SUSTAINABLE TRANSPORT STRATEGY 2012–2016

UTAS
Supporting documents and other information

Preliminary strategy scoping work, internal consultation recommendations and a review of other university activities in sustainable transport was undertaken in late 2010. These documents can be viewed and downloaded from the UTAS website at:


A summary of this Strategy also accompanies this main document.

Acknowledgements

Special thanks to Matt Smith, Eng Seow, and Kamal Singh for facilitating commencement of the UTAS sustainability journey and to Jacinta Young, UTAS Executive Director Commercial Services and Development, for facilitating its continuation to this point where we are able to produce subject level holistic strategies to more effectively design implementation plans and activities. Acknowledgement of the critical enabling function played by members of the Environmental Management Committee with support from the Senior Management Team is also warranted.

Due acknowledgment is also given to the project team outlined below who have contributed many hours to the development of this Strategy. Also thanks to UTAS staff who provided useful data, information or feedback, specifically: Rod Barnes, Fiona Brodribb, Clynton Jaffray, Janine McGuinness, Dean Mundey, Barry Russell and Dr Stewart Williams; and all other UTAS staff and students who contributed via workshops, written comment and consultation meetings.

Finally, our appreciation to our external partners who are so important in helping us work to deliver the objectives of this strategy. We particular thank the following for contributing their time and information: Andrew Tompson and Stuart Baird of Hobart City Council, Harry Galea and his team at Launceston Council, Gary Neil at Burnie City Council, James Verrier, Janine Pearson and Lorna Mitchell of the Tasmanian Department of Infrastructure and Energy Resources, Heather Haselgrove and Antony James of Metro Tasmania, and Wendy Spencer and Erin Buttermore of the Tasmanian Climate Change Office.

Project Team

| UTAS Sustainability | Corey Peterson, UTAS Sustainability Manager (Project Director) |
| UTAS Sustainability Consultant | Dr Anna Lyth (Lead consultant - project management, research and document development, external stakeholder consultation) |
| UTAS Sustainability Working Group | Kamal Singh, Sustainability Project Officer |
| UTAS Sustainability Working Group | Rowena Zwart, Sustainability Project Officer (South) |
| UTAS Sustainability Working Group | Mark White, Energy Officer |
| UTAS Sustainability Working Group | Duane Richardson, Sustainability Officer (North) |
| UTAS Sustainability Working Group | Sara Vikström (Student placement research officer) |
| UTAS Communications | Fiona Brodribb |
| Editing | Suzanne Cooper |
| Maps | Dr Michael Lacey, UTAS School of Geography and Environmental Studies |
I am pleased to introduce the University of Tasmania’s Sustainable Transport Strategy, part of the broader UTAS Sustainability Plan, which will support the long term future of our institution, improve travel experiences for students, staff and visitors and reduce the impact of travel on the environment.

Open to Talent, the University’s strategic plan, identifies ‘community’ as one of our key priorities. The University is one of the largest employers in Tasmania and recognises that our travel activities impact on the broader Tasmanian community, influencing transportation patterns in all regions.

This sustainable transport strategy, the University’s first, is a significant element in the fulfilment of our commitment to corporate social responsibility. Its implementation will bring about positive change to the way we manage our transport activities — change that will benefit staff, students, local communities and our environment.

Staff, students, key external stakeholders and the University community have all had a say in the development of this important document which, to be successful, will need the support of all stakeholders including regional partners. We will work together to develop the state’s economy while protecting the environment, encouraging the use of sustainable modes of transport, and promoting healthier lifestyles.

I encourage you to familiarise yourself with the strategy and to play an active role in growing the sustainability of our University.

Professor Peter Rathjen
Vice-Chancellor
Contents

Supporting documents and other information i

Acknowledgements i

Foreword ii

Executive Summary vii

1 Introduction 1

1.1 About this strategy 1

1.1.1 Factors contributing to the need for this strategy 1

1.1.2 Development of this Strategy 2

1.1.3 A word about data limitations and indicators 2

1.2 Defining ‘Sustainable Transport’ 4

1.3 The imperatives for sustainable transport 5

1.3.1 Environmental imperatives 5

1.3.2 Social and economic imperatives 5

1.3.3 Energy security and the cost of car travel 6

1.3.4 Government responses 7

1.3.5 Business imperatives 9

1.4 Imperatives for university attention to sustainable transport 11

1.4.1 Sustainable transport in the context of education for sustainability 12

1.4.2 University reputations in sustainability 12

1.4.3 What other universities are doing 13

1.5 The role of UTAS and progress towards sustainable transport 14

1.5.1 Guiding plans and principles 14

1.5.2 What UTAS has done so far 15

2 UTAS transport profile and issues 18

2.1 The locations of UTAS campuses and facilities 18

2.1.1 South (Hobart) 18

2.1.2 North (Launceston) 19
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.3</td>
<td>North-west (Burnie)</td>
<td>19</td>
</tr>
<tr>
<td>2.2</td>
<td>The UTAS Community – transport needs, practices and issues</td>
<td>21</td>
</tr>
<tr>
<td>2.2.1</td>
<td>UTAS students</td>
<td>21</td>
</tr>
<tr>
<td>2.2.2</td>
<td>UTAS staff</td>
<td>31</td>
</tr>
<tr>
<td>2.3</td>
<td>Transport services and infrastructure</td>
<td>38</td>
</tr>
<tr>
<td>2.3.1</td>
<td>Parking facilities and cost</td>
<td>38</td>
</tr>
<tr>
<td>2.3.2</td>
<td>Active transport infrastructure – supporting walking and cycling</td>
<td>42</td>
</tr>
<tr>
<td>2.3.3</td>
<td>Bus services</td>
<td>47</td>
</tr>
<tr>
<td>2.3.4</td>
<td>Carpooling</td>
<td>54</td>
</tr>
<tr>
<td>2.3.5</td>
<td>The University vehicle fleet</td>
<td>55</td>
</tr>
<tr>
<td>2.3.6</td>
<td>Virtual transport, communication and e-learning technologies</td>
<td>57</td>
</tr>
<tr>
<td>2.4</td>
<td>Towards a strategy – key opportunities for improving sustainable transport outcomes</td>
<td>59</td>
</tr>
<tr>
<td>2.4.1</td>
<td>South (Hobart)</td>
<td>62</td>
</tr>
<tr>
<td>2.4.2</td>
<td>North (Launceston)</td>
<td>64</td>
</tr>
<tr>
<td>2.4.3</td>
<td>North-west (Burnie)</td>
<td>65</td>
</tr>
<tr>
<td>2.4.4</td>
<td>Inter-regional trips</td>
<td>65</td>
</tr>
<tr>
<td>2.4.5</td>
<td>Vehicle fleet, procurement and offsetting</td>
<td>65</td>
</tr>
<tr>
<td>3</td>
<td>The UTAS Sustainable Transport Strategy 2012–2016</td>
<td>67</td>
</tr>
<tr>
<td>3.1</td>
<td>Strategy framework and principles</td>
<td>67</td>
</tr>
<tr>
<td>3.2</td>
<td>Improvement objectives and strategies</td>
<td>69</td>
</tr>
<tr>
<td>3.2.1</td>
<td>Objective 1: Maximise access to the university by healthy and sustainable transport options</td>
<td>69</td>
</tr>
<tr>
<td>3.2.2</td>
<td>Objective 2: Reduce the incidence of single occupant vehicle use and unnecessary travel</td>
<td>70</td>
</tr>
<tr>
<td>3.2.3</td>
<td>Objective 3: Reduce greenhouse gas (GHG) emissions from University transport sources</td>
<td>71</td>
</tr>
<tr>
<td>3.3</td>
<td>Strategic actions</td>
<td>72</td>
</tr>
<tr>
<td>4</td>
<td>Implementing the Strategy</td>
<td>83</td>
</tr>
<tr>
<td>4.1</td>
<td>A collaborative effort</td>
<td>83</td>
</tr>
</tbody>
</table>
4.2 Monitoring, reporting and evaluating

4.2.1 Importance of indicators, monitoring and evaluation

4.2.2 Key Performance Indicators for this Strategy

4.2.3 Reporting and evaluation framework

References

Appendix

Figures

Figure 2–1 Location of UTAS Facilities ................................................................. 19
Figure 2–2 Student admission counts 2004–2011 .............................................. 22
Figure 2–3 North-west (Cradle Coast Campus) student origins ...................... 23
Figure 2–4 Launceston (Newnham) student origins ........................................ 24
Figure 2–5 Hobart student origins .................................................................... 25
Figure 2–6 Ages of students at main UTAS campuses ..................................... 29
Figure 2–7 UTAS staff by campus and facility ................................................ 32
Figure 2–8 Hobart staff residential origins ...................................................... 34
Figure 2–9 Launceston staff residential origins ................................................ 35
Figure 2–10 Comparison of University Parking Permit Costs Per Annum .......... 39
Figure 2–11 Example of an accessible and useful university web portal on transport options ................................................................. 51
Figure 2–12 UTAS carbon emissions by source ............................................. 56
Figure 2–13 Number of UTAS video conference venues by region ............... 58
Figure 2–14 UTAS sustainable transport travel zones with most suited sustainable modes ................................................................. 60
Figure 3–1 The Strategy Framework ................................................................. 67

Tables

Table 1–1 What UTAS has done so far ............................................................. 16
Table 2–1 Approaches to facilitating a shift to sustainable transport modes and practices ................................................................. 61
<table>
<thead>
<tr>
<th>Glossary</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>BCC</td>
<td>Burnie City Council</td>
</tr>
<tr>
<td>BITRE</td>
<td>Bureau of Infrastructure, Transport and Regional Economics</td>
</tr>
<tr>
<td>BUGs</td>
<td>Bicycle User Groups</td>
</tr>
<tr>
<td>CBD</td>
<td>Central Business District</td>
</tr>
<tr>
<td>CCC</td>
<td>Cradle Coast Campus</td>
</tr>
<tr>
<td>C0₂-e</td>
<td>Carbon Dioxide equivalent</td>
</tr>
<tr>
<td>DIER</td>
<td>(Tasmanian) Department of Infrastructure and Energy Resources</td>
</tr>
<tr>
<td>EMC</td>
<td>(UTAS) Environmental Management Committee</td>
</tr>
<tr>
<td>EMP</td>
<td>(UTAS) Environmental Management Plan</td>
</tr>
<tr>
<td>GHG</td>
<td>Greenhouse Gas</td>
</tr>
<tr>
<td>HCC</td>
<td>Hobart City Council</td>
</tr>
<tr>
<td>IMAS</td>
<td>Institute for Marine and Antarctic Studies</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
</tr>
<tr>
<td>LCC</td>
<td>Launceston City Council</td>
</tr>
<tr>
<td>Metro Tas</td>
<td>Metro Tasmania</td>
</tr>
<tr>
<td>NGER</td>
<td>National Greenhouse and Energy Reporting</td>
</tr>
<tr>
<td>RACT</td>
<td>Royal Automobile Association of Tasmania</td>
</tr>
<tr>
<td>SBC</td>
<td>Sandy Bay Campus</td>
</tr>
<tr>
<td>STCA</td>
<td>Southern Tasmanian Councils Authority</td>
</tr>
<tr>
<td>TAFI</td>
<td>Tasmanian Aquaculture and Fisheries Institute</td>
</tr>
<tr>
<td>TD</td>
<td>Talloires Declaration</td>
</tr>
<tr>
<td>TUU</td>
<td>Tasmanian University Union</td>
</tr>
<tr>
<td>UTAS</td>
<td>University of Tasmania</td>
</tr>
</tbody>
</table>
Executive Summary

Universities across the world are looking for ways to cut costs, decrease their carbon emissions, strengthen their brands and manage emerging significant risks associated with transport to their operations and business. Many are developing sustainable transport strategies to address these challenges and develop more sustainable organisational transport cultures.

The University of Tasmania (UTAS) is one of the largest employers in Tasmania, and has large numbers of people moving within and between its various campuses and facilities. Most of these people drive single-occupant cars, all of which require infrastructure, services and parking spaces, and all of which contribute to the University’s carbon emissions. The University also manages its own vehicle fleet and procures products and services that involve a transport cost and carbon footprint.

UTAS has the opportunity to build on its already high standing within the Tasmanian community at large and immediate local communities and to demonstrate leadership in sustainable practice, including sustainable transport, via its own facilities and operations. The University can work with the community to help build capacity in sustainable practices and facilitate public conversations about doing things more sustainably, sharing its learnings and innovations, and building on the kudos the institution already celebrates within Tasmanian society.

This Sustainable Transport Strategy lays out the information we have about transport issues and practices within the University community and maps out a pathway towards more sustainable transport practices and outcomes. It pertains to all UTAS campuses and facilities located in Tasmania’s south (Hobart region), north (Launceston region), north-west (Cradle Coast region), and interstate facilities, and addresses transport issues for the whole UTAS community, including students, staff and visitors.

The need for this Strategy

A range of factors has contributed to the recognised need for this Strategy. These include:

- UTAS’s growing commitment to improving sustainability outcomes, including:
  - via the international Talloires Declaration (TD) to which UTAS is a signatory (the TD is a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach at colleges and universities)
  - the reduction of greenhouse gas emissions (GHG) from transport sources in line with Tasmanian and National reduction emission targets (the Tasmanian Government has committed to reducing Tasmanian GHG emissions to at least 60 per cent below 1990 levels by 2050)

- Recognition of the need to continue to facilitate good and equitable levels of access to university educational services and facilities

- Acknowledgement of the need to reduce the vulnerability of the University and its community to the continuing rising cost of transport fuel and the increasing risk to the organisation of significant transport fuel price hikes associated with global oil markets
• Recognition of the growing interest and potential of the student and staff community to access campuses and facilities by active modes such as cycling and walking, but acknowledgment that the quality and lack of integrated infrastructure supporting cycling and walking requires attention

• An increase in staff being located in and around the Hobart Central Business District (CBD), which increases the cost of parking and generates new kinds of city-based travel demand

• UTAS’s obligation to report its greenhouse gas emissions (GHG) from a range of sources (including transport) as part of the National Greenhouse and Energy Reporting system (NGER) and develop strategies to reduce energy consumption and GHG emissions over time

• Recognition of the need to manage risks and costs associated with supply chains impacted by the introduction of an economy-wide price on carbon and price hikes related to global oil-based transport fuel scarcity (e.g., peak oil)

• Recognition of the need to transition the University’s vehicle fleet (including motor and marine vehicles) away from oil-based transport fuels to less carbon intensive and lower cost transport fuel technologies

• Limitations on the financial and physical capacity of the University to meet the demand for on-campus parking

Summary of transport issues and opportunities

UTAS operations and activities and the associated movement of its staff, students and contractors contribute significantly to Tasmania’s travelling population and to the community-wide increases in transport infrastructure and service demand. This, and the need to consider the transport needs of the University, and the adequacy of transport services and infrastructure serving the university community now and into the future are important considerations in developing an understanding of improvement objectives and strategic actions.

Managing and planning for the transport needs of UTAS is a multi-faceted challenge. Foremost, UTAS is a multi-facility university. It has a diverse community of students, staff and visitors, and a diverse range of services and activities occurring at these different sites at different times throughout the year. Any plan for sustainably managing transport also needs to accommodate the University’s plans for continued student growth in all UTAS regions and the educational and economic value this brings to Tasmania.

The locations of UTAS facilities and the activities associated with university operations generate a range of trip types and transport challenges. As well as travel to and from home to study or work at UTAS facilities, there are significant inter-city movements between campuses, especially between Launceston and Hobart, and more localised intra-city movements between a variety of activities within each city or region.

This strategy addresses the different trip types associated with university activities and business.

• Trips to work or study
• Intra-city local trips for university business
• Inter-regional trips for university business and study
• Air travel

While there are opportunities and potential to enhance the accessibility and convenience of active modes of transport (walking and bicycling) and public transport in areas around the main campuses and in urban corridors that are relatively well served by public transport, there are many students and staff who face lengthy car trips, especially in the north and north-west regions or who are reliant on access to university services via information and communication technologies. The Strategy also acknowledges the different needs, limitations and response options for this group.

There are also a number of things the University can do to reduce the GHG emissions from its vehicle fleet, supply chains and transport related operational practices in addition to addressing transport accessibility and travel practices. Often such initiatives will have cost savings associated with them or other benefits such as improvements in staff productivity and reduction in the dependence of goods and services with large carbon footprints. Management of carbon from supply chains will become even more relevant in the context of the Australian Government’s introduction of a price on carbon, which will impact on the cost of freight transport.

Collaboration

There are many opportunities for the University to collaborate with various agencies on specific initiatives or co-ordinate where other plans and programs have common intents. The University will need to develop and maintain good working relationships with state and local government and bus service providers to fully realise the benefits of this Strategy.

The major stakeholders of relevance to the delivery of this Strategy are:

• Local Government – Hobart, Launceston, Burnie
• Tasmanian Department of Infrastructure and Energy Resources (DIER)
• Tasmanian Ministry of Sustainable Transport
• Bus service providers - Metro Tasmania, Redline and others

Monitoring and reporting progress

Monitoring and the application of useful indicators, evaluation, reporting and improvement are important elements of the UTAS Sustainable Transport Strategy and its implementation. Where it has been identified that baseline information and indicators are lacking the development of these have been identified as important priority strategies. It is intended that baseline data and the development of key performance indicators for this Strategy will have occurred by Year 1 of this Strategy period to facilitate the review and update of implementation plans. Establishing a monitoring framework and key performance indicators will help the institution and its stakeholders to:

• be accountable
• learn about core sustainability problems and the effectiveness of actions
• ensure programs and investments achieve desired outcomes.
The Strategy Framework

The Strategy is informed by the UTAS Environmental Management Plan 2009-2011 (EMP) and its targets. The EMP aspires to:

Contribute positively to addressing sustainable urban transport issues.

The Strategy is guided by three key improvement objectives for the University. These focus on the different improvement themes recognised as being the most significant UTAS transport planning and management themes for the next five years. Related to these improvement objectives are some 16 strategies from which strategic actions are recommended and implementation plans developed.

The strategies and actions entail a mix of essential principles in recognition of: first, the desire for an integrated approach to sustainable transport across the University; and second, of the multi-stakeholder approach that is required for delivering improvements in sustainable transport choices and outcomes. The strategies and actions therefore include the following elements:

- Improving baseline and monitoring information as a foundation for better informing transport planning and strategy review and evaluation into the future.
- Things the University can do to improve its own infrastructure, facilities and behavioural and procurement practices.
• Things the University needs to do in collaboration or co-ordination with other stakeholders to deliver improvements (such as local and state government agencies and bus provider services).

• Attention to the University’s four trip categories:
  – Trips to work or study
  – Intra-city local trips for university business
  – Inter-regional trips for university business and study
  – Air travel.

• Engaging with the University community and other neighbourhood communities to develop and deliver relevant improvements and solutions (such as neighbourhood active transport infrastructure and amenity improvements, community awareness raising or showcasing events).

• Integrating various strategy actions into academic and operational activities to foster a sustainability culture throughout the University.

Objectives of the Strategy 2012–2016

**Objective 1: Maximise access to the university by healthy and sustainable transport options**

Ensuring a good level of access to the range of educational services offered at UTAS and facilitating more sustainable transport options where feasible allows us to:

• reduce inequities in access to higher education in the state of Tasmania as far as possible through improvements in transport choices and online or remote educational services

• reduce the vulnerability of the University community to increasing transport fuel prices or fuel shocks by improving alternative transport options to the car and increasing the resilience of the institution and its community

• support the continued growth and development of the University by enhancing:
  – accessibility choices
  – the attractiveness and amenity of University campuses, facilities and environments to students, staff and visitors.

• facilitate active transport options, in turn enhancing the wellbeing of the university community

• reduce the growth in demand for on-campus and neighbourhood parking, thereby reducing the significant cost of parking provision to the University

In addition to these benefits to the University are the urban amenity, environmental and social benefits to the community at large of facilitating more sustainable transport options and practices, and social inclusion in higher education.
The strategies associated with this improvement objective to guide implementation plans and actions are:

1.1 Establish baseline measures and monitoring for this objective.

1.2 Provide and enhance walking, bicycling and motorcycle/scooter infrastructure (including end of trip facilities, cycle routes, safe and direct pedestrian routes).

1.3 Work with public transport providers to enhance public transport services to university facilities (including bus shelters, bus service information, Wi-Fi, ticketing, bus route planning, bike user access, and new public transport modes in target corridors).

1.4 Co-ordinate with other initiatives and establish networks that further support our sustainable transport objectives.

1.5 Identify opportunities to reduce student and staff travel inefficiencies through improvements to class timetables, e-learning and video conferencing access.

**Objective 2:**
Reduce the incidence of single occupant vehicle use and unnecessary travel

Reducing the degree of car use, particularly the number of single occupant vehicles arriving on campus, where there are opportunities to facilitate and encourage alternatives will help:

- reduce the growth in parking demand across University facilities – thereby reducing the financial burden of parking facilities on the institution
- reduce the costs of transport inefficiencies associated with university business travel
- reduce the GHG emissions from university transport sources
- improve neighbourhood amenity and traffic safety on and around campuses

The strategies associated with this improvement objective to guide implementation plans and actions are:

2.1 Establish baseline measures and monitoring for this objective.

2.2 Encourage students and staff to consider sharing vehicles or choosing non-car options for short trips.

2.3 Minimise the number of single occupant vehicle trips.

2.4 Create an environment where more efficient vehicle options are attractive (motor cycles/scooters, electric vehicles).

2.5 Create an environment where more efficient travel is considered.
Objective 3: Reduce greenhouse gas (GHG) emissions from university transport sources

As well as positioning UTAS as a carbon responsible and sustainable higher education institution in the global education market and within the national and state economy, this objective focuses the University on:

- Its regulatory compliance requirements associated with NGER
- Meeting energy consumption and GHG emission reduction targets established in the UTAS Environmental Management Plan
- Meeting the aspirations of many staff and students to be part of an institution and community that is taking action to address climate change through reducing energy consumption and GHG emissions from personal and university transport sources. This aspiration was articulated strongly at the internal staff workshop in October 2010.
- Reducing the University’s transport costs through reduced consumption of transport fuels
- Reducing the carbon footprint of goods and services procured by the University through consideration of GHG emissions associated with supply chains. With the impending price on carbon and the risk of fuel price hikes associated with peak oil this is likely to provide cost savings.
- Addressing transport and work productivity inefficiencies (such as when virtual transport is a viable alternative to long distance travel for university meetings).

The strategies associated with this improvement objective to guide implementation plans and actions are:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Establish baseline measures and monitoring for this objective (including GHG emissions from vehicle fleet, collective travel behaviour, and supply chain activities).</td>
</tr>
<tr>
<td>3.2</td>
<td>Identify and implement emission and waste reduction strategies for the UTAS vehicle fleet (including encouraging procurement of more efficient vehicles, use of alternative fuels and reduction of unnecessary vehicle use).</td>
</tr>
<tr>
<td>3.3</td>
<td>Identify opportunities to reduce GHG emissions from supply chains.</td>
</tr>
<tr>
<td>3.4</td>
<td>Identify certified ethical carbon offset opportunities for any emissions we can’t reduce and facilitate implementation of these.</td>
</tr>
<tr>
<td>3.5</td>
<td>Support and recognise individuals and business units (Schools, Institutes, sections) who act to reduce their transport emissions.</td>
</tr>
<tr>
<td>3.6</td>
<td>Encourage more energy-efficient travel behaviour.</td>
</tr>
<tr>
<td>3.7</td>
<td>Identify and reduce unnecessary travel (including local business travel, flights).</td>
</tr>
</tbody>
</table>
Strategic Actions

Actions associated with these strategies are outlined in Section 3.3 of this document and the Strategy Summary.
1 Introduction

1.1 About this strategy

This Sustainable Transport Strategy (the Strategy) has been developed by the University of Tasmania (UTAS) to guide investments and actions that deliver more socially, economically and environmentally sustainable transport outcomes and travel behaviours.

The Strategy pertains to all UTAS campuses and facilities located in Tasmania’s south (Hobart region), north (Launceston region), north-west (Cradle Coast region), and interstate facilities. The Strategy also covers transport needs, issues and opportunities for the whole UTAS community, including students, staff and visitors. It recognises that transport issues are community-wide and that in addition to individual actions, the responsibility to address transport challenges lies with a range of stakeholders, including large institutions and trip generators such as UTAS, the business sector and governments at all levels.

It is hoped that this Strategy and the actions that flow from it will not only benefit UTAS as an institution, and the university community within it, but will also benefit Tasmania at large via attention to passenger transport deficiencies and inefficiencies, improved urban amenity around university campuses, engagement activities with communities, and demonstration of the role of such institutions and workplaces in sustainable transport planning, procurement and management.

1.1.1 Factors contributing to the need for this strategy

A range of factors has contributed to the recognised need for this strategy. These include:

- UTAS’s growing commitment to improving environmental and sustainability outcomes, including:
  - via the international Talloires Declaration (TD) to which UTAS is a signatory (the TD is a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach at colleges and universities)
  - the reduction of greenhouse gas emissions (GHG) from transport sources in line with Tasmanian and National reduction emission targets (the Tasmanian Government has committed to reducing Tasmanian GHG emissions to at least 60 per cent below 1990 levels by 2050)

- Recognition of the need to continue to facilitate good and equitable levels of access to university educational services and facilities

- Acknowledgement of the need to reduce the vulnerability of the University and its community to the continuing rising cost of transport fuel and the increasing risk to the organisation of significant transport fuel price hikes associated with global oil markets

- Recognition of the growing interest and potential of the student and staff community to access campuses and facilities by active modes such as cycling and walking, but acknowledgment that the quality and lack of integrated infrastructure supporting cycling and walking requires attention
An increase in staff being located in and around the Hobart Central Business District (CBD), which increases the cost of parking and generates new kinds of city-based travel demand

UTAS’s obligation to report its greenhouse gas emissions (GHG) from a range of sources (including transport) as part of the National Greenhouse and Energy Reporting system (NGER) and develop strategies to reduce energy consumption and GHG emissions over time

Recognition of the need to manage risks and costs associated with supply chains impacted by the introduction of an economy-wide price on carbon and price hikes related to global oil-based transport fuel scarcity (e.g., peak oil)

Recognition of the need to transition the University’s vehicle fleet (including motor and marine vehicles) away from oil-based transport fuels to less carbon intensive and lower cost transport fuel technologies

Limitations on the financial and physical capacity of the University to meet the demand for on-campus parking

1.1.2 Development of this Strategy

This Strategy has been developed through consultation within the University community (staff and students) and with key external stakeholders responsible for transport planning and the delivery of transport services (including city councils, State Government and bus service providers). It has been informed by an investigation of the range of transport issues and response options for all UTAS facilities locations.

The Strategy development journey began in 2010 when UTAS Sustainability was resourced with permanent staff and a recurrent budget allocation as part of UTAS Asset Management Services. Towards the end of 2010, UTAS Sustainability commissioned consultants to start scoping the issues and opportunities for sustainable transport for UTAS as a whole. This process entailed a review of initiatives, experiences and learnings from other universities and the facilitation of a scoping workshop for key internal stakeholders including executive, academic, and general staff and student representatives from all UTAS regions. Some 30 people attended in all. The outcome of this process was an endorsement of the need to develop an integrated sustainable transport strategy that not only dealt with transport infrastructure and service planning and management issues, but also developed a university-wide culture of sustainability.

In the first half of 2011 the Sustainable Transport Strategy project team continued to consult with internal and external stakeholders on specific issues and explore opportunities for improvement and change.

From this process a draft strategy was developed. A final round of consultation with the University community and key stakeholders provided feedback on the draft and contributed to this final document.

1.1.3 A word about data limitations and indicators

One of the first barriers identified in developing this strategy was the lack of relevant transport indicators for the university as a whole, and for each of the University’s three regions and interstate facilities. For example we lack data indicating the transport mode

1 A report from the scoping workshop can be accessed at http://www.env.utas.edu.au/transport.htm
share of students and staff at each campus or major facility. We also need to understand much more about work-related travel within urban areas and regions, the effectiveness of carpooling schemes and the use of the University’s vehicle fleet as a whole.

An essential outcome of this Strategy is the need to establish baseline data to inform the development of key performance indicators and a monitoring, reporting and evaluation framework linked to this strategy. In the meantime, however, we’ve developed this Strategy using other useful available data and secondary indicators, or well-founded assumptions to guide initial directions.
1.2 Defining ‘Sustainable Transport’

The term ‘sustainable transport’ is used to describe modes of transport and systems of transport planning that are consistent with wider concerns of sustainability. There are various interpretations of sustainable transport, and images associated with its meaning, but the more popular meaning in Australia tends to refer to:

... modes of transport (or ways of getting around) that reduce or minimise social costs and environmental impact, particularly the minimisation of carbon and other polluting emissions from transport.

A more comprehensive definition is presented in Box 1. This definition has been adopted by significant organisations such as the European Council of Ministers for Transport, and it demonstrates the scope of social, economic and environmental reasons for pursuing more sustainable transport systems and practices at a range of levels.

Ultimately sustainability is all about looking after the future today and doing things smarter for a range of interrelated environmental, social and economic reasons, while thinking about how to manage transport demand more sustainably.

It makes good business sense to improve efficiencies in transport operations and travel practices. The responsibility for and benefits of sustainable transport therefore reach throughout the community from individuals and households, to organisations and institutions, and government agencies.

The UTAS sustainable transport strategy is guided by the principles of:

- Accessibility
- Social and inter-generational equity
- Affordability, economic efficiency and resilience
- Minimisation of the environmental impact of transport.

Box 1
A definition of sustainable transport

A sustainable transport system is one which:

- Allows the basic access and development needs of individuals, companies and society to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between successive generations.
- Is affordable, operates fairly and efficiently, offers a choice of transport mode, and supports a competitive economy, as well as balanced regional development.
- Limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes, while minimising the impact on the use of land and the generation of noise.

Centre for Sustainable Transport, Canada
1.3 The imperatives for sustainable transport

There have long been reasons for looking at ways to improve accessibility in urban areas and reduce the impact of the growth in motor vehicle use. Many of these reasons are social and economic, such as improving accessibility to jobs and services, reducing social exclusion from higher education, improving the efficient operation of cities and reducing social and organisational costs associated with high levels of car use, particularly single occupant vehicles. The challenges of environmental protection and climate change, and the re-emergence of transport energy security, are additional reasons for addressing car use and have re-framed the context for transport planning.

1.3.1 Environmental imperatives

Increasing community-wide awareness about global warming and the contribution of greenhouse gases (GHGs) from human activities such as transport has prompted new urgency to pursue more sustainable travel practices and transport technologies around the world. In some cities and regions the motivators for sustainable transport initiatives have been concerns about urban air quality and its impact on human health (whether region-wide or localised) and traffic noise.

Transport emissions are one of the strongest sources of GHG emissions growth in Australia.

It is expected that emissions from the transport sector will continue to grow with direct carbon dioxide equivalent (CO₂-e) emissions projected to increase 22.6% over the period 2007 to 2020. In Tasmania the story is similar, although the projected growth is expected to be half of this.

1.3.2 Social and economic imperatives

Sustainable transport may also have other social and economic intents, such as: improving accessibility to urban services, employment and education; reducing the social exclusion and personal travel costs of those with limited access to a car or with limited alternative transport choices to using a car; encouraging healthier lifestyles through promotion of walking and bicycling; or reducing the community-wide cost of traffic congestion (Box 2) and traffic delays on economic productivity and community health and wellbeing.

While smaller cities such as Hobart or Launceston are not experiencing the degrees of traffic congestion evident in Australia’s larger cities, there are some transport corridors, traffic hotspots and times of the day that experience congestion more regularly, thereby affecting travel time and productivity. The average unit cost of congestion is still projected to grow in Hobart. The BITRE estimates that by 2020, road

---

Box 2
The cost of traffic congestion in Australia

The Australian Bureau of Infrastructure, Transport and Regional Economics (BITRE) estimates that the avoidable cost of traffic congestion on Australian roads is set to double by 2020 – costing the national economy around $20 billion by 2020. Costs include estimates of lost productivity, and inefficiencies associated with increasing travel times for workers and the transport of goods and services, as well as social costs.

Infrastructure Australia, 2010

---

2 Infrastructure Australia, 2010, p. 2
3 McLennan Magasanik Associates, 2009
congestion in Hobart could produce about $70 million in avoidable social and economic costs\(^4\). Such costs would also be relevant to Launceston but on a smaller scale.

Traffic congestion and a heavy reliance on private motor vehicle transport also present infrastructure and amenity costs at the local level associated with the need to accommodate parking demands and an ever increasing demand for road space. Economic inefficiencies in the use of valuable land in central areas for relatively low value uses (such as parking), and conflicts where local traffic and parking pressures impact on community or neighbourhood amenity, are other social and economic costs that are often taken for granted. Such costs are borne by the community including institutions such as UTAS.

1.3.3 Energy security and the cost of car travel

Most commentators anticipate that rising oil prices (and thereby the relative increase in petrol prices) will continue to be an issue in the foreseeable future.

There are also well-founded concerns that transport fuel prices will increase sharply due to the onset of ‘peak oil’ (Box 3) consequently limiting the capacity for communities to adapt to gradual price increases. Optimistic estimations of peak oil production forecast the global decline will begin by 2020 or later. More realistic estimates are that either the peak has already occurred, we are on the cusp, or that it will occur shortly (in the period of this Strategy).

Both the International Monetary Fund\(^5\) (IMF) and the International Energy Agency’s Chief Economist, Faith Birol\(^6\) confirm that we are now moving into a period of increased global oil scarcity.

Modelling of Tasmanian oil vulnerability recently commissioned by the Tasmanian Minister for Sustainable Transport points to a high degree of confidence that oil prices will be both volatile, high and rising into the future for a range of reasons and that Tasmania needs to plan to mitigate the impacts on the most vulnerable sectors of the economy and community\(^7\). For example, there is a risk that rising oil prices will affect supply chains to Tasmania, slow the growth in the international student market and restrict Tasmanian student access to the University due to high transport costs.

---

\(^4\) BITRE, 2007  
\(^5\) International Monetary Fund, 2011  
\(^6\) ABC Radio, The Science Show ‘Peak Oil Just Around the Corner’ (23 April 2011)  
\(^7\) Centre of Policy Studies, 2011
Transport costs are already one of the largest items in Australian household budgets\(^8\), and recent Consumer Price Index statistics show that fuel prices are rising most significantly compared to other household expenses\(^9\). Lower income households (including students) are particularly vulnerable to transport fuel price hikes when they rely on a car to get around. This in turn can limit access to education, jobs and services and so has personal and community-wide social costs. This is relevant to the University community where it is essential that students’ access to educational opportunities is not reduced because of the cost of transport, or the effect this cost might have on their capacity to purchase other essential living items. By facilitating the provision of a range of alternative transport options to the car and improving access to University services and facilities by a range of means, the University would be acting to reduce the impact on its community and the risks to its business - in terms of both operational costs and the risk of reduced student numbers from out of state and overseas.

### 1.3.4 Government responses

Governments at all levels are responding to the challenge of reducing and managing the negative environmental, social and economic impacts of urban transport. As transport and travel behaviour are impacted by multiple, and not necessarily ‘rational’ factors, governments use a variety of strategies to improve the energy efficiency of transport networks, vehicles, fuels and urban areas while also encouraging people to drive less and walk, cycle and use public transport more.

---

\(^8\) ABS, 2006  
\(^9\) ABS, 2011
The national response, in the absence of a price on carbon, has been focused on: setting vehicle emission and fuel quality standards; import and excise taxes; funding public transport infrastructure and sustainable transport incentive programs; and improving coordination between federal, state and local government planning processes to improve coordination of transport planning and investment, mobility and accessibility, and environmental and energy outcomes.\(^\text{10}\)

In 2008 the Commonwealth Government introduced the National Greenhouse Energy Reporting framework (NGER), which requires organisations and corporations whose operations or facilities emit 25,000 t CO\(_2\)-e\(^1\)) (single facility) or 125,000 t CO\(_2\)-e (total operations) annually to assess and report their emissions. Liable organisations report their emissions resulting from electricity, gas and liquid fuel use including fuel burnt in vehicles and machinery, as well as other sources such as mining. Many universities, including UTAS, began to report under NGER in 2010/11.

While transport fuels for passenger vehicles are unlikely to be included in the initiative by the Commonwealth Government to introduce a price on carbon via a carbon tax in 2012 and then an emission trading scheme, it is possible that some restructuring of road transport costs via changes to fuel excises to reflect the carbon energy content in fuels and the introduction of other pricing tools (such as road-user charges in some areas to discourage the use of road transport) will occur and there will be some transport fuel price adjustments.

At the state level, many governments are implementing strategies to encourage more people to walk, cycle and use public transport. These interventions include having sustainable transport

---

\(^{10}\) Local Government and Planning Ministerial Council, 2009

\(^{11}\) t CO\(_2\)-e denotes ‘Tonnes of CO\(_2\) equivalent’

---

**Box 5**

Example of Tasmanian Local Government initiatives promoting sustainable transport outcomes

**Sustainable Transport Planning**

Both Hobart City Council (HCC) and Launceston City Council (LCC) have Sustainable Transport Strategies. In its strategy the HCC identified most of the essential requirements for delivering more sustainable transport outcomes. It strongly advocated for an integrated approach to transport planning throughout the Hobart metropolitan region recognising the importance of governments at all levels and other stakeholders to work collaboratively to address regional transport challenges.

HCC and LCC recently commissioned the Danish Transport Planning expert, Jan Gehl, to develop proposals for improving the amenity, walkability and accessibility of each city’s CBD. The Hobart Gehl plan suggests many features that would benefit the UTAS community, including bus infrastructure, and pedestrian and bicycling connectivity and amenity improvements.

**Walking and bicycling initiatives**

HCC, LCC and Burnie City Council (BCC) all have various bicycling and walking plans and infrastructure programs. For example:

- The HCC Sandy Bay Road Cycleway is one initiative that is particularly relevant to UTAS.
- CyclingSouth is a co-operative initiative of the Southern Councils to promote a regional approach to provision of bicycling networks and infrastructure.
- LCC is working towards a Greater Launceston Bicycle Commuting Network and arterial bike routes, and with Sport and Recreation Tasmania and other neighbouring councils, have created a regional map displaying possible commuter cycling routes and how they could be best linked between council areas.

**Local public transport**

An initiative of the LCC to encourage public transport use and address city parking pressures, the ‘no fare’ Tiger Bus shuttle operates at the beginning and end of the working day and is an easy and affordable option for CBD commuters to park and ride at Inveresk. It also enhances bus services to the UTAS Inveresk facilities although patronage on this part of the route has been low. While the service is free to users the service comes at a public cost (approximately $280,000 a year for LCC to support the service).
requirements as part of urban development assessment processes; health and physical activity campaigns; implementing fleet management strategies to minimise and reduce emissions; and funding active and public transport infrastructure.

Local governments have a similar set of responsibilities for local planning and infrastructure, delivering opportunities for more sustainable outcomes at the local and neighbourhood scale. Boxes 4 and 5 summarise some key Tasmanian state and local government strategies, plans and initiatives that address transport challenges and seek outcomes.

So, in addition to the State Government the University can seek to work with Hobart City Council, Launceston City Council and Burnie City Council to realise mutual objectives for improving local accessibility, walkability, and bicycling capability.

1.3.5 Business imperatives

All large public and private sector institutions need to manage travel and transport issues and costs. Larger institutions, such as universities or other major places of work (individual employers or groups of employers), contribute cumulatively to the wider social, economic and environmental implications discussed above. However, there are also sound business arguments for implementing more sustainable practices.

Increased fuel costs and other regulatory requirements mean many large employers and trip generators are using sustainable transport plans to reduce fuel and vehicle costs of work-related travel as well as manage limited land resources and growing costs associated with parking infrastructure provision and subsidisation. Box 6 shows some examples of such realised cost savings from sustainable transport initiatives by various organisations.

At UTAS the cost of parking subsidy is approximately $500,000 per annum and this will continue to increase, placing greater pressure on the University budget\(^\text{12}\). This issue is common to many Australian universities and parking is often a key reasons why a university commits to looking at alternative solutions.

---

\(^{12}\) UTAS Parking Policy Review, 2011
There are also business imperatives associated with facilitating good amenity and accessibility within the workplace as well as providing flexible working opportunities. Appealing to staff members who value these aspects of a workplace can help maintain a positive workplace, retain staff and attract quality new staff.

Growing interest in sustainable living and responsibility in the global student market may also increasingly influence students’ choices about where to study, particularly those enrolling in sustainability or environmentally focused course or research programs. These are important considerations for UTAS as it is competing in the national and global market for students and high calibre academics.

Universities also need to recognise the economic costs to their business of social exclusion to their facilities and services associated with transport inadequacies.
### 1.4 Imperatives for university attention to sustainable transport

Universities are major trip generators and users of transport services. On this basis alone they are important stakeholders in developing sustainable transport systems. Indeed many university campuses operate like mini towns or neighbourhoods, managing significant parking facilities, campus roads and relationships with public transport service providers and local communities. Universities procure and maintain vehicle fleets for a range of uses and are affected by supply chain costs associated with rising transport costs. They are also significant consumers of energy and emitters of GHGs with an increasing number of Australian universities now required to report emissions under NGER.

Universities have a significant interest in enhancing the accessibility of their facilities and services to students as part of the marketability of their institutions. Improving accessibility does not just apply to motor vehicles, in fact enhancing the range of transport mode choices is likely to improve access to the institution and reduce the cost of travel for many students, staff and visitors. This often enhances the attractiveness of the institution and its connectivity with surrounding activities and places, while reducing the institution’s operational costs and the community-wide externality costs associated with providing for motor vehicle use.

There are many common reasons that universities pursue sustainable transport initiatives but it is also important to state that each university is in itself unique, with varying circumstances associated with location, travel demand, available transport infrastructure and services, parking and operational contexts. One of the most common motivators, however, is the need to limit growth in parking demand and the rising costs to university institutions associated with the provision and management of parking.

A sustainable transport plan is often embedded within an overarching sustainability vision and strategy for the university, although some plans may be focused on managing an individual issue such as parking demand problems or local traffic congestion. Plans may take the form of traditional workplace travel plans that focus on reducing the environmental impact of the travel practices of employees and students to and from campus facilities. They can also extend to other operations and functions, including the procurement and management of vehicle fleets, intra-campus transport (e.g. small electric vehicles for security or intra-campus freight movement), and amending institutional policies and procedures that foster unsustainable transport outcomes.

There is growing recognition that universities can do more to engage with the challenges of sustainability, particularly better integrating their core activities of education and research with institutional operations and facilities management to develop university-wide sustainability (see Box 7). The UTAS Academic-Operations Sustainability Integration Program (AOSIP) is an important element of the UTAS response to this challenge.

---

**Box 7**

*The contribution of higher education to sustainability in Australia*

“Change towards sustainability in this sector requires more than just rethinking education plans or curricula. Ultimately, learning for sustainability has implications for the core of the institutional culture, influencing the decisions, management procedures and research actions of the further and higher education sector.”

“For education institutions to more deeply address sustainability there is a need to link campus management to research, curriculum and administrative practice, such that sustainability is embedded across every aspect of institutional operations in a synergistic way.”

*Tilbury et al (2005)*

---
1.4.1 Sustainable transport in the context of education for sustainability

The United Nations General Assembly has proclaimed the years 2005–2014 the Decade of Education for Sustainable Development (DESD)\textsuperscript{13}. Governments from around the world have been invited to strengthen their contribution to sustainability through a focus on education. Universities play an important role in shaping the way society thinks, as well as educating the next generation of decision-makers (business leaders and government executives alike)\textsuperscript{14}. Universities communicate on their research and engage with the community on issues of topical interest, as well as demonstrate better practice and behaviours through innovations. They are also the main places of training for the teaching profession itself,\textsuperscript{15} who in turn influence the wider community.

There are many opportunities to integrate active sustainability learning or ‘education for sustainability’ into the culture, operations and curricula of universities, as well as linking operational activities to the learning environment impacting on the sustainability literacy of students and staff. This might include education about sustainable transport behaviour and planning, engaging students in the collection and analysis of travel data or travel behaviour research for the university community via a formalised learning program, and including staff in defining issues, suggesting and implementing solutions within their own work units.

The UTAS Environmental Management Committee and the network of volunteer Sustainability Representatives is an important first step to include staff and students from throughout the University in the UTAS sustainability journey.

1.4.2 University reputations in sustainability

University reputations are at stake with the emergence of university scorecards and rankings on their commitment to sustainability and their reputations in this area. With growing global interest in sustainability issues and competitive student and academic labour markets, discerning students and potential new high quality academic staff are likely to be increasingly influenced by campus cultures and institutional commitments to sustainability when choosing where to study or work. Public scorecards, reporting or other information that can be used to compare institutional performance in this area is becoming more sophisticated and accessible around the world, including in Australia (see Box 8). The Tertiary Education Facilities Management Association (TEFMA) and the Australasian Campuses Towards Sustainability (ACTS) are working together to develop reporting mechanisms while the Monash University led Sustainable Campus Group is also doing development work on scorecards and is gaining support in Australasia.

Box 8
University sustainability performance reporting and scorecards

An increasing number of universities and colleges in the USA and Canada have participated in the College Sustainability Report Card, such that the recent 2010 findings included over 300 institutions. This report card examines colleges and universities, as institutions, through the lens of sustainability, and scores institutions on a range of criteria including transport.

Similar scorecards and voluntary reporting schemes are currently being developed and negotiated for Australian universities.

\textit{Sustainable Endowments Institute (The College Sustainability Report Card)}

\textsuperscript{13}For more on the Decade of Education for Sustainable Development and Australian Government activities and in this area: http://www.environment.gov.au/education

\textsuperscript{14}Tilbury et al., 2005

\textsuperscript{15}Tilbury et al., 2005
1.4.3 What other universities are doing

There have been a number of sustainable transport initiatives implemented by Australian and international universities. Background research\(^{16}\) on the initiatives used to inform this strategy found that:

- Universities varied in the extent to which they dealt with transport issues, but there were many commonalities of focus. The main focus of attention for all examples investigated was the development of strategies for encouraging a shift from car use (particularly single-occupant car use) to public transport or active modes (walking or cycling). Often there were targets or performance indicators associated with this objective.

- Areas where there was particular variability in attention included incorporation of vehicle fleet procurement and management strategies; attention to workplace and information technology practices and policies to remove impediments to sustainable travel practices or facilitate the reduction in the need for some trips in the first place; and staff business travel management (e.g. offsetting air travel flights, use of ‘green’ taxi services, or business travel car share or carpool schemes).

- Where universities focused on the reduction of their carbon footprint as a core objective (whether as a response to regulatory requirements or not) they tended to include management of the vehicle fleet, technology responses and offsetting opportunities.

- Only a few universities focused on the whole institution, with these institutions acknowledging the role of the university in the broader sustainability challenge and the benefit of sustainability positioning and branding within the higher education market.

Universities tend to focus attention on the following four cornerstones. If undertaken together they form an holistic approach to a university sustainable transport strategy:

1. Facilitating and promoting active transport
2. Encouraging public transport and increased occupancy of vehicles
3. Improving sustainability and efficiency of university business operations
4. Community and university-wide engagement and learning

\(^{16}\) Rare Consulting, 2010,
1.5 The role of UTAS and progress towards sustainable transport

The University of Tasmania has an international standing and is an organisation that aspires to achieve excellence in all its activities as well as leadership within its community. It is the only university in Tasmania and therefore plays an important role in the state’s cultural, social and economic development. This is reflected in the University’s mission statement\textsuperscript{17}. With three main regions (South, North and North-West), UTAS activities also contribute to community engagement and development on a regional scale and within the three cities of Hobart, Launceston and Burnie. Each campus has a number of satellite sites that host staff and students from a range of different schools and units, while there are also interstate facilities. There are also significant and exciting plans for the future expansion of the University’s facilities and activities in the Hobart CBD and waterfront areas, while plans to develop the University’s northern campuses are also stated in its strategic plan (EDGE\textsuperscript{2}).

These perspectives on the University demonstrate it is more than merely a significant state employer and education facility that generates trips that need to be managed. The University’s standing within the Tasmanian community at large and immediate local communities also provides it with the opportunity to demonstrate leadership in sustainable practice, including sustainable transport, via its own facilities and operations. The University can engage with the community to help build capacity in sustainable practices and facilitate public conversations about sustainable practice, sharing its learnings and innovations, and building on the kudos the institution already celebrates within Tasmanian society.

1.5.1 Guiding plans and principles

The University is a signatory to the international Talloires Declaration (TD), a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach at colleges and universities. In addition to this international commitment to sustainability, the University’s role within the Tasmanian community and its implications for trip generation and transport demand, the University has developed an Environmental Management Plan 2009–2011 (the EMP) overseen by the UTAS Environmental Management Committee (EMC) and a parking strategy. Among a range of environmental management and sustainability objectives, the EMC has identified to further UTAS’s commitment towards sustainable transport via the following objective:

\textit{To contribute positively to addressing sustainable urban transport issues}

Transport targets outlined in this plan are summarized in Box 9.

The UTAS Sustainable Transport Strategy is the guiding mechanism to meet this objective, while it also reflects the University’s mission and overarching organisational strategy outlined in EDGE 2.

The EMP also refers to four core themes relevant to all of its objectives. These core themes provide fundamental principles for the development of a sustainable transport strategy in terms of helping focus attention on the sorts of initiatives and programs that might be implemented, and encouraging the rollout of integrated strategic plans and programs. They are:

\textsuperscript{17} Refer to the UTAS Strategic Plan 2008–2011, EDGE2
\textsuperscript{18} Refer to the UTAS Strategic Plan 2008–2011, EDGE2
1 **Communication and engagement**

To engender within the UTAS community a culture of environmental stewardship and continual improvement which is inclusive, responsive, innovative, engaged and informed in its role in contributing to a sustainable society.

2 **Sustainable procurement**

To contribute towards UTAS’s environmental sustainability through the development and application of sustainable procurement practices that ensure whole-of-life value for money by minimising inefficiencies and negative impacts on society and the environment.

3 **Academic operations sustainability integration program**

To integrate the mutual objectives of UTAS’s Environmental Management Program and Academic Program by using UTAS’s sustainable infrastructure and service needs as an opportunity for cross-disciplinary teaching, learning and research as well as supporting and accessing the sustainability knowledge base of graduates and academics.

4 **Sustainable infrastructure**

To ensure that infrastructure solutions demonstrate, through quantitative data collection and analysis, environmental, social and economic responsibility over their life cycle by minimising impact on natural ecosystems, using resources efficiently, reducing waste production, maximising opportunities for sustainable occupancy behaviour, and supporting a healthy built environment.

In addition to these four principles, and in light of the social and economic sustainability considerations, this strategy is also informed by a fifth principle not outlined in the EMP:

5 **Reduce vulnerability and build resilience**

External economic pressures on transport costs place pressure on University operations and the University community’s wellbeing and capacity to access university services into the future. A sustainable transport strategy will need to help minimise the risks and vulnerability of the University and its community to significant increases in transport fuel and vehicle costs and build its resilience to these into the future.

1.5.2 **What UTAS has done so far**

To date the University has implemented a number of very positive initiatives in an attempt to address transport issues and improve sustainable transport outcomes in line with the EMP. Prior to the establishment of UTAS Sustainability, however, the strategic coordination of such initiatives were limited and initiatives were usually ad hoc and poorly monitored. It is intended that this strategy will rectify this and better co-ordinate and monitor progress in delivery of sustainable transport outcomes. The initiatives that have been up and running to date and the development of this strategy reflect positively on the University’s commitment to develop more sustainable university transport outcomes for a range of reasons. Table 1.1 summarises initiatives that have been implemented in recent years that are delivering such improvement outcomes.
Table 1–1  What UTAS has done so far

<table>
<thead>
<tr>
<th>UTAS initiatives that have sustainable transport improvement intentions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UTAS Environmental Management Plan</td>
<td>This document establishes UTAS’s sustainability and environmental management commitment, principles, priorities and targets and informs other strategies such as the Sustainable Transport Strategy. The EMP is overseen by the UTAS Environmental Management Committee.</td>
</tr>
<tr>
<td>NGER compliance and activities</td>
<td>The University undertook an assessment of Scope 1 and 2 emissions for the calendar year 2009 to determine its obligations under NGER and a framework for future reporting. UTAS is now reporting emissions (including emissions from transport fuel consumption) under NGER beginning with the financial year 2010–11.</td>
</tr>
<tr>
<td>UTAS Parking Policy Review</td>
<td>UTAS has recently reviewed its parking policy and is considering recommendations for parking reform including pricing restructuring.</td>
</tr>
<tr>
<td>UTAS ‘Peak Oil’ Vulnerability and Risk Assessment</td>
<td>UTAS is undertaking a preliminary vulnerability and risk assessment for its organisation in light of the increasing concerns about the impacts of ‘peak oil’.</td>
</tr>
</tbody>
</table>
| Improving sustainable transport outcomes via the UTAS Sustainable Built Environment Design Policy | This policy mandates that all building projects (refurbishments, minor works, new buildings, access and compliance, service upgrades, demolition and building extensions) are required to meet high environmental sustainable design standards.  
A key focus of this Policy is to ensure that design supports the uptake of sustainable transport options. For example, the Medical Science 1 Building (MS1) includes design features that encourage occupants to use stairs rather than lifts and is providing a temporary sheltered and secure lock-up facility for approximately 100 bikes with access to change/shower rooms in MS1. The Medical Science Precinct Stage 2 building will include a permanent facility providing sheltered and secure parking for over 200 bikes and more convenient access to change/shower rooms. |
| Development of the sustainable transport strategy                       | Consultation with staff about sustainable transport issues and the scope of a sustainable transport strategy (Rare Consulting 2010)  
Background research on what other universities are doing (Rare Consulting 2010)  
Transport baseline data review and gaps analysis (Anna Lyth Consulting 2011) |
| Providing secure and undercover bike parking facilities across campus | Options for secure and undercover bike parking facilities across its major campuses similar to MS1 and MS2 initiatives are being investigated and a number of infrastructure improvement projects have been initiated. |
| Understanding more about how students and staff arrive on campus | Sandy Bay Campus – baseline counts of students and staff arriving on campus by foot, bicycle and bus were undertaken in early 2011. |
| Identifying the needs of cyclists | Sandy Bay Campus – a bicycling survey was undertaken mid-2011 to understand the needs of cyclists and opportunities to enhance safety and accessibility. |
| Design of sustainable transport infrastructure | The School of Architecture and Design has partnered with UTAS Sustainability to involve their staff and students in the design and building of bicycle parking facilities across the Sandy Bay Campus. In the past students have been involved in the design of various Launceston and Cradle Coast Campus bus shelters. |
| TravelSmart carpooling and bus service improvements | Jointly supported by the University of Tasmania, the Tasmanian University Union, the Department of Infrastructure, Energy and Resources, the Hobart City Council, Metro Tasmania and the Australian Greenhouse Office in 2006. Travel surveys of first-year students and car and bus arrivals to Sandy Bay campus provided some indication of transport issues. The TravelSmart project contributed to a number of improvement outcomes: |
| | • An online portal to match car trip journeys for those wishing to carpool was implemented (service used regularly by some 60–70 staff and students) |
| | • The establishment of a number of improved public transport options for staff and students: |
| | – a heavily discounted intercampus bus service (between Launceston and Sandy Bay) for students |
| | – an additional high frequency 888 bus service for staff and students travelling between Sandy Bay Campus and the Hobart CBD. |
| Hobart City Council Walking and Cycling Project | A number of submissions have been provided to Hobart City Council over the last 2 years outlining UTAS support for the Project as well as recommendations on how to improve access and safety for pedestrians and cyclists entering and exiting the University off Sandy Bay Road. |
| Involving students via academic integration | In 2010 students from the School of Geography and Environmental Studies were involved in an action learning project involving the collection of sustainable transport related data. A number of UTAS students are contributing research findings from their transport research projects and undertaking internships with UTAS Sustainability. |
2 UTAS transport profile and issues

UTAS operations and activities and the associated movement of its staff, students and contractors contribute significantly to Tasmania’s travelling population and to the community-wide increases in transport infrastructure and service demand. This, and the need to consider the transport needs of the university, and the adequacy of transport services and infrastructure serving the university community now and into the future are important considerations in developing an understanding of improvement objectives and strategic actions.

Managing and planning for the transport needs of UTAS is a multi-faceted challenge. Foremost, the University is a multi-facility university, it has a diverse community of students, staff and visitors, and a diverse range of services and activities occurring at these different sites at different times throughout the year.

The following sections outline the travel demand that is generated by the university community, travel practices and issues associated with transport for the university community, and the transport infrastructure and services that are available to students, staff and visitors. This section helps establish the various factors UTAS has to deal with in planning for more sustainable transport outcomes.

2.1 The locations of UTAS campuses and facilities

The University of Tasmania has three main campus hubs (Figure 2–1 a, b and c): south (Hobart), north (Launceston) and north-west (Burnie), and many other facilities in or around these hubs. Also of note are a number of facilities in Sydney and South Australia. These facilities and the activities associated with them generate a range of trips and transport infrastructure demands beyond those just focused on the movement of students and staff to and from campuses. Maps of the main campuses are provided in the Appendix.

2.1.1 South (Hobart)

The UTAS campuses and facilities in the south of the state are scattered in and around Hobart city. The largest campus is at Sandy Bay, a few kilometres south of the city centre. In the city centre are The Tasmanian Conservatorium of Music, the Centre for the Arts and the new Medical Sciences Centre, and scattered offices at Salamanca and near the bus mall.

Other facilities in the south include the Institute for Marine and Antarctic Studies – Fisheries Aquaculture and Coasts (previously the Tasmanian Aquaculture and Fisheries Institute) in Taroona, south of the Sandy Bay campus.

In the future the other activities of the Institute for Marine and Antarctic Studies will be relocated to new state of the art premises in the city waterfront precinct at Princes Wharf, while the original University building, Domain House, will also be redeveloped. There are also facilities at University Farm at Cambridge to the east of the city and the new Bisdee Tier telescope facility 50km to the north.
2.1.2 North (Launceston)

The University’s main northern campus is in the suburb of Newnham, about 5 km north of the city centre. The Academy of the Arts and the School of Architecture and Design are housed in the Inveresk Arts Precinct, an award-winning 17 hectare inner city site comprising arts studios, galleries, performance spaces, a museum and specialist workshops. The site is relatively close to the city centre (less than 2 km north) and has good pedestrian access to the city via dedicated boardwalks.

Other facilities are the Ann O'Byrne Rural Health Centre near the Launceston General Hospital, the Australian Maritime College at Beauty Point and laboratories at Mount Pleasant (south of Launceston).

2.1.3 North-west (Burnie)

The north-west campus in Burnie is the University’s newest campus (established in 1995) and is also known as the Cradle Coast Campus (CCC). It is located approximately 3 km from Burnie’s town centre.

The University’s state of the art Rural Clinical School is adjacent to the North West Regional Hospital in Burnie. Both facilities are in hilly locations away from the city centre and other retail hubs.

UTAS also runs dairy farms in the rural areas inland from Burnie city.

Figure 2–1 (a) Location of all UTAS Australian Facilities
Figure 2–1 (b)
Location of all UTAS Launceston and Hobart facilities

Facilities off the map

Launceston region:
The Australian Maritime College has facilities at Beauty Point (north west of Launceston) while there are facilities at Mt Pleasant (south of Launceston)

Hobart region:
There is miscellaneous office space occupied by UTAS within the Hobart CBD and facilities in Cambridge (north east of Hobart).
2.2 The UTAS Community – transport needs, practices and issues

The locations of UTAS facilities and the activities associated with university operations generate a range of trip types and transport challenges.

As well as travel to and from home to study or work at UTAS facilities, there are significant inter-city movements between campuses, especially between Launceston and Hobart, and more localised intra-city movements within each city or region.

This strategy aims to address these different trip types associated with University activities and business:

- Trips to work or study
- Intra-city local trips for university business
- Inter-regional trips for university business and study
- Air travel

2.2.1 UTAS students

UTAS’s equivalent fulltime student load (at July 2010) for its largest campuses was 8458 for the Sandy Bay Hobart campus, and 4778 for the Newnham Launceston campus. However, these figures don’t directly correlate to the actual number of students associated with each main campus and therefore the number of trips students make to and between UTAS facilities.

Figure 2–2 shows actual counts of student enrolments (continuing and commencing prior to conversion into full time equivalent) for Hobart, Launceston and north-west (Cradle Coast) locations and the growth in student numbers for the period 2004–2011. The graph reminds us that any plan for sustainably managing transport also needs to accommodate the university’s plans for continued student growth and the educational and economic value this brings to Tasmania.

Where students live and their journeys to university

Student residential origins as recorded at enrolment are useful in identifying opportunities for enhancing student access to university facilities by public transport or considering alternative strategies for those students located in areas less well served by direct public transport routes. Figure 2–3, Figure 2–4 and Figure 2–5 show the density of students by residential origin (at enrolment) for each UTAS regional centre. The maps demonstrate both similarities and differences between the regions, confirming some of the observations already described. They are particularly useful in identifying potential opportunities and priorities for enhancing accessibility, reducing car use or improving car use efficiency strategies.
North-west students (Cradle Coast Campus)

Figure 2–3 shows the dispersed nature of residential origins for students enrolled at the Cradle Coast Campus. Although there are clusters of students travelling from the main towns in the region, including in and around Burnie, Wynyard, Devonport and Ulverstone, many students face lengthy trips to attend facilities.

Launceston students (Newnham Campus)

Students attending the Launceston campus show considerable dispersal and diversity when it comes to where they live (as shown in Figure 2–4), with many making long trips throughout the north and north-western regions to attend campuses or access other university resources.

This figure also shows there is a high density of students living relatively close to the main campuses in and around Launceston.

Figure 2–2  Student admission counts 2004–2011

Source: UTAS Planning & Institutional Performance. Note: 2011 data is an estimate only
Students Enrolled at Cradle Coast Campus and Residing in Northern Tasmania, by Postcode Zone

Legend
- Cradle Coast Campus
- Rural Clinical School
- Distance from Cradle Coast Campus

Number of Students
- 10 - 49
- 50 - 99
- 100 - 199
- 200 - 299
- 300 - 399
- 400 - 499
- 500 - 999
- 1000 - 1999
- 2000 - 3000

Data sources: University of Tasmania, the LST (© State of Tasmania). Prepared by: Michael Lacey, School of Geography and Environmental Studies.

Figure 2–3 North-west (Cradle Coast Campus) student origins
Figure 2–4  Launceston (Newnham) student origins
Figure 2–5  Hobart student origins
Hobart students (Sandy Bay Campus)

The map of residential postcode origins for students enrolled in Hobart shows a picture of diversity in transport demand and opportunity (Figure 2–5).

First, Hobart is similar to Launceston in that it has a high proportion of its students living within the central urban area near to the main campus. Of particular interest is the high density of students residing in Sandy Bay itself and neighbouring postcodes – about 30% of these students live within 2.5 km of the Sandy Bay campus. These students have the highest levels of access to UTAS facilities in Tasmania with options to walk or cycle, or take short bus trips to and from the main campus or city-based facilities.

Second, a significant number of students reside in the Kingston area, Eastern Shore suburbs and Hobart’s northern suburbs within or near the 10 km radius. These broad patterns reinforce the significance of the public transport corridors earmarked for future consolidation in the *Tasmanian Urban Passenger Transport Framework*, specifically the northern suburbs to city corridor, eastern shore to city corridor and potential for Kingston-to-city high frequency satellite bus services. Better linking of UTAS facilities into future improvements to the bus service network, particularly reducing the need to change buses in the city to access the Sandy Bay campus, would enhance public transport accessibility to both students and staff living in these corridors.

Third, a significant number of students live more than 50 km away from the Sandy Bay campus, especially those based in the Huon Valley and southern reaches of the State. These students face similar travel costs issues as northern students (both financially and in time spent travelling).

*Inter-region trips made by students*

Because of course availability, resourcing and scheduling some students are required to travel to other regions and campuses. This may be required on a regular basis or occasionally. There are UTAS students travelling up and down the Midlands Highway between Hobart and Launceston, or between Burnie and Launceston on a daily basis during semesters. Such travel is time consuming, costly and potentially risky if road safety issues are considered. Many students choose to travel in their own cars, some carpool and others take advantage of private bus services.

In response to a tragic incident in 2006 when a number of UTAS students were involved in a fatal road accident on the Midlands Highway, and the evident demand for a campus-to-campus bus service between the Sandy Bay campus and the Newnham campus, UTAS with Redline Coaches established a dedicated UTAS service to transport students between Hobart and Launceston and Launceston and Hobart campuses in time for 9.00am classes. This service is significantly subsidised by the University reducing the transport costs for students.

A survey of student responses to the bus service revealed their appreciation for the service, especially for providing an alternative for driving, reducing car accidents and reducing the cost of their journey\(^\text{19}\). The following is a sample of the feedback:

> *It gives students an option of not having to drive. There are also heaps of young students who may not have their licence yet or 'P' platers who may not necessarily want to drive every week. It is mostly the Hobart-Launceston leg that I hear the most about. I have been at the Launceston campus for 4 years and I travel back to*

\(^{19}\) UTAS Redline Bus Service Survey, 2007
**Hobart every weekend. I know students in the same position who have had near accidents because of tiredness. If we have a cheap alternative to driving ourselves we will take it, but paying $26.60 is not cheap and because Tasmania has no trains it is important to keep this option available to students – it is guaranteed to save lives.**

*I am a mature age, in-service student and not on any discounts so it’s really great to get something a little cheaper. I think the bus is too expensive ordinarily and would have driven otherwise. Thanks heaps.*

**Please continue the $10 bus fare for Uni students. We need to keep off the road, because when we go home for the weekend or some time we are tired, stressed and in no condition to drive the dangerous highway!**

**Student diversity**

Not only are there different numbers of students at the various campuses, there are also other differences, which translate into diverse trip patterns and diverse transport needs – therefore requiring a range of responses.

Many more students are choosing to study part-time, and attend classes and access university services and resources at different times of the day, evening or year. Some live locally while others face lengthy journeys. Some people may attend one campus more than three days a week during a semester, or less frequently for specific on-campus sessions or to access the university’s services and resources. Some students have to attend different campuses in the north and south or north and north-west for parts of their courses, generating the need to travel in between cities regularly or intermittently throughout a semester.

UTAS caters for Tasmanian and interstate students as well as a growing number of international students. Currently about 12% of students are on-campus international students from over 70 countries\(^\text{20}\). These students bring a range of additional transport issues, transport expectations and experiences.

Important issues for all students, but especially international students who need help understanding local transport systems, are:

- ensuring safe local pedestrian and cycle routes
- communicating information about the availability of transport services and options and how to use these
- advocating for student bus fare concessions
- ensuring good quality bus services.

\(^{20}\text{http://www.international.utas.edu.au/static/aboutUTAS.php}\)
Social inclusion, car use and cost

UTAS is the only university in Tasmania and it serves the tertiary education needs of students from all over the state. While many Tasmanian based students live in or near the major cities, or move to be near to the main campuses, rural or remote students face specific issues regarding access to university services and facilities. UTAS aims to minimise social exclusion from tertiary education associated with location or distance.

Online learning options in some courses, and course offerings in Burnie, Launceston and Hobart provide a range of course choices to such students, however it is not always feasible to provide equal access to all university services where the demand is low. There are also quality issues around wholly online-based learning. As a consequence, students who live away from main campuses may need to undertake lengthy car trips or regional bus trips to access university services. Concerning issues for students facing this challenge include:

- road safety concerns associated with lengthy car trips
- the limited availability of regional public transport services that meet students’ travel needs
- the cost of such trips by car now and into the future as transport fuel prices increase (and therefore the cost of access to educational opportunities).

While these issues apply to students in all parts of the state, people in the north and north-west are particularly dependent on car-based travel. For example, 79% of UTAS students living in the Cradle Coast region travel more than 50 km one way to get to university21.

In addition to the cost of car ownership, if a student goes to the university three times a week travelling 100 km return, their weekly petrol bill will be between $26 and $6022 for these trips alone, depending on the fuel efficiency of the vehicle. Of course if the trip is longer then this cost increases. Many students drive older cars, which are less fuel-efficient, and this further contributes to the cost of travel.

If petrol rises upwards towards $2.00 a litre then the weekly bill jumps to between $36 and $84. It is expected that transport fuel prices will continue to increase for a variety of reasons, including the onset of peak oil as explained in Section 1.3.3.

Complex trip patterns

It’s important that we understand different people’s reasons for travel so we can work out the most appropriate responses, strategies and priorities for each region, campus and transport user group. This Strategy recognises the many influences on people’s daily travel and transport decisions and mode choices.

For example an increasing proportion of students have families with children and/or work commitments outside of university commitments. It is well known that these other responsibilities add to the complexity of trip patterns and purpose and often tend to encourage car use23. Figure 2–6 shows us that students over the age of 25 comprise a

21 About 80% of these students study in the north and north west (at either CCC or Launceston campuses or both), the rest in Hobart.
22 Based on a price of $1.45 a litre and calculated for a small car and large car using fuel consumption figures from the Green Vehicle Guide http://www.greenvehicleguide.gov.au
23 Lyth-Gollner & Dowling, 2002
significant proportion of the state-wide student community. Many of these students are likely to have other commitments, particularly family.

At the Cradle Coast Campus in Burnie over 70% of students are women, with the majority of these over the age of 25 – which means they’re often juggling study with family demands and sometimes work. It’s not surprising then that the dominant mode of transport to this campus is by car as driver since a journey to university is also likely to involve other linked trips to school or day care or to deal with other personal business.

![Figure 2–6 Ages of students at main UTAS campuses](image)

**Figure 2–6 Ages of students at main UTAS campuses**
Source: UTAS Planning & Institutional Performance

While this issue is particularly apparent at the CCC it is also relevant to all other campuses and to university staff who have a variety of responsibilities to juggle, including family commitments, or part-time students who are working and studying. Such complexity in day-to-day household travel patterns is a feature of contemporary life throughout the community and has a significant influence on urban car use largely due to the real and perceived convenience of the car for such trips.

**Proximity to campus, active transport and public transport use**

The greatest opportunity for UTAS to promote more sustainable transport behaviour lies in the central urban areas in Hobart and Launceston where there is greatest access to urban bus services and capacity to walk or cycle (also referred to as active transport modes). This is supported by well-founded research carried out at the University of Western Australia (UWA) findings from which are summarised in Box 10.
More than 40% of students living in the Greater Hobart region live within 6 km of the Sandy Bay campus and approximately 30% live within 2.5 km\(^2\). In Launceston over 60% of students report living within 6 km of the Newnham or Inveresk campuses and a little over 20% live within 2.5 km\(^2\).

These significant proportions of students residing close to campuses suggest that there is a good opportunity to encourage more active transport. While some students are already walking and cycling within these zones regularly, or at least partially, there may be a further proportion who might be encouraged to do so more frequently or even switch short car trips for walking, cycling or short bus trips some of the time. The latter is more likely with the implementation of a mix of incentives to walk or cycle and disincentives to drive and park, including improving walking and cycling facilities and safety, and applying parking restrictions (either via limiting availability or by price).

A UTAS TravelSmart survey of 504 first-year students in 2006 found that of those 186 students who already made partial use of public transport, walking, cycling or carpooling:

- 10.8% wanted to cycle more
- 19.4% wanted to walk more
- 24.7% wanted to use public transport more
- 39.2% wanted to carpool more.

While, it is not clear what these students’ residential origins were and therefore what level of access they had to UTAS facilities, this kind of information is useful in identifying which groups of students may have a propensity to adopt more sustainable transport practices. This, in turn, assists identification of the kind of infrastructure and service improvements that could be made to facilitate such a shift. This particular survey, however, involved a limited sample of the student community. A more extensive survey of student and staff travel behaviour and opportunities for change would provide useful information.

---

Box 10
UWA Study: Assessing commuting habits and potential for modal change

The results of this UWA online survey of 1040 students and 1170 staff examining commuting patterns, potential for change and barriers and motivators affecting transport decisions found that 21.5% of staff and 46.8% of students at UWA regularly used active modes, and potentially an additional 30% of staff and students would switch to active modes due to proximity to campus and access to public transport services.

The results suggested that reducing barriers to using active modes, in particular reducing actual and perceived travel time by bus and bicycle would have the greatest impact on commuting patterns. Some policy applications appeared to hold particular promise, including an implementation of a subsidised public transport pass (U-Pass), increased student housing on or near campus, increased cost of parking, and improved bus services and cycle networks.

The study also found that there was particular opportunity to focus effort on first year students who did not have access to parking permits and were only just establishing their transport habits for the trip to university.

Shannon et al 2006

---

More than 40% of students living in the Greater Hobart region live within 6 km of the Sandy Bay campus and approximately 30% live within 2.5 km\(^2\). In Launceston over 60% of students report living within 6 km of the Newnham or Inveresk campuses and a little over 20% live within 2.5 km\(^2\).

These significant proportions of students residing close to campuses suggest that there is a good opportunity to encourage more active transport. While some students are already walking and cycling within these zones regularly, or at least partially, there may be a further proportion who might be encouraged to do so more frequently or even switch short car trips for walking, cycling or short bus trips some of the time. The latter is more likely with the implementation of a mix of incentives to walk or cycle and disincentives to drive and park, including improving walking and cycling facilities and safety, and applying parking restrictions (either via limiting availability or by price).

A UTAS TravelSmart survey of 504 first-year students in 2006 found that of those 186 students who already made partial use of public transport, walking, cycling or carpooling:

- 10.8% wanted to cycle more
- 19.4% wanted to walk more
- 24.7% wanted to use public transport more
- 39.2% wanted to carpool more.

While, it is not clear what these students’ residential origins were and therefore what level of access they had to UTAS facilities, this kind of information is useful in identifying which groups of students may have a propensity to adopt more sustainable transport practices. This, in turn, assists identification of the kind of infrastructure and service improvements that could be made to facilitate such a shift. This particular survey, however, involved a limited sample of the student community. A more extensive survey of student and staff travel behaviour and opportunities for change would provide useful information.

---

\(^{24}\) Estimates based on MIRU (UTAS) enrolment statistics (2009) by postcode and campus. Note that these estimates should be read as indicators only since there is some error expected with the data associated with students’ reporting of residential address at enrolment and actual residential address during semesters, and the size of postcode areas.

\(^{25}\) Ibid
Active transport – walking and bicycling

While there is no information about the share of students walking or bicycling to university some preliminary baseline counts of students accessing the Sandy Bay campus on foot or by bike were taken by UTAS Sustainability in 2010 and 2011 and counted a significant number of walkers and cyclists accessing the campus. The process of collecting this data will continue for all campuses over time and is already assisting in the identification of pedestrian and bicycle needs and improvements, including: safe, direct and well signposted walking routes, safe and connected bike access on and around campus, and end of trip bike facilities including storage and shower facilities. This data is also being supplemented by a comprehensive survey of bicycle users about their travel behaviour, issues and needs carried out recently.

Public transport use

A significant number of students also arrive at the Sandy Bay campus by bus, alighting at Churchill Road or Sandy Bay Road bus stops. The total share of these trips as a proportion of total student trips to the university is currently unknown. It is essential that UTAS has a clearer picture about the travel behaviour and mode share of students and staff at all campuses and main facilities to facilitate more directed transport planning and monitor progress into the future.

While different universities have different levels of public transport service access it is well known that higher education students are good users of public transport compared to the population at large. For example the UWA study found that public transport was the main mode for the trip to university for some 28% of students and 36% for those living more than 8 km away this compared to nearly 9% and 10% respectively for staff at the same campus. Similarly at Macquarie University it was found that public transport (bus) was the main mode for 29% of students travelling to university and 12% of staff. As a crude comparison, in the Greater Hobart region, public transport (bus) is only used by 4.5% of commuters for the trip to work and for the trip to education by 9.5% (although this figure is skewed by the inclusion of school age children using school buses) and the proportion will be highest for those travelling to the Hobart CBD for work or study.

As is explained in detail in Section 2.3.2, bus services in main Hobart public transport corridors largely terminate in the city (unless travelling from the city centre and neighbouring southern suburbs). This reduces the seamlessness of bus travel for many students, as they’re required to change bus services in the city centre to get to the Sandy Bay campus even if they live in relatively central suburbs of Hobart. This need to change buses tends to act as a disincentive to bus use for many people in the community since it can lengthen journey times and is thus viewed as being less convenient than taking a car.

2.2.2 UTAS staff

University academic and general staff members generate a range of trips in and outside their regions of employment. In addition to travelling to and from their employment base (normally referred to as the journey to work), university academic and operational business generates a range of movements that require different responses, including local city-centric movements associated with business meetings and activities, inter-

26 Vikstrom, 2011
27 Shannon et al, 2006
28 GTA Consultants, 2008
29 DIER, 2010
region trips (such as between Hobart and Launceston or Launceston and Burnie), and other trips further afield, including domestic and international air travel for academic research and engagement activities and other university business.

Where staff members work

The University employs approximately 2685 people in Tasmania, with about 1750 based in Hobart at Sandy Bay or other facilities, 810 in Launceston campuses and facilities, and 125 at the Cradle Coast facilities. These figures do not include casual staff who also contribute in a range of ways at all locations. Figure 2.7 shows the location of staff members within each region.

Figure 2–7 UTAS staff by campus and facility

Approximately 77% of Hobart staff work at the Sandy Bay campus, with 18% employed at various facilities in the Hobart city precinct (Conservatorium, Centre for Arts, Medical Sciences). The number of staff located off the Sandy Bay campus in the city precinct is set to increase into the future with the further development of Medical Sciences premises and the relocation of the Institute for Marine and Antarctic Studies (IMAS) to new premises next to CSIRO Marine and Atmospheric Research Laboratories on Hobart’s waterfront.

In Launceston, approximately 88% of staff are located at the Newnham campus, with around 12% of staff employed at other locations including the Australian Maritime College at Beauty Point, the Inveresk campus, the Anne O’Byrne Centre in the city precinct, and Mount Pleasant Laboratories. The majority of staff on the Cradle Coast are located in Burnie at the Cradle Coast Campus and the North West Rural Clinical School.
Where staff members live and their journey to work

For the journey to work many of the issues impacting on transport choice are relevant to both students and staff, such as where they live and availability and quality of public transport services in the area in which they live, opportunities and limitations to walking and cycling, and the need to match their transport mode choice with other demands such as dropping off and picking up children, shopping or other personal or business commitments during or after business hours.

In all three regions there are a number of staff members who regularly travel long distances to work (up to or more than 50 km), although they aren’t in the majority. For many staff, particularly academic staff, information and communication technology and the characteristics of work tasks allows them to work from home (telecommute) for some of the time if they choose, however for some jobs this is not possible.

Figure 2–8 and Figure 2–9 show where staff working at Hobart’s Sandy Bay campus and Launceston’s Newnham Campus live. Because staff numbers are smaller at other facilities, these have not been mapped. Like students, the majority of staff tend to live within a 10 km radius of each campus, demonstrating a strong degree of centralisation in both Hobart and Launceston. In Hobart there is also a strong orientation towards outer southern suburbs in the Kingborough area and the northern Huon area, while in Launceston the extent of staff residential origins also stretches along the Tamar River valley towards northern coastal communities.

The location and distribution of UTAS campuses and other activities creates a range of transport challenges beyond one single campus domain and precinct. In addition to the journey to work, there are also significant inter-city movements associated with university business between campuses (especially between Launceston and Hobart, and Burnie and Launceston), and intra-city movements between a variety of activities within each city region due to meetings and activities at other UTAS facilities or other non-UTAS locations.

Inter-region trips for university business

The majority of longer haul trips between cities and regions are by car, either in a private car as driver or passenger, or in university fleet vehicle as a driver or passenger. It is noted that staff are encouraged to carpool for such trips when and where this is possible, but initiative and encouragement to do so is inconsistent across the University. The University’s Redline bus service that links Launceston and Hobart campuses directly is also available to some staff, as are other Redline services, but door-to-door convenience and meeting schedules usually favours the car when tele- or video-conferencing is not possible. In order to attempt to reduce the travel length burden, Hobart and Launceston staff sometimes choose to meet part way, in Campbell Town or Ross for instance, when there are meetings or forums involving a number of people.

Outside UTAS, the movement of staff up and down the Midlands Highway between Hobart and Launceston is also a common practice in the Tasmanian public and private sectors, which points to the potential for more collaborative and co-ordinated initiatives between sectors, whether employee carpooling schemes, or a stronger focus on supporting the development of public transport services that meet the needs of major
Figure 2–8  Hobart staff residential origins
Figure 2–9  Launceston staff residential origins
employer organisations. Recent trials\textsuperscript{30} of Wi-Fi services on such inter-city bus services as well as other regional bus services may make the use of these services more attractive to business users who usually want to make most of their time.

\textbf{Local trips for university business}

There is much more to know and do about local staff business travel, while there is a range of benefits to staff and the University in addressing travel inefficiencies including productivity improvements and staff health and well-being through being more active. For instance, where there are opportunities to encourage and facilitate staff to walk or bicycle more for these trips the health benefits are felt throughout the community.

Staff making local trips, such as between Sandy Bay and other city facilities, do so by a range of modes, including by foot, bicycle, bus, personal car or university fleet vehicle. Like longer haul university business trips it is not clear how much of this travel is going on, what the main destinations are within the central city area, what the transport mode share is or how much of this travel might be undertaken more efficiently or by more sustainable modes.

There is anecdotal evidence that some staff members use their car during the day to get between meetings elsewhere in the city, and that this is a major reason for driving to work even when other alternatives are available. This points to the need to further investigate demand and opportunities for:

- improving connectivity between main activity areas and facilities
- working with Metro Tasmania to review and suggest changes to bus routing and services based on UTAS needs
- promoting convenient bus services and shuttles that serve campus to city routes (such as Launceston’s Tiger Bus service for the Inveresk Campus and Hobart’s Metro Tas 888 service)
- reviewing university policies regarding taxi use and availability
- investigating ideas and opportunities for improving alternative transport services (such as bicycle share or hire schemes and bicycling safety and maintenance programs) or amenity to facilitate safe and direct walking and bicycle routes
- supporting staff and business units to make more sustainable and efficient local travel choices through policy and procedural improvements and incentive schemes.

Of course some staff members make a number of local trips on any day and prefer a car for the flexibility it provides. For example some academic staff are also practitioners in the law or medical fields and have tight schedules – using a car allows them to quickly move between the university and their practice locations.

\textbf{Local trips for personal business}

Staff also make local trips during work or study hours to conduct personal business such as getting lunch, or visiting the post office, shops or doctor. In areas relatively close to other facilities and services or where these facilities are provided on campus, staff and students can make such trips on foot, thus creating convenience and opportunities to be active.

\textsuperscript{30} Tasmanian Government Media Release, 10 June 2011
Cradle Coast staff have mentioned that the location of the Burnie Cradle Coast Campus away from the city centre or other retail hubs and with limited facilities and services on campus (such as choice of food outlets, access to an ATM or post office) necessitates staff and students driving to nearby retail centres to access such services during lunch breaks. While these trips are often made by choice, for some this situation is inconvenient and an inefficient use of time on a regular basis. Such daytime trip generation also creates local traffic and parking pressures.

**Air travel**

An important component of university business is engagement with the rest of Australia and the world beyond Tasmania. This is especially important in a competitive global market such as tertiary education and for an institution such as UTAS located on an island state. University staff engage in a significant amount of air travel. There is a range of opportunities to reduce the amount of air travel, particularly in light of likely airfare price increases, such as encouraging where feasible virtual transport via web or video conferencing. However, significantly restricting domestic and international travel by academic, executive and other staff is likely to be counter to the principles of fostering a nationally and globally engaged and innovative university. Nevertheless there are opportunities to reduce the impact of travel such as requiring the purchase of certified and ethical carbon credits or offsets with all air travel.
2.3 Transport services and infrastructure

2.3.1 Parking facilities and cost

It is essential to provide parking for a range of users, particularly:

- the disabled
- students and staff who have limited alternatives to driving and parking
- visitors
- staff who regularly require a vehicle for work related travel.

Cheap and readily available parking can act as an incentive to drive even when there are other alternative transport options available, therefore perpetuating car parking supply and demand pressures, impacts and costs to the University and local community. Conversely parking areas can be set up so that parking for single occupant vehicles is restricted and more costly, and priority is given to those to using more efficient modes of vehicle travel, including cars used by carpoolers and small vehicles such as motor scooters, motorbikes and electric bicycles or scooters. Car parking policy design therefore requires a careful balance between facilitating a good and equitable level of access to university facilities, and reducing parking inefficiencies and costs to the institution and wider community.

The approach to car parking at UTAS has undergone review and refinement over a number of years. The circumstances surrounding car parking at the University continue to evolve and become more complex. The relevant key factors include:

- A continued growth in demand for parking on university property and in surrounding streets (especially at Sandy Bay)
- An increase in the number of staff being located in and around the Hobart CBD, which will continue to increase the cost of parking to the University
- UTAS’s growing commitment to improving environmental and sustainability outcomes.

Under current arrangements, the University subsidises staff and student car parking at an approximate cost of $500,000 per annum. This will continue to increase, reducing the capacity of UTAS to meet this cost\(^3\). As a consequence of these unsustainable financial costs and the recognition that continued growth in demand for parking will have negative amenity and environmental consequences, UTAS has recently completed a review of current parking arrangements and is proposing to implement progressive reforms over the period 2012–2014 including changes to parking pricing and categories of parking spaces.

Availability and cost of parking

The University has a limited number of parking spaces available on each campus and limited capacity to continue to provide low cost parking. Students, staff and visitors are permitted to park in designated car parking areas only, on a “first in” basis. At the Cradle Coast Campus all parking is free, while there is a mixture of free parking and charged parking via vouchers and permits at other main campuses.

UTAS staff and students have access to relatively cheap parking compared to other Australian university campuses. Some comparative examples are presented in Figure

\(^{31}\) UTAS Car Parking Policy Review, 2011
2–10, which shows that Monash University students pay more than four times the price of a UTAS permit, while some staff pay more than eight times\textsuperscript{32}. Even other universities with modest permit prices pay significantly more than UTAS staff and students.

![Comparison of University Parking Permit Costs Per Annum](image)

**Figure 2–10** Comparison of University Parking Permit Costs Per Annum

Source: University websites (accessed July 2011)

There are currently 927 free car parking spaces across all campuses of the University, while at the Sandy Bay and Newnham campus voucher rates are $0.30 per hour or $2 a day and permit rates are currently $77 per year. Permit rates are higher in the Hobart CBD at $1040 per year reflecting the higher cost of leased parking generally in the CBD.

The relative cost of parking does not act to provide any disincentive to drive and park. The main disincentive at the moment is the difficulty in parking at peak parking periods, especially in the early weeks of semesters, and particularly at the Sandy Bay campus where the demand for on-campus parking regularly outstrips supply. Pressure on parking supply at Launceston’s Newnham campus and the Cradle Coast Campus has also been reported at various peak periods. If parking is not readily available on campus or the car does not have a permit, students, staff and visitors seek free parking in neighbouring streets, especially in Sandy Bay. As the demand continues to increase the impact on local streets expands. The impact is not only associated with spill-over parking into residential zones but also a loss of amenity in the local area with increased generation of road traffic associated with the seeking of parking spaces. Hobart City

\textsuperscript{32} The UTAS Sandy Bay campus is compared to a sample of other campuses outside central city areas with a traditionally good supply of parking on site.
Council has implemented residence permit parking on surrounding streets to address this issue, which allows 2 hour parking for non-residents.

**Supporting efficient vehicle use via parking**

**Carpooling**

The University does not provide much in the way of parking incentives for more efficient vehicle use, whether encouragement for carpoolers or those riding motor scooters or motorbikes. The Newnham campus provides dedicated parking for carpoolers and offers special carpooler parking permits for a reduced fee of $37.50 per year. The application for such permits is via a manual process and is based on an honesty system. The Student Association initiative was initially established to assist north-west students in particular, however it only allows the carpooler to seek a space – they’re not provided with a guaranteed parking space. Other campuses do not have such a system to support carpoolers.

**Motor scooters and motorcycles**

Motor scooters and motorcycles are increasingly popular modes of transport – they need less space for parking. The upsurge in this type of transport will require UTAS to reconsider how parking spaces are allocated to cars vs motorcyles/scooters or other forms of non-car transport.

At the Sandy Bay and Launceston campuses, free dedicated parking spaces are provided for motor scooters or motorbikes and these vehicles only need to purchase a permit if they require access to a full-sized parking space. At the Cradle Coast Campus, however, there is currently no dedicated motorbike or scooter parking, so these vehicles use full-sized car spaces or park illegally.
Sales of motor scooters (sometimes referred to as mopeds) in Australia increased by 300% between 2004 and 2007 and in 2008 sales of motorcycles broke all previous records\textsuperscript{33} – this presents a new phenomenon, which is poorly understood in terms of transport planning\textsuperscript{34}.

**Electric vehicles**

Electric bicycles are becoming popular in Tasmania and help overcome the difficulty bicycling in hilly terrain. A cheaper option than purchasing and running a car, it is expected that the attractiveness of such vehicles will increase into the future as well as the use of electric scooters and motorcycles. Such vehicles require much less dedicated parking space than cars, although the design of parking spaces needs to be appropriate for their use.

Electric cars are also predicted to become a more popular transport choice as the technology improves and vehicles become more price competitive in light of likely changes in fuel taxes to favour less carbon intensive fuels.

Parking infrastructure at UTAS will need to consider the accommodation of these modes of transport more into the future and also consider possibilities for recharging facilities for electric vehicles (particularly electric bicycles and electric scooters) at key parking locations.

\textsuperscript{34} Blackman, 2010
2.3.2 Active transport infrastructure – supporting walking and cycling

Active transport refers to walking and bicycling. Skateboards are considered a form of walking. Bicycling includes power-assisted bicycles (e.g., electric, petrol), but not motor scooters or motorcycles. Facilitating and encouraging active transport modes is an essential element of any sustainable transport strategy, particularly for university communities. There are many benefits associated with facilitating more active transport modes for both the University community and the community at large, the most significant being the health and wellbeing benefits. Walking and cycling when possible can also reduce the transport costs for students and staff who live near to university facilities and fulfil individual's desires to reduce their environmental impact.\(^{35}\)

It should be noted that UTAS has good working relationships with Hobart City Council regarding walking and bicycling facility enhancements with both organisations having many common objectives. UTAS has also been participating in Principal Urban Cycling Network (PUCN) workshops organised and facilitated by the DIER Active Transport officer for Greater Hobart, Greater Launceston, and Burnie/Cradle Coast. The results from these workshops will inform DIER funding commitments and projects.

**Status of infrastructure and facilities for all campuses/major facilities**

**Greater Hobart - Walking**

Walking to the Sandy Bay campus and within the campus itself is fairly easy. There are well-formed pavements or pathways for people to walk safely from surrounding suburbs, however some areas are quite hilly with lots of steps and/or steep grades. We need to improve walkability by doing things like adding and improving pedestrian crossings in high traffic locations and improving wayfinding signage. For example, the French Street/College Road to Churchill Avenue connector is very pedestrian unfriendly.

The Hobart CBD UTAS facilities are fortunate to be set in a relatively flat area. Hobart’s city centre is relatively well set up for pedestrians, but some improvements are possible such as all-ways crossing at intersections where all traffic is stopped and pedestrians can cross to anywhere they wish. Walking between the Sandy Bay campus and the CBD facilities takes anywhere from 20–35 minutes for a person of average fitness and depending on which side of the CBD the facility is located.

Other Hobart facilities such as those at Taroona or the University Farm at Cambridge present more of a challenge as a destination because they are so far from the city and other UTAS locations. The Taroona-based facility, however, is on a main thoroughfare with adequate footpaths for those who wish to walk.

**Greater Hobart - Bicycling**

While there is a decent spread of bike hoops for securing bicycles around the Sandy Bay campus, other aspects of the bicycling infrastructure on campus are quite poor, such as:

- most are not covered
- many are of an old style that don’t meet current standards
- many are in locations that can be muddy, inconvenient or not well lit

---

\(^{35}\) Preliminary results from a UTAS survey found that bicyclists choose to ride to University for a variety of reasons including the desire to reduce their environmental impact, convenience, health reasons, personal enjoyment, and to save money.
• signage is non-existent
• lack of designated bicycle lanes/pathways.

The older UTAS facilities in the CBD area have poor bicycle parking facilities (e.g. Conservatorium of Music), slightly better at the Hunter Street Art School where occupants can at least park inside, and the newer facilities (e.g. Medical Science 1) providing better facilities that meet current design standards required under the Green Building Council of Australia and Bicycle Victoria. These standards also apply for the new purpose-built facilities being incorporated into the new Medical Science buildings in the CBD and at the Domain site, as well as the Institute for Marine and Antarctic Science near Salamanca Place. Facility upgrades are required at both the Conservatorium of Music and the Arts School to bring them up to standard. All locations require signs indicating where people can park and use facilities.

For all of our southern Tasmania campuses and facilities there are also bicycling-related issues not under our control, including:

• the lack of bike lanes to/from and around the campus on city streets
• inadequate street lighting in some locations
• poor pavement treatments and maintenance (such as sweeping and debris removal).

UTAS has supported recent proposals for improvements to dedicated bicycle lanes in Hobart, particularly approaching the Sandy Bay campus. It is recognised that across the Greater Hobart region there needs to be attention to integrating local bicycle routes and lanes into a metropolitan wide network to improve route connectivity, continuity and amenity if bicycling is to be encouraged further. For example, a Sandy Bay Road bicycle lane would serve to not only connect the Taroona facilities to the Sandy Bay campus, it would allow safer and easier bicycle commuting for staff and students that live in the areas to the south of Sandy Bay.

Greater Launceston - Walking

The Launceston campuses vary in their suitability for bicycling or walking.

The Newnham campus is well set up for walking as it is compact with many students residing on campus. It is not, however, convenient for most people to walk from the city to the campus due to the distance from the city, although there are footpaths for the whole distance between the two, including via the Inveresk campus.

Walking from the Inveresk campus to Launceston city is simple as the city is nearby and pedestrian pathways exist.

The Australian Maritime College’s Beauty Point campus is not within walking distance of the other Launceston area facilities. There are, however, improvements possible between the Beauty Point facilities themselves and solutions should be sought in conjunction with DIER and the West Tamar Council.
Greater Launceston - Bicycling

Bicycling within the Newnham campus is generally quite easy. While most bicycle parking is under cover, other aspects of the bicycling infrastructure on campus are quite poor, such as:

- Many bicycle parking facilities are of an old style that don’t meet current standards – the poor hoop designs result in a high rate of theft and vandalism of bicycles.
- Lack of adequate lighting on a main access pathway to the Plumer Street entrance.
- Lack of signage for bicycle facilities.
- Lack of designated bicycle lanes/pathways.

It is not especially easy to bicycle to the Newnham campus. Apart from a section of dedicated bike lane on Mowbray Road nearest the campus, there are no designated routes between the city and Newnham. Launceston City Council is also working within the DIER PUCN effort to ensure improved access and, but has also been quite active in supporting ways to accommodate bicyclists.

There has been a big problem with bike vandalism at the Inveresk campus, so a designated area has been set aside for School of Architecture and Design students to park inside the building. This is not, however, available to students from the School of Visual and Performing Arts. Problems with the existing bicycle facilities include a poorly designed rack system, a location that is out of sight, poor security and access only through the landscaping.

Bicycling at the Beauty Point campus is almost non-existent and there is only a non-standard bike rack for five bikes. We have an opportunity to find out why people don’t ride there – whether it’s because of poor facilities, access, the types of students, or the types of materials students need to carry with them. Bike travel between the two Beauty Point facilities is via a city street with a significant incline and across the West Tamar Highway.

Burnie Area

There are very different demographics and student involvement in active transport at the Cradle Coast Campus (CCC) and the Rural Clinical School (RCS). The two campuses are 2 kilometres apart and the RCS accommodation units are adjacent to the CCC. There is no designated bike lane between the two nor connecting to Burnie, but the streets are quite wide and have footpaths. Both are set in very hilly areas, on top of
the bluff above Burnie CBD, so pedestrians or cyclists going to either campus from Burnie CBD face some very steep hills.

The Cradle Coast Campus has two non-standard bike racks and access to showers in two buildings, one with a single unisex shower, two male and two female showers, as well as one shower for disabled people in the other.

The Rural Clinical School has an active group of staff and students who encourage any kind of physical activity. They have initiatives to encourage people to park away from the campus and ride or walk the remaining distance. They also encourage people to ride bikes to and from the clinical school. Bike riders enjoy regular breakfasts and access to undercover bike parking, showers and storage lockers.

**Provision of infrastructure**

For those campuses well suited to walking or bicycling, UTAS is exploring ways to encourage uptake by staff and students. An immediate area of attention is the provision of appropriate end of trip facilities (such as bike parking, storage and shower facilities). At their most basic these would include safe and conveniently located covered bike hoops. More full-featured facilities might include swipe-card access, showers, bicycle and gear lockers, tyre pumps and electric bike charging points.

For the Sandy Bay campus, a survey has been conducted to identify specific priority infrastructure the user community expects and where they would place them. Plans are in place to conduct similar surveys for other campus locations.

**Provision of information**

There is very little information currently available about walking or cycling to/from campuses and facilities. Currently, the only information on cycling routes is available
from Cycling South and covers the Greater Hobart area. A link to this information is available on the UTAS Sustainability website.

Plans are underway to ensure provision of maps that identify routes and end-of-trip facilities for all of our facilities, put up signs on campus and start a campaign to inform people about their walking and cycling options.

Partnerships with other organisations

UTAS has established working relationships with Hobart and Launceston City Councils to progress community-wide objectives of improving walking and cycling facilities. UTAS also has working relationships with Cycling South and Bicycle Tasmania, especially with their involvement as members of the Design Review Panel for the student-designed bike shelters being provided on the Sandy Bay campus. In addition, regular consultation occurs with other organisations such as the Hobart Bike Kitchen and various bicycle user groups (BUGs). Future opportunities could be to partner with Hobart Bike Kitchen to provide workshops on bike maintenance.

UTAS Sustainability is part of the group being consulted by DIER in identifying principal urban cycling networks (PUCN) in Greater Hobart, Greater Launceston, and the Burnie area. UTAS Sustainability is also actively working with local councils, including Hobart, Launceston and Burnie about sustainable transport in general and walking and bicycling in particular.

We continue to work with UTAS Accommodation Services, the Tasmanian University Union (TUU) and Sport and Recreation, especially through their Active UTas program with the aim to increase awareness and education of active transport opportunities.
Demonstrating support for other initiatives that also meet our aims

UTAS can be a significant lobbyist when it comes to supporting initiatives by DIER and local councils. These initiatives include bike network integration, road safety, and dedicated bike lanes, which would all help satisfy the need for safe and relatively level walking and cycling pathways connecting UTAS facilities. For example, UTAS’s desire to better link the Sandy Bay campus and the CBD facilities could be met by the Hobart City Council’s proposed Battery Point walk and cycleway, the University could be more vocal and engaged supporters of this plan.

UTAS is also interested in the current trial of bike racks on Metro Tasmania buses on some routes. There may be opportunities for UTAS to work with Metro Tasmania to accommodate bikes on buses on specific routes.

Continued effort needs to be made in engaging with other groups or organisations such as the RACT that have demonstrated an interest in supporting cycling.

Internally, as suggested by ex-Vice Chancellor Darryl LeGrew, UTAS could conduct a trial of electric bikes for staff and students moving staff between campuses. Similar types of initiatives, including bicycle hire schemes such as those available in Melbourne, have been mooted for possible application in the Hobart CBD.

The University may also want to explore both internal and external initiatives that have been successful in increasing ridership numbers, such as reward programs, challenges, and bicycling safety education programs.

2.3.3 Bus services

The quality of bus services vary between the different UTAS campuses. While all campuses are served by bus routes there are variations in the level of service in terms of frequency, directness and connectivity between different routes. This, as well as the diversity in student and staff residential origins, results in uneven levels of access to public transport for UTAS students, staff and visitors therefore impacting on the opportunity to use public transport for the journey to work or study. For instance encouraging students and staff to take the bus at the CCC is less likely to be a realistic option for most compared to key sectors of the university community commuting to the Sandy Bay campus or Hobart CBD facilities.

Services to Cradle Coast Campus and the Rural Clinical School

Providing bus services to dispersed regional communities and smaller cities is a challenge in non-metropolitan regions throughout Australia largely due to the many different origins and destinations that exist and relatively low population densities that make it difficult to financially support services. As a consequence bus services tend to be delivered based on minimum service requirements. This is largely the case in the Cradle Coast region.

The UTAS CCC is situated on a Metro Tasmania bus route and, with Hellyer College nearby, is part of a larger education activity zone. The bus service operates at a reasonable frequency with two different loop circuits running past the campus and Hellyer College every half hour (bus routes 40, 41, 50, 51 and 5436). It takes between 8 and 12 minutes to travel by bus between the Burnie city centre and campus depending on the route, and between 4 and 16 minutes to the hospital where the NW Rural Clinical School is based. These are not lengthy travel times and while the frequencies

could be improved the residential origins of students and staff (as discussed earlier) and their other travel needs mean that public transport is largely unable to meet the needs of the majority of students and staff.

Regional buses servicing Burnie from neighbouring towns such as Wynyard, Ulverstone and Devonport are provided by Metro Tasmania and private bus companies, such as Redline and Phoenix Coaches. Some of these services offer reasonable journey times between city centres, however frequency in service is variable and there is the need to wait and change buses in the city for services out to the hospital or campus, increasing total journey time and inconvenience. In Burnie city centre there is also a need to relocate from one bus terminal in one part of the city to another if using different bus companies.

For regional bus services between Cradle Coast centres the cost can be as much as, or significantly more than, the running cost of a car for the same trips, especially if you are not a full-time student and do not receive concession fares.

**Services to Launceston campuses and other facilities**

For students, staff and visitors residing or staying in the Launceston inner urban area the Newnham and Inveresk campuses are reasonably well served by Metro Tasmania bus services (bus routes 2, 10, 6 and 7)\(^\text{37}\). Bus route 2 takes passengers from the city into Newnham campus, while routes 10, 6 and 7 stop outside the campus. Service frequency is about half hourly for route 2 services and more frequent if routes 10, 6 and 7 services are included. The latest route 2 service from the campus back into the city centre, however, is 5.42pm which means that outside daylight saving students and staff are required to walk in the dark through the campus in poorly lit areas to Invermay Road to hail a bus. There have been concerns raised about personal safety for such passengers and interest by students, in particular, to extend the evening services onto the campus to reduce safety concerns.

In addition to city to Newham campus services the Inveresk precinct is served by the free Tiger Bus service, an initiative of the Launceston City Council to better link inner city activity zones, reduce traffic and free up more short-term parking spaces in the CBD\(^\text{38}\). Launceston Council has recently committed to continue this service with some improvements.

Launceston students and staff travelling from further afield face similar issues to those mentioned for the Cradle Coast, including the need to change bus services in the city centre, and bus frequency, journey time and cost challenges. The fact that a significant proportion of students and staff reside within 6 kilometres of either Newnham or Inveresk campus suggests, however, that there are possibilities to explore opportunities to enhance existing services and promote existing bus services for city commutes by a range of means.


Services to Sandy Bay campus and other Hobart facilities

The Sandy Bay campus is well served by a range of Metro bus services running through Sandy Bay along Sandy Bay Road and Churchill Road from the Hobart CBD and neighbouring inner and southern suburbs. During semester periods the Sandy Bay campus and CBD is particularly well connected with the additional Metro 888 ‘Unibus’ service which runs in a loop between the Sandy Bay and Hobart CBD at 15 minute intervals. Previously, the service terminated at Franklin Square in the CBD but now continues on to the Medical Sciences precinct near the new building (Medical Science 1, housing the Clinical School and Menzies Research Institute) before returning to Sandy Bay. This extension allows for improved connectivity between UTAS facilities in the CBD and Sandy Bay as well as extending the bus service through to the north-eastern part of the CBD for the Hobart community at large.

Some of the buses on this route are branded with the UTAS colours and logo, which identifies the special service and promotes the institution at the same time. While providing an excellent and popular service during the day and semester periods, this service is unavailable outside semester periods and does not commence until about 10.20am in the morning, finishing service about 5.00pm in the evening. Consequently the bus route serves students well but is limiting for staff or visitors who could make use of the service out of semester periods as part of their commute or for university business between the SBC and Hobart CBD. There are a number of other relatively good frequency services to and from the Sandy Bay campus to the CBD accessed from either Churchill Avenue or Sandy Bay Road, however. These could be better promoted.

Sandy Bay campus students and staff travelling by bus from further afield on other urban Metro Tasmania bus services or various other private bus services serving the southern Tasmanian region (e.g. Tassielink, Redline, O'Driscoll Coaches) generally have to get off in the Hobart CBD and change to another bus to connect to the Sandy Bay campus. While it is not possible to provide direct bus services to the Sandy Bay campus for all students and staff bus users there may be an opportunity for Metro Tasmania to consider routing some of the higher patronaged urban bus routes through to Sandy Bay. For example students and staff travelling from southern suburbs, such as Kingston, taking advantage of express bus services via the Southern Outlet and dedicated bus lanes would particularly benefit from a route adjustment to remove the need to take a second bus. This would also improve the attractiveness of taking the bus for some commutes to campus currently made by car. Likewise some services from the

northern suburbs and eastern shore might also be considered for such route adjustments.

It is appreciated that route planning for the entire Hobart Metro Tasmania bus network is a complex task, especially with limited resources and data, however UTAS is a major trip generator and destination for a city the size of Hobart and providing the opportunity for direct services, at least on some routes and at key times, is likely to provide community-wide benefits in addition to improved convenience for students and staff. Benefits include the improvement in personal time efficiencies associated with urban bus travel, improvements to public transport convenience, and potential for increased viability of some services, enhancing the overall community experience of urban bus travel and encouraging car drivers to take the bus more often where possible.

**Inter-regional services**

Inter-regional bus services are provided by a number of private bus and coach companies but can be expensive if used on a regular basis by students. They only pick up and terminate at city transit centres or stops. In response to concerns about road safety for longer distance student travel and the recognized demand for campus to campus service between Hobart and Launceston in time for morning classes UTAS has contracted Redline Buses to provide a heavily discounted intercampus charter bus service for students. The service operates four mornings a week leaving each campus for the other at 6.00am in time for the start of classes at 9.00am. Students and staff are required to book in advance online. The service does not operate for same day return but passengers have access to other Redline services for the return trip later in the day.

**Bus shelters and information about bus services**

Beyond bus routes, frequency and connectivity, it is also important for users to have ease of access to information about routes, timetables, ticketing, bus stop and shelter locations and interchange facilities. Being confident about: where to wait for a bus, when the next bus is likely to arrive, how to pay for the fare, and where to get off or connect to another service are important aspects of the public transport experience and if any of these are inadequate can reduce the attractiveness of using bus services. UTAS has invested in the past in improvements to the bus stop shelters located on Churchill Avenue, Regent Street and Newnham and Cradle Coast campuses. The most recent shelters are clearly branded as UTAS bus stops, while there are others that have been cleverly designed by UTAS architecture and design students thus showcasing the creativity and expertise of the UTAS School of Architecture and Design.

Branding bus shelters, or at least signage, at bus stops helps to more easily alert bus users as to the appropriate waiting or alighting places for significant facilities or places, especially for first time users and visitors. Improvements to, and consistency in the delivery of, this sort of infrastructure might also be considered for other UTAS facilities, such as the Medical Sciences building in the Hobart CBD and other future city sites. Such facilities also have a community-wide marketing value if branded.

Information about routes, service frequency, timetables, fares and connections are also very important to the enhancement and promotion of existing and new services. Readily accessible web portals that deliver good quality information about how to get to and from campuses and facilities and around town are being increasingly provided by universities around the world (see Figure 2–11 for an example of the University of Wollongong’s excellent web based information resource), while city wide portals have also been developed to improve the accessibility to public transport information in particular.
There is room for UTAS and key public transport service providers to work together to improve the presentation and accessibility of useful information, including via the web and more traditional methods such as information brochures, permanent information kiosks at key transport hubs, and demonstration opportunities at special campus events such as orientation week or via web-based YouTube demonstrations. Currently there are no metropolitan-wide bus network maps as you find in many other cities around the world which help to easily identify appropriate bus routes, while integrated trip planning tools are also unavailable to public transport users for either the Greater Hobart or Launceston regions.

The provision of real-time information which informs passengers when to expect the next bus has also been introduced around the world including on key bus routes in other Australian cities (such as the Liverpool-Parramatta Transiway in Sydney)40. Real time information can take the form of digital display screens or audio announcements at major bus stops or terminals, or text message and internet applications that can be accessed on mobile phones or other mobile information technology. These are

40 The 31km Transiway connects the major regional centres of Liverpool and Parramatta. There are 35 stops along the route that feature modern stations with seats, lighting, real-time information digital display screens and audio announcements to provide actual arrival and departure times. There are also timetables and local area maps on display at each station. http://www.sydneybuses.info/western-sydney-buses.htm (accessed 29/6/11)
investments for the community at large and they would also enhance the public transport experience for the UTAS community.

**Enhancements to bus services**

Currently Metro Tasmania is trialling bike racks on buses on select Hobart routes\(^{41}\). Bike racks on buses have been trialled with varying success elsewhere in Australia and have been in service for some time in many North American cities. They provide the opportunity to load a bike easily onto a bus (rather than in a bus) and are intended to encourage an increased mix of bicycling and bus use for certain routes. Routes that are particularly suited to this initiative in Hobart are those that are hilly and require the rider to ride uphill one way, but bike racks on buses may also encourage those who prefer not to ride in the dark or inclement weather to cycle at least one way or commute longer distances by bus for part of the journey. Being able to bring your bicycle to the university may also facilitate more local bicycle trips for personal or university business during the day. Education and awareness campaigns about how to use the system for bus drivers, passengers and other road users will be essential for the successful introduction of such facilities.

\(^{41}\) The Mercury, 21 March 2011
In an attempt to enhance the convenience of longer haul bus trips the Tasmanian Government has funded a 12 month trial of Wi-Fi equipped buses on 16 private Tasmanian bus operators, Redline, TassieLink, and O’Driscoll Coaches. The intention is to help workers travelling round the state to make good use of their time and give school students the opportunity to do homework\textsuperscript{42}.

While it is possible that some students and staff may ride on some of the bus routes equipped with this facility, it is unfortunate that the UTAS Redline bus service between Hobart and Launceston (and Launceston to Hobart) was not included in the trial and therefore not Wi-Fi equipped since it would be very likely that many students (and some staff) using these services would take advantage of the convenience, further enhancing the attractiveness of the services.

\textbf{Ticketing and fares}

The introduction of the rechargeable Metro Tasmania \textit{Greencard} in recent years is a positive development in ticketing convenience and efficiency and facilitates both regular and occasional users.

Greencards might also be considered as incentives to attract potential users. For example people are more likely to change their previous travel behaviour when their life changes, such as moving house or job. Based on this it can be assumed that new students (and staff) to the University may be more readily encouraged to try existing bus services if they are made aware of the availability of the service and are given an incentive to try. It has been found that habitual travel behaviour and mode choice reduces likelihood that people will investigate (and try) alternative options even if alternatives are available\textsuperscript{43}. Thus in areas well served by alternative modes to the motor vehicle, exposing people to appropriate information about the alternatives and how to use them in order to encourage trying a new behaviour is the first important step to breaking the ‘habit’ of the old behaviour. Consequently, offering new students to UTAS in urban areas information as well as a free Greencard with a nominal fare allocation may entice some to try bus services, encouraging longer term use. Similarly there may be opportunities to incorporate incentives and reward programs to public transport users via the fare system.

Ticketing systems also allow for collection of information about the use of the bus network. It would be useful for Metro Tasmania to obtain some more details about Greencard applicants in order to improve understanding of UTAS student bus use to improve the capacity to plan for these user groups.

Metro Tasmania and private operators offer concession fares for university students both on single trips and for multi-ride tickets. The university student fare is set at the adult concession fare, which is $1.80 on Metro’s urban services and 50\% of the full adult fare on non-urban services. These fares were introduced following the completion of the Core Passenger Services Review as a direct result of consultation with the University, and recognise the generally lower incomes of university students. They were also provided as an incentive for students to travel by bus between campuses. There are also opportunities to reduce the cost of fares further when purchasing a Greencard and pre-paying for bulk fares.

Working with Metro Tas and the Department of Infrastructure and Energy Resources (DIER) to promote Greencard use and keep fares low into the future will need to be an important focus for UTAS alongside encouraging greater bus use through advocating

\textsuperscript{42} Tasmanian Government Media Release, 10 June 2011

\textsuperscript{43} Aarts et al, 1997
for improved bus service frequencies and scheduling to main campuses. As students (school and tertiary) make up a significant proportion of bus users in the Hobart and Launceston regions it is unlikely that an argument for providing ‘free’ public transport for university students can be strongly presented in the short term largely due to the cost recovery challenges associated with providing public transport in Tasmania’s small cities. This is despite considerable interest in free student transport within the University student community.

2.3.4 Carpooling

Carpooling programs and incentives are particularly useful for those in the university community who reside outside urban areas with poor access to bus services, who attend classes in the evenings, who are required to travel between cities, and who face lengthy car journeys and high car use costs as a consequence. There is a particular interest in carpooling programs to serve the northern and north-west campuses with the Student Association at Newnham initiating the parking permit incentives mentioned in the parking section (Section 2.3.1).

A carpooling matching scheme was established following federal government funding of a TravelSmart project in 2006. Through this program UTAS has offered to staff and students an online portal to match car trip journeys for those wishing to carpool. This site is used regularly by some 60–70 staff and students and is promoted each year through a bulk email. It is timely to review the effectiveness of this program relative to other carpool schemes that exist in Tasmania and to investigate whether such a scheme can be improved or integrated with other programs to maximise community-wide benefits and efficiencies. For example, the Tasmanian public sector has also initiated its own carpooling program, while there are other schemes such as Coolpool\textsuperscript{44} that provide a whole of state service. In addition to this formalised carpool matching tool there is undoubtedly informal carpooling occurring involving students and staff.

To improve the effectiveness of carpooling schemes it is important to target those campuses and students and staff most likely to benefit and provide incentives or rewards to encourage uptake of the scheme and promote its benefits. Obviously where parking is difficult to find or costly students in particular will be keen to receive dedicated parking spaces and reduced parking fees. While the Newnham campus discounted parking permits for carpoolers are a step in the right direction there has been a very small uptake of the special permits. The permits provide a parking cost benefit but only provide the carpooling driver with a licence to seek a parking space rather than guarantee a parking space.

The CCC is likely to benefit the most from an integrated carpooling and parking scheme. While parking is currently free at the CCC it can be very difficult to find a space at peak periods, so it may be worth investigating opportunities to dedicated some spaces for carpoolers at these times. A challenge with introducing such parking arrangements, however, revolves around the validation of genuine carpoolers and the extra resources that might need to go towards this, such as boom gates for special parking areas and other checking mechanisms.

\textsuperscript{44} For more information about CoolPool visit http://www.coolpooltas.com.au
2.3.5 The University vehicle fleet

The University owns and leases a range of vehicles used for university business, including vehicles used: by University executive, for field-work, for facilities management and maintenance, accommodation services, and other miscellaneous university business activities. There are institutional procurement and vehicle use policies that guide the purchase or lease of vehicles, their management and use. Until recently there has been little attention paid to the environmental impact of the vehicle fleet. However, greenhouse gas emission reporting as part of the University’s NGER requirements, and consideration of environmental issues associated with the University vehicle fleet via the University’s Environmental Management Plan alongside the rising running costs of vehicles, has motivated some changes to the approach to vehicle procurement so that fuel efficiency is now considered when purchasing or leasing vehicles.

Since recording of greenhouse gas emissions from University sources was established in 2008, transport energy consumption has dropped slightly although it has remained relatively stable. However, the share of transport emissions associated with the University’s vehicle fleet has been reduced from 12% in 2008 to 5% in 2010 of total measurable carbon dioxide equivalent (tCO2-e) emissions. This is largely due to a significant increase in emissions from electricity in the period associated with the reduction in hydro electricity generation (see Figure 2–12). However, it is expected that the emission factor for Tasmanian electricity consumption will fall again due to an increase in hydro generation capacity in recent years. This will likely increase the significance of the share of transport emissions again.

While the vehicle fleet has increased in number during this period fuel efficiency gains have been made via the procurement of more efficient petrol vehicles or switching from petrol to more efficient diesel vehicles. There may be potential for investigation of further efficiency gains through:

---

45 UTAS Energy and Carbon Emissions 2008-2010, Report by UTAS Asset Management Services (April 2011). Based on data obtained from central account invoices, Vehicle Fleet and fuel suppliers. All conversion factors used have been sourced from the National Greenhouse and Energy Reporting (NGER) technical guidelines for scope 1 and scope 2 emissions.
• consideration of other low emission fuels or technologies for certain types of vehicles (perhaps including electric, compressed natural gas or biofuel vehicles for special tasks)

• investigation of opportunities for improving the efficient use of the vehicle fleet via review of vehicle usage policies, including matching the right vehicle for task and considering alternative travel arrangement options and incentives for trips that may be made by other means, particularly local trips in the inner urban zones

• consideration of the advantages of education in eco-driving for regular fleet users which is being identified as a highly cost effective way to reduce CO2 emissions\textsuperscript{46}.

Further more comprehensive analysis of the University's vehicle fleet (including by vehicle type and actual vehicle use observations in the context of university transport needs and trip types, emerging vehicle and fuel technologies, and fuel cost scenarios) would improve the decision making framework for reducing the financial cost of the vehicle fleet into the future and the carbon footprint of the vehicle fleet.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2-12.png}
\caption{UTAS carbon emissions by source}
\end{figure}


\textsuperscript{46} The European Climate Change Program calculated that eco-driving could contribute to CO2 emission reductions with about 50 million tons of CO2 savings in Europe by 2010. Other research also clearly indicates that eco-driving is a highly cost-effective way to reduce CO2 emissions, while Ford claim that Some 25\% savings in fuel consumption and therefore Co2 emissions can be achieved when comparing Eco-Driving style with "normal-average" driving behavior.
2.3.6 Virtual transport, communication and e-learning technologies

Information and communication technologies (ICT) have provided a range of opportunities for universities to change the way they deliver some of their educational services, and like many other organisations, change the way they do business more generally. This is having an impact on when, why and how much individuals and institutions travel. Consequently ICT and how it is used is an important component to any transport strategy into the future.

Online learning

At UTAS, online teaching and learning tools are being used to support on-campus students at the site of course/unit delivery, on-campus students at campuses remote from the base where teaching staff largely operate (such as at the CCC), and off-campus students (in a small suite of distance education offerings). As the technology in this area improves and students and staff build their capacity to interact in these environments the need for travel for some students (and staff) will continue to reduce, although the need for some face-to-face teaching and student interaction will remain important for many course offerings.

Telecommuting

For some time many University employees have been able to work remote from their traditional work places (or telecommute) at least some of the time thanks to the internet, remote access networking, portable computers, and other mobile communication technologies. This can help reduce the need for the daily journey to work, allow employees to become more flexible with their work hours and practices, and improve the capacity of staff to work while travelling (for example waiting at airports, on planes or buses).

It has been estimated that the proportion of telecommuting in the Australian workforce in 2000 and 2005 was 11% and 30% respectively, and that the Australian workforce as a whole may have a maximum telecommuting capacity of 40–50% . The impact telecommuting has on travel demand and total kilometres travelled by employees of an institution depends on whether the telecommuting is undertaken on a part-day or full-day basis since simply working from home in the morning and then on campus in the afternoon does not reduce travel demand, although it may have a range of other benefits. At UTAS it is unclear how much travel might be being saved by telecommuting practices. The structure of the University’s workforce is such that a significant proportion of employees have the capacity to work from home (or remotely) some of the time, while ICT equipment and support systems facilitate many staff (particularly academics) to do so.

Virtual meetings and virtual transport

Continuing improvements to video and teleconferencing technologies and infrastructure have also provided increasing opportunities for the university community to meet virtually or ‘transport themselves virtually’. Currently the University has 71 video conference venues which are upgraded periodically. The location of these are summarised in Figure 2–13. The booking system for these facilities provides some indicators of use but overall it is quite difficult to get detailed information about the use of these facilities to monitor change in use over time . Gleaning more about why such

47 ABS, 2001  
48 Sensis, 2005  
49 Vu et al, 2007  
50 UTAS Information Technology Resources
services are being used (e.g. for teaching, university business meetings, conferences),
the frequency of use, and whether the use of the facility was replacing the need to
physically meet (and therefore travel) via the booking system would provide some
useful indicators of the uptake of such facilities.

The University might consider promoting the use of tele-conferencing, video-
conferencing venues, and voice and video calls over the internet on personal
computers and mobile communication devices through improving access to such
technologies in the workplace and communicating the benefits of such practices
including time and financial savings associated with travel, and environmental impact.

![Figure 2–13 Number of UTAS video conference venues by region](source: UTAS, ITS Video Conferencing 2011)
2.4 Towards a strategy – key opportunities for improving sustainable transport outcomes

UTAS Hobart and Launceston campuses and facilities present the most opportunities to improve sustainable transport outcomes, particularly encouraging students and staff to partake in active modes of transport such as walking and bicycling when they reside locally or need to undertake local trips for university business; and encouraging the use of bus services in key public transport corridors where service levels and access to public transport is highest.

Where students and staff reside in outer urban areas or regional communities poorly served by public transport there are limits to the kind of initiatives that can be promoted to reduce the incidence of car use. Along with the significant amount of university associated travel between the Hobart and Launceston campuses and Launceston and Burnie campuses there are opportunities to focus attention on carpooling schemes and incentives, the quality of regional and inter-regional bus services and the use of mechanisms, such as communication technologies, for reducing the extent of the need to travel for some trips. tourism benefits.

Figure 2–14 schematically outlines the different travel demand and transport choice zones that have emerged from the analysis of the University community and transport issues and options available. The diagram points to the most suitable transport modes for each zone, although it excludes air travel. While there are opportunities to address the needs of the University community in each zone, it is the ‘Active Inner Zone’ and the ‘Urban Zone’ that provide the most significant opportunities, particularly in Hobart and Launceston.

The Active Inner Zone (0–2.5 km)

The Active Inner Zone (0 to 2.5 km away from campus) is classified as the short trip zone. With a high number of students and staff residing in this zone there are opportunities to build on already established active transport cultures amongst some sections of the university population and encourage increased uptake in walking and bicycling.

The University of Western Australia (UWA) found that the proportion of students and staff at its campus regularly using active modes was significantly higher than the general population and that the measured potential for switching staff and students to more regular active transport modes was about 30%⁵¹. Their results suggested that reducing barriers to using active modes, in particular reducing actual and perceived travel time by bus and bicycle, would have the greatest impact on commuting patterns. Given the Hobart and Launceston contexts, these findings support a similar opportunity for UTAS to focus initiatives on supporting and establishing cultures of active transport for short trips, alongside encouraging usage of established local bus services.

---

⁵¹ Shannon et al 2006
The Urban Zone (2.5–10 km)

The Urban Zone (2.5 to 10 km away from campus) generally provides reasonably good levels of access to bus services in both Hobart and Launceston, although there are a number of network efficiency and service enhancements that need addressing and other potential public transport services that might be introduced. Consequently, focusing attention on mechanisms for enhancing existing bus services and promoting public transport use as well as cycling and small powered vehicles seems a most appropriate strategy for this zone.

Key public transport corridors through this zone and out to Hobart’s northern suburbs, the eastern shore and down towards Kingston have been earmarked by DIER for future consolidation, although most services terminate in the CBD requiring those attending Sandy Bay campus to change to another bus route. This impacts considerably in the perceived and real level of convenience of bus services despite improvements to service frequencies and attention to the reduction of journey time through initiatives such as the dedicated bus lane on Hobart’s Southern Outlet.

A further possibility supported by UTAS is the development of a public transport ferry service linking the Eastern Shore with the Hobart CBD/Waterfront and Sandy Bay area (perhaps using the Wrest Point Casino Wharf). Such a service uses the valuable and attractive River Derwent instead of congested roads and bridges, serves commuters via connection of key employment and educational activity zones (including the Sandy Bay campus) and offers additional tourism benefits.

Figure 2–14  UTAS sustainable transport travel zones with most suited sustainable modes
|------------------|----------------|------------------------|---------------------|
| **1 RAISE AWARENESS** | Identify sustainable transport options in each zone  
Show how to access and use bus services, bicycle, carpooling and virtual transport options  
Understand benefits (health and wellbeing, environment, convenience, cost) | ▪ Information communication  
▪ Promotional activities  
▪ Demonstration events (how to use bus/maintain bicycle)  
▪ Education programs (safe bicycling, eco-driving) | Mostly UTAS and partnerships with other organisations  
(bus service providers, bicycle user groups) |
| **2 PROVIDE INCENTIVES & DISINCENTIVES** | To encourage people to try existing sustainable transport options  
To increase the proportion of regular sustainable transport users  
To discourage drive and park when alternatives are available | ▪ Dedicated parking and discounted parking permits for carpoolers  
▪ Rewards schemes for sustainable transport action  
▪ Sustainable transport challenge programs  
▪ Free Metro Tas Greencards at enrolment to encourage trial of bus services  
▪ Parking limitations and pricing  
▪ Organisational policy and procedure reform | Mostly UTAS |
| **3 IMPROVE SUSTAINABLE TRANSPORT INFRASTRUCTURE, FACILITIES AND SERVICES** | To enhance sustainable transport accessibility, convenience and safety to improve its attractiveness as an option | ▪ Improve directness of some key Metro Tasmania bus services  
▪ Improve bus frequency and routing  
▪ Advocate for bike access on buses and Wi-Fi on key UTAS bus services  
▪ Link the Hobart eastern and western shores key activity zones by supporting a bicycle friendly ferry service that stops at the Hobart waterfront and Sandy Bay (Wrest Point Casino).  
▪ Improve connectivity and safety of pedestrian and bicycle paths/lanes  
▪ Improve quality and convenience of end of trip bicycle facilities | Local and state government, bus service providers in partnership with UTAS |
Co-ordinated and integrated approaches

There are numerous opportunities for improving sustainable transport infrastructure, facilities and services and encouraging the specific sustainable transport choices most suited to each of the zones outlined in Figure 2–14. While there are things that UTAS can do to promote and encourage sustainable transport and travel practices and improve facilities within its own grounds, many of the infrastructure and service improvements are the responsibility of other government agencies and bus service providers. UTAS will need to work collaboratively with these agencies to co-ordinate and advocate for the improvements.

Table 2–1 summarises the three essential approaches that will need to be part of the mix of strategies for improving the University’s sustainable transport outcomes: raising awareness, providing incentives and disincentives and improving sustainable transport infrastructure, facilities and services. The reasons for each approach are presented, as well as examples of appropriate initiatives and stakeholder responsibility.

In addition to the strategic attention to these different zones, there will need to be integrated approaches to sustainable transport improvement incorporating three essential approaches:

1 Raising awareness:
   - about sustainable transport options in each zone
   - about how to access and use bus services, bicycle, carpooling and virtual transport options
   - about benefits (health and wellbeing, environment, convenience, cost)

2 Providing incentives and disincentives
   - to encourage people to try existing sustainable transport options
   - to increase the proportion of regular sustainable transport users
   - to discourage drive and park when alternatives are available or unnecessary travel

3 Improving sustainable transport infrastructure, facilities and services
   - to enhance sustainable transport accessibility, convenience and safety
   - to improve the attractiveness of sustainable transport as a realistic transport option

The following considers each UTAS region and outlines key opportunities for infrastructure and service improvements, keeping in mind the specific circumstances and issues discussed in Sections 2.2 and 2.3. Accompanying such opportunities would need to be those initiatives associated with raising awareness, providing incentives encouraging sustainable transport practices alongside disincentives for single occupant vehicles when alternative choices are available.

2.4.1 South (Hobart)

There are specific opportunities to encourage and facilitate more sustainable transport outcomes in Hobart, particularly because of the high number of students and staff that reside in inner city suburbs and key public transport corridors. Opportunities exist in:

- Extending and improving the Hobart and metropolitan bicycle network and providing dedicated bicycle lanes to enhance the connectivity and safety of bicycling across the city and approaching the Sandy Bay campus
- Improving the quality of local pedestrian routes, particularly around and within each campus and main facility, and between Sandy Bay campus and the CBD
• Improving urban bus services in the highest demand public transport corridors, particularly increasing the directness of some key urban public transport routes so that fewer students and staff need to change buses in the CBD to get to the Sandy Bay campus and improving frequency of CBD to Sandy Bay campus services and connectivity of UTAS origins and destinations in the CBD and Sandy Bay.
  - Improving frequency of CBD to Sandy Bay campus services will be paramount if the provision of direct metropolitan routes proves difficult due to whole of network service constraints. This may include improving existing CBD to campus services through enhancing access, awareness of services and frequency and/or extending the Metro Tasmania 888 service throughout the year
  - Exploring opportunities for a city circle type bus service linking key CBD activity zones and CBD/waterfront UTAS facilities is in line with recommendations made in the Hobart City Council Jan Gehl report.

• Supporting bus lanes, a CBD bus interchange, improvements to public transport consumer information, and supporting on bus bike capacity and Wi-Fi initiatives.
  - Bus lanes allow bus services to minimise time stuck in peak traffic and shorten journey times improving the attractiveness of bus services.
  - A state-of-the-art bus interchange or hub in the Hobart CBD presents the opportunity to: improve the visibility and attractiveness of bus services and bus travel, provide a good level of information about bus routes (maps), timetables, frequency, fares and ticketing, improve connectivity of bus routes and convenience and comfort while waiting for a bus. Such an initiative is recommended in the work for Hobart City Council by Jan Gehl.
  - The emergence of real-time public transport information technologies, personal mobile communication and information technology, and Wi-Fi capability presents a range of opportunities that UTAS can advocate for and work with service providers to deliver and promote. This includes improvements to the University’s own information media including its website, brochures, and public transport promotional opportunities.
  - UTAS supports the investigation of opportunities for Metro buses to carry bikes on key routes which may be shown to encourage an integration of bicycling and bus use.

• Advocating for a public transport loop ferry service that links the Eastern Shore to the Hobart CBD (waterfront) and Sandy Bay (potentially using the Wrest Point Casino wharf).
  - Such a service could significantly improve non-road based public transport options from the Eastern Shore to UTAS Hobart CBD, waterfront and Sandy Bay campus/ facilities and support the promotion of active modes of transport through connection to walking and bicycling routes.
  - Current commercial services are not well promoted or integrated into the Hobart public transport system and there is continuing interest from a range of stakeholders in making better use of the River Derwent for passenger transport akin to other Australian ‘river and harbour’ cities. Investigation by DIER in 2009 of the viability of Hobart ferry services pointed to the wharf at Sandy Bay Casino as a ‘location considered potentially suitable for the establishment of a ferry service’ \(^{52}\), and a ‘commuter destination due to the

\(^{52}\) DIER 2009
presence of the UTAS Sandy Bay campus. However, the recommendations by DIER based on this work and modelling of potential catchments and costs has been that public transport ferry services on the Derwent are not currently viable. The limitations of the modelling methods adopted, however, and transport planning by other agencies since this time present new opportunities for investigation.

- With improvements in the approach to modelling ferry service catchments (origins and destinations, commuters and recreational users) to that undertaken in the 2009 DIER study, and cost modelling around a ferry service that is well designed, targeted and integrated with other transport modes and future land use planning (specifically good walking and bicycling connections and an increasing CBD residential population) and, cognizant of more recent plans and recommendations in the region (such as Hobart City Council’s Sustainable Transport Strategy, the Jan Gehl proposal, and this Strategy), further collaborative investigation of the viability of such a public transport enhancement for Hobart may point to greater viability of such a service than was earlier concluded.

- Promoting carpooling to facilitate more efficient and cost effective travel for students travelling long distances and providing incentives for carpoolers.

2.4.2 North (Launceston)

Like Hobart, there are opportunities to encourage and facilitate more sustainable transport in the active and urban zones due to the higher number of students and staff residing in these areas in Launceston. However, there are also significant region-wide transport challenges with many students and staff travelling long distances from diverse locations. Particular opportunities to address key transport challenges in Launceston and the northern region include:

- Improving inter-city (regional) bus services (timetabling and costs) to strengthen the links between Launceston and other north and north western centres.
- Promoting carpooling to facilitate more efficient and cost effective travel for students travelling long distances, and providing incentives for carpoolers.
- Extending, improving and promoting the Launceston urban bicycle network and arterial bike routes to improve connectivity and safety of cycling across the city and to Inveresk and Newnham campuses to encourage urban students to confidently cycle more often.
- Improving the quality of local pedestrian routes, particularly around each campus, neighbouring suburbs and activity zones and between Inveresk and Launceston city centre to encourage local students to walk.
- Improving Launceston city bus services (routes, timetables and journey time) with a focus on improving links between Launceston city, Newnham and Inveresk campuses, particularly during semester periods, and extending early evening services on campus.
- Supporting bus lanes, improvements to public transport consumer information on bus bike access and Wi-Fi initiatives (for reasons explained in section 2.4.1).
2.4.3 North-west (Burnie)

The relatively low number of students based at Cradle Coast and the dispersed pattern of student origins limits opportunities to reduce the use of the private car, however targeted areas of attention for Cradle Coast students might include:

- Promoting region-wide carpooling opportunities
- Improving public transport services and information into Burnie from Wynyard, Ulverstone and Devonport in line with peak class attendance times
- Improving connectivity to the Burnie Cradle Coast Campus by local bus services from city interchanges
- Enhancing the services and facilities on campus (e.g. food outlets, ATM or post office service) to reduce the incidence of daytime car use associated with personal business.

2.4.4 Inter-regional trips

Opportunities exist to improve the existing Redline Bus service between Sandy Bay campus and Newnham campus by including Wi-Fi facilities and promoting its use to staff as well as students. While there is an existing UTAS carpool scheme it is timely to review the effectiveness of this scheme, other state-wide carpool matching service options and carpool incentive mechanisms. There are also opportunities for the University to further encourage and facilitate the use of video conferencing and other communication technologies to reduce the need for some inter-region/inter-campus trips associated with university business.

2.4.5 Vehicle fleet, procurement and offsetting

There are a number of things the University can do to reduce the GHG emissions from its vehicle fleet, supply chains and transport related operational practices in addition to addressing transport accessibility and travel practices. Often such initiatives will have cost savings associated with them or other benefits such as improvements in staff productivity and reduction in the dependence of goods and services with large carbon footprints. Management of carbon from supply chains will become even more relevant in the context of the Australian Government’s introduction of a price on carbon, which will impact on the cost of freight transport. Example initiatives include:

- Undertaking a comprehensive assessment of the University’s vehicle fleet and its use to identify opportunities to reduce GHG emissions and improve cost efficiency (e.g. transition to alternative low carbon intensive fuels for some vehicles, procurement of more energy efficient vehicles where feasible and where safety standards allow, and implementation of initiatives that encourage more efficient use of vehicles).
- Review and amendment of university procurement policies and guidelines to incorporate consideration of supply chain carbon footprints and encourage use of local (Tasmanian and Australian) suppliers where possible
- Identification and incorporation of accredited and ethical carbon offsetting schemes where reduction in travel or GHG emissions is not possible (e.g. air travel)

54 Assessment and procurement of fuel efficient vehicles or alternative fuel technologies will need to be considered in light of The UTAS Driving and Safety Policy which specifies the high importance of vehicle safety.
3 The UTAS Sustainable Transport Strategy 2012–2016

3.1 Strategy framework and principles

The Strategy is informed by the UTAS Environmental Management Plan 2009-2011 (EMP) and its targets. The EMP aspires to:

Contribute positively to addressing sustainable urban transport issues.

The Strategy is guided by three key improvement objectives for the University (Figure 3–1). These focus on the different improvement themes recognised as being the most significant UTAS transport planning and management themes for the next five years. Related to these improvement objectives are some 16 strategies from which strategic actions are recommended and implementation plans developed.

![Figure 3–1 The Strategy Framework](image)

The strategies and actions entail a mix of essential principles in recognition of: first the desire for an integrated approach to sustainable transport across the University; and second of the multi-stakeholder approach that is required for delivering improvements.

55 The EMP also has relevant targets associated with: increasing the efficiency of the University vehicle fleet (10% reduction of litres fuel consumed with reference to the base level year (2008) by 2011); and reducing the environmental impact of the university community’s commuting.
in sustainable transport choices and outcomes. The strategies and actions therefore include the following elements:

- Improving baseline and monitoring information as a foundation for better informing transport planning and strategy review and evaluation into the future
- Things the University can do to improve its own infrastructure, facilities and behavioural and procurement practices
- Things the University needs to do in collaboration or co-ordination with other stakeholders to deliver improvements (such as local and state government agencies and bus provider services)
- Attention to the University’s four trip categories:
  - Trips to work or study
  - Intra-city local trips for university business
  - Inter-regional trips for university business and study
  - Domestic and international air travel
- Engaging with the University community and other neighbourhood communities to develop and deliver relevant improvements and solutions
- Integrating various strategy actions into academic and operational activities to foster sustainability cultures throughout the University.
3.2 Improvement objectives and strategies

3.2.1 Objective 1: Maximise access to the university by healthy and sustainable transport options

Ensuring a good level of access to the range of educational services offered at UTAS and facilitating more sustainable transport options where feasible allows us to:

- Reduce inequities in access to higher education in Tasmania as far as possible through improvements in transport choices and online or remote educational services.
- Reduce the vulnerability of the University community to increasing transport fuel prices or fuel shocks by improving alternative transport options to the car and increasing the resilience of the institution and its community.
- Support the continued growth and development of the University by enhancing:
  - accessibility choices
  - the attractiveness and amenity of University campuses, facilities and environments to students, staff and visitors.
- Facilitate active transport options, in turn enhancing the wellbeing of the university community.
- Reduce the growth in demand for on-campus and neighbourhood parking, thereby reducing the significant cost of parking provision to the University.

In addition to these benefits to the University are the urban amenity, environmental and social benefits to the community at large of facilitating more sustainable transport options and practices, and social inclusion in higher education.

The strategies associated with this improvement objective to guide implementation plans and actions are:

| 1.1 | Establish baseline measures and monitoring for this objective. |
| 1.2 | Provide and enhance walking, bicycling and motorcycle/scooter infrastructure (including end of trip facilities, cycle routes, safe and direct pedestrian routes). |
| 1.3 | Work with public transport providers to enhance public transport services to university facilities (including bus shelters, bus service information, Wi-Fi, ticketing, bus route planning, bike user access, and new public transport modes in target corridors). |
| 1.4 | Co-ordinate with other initiatives and establish networks that further support our sustainable transport objectives. |
| 1.5 | Identify opportunities to reduce student and staff travel inefficiencies through improvements to class timetables, e-learning and video conferencing access. |
3.2.2 Objective 2: Reduce the incidence of single occupant vehicle use and unnecessary travel

Reducing the degree of car use, particularly the number of single occupant vehicles arriving on campus, where there are opportunities to facilitate and encourage alternatives will help:

- Reduce the growth in parking demand across University facilities – thereby reducing the financial burden of parking facilities on the institution
- Reduce the costs of transport inefficiencies associated with University business travel
- Reduce the GHG emissions from university transport sources
- Improve neighbourhood amenity and traffic safety on and around campuses.

The strategies associated with this improvement objective to guide implementation plans and actions are:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Establish baseline measures and monitoring for this objective.</td>
</tr>
<tr>
<td>2.2</td>
<td>Encourage students and staff to consider sharing vehicles or choosing non-car options for short trips.</td>
</tr>
<tr>
<td>2.3</td>
<td>Minimise the number of single occupant vehicle trips.</td>
</tr>
<tr>
<td>2.4</td>
<td>Create an environment where more efficient vehicle options are attractive (motor cycles/scooters, electric vehicles).</td>
</tr>
<tr>
<td>2.5</td>
<td>Create an environment where more efficient travel is considered.</td>
</tr>
</tbody>
</table>
3.2.3 Objective 3: Reduce greenhouse gas (GHG) emissions from University transport sources

As well as positioning UTAS as a carbon responsible and sustainable higher education institution in the global education market and within the national and state economy, this objective focuses the University on:

- Its regulatory compliance requirements associated with NGER
- Meeting energy consumption and GHG emission reduction targets established in the UTAS Environmental Management Plan
- Meeting the aspirations of many staff and students to be part of an institution and community that is taking action to address climate change through reducing energy consumption and GHG emissions from personal and University transport sources. This aspiration was articulated strongly at the internal staff workshop in October 2010.
- Reducing the University’s transport costs through reduced consumption of transport fuels
- Reducing the carbon footprint of goods and services procured by the University through consideration of GHG emissions associated with supply chains. With the impending price on carbon and the risk of fuel price hikes associated with peak oil this is likely to provide cost savings.
- Addressing transport and work productivity inefficiencies (such as when virtual transport is a viable alternative to long distance travel for university meetings).

The strategies associated with this improvement objective to guide implementation plans and actions are:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Establish baseline measures and monitoring for this objective (including GHG emissions from vehicle fleet, collective travel behaviour, and supply chain activities).</td>
</tr>
<tr>
<td>3.2</td>
<td>Identify and implement emission and waste reduction strategies for the UTAS vehicle fleet (including encouraging procurement of more efficient vehicles, use of alternative fuels, and reduction of unnecessary vehicle use).</td>
</tr>
<tr>
<td>3.3</td>
<td>Identify opportunities to reduce GHG emissions from supply chains.</td>
</tr>
<tr>
<td>3.4</td>
<td>Identify certified ethical carbon offset opportunities for any emissions we can’t reduce and facilitate implementation of these.</td>
</tr>
<tr>
<td>3.5</td>
<td>Support and recognise individuals and business units (Schools, Institutes, sections) who act to reduce their transport emissions.</td>
</tr>
<tr>
<td>3.6</td>
<td>Encourage more energy-efficient travel behaviour.</td>
</tr>
<tr>
<td>3.7</td>
<td>Identify and reduce unnecessary travel (including local business travel, flights)</td>
</tr>
</tbody>
</table>
3.3 **Strategic actions**

The following tables outline the strategic actions relevant to each objective and strategy area.

Each action has a timing code to indicate the priority of action implementation. These are:

- **A** = commences in first 6 months (or immediately)
- **B** = commences in year 1-2
- **C** = commences in year 2-3
- **D** = commences in year 3-5
### Objective 1 - Maximise access to the University by sustainable and healthy transport options

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Whole of UTAS</th>
<th>South</th>
<th>North</th>
<th>North-West</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.1 Establish baseline measures and monitoring for this objective</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Survey: Undertake a university-wide online survey of staff and student travel behaviour, needs and attitudes to benchmark mode share, trip generation, and travel behaviour attitudes for the university and separate campuses and facilities and establish key performance indicators.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Motorcycles/Scooters: Complete the baseline audit of ridership and parking provision at all campuses and main facilities to establish needs and performance indicators.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Walking: Undertake a baseline audit of pedestrian movements and quality (directness, lighting, safety) of access routes (to Sandy Bay Campus and other main city facilities, within Sandy Bay campus, and between UTAS facilities and public transport services) to establish needs and performance indicators.</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>d) Bicycling: Complete the baseline audit of bicycle ridership, electric bike use, access routes and end of trip facilities in all Hobart facilities to establish needs and performance indicators.</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>e) Walking: Undertake a baseline audit of pedestrian movements and quality (directness, lighting, safety) of access routes (to Newnham, Inveresk and Beauty Point campuses, within each campus, and between UTAS facilities and public transport services) to establish needs and performance indicators.</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>f) Bicycling: Undertake a baseline audit of bicycle ridership, electric bike use, access routes and end of trip facilities for Newnham and Inveresk campuses and Beauty Point facilities to establish needs and performance indicators.</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>g) Walking: Undertake a baseline audit of pedestrian movements and quality (directness, lighting, safety) of access routes (to Cradle Coast Campus, NW Rural Clinical School, and key public transport services) to establish needs and performance indicators.</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>h) Bicycling: Undertake an audit of bicycle ridership, electric bike use, access routes and end of trip facilities for Cradle Coast Campus and NW Rural Clinical School to establish needs and performance indicators.</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td><strong>1.2 Provide and enhance walking, bicycling and motorcycle/scooter infrastructure (including end of trip facilities, cycle routes, safe and direct pedestrian routes)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Identify priorities, develop an action plan and implement end of trip bicycling infrastructure for all campuses and main facilities.</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>b) Identify priorities and develop an action plan for improving pedestrian and bicycle access and safety on campus and between Hobart main facilities, local activity centres and public transport services (based on pedestrian and bicycling audits and online survey).</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>c) Include walking, bicycling and motorcycle/scooter infrastructure in future facility development and campus improvement plans (including Master Plans, IMAS, MS2, Domain House and other emerging plans).</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>d) Identify priorities and develop an action plan for improving pedestrian and bicycle access and safety on campuses and between Launceston/Beauty Point main facilities, local activity centres and public transport services (based on pedestrian and bicycling audits and online survey).</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>e) Include walking, bicycling motorcycle/scooter infrastructure in future facility development and campus improvement plans (including the Newnham Campus Urban Design Framework).</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>f) Identify priorities and develop an action plan for improving pedestrian and bicycle access and safety on campus and between main Burnie facilities, local activity centres and public transport services (based on pedestrian and bicycling audits and online survey).</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>g) Include walking, bicycling motorcycle/scooter infrastructure in future facility development and campus improvement plans.</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>
### Objective 1 - Maximise access to the University by sustainable and healthy transport options

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.3</strong></td>
<td>Work with public transport providers to enhance public transport services to university facilities (including bus shelters, bus service information, Wi-Fi, ticketing, bus route planning, bike user access, and new public transport modes in target corridors)</td>
</tr>
<tr>
<td></td>
<td>a) Provide input into bus service provider bus network reviews/route service reviews (especially Metro Tasmania’s Greater Hobart and Launceston bus network review processes), and review of ticketing improvements (including future possibility for integrated student/bus card).</td>
</tr>
<tr>
<td></td>
<td>b) Ensure Metro Tasmania/Tiger Bus and other bus service providers are visible at UTAS orientation events to inform bus users of service routes, timetables, ticketing and ‘how to use’ buses.</td>
</tr>
<tr>
<td></td>
<td>c) Advocate for Wi-Fi facilities on longer haul urban and inter-city bus routes.</td>
</tr>
<tr>
<td></td>
<td>d) Develop an easy to access portal on the UTAS website about public transport services (routes, timetables, ticketing, bike access, Wi-Fi facilities etc.) for use by students/staff/visitors.</td>
</tr>
<tr>
<td></td>
<td>e) Advocate for bus bike access on certain routes and where feasible.</td>
</tr>
<tr>
<td></td>
<td>f) Work with Metro Tasmania, Tiger bus and other bus service providers to identify and improve the quality (safety, comfort and information) of bus shelters associated with UTAS destinations and services.</td>
</tr>
<tr>
<td></td>
<td>g) Identify opportunities to improve the inter-city/inter-campus (Hobart-Launceston) bus service, and work with the service provider to deliver improvements.</td>
</tr>
<tr>
<td></td>
<td>h) Develop a UTAS public transport information brochure (for the Greater Hobart region and inter-city) for distribution at key UTAS student and staff information points.</td>
</tr>
<tr>
<td></td>
<td>i) Work with Metro Tasmania, Hobart City Council and other stakeholders (including other major trip generators) to explore opportunities for a campus and city circle ‘green’ bus service to improve links between Sandy Bay Campus and UTAS city and waterfront facilities and encourage mode shift from car to public transport for short trips in the central Hobart zone.</td>
</tr>
<tr>
<td></td>
<td>j) Advocate for a bus interchange in the Hobart central zone that improves ease of access to bus services throughout the Greater Hobart region for UTAS users and enhances information about services.</td>
</tr>
<tr>
<td></td>
<td>k) Advocate for expansion of the public transport network including a ferry service linking the Eastern Shore to the CBD and West Point/Sandy Bay, and progression of the proposed transit corridors in Northern Suburbs (high frequency bus transit or light rail) and Kingston-CBD/Sandy Bay.</td>
</tr>
<tr>
<td></td>
<td>l) Work with Metro Tasmania to improve bus services that better serve UTAS users, Hobart campuses and facilities.</td>
</tr>
<tr>
<td></td>
<td>m) Identify opportunities to improve the inter-city/inter-campus (Hobart-Launceston) bus service, and work with the service provider to deliver improvements (including facilities and financial viability).</td>
</tr>
<tr>
<td></td>
<td>n) Develop a UTAS public transport information brochure (for the Launceston region and inter-city) for distribution at key UTAS student and staff information points.</td>
</tr>
<tr>
<td></td>
<td>o) Work with Metro Tasmania and/or Tiger Bus to improve bus services that better serve UTAS users, Launceston campuses and facilities.</td>
</tr>
<tr>
<td></td>
<td>p) Ensure the new bus stop pull-over outside the Cradle Coast Campus has a safe, comfortable and informative bus shelter (work with Burnie Council to move existing UTAS School of Architecture designed bus stop shelter or undertake alternative improvements works).</td>
</tr>
<tr>
<td></td>
<td>q) Develop a UTAS public transport information brochure (for the Cradle Coast region and inter-city) for distribution at key UTAS student and staff information points.</td>
</tr>
<tr>
<td>Objective 1 - Maximise access to the University by sustainable and healthy transport options</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>1.4</strong> Co-ordinate with other initiatives and establish networks that further support our sustainable transport objectives</td>
<td></td>
</tr>
<tr>
<td>a) Input to proposals, plans and strategies that have implications for the delivery of UTAS sustainable transport strategies.</td>
<td>A</td>
</tr>
<tr>
<td>b) Explore opportunities to collaborate and co-ordinate with other stakeholders responsible for transport outcomes where possible.</td>
<td>A</td>
</tr>
<tr>
<td>c) Investigate opportunities and feasibility of linking the UTAS community to an established and tested state-wide carpooling scheme to provide students and staff travelling long distances with alternative options.</td>
<td>A</td>
</tr>
<tr>
<td>d) Explore the suitability and feasibility of linking to programs and initiatives that support this strategy (including travel behaviour change programs, awareness and educational campaigns, active transport initiatives that promote health and wellbeing).</td>
<td>A</td>
</tr>
<tr>
<td><strong>1.5</strong> Identify opportunities to reduce student and staff travel inefficiencies through improvements to class timetables, e-learning and video conferencing access.</td>
<td></td>
</tr>
<tr>
<td>a) Promote the use of UTAS video-conferencing and tele-conferencing facilities to reduce unnecessary travel by staff and research students. Explore business model for possible sharing of facilities.</td>
<td>B</td>
</tr>
<tr>
<td>b) Work with ITR to establish monitoring of the use of video-conferencing facilities.</td>
<td>B</td>
</tr>
<tr>
<td>c) Improve the quality and range of courses offered online.</td>
<td>B</td>
</tr>
<tr>
<td>d) Work with exam timetabling to limit scheduling of exams on weekends when university facilities are less well served by public transport.</td>
<td>B</td>
</tr>
<tr>
<td>e) Investigate student transport issues created by class timetables and identify opportunities for improvement (use Cradle Coast Campus students in a pilot study and undertake as a student research project).</td>
<td>B</td>
</tr>
</tbody>
</table>
### Objective 2 - Reduce the incidence of single occupant vehicle use and unnecessary travel

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Whole of UTAS</th>
<th>South</th>
<th>North</th>
<th>North-West</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Establish baseline measures and monitoring for this objective</td>
<td>a) Undertake a university wide online survey of staff and student travel behaviour, needs and attitudes to benchmark mode share, trip generation, and attitudes for the university and separate campuses/facilities, and inform establishment of key performance indicators.</td>
<td>as per 2.1 a</td>
<td>as per 2.1 a</td>
<td>as per 2.1 a</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>b) Explore and adopt relevant initiatives used at other universities to encourage bike use through incentives, partnering with external organisations (e.g., Bicycle Tasmania, CyclingSouth, DIER, various bicycle user groups - BUGs) or internal groups advocating and providing physical fitness programs (e.g., UniGym, Active Launceston).</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>2.2 Encourage students and staff to consider sharing vehicles or choosing non-car options for short trips</td>
<td>a) Undertake a university wide online survey of staff and student travel behaviour, needs and attitudes to benchmark mode share, trip generation, and attitudes for the university and separate campuses/facilities, and inform establishment of key performance indicators.</td>
<td>as per 2.1 a</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Explore and adopt relevant initiatives used at other universities to encourage bike use through incentives, partnering with external organisations (e.g., Bicycle Tasmania, CyclingSouth, DIER, various bicycle user groups - BUGs) or internal groups advocating and providing physical fitness programs (e.g., UniGym, Active Launceston).</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>c) Participate in already established ‘encouragement’ days (e.g., National Ride to Work and School Days).</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>h) Raise awareness among the high proportion of students and staff that live in the central Hobart zone about their opportunities to reduce the use of cars for short trips when feasible. Particularly encourage active transport modes (walking and cycling) pointing out health and well-being benefits, parking/car running cost savings and trip time benefits at congested periods.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>i) Work with MetroTas to promote the use of the MetroTas CBD to Sandy Bay Campus services to students and staff (including regular services and the UniBus 888 service), highlighting ease of use, travel time and frequency, and parking cost savings compared to use of car for trips to CBD. Market services through targeted information, promotion of the MetroTas online trip planner, and improved wayfinding.</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>j) Identify priorities and develop an action plan for improving pedestrian and bicycle access and safety on campuses and between Launceston/Beauty Point main facilities, local activity centres and public transport services (based on pedestrian and bicycling audits and online survey).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>k) Raise awareness among the high proportion of students and staff that live in the central Launceston zone about their opportunities to reduce the use of cars for short trips when feasible. Particularly encourage active transport modes (walking and cycling) pointing out health and well-being benefits, parking/car running cost savings and trip time benefits at congested periods.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>l) Identify priorities and develop an action plan for improving pedestrian and bicycle access and safety on campuses and between Burnie main facilities, local activity centres and public transport services (based on pedestrian and bicycling audits and online survey).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>m) Reduce the generation of car based lunchtime personal business trips into Burnie by improving on-campus facilities including improvements to food outlets, provision of an on-site ATM and Australia Post/news agent onsite or nearby (in collaboration with Hellyer College and neighbouring Umina Park Home for the Aged)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

76
<table>
<thead>
<tr>
<th>Objective 2 - Reduce the incidence of single occupant vehicle use and unnecessary travel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.2</strong> Encourage students and staff to consider sharing vehicles or choosing non-car options for short trips</td>
</tr>
<tr>
<td>c) Conduct a trial at the Newnham and/or Sandy Bay campuses providing a set of bicycles (electric or manual) available for short term use by staff and secured by a key or wallet deposit, with signed disclaimer and safety notes.</td>
</tr>
<tr>
<td>d) Encourage Metro Tasmania’s participation in UTAS Orientation activities by having a bus use familiarisation demonstration (a bus on site that allows potential users to ‘walk through’ the process for boarding and exiting).</td>
</tr>
<tr>
<td>e) Encourage student bus use by providing a Metro Greencard free of charge at orientation.</td>
</tr>
<tr>
<td>f) Encourage staff bus use for local business trips by making Metro Greencards available to business units/Schools/institutes and include a reward scheme for use.</td>
</tr>
<tr>
<td>g) Develop a UTAS vehicle fleet efficiency improvement strategy that identifies opportunities to improve the efficient use of the UTAS vehicle fleet and identifies business cost savings as a consequence (as per Action 3.2a); this may include reporting and data gathering standardisation and requirements.</td>
</tr>
<tr>
<td>h) Promote the use of the free Tiger Bus service to Inveresk students and staff for commutes and local business trips into the city.</td>
</tr>
<tr>
<td>m) Work with Metro Tasmania to enhance bus services on to Newnham campus (especially in evening period to improve evening safety accessing bus routes), and explore the feasibility of a dedicated UniBus (Newnham-Launceston city) similar to the SBC - Hobart 888 service.</td>
</tr>
<tr>
<td>i)</td>
</tr>
<tr>
<td>j)</td>
</tr>
<tr>
<td>k)</td>
</tr>
<tr>
<td>l)</td>
</tr>
<tr>
<td>m)</td>
</tr>
<tr>
<td>n)</td>
</tr>
<tr>
<td>o)</td>
</tr>
<tr>
<td>p)</td>
</tr>
<tr>
<td>q)</td>
</tr>
<tr>
<td>r)</td>
</tr>
<tr>
<td>s)</td>
</tr>
<tr>
<td>t)</td>
</tr>
<tr>
<td>u)</td>
</tr>
<tr>
<td>v)</td>
</tr>
<tr>
<td>w)</td>
</tr>
<tr>
<td>x)</td>
</tr>
<tr>
<td>y)</td>
</tr>
<tr>
<td>z)</td>
</tr>
</tbody>
</table>
## Objective 2 - Reduce the incidence of single occupant vehicle use and unnecessary travel

<table>
<thead>
<tr>
<th>2.3 Minimise the number of single occupant vehicle trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Review links to statewide carpooling schemes (e.g., TravelSmart, CoolPoolTas) to ensure best fit for UTAS requirements and promote use by staff and students via: easily accessible information on the UTAS website; and promotional activities to students and staff outlining the benefits of carpooling for longer trips (inter-regional/inter-campus) and after hours, and explaining how carpooling works.</td>
</tr>
<tr>
<td>b) Investigate and implement where feasible incentive options for carpool, such as: parking permit discounts, dedicated carpool parking close to key facilities, and rewards programs (e.g., car maintenance and running cost discounts).</td>
</tr>
<tr>
<td>c) Seek opportunities to actively promote the use of alternative transport options for students and staff when feasible for them (i.e. walk and bike to work days). Particularly promote active transport modes for short (near campus and city) trips focused on health benefits and parking/car running cost savings, and use of bus services.</td>
</tr>
<tr>
<td>d) Promote other transport options such as the UTAS-chartered Redline coach service between Hobart and Launceston as well as standard bus/coach services available state-wide.</td>
</tr>
<tr>
<td>e) Continue parking pricing reform plan across all campuses and major facilities, including higher costs for single occupant vehicles.</td>
</tr>
<tr>
<td>f) Seek opportunities to actively promote the use of alternative transport options for students and staff when feasible for them. Particularly the use of bus services and carpooling alternatives at CCC as well as cycling to NW Rural Clinical School.</td>
</tr>
<tr>
<td>f) Monitor the impact of parking reform on neighbouring streets and work with Hobart City Council to address emerging issues.</td>
</tr>
</tbody>
</table>
## Objective 2 - Reduce the incidence of single occupant vehicle use and unnecessary travel

### 2.4 Create an environment where more efficient vehicle (or small vehicle) options are attractive

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>b) Increase dedicated parking spaces for smaller vehicles (scooters, motorcycles, electric motorcycles) in accessible locations at each campus.</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>c) Increase the number of dedicated parking spaces for smaller vehicles (scooters, motorcycles, electric motorcycles) in accessible locations on Sandy Bay Campus and working with the Hobart City Council at or near the UTAS CBD facilities.</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>d) Increase provision of dedicated parking spaces for smaller vehicles (scooters, motorcycles, electric motorcycles) in accessible locations at Newnham, Inveresk Campuses and AMC at Beauty Point.</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>e) As a priority action and to bring into line with other campuses, by early 2012 provide dedicated parking spaces for motorcycles, scooters and electric motorcycles.</td>
<td></td>
</tr>
</tbody>
</table>

### 2.5 Create an environment where more efficient travel is considered

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>a) Raise awareness about opportunities for reducing unnecessary University business travel, including information and tips on the UTAS website.</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>b) Identify opportunities to amend policies and procedures in University business units that encourages consideration of the necessity of travel and alternatives (e.g. use of video or web-conferencing, carpooling for longer car trips, more efficient organisation of meetings within Tasmania and outside the State).</td>
<td></td>
</tr>
</tbody>
</table>
### Objective 3 - Reduce greenhouse gas (GHG) emissions from university transport sources

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Whole of UTAS</th>
<th>South</th>
<th>North</th>
<th>North-West</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.1</strong> Establish baseline measures and monitoring for this objective (including GHG emissions from vehicle fleet, collective travel behaviour, and supply-chain activities)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Undertake a UTAS vehicle fleet GHG emission assessment (including fleet type, size, use, fuel use tracking) to determine a baseline understanding from which to develop an emission reduction response strategy, develop a vehicles emission monitoring framework and key performance indicators.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A as per 3.1 a, b</td>
</tr>
<tr>
<td>b) Undertake a university wide online survey of staff and student travel behaviour to benchmark mode share and trip generation for the university and estimate greenhouse gas emissions from collective university travel and individual campuses/facilities (as per Action 1.1a).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B as per 3.1 a, b</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Hobart Sandy Bay Campus, Hobart CBD facilities, other facilities</th>
<th>Launceston Newnham Campus, Inveresk Campus, Beauty Point, other facilities</th>
<th>Burnie Cradle Coast Campus and North West Rural Clinical School</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.2</strong> Identify and implement emission and waste reduction strategies for the UTAS vehicle fleet (including encouraging procurement of more efficient vehicles and reduction of unnecessary use)</td>
<td>a) Building from the vehicle fleet GHG assessment study, develop an emission reduction response plan for the UTAS fleet that includes attention to vehicle technologies and fuel options (particularly reduction of petrol use), procurement, vehicle usage policies and procedures, and waste management. Investigate vehicle pilot options such as electric vehicles for urban use and recharge facilities. Include learnings from other fleet improvement initiatives (e.g. the experiences of Hobart City Council)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B as per 3.2 a</td>
<td>as per 3.1 a</td>
<td>as per 3.1 a</td>
</tr>
<tr>
<td>Objective 3 - Reduce greenhouse gas (GHG) emissions from university transport sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3.3 Identify opportunities to reduce GHG emissions from supply chains</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Work with appropriate academic staff to identify a student research project investigating GHG emissions from UTAS supply chains to establish baseline information and performance indicators.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Identify a UTAS supply chain that can be used to pilot efficiency improvements (such as bulk purchasing, preference for local manufacture, sustainable suppliers including those using sustainable transport or emissions offsets). Implement the pilot and communicate the findings.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>as per 3.3 a, b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>as per 3.3 a, b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>as per 3.3 a, b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3.4 Identify certified carbon offset opportunities for any emissions we can’t reduce and facilitate implementation of these</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Identify and assess certified ethical carbon offset opportunities and options.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Adopt preferred certified ethical offset options in policies (especially if Tasmanian options).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Amend air travel policies and booking procedures to require purchase of certified ethical carbon emission offsets as part of airfares.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B as per 3.4 a-c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>as per 3.4 a-c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>as per 3.4 a-c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3.5 Support and recognise individuals and business units (Schools, Institutes, sections) to reduce their transport emissions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Identify opportunities for individual and business unit GHG transport emission reduction challenges and reward and recognition programs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Provide ideas, tips and emission calculators via UTAS Sustainability website transport portal to inform and encourage individual and collective action to reduce transport emissions and report successes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Develop a campus challenge (SBC, Newnham, Inveresk, RCS, CCC) to reduce GHG emissions from the baseline.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Communicate via the media GHG emission reduction efforts and success stories to show case to the wider community.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A as per 3.5 a-e</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>as per 3.5 a-e</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>as per 3.5 a-e</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective 3 - Reduce greenhouse gas (GHG) emissions from university transport sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>Encourage more energy efficient travel behaviour</td>
<td>as per 2.2, 2.3, 2.4, and 3.2</td>
<td></td>
</tr>
<tr>
<td>3.5</td>
<td>Identify unnecessary travel (including local, inter-regional and air travel) and identify feasible opportunities to reduce</td>
<td>as per 2.5</td>
<td></td>
</tr>
</tbody>
</table>
4 Implementing the Strategy

4.1 A collaborative effort

Delivering more sustainable transport outcomes and practices cannot be the responsibility of one organisation or agency. Government agencies, employer and educational organisations such as UTAS, community groups and individuals all have a role to play.

To achieve the benefits of this Strategy the University needs to work with a range of different stakeholders. There are many opportunities for the University to collaborate with various agencies on specific initiatives or co-ordinate where other plans and programs have common intents, while community organisations and sustainable transport user groups also provide opportunities for progressing sustainable transport outcomes.

The development and maintenance of good working relationships with state and local government and bus service providers to fully realise the benefits of this Strategy will be essential and the University will need to commit personnel to undertake this role and to fully realise this Strategy.

The stakeholders who are most crucial to the delivery of this Strategy are:

Hobart City Council, Launceston City Council, Burnie City Council

UTAS will seek to collaborate with and co-ordinate efforts to improve local transport infrastructure (especially pedestrian and bicycling access and infrastructure improvements), and link to complementary funding schemes and plans.

Tasmanian Department of Infrastructure and Energy Resources

UTAS will seek to collaborate with, and co-ordinate efforts to improve transport and travel behaviour data associated with the University and surrounding communities; pursue improvements to public transport services and infrastructure and active transport initiatives; and link to complementary travel behaviour and transport improvement programs and funding schemes.

Tasmanian Ministry of Sustainable Transport

UTAS will advocate for integrated transport and land use planning across stakeholder agencies and the delivery of initiatives to facilitate sustainable transport outcomes.

Bus service providers – Metro Tasmania, Redline and others

UTAS will work with bus service providers to identify specific bus service needs for the University; investigate options and feasibility for route and service improvements; and to deliver service improvements and promotional information and events.
Examples of other stakeholders which UTAS can seek to work with to advocate for improved transport infrastructure and services, promote awareness about sustainable transport options, and collaborate on local transport improvement initiatives include:

- Community or neighbourhood groups who have a particular interest in the University’s strategy due to their proximity to main campuses or the number of staff or students residing in these areas interested in improving sustainable transport options
- Sustainable transport user groups such as various Bicycle User Groups (BUGs)
- Community education and program supplier organisations such as Sustainable Living Tasmania
- The Tasmanian Climate Change Office and the Tasmanian Climate Action Council
- The RACT
- Other neighbouring trip generators, such as Hellyer College in Burnie and other employer organisations with an interest in improving transport options for their organisation.
4.2 Monitoring, reporting and evaluating

4.2.1 Importance of indicators, monitoring and evaluation

Indicators help you understand where you are, which way you’re going, and how far you are from where you want to be. Good indicators alert you to problems and help identify what needs to be done to address them.

Monitoring and evaluation are different but related activities. **Monitoring** is the regular gathering of information in a consistent manner. It provides information to keep track of and address progress towards sustainability objectives. Through monitoring and the use of appropriate indicators the University will be able to track progress.

**Evaluation** is the systematic review of a program, project, strategy or other activity to determine whether it is working as intended, the impacts it is producing, the reasons why it is producing the identified impacts, and whether it is being implemented cost effectively. Evaluation involves collecting and analysing information (e.g. monitoring data) to make judgements and recommendations for future action. Once evaluation is complete, key findings should be communicated and implemented to complete the improvement cycle.

Importantly, the reporting of monitoring activities and periodical indicators also serve to communicate and educate stakeholders (e.g. management, staff, students, external organisations, clients, service providers to the organisation, and the interested public) about the sustainability issues the organisation is seeking to address and can help raise awareness of, and support for, the strategies and actions being implemented to address key issues. In this respect communication of indicators that are showing progress towards sustainability can also play a marketing role for the organisation.

This is particularly relevant to an organisation such as UTAS whose ‘brand’ is linked to education in sustainability and environmental management and innovation across a range of academic disciplines, and who is also a significant stakeholder in contributing to a sustainable Tasmania.

Monitoring and the application of useful indicators, evaluation, reporting and improvement are important elements of the UTAS Sustainable Transport Strategy and its implementation. Unfortunately though, there is limited Tasmanian or University baseline data from which to develop useful indicators or performance targets from day one of this strategy. Where it has been recognised that baseline information and indicators are lacking, the development of these have been identified as important priority strategies (see Strategies 1.1, 2.1 and 3.1).

It is intended that baseline data and the development of key performance indicators for this strategy will have occurred by Year 1 of the Strategy period to facilitate the review and update of implementation plans and establish some key performance indicators and targets for the remainder of the Strategy period.

Establishing a monitoring framework and key performance indicators will help the institution and its stakeholders to:

- be accountable
- learn about core sustainability problems and the effectiveness of actions
• ensure programs and investments achieve desired outcomes.

4.2.2 Key Performance Indicators for this Strategy

Following the development of baseline data in Year 1 of this Strategy, key performance indicators (KPIs) will be developed. Example performance indicators that may also become targets focused on the delivery of the Strategy’s key objectives include (but are not restricted to):

• A % reduction in the share of students and staff travelling to study and work in single occupant vehicles

• For staff and students residing in the ‘Active zone’ – A % increase in the share of students and staff travelling to study and work by active modes

• A % reduction in inter-regional/inter-campus trips made by single occupant vehicles

• A % increase in the proportion of Tasmanian students residing outside the major urban centres accessing online course units

• An increase in the number of bicycle end of trip facilities available at each campus and facility

• An increase in the number of parking spaces for motorcycles, scooters (and other efficient vehicles) at each campus

• An increase in the number of dedicated carpool parking spaces at each main campus

• A reduction in the average kilometres travelled by vehicles in the University vehicle fleet per year

• A reduction in the GHG emissions from University vehicle fleet sources (measured by the distance travelled by fuel type e.g. petrol, diesel, CNG, biofuels, electric)

Working out the UTAS carbon footprint

In addition to the aforementioned indicators UTAS needs to develop an indicator of the University’s transport carbon footprint as we build up a database of baseline and monitoring information. To do this UTAS needs to understand more about travel demand and transport mode choice, the University’s total vehicle fleet (including motor vehicles and marine vehicles), and supply chain factors.

Some of the tasks of understanding and monitoring the University’s carbon footprint can be integrated into academic research and learning activities such as a student and academic research projects, while other data may need to be collected by in-house personnel or contracted professionals. Regardless, it will be important to link understanding about the University’s carbon footprint with information and targets established by the Tasmanian Government outlined in the Tasmanian Framework for Action on Climate Change (Tasmanian Climate Change Office, 2008).

4.2.3 Reporting and evaluation framework

The development of the UTAS Sustainable Transport Strategy includes a commitment to monitoring, reporting of key indicators and evaluation and review part way through the Strategy period once baseline data and indicators are developed.
Such commitment entails delegation of oversight of this task to UTAS Sustainability with appropriate staff resourcing to accomplish this. UTAS Sustainability will become a repository of all information from which indicators are developed and should be responsible for the development and oversight of monitoring, reporting and evaluation planning.
References


Tweed Shire Council (2009b), ‘Vehicle fleet management’, Tweed Shire Council, Murwillumbah, NSW.


Vikström, S (2011) Sustainable Transport Patterns and Issues for Sandy Bay Campus – A Movement Analysis. A report to UTAS Sustainability Office based on Master of Planning Academic Integration research project.

Appendix

Cradle Coast (Burnie) Campus Map
Inveresk (Launceston) Campus Map
Newnham (Launceston) Campus map
Sandy Bay (Hobart) Campus Map