

chapter ten  
sustainability

## 10.1 Recognising the need for a sustainable campus

The 25-year currency of the Campus Master Plan will see significant changes to the sustainable development of the built environment of the campuses, particularly in response to human-induced climate change. The built environment, both directly and indirectly, is responsible for up to 30% of New Zealand's greenhouse gas emissions.

Universities as educators are seen as leaders rather than followers by their communities and might therefore be expected to play a vital role in moving the sustainability agenda forward.

The Campus Master Plan provides the opportunity to influence the physical embodiment of the University's commitment to sustainability and to bind it closely into the University's day to day operations and long term future. It represents both a risk mitigation strategy and an opportunity to create a new campus paradigm in terms of sustainable infrastructure, buildings, operational practices, and staff and student behaviours.

The Master Plan seeks to integrate and balance environmental sustainability while reinforcing the urban design and public realm of the University, and facilitating projected future growth and development.

## 10.2 Nurturing a culture of environmental sustainability

The preparation of the Master Plan has coincided with the formation of the University's Environmental Sustainability Advisory Committee to develop, implement and monitor policies and practices that nurture a culture of environmental sustainability within the University and across the range of its activities.

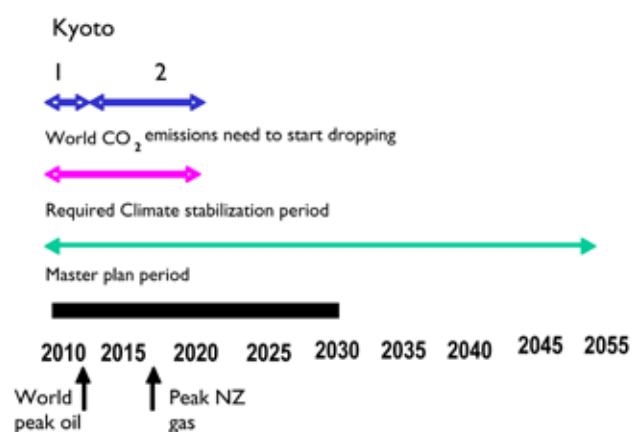
As part of the development of the Campus Master Plan a draft sustainability framework has been developed. This has been closely related to the University's strategic direction. The underlining environmental principles include:

- The promotion, nurture and communication of a culture of environmental sustainability within the University;
- Environmentally sustainable practices in the University's research and teaching;
- Environmentally sustainable campuses and facilities;
- Contribution to the national and international good and preserving the environment for future generations; and
- Socially and environmentally sustainable practices in the University's community service and outreach.

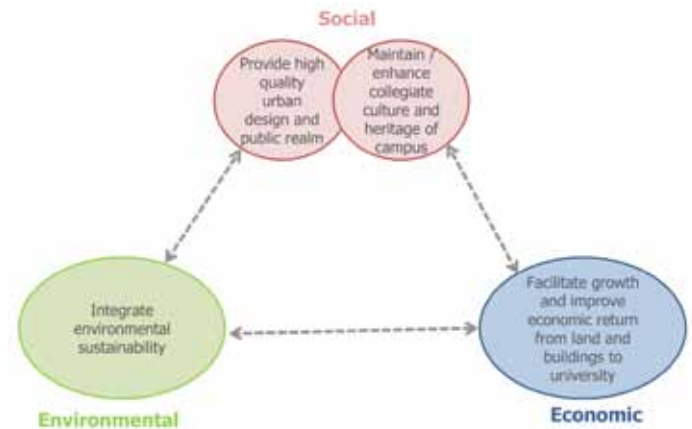
## 10.3 Sustainability Themes

Twelve key sustainability themes have been developed in conjunction with the Master Plan.

1. Via the Environmental Sustainability Advisory Committee, nurture and communicate a culture of environmental sustainability within the University. Consider becoming a signatory to the Talloires Declaration. Integrate environmental performance into the current reporting protocols of the University's Annual Report.
2. Move towards a carbon-neutral campus by means of non-renewable fossil fuel replacement strategies and adoption of greater energy efficiency across campus. In particular progressively reduce the University's dependence on coal for heating and utilise the existing University district heating infrastructure networks.
3. Maintain a compact, walkable campus with augmented cycling and public transport networks for more remote campus communities. Reduce dependence on motor vehicles so that the existing car parking is gradually reduced. Enhance public transport use through the provision of a network of bus stops on campus with appropriate weather protection. Encourage the use of cycles through the provision of purpose-built storage in all new construction.
4. Investigate the potential for improvements to the campus landscape/ecology and plan for campus-wide re-use of stormwater and maintenance of the aquatic environment as part of Water of Leith flood mitigation works.
5. Implement progressive life-cycle upgrading of the existing campus built environment and create a new environmental paradigm in areas of new campus growth. Utilise climate-responsive building design principles.



DIMENSION	CURRENT	MID-TERM 2020	END TERM 2030
<b>GREENHOUSE GASES</b>	45kgCO <sub>2</sub> /m <sup>2</sup> /yr	22.5 kgCO <sub>2</sub> /m <sup>2</sup> /yr	0 kgCO <sub>2</sub> /m <sup>2</sup> /yr (Carbon Neutral)
<b>ENERGY</b>	172kWh/m <sup>2</sup> /yr	140kWh/m <sup>2</sup> /yr	100kWh/m <sup>2</sup> /yr
<b>WATER</b>	0.84kL/m	0.7kL/m <sup>2</sup> /yr	0.6kL/m <sup>2</sup> /yr
<b>SOLID WASTE</b>	No data. Audit required	50% recycled	100% recycled (Target Zero)
<b>HAZARDOUS WASTE</b>	No data. Audit required	?	?
<b>TRANSPORT TO DUNEDIN CAMPUS</b>	79% students walk 18.5% staff walk 3% students cycle 9% staff cycle 1% students use bus 6% staff use bus 16% students drive 66% staff drive	79% students walk 25% staff walk 11% students cycle 17% staff cycle 10% students use bus 25% staff use bus 0% students drive 33% staff drive	79% students walk 25% staff walk 10% students cycle 11% staff cycle 17% students use bus 10% staff use bus 0% students drive 0% staff drive (Target Zero)



- Develop solid and hazardous waste management strategies to minimise waste generation and maximise diversion by recycling where appropriate. Provide hot rot box or vertical composting unit for green waste from the Union and residential colleges.
- Promote the principles of environmental sustainability in the practice of the University's community service and outreach. Act as a catalyst for developing a sustainable and healthy North Dunedin which could in turn provide the impetus for Dunedin to become a 'Sustainable Learning City'. Link sustainability policies with Otago Polytechnic in a complementary way.
- Promote and audit environmental sustainability in the policies and practices that pertain to all aspects of the carrying out of the University's research, and encourage the incorporation of sustainability perspectives into appropriate areas of the University's teaching activities.
- Develop environmental literacy as a core capability of Otago students and staff.
- Consider the establishment of a campus sustainability fund to finance sustainability initiatives, with capital repayment by operating cost savings.
- Encourage the procurement of environmentally sustainable materials, goods and services by selecting products and services with lower operating costs and environmental impacts over their life cycle, and support suppliers who adopt socially responsible and ethical practices.
- Move towards incorporating all elements of assessment used in university sustainability reporting (administration, climate change and energy, food and recycling, green building, student involvement, transportation, endowment transparency, investment priorities, stakeholder engagement).

## 10.4 Current benchmarks and performance targets

It is recommended that the University develop targets for its environmental performance. The table above summarises the current environmental benchmarks for the University, together with potential mid and end term targets associated with the currency of the Master Plan.

## 10.5 Sustainability framework

A detailed strategy for sustainability is included as an Appendix to this report.

