

Green Bond Campus Redevelopment

University of Tasmania
August 29 2023

Net Zero on Campus Community Case Study

The [Net Zero on Campus](#) initiative, a collaborative effort between SDSN, the Climateworks Centre, and Monash University, aims to facilitate the sharing of lessons and resources to accelerate the decarbonization of university campuses around the world. The initiative consists of a “how-to” guide and accompanying online toolkit that will enable universities to accelerate the planning and implementation of net zero strategies, and act as living laboratories for testing solutions.



What is the case study trying to accomplish?

The University of Tasmania has clear and credible commitments to improve our environmental sustainability outcomes. A key performance indicator from our Emissions Reduction Strategic Plan 2022-2030 requires a minimum 50% reduction in gross emissions across all material sources as reported to maintain our Australian Government Climate Active carbon neutral certification. The University is one of only two certified carbon neutral universities in Australia and encompasses all three scopes. The University is also undertaking a multi-year redevelopment of all three Tasmanian campuses, requiring access to capital that is affordable for the University to service the debt. Bringing our environmental and financial sustainability focus together into a Green Bond Framework signaled that the University aligns with and delivers on public commitments and that strengthens our unique, sustainable,

University Information

City: Hobart
Country: Australia
Region: Oceania
Number of Staff: Large (between 6,000 - 10,000)
Number of Students: Large (30,000-60,000)
Type of Institute: Public

Case Study Overview

Category: Facilities
Initiative: Construct new sustainable buildings
Type of Net Zero Solution: Financial investments
Funding Source: The green bond proceeds are part of the financing of the projects, some also comes directly from the University and some from State and Federal Government grants depending on the project.
Emissions Scope: Multiple
Impact on Net Zero: Very large positive impact
Scale: Greater than \$10 million
Timeframe: Very long (greater than 5 years)
Stakeholders: Staff, students, sustainability office, University administration, University Council, designers and construction companies, building material suppliers, consultants, governments, investors, local community

place-based approach. The Green Bond proceeds require achieving a minimum 20% reduction in upfront carbon emissions through the adaptive reuse of existing buildings (i.e., avoiding demolition and construction) where appropriate, and the use of low embodied carbon construction practices in major refurbishments and new construction. So far, across five projects we have avoided 13,527 tCO₂e, averaging reductions of 32% for new builds and over 60% for re-purposing existing buildings versus reference buildings.

To accomplish this, we included this focus on upfront carbon reduction very clearly in project scopes to guide design and delivery. Each project has informed the next and set base level expectations that then are stepped up for the next project. Our initial projects were all completely new brownfield site builds with more recent works involving re-purposing existing buildings, which have provided additional challenges and opportunities. We are participating in case studies such as this to share our approaches and results with the broader sector and community as part of our outreach efforts.

What were the key success factors in implementing the case study?

1. Developing a Green Bond Framework tied together funding required to deliver University strategy for new campuses and emissions reduction efforts, which delivered on the University Emissions Reduction Strategic Plan 2022-2030 that specifically identifies emissions reductions from construction as a primary focus area given it is a reportable emissions source under our Climate Active carbon neutral commitment.
2. Our design guidelines already had a broad sustainability focus, but the embodied carbon reduction commitment ensures clarity of alignment of our built environment (new builds and refurbishments) function with our holistic Emissions Reduction Strategic Plan with the minimum 50% gross emissions reduction target by 2030.
3. For each building and refurbishment project, specific allocation of the budget has been set aside for additional sustainability outcomes plus the increased requirements in the core elements of the project, which includes the embodied carbon reduction.
4. We have engaged with a broad range of suppliers to work with them to identify products or changes they could make to reduce the embodied carbon content to help us achieve our targets. Suppliers for our built environment function are now selected based on expertise and ability to deliver embodied carbon reduction (as well as broader sustainability outcomes). This has also led to upskilling across a number of expertise areas, from designers through to project managers and builders.
5. We were supported by both the Commonwealth Bank and National Australia Bank in putting our Green Bond framework to use in achieving significant interest from investment companies from around the world and achieving favorable rates for the University in two tranches at different investment horizons.

What were the challenges or barriers you had to overcome in implementing your initiative?

Upfront carbon reduction requires industry to step up with options for materials replacement through to dematerialization as well as reduced carbon alternatives. It also requires all those involved in the building process from designers, quantity surveyors through to the construction companies, including project managers through to the trades, to understand carbon emissions and thus climate change impact issues within their professions. Requiring this in Tasmania by the University of Tasmania is bringing world best practice and world leading approaches to our entire island community considering our campuses and projects are undertaken in all three regions. Thus, the impact is broad and deep with positive improvements for others undertaking building projects from the upskilling of these professions.

Within the University itself, there was a similar upskilling required across a range of professions, including finance, project managers and senior management with respect to carbon emissions calculations and methodologies as well as impact from carbon emissions on climate change. Identifying the outcomes sought from each of these and how they could be mutually reinforcing as well as delivering on broader strategic University impact outcomes garnered support.

What did you learn from the process and what are your recommendations to others?

Understanding the drivers for action or measurements of success for different stakeholders and working out ways for them to meet these is critical (the classic win-win-win scenario) and ensuring that these map to University strategy or impact outcome commitments. So, a first step might be to ensure that there are high level policy/strategies in place and commitments (such as Race to Zero or International Universities Climate Alliance) made that identify outcomes with respect to carbon emissions reduction, so that specific initiatives such as this can be shown to deliver on these for reporting purposes to senior management and governing bodies. Second is to ensure that procurement documentation (request for quotes, tenders) includes the appropriate clauses and phrases to make clear the expertise you are seeking as well as the commitment to work on innovative solutions, as this is a very new area of activity.

What resources did you use to implement this initiative?

Resource	Why is this resource helpful?
University of Tasmania Green Bond Framework	<p>Provides clarity for internal decision makers and partnering businesses on our commitment.</p>
International Capital Market Association's Green Bond Principles 2021	<p>Underpins the University of Tasmania Green Bond Framework.</p>
University of Tasmania Sustainability Policy and Strategic Framework for Sustainability	<p>Provides overall strategic direction that guide these efforts.</p>
One Click LCA software	<p>One Click LCA is a building Life Cycle Metrics software that allows calculation of Life Cycle Assessment, Life Cycle Costing, Carbon footprint and other environmental impacts.</p>

<p>Environmental Product Declaration (EPD)</p>	<p>An independently verified and registered document that communicates transparent and comparable data and other relevant environmental information about the life-cycle environmental impact of a product.</p>
<p>Green Building Council of Australia - Upfront Carbon Credit</p>	<p>Provides detailed definitions and calculation information.</p>
<p>Climate Active Carbon Neutral Product Register</p>	<p>Provides a list of producers of carbon neutral materials and products.</p>

Get Involved with Net Zero on Campus

Contribute to the Online Toolkit

- [Submit](#) your own case studies and decarbonization resources to be featured;
- Share your questions and/or feedback with us at info@unsdsn.org.

Join Our Community

- Join our global community of practice and Net Zero on Campus LinkedIn Group;
- Join global networks of academic institutions working on decarbonization: [SDSN](#), [Second Nature](#), and [EAUC](#). See our resource directory for more networks;
- Join the [Race to Zero for Universities and Colleges](#) campaign and make a net zero commitment;
- Empower your students and engage them in your campus decarbonization efforts: join [SDSN Youth](#) and see our guide for more information.

Learn More

- Explore [SDSN's free, open educational resources](#) from the world's leading sustainable development experts to use in your classrooms: MOOCs, educational videos and lectures, and global community of practice.

[Net Zero on Campus](#) is a collaboration between [SDSN](#), [the Climateworks Centre](#), and [Monash University](#), in partnership with [Second Nature](#) and the [EAUC](#) (Secretariat of the Race to Zero for Universities and Colleges).