in terms of procurement. These documents include sets of Sustainability Contract Provisions and Sustainable Purchasing Guidelines.

The Sustainability Contract Provisions document establishes six overarching concepts to consider when selecting a contractor: materiality and completeness; timeliness; reliability and comparability; clarity; accuracy and balance; and, stakeholders. It provides a series of recommended sustainability actions for contractors based on the Triple Bottom Line pillars:

- Environmental: These factors focus on the contractor’s behavior, steps they take to verify their actions and commitments and how they address or manage biodiversity, chemicals, efficiency, recycling and waste.
- Social: These factors focus on the contractor’s behavior, how they engage key stakeholders and the community, their level of transparency, how they address or manage human and labour rights and the steps they take to verify these actions.
- Economic: These factors focus on their partnerships, how they identify and address risks and whether they measure cost using whole of life/lifecycle costings.

The Sustainable Purchasing Guidelines document is a form that staff can use when preparing to purchase a product or service. The form includes:

- A section examining why and whether the product/service is needed;
- A chart that allows staff to compare three models across a range of criteria (i.e. Star Ratings, Life Expectancy, Price, Maintenance, Risks); and,
- Guidance on how to evaluate the sustainability of products/services based on what the products use (i.e. fuel, energy, water, packaging), the human resources necessary (i.e. delivery, installation, training, maintenance), relevant certifications, risks (i.e. biodiversity, staff) and issues that affect the life and cost of the product.

TRANSPORT

As a regional university, USC is acutely aware that its staff and students are often reliant upon cars to get them to campus, or between campuses. However, the University offers several options to promote more sustainable transportation options.

USC Express Shuttle



USC offers a free Express Shuttle service for all current University staff and students. These shuttles operate during teaching weeks and run regularly between the Sunshine Coast campus and: Gympie campus; North Lakes; and, Caboolture campus. A free TransportMe app is available that provides riders with information on the current location of each Shuttle and when the Shuttle reaches ninety percent capacity.



Public Transportation



Sunbus runs regular bus services between various Sunshine Coast locations and the USC Transit Centre on the Sunshine Coast campus. The Transit Centre includes a three-platform bus interchange and dedicated pedestrian link into nearby Chancellor Park. A bus service is also available between Queensland Rail’s Nambour and Landsborough stations and the Transit Centre. To make it easy for students, TransLink concession *go* cards are available for students to purchase at the Sunshine Coast campus Coop bookstore. Public transportation options exist for each of USC’s study hubs, whether through coaches (Gympie), buses (Fraser Coast, Thompson Institute, Sunshine Coast Health Institute), shuttles (Caboolture) or a combination of ferries, trains and buses (Southbank).

Cycling

USC provides infrastructure to support staff and students wishing to reduce emissions and get healthy by riding in to campus. Dedicated bike paths are available at the Sunshine Coast and Southbank campuses to assist cyclists in getting to USC. Once cyclists have arrived, bike racks are available at all campuses for bike storage. A Bike Hub and safe storage locations are located across the Sunshine Coast campus, which provide access to showers, lockers and bike repair tools. If the bike repair tools don’t do the trick, Giant Bikes runs a series of free bike maintenance and repair clinics on Market Days at the Sunshine Coast campus.



Vehicles

USC is committed to reducing transport-related emissions, opting for hybrids to replace standard vehicles as they are rotated out of the University’s fleet. In 2019, the University purchased a new hybrid as part of the fleet at Fraser Coast to join the hybrid fleet car at the Sunshine Coast campus. A majority of USC’s buggies are purpose-built solar powered models and several of the maintenance and cleaning buggies are electric.

As a part of the Energy Efficiency through Innovation project, four electric vehicle charging stations became operational at the Sunshine Coast campus in August 2019. These slow-charging stations are free-of-charge for USC staff, students and visitors. Existing in-ground infrastructure will allow the University to add more charging stations as the cost of electric vehicles comes down and the demand for charging stations increases.



USC has also utilised a ridesharing app, Liftango, that is free to the University’s staff and students at all campuses. The app matches passengers with drivers.

Community *engagement*

with industry, government and the broader community will continue to *enhance sustainability* across the region and, as USC's promotion of the region's social, economic, cultural, and environmental sustainability expands, *the benefits* to students, staff and the wider community *will be realised*.



Engagement

The University of the Sunshine Coast is committed to creating a sustainable and responsible culture across the University's community, which includes staff, students, partners and community members throughout the Sunshine Coast region. This commitment empowers USC to proactively engage and collaborate with industry, government and the broader community to promote sustainability and creates an impetus to communicate relevant sustainability information to staff, students, partners and the wider community.

STUDENTS & STAFF

There are multiple opportunities for staff and students to engage with sustainability at USC, from attending events, forums, lectures and talks to joining groups or organisations. Some examples of these opportunities include:

- *Sustainability and Engagement Forum:* The SEF is a quarterly forum that is hosted by the Deputy Vice-Chancellor (Academic) and the Pro Vice-Chancellor (Engagement). It brings together operational and teaching staff and students to discuss environmental and social sustainability across the University. It also provides a valuable opportunity to share information about existing sustainability initiatives and discuss ideas for collaboration on new initiatives.
- *Orientation & Welcome Weeks:* Asset Management Services runs a sustainability stall during Orientation Week. In 2019 this stall included information on the many sustainability initiatives that the University has implemented and provided students with an opportunity to take a quick survey to measure their environmental footprint.
- *Market Days:* The Student Guild hosts regular Market Days at the Sunshine Coast Campus which often include vendors and University representatives with an environmentally-friendly focus or a socially-responsible message, such as the stalls that SafeUSC run around RUOK Day.
- *Environmental groups:* Student-led groups across the University focus on sustainability issues. USC ECO is the main environmental student group, defining itself as a socially-aware environmental action group that is concerned with University environmental policies, encouraging environmental practices, providing information, encouraging debate and promoting participation in environmental campaigns. Other sustainability minded student-led organisations include Amnesty International USC, Diversity Connect, Rainbow Connection, With Respect USC and USC Activate.
- *Student Ambassadors:* Student Ambassadors are current USC students that are trained to speak with students about a range of issues from study options to financial assistance to general support. The Student Ambassadors are informed of sustainability initiatives across the University and even run sustainability tours for community and school groups.
- *Sustainability Research Centre Brown Bag Lunches:* The SRC hosts regular presentations at lunchtime for USC staff that feature experts on a range of sustainability issues. Recent topics have included Sustainability for Survival (sustainable gardening), Council's Blue Heart Project (flood mitigation and recreational planning) and Invisible Hand (China's heritage tourism policy).
- *Sustainability Tours:* The USC Sustainability Officer runs tours that highlight sustainability initiatives and operations across the Sunshine Coast campus. These tours are incorporated into courses, where relevant, highlighting the messages that resonate most with each group of students.
- *Sustainable USC Updates:* Regular messages are posted on the USC staff website and sent out to students that provide fun facts, draw attention to upcoming events and promote University sustainability initiatives.

COMMUNITY & PARTNERS

USC draws upon its education, knowledge and research in sustainability to guide and support the regional community to respond to sustainability challenges. This is achieved through the development of relationships with key partners in the community, as well as through simple actions to share information. The following are just a few examples of how USC engages with the greater community:

- USC and Veolia:* USC and Veolia worked together on the innovative Energy Efficiency through Innovation project, which led to the first thermal energy storage battery powered by renewables in Australia. To celebrate this partnership, Veolia and USC teamed up to run Solar Nights in December 2018. Solar Nights was a free event that featured an interactive light trail, food trucks and activities to engage the general public in celebrating sustainable energy, creativity and the environment. The 2018 event was a success with over 20,000 visitors and led to a repeat of the event in December 2019, which drew an estimated 50,000 visitors from the Sunshine Coast and surrounding communities.



- Community Partners:* USC is committed to protecting and enhancing the local environment through ecological restoration and revegetation projects. The University partners with the Sunshine Coast Regional Council, neighbouring schools and private industry to ensure there is a net gain of trees on campus that can provide food and habitat for wildlife and a balance between the built and natural environments onsite.

- Sustainability Tours:* The USC Sustainability Officer runs tours that highlight sustainability initiatives across the Sunshine Coast campus. These tours are made available, upon request, to the Sunshine Coast community. The three main groups that make use of these tours are: local and regional schools; sustainability professionals; and, university students visiting USC through exchange programs. The school representatives often want to learn more about how USC manages its waste, especially its on-site composting efforts. The sustainability professionals are interested in how sustainability initiatives have been implemented. The exchange students generally want to get an overview of how USC engages its students on the issue of sustainability.



The University has developed significant partnerships beyond those mentioned here. Many of the valuable partnerships are linked to research efforts across USC’s Research Centres and Institutes. Others are partnerships with contractors that share USC’s passion for sustainability.

EVENTS

USC has promoted sustainability-themed events, whether run by the University or by external local, national or international organisations. Some recent examples of external events included National Recycling Week (11-15 November 2019), International Coastal Cleanup Day (21 September 2019), National Sorry Day (15 May 2019) and National Close the Gap Day (21 March 2019).

The University continued to run annual events that promote environmental and social sustainability. Some examples of these are:


- *Ride2USC Day*: A one-day campaign in October that encourages staff and students to cycle or walk into work. The event includes a bike repair and maintenance clinic run by Giant Bikes, prizes for participation and a free breakfast.
- *National Reconciliation Week*: A week-long campaign in May that celebrates and builds on the respectful relationships shared by Aboriginal and Torres Strait Islander people and non-Indigenous Australians. The week includes events to recognise National Sorry Day (May 26) and to commemorate the 1967 referendum and the High Court of Australia's Mabo decision.
- *NAIDOC Week*: A week of celebrations in mid-July to celebrate the history, culture and achievements of Aboriginal and Torres Strait Islander peoples. Some of the events that USC has run in conjunction with NAIDOC week are flag raising ceremonies, family fun days, a dinner dance and a NAIDOC Ball. These events are held across the Gympie, Fraser Coast and Sunshine Coast regions.

A new annual sustainability event was added to the USC calendar in 2019: Global Climate Change Week.

Global Climate Change Week

USC Global Climate Change Week (GCCW) was held the week 12-18 October to engage staff, students and academics on the issue of climate change. GCCW organised events throughout the week under the banner of "What's up with climate change?" to demonstrate the diverse nature of climate change drivers and constructive responses. Highlights of the week included:

- *Implications of Climate Change for the Sunshine Coast*: A symposium to exchange information about the local implications of climate change and generate ideas for action. Speakers came from The Climate Reality Project, Insurance Council of Australia, BMT Australia, Queensland Reconstruction Authority and The University of Queensland.
- *Science and Technology Actions Addressing Climate Change*: A panel discussion with three USC experts (Dr. Ipek Kurtboke; Dennis Desmond; and, Dennis Frost) that showcased how environmental microbiology, technology and organisational sustainability initiatives can provide solutions in a changing climate.
- *Student Contributions*: Short plays highlighting aspects of climate change; three-minute presentations discussing climate change projects or research; inspiring short stories about solutions to climate change; and, a film festival showcasing short films and infographics.
- *Lectures*: Science of climate change; community lecture covering stories of climate change throughout Oceania and how to plan for urban heat stress; and, a research presentation exploring the significance of childhoods, people and place through art-based reflection.
- *Does USC need a Climate Action Group?*: A workshop with a Climate Reality Leader to discuss how USC staff and students can join the global movement for climate solutions.
- *Documentary*: Public screening of 2040 exploring what the world will look like in twenty years if we embrace existing solutions and embed them into the mainstream.



In strengthening sustainability,
the University's
measures of success
are regularly monitored
by *tracking* and *reporting on*
performance against targets
in areas such as
carbon emissions, high impact
sustainability initiatives,
and educational attainment
across USC catchment areas.

Performance

MEASUREMENT

Capturing information is the key to measuring the environmental impact of The University of the Sunshine Coast. The University currently tracks the following information on a regular basis:

Measurement	Scope(s)	Campuses*	Schedule
Transport: Diesel Consumption	1, 3	All Campuses	2x/year (Biannually)
Transport: Petrol Consumption	1, 3	All Campuses	2x/year (Biannually)
Transport: Biodiesel Consumption	1, 3	All Campuses	2x/year (Biannually)
Transport: Ethanol Consumption	1, 3	All Campuses	As Relevant
Purchased Paper	3	All Campuses	Monthly
Business Travel – Air	3	All Campuses	Monthly
Electricity from Fossil Fuel / Grid	2, 3	SD, FC, TI, GY, SB, OH	Monthly
Electricity from Renewables	2, 3	SD, FC, TI, GY	Monthly
Diesel Consumption – Stationary	1, 3	SD, FC, TI, GY, SB, OH	As Relevant
LPG Consumption – Stationary	1, 3	SD, FC, TI, GY, SB, OH	As Relevant
Waste: Domestic Waste to Landfill	3	SD, FC, TI, GY, SB, OH	Monthly
Waste: Construction Waste to Landfill	3	SD, FC, TI, GY, SB, OH	As Relevant
Sewerage Treated	3	SD, FC	Monthly
Refrigerant Gases	1	SD, FC, TI, GY	As Relevant

* Campuses: SD (Sippy Downs), FC (Fraser Coast), TI (Thompson Institute), GY (Gympie), SB (SouthBank), OH (Ochre Health)

Additional measurements that will be captured in the lead up to becoming carbon neutral in 2025 include Moreton Bay campus performance and more depth of travel and transport figures (i.e. Shuttle Bus usage).

Chart #1: Emissions (t CO₂-e) by Source and Scope

Emissions Source	Scope	2016	2018	2019
Refrigerant Gas	Scope 1	424	363	365
USC Fleet Vehicles – Gasoline (L)	Scope 1	126	170	155
	Scope 3	7	9	8
USC Fleet Vehicles – Diesel (L)	Scope 1	83	131	125
	Scope 3	4	7	6
USC Fleet Vehicles – Biodiesel (2016); E10 (2019)	Scope 1	1	Did Not Apply	2
Stationary Fuel – LPG (L)	Scope 1	10	10	4
	Scope 3	1	1	.2
Stationary Fuel – Diesel (L)	Scope 1	Did Not Apply	7	8
	Scope 3	Did Not Apply	0.3	.4
Electricity	Scope 2	9,648	9,125	8,352
	Scope 3	1,776	1,549	1,310
Electricity (Tenants at Sippy Downs)	Scope 2	-920	-845	-712
	Scope 3	-170	-144	-112
Business Travel – Flights longer than 3700km	Scope 3	805	1,109	1,848 ^a
Business Travel – Flights from 463-3700km	Scope 3	383	463	837 ^a
Business Travel – Flights shorter than 463km	Scope 3	15	17	46 ^a
Waste to Landfill	Scope 3	113	185	177
Waste to Landfill – Construction	Scope 3	3	Phased Out	Phased Out
Potable Water	Scope 3	1	45	100 ^b
Purchased Paper	Scope 3	19	0.3	0.2
Electricity	Scope 3	1,776	1,549	1,310
Total All Sites		2016	2018	2019
Scope 1		644	681	659
Scope 2		8,728	8,280	7,640
Scope 3		4,733	4,790.6	5,530.8
Total all Emissions (Inclusive of Tenants)		15,195	14,740.6	14,653.8
Total all Emissions (Exclusive of Tenants)		14,105	13,571.6	13,829.8
Benchmark Values		2016	2018	2019
EFTSL ^c (Full Time Equivalent)		11,602	14,460	11,875
FTE ^d (excluding casuals) (Full Time Equivalent)		906	1,023	1,075
EFTSL + FTE (Full Time Equivalent)		12,508	15,483	15,891
UFA ^e (m ²)		50,540	50,540	50,540
GFA ^f (m ²)		81,398	81,398	81,398
Benchmarked Emissions		2016	2018	2019
Total Emissions by EFTSL (inclusive of tenants)		1.31	1.02	1.23
Total Emissions by EFTSL (exclusive of tenants)		1.22	0.95	1.16
Total Emissions by EFTSL+FTE (inclusive of tenants)		1.21	0.95	0.92
Total Emissions by EFTSL+FTE (exclusive of tenants)		1.13	0.89	0.87
Total Emissions by UFA (inclusive of tenants)		0.30	0.29	0.29
Total Emissions by UFA (exclusive of tenants)		0.28	0.27	0.27
Total Emissions by GFA (inclusive of tenants)		0.19	0.18	0.18
Total Emissions by GFA (exclusive of tenants)		0.17	0.17	0.17

a. Flight emissions factors changed to incorporate radiative forcing in 2019, significantly increasing associated emissions. b. Potable water emissions factors changed in 2019 to incorporate state-based factors on supply and wastewater, increasing associated emissions. c. EFTSL = Equivalent Full Time Student Load; d. FTE = Full Time Equivalent (Staff); e. UFA = Useable Floor Area; f. GFA = Gross Floor Area

CARBON MANAGEMENT PLAN PROGRESS

Initiative	Progress	Detail
Management & Governance		
Transparency & Reporting	Ongoing	This report serves as a public reporting of progress towards carbon neutrality. AMS also reports through TEFMA.
Funding CMP Actions	Ongoing	The water battery project was funded through a DBOOT (Design, Buy, Own, Operate, Transfer) model with partner Veolia. It became operational in September 2019. Tree plantings have been funded through Land for Wildlife grants. Operational budgets have covered sustainability communication efforts. Recycled waste streams have been expanded through efforts that have minimal or no cost for USC, including Mobile Muster (mobile phone recycling) and Container Refund Scheme.
Assessment of Carbon Emission Sources	Ongoing	Planning is ongoing to identify opportunities to capture additional emissions: <ul style="list-style-type: none"> • New travel management software tender. • Plans for student survey projects are being designed to capture information on commuting.
Data Management Systems	Ongoing	Sensors have been installed and connected to the Building Management System to capture information across the new Moreton Bay campus and at the solar panel level at the Sunshine Coast campus.
NCOS/Climate Active Accreditation	Planning	USC has been liaising with NCOS certified universities and carbon accounting providers, investigating the requirements for NCOS/Climate Active certification.

Initiative	Progress	Detail
Carbon Abatement		
LED Lighting Upgrades	Ongoing	On-campus wayfinding lighting has been replaced with LED street lights, and t5 low energy fluoro-tubes are in use across the Sunshine Coast campus. All exit and evacuation lights have been replaced with a system that provides 24/7 monitoring.
HVAC Upgrades	Ongoing	Various initiatives have been implemented to improve energy efficiency and HVAC services, such as variable speed drives, optimisation of ventilation controls and building management system upgrades.
Thermal Energy Storage & Solar PV	Completed	Thermal energy storage tank and solar PV installed and operating at Sunshine Coast campus (as of 08/2019). Solar PV roof installed at Sunshine Coast campus (carparks 11 & 11a), alongside 4 electric vehicle charging stations.
Renewable Energy Generation	Planning	Feasibility study grant in progress for Moreton Bay re: renewable energy options.
Carbon Offset Purchasing	Not Started	To be undertaken in 2025/2026 as part of the Climate Active certification process.
Engagement and Capacity Building		
Sustainable Events	Planning	The first annual Sustainability Day is scheduled for the week of 23 rd March 2020. Planning is ongoing.
Engaging Students on Energy Efficiency	Planning & Ongoing	Opportunities to engage students on sustainability issues are in the planning stage, with an eye to developing course projects that will examine barriers to sustainability. Engineering and Business students have been using the development and operation of the 'Water Battery' as a hands-on chance to learn about how the innovative development was funded and built.

Initiative	Progress	Detail
Displays re: Resource Consumption	Ongoing	Displays with real-time energy consumption from multiple campuses are in place in operational areas of the Sunshine Coast campus. Planning is underway to expand these displays to cover additional data and to be located in public areas around the Sunshine Coast and Moreton Bay campuses.
Work with Contractors on Carbon Reductions	Ongoing	USC works closely with Biniris, its cleaning contractor, to implement a multiple stream waste management system to divert as much waste as possible from landfill. Sustainability criteria is used in the tender process to evaluate potential contractors.
Staff and Contractor Inductions	Ongoing	A Sustainable Employee Checklist and Sustainability Onboarding session have been developed and are in use to inform new hires about USC’s sustainability commitments and expectations.
Marketing and Communications	Ongoing	The Sustainability Officer leads regular tours for external audiences, including regional schools and businesses, as well as for courses and staff. Solar Night was held in December 2018 & 2019 to promote the partnership between Veolia and USC to the Sunshine Coast community. Updates have been made to the Sustainability Tour information for Student Ambassadors that lead these tours for visiting school groups and special events.
Sustainability Champions	Planning	The Building Management System is being modified to enable tracking of performance and trends in energy/water use. This information will be used to run a sustainable behavior change competition.
Sustainable Procurement	Ongoing	Guidance documents have been created to accompany the tender and procurement processes, including Sustainability Contract Provisions and Sustainable Purchasing Guidelines.

Initiative	Progress	Detail
Learning and Teaching	Ongoing	<p>The Sustainability and Engagement Forum is increasing opportunities for collaboration between operational and teaching staff and students.</p> <p>A document has been shared, through the SEF and on the sustainability collaboration site, that highlights opportunities for collaboration between various USC Schools and Asset Management Services, including opportunities to engage students in sustainability issues.</p>
Incentive Programs	Ongoing	<p>Borrow ware is in place at one Sunshine Coast campus café. A bring-your-own cup initiative is in place at the Sunshine Coast campus, with discounts available at multiple food and beverage outlets. Both programs are promoted across the campus.</p>

The Year Ahead

The big hurdle that USC will face in the year ahead is how to reduce its emissions while expanding its footprint. The University's newest campus in Moreton Bay is set to open in February 2020 with its first intake of students.

MORETON BAY CAMPUS

Several sustainability initiatives are being developed regarding the development of the Moreton Bay campus. These initiatives include:

- **Buildings:** Environmentally Sustainable Design requirements have been incorporated into the design of the Moreton Bay campus.
- **eWater:** Like at the Sunshine Coast campus, an eWater system is being installed that will be used for much of the cleaning across campus.
- **End of Trip Facilities:** A bike storage facility with locker and shower access has been incorporated, which will encourage sustainable commuting. USC is hoping the ridership on the Moreton Bay campus will be higher than at the Sunshine Coast campus given the proximity to the Moreton Bay Cycleway, which runs through the campus.
- **Waste:** Compost will be collected and, initially, taken off-site for processing. A waste management provider is being contracted to expand USC's waste streams.

The University will also put its sustainability commitments front-and-centre by launching an annual Sustainability Day event.

USC SUSTAINABILITY DAY

One of the key engagement deliverables listed in the Carbon Management Plan is for USC to host an annual Sustainable USC Day that will celebrate the University's sustainability initiatives and celebrate staff and students that demonstrate a passion for emission reductions. The key audience will be USC staff and students, but the event would engage the wider community, as well. The focus will be on the work that USC is doing, from the operational aspects of managing resources to the topics that the University is engaging with on a teaching and research basis. The key events will focus on three main areas – Market Day; Information Sharing; and, Engagement Activities. Sustainability Day is planned for the fourth week of March 2020.

Links

USC Sustainability Webpages

University of the Sunshine Coast Homepage	https://www.usc.edu.au/
Sustainability at USC	https://www.usc.edu.au/explore/sustainable-usc
Sustainability Courses and Programs at USC	https://www.usc.edu.au/explore/sustainable-usc/sustainability-in-courses-and-programs

USC Documents

Strategic Plan 2019-2022	https://www.usc.edu.au/explore/vision/strategy-quality-and-planning/strategic-plan-2019-2022
Carbon Management Plan	https://www.usc.edu.au/explore/sustainable-usc/carbon-management-plan

Contact Information

University of the Sunshine Coast

Anne Marie DeRose, Sustainability Officer

Locked Bag 4

MAROOCHYDORE DC QLD 4558

AUSTRALIA

Tel +61 7 5430 2857

Email sustainability@usc.edu.au

Website <https://www.usc.edu.au/explore/sustainable-usc>