



THE UNIVERSITY  
OF QUEENSLAND  
AUSTRALIA

CREATE CHANGE

# UQ ENVIRONMENTAL FORUM

MONDAY  
17<sup>TH</sup> AUGUST, 2PM



THE UNIVERSITY  
OF QUEENSLAND  
AUSTRALIA

GREEN  
AMBASSADOR  
PROGRAMME



# Acknowledgment of **Country**

The University of Queensland (UQ) acknowledges the Traditional Owners and their custodianship of the lands on which we meet.

We pay our respects to their Ancestors and their descendants, who continue cultural and spiritual connections to Country.

We recognise their valuable contributions to Australian and global society.





# Introduction of Event – Lachlan Green (MC)



# UQ Environment Forum - Agenda

## Part 1 – Sustainability at UQ Webinar (1hr)

- Introduction and Welcome to Country
- Keynote speaker: Dr Nina Landsbury Hall
- UQ Energy speaker: Danielle (with Q&A)
- UQ Waste speaker: Christine (with Q&A)
- UQ Water & Compliance speaker: Helena (with Q&A)
- UQ Biodiversity speaker: Carmel (with Q&A)
- UQ Green Programs speaker: Emily (with Q&A)
- UQ Sustainability Strategy speaker: Suzanne (with Q&A)

## Part 2 – Sustainability Idea Discussion Zoom (1hr)





# Are the SDGs relevant?

Dr Nina Lansbury Hall

UQ School of Public Health  
(n.hall2@uq.edu.au)

UQ Sustainability Week  
August 17 2020



**UQ School of Public Health:**

*Working together to improve the health of populations in a  
changing and inequitable world*

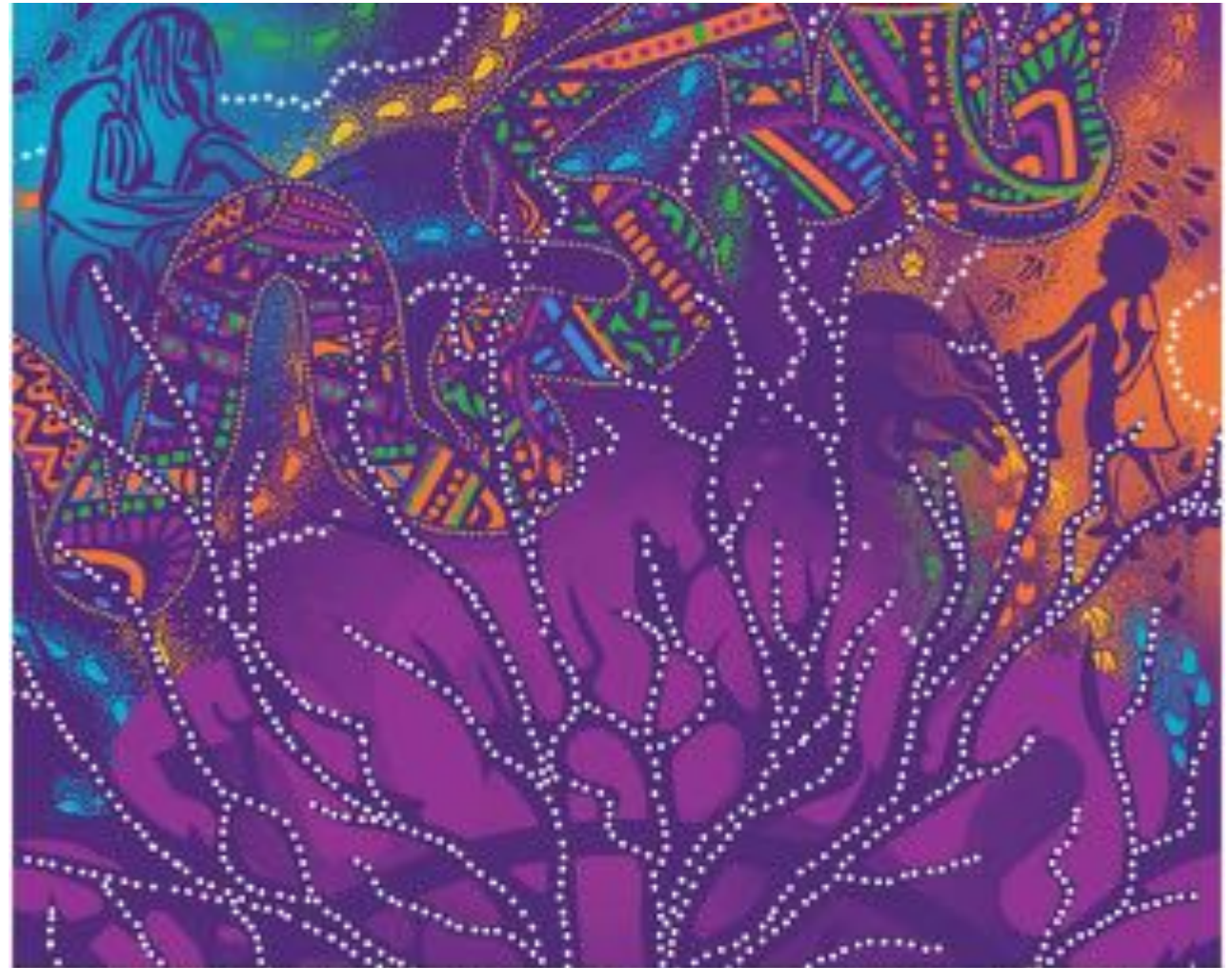


# Acknowledgement of Country

I acknowledge the Traditional Owners and their custodianship of the lands on which we meet today.

I would like to pay my respects to their Ancestors and their descendants, who continue cultural and spiritual connections to Country.

I recognise their valuable contributions to Australian and global society.



A Guidance in Time created by Quandamooka artists Casey Coolwell and Kyra Mancktelow

# 4 questions

1. **What** are the UN Sustainable Development Goals?
2. Why are the SDGs **relevant**?
3. How do we take the SDGs from **lofty goals** to **on-ground actions**?
4. Where to for **SDGs** in a **post-pandemic** world?

# 1. What are the United Nations' Sustainable Development Goals?

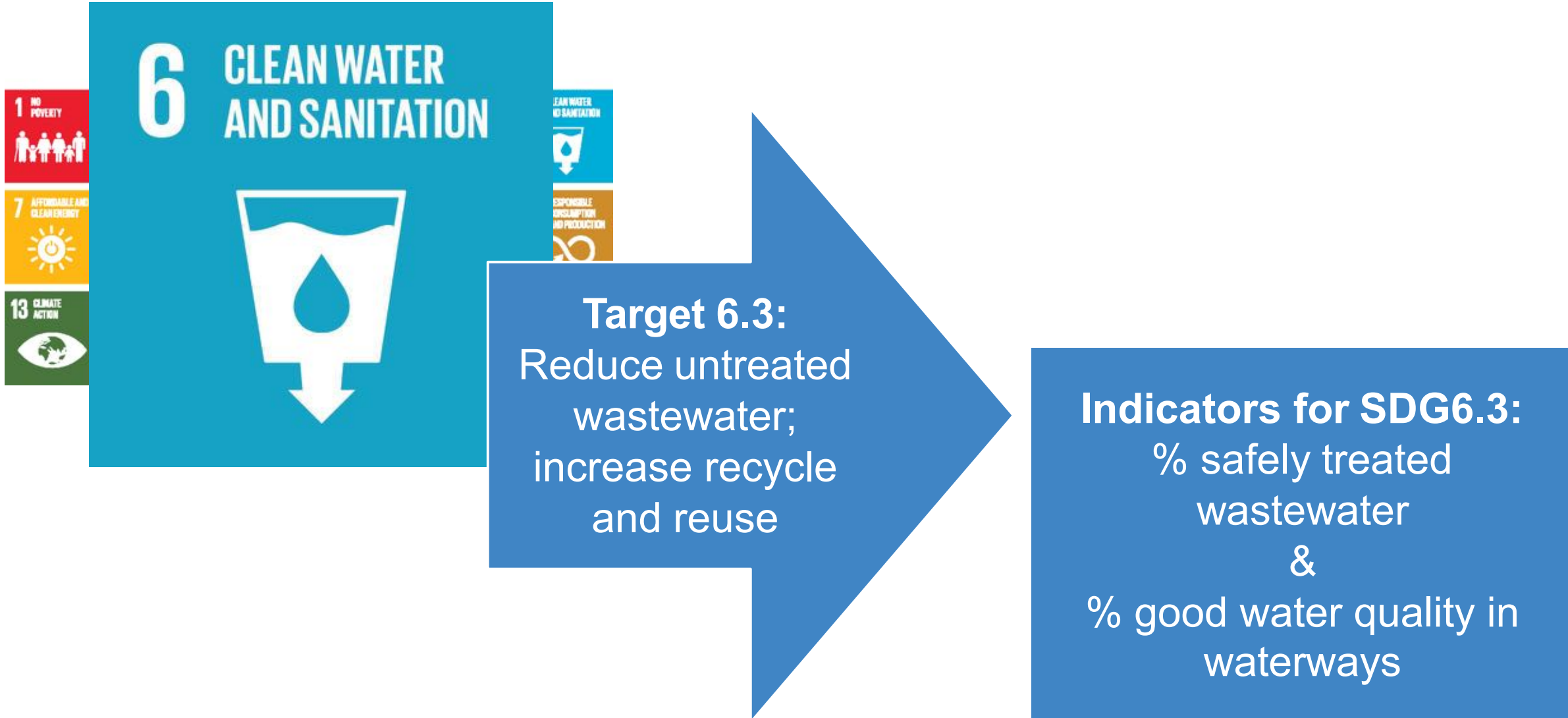
‘We recognize that **eradicating poverty** in all its forms and dimensions, including extreme poverty, is the **greatest global challenge** and an indispensable requirement for sustainable development.

We are committed to achieving sustainable development in its three dimensions – **economic, social and environmental** – in a balanced and integrated manner.

We will also build upon the achievements of the Millennium Development Goals and seek to **address their unfinished business**’.



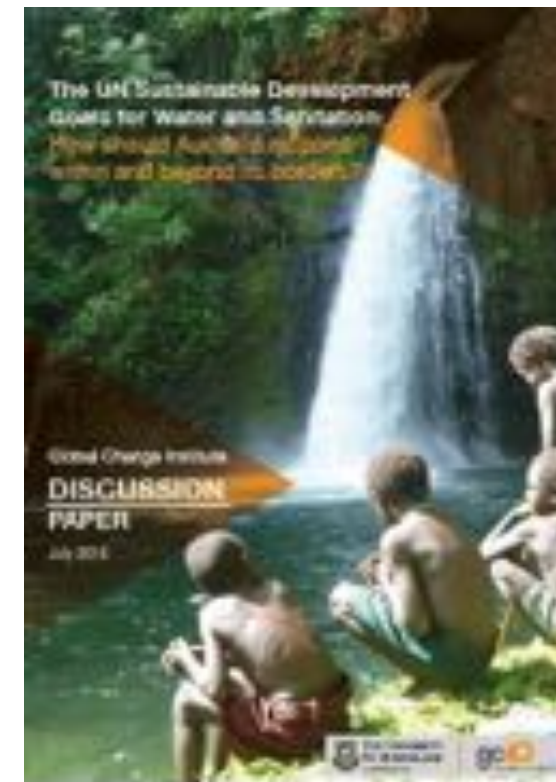
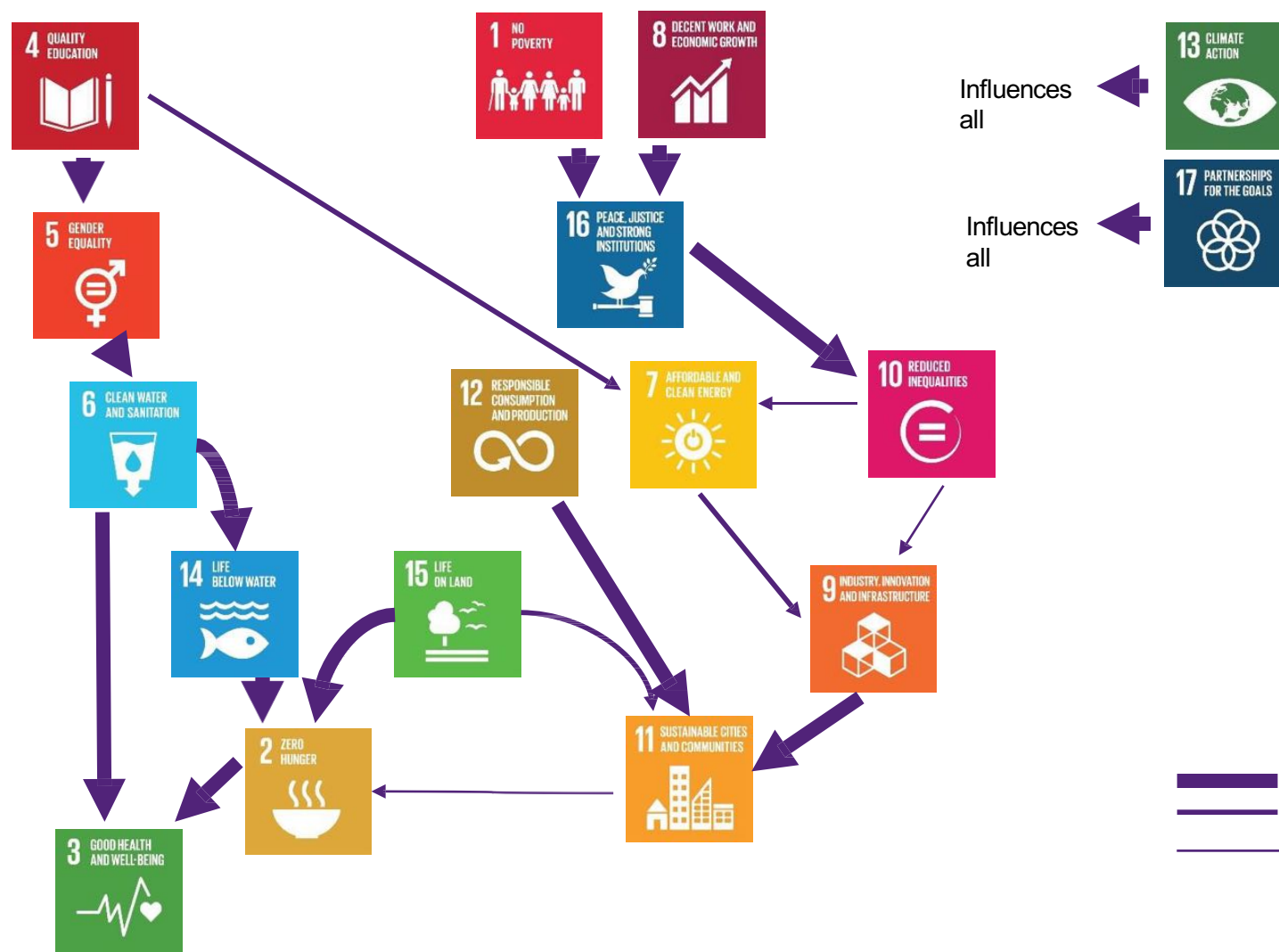
# Implementation of the SDGs



# Avoiding a silo-based approach...



# ...and adopting an interlinked approach



Hall, N., E. Abal, S. Albert, S. Ali, ... J. Willis (2016). The UN Sustainable Development Goals for water and sanitation: How should Australia respond within and beyond its borders? Discussion Paper. Brisbane, Global Change Institute, The University of Queensland.

## 2. Why are the SDGs relevant?

Common global focus

Buy in/ commitment from high level  
national governments

New frame AND timeline for  
existing old issues



# Key reference on SDG relevance

Australia's Voluntary National Review (2018):

<https://www.dfat.gov.au/sites/default/files/sdg-voluntary-national-review.pdf> (p.50)

## LEAVING NO ONE BEHIND

One of the challenges Australia faces as a vast country with environmental and climate variability is the spatial disconnect between the location of water and communities. Rural and remote communities in particular may not have the same level of access to water and sanitation services as urban centres. This is particularly the case for remote Aboriginal and Torres Strait Islander communities and can have important flow on effects to health outcomes.<sup>38</sup>



'Translation'  
required

Commitment  
from diverse  
stakeholders

Funding!

### 3. How do we take the SDGs from lofty goals to on-ground actions?

Role for universities:

- Translate from research to policy relevance
- Identify 'baseline' starting point
- Provide evidence base
- Suggest new ways of thinking (eg systems approach)
- Adapt indicators for local context
- Walk the talk!

# Key reference on SDG implementation

**SDSN University guide:**

[http://ap-unsdsn.org/wp-content/uploads/University-SDG-Guide\\_web.pdf](http://ap-unsdsn.org/wp-content/uploads/University-SDG-Guide_web.pdf) (p. 2)



Education, research, innovation and leadership will be essential in helping society address these challenges. Universities, with their broad remit around the creation and dissemination of knowledge and their unique position within society, have a critical role to play in the achievement of the SDGs. Arguably none of the SDGs will be achieved without this sector.

Engaging with the SDGs will also greatly benefit universities by helping them demonstrate university impact, capture demand for SDG-related education, build new partnerships, access new funding streams, and define a university that is responsible and globally aware.

Education and research are explicitly recognised in a number of the SDGs and universities have a direct role in addressing these. However the contribution of universities to the SDGs is much broader, as they can support the implementation of every one of the SDGs as well as the implementation of the SDG framework itself.



## 4. Where to for SDGs in a post-pandemic world?

SDG targets **reduce future** pandemic risks (30 targets)

- eg reducing supply / demand of illegal wildlife products reduces animal → human transmission

SDG targets **slow pandemic impacts** in low-income countries:

- universal health coverage
- bolster health workforce
- strengthen early-warning systems for global health risks



# 5 key messages

- SDGs provide measurable ambition to 2030
- SDG intentions are not new; instead, a ‘fresh frame’
- SDGs applicable to all signatory countries (including Australia)
- SDGs x 17 need to be considered as an interlinked ‘set’
- SDGs require ‘translation’ from goals to on-ground action
- SDGs are relevant in a pandemic & post-pandemic world



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# Thank you!

## Questions? Thoughts?

**Dr Nina Lansbury Hall**  
UQ School of Public Health  
([n.hall2@uq.edu.au](mailto:n.hall2@uq.edu.au))

**UQ School of Public Health:**

*Working together to improve the health of populations in a  
changing and inequitable world*

# UQ Sustainability Operations – Staff Guest Speakers

UQ Energy speaker: Danielle

UQ Waste speaker: Christine

UQ Water & Compliance speaker: Helena

UQ Biodiversity speaker: Carmel

UQ Green Programs speaker: Emily

UQ Sustainability Strategy speaker: Suzanne





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# Energy Management at UQ

Danielle Esterhuysen

*Program Manager – Energy Management*

*Property & Facilities*

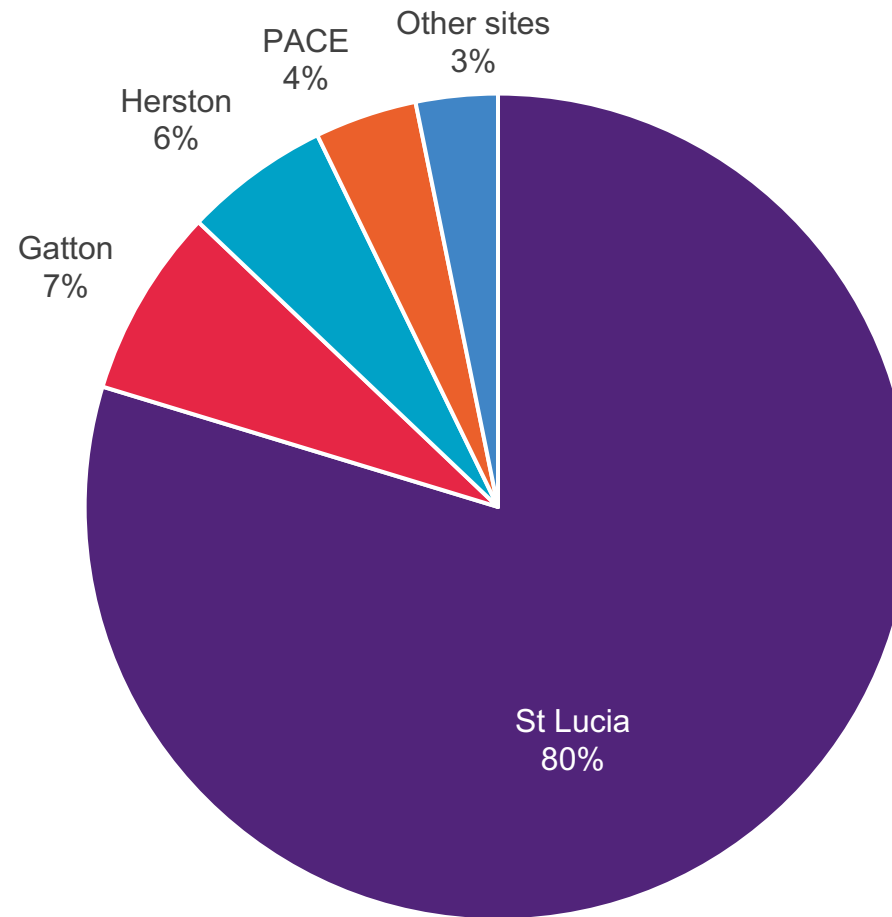


# UQ's Energy Impact

- 700+ buildings across 25 sites with GFA of almost 800,000 m<sup>2</sup>
- Electricity usage in 2019 was ~140 GWh
- Gross electricity spend = ~\$20 million per annum
- Peak demand = ~28 MW
- Many energy intensive spaces (labs, 24x7 libraries, art galleries)

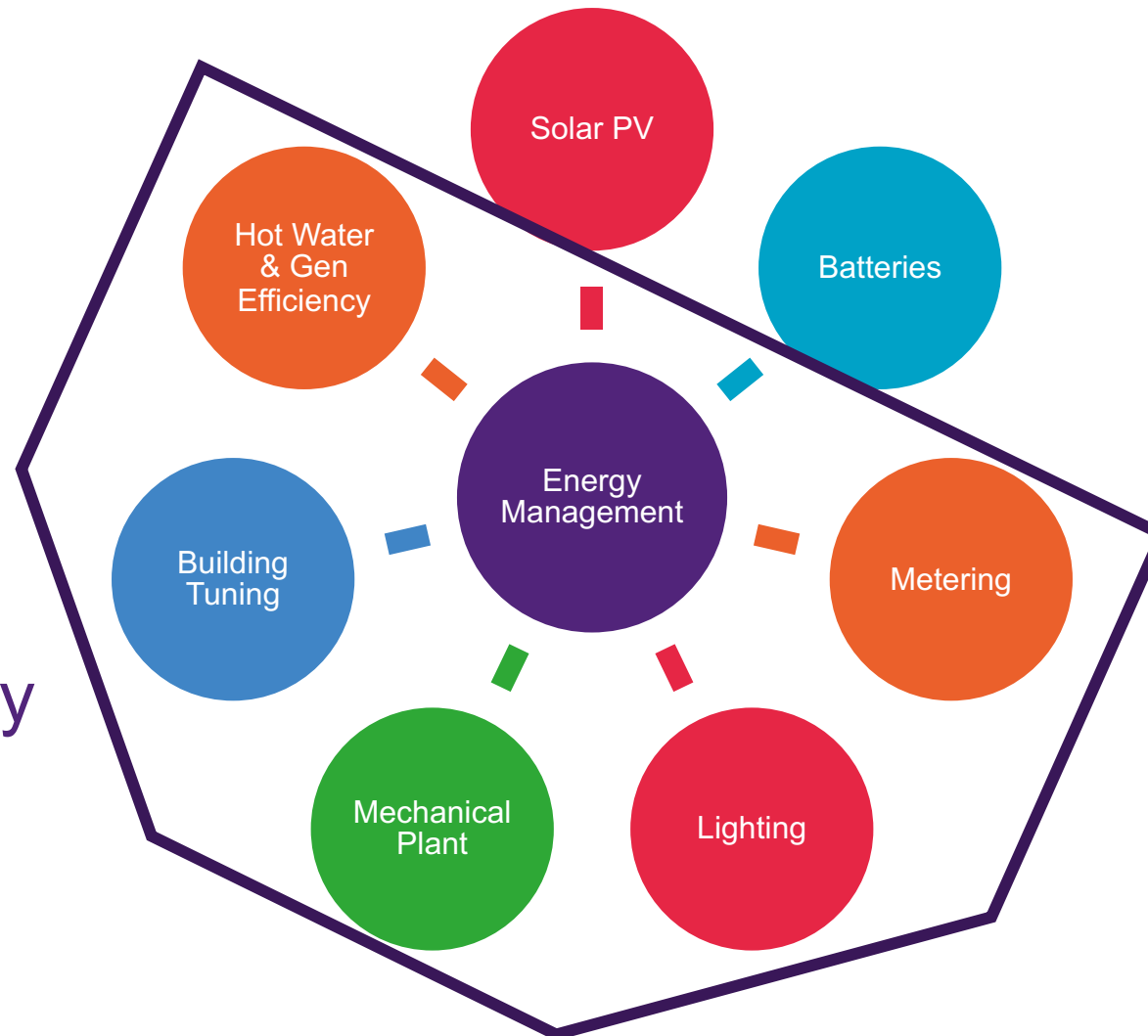


# Energy Consumption by Campus



# Energy Management Office

Energy Efficiency



# Energy Efficiency

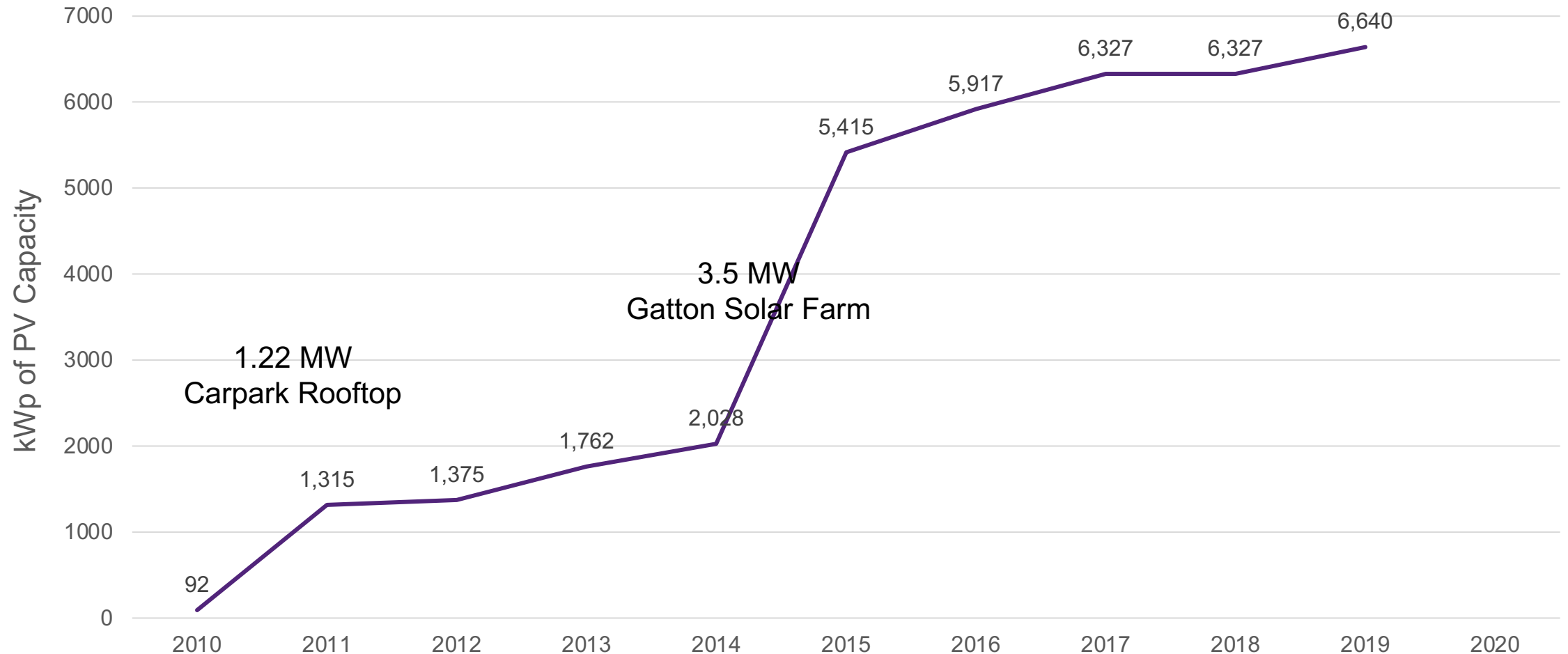
- Interested in any opportunity with an ROI of 20% or better (5 year payback)
- Lighting – move to LED & motion sensors – currently retrofitting ~10,000 lights per year
- Mechanical plant – chiller optimisation, VSDs, heat pumps
- Building tuning – adjust set points, schedules, control logic – recommission existing buildings from ground up
- Hot water – instantaneous systems, removal of HW loops, heat pumps
- General efficiency – fume cupboard controls, building fabric
- Can have high transaction costs for small projects
- 2016 – at 2011 levels, 2019 – 8% below 2011



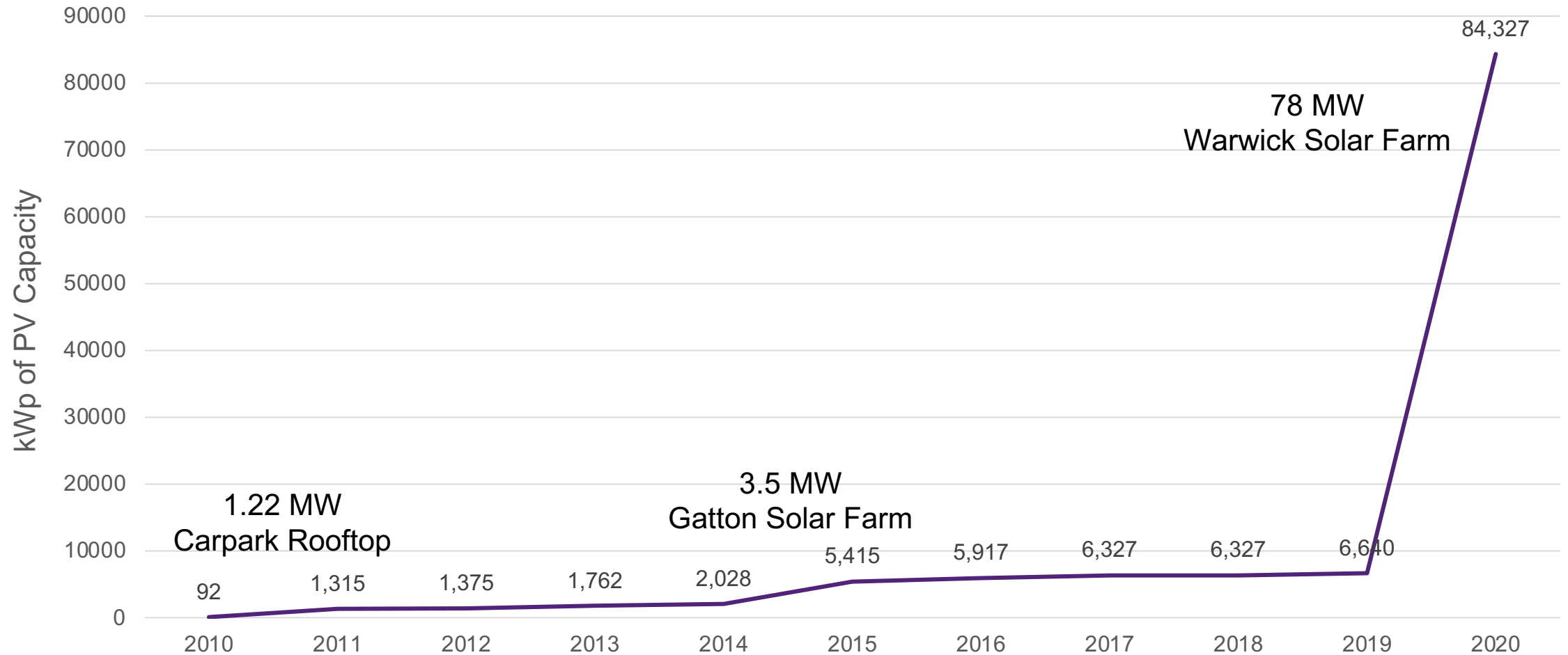
# Energy Efficiency



# UQ's Solar Journey



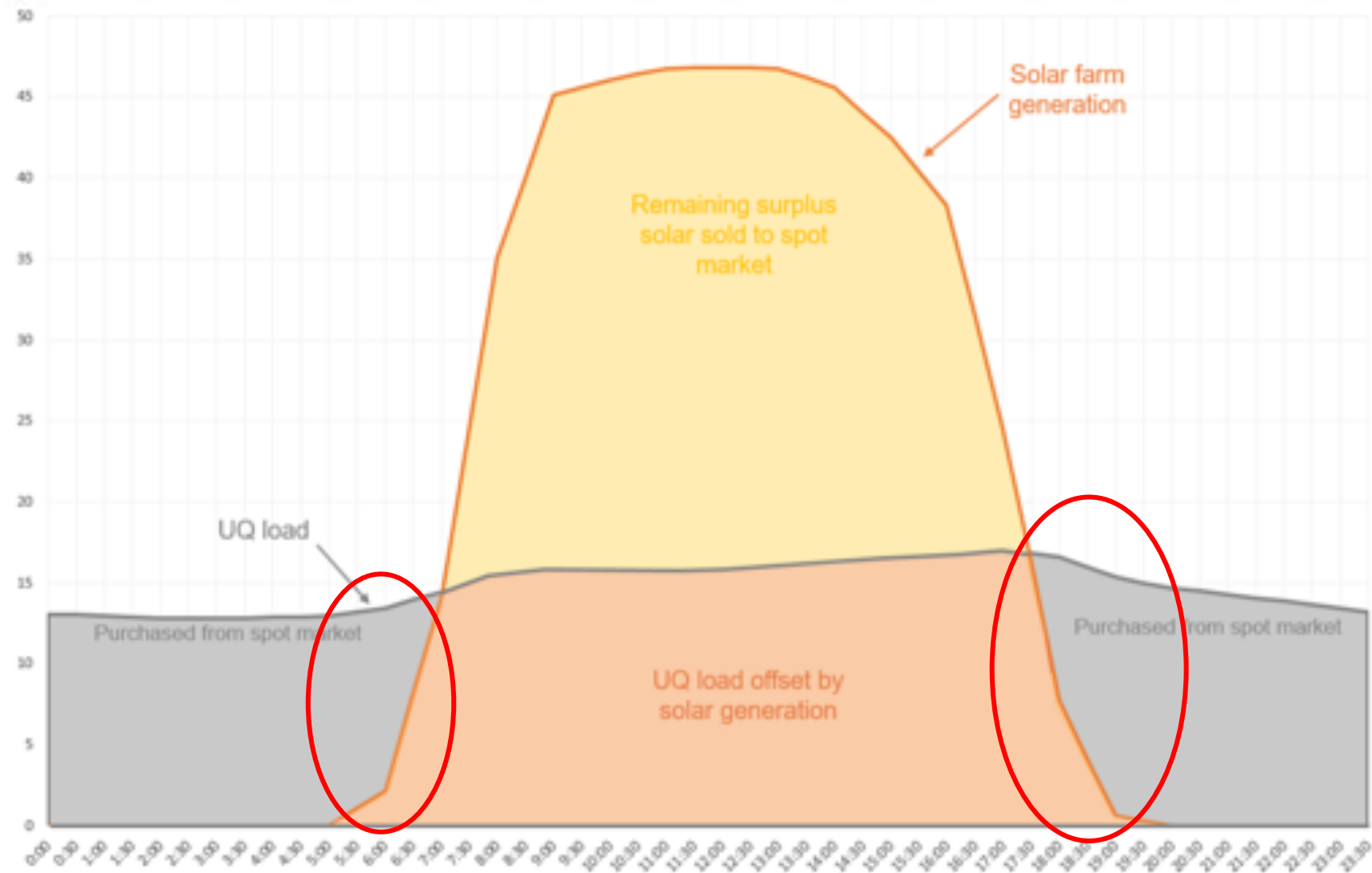
# UQ's Solar Journey



# Warwick Solar Farm



# 'Gensumer' Strategy

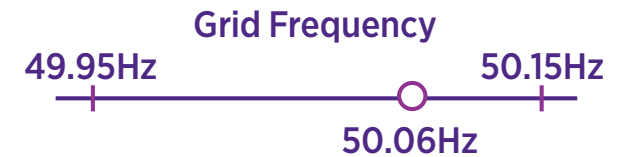
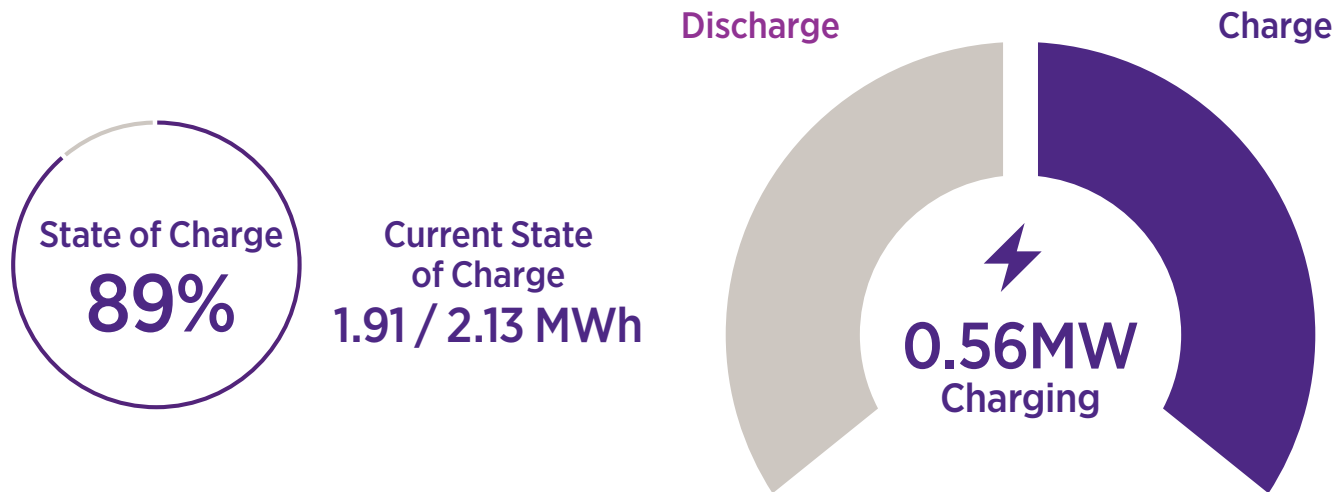




# The Future – Onsite energy storage



# The Future – Onsite energy storage



QLD Energy Spot Price

**\$34.14/MWH**

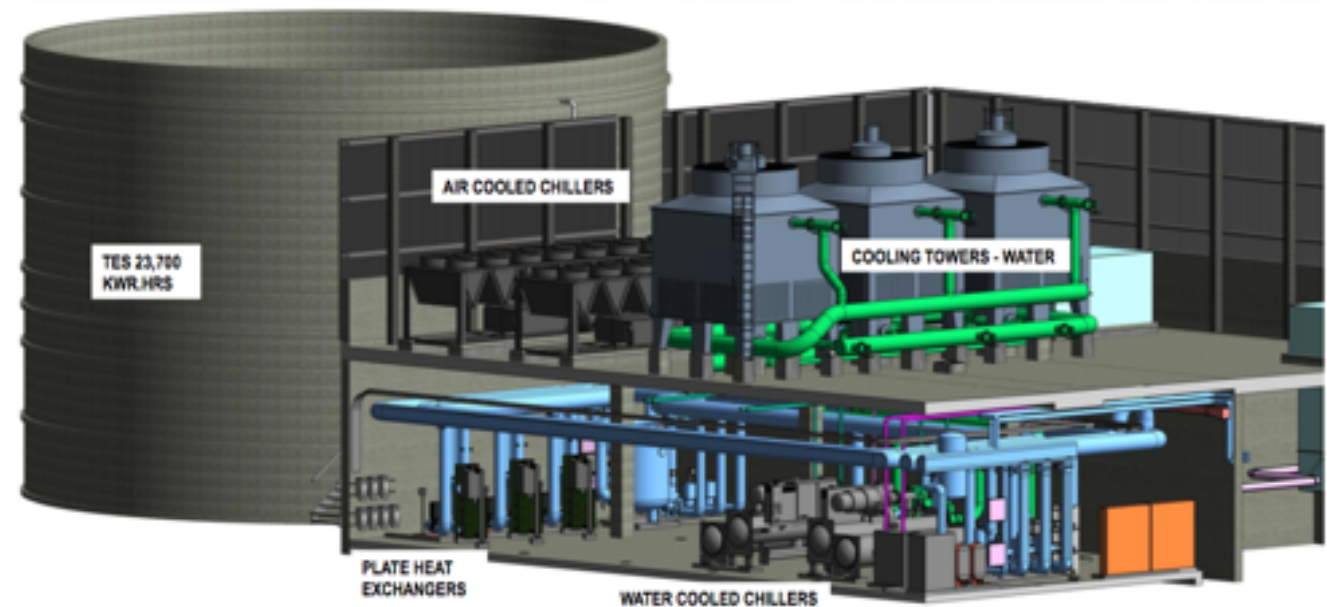
QLD Contingency FCAS Price

**\$11.13/MWH**

The battery earns revenue by charging when energy spot prices are low, and discharging when prices are high.

The battery is paid the contingency FCAS price for being on standby to help stabilise the grid when needed.

# The Future – Onsite energy storage





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# Q&A



[facebook.com/uqsustainability](https://facebook.com/uqsustainability)



[Instagram.com/uqsustaianbility](https://Instagram.com/uqsustaianbility)

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# UQ Waste Reduction Strategy

Christine McCallum

UQ Sustainability Office



# Why reduce waste?

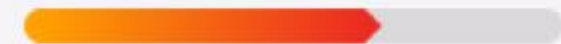
- **Respond to growing community expectations**
- **It's a waste**
- **Reduce operating costs**
- **Demonstrate leadership**

## STARS- Sustainability Tracking, Assessment & Rating System

The following areas are reported on:

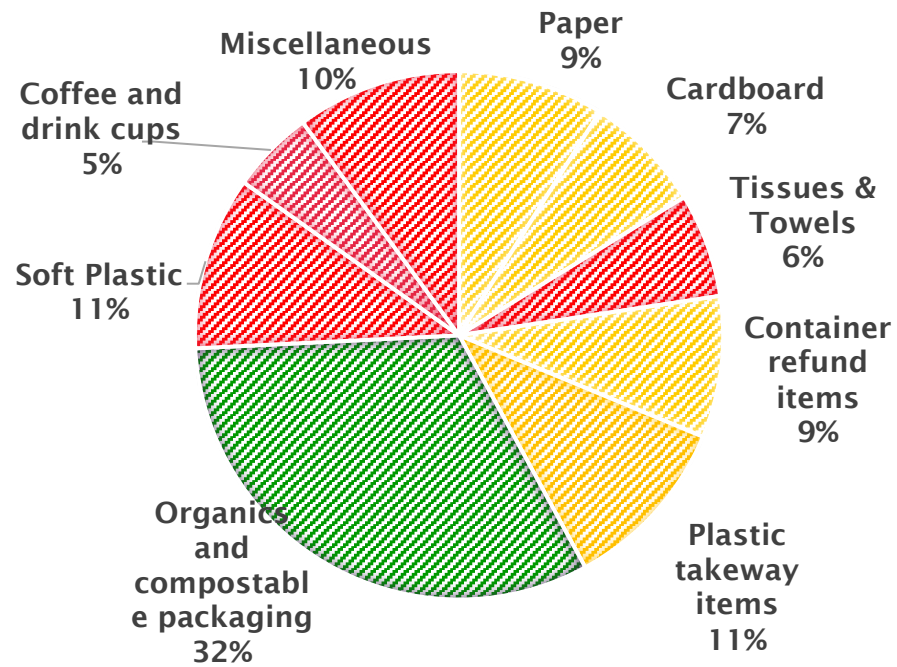
- OP-7: Food and Beverage Purchasing
- OP-19: Waste Minimization and Diversion
- OP-20: Construction and Demolition Waste Diversion
- OP-21: Hazardous Waste Management

3,161 have signed. Let's  
get to 5,000!

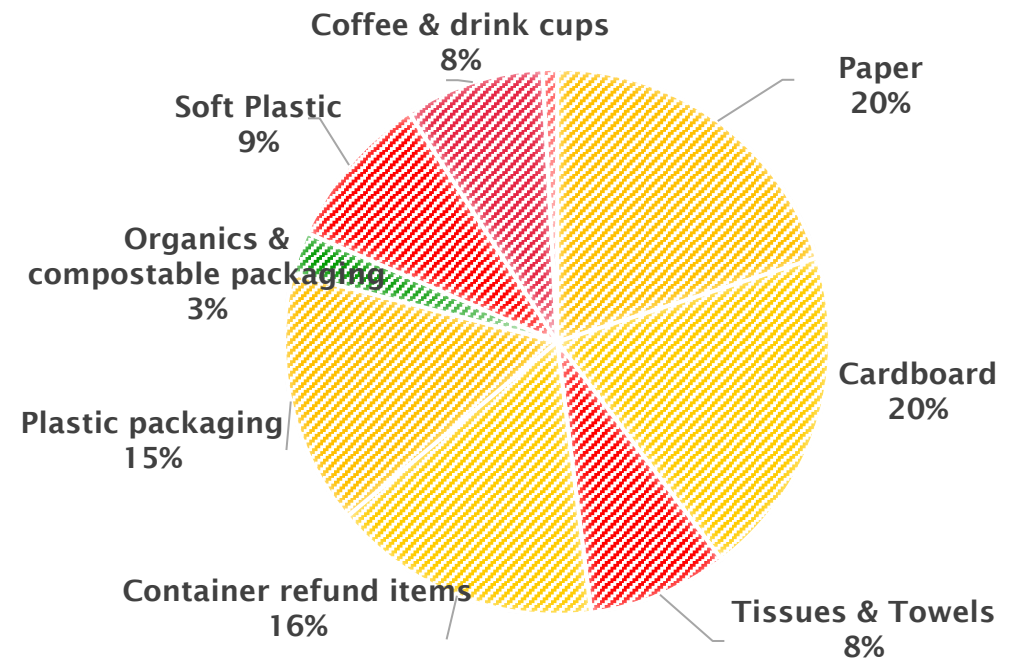


# Waste Audit data 2018

## General Waste



## Co-mingled Recycling



# Waste Reduction Strategy

To reduce waste improve landfill diversion rates:

- ✓ Improve recycling
  - removal of under-desk bins
  - container refund scheme
  - education and engagement
- ✓ Organics diversion
  - capture pre & post-consumer food waste at food outlets
  - organics collection within office areas- incl. paper towels
  - UQ Unwrapped- compostable packaging
- ✓ Reduce waste
  - BYO & Green Caffeine- reusable cups & containers
  - UQ Unwrapped- reduce single use plastics & increase reusable
  - WarpIT- Lab Swap week, Declutter campaign
  - Repair cafe



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# Thank you

Christine McCallum  
Project Officer-Sustainability  
Property and Facilities Division  
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## Q&A - Waste







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# UQ Guest Speaker – Water and Compliance

Helena Malawkin

Program Manager, Environment and  
Sustainability

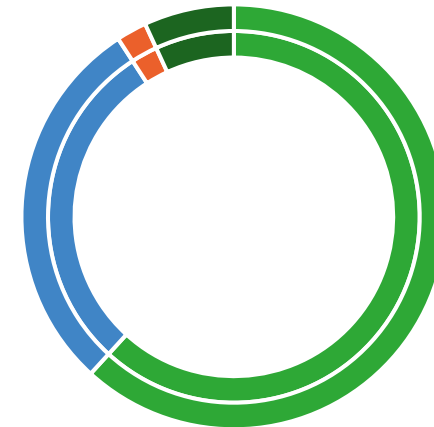
Property & Facilities Division



# Environment Forum – Water

- UQ Operations consume a lot of water
- Drinking or potable water consumption for 2019 was:
- Total = 784.2 ML (313 standard Olympic sized swimming pools [1 = 2.5ML])
- St Lucia = 484.4 ML and
- Gatton = 227.8 ML

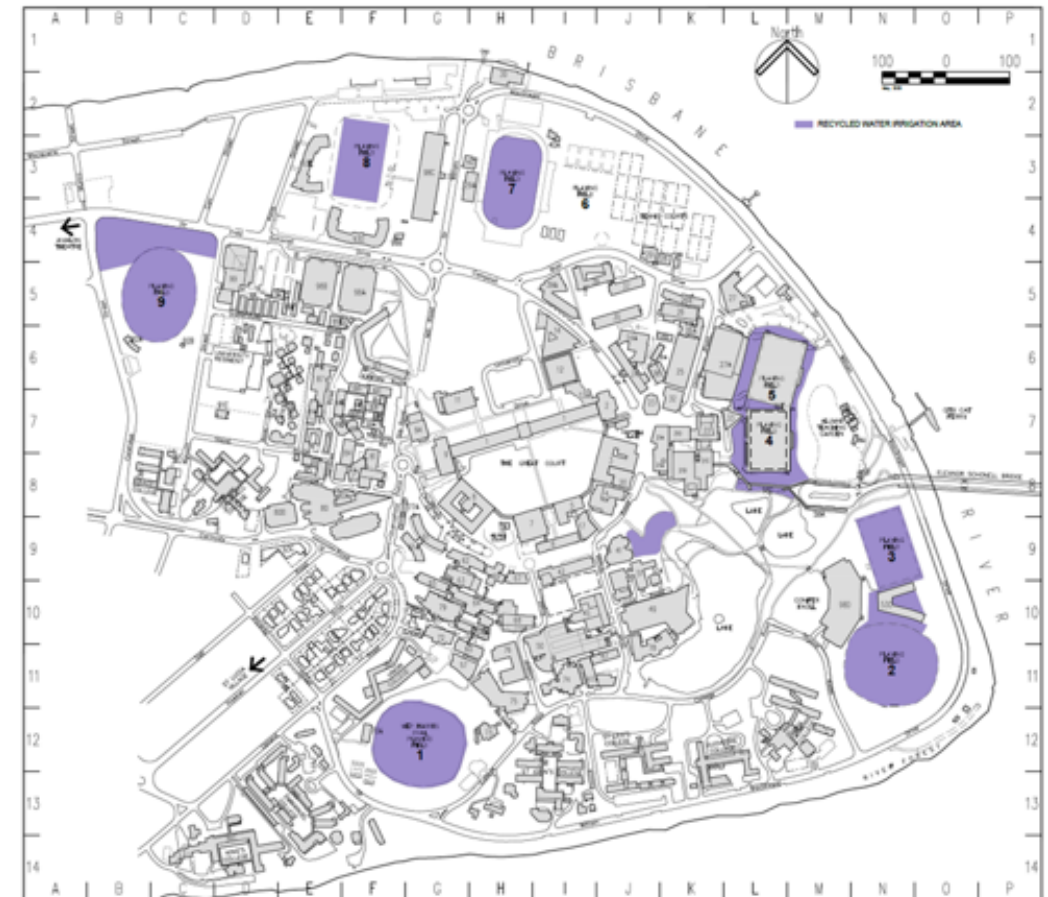
UQ Potable Water Consumption ML  
(2019)



■ St Lucia ■ Gatton ■ Herston ■ Other Sites

# Environment Forum – Water

- About 30% of St Lucia's water use is for cooling towers
- St Lucia receives about 7ML per week of recycled water stored in the effluent lakes.
- Recycled water used to irrigate most ovals and grounds.
- Reduce consumption - use the Class A recycled water for cooling towers - more resource efficient and fit for purpose water use
- Recycled and Groundwater used at Gatton – agricultural uses



# Environment Forum – Compliance & Risk

- 2 Environmental Authorities under *Environmental Protection Act, 1994* and subordinate legislation *Environmental Protection Regulations, 2018*.
- Multiple permits – trade waste, recycled water use, Service Provider
- Manage pest plant and animals under BioSecurity Act, 2015
- Responsible for ensuring conditions are met.
- Staff are trained and understand compliance.
- Monitoring and reporting processes in place.
- Duty of Care and Duty to Notify obligation.
- EMS on Sustainability web site
- Enterprise Risk Management Framework



Enterprise Risk Management Framework					Compliance Framework		
Risk Category	Risk Description	Impact	Likelihood	Risk Level	Control Measure	Responsible Party	Review Date
Environmental	Climate Change	High	Medium	High	Carbon Footprint Reduction	Facilities Management	2024-12-31
Environmental	Water Usage	Medium	Low	Medium	Water Conservation Measures	Facilities Management	2024-12-31
Environmental	Waste Management	Medium	Low	Medium	Waste Recycling Program	Facilities Management	2024-12-31
Environmental	Pest and Animal Control	Low	Low	Low	Pest Management Plan	Facilities Management	2024-12-31
Environmental	Trade Waste Disposal	Low	Low	Low	Trade Waste Management Plan	Facilities Management	2024-12-31
Environmental	Recycled Water Use	Low	Low	Low	Recycled Water Management Plan	Facilities Management	2024-12-31
Environmental	Service Provider Compliance	Low	Low	Low	Service Provider Vetting Process	Facilities Management	2024-12-31
Environmental	Environmental Protection Act, 1994	Low	Low	Low	Environmental Protection Regulations, 2018	Facilities Management	2024-12-31
Environmental	BioSecurity Act, 2015	Low	Low	Low	BioSecurity Act, 2015	Facilities Management	2024-12-31
Environmental	Duty of Care and Duty to Notify	Low	Low	Low	Duty of Care and Duty to Notify	Facilities Management	2024-12-31
Environmental	EMS on Sustainability web site	Low	Low	Low	EMS on Sustainability web site	Facilities Management	2024-12-31
Environmental	Enterprise Risk Management Framework	Low	Low	Low	Enterprise Risk Management Framework	Facilities Management	2024-12-31



## Q&A – Water and Compliance







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# UQ Guest Speaker – Biodiversity

Carmel Ainsley

Environment and Sustainability Program Officer

Property & Facilities Division



## Q&A - Biodiversity





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# UQ Guest Speaker – Engagement

Emily Conn

Green Programs Assistant

Property & Facilities Division



# Current UQ Sustainability Initiatives

To create a sustainable university, we need to engage different UQ groups to create sustainable change and culture.

**Sustainability Office:** Within Properties & Facilities. Overseas energy, waste, water usage, compliance, staff and student sustainability programs throughout UQ.

## **Current engagement programs:**

Green Labs & Green Office – staff workspaces

Green the Team – Gatton residential colleges

Student Green Fund – student initiatives





# Green Ambassadors Program

## Purpose Statement:

To allow opportunities for staff and students to communicate, coordinate and collaborate effectively in the sustainability space, run student-led initiatives relating to the Sustainability Strategy and SDGS, and promote behaviour change within and outside of the UQ community.

## This will:

- Allow effective implementation of change
- Participation from all UQ community members
- Students and staff using unique knowledge and experiences to make sustainable efforts successful



# Goals of Green Ambassador Program

- Autonomy of Ambassadors cohort
- Representation of all groups within the UQ community, with a student focus
- Participation of all levels (from attending events to organising them)
- Effective communication and dissemination of information
- Promoting engagement in the Sustainability Strategy 2020-2030
- Promoting engagement in the UN's Sustainable Development Goals





## Other ways to engage in sustainability at UQ:

- Student Staff Partnerships
- Environmentally-orientated clubs and societies
- Join online community groups - UQ Unwrapped etc
- Attending events in Sustainability Week and make connections
- Join UQ Volunteers – work with us!
- Join your school or faculty's student committee
- Utilise UQ facilities – bike boxes, organics collection in Phizz etc

You can also:

- Join the Virtual Village Sustainability Circle – host your own events
- Suggest the Green Labs or Green Office programs to your supervisors if you're a student working at UQ
- Supporting UQ events with sustainable catering and organisation

## Q&A - Engagement





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# UQ Guest Speaker – Sustainability Strategy

Suzanne Davis

Environment and Sustainability  
Program Officer

Property & Facilities Division



## Q&A – Sustainability Strategy





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# Thank you

**Environment Forum was brought to you by:**

UQ Sustainability Office  
UQ Green Ambassador Program  
UQU Environment Collective



Green Ambassador Program - <https://www.facebook.com/groups/668453877298892/>



UQU Environment Collective - <https://www.facebook.com/ugenvirocollective/>

[sustainability@uq.edu.au](mailto:sustainability@uq.edu.au)

<https://sustainability.uq.edu.au/>

CRICOS code 00025B

## Up next – Forum Discussion Section

## See the new Zoom link in the chat!