

# UNIVERSITY OF TASMANIA TRAVEL BEHAVIOUR SURVEY 2019 Update Report

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prepared by

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The project is initiated biennially and supported by the University's Sustainability team led by Corey Peterson, Sustainability Manager within Infrastructure Services and Development. The surveys were undertaken by Dr Anna Lyth of RED Sustainability Consultants and carried out under the University of Tasmania Social Sciences Human Research Ethics Permit H0016363.

Data from the TBS 2019 is used to inform university transport and facilities planning; calculate the transport-related carbon footprint of the University as required by the National Greenhouse and Energy Reporting scheme; and compile the University's greenhouse gas emissions inventory to support the University's carbon neutral certification.

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## GLOSSARY OF TERMS AND ABBREVIATIONS

Active transport	The combined total of walking/running and cycling
Carpooling	An arrangement, either through formal programs or informal efforts, between two or more people sharing a ride to a common or nearby destination
Confidence level	A measure of the reliability of a result
EoT	End of trip
ICT	Information and communications technology
Inter-campus	Movement between two university campuses or facilities
Inter-regional	Movement between regions
Intra-city	Movement within a city/urban area
Main mode	The single transport mode used for the furthest distance in the journey (consistent with the <i>Greater Hobart Household Travel Survey 2010</i> )
Margin of error	A measure of the accuracy of the results of a survey
Modal share	Also called mode split or mode share, modal share is the percentage of travelers or trips using a particular type of transport. It is an important indicator used for assessing sustainable transport
Multi-modal	Multi-modal journeys involve more than one trip step and mode
SIPS	Sustainability Integration Program for Students
STS	Sustainable Transport Strategy
Sustainable modes	The combined total of walking/running, cycling and public transport modes
TBS	Travel Behaviour Survey
UTAS	University of Tasmania
Virtual transport	Participation in meetings/classes/events without physically attending, usually with the assistance of ICT (e.g. videoconference)

### Campus Abbreviations

CftA	Centre for the Arts
CON	The Conservatorium of Music
CC	Cradle Coast
DOM	The Domain
Hobart CBD	The aggregate of all University Hobart city centre facilities
INV	Inveresk

IMAS-S	Institute for Marine and Antarctic Studies, Salamanca
IMAS-T	Institute for Marine and Antarctic Studies, Taroona
LCS	Launceston Clinical School
MSP	Medical Sciences Precinct
NH	Newnham
RCS	Rural Clinical School
SB	Sandy Bay

### **Mode Abbreviations**

SOV	Single occupant vehicle
MULTI	Multi-occupant vehicle
PASS	Passenger in vehicle
MC/S	Motorcycle or scooter
P(SOV)	Private single occupant vehicle
P(MULTI)	Private multi-occupant vehicle

## EXECUTIVE SUMMARY

This report summarises results from the fourth biennial University of Tasmania Travel Behaviour Survey (TBS 2019). The TBS informs University of Tasmania transport and facilities planning and performance indicators that underpin the University's sustainable transport strategies. The data from all the University's travel behaviour surveys is also available for use in student and academic research projects as part of the University's Sustainability Integration Program for Students (SIPS).

This report outlines key findings from the TBS 2019, in which over 3,164 students and staff (combined) participated. It identifies changes since the 2013, 2015 and 2017 surveys that will assist with further planning, as well as challenges and opportunities in relation to the university community's collective travel behaviours and practices, and the systems and structures that influence these. The TBS collects data across university campuses and facilities in Tasmania and Sydney, New South Wales where it has operations.

The 2019 UTAS Travel Behaviour Survey was conducted via two online surveys in March/April 2019 lasting two weeks, one each for UTAS staff and students. Relative to the student on-campus and staff populations, sample sizes across the survey years provide us with high confidence levels and the ability to compare over time.

As in previous years, there is notable variation in findings region to region, campus to campus, and between students and staff. The results are helpful in creating a snapshot for the survey year and period that also provide us with indicators of change over time. The following outlines key findings for the University's student and staff communities.

Of relevance for the results of this and previous surveys, in early 2019, the University Council confirmed that over the next decade or so, the University is committed to moving most of its activities into or more immediately adjacent to the three major regional centres of Hobart, Launceston and Burnie. This includes an increasing proportion of students living in University-provided accommodation within the campuses, especially international students. Thus, the information gained comparing the modal patterns of current inner city-based staff and students with those of the current suburban campus-based cohorts allows more accurate modelling and planning of the facilities to be provided over time and the stakeholder partnership initiatives that are best pursued to deliver positive outcomes for the University and our communities.

For example, results demonstrate there is a need to focus attention on either bus service improvement in areas where multiple buses might be required or bus route access enhanced, potentially through park-and-ride facilitating access to higher frequency corridors and the most direct services. It is anticipated that with a shift of main campus activity over

the next decade that the issue of through servicing will become less of an issue while improved services in service-deficient suburbs will need to be the focus.

It is also worth noting that there were no major transport mode change supporting infrastructure or services undertaken by the University or others impacting on mode choices. Some minor changes were made or occurred during the period between the 2017 and 2019 surveys, including small numbers of additional bike parking areas and a secure hub on the Newnham campus, temporary unavailability of 20 motorcycle parks on Sandy Bay campus and a late period loss of some 50 car parks on the Sandy Bay campus and addition of a few dozen additional parks in the Hobart CBD.

### **Key findings – students**

Since 2013, where there has been a decline in walking as the main mode for students, such as at the Sandy Bay and Newnham campuses, this has been offset by a marked increase in bus use. Between 2013 and 2019 the only campus increasing the share of students primarily undertaking active modes to get to university were those attending city facilities – Hobart CBD and Inveresk. This reflects the growing proportion of students living in and around these locations, facilitating the option to walk, run or cycle. Some of the key findings for students include:

- While public transport use continues to grow overall, the proportion of students cycling remains static and walking has declined.
- Car-based mode use remains static in 2019 after declining 2013-2017:
  - Car use as sole driver is also up amongst students in 2019 relative to 2015 and 2017 levels though this is still lower than 2013.
  - For Rozelle, sole-driver car use has steadily decreased over time (33.3% in 2019 compare to 46.6% in 2015).
- Students attending Hobart CBD facilities continue to display the most sustainable travel behaviours of all UTAS facility locations, particularly active modes, with 71% travelling by a sustainable mode.
- A very positive observation is continued growth in public transport use by students:
  - Up to 28.5% in 2019 from 15.7% in 2013 and up for students attending both Sandy Bay and Hobart CBD.
  - In Launceston, 17.3% used the bus in 2019 compared to 14.8% in 2017.
  - For students travelling to the Sandy Bay campus 10% of journeys involved taking at least two buses compared to just 1% for students travelling to the



Hobart CBD, though just 2% of journeys to Launceston campuses involved more than one bus.

- Bus use is similar for all Cradle Coast Burnie facilities and has more than doubled since 2017.
- For Rozelle, a notable increase since 2015 and slightly since 2017.
- In Launceston, a notable increase in the proportion of students cycling as their main mode of transport to UTAS (5.3% in 2019 compared to 3.2% in 2017).
- 9.5% of all journeys to university and 32% of all multi-modal journeys involved a mix of sole occupant and multi-occupant vehicle journeys (slightly down from 2017).
- At Cradle Coast Burnie facilities walking has also almost doubled due in a large part on those attending West Park and the Rural Clinical School.
- Student inter-campus travel is up by 14% since 2017, an increase of two inter-campus trips per week for every 100 students with 78% of such trips in 2019 made within the southern region, compared to 16% within northern Tasmania and the Cradle Coast combined.
- Just over 5% of all inter-campus trips were inter-regional, the vast majority between Hobart and Launceston.
- Tasmanian students are more likely to travel by car as sole driver (41%) than international students (11%).
- For Tasmanian students, car use as sole driver increased by 7% since 2017 and sustainable modes are down by 10%.
- International student car use has remained low since 2017 with 82% of international students opting for sustainable modes (53% active modes and 29% taking the bus) in 2019 up a little from 2017.

### **Key findings – staff**

- Staff located in Hobart CBD locations have more than double the share of sustainable mode use in 2019 compared to those located at Sandy Bay campus (48% in Hobart CBD compared to 23% at Sandy Bay).
- Single occupant vehicle use reflections include:
  - Car use as sole driver is most significantly down for those working in the Hobart CBD (by 11% since 2017) compared to Sandy Bay (down by 2%)
  - In 2019, the campuses with the highest single occupant car use are those in Launceston with some 88% of staff in north arrived at work by car with 69% of those as sole driver representing a 5% increase in car use as sole driver.

- Reflections on public transport include:
  - For southern campuses, the share of staff bus users in 2019 is double that of 2013. Staff bus use mode share has increased at each data collection year, though is still only at 5% mode share compared to over 29% for students.
  - For staff based in Tasmania, 49% own Metro Tasmania Greencards with 81% of these having regular credit on it and comparing to an ownership rate of only 28% in 2013.
  - For staff, 16% stated that they would be either likely or extremely likely to take up a Metro Tasmania Greencard salary sacrifice initiative with a further 15% unsure.
- Hobart CBD-based staff display the most active transport mode behaviours than any other UTAS location with 34% either walking or cycling compared to 18% for staff at the Sandy Bay campus.
- Some 9% of staff respondents reported working from home or elsewhere remote from UTAS in 2019 versus 7% in 2017.
- In 2019 some 24% of staff (226 individuals) reported travelling for work purposes, including inter-campus trips, in the previous week, which is slightly higher than 2017.
- For the number of trips made per 100 staff there has been a 16% increase in trips since 2017; the take home message here is that while ICT use has increased, it is not necessarily replacing the need to travel for face-to-face meetings.
- Of the land-based work trips made in Tasmania some 30% were associated with inter-campus travel in 2019, a decrease from 40% in 2017 reflecting a growth in other work trips not involving movement between UTAS campuses or facilities.

Details of note include:

- For Hobart CBD-Sandy Bay trips, 33.5% of 2019 trips for this journey used sustainable modes (hybrid or electric fleet vehicles (eco-fleet), motorcycle, bus, walk, cycle) with almost 20% by active modes (walk or cycle); of all cycle trips, half were by electric bicycle.
- For IMAS-Salamanca - Sandy Bay trips, 44% of 2019 trips for this journey type used more sustainable modes (UTAS eco-fleet vehicle, motorcycle, bus, walk, cycle), and 31.5% by active modes (walk and cycle).
- For Inveresk-Newnham trips, the dominant mode of choice for this journey type in 2019 was private car as sole driver (71%) and 29% taken by taxi in 2019 while no one reported taking a taxi in 2017.
- For Hobart-Launceston trips, 78% used a fleet vehicle and only 2% took a bus/coach.

## Other findings

- Some 33% of all respondents reported their journeys to UTAS in Sydney and Tasmania as multi-modal, including with walking segments longer than 5 minutes.
- Overall there has been little change since 2013 in bicycle mode share despite the upswing for Hobart CBD students between 2013 and 2017 and all staff over the same period due to a significant drop in the North and at Sandy Bay.
- Overall, in 2019 the University has a male to female cycling ratio of three to two (or 1.5 male riders for every female ride).
- The Hobart CBD shows the highest levels of usage of secured or covered storage, reflecting the high-quality infrastructure installed at several facilities there; notably, there is little storing of bicycles in workspaces/offices in Hobart CBD facilities, whereas this is still done at northern campuses and Sandy Bay.
- While the share of electric bike users reported in the 2017 TBS dropped to 9% from 10% in 2015, the 2019 TBS observes an increase in e-bike use, with the share of e-bikers now at 12% (students and staff combined) and for staff electric biker users is highest at 17% of all staff cyclists.
- Some 33% of all UTAS international student respondents stated they either owned a car (or motorcycle) for their sole use or had regular access to a shared vehicle:
  - For those students based primarily at the Sandy Bay campus with regular access to a car, only 19% stated that they did not drive to the university at all in the week prior to the survey (meaning 81% drove to the university at least once in that week).
  - For those primarily attending Hobart CBD facilities, 32% of students who owned a vehicle or had regular access to one, 75% did not use it to drive to the university at all in the prior week.
  - In Launceston the share reported is 61%.

# 1 BACKGROUND

The University of Tasmania's (UTAS) Sustainable Transport Strategy (2017-2021) guides investments and actions that deliver more socially, economically and environmentally sustainable transport outcomes<sup>1</sup>. Responding to the need for appropriate data, the *UTAS Travel Behaviour Survey* (TBS) project was initiated in 2012 to provide baseline travel behaviour data for the university community and then ongoing data over time (biennially) to inform planning and performance indicators that underpin the University's sustainable transport strategies. The survey was initially designed and developed as part of the Sustainability Integration Program for Students (SIPS)<sup>2</sup>. The SIPS program provides opportunities to partner operational projects with student academic endeavours.

This report outlines key findings from the 2019 TBS, in which 3,164 students and staff (combined) participated. It identifies changes since the 2013, 2015 and 2017 surveys that will assist with further planning, as well as challenges and opportunities in relation to the university community's collective travel behaviours and practices, and systems and structures that influence these.

The results of the survey provide great insight into UTAS staff and student travel behaviour associated with university business (work and study) across university campuses and facilities in Tasmania and NSW. Supplemented and ground-truthed by a range of other smaller purpose-driven surveys associated with UTAS transport planning and management (i.e. vehicle traffic, motorcycle, bicycle and pedestrian counts), the UTAS TBS has become a valuable comprehensive periodical dataset that informs not only university planning but also other agencies responsible for transport service delivery and infrastructure improvement.

UTAS is a growing institution, both in terms of numbers of students and its facilities<sup>3</sup>. It is also one of the largest employers in Tasmania<sup>4</sup>. The University's facilities and associated activities generate a range of trips and transport infrastructure and service demands beyond those just focused on the movement of students and staff to and from study or work. It is consequently important to understand more about student and staff movements to manage the impacts of the University's trip generation, improve access to facilities, and address inefficiencies or issues associated with university travel.

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<sup>1</sup> <http://www.utas.edu.au/infrastructure-services-development/sustainability/transport>

<sup>2</sup> SIPS (previously known as AOSIP) is an award-winning program linking operational sustainability outcomes with student education and experience. See more at <http://www.utas.edu.au/infrastructure-services-development/sustainability/SIPS>

<sup>3</sup> Over 33,000 students were enrolled in 2019 with a little over half of these attending a campus full-time or part-time (UTAS student enrolment data Semester 1 2019).

<sup>4</sup> The University is also a significant employer with over 4,300 employees in 2019 if fixed-term, ongoing, and casual staff are counted. Of these, 3,141 are located in Hobart campuses/facilities, 974 in Launceston, and 109 in Burnie (UTAS Human Resources database, March 31 2019).

While the University is a growing institution in terms of student numbers, the drivers of changing travel patterns and transport infrastructure or service demands are not simply associated with an increasing university population. Rather it is the changing nature and location of the University population that have become important contributors to travel demand and changing travel patterns amongst students and staff, particularly the following:

1. Stability in the number of students physically attending campuses/facilities due to the decline in the share of 'on-campus' student enrolments and the increase in online learning over time. In 2013 some 83% of all student enrolments were on-campus in some capacity whereas the figure in 2019 is 56%.<sup>5</sup>
2. an increase in 'on-campus' international students, particularly in Hobart and Launceston;<sup>6</sup> and
3. the dispersal of students and staff across city-based facilities as the University develops beyond its largest campuses. While the largest university campus continues to be the Sandy Bay campus (Hobart), there are an increasing number of students and staff attending facilities throughout the Hobart city centre as the University develops into this zone. The shift to the Hobart city centre in Tasmania's south and to the Inveresk campus in the north (on the fringe of the Launceston city centre) is set to continue as the University consolidates its facilities in these locations.

In addition to the three noted changes in the university community's population and location, working internally and with external partners there has been an array of improvements implemented since 2017 to encourage the take-up of sustainable transport practices. These include: more bike parking rails across all campuses and an additional secure bike cage on the Newnham campus, additional fine tuning of the Metro Tasmania timetable, and removal of over 50 car parks on Sandy Bay campus while additional staff parking has been provided in Hobart CBD to satisfy demand. Other changes that may impact on results include additional students residing on the Sandy Bay campus due to the severe housing shortage in Hobart and the unintended consequence of the serious flood damage at the Sandy Bay campus in May 2018 and the temporary loss over 9 months of space for more than 20 motorcycle parking spaces. No significant changes were made with regard to transport at Cradle Coast, Inveresk or Sydney campuses.

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<sup>5</sup> Between 2013 and 2019, UTAS student enrolments increased overall by 41%. Until recently, the majority of this increase comprised students enrolled in external (distance or online) capacities with the overall number of students on-campus across the University remaining fairly constant. Since the last TBS, however, there has been growth in on-campus students in Hobart in particular, with declines in Launceston and Cradle Coast.

<sup>6</sup> The number of international students as a share of on-campus students is 39% in 2019, with international students comprising 41% of on-campus Hobart students (UTAS student enrolment data, Semester 1 2019).

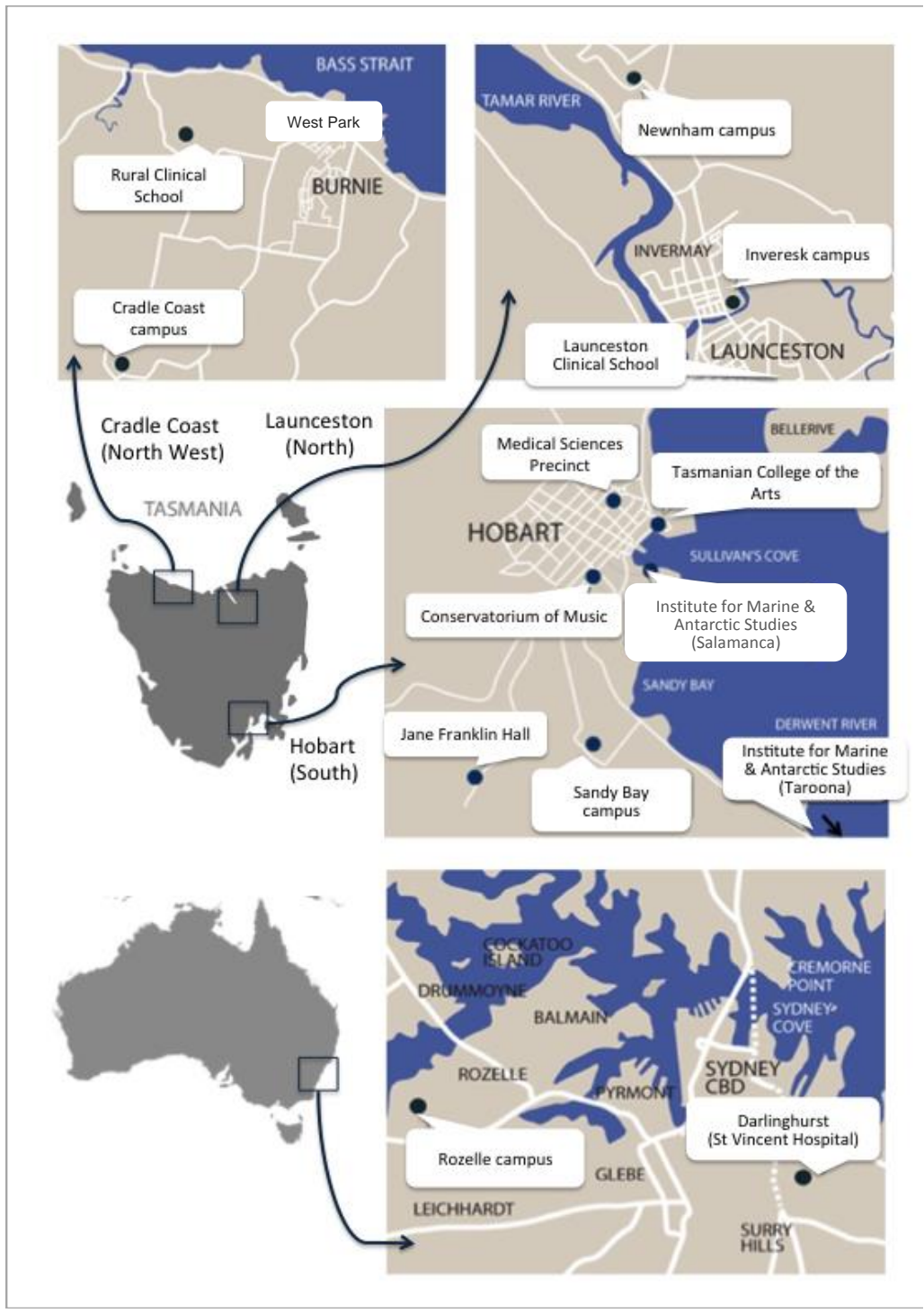


Figure 1.1: University of Tasmania campus/facilities locations 2017

Figure 1.1 shows the location of university campuses and major facilities in Tasmania and inner Sydney, New South Wales. The TBS collects data for all these campuses and facilities.

## 2 ABOUT THE SURVEY

Here we outline the TBS 2019 method employed, participation and reporting.

### 2.1 Method

The 2019 *UTAS Travel Behaviour Survey* was conducted via two online surveys in March/April 2019, one each for UTAS staff and students to allow tailored questions to each group.

Like previous years (2013, 2015 and 2017), an online survey was deemed the most suitable survey approach given available resources, ability to reach all UTAS staff and students across the state, and to provide capacity for periodically repeated surveys to allow for longitudinal analysis. Each successive survey is run at a similar time of year using similar data collection methods to ensure comparability across data sets. The 2019 surveys were open for two-weeks, 25 March - 7 April 2019. The Travel Behaviour Survey (TBS) project has approval from the Tasmanian Social Sciences Human Research Ethics Committee (reference H0016363).

To recruit participants, bulk emails were sent to students and staff inviting them to participate. A second reminder email was sent out part way through the survey period. UTAS News and Facebook also included links to the surveys in the lead up to its opening.

The staff survey asked participants to reflect on their travel behaviour for the previous week, such as what days of the week they travelled to and from work, by what transport mode or modes they travelled, and the length of their journey measured by time taken. Other questions focused on travel for work purposes, both inter-campus and to non-UTAS destinations. Further questions focused on car parking practices, public transport use (including information and ticketing), cycling infrastructure use, information and communications technology use to replace face-to-face meetings, and carpooling practices. In 2019 we also asked two opinion-based questions to gauge interest in public transport and cycling incentive schemes. Survey questions and themes are outlined in the Appendix.

The student survey replicated much of the staff survey; however, inter-campus travel for work was reframed as inter-campus travel for study. Questions about technology use for meetings were not included in the student survey. Questions were asked of both staff and students to provide further participant context to the analysis, such as the primary campus of work/enrolment, age, gender, employment status, postcode and suburb of residence.

### 2.2 Participation and statistical confidence

Survey participation details and statistical confidence are outlined in Table 2.1. Overall response was very good, with response rates up from 2017. Staff participation was particularly high in 2019, though the share of staff responses was down in northern Tasmania. In 2019 there were 3164 responses overall (students and staff combined) with 26% of the total staff

population participating and 15% of on-campus students. Participation varied a little according to campus and region. The following are the total responses for the largest Tasmanian regions:

- Tasmania south – 1100 student responses and 700 staff responses
- Tasmania north – 355 student responses and 169 staff responses

Relative to student on-campus and staff populations, sample sizes provide us with high levels of confidence for on-campus students and staff.<sup>7</sup> Due to only marginal difference in statistical confidence between each survey year, there is high confidence in year-to-year comparisons.

*Table 2.1: Participation & statistical confidence 2013, 2015 and 2017*

<b>Student survey</b>			
<b>Survey Year</b>	<b>Responses (sample size)</b>	<b>Confidence level<sup>8</sup></b>	<b>Margin of error (+/- percentage points)</b>
<b>2013</b>	3133	95%	+/- 1.6
<b>2015</b>	3528	95%	+/- 1.5
<b>2017</b>	1976	95%	+/- 2.1
<b>2019</b>	2050	95%	+/- 2.0
<b>Staff survey</b>			
<b>Survey Year</b>	<b>Responses (sample size)</b>	<b>Confidence level</b>	<b>Margin of error (+/- percentage points)</b>
<b>2013</b>	838	90%	+/- 2.6
<b>2015</b>	952	90%	+/- 2.4
<b>2017</b>	695	90%	+/- 2.9
<b>2019</b>	1114	90%	+/- 2.5

In each student and staff TBS, there is a higher participation of female respondents than males (Table 2.2). This translates to only a small bias, as there is a higher proportion of females than males in the general student and staff populations. For instance, the University's staff gender profile was reported as being 44% men and 56% women in 2016 and 42% men and 58% women in 2019.<sup>9,10</sup> For the student population, some 46% of enrolments were men and 54% women in 2019,<sup>11</sup> although the gender difference narrows if external (online) enrolments are removed. Where there is specific gender analysis, such as in calculating male to female cycling ratios, we have standardised the data according to the population gender split to remove bias. Total response rates in 2019 (percentage of respondents participating who completed all questions) were: 82% for staff, and 76% for students.

<sup>7</sup>A confidence level of 95 per cent means that there is a probability of at least 95 per cent that the result is reliable. The larger the margin of error around a value, the less accurate the value.

<sup>8</sup> Confidence levels were calculated based on estimates of student on-campus/part on-campus populations provided by the University of Tasmania, and by using the Survey Monkey sample confidence calculator.

<sup>9</sup> Workplace Gender Equity: Public Report 2015-16, University of Tasmania  
[https://www.wgea.gov.au/sites/default/files/public\\_reports/tempPublicReport\\_pjeegtkwll.pdf](https://www.wgea.gov.au/sites/default/files/public_reports/tempPublicReport_pjeegtkwll.pdf)

<sup>10</sup> UTAS Human Resources data March 2019

<sup>11</sup> UTAS Semester 1 2019 student enrolments (on-campus/mixed students only)



Table 2.2: Survey respondent profile

	STUDENTS				STAFF			
	Year 2013	Year 2015	Year 2017	Year 2019	Year 2013	Year 2015	Year 2017	Year 2019
<b>Location of study/work</b>								
Sandy Bay	47.1%	46.4%	48.5%	48.9%	52.6%	49.7%	50.4%	53.8%
Hobart CBD	14.6%	14.4%	16.0%	15.8%	12.9%	18.5%	22.2%	20.1%
Other South	0.1%	0.2%	0.4%	2.2%	2.2%	3.2%	1.4%	2.5%
<b>All South</b>	<b>61.8%</b>	<b>61.1%</b>	<b>64.9%</b>	<b>66.9%</b>	<b>67.7%</b>	<b>71.4%</b>	<b>74.1%</b>	<b>76.4%</b>
Inveresk	4.3%	2.4%	2.2%	2.1%	1.7%	2.0%	1.3%	0.7%
Newnham	25.0%	23.7%	19.0%	19.1%	23.9%	21.3%	19.5%	17.1%
Other North	0.1%	2.9%	0.9%	1.5%	0.7%	0.7%	0.2%	0.4%
<b>All North</b>	<b>29.5%</b>	<b>29.0%</b>	<b>22.1%</b>	<b>22.7%</b>	<b>26.4%</b>	<b>23.9%</b>	<b>20.9%</b>	<b>18.2%</b>
Cradle Coast campus	4.7%	4.2%	4.6%	2.8%	2.9%	2.8%	2.0%	2.4%
Rural Clinical School (Burnie)	1.0%	0.6%	0.6%	0.2%	1.2%	0.5%	1.3%	0.8%
West Park (Burnie)	-	-	-	0.1%	-	-	-	0.2%
<b>All Cradle Coast</b>	<b>5.7%</b>	<b>4.7%</b>	<b>5.2%</b>	<b>3.1%</b>	<b>4.1%</b>	<b>3.3%</b>	<b>3.2%</b>	<b>3.4%</b>
Sydney (Rozelle/Darlinghurst)	-	3.7%	4.3%	3.5%	-	0.9%	0.4%	0.9%
Other location	3.0%	5.2%	7.8%	3.8%	1.9%	1.3%	1.8%	1.1%
<b>Gender</b>								
Men	31.2%	33.2%	28.2%	30.7%	31.6%	36.2%	34.8%	36.4%
Women	68.8%	66.8%	69.7%	67.4%	68.4%	63.8%	64.9%	62.1%
Prefer not to specify/self-describe	-	-	2.0%	0.8%	-	-	0.4%	1.5%
<b>Employment status (staff)</b>								
Full-time	-	-	-	-	63.2%	65.1%	67.6%	66.4%
Part-time	-	-	-	-	19.4%	16.6%	19.5%	20.5%
Casual/short-term contract	-	-	-	-	17.4%	18.2%	13.0%	12.8%
<b>Student origin</b>								
Tasmanian student	80.0%	70.7%	68.0%	66.1%	-	-	-	-
Interstate student	9.5%	16.8%	15.2%	13.9%	-	-	-	-
International student	10.5%	12.5%	16.8%	20.0%	-	-	-	-

## 2.3 How results are reported

Results are reported for students and staff separately, except for a few key performance indicators where student and staff survey results are aggregated. Results are reported for the University as a whole, at regional scales (i.e. in Tasmania for South, North, North West, and for Sydney), and at campus scale. Where several smaller campuses/facilities are in the same vicinity, these have been grouped and aggregate results reported (such as Hobart CBD).

*Table 2.3: Reporting scales*

<b>Reporting scales (groupings)</b>	<b>Campus and facilities incorporated within reporting scales</b>
<b>South</b> – all campuses and facilities located in and around greater Hobart	Sandy Bay, Medical Sciences Precinct (MSP), Institute of Marine and Antarctic Studies at Salamanca and Taroona, Conservatorium of Music, College of the Arts, Domain, New Town Laboratories, Mt Pleasant Observatory, all Hobart student accommodation facilities
<b>North</b> – all campuses and facilities located in and around greater Launceston	Newnham, Inveresk, Launceston Clinical School and Australian Maritime College at Beauty Point, all Launceston student accommodation facilities
<b>North West / Cradle Coast</b> – all campuses and facilities located in and around Burnie	Cradle Coast campus, Rural Clinical School, West Park, all Burnie student accommodation facilities
<b>Sydney, NSW</b> – all campuses and facilities located in inner Sydney	Rozelle and Darlinghurst
<b>Hobart CBD</b> – all facilities located in the Hobart central business district and waterfront (CBD)	Medical Sciences Precinct (MSP), Institute of Marine and Antarctic Studies (IMAS-Salamanca), Conservatorium of Music, College of the Arts, The Domain, all Hobart CBD student accommodation facilities
<b>Sandy Bay campus</b>	All Sandy Bay campus facilities

With four biennial data sets now available, comparisons over time for transport mode share are possible. In order to consider changes over time and note differences in mode share by place, we report:

- on the mode share for the University as a whole, and how this compares over time;
- by region; and
- by major campuses or campus groupings.

It should be noted that the mode share reporting method for 2017 and 2019 changed from 2013 and 2015, although data is still comparable. We have removed the reporting of the proportion of respondents studying or working from home (virtual transport) in 2017 and 2019 and have adjusted 2013 and 2015 data accordingly. This means that the proportions reported in this report differ slightly from those reported in the 2013 and 2015 Summary Reports. The adjusted data means that we can compare across years more accurately and report on only those people travelling to a university campus or facility. Work from home/virtual transport is still reported but in its own section.

### 3 FINDINGS

This section presents findings relating to transport mode share, land-based inter-campus and business travel, and use of public transport, bicycle and parking infrastructure and services.

#### 3.1 Journey to work and study

The following sections report on transport modes used for travel to/from university facilities for work or study, both multi-modal journeys and main mode. Multi-modal journeys involve more than one trip step mode, while main mode is defined as the single mode used for the 'farthest distance' in the journey. The latter is used as a key performance indicator for university transport planning.

##### *Multi-modal journeys to university*

Around one third of student and staff respondents reported their journeys to UTAS in Sydney and Tasmania as multi-modal, including those with walking segment longer than 5 minutes.

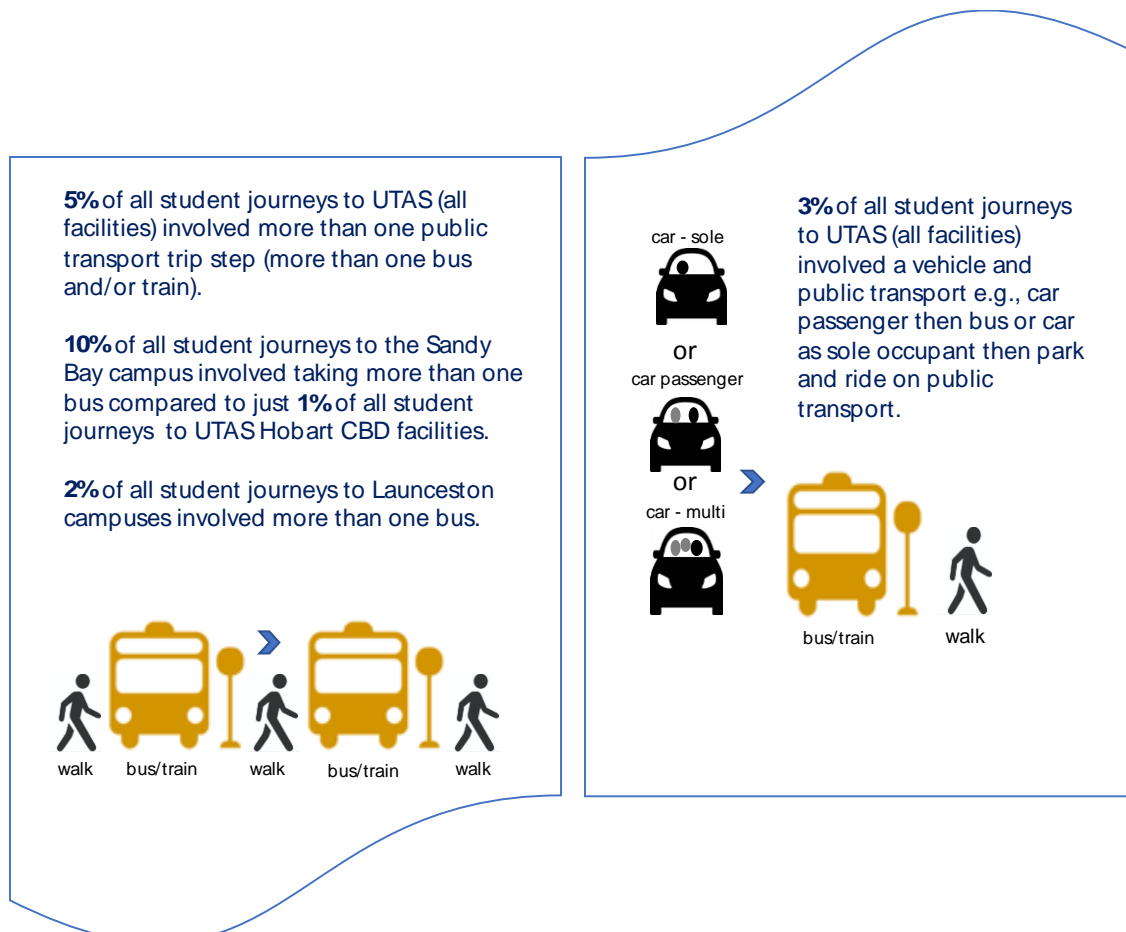


Figure 3.1: Dominant student multi-modal journey types to university, 2019

Some 5% of all student journeys to UTAS involved more than one public transport trip step (i.e. at least two buses, or in Sydney possibly a train and a bus). For students travelling to the Sandy Bay campus 10% of journeys involved taking at least two buses. This compares to just 1% for students travelling to UTAS Hobart CBD facilities. Though just 2% of journeys to

Launceston campuses involved more than one bus, the vast majority of journeys to Launceston campuses are not multi-modal. Some 3% of all student journeys to UTAS involved a vehicle (either single or multi-occupant driver or passenger) and public transport (Fig 3.1).

For staff, some 9.5% of all journeys to university and 32% of all multi-modal journeys involved a mix of sole occupant and multi-occupant vehicle journeys (slightly down from 2017), likely to be vehicle trips involving riding with family or friends at some point in the journey (frequently referred to as carpooling), and also involving dropping off or picking up other household members (i.e. children to day-care or school, partner to workplace or bus stop). The second largest staff multi-modal journey type was single occupant vehicle and walk, where staff drove, parked and walked more than 5 minutes to their workplace (Figure 3.2). For Hobart CBD staff, where parking is more constrained, the vehicle is often parked on the inner-city fringes.

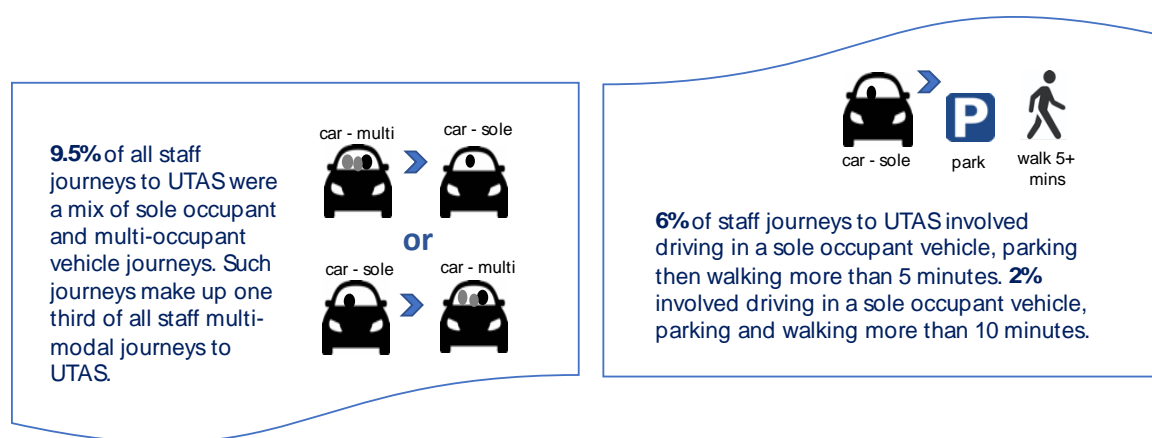


Figure 3.2: Dominant staff multi-modal journey types to university, 2019

### Student main mode to university

Figure 3.3 shows a gradual increase between 2013 and 2017 in the use of sustainable modes by students as the main mode for their journeys to/from university overall (walk + bicycle + bus/train, represented as green categories), but stabilisation between 2017 and 2019. While public transport use continues to grow overall, the proportion of students cycling remains static and walking has declined. Car-based mode use also remains static in 2019 after declining 2013-2017. Mode distribution, however, varies significantly from region to region and campus to campus as shown in Figure 3.4, with campuses located in, or near to, city centres performing best (see Hobart CBD compared to Sandy Bay, and Inveresk compared to Newnham for example).

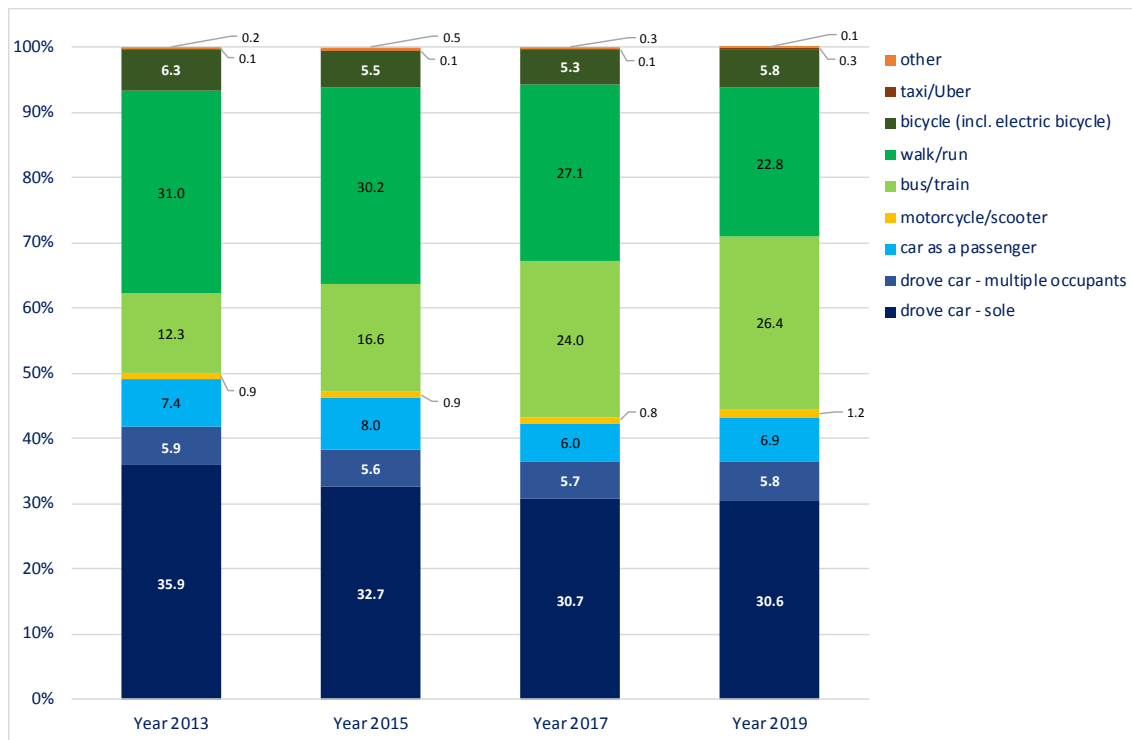


Figure 3.3: Main Mode Share 2013, 2015, 2017, 2019 – Students – All University of Tasmania

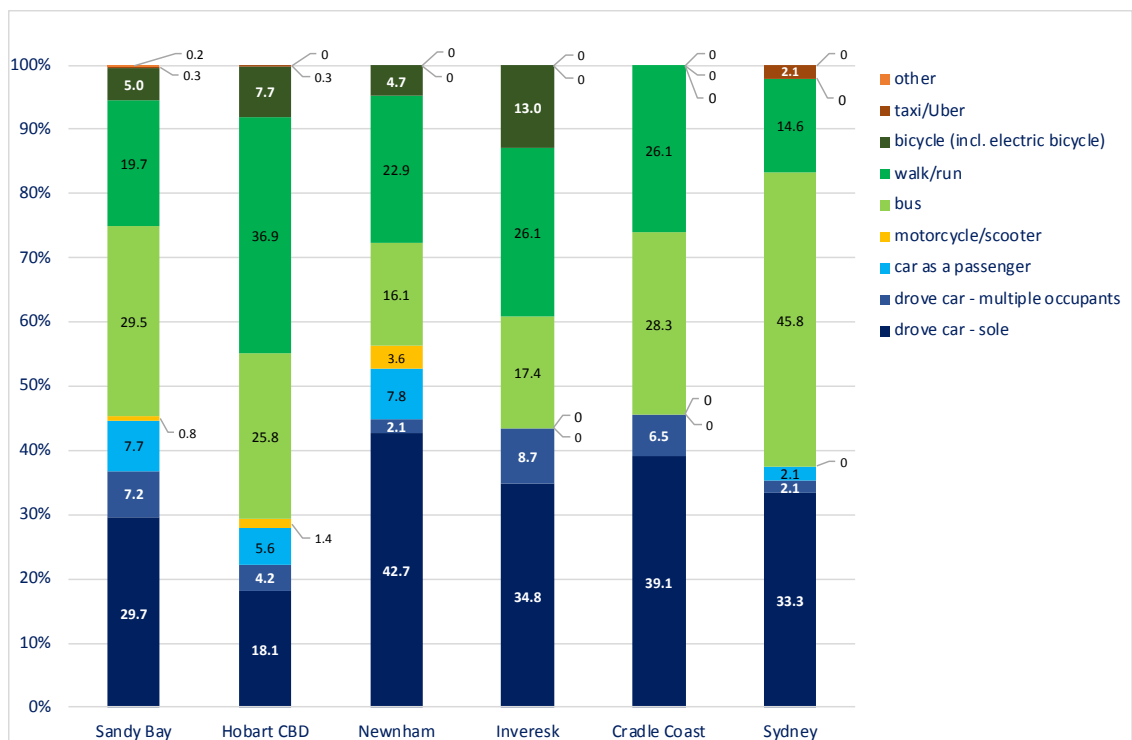


Figure 3.4: Main Mode Share 2019 – Students – by campus and campus groupings

Note: Sample sizes for some campus locations are < 100 (Inveresk n=23, Cradle Coast n=48, Sydney n=46). Analysis of data collected from these campuses is taken with caution. Cradle Coast includes the Rural Clinical School, West Park, and Burnie Cradle Coast Campus. Sydney includes Rozelle and Darlinghurst facilities).

### Southern Tasmania Campuses (Hobart)

In the south, a shift away from single occupant vehicle use is observed over time (Figure 3.5), though since 2017 there has been an increase in car-passenger and car driver-multiple occupants for students attending the Sandy Bay campus (Figure 3.6). A very positive observation is continued growth in bus use, up to 28.5% in 2019 from 15.7% in 2013 and up for students attending both Sandy Bay and Hobart CBD (Figures 3.6 and 3.7). Cycling has remained stable for the south overall, though for students attending the Hobart CBD cycling is down to 8% in 2019 from a high of 10% in 2017. The proportion of students predominantly walking to attend Hobart CBD facilities remains unchanged between 2017 and 2019 at 30%, however walking as the main mode has reduced steadily over time for those attending the Sandy Bay campus, from 29% in 2013 to 20% in 2019. This is potentially being offset by the increase in bus use. Students attending Hobart CBD facilities continue to display the most sustainable travel behaviours of all UTAS facility locations, particularly active modes. Some 71% of Hobart CBD students travelled by a sustainable mode.

Some 60% of students attending southern facilities live within the City of Hobart local government area (Figures 3.8 and 3.9). The proportion is highest for those attending Hobart CBD facilities (68%) where more than half of these live in the city centre and inner-city suburbs immediately bordering the city centre (West Hobart, Battery Point, South Hobart, North Hobart). The concentration of students in these inner locations provides a high level of accessibility to UTAS Hobart CBD facilities, particularly by active modes.

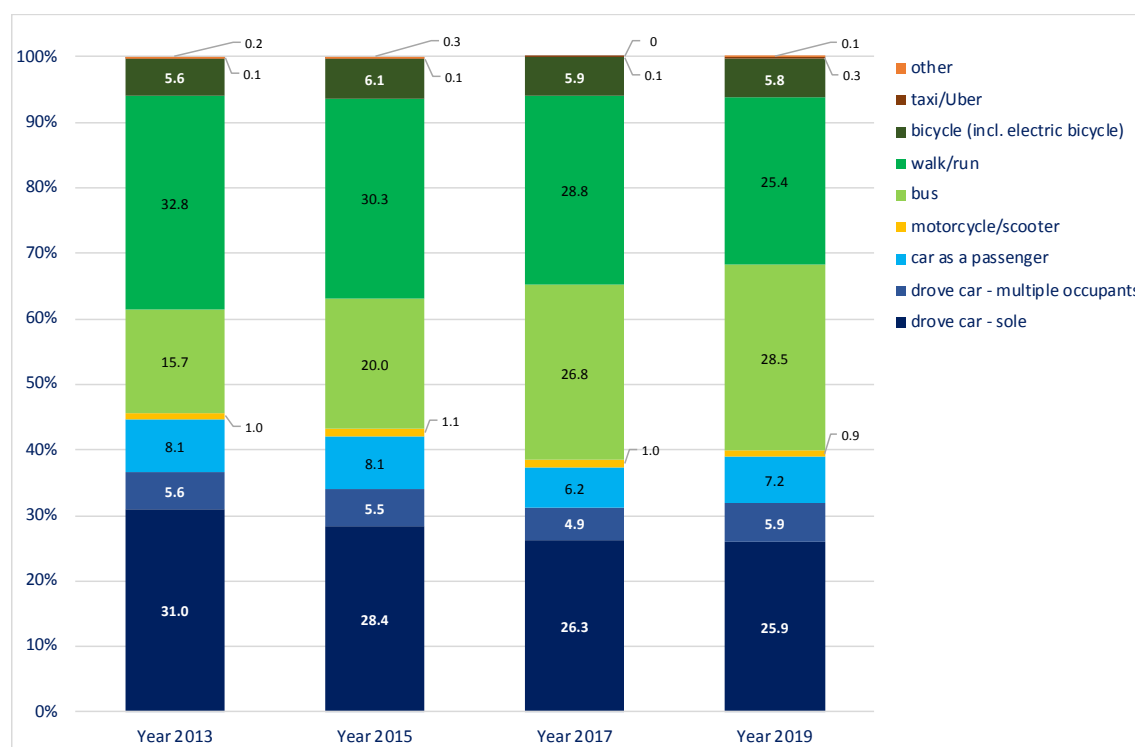


Figure 3.5: Main Mode Share 2013, 2015, 2017, 2019 – Students – Tasmania South (all Greater Hobart)

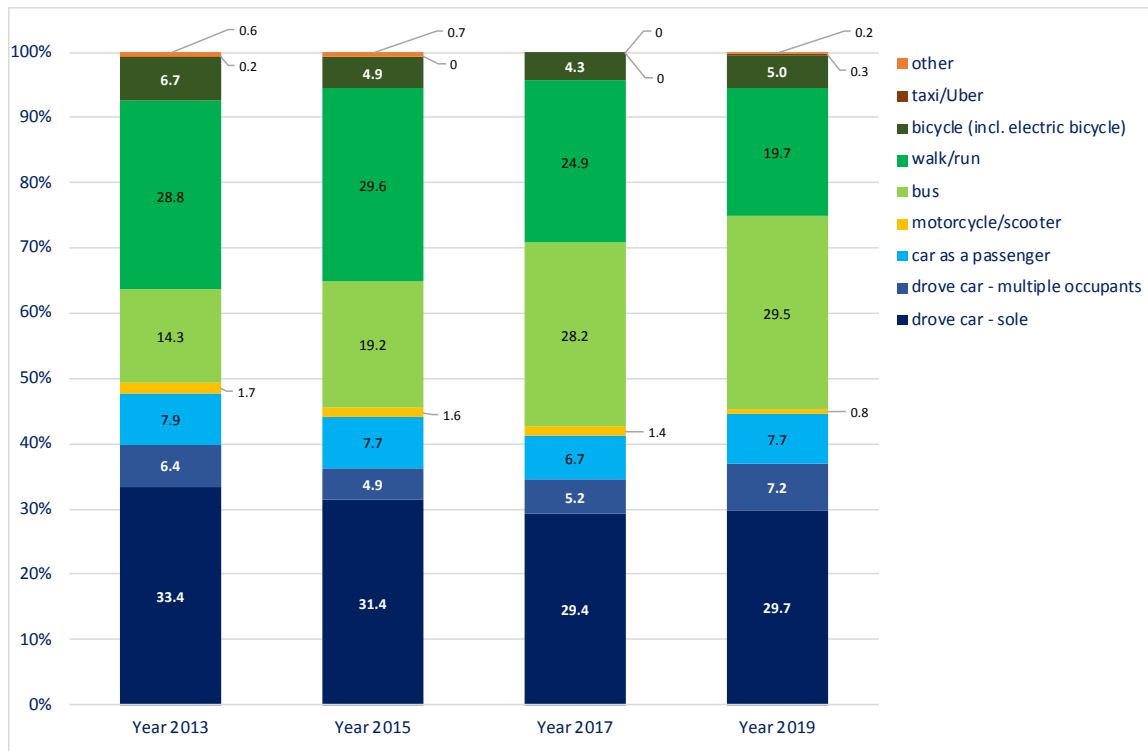


Figure 3.6: Main Mode Share 2013, 2015, 2017, 2019 – Students attending Sandy Bay campus

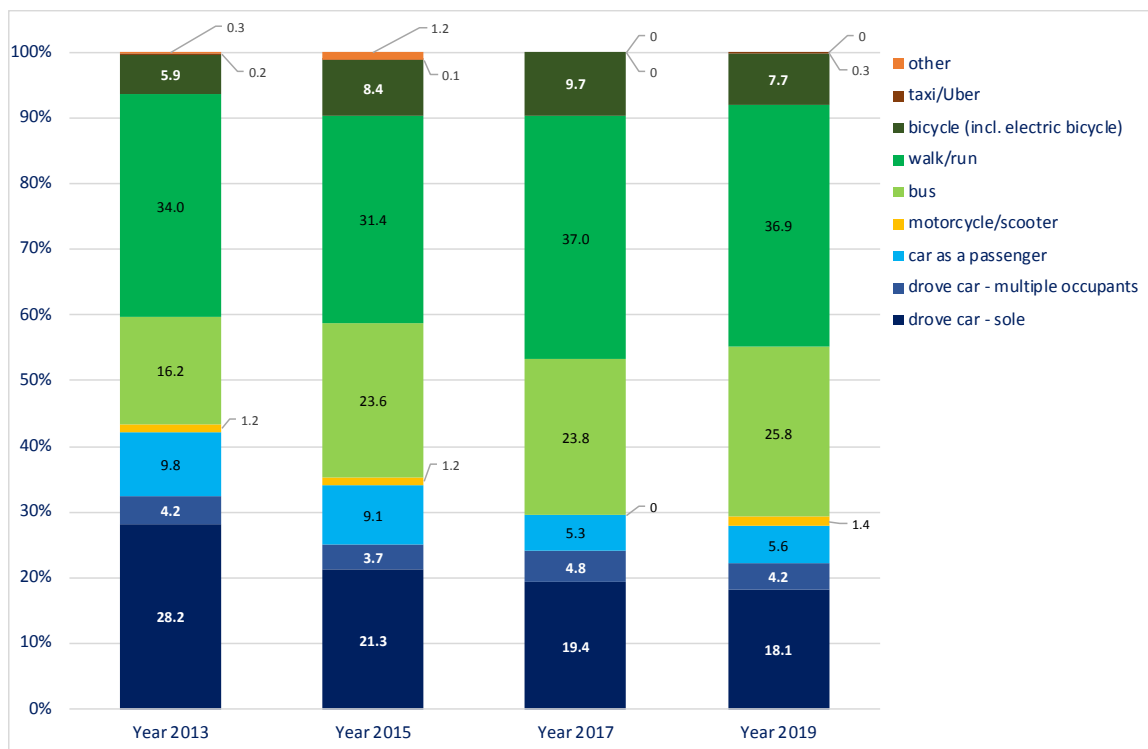


Figure 3.7: Main Mode Share 2013, 2015, 2017, 2019 – Students attending Hobart CBD facilities

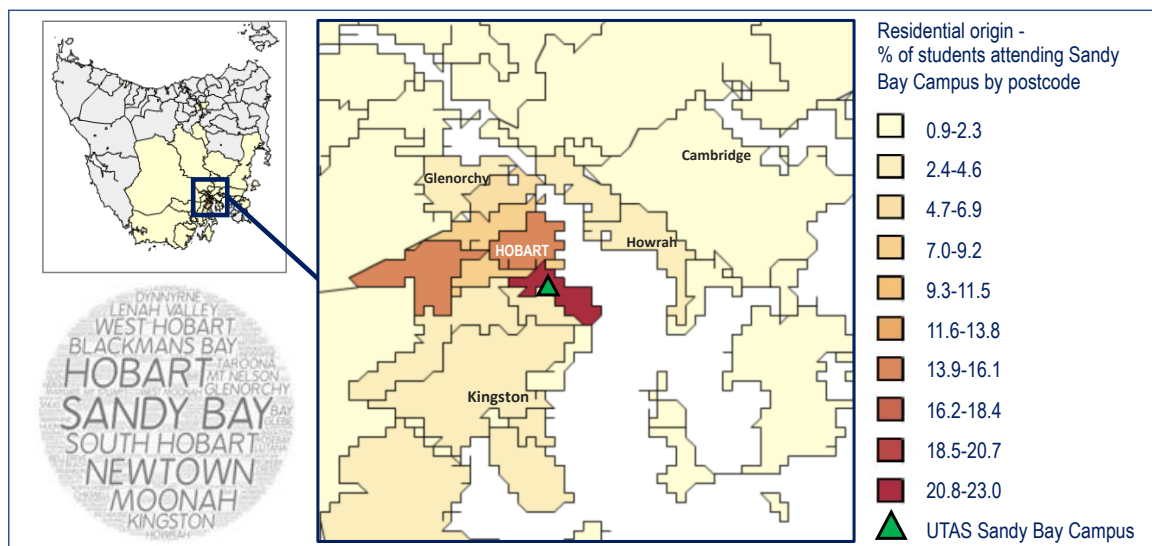


Figure 3.8: Residential Origin by Postcode 2019 - Students attending Sandy Bay campus

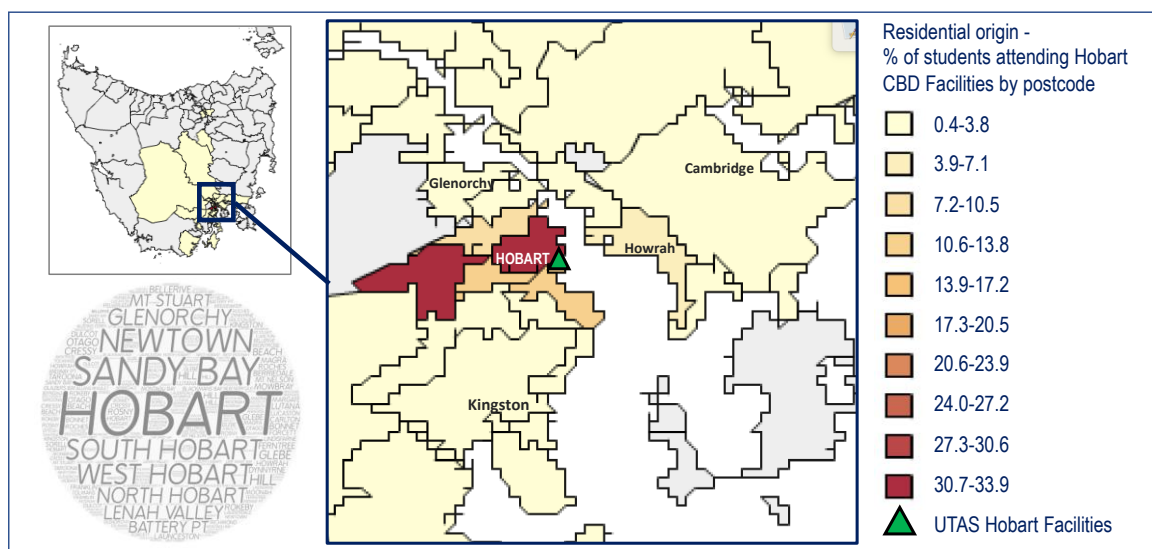


Figure 3.9: Residential Origin by Postcode 2019 - Students attending Hobart CBD facilities

### Northern Tasmania Campuses (Launceston)

As shown in Figure 3.10, between 2013 and 2017 bus use among students attending Launceston campuses tripled following improvements to bus services – particularly the introduction of the ‘Turn-up-and-Go’ service from Launceston CBD to Launceston UTAS campuses at Inveresk and Newnham supported by new bus stop shelters. In 2019 some 17.3% of students used the bus compared to 14.8% in 2017. There has been a notable increase in the proportion of students cycling as their main mode of transport to UTAS (5.3% in 2019 compared to 3.2% in 2017), however the level is still lower than the highest share recorded in 2013 (8.8%). Walking as the main mode has declined significantly since 2017 (more than 10-percentage points) and is even lower than 2013 levels. Car use as sole driver is also up amongst students in 2019 relative to 2015 and 2017 levels though this is still lower than 2013. These observations suggest that the recent growth in bus use has been amongst those that would otherwise walk, rather than a conversion from car users.



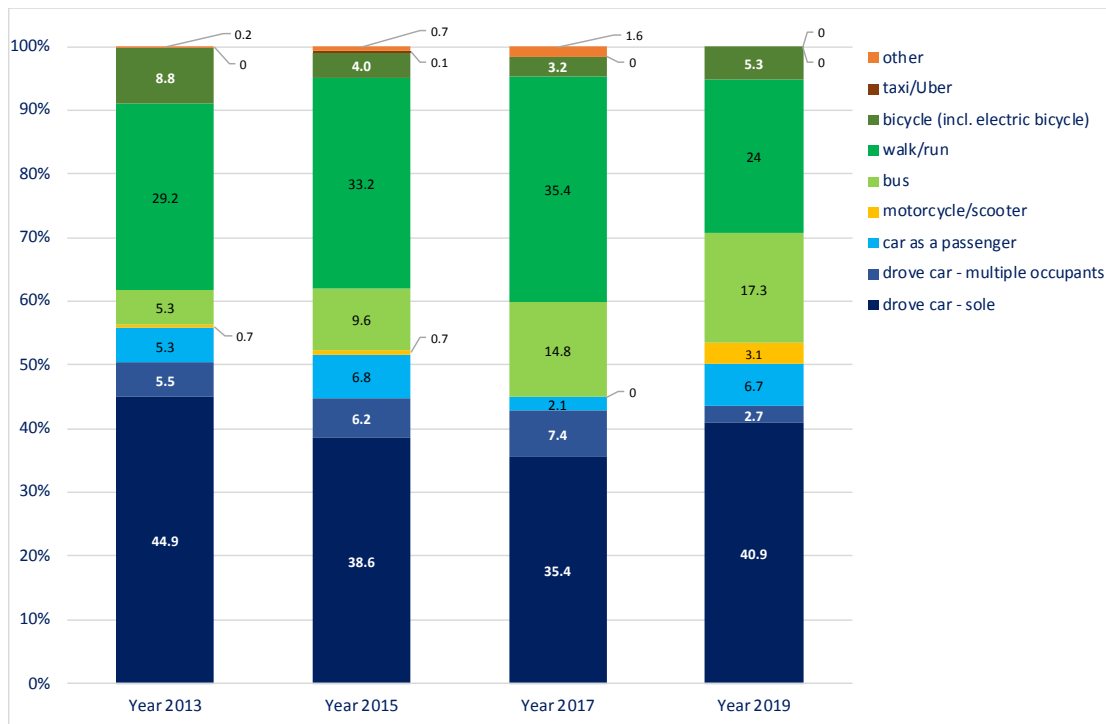


Figure 3.10: Main Mode Share 2013, 2015, 2017, 2019 – Students – Tasmania North (all Launceston)

The challenge for Launceston campuses and future development is enhancing accessibility for students residing in the Launceston local government area and the greater region, especially southern growth suburbs. As shown in Figure 3.11, more than 50% of students live within Launceston postcodes 7250 and 7248 (see light and darker blue area) with more than 30% live in suburbs surrounding the Newnham and Inveresk campuses (Newnham, Mowbray, Invermay, Launceston - see darker blue area). Growing sustainable mode-use and maintaining its viability and attractiveness over time will be essential as UTAS transitions to within Launceston. This means targeted investment in infrastructure, public transport services and well-located student accommodation. Importantly, it also requires a review of current parking and other car use incentives, noting needs of regional students.

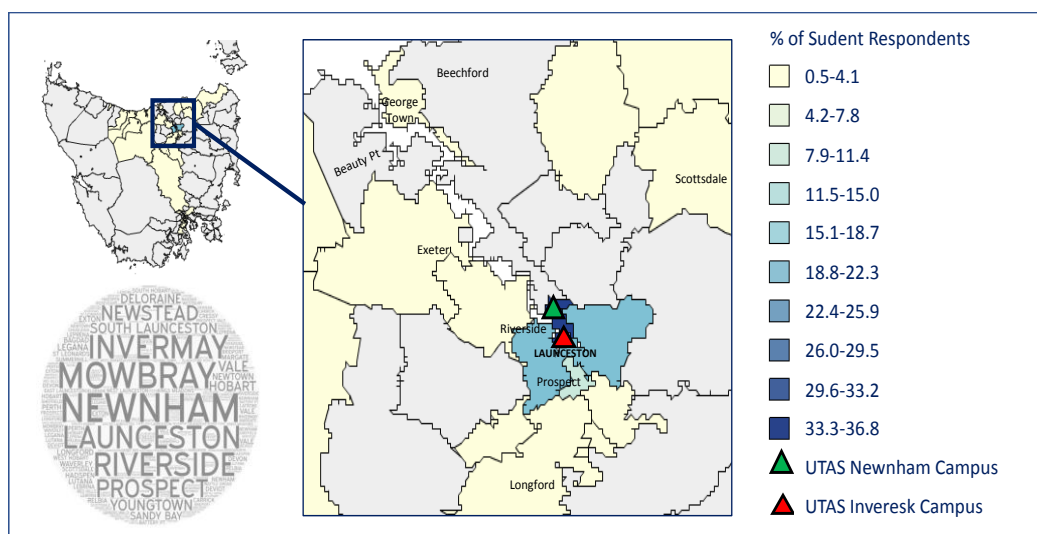


Figure 3.11: Residential Origin by Postcode 2019 - Students studying at Launceston campuses (Newnham and Inveresk)

### North Western Campuses (Burnie)

While the student sample size for north western Burnie-based locations is small (<100), it is of a sufficient size for analysis of crude indicators at least, though results should be considered with caution.

Results for 2019 have some promising features. They show a significant shift to bus and walk modes. The proportion of those walking to the main Cradle Coast campus remains similar to 2017, however in 2019 the Cradle Coast sample includes students located at the new West Park facility, which is more central to the Burnie city centre. Walking as the main mode is highest for those attending the West Park facility and Rural Clinical School located between Cooee and Park Grove, Burnie. Bus use is similar for all Cradle Coast Burnie facilities and has more than doubled since 2017.<sup>12</sup>

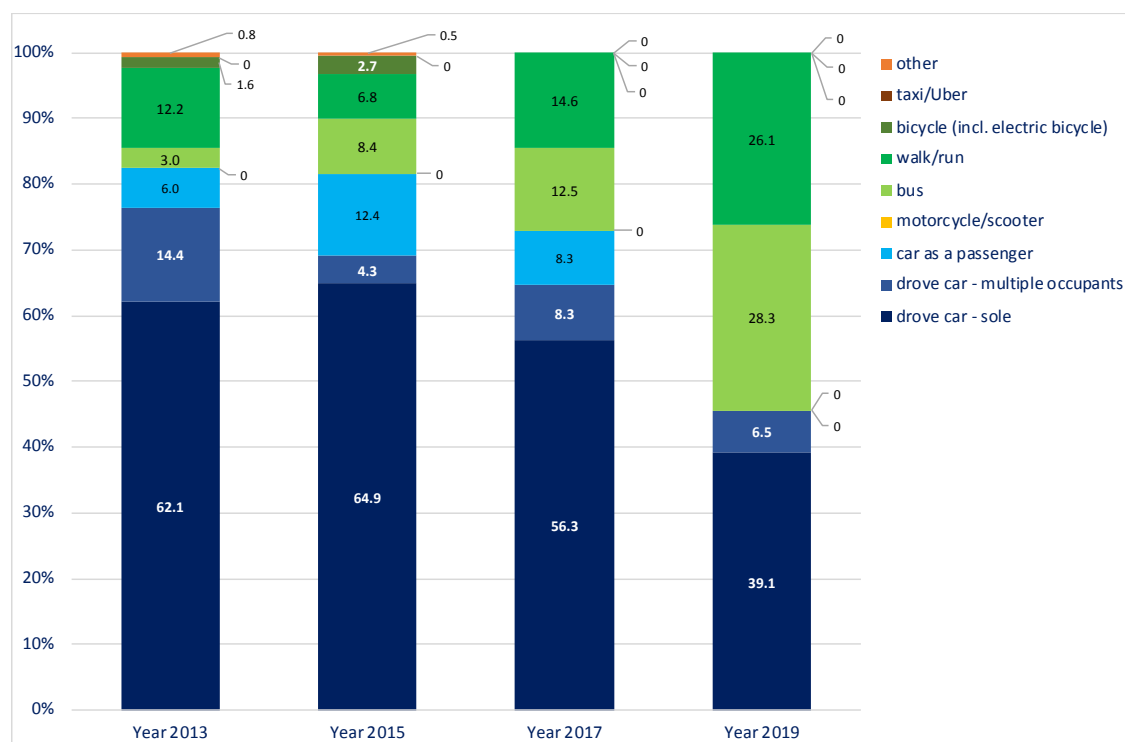


Figure 3.12: Main Mode Share 2013, 2015, 2017, 2019 – Students – Tasmania North West (all Burnie)

Note: Year-to-year comparisons are to be taken with caution for this region as sample sizes for Cradle Coast are small, being <100. Instead the data provides a crude indication only of the mode share.

<sup>12</sup> Since the introduction of Metro Tasmania Route 85 in September 2016, patronage has remained fairly consistent (around 21% of all UTAS boardings from the Cradle Coast campus). There have been no timetable or route changes to Burnie since the introduction of Route 85 (Metro Tasmania).

## Sydney Campuses

For Sydney facilities (Rozelle and Darlinghurst) the 2019 TBS student sample is less than 100 and so the results should be treated with caution. The sample for students is, however, of a sufficient size for analysis of crude indicators at least.

Public transport use by students (various bus, train, light rail and harbour ferry combinations) has increased notably since 2015 and slightly since 2017, while sole-driver car use has steadily decreased over time (33.3% in 2019 compare to 46.6% in 2015). Walking as the main mode has fluctuated a little over the three survey periods and is up from 2017 levels, however there is no record of anyone cycling in the 2019 sample. The latter is not so surprising since Sydney overall has experienced a steady decline in cycling participation.<sup>13</sup>

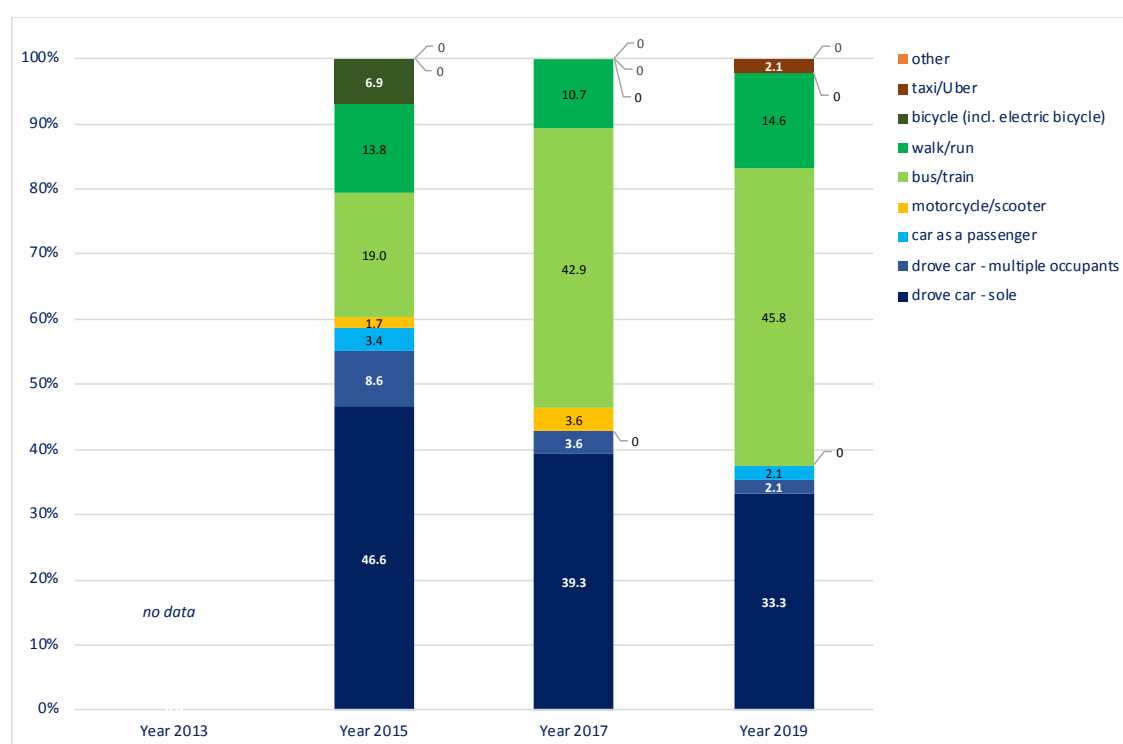


Figure 3.13: Main Mode Share 2015, 2017, 2019 – Students – Sydney campuses (Rozelle & Darlinghurst)

Note: Year-to-year comparisons are to be taken with caution for this region as sample sizes are small, <100. Instead the data provides a crude indication only of the mode share.

<sup>13</sup> The National Cycling Participation Survey 2017 showed a decline in cycling in Greater Sydney, especially amongst women. Source: Australian Bicycle Council <http://www.bicyclecouncil.com.au/publication/national-cycling-participation-survey-2017>

### Staff main mode to work

Main mode distribution for staff journeys to/from the university for work is quite different to that for students, with staff residential origins tending to be more dispersed (for Hobart staff see Figures 3.19 and 3.20). For UTAS overall, Figure 3.14 shows very little change in car-based modes overall and sustainable modes collectively (walk, bicycle, bus). Like students, however, mode distribution from region to region and campus to campus varies notably (Figure 3.15.)

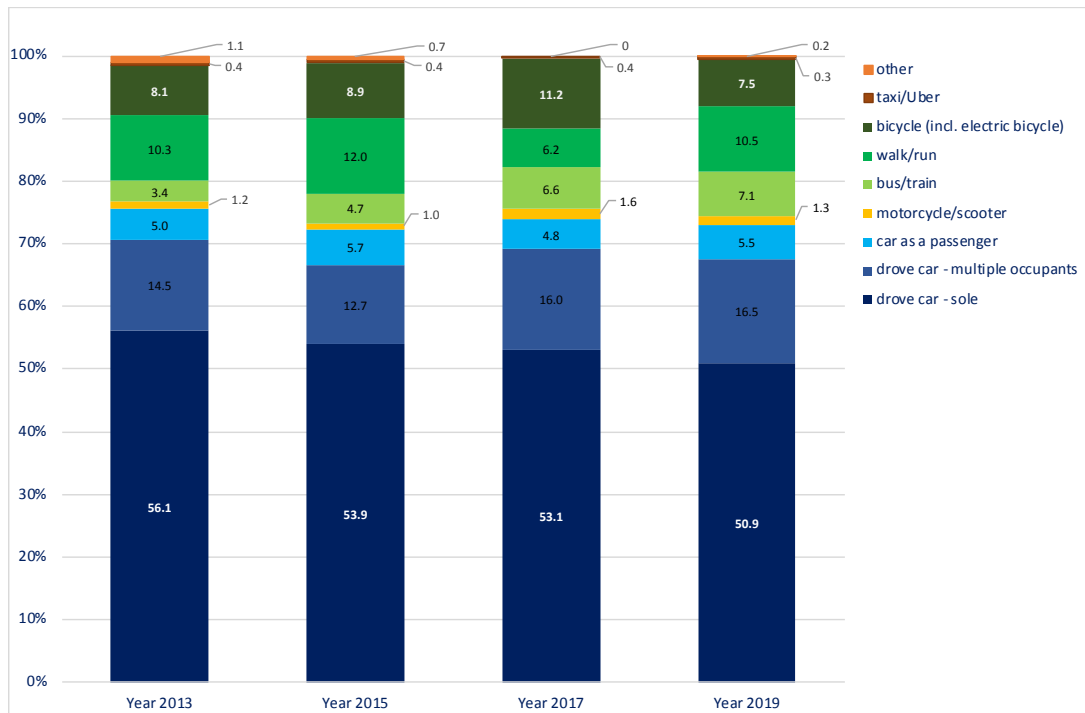


Figure 3.14: Main Mode Share 2013, 2015, 2017, 2019 – Staff – All University of Tasmania

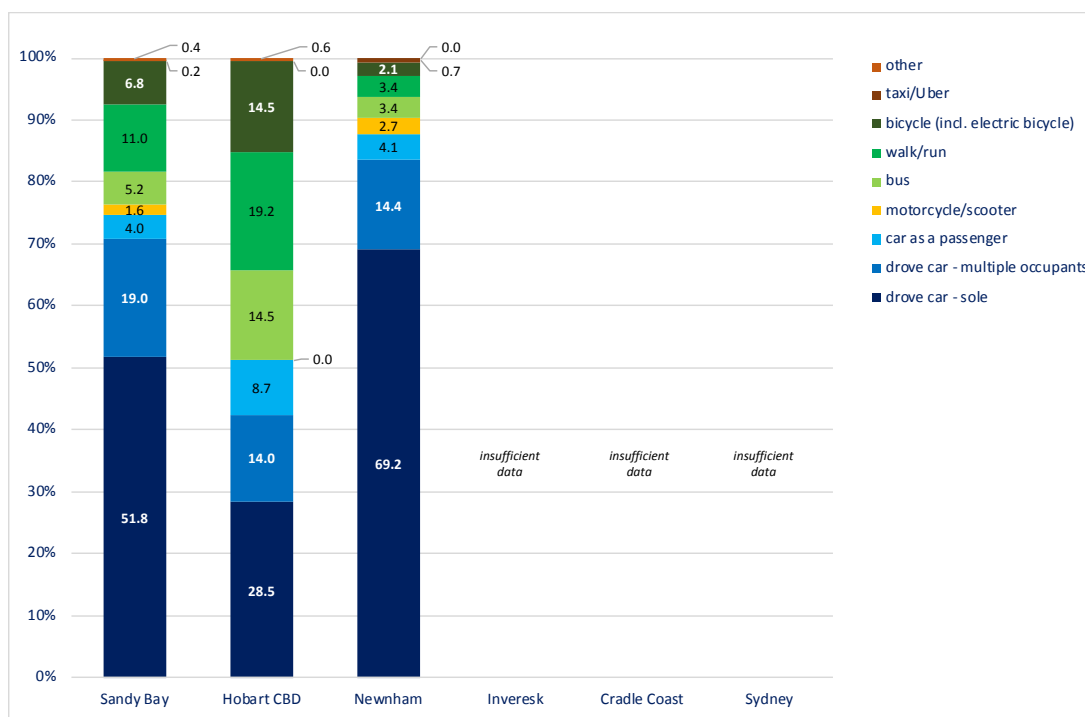


Figure 3.15: Main Mode Share 2019 – Staff – by campus and campus groupings

Note: The staff sample size for Inveresk, Cradle Coast and Sydney are too small to report

## Southern Campuses

Figure 3.14 shows that staff located in Hobart CBD locations have more than double the share of sustainable mode use in 2019 compared to those located at Sandy Bay campus (48% in Hobart CBD compared to 23% at Sandy Bay).

Over time there are small positive changes in bus use and bicycle use for southern staff, though bicycle use dropped from 2017 to 2019 to the benefit of the increase in walking (Figure 3.16). Bus use is stable, having grown between 2013 and 2017, and car use as sole driver is down by 4% since 2017. Car use as sole driver is most significantly down for those working in the Hobart CBD (by 11% since 2017) compared to Sandy Bay (down by 2%). Carpooling, in the form of staff arriving at work as a car passenger or driver with multiple passengers, is up slightly since 2017. This is most evident for those working in the Hobart CBD (Figure 3.18).

For Sandy Bay campus-based staff, sole-driver car use is at its lowest for all data collection years, though the fluctuation since 2013 is small (Figure 3.17). Carpooling levels, in the form of car passenger and car driver with multiple occupants, remain on par with 2017 – the highest for all collection years. The share of staff bus users in 2019 is double that of 2013. Staff bus use mode share has increased at each data collection year, though is still only at 5% mode share compared to over 29% for students. For active modes, while walking is up from 2017 levels and the share of cycling is down, walking and cycling combined is back on par with 2013 levels. Therefore, over the course of time the small shift away from sole-drive car use appears largely attributable to growth in bus use and carpooling for the Sandy Bay campus.

While Hobart CBD staff have the highest levels of sustainable mode use, the share declined from 2015 to 2017, but has returned to 2013 levels (Figure 3.18). The 2019 data shows a return to pre-2017 patterns of sustainable mode use with small increases in bus and bicycle use since 2015. Hobart CBD-based staff display the most active transport mode behaviours than any other UTAS location with 34% either walking or cycling compared to 18% for staff at the Sandy Bay campus. Overall in 2019 we see the highest proportion of sustainable modes combined (48.2%) of all the TBS data collection years for the Hobart CBD, and the lowest share of sole-driver car use (28.5%).

Contrary to 2017, Figures 3.19 and 3.20 show that in 2019 a higher proportion of staff live locally for those working at UTAS Hobart CBD facilities than those working at the Sandy Bay campus, though residential origin patterns do not differ significantly for either workplace location. Living locally enables walking and cycling mode choice. A good number of staff still live in suburbs that have reduced public transport convenience, being away from transport hubs or high frequency corridors. While a high level of public transport service cannot be provided to everyone in a low density and dispersed urban setting, well designed park-and-ride facilities connected to select high frequency bus service corridors supported by dedicated bus lanes might be explored, especially in outer growth areas with growing travel demand.

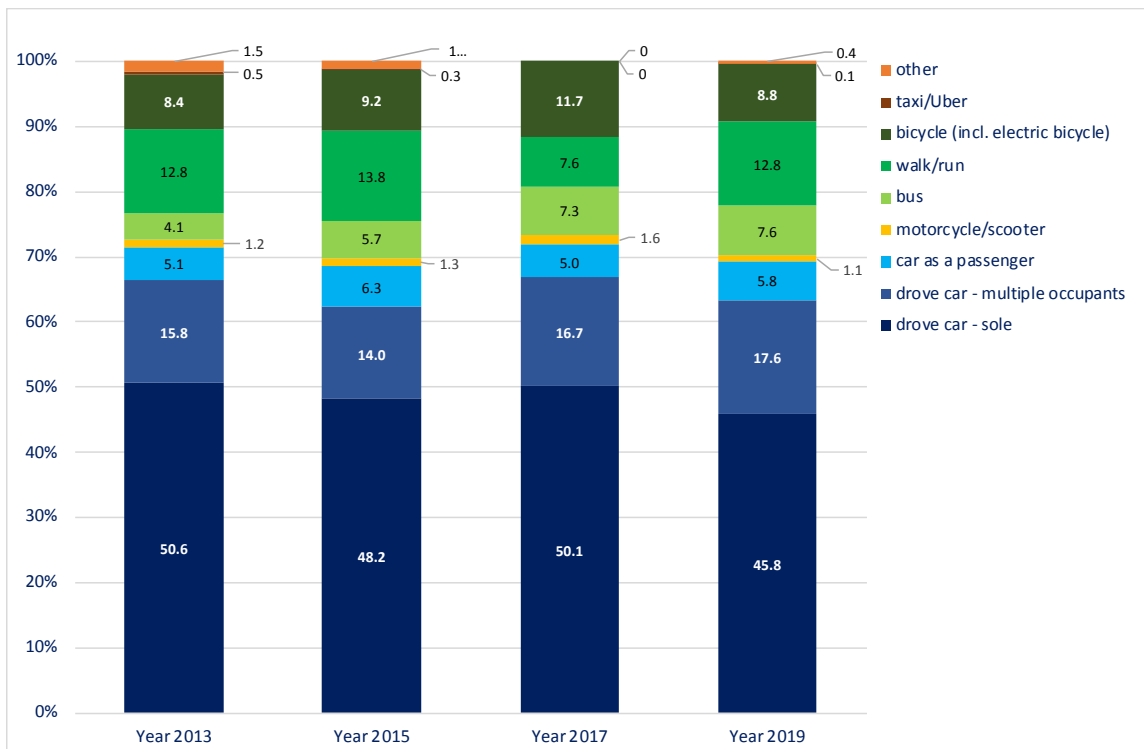


Figure 3.16: Main Mode Share 2013, 2015, 2017, 2019 – Staff – Tasmania South (all Hobart)

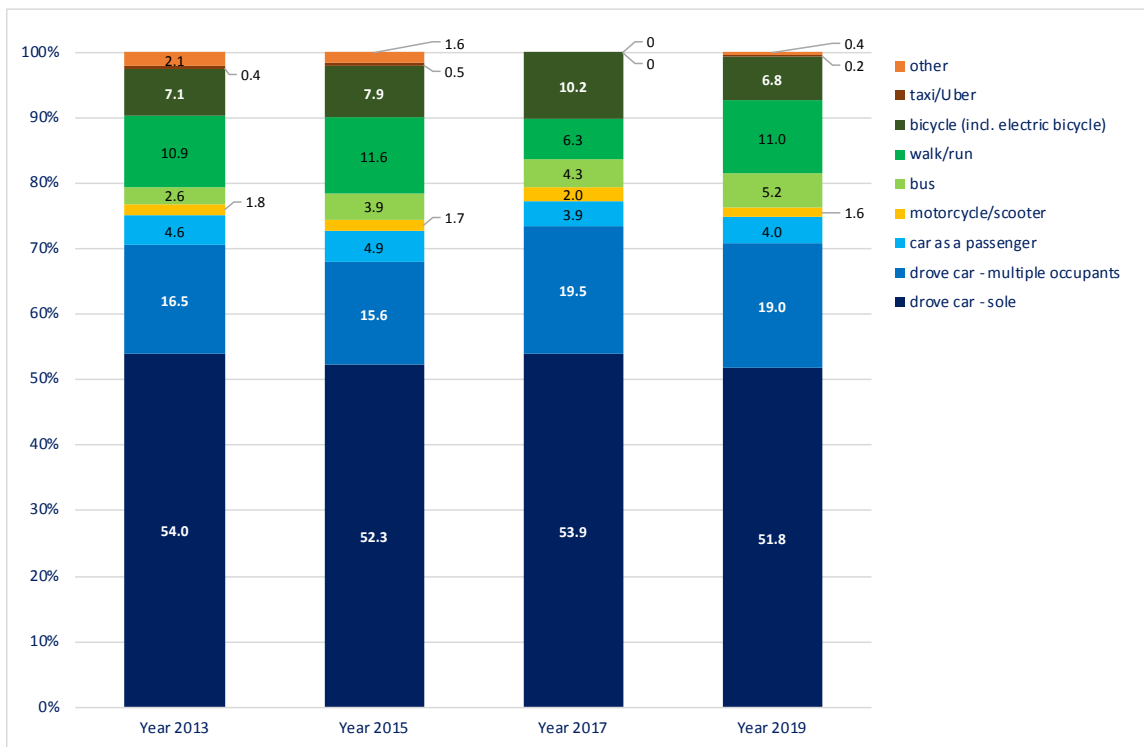


Figure 3.17: Main Mode Share 2013, 2015, 2017, 2019 – Staff – Sandy Bay Campus (Hobart)

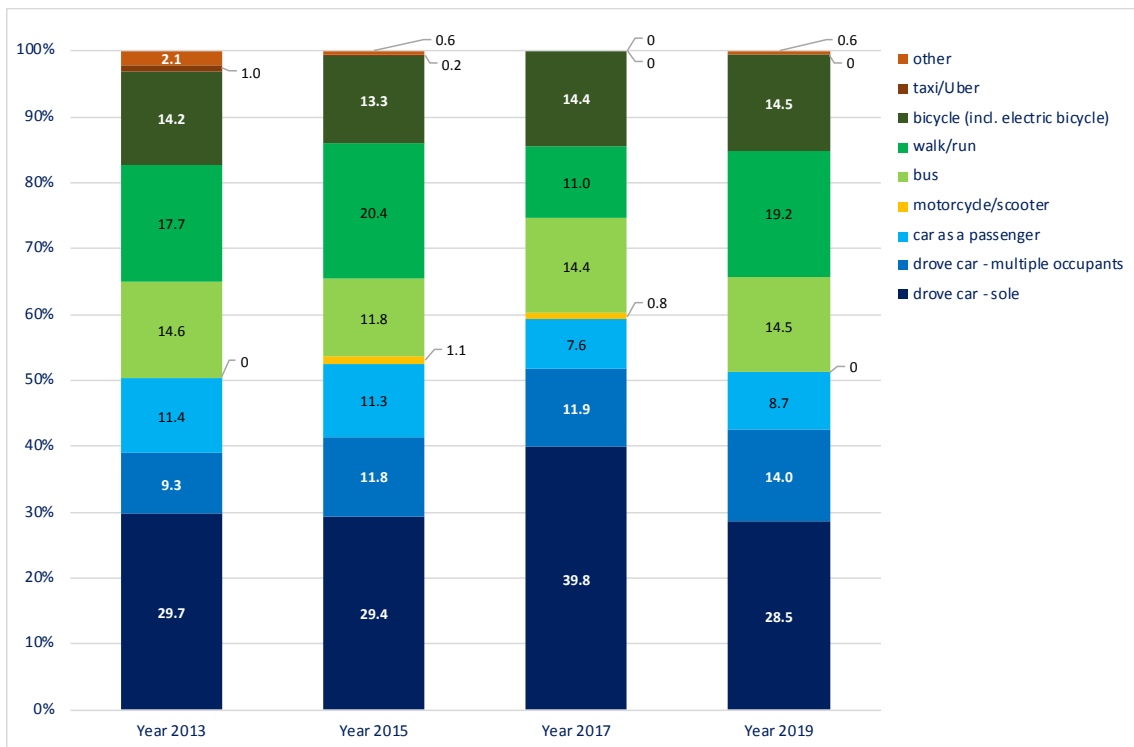


Figure 3.18: Main Mode Share 2013, 2015, 2017, 2019 – Staff – Hobart CBD

Note: 2013 data reports MSP only and no other CBD facilities. IMAS-S was not complete and other CBD facilities had very low sample sizes in 2013. Caution should therefore be taken comparing 2013 data with 2015, 2017, 2019.

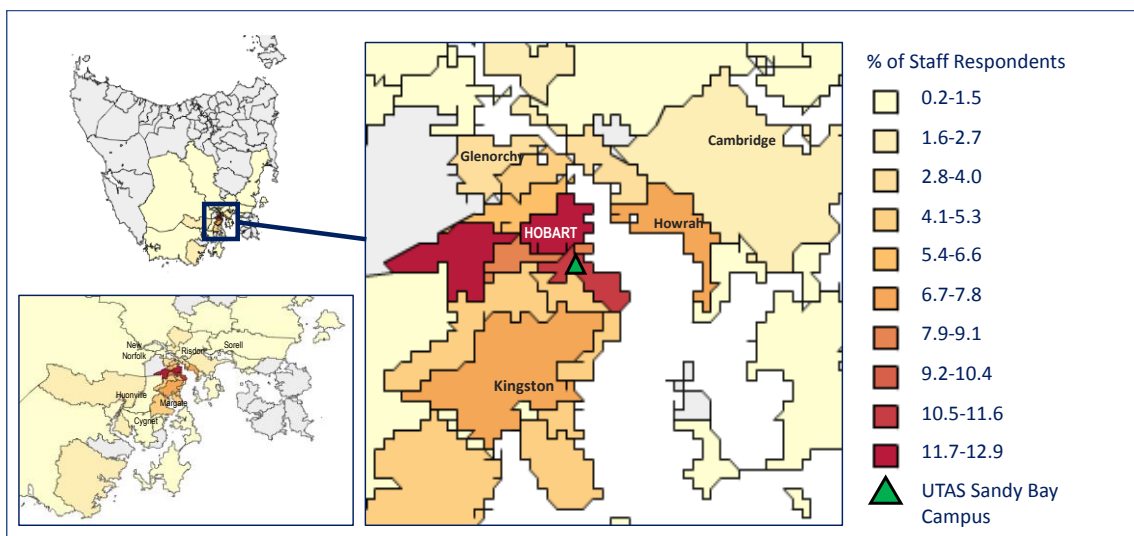


Figure 3.19: Residential Origin by Postcode 2019 – staff working at Sandy Bay campus

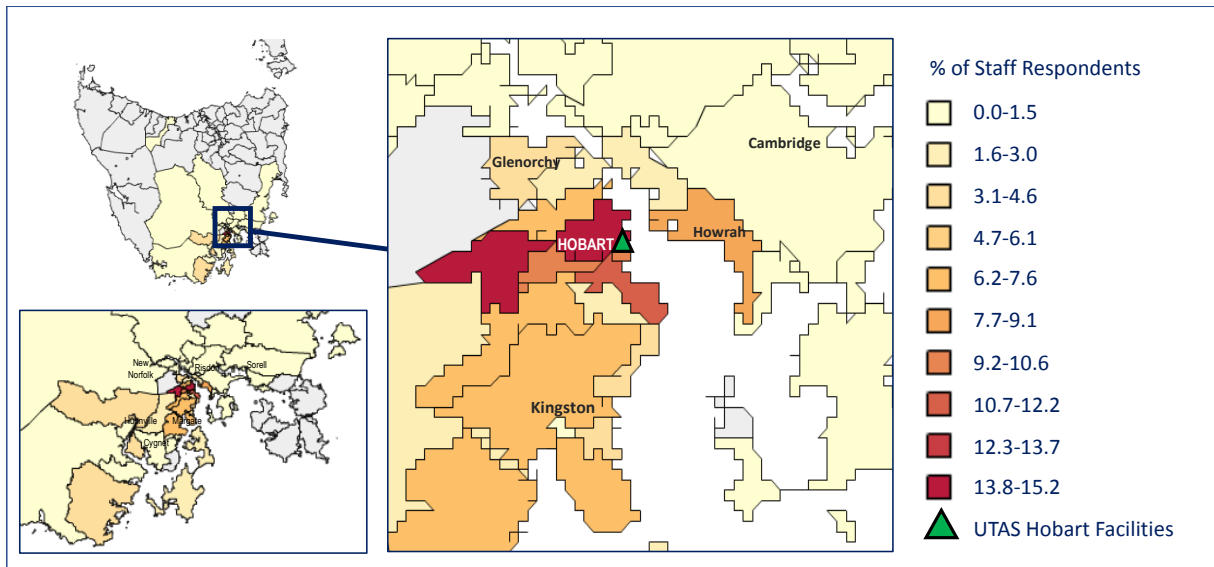


Figure 3.20: Residential Origin Postcode 2019 – staff working at Hobart CBD facilities

### Northern and North Western Campuses

In the north there has been a notable drop in staff active modes since 2017, particularly bicycle use. Most concerning is the 5% increase in car use as sole driver (Figure 3.21). Carpooling in the form of staff arriving at work as a car passenger or driver with multiple passengers is also up slightly in northern campuses. Bus use remains up from 2013 and 2015 levels but has not grown since 2017. Unfortunately, survey responses from Inveresk and other Launceston facilities were too few to allow a reliable comparison with Newnham campus staff.

The campuses with the highest single occupant car use are in Tasmania’s north (Launceston campuses combined). In 2019 some 88% of staff in north arrived at work by car with 69% of those as sole driver (Figure 3.21). Though the North Western campuses in Burnie show the highest single occupant car use in 2017 and 2019 with staff in 2019 not reporting any sustainable mode use, sample sizes for both years are very small and potentially unrepresentative, therefore they have not been shown here.



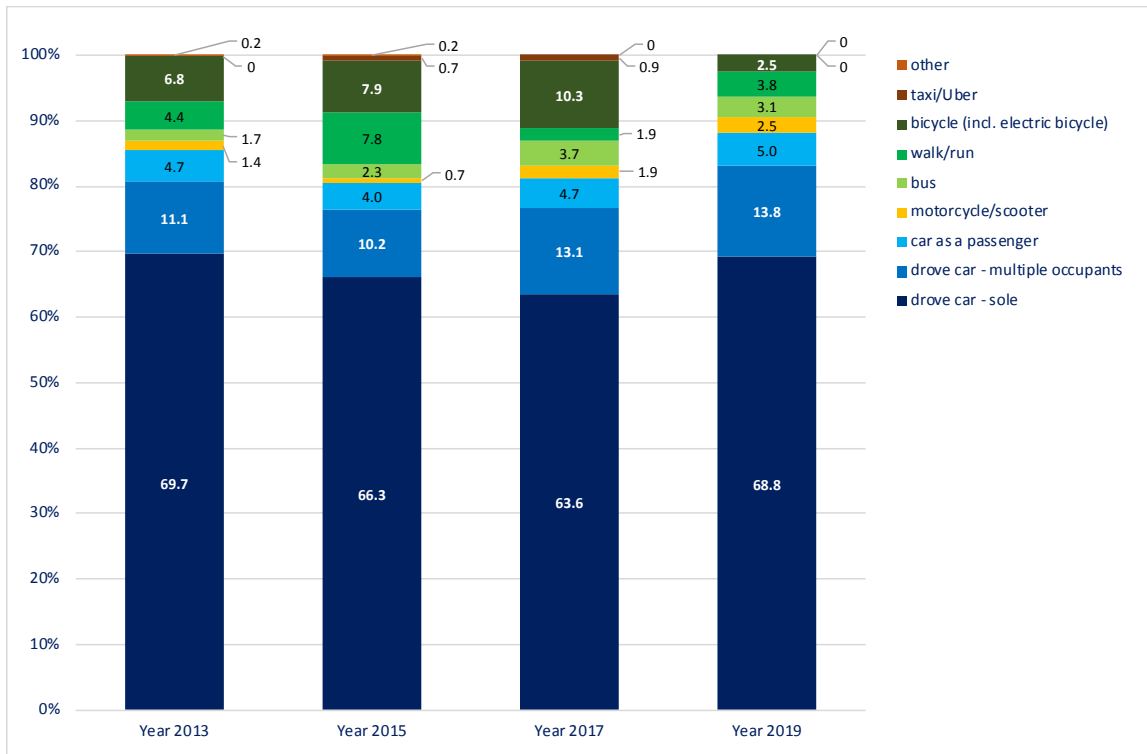


Figure 3.21: Main Mode Share 2013, 2015, 2017, 2019 – Staff – Tasmania North (all Launceston)

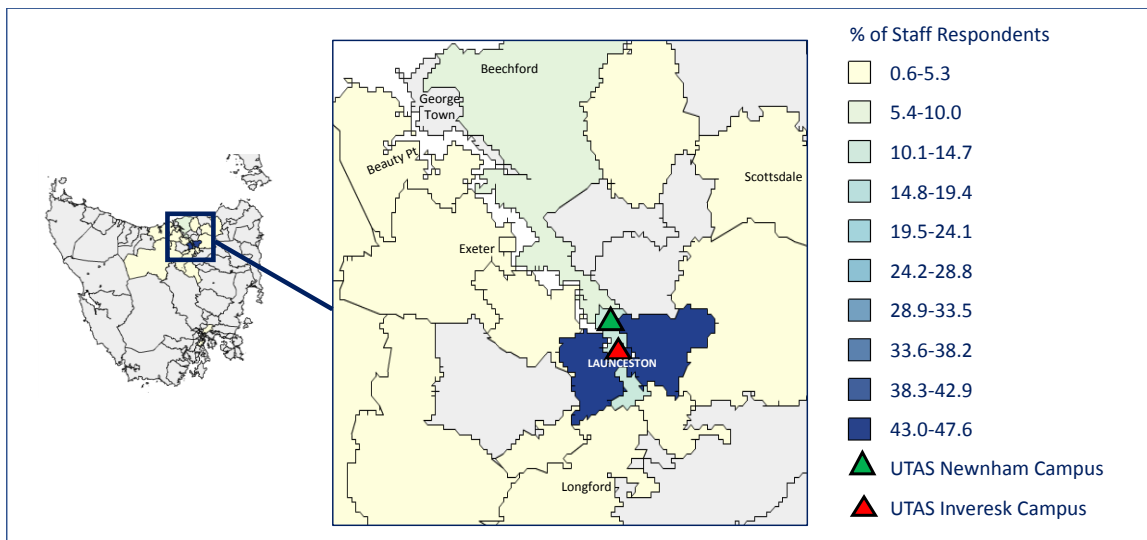


Figure 3.22: Residential Origin by Postcode 2019 – staff working at Launceston campuses (Newnham and Inveresk)

### Working from home or remotely (virtual transport)

Working from home reduces the physical need to travel to work and reduces peak commute period travel demand.<sup>14</sup> Some 9% of staff respondents reported working from home or elsewhere remote from UTAS in 2019 versus 7% in 2017<sup>15</sup>. Figure 3.23 shows how the share varies by region and weekday. In the north (all Launceston locations) the average staff daily work from home share was 7% in 2019 down from 8% in 2017 and a Monday peak in 2019. The south (all Hobart locations) average is 7% in 2019 up from 6% in 2017 with a Friday peak.

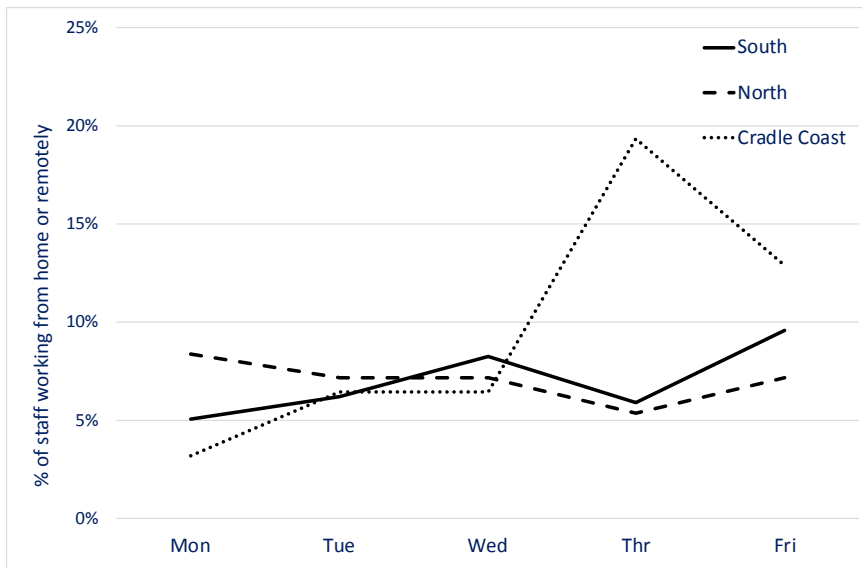


Figure 3.23: Proportion of staff working from home by weekday and Tasmanian region

Table 3.1 shows that in the south there has been an increase over time in working from home or remotely, while in the north working from home is down slightly from peak 2017 levels. Overall, working from home has increased at UTAS since 2017, which is not surprising given information and communication technology improvements facilitating this work mode.

Table 3.1: Proportion of staff working from home (or remotely) – Monday to Friday average

	2013	2015	2017	2019
South (Hobart)	2%	3%	6%	7%
North (Launceston)	2%	3%	8%	7%
Cradle Coast	5%	-	4%	10%
All UTAS staff			7%	9%

Note: In the 2013 & 2015 TBS, 'worked from home' was offered as a mode choice for the journey to/from work each day of the week and so was reported as a transport mode category. In 2017 and 2019 respondents were asked if they: attended a university facility, worked from home/remotely, or did not work, before asking what transport mode they used to get to/from a university facility. The 'worked from home' share is calculated similarly as a share of total workers for each day for all years, despite the question adaptation in 2017.

<sup>14</sup> While tending to reduce travel demand in peak commuter periods, working from home may increase short local trips in the neighbourhood of the worker, which can have a negative and/or positive impact on that place.

<sup>15</sup> Some staff may also be working remotely while on work business.

### 3.2 Student inter-campus travel

Both student and staff surveys asked about inter-campus trips, that is trips made between UTAS campuses or facilities rather than other places. Student inter-campus travel is up by 14% since 2017, an increase of two inter-campus trips per week for every 100 students. Some 78% of student inter-campus trips in 2019 were made within the southern region, compared to 16% within northern Tasmania and the Cradle Coast combined. Just over 5% of all inter-campus trips were inter-regional, the vast majority between Hobart and Launceston.

Table 3.2 shows the main mode of transport taken for the most prominent intra-regional trips:

- between the Hobart Medical Science Precinct (MSP) and the Sandy Bay campus – 23% of all student inter-campus trips;
- between the Sandy Bay campus and all Hobart CBD facilities – 66% of all student inter-campus trips; and
- between Inveresk and Newnham campuses – 8% of all student inter-campus trips.

While there has been an increase in inter-campus student trips, the proportion travelling by car (sole and multi occupant) has declined in both Hobart and Launceston. For trips between the Hobart CBD and Sandy Bay campus an increase in bus and active modes is observed. In Launceston bus use is up for trips between Inveresk and Newnham though active modes are down. Importantly, overall, we do not see an increase in car use as sole occupants.

*Table 3.2: Main mode of transport for most prominent inter-campus trips*

Transport mode	Medical Science Precinct to Sandy Bay Campus (and return)		All Sandy Bay to Hobart CBD Destinations		Inveresk-Newnham (and return)	
	2017	2019	2017	2019	2017	2019
Private car – sole occupant	11%	7%	16%	16%	39%	39%
Private car – multi occupants	13%	15%	15%	7%	14%	10%
Motorcycle/scooter	-	2%	-	1%	-	-
Bus	55%	55%	43%	45%	34%	45%
Walk	19%	11%	19%	22%	13%	-
Bicycle	2%	9%	5%	9%	-	3%
Taxi/Uber	-	-	1%	-	-	-
Mode not specified	-	1%	1%	1%	-	2%

Most of the inter-campus, inter-regional trips reported by students in 2019 were between Hobart and Launceston (85%), with the remainder being between Launceston and Burnie and Hobart and Burnie. Some 50% of trips between Hobart and Launceston were made by bus (coach service), 25% by car as sole occupant and the remainder by car with multiple occupants (driver or passenger). The reported bus use for these trips is a significant increase from 2017 though it only relates to a few people.

### 3.3 Staff business travel

In 2019 some 24% of staff (226 individuals) reported travelling for work purposes, including inter-campus trips, in the previous week. Such travel does not include air or sea travel. This proportion is slightly higher than in 2017 though not as significant as the change between 2013 and 2017 (Figure 3.24). For the number of trips made per 100 staff, however, there has been a 16% increase in trips since 2017 with 59 land-based work trips made (Monday to Friday) for every 100 staff members compared to 51 land-based work trips in 2017. This increase is despite the parallel increase in the use of UTAS teleconferencing or videoconferencing ICT for meetings (Figure 3.25).<sup>16</sup> The take home message here is that while ICT use has increased, it is not necessarily replacing the need to travel for face-to-face meetings. However, it may have reduced the need to travel for longer inter-regional trips (e.g. between Hobart and Burnie or Launceston and Burnie) which have reduced in number and share.

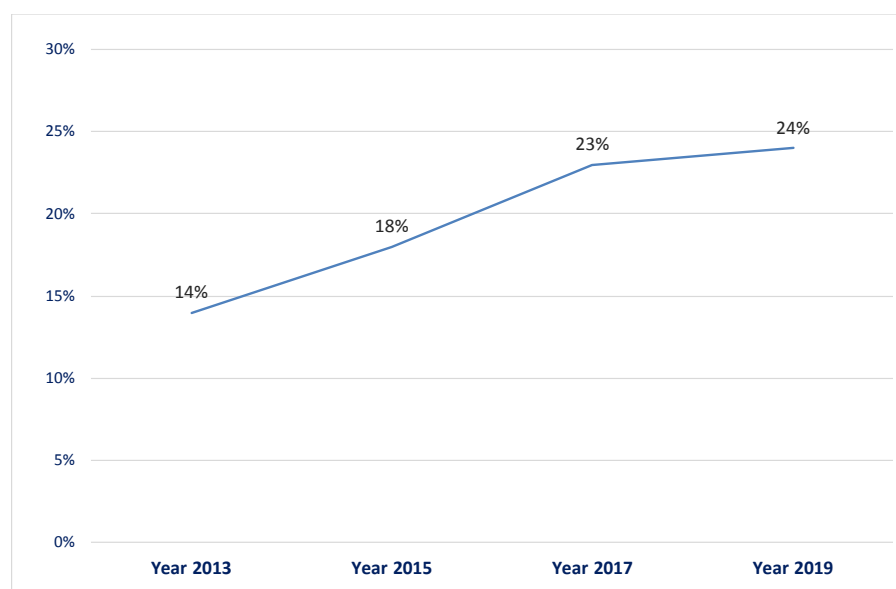


Figure 3.24: Proportion of staff undertaking inter-campus trips in previous week

<sup>16</sup> The survey asked staff how frequently they had used ICT over the previous year. Results show that as the quality of ICT has improved and its accessibility enhanced, there has been a notable increase in regular use. An increasing number of staff are also using other personal ICT and smart-phone communication apps to carry out day-to-day business communications such as WhatsApp, Facetime and Google Hangouts.

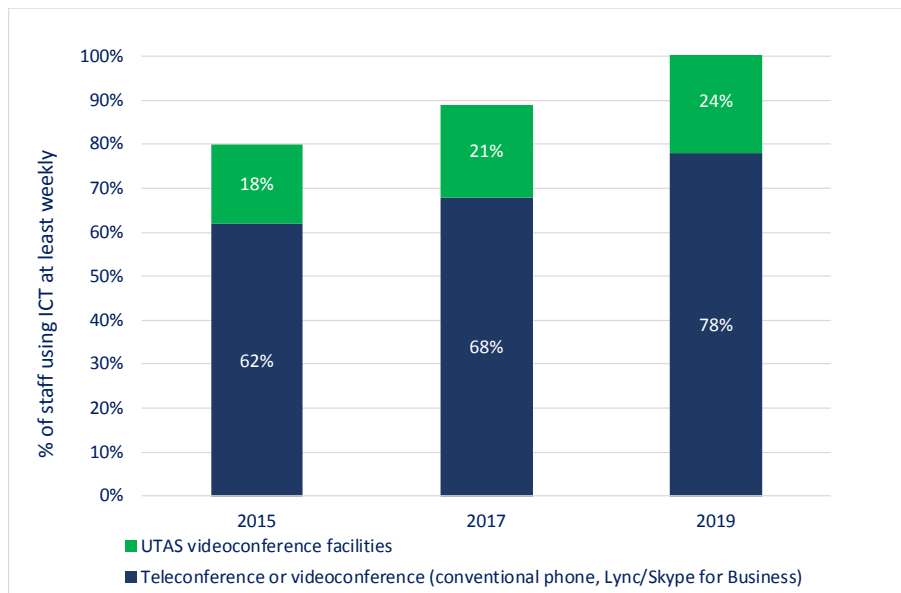


Figure 3.25: Proportion of staff using UTAS teleconferencing or videoconferencing ICT at least weekly

Note: Figure 3.25 highlights the change in the proportion of staff using university provided meeting-replacement ICT at least weekly, specifically telephone or PC-based teleconferencing/videoconferencing and university videoconference venues that allow groups of people to meet with each other virtually.

### Type and mode of land-based work trips

Of the land-based work trips made in Tasmania some 30% were associated with inter-campus travel in 2019, a decrease from 40% in 2017. This means there has been growth in other work trips not involving movement between UTAS campuses or facilities.

As shown in Figure 3.26, of all the inter-campus work trips the greatest proportion were movements between Sandy Bay and Hobart CBD facilities (61%). Another 10% of inter-campus trips occurred within Tasmania's southern region (e.g. between IMAS-Salamanca and IMAS-Taroona or between Sandy Bay and Mt Pleasant). Only 5% of all inter-campus trips involved movements in the north (within the Greater Launceston area). Some 23% of inter-campus trips were longer inter-regional movements with the majority of these being movements between Hobart and Launceston campuses and facilities.

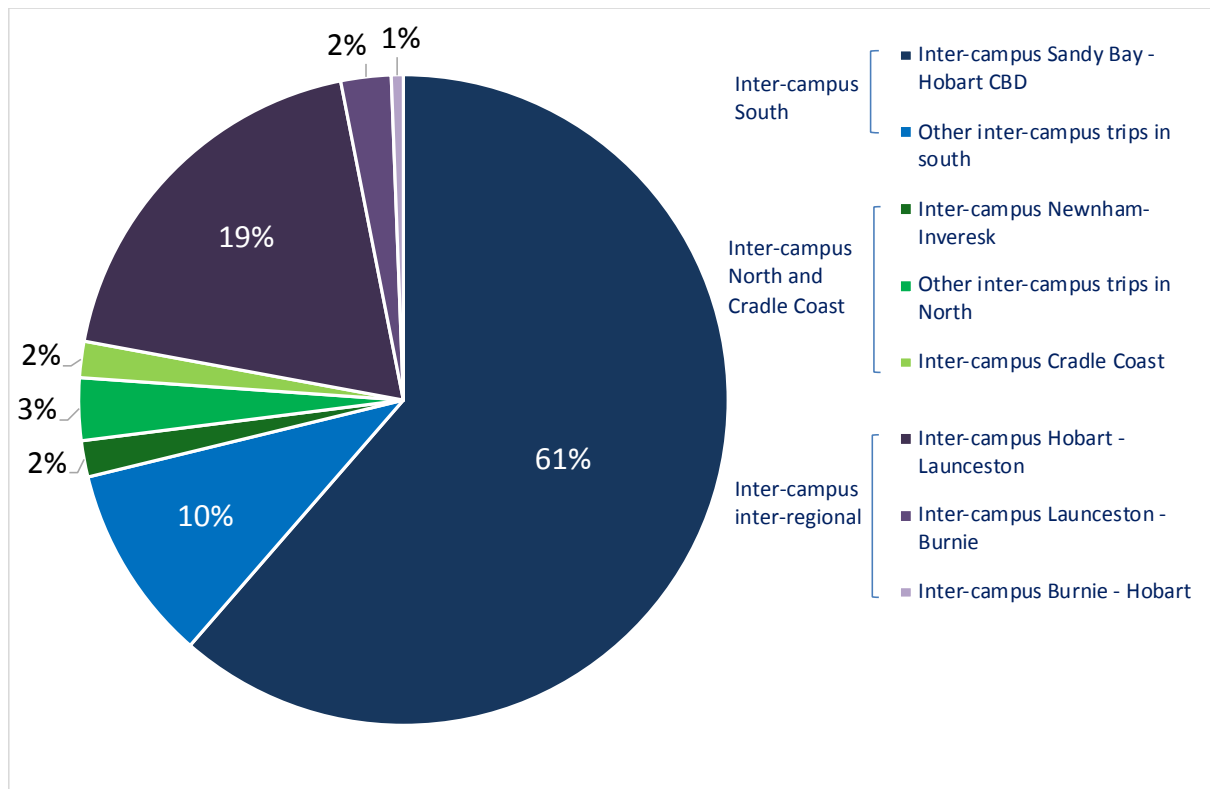


Figure 3.26: Tasmanian land-based inter-campus work trips – by trip type

Table 3.3: Main mode of transport for select Tasmanian inter-campus trips

Transport mode	Medical Science Precinct - Sandy Bay Campus (return)		IMAS-S – Sandy Bay Campus (return)		Inveresk-Newnham (return)		Sandy Bay - all Hobart CBD UTAS facilities (return)	Hobart - L'ton (return)
	2017	2019	2017	2019	2017	2019	2019	2019
Private car – sole occupant	21%	20%	25%	31%	43%	71%	35%	16%
Private car – multi occupants	21%	8%	-	-	14%	-	8%	5%
Uni fleet car – sole occupant	16%	1.5%	12.5%	-	36%	-	0.5%	46%
Uni fleet car – multi occupant	-	1.5%	-	-	7%	-	1%	32%
Uni eco-fleet car – sole occupant	-	-	-	-	-	-	1%	-
Uni eco-fleet car – multi occupant	-	-	-	-	-	-	0.5%	-
Motorcycle/scooter	-	-	12.5%	-	-	-	2%	-
Bus/coach	37%	22%	-	12.5%	-	-	11%	2%
Walk	-	3%	12.5%	19%	-	-	13%	n.a.
Bicycle	-	9%	-	12.5%	-	-	6%	n.a.
Taxi/Uber	5%	35%	37.5%	25%	-	29%	22%	n.a.

Table 3.3 shows the primary mode of transport for the most common inter-campus trips, with key notes:

- Sandy Bay - Hobart CBD inter-campus trips (and return)
  - 33.5% of 2019 trips for this journey used sustainable modes (hybrid or electric fleet vehicles (eco-fleet), motorcycle, bus, walk, cycle) with almost 20% by active modes (walk or cycle).
  - Of all cycle trips, half were by electric bicycle.
  - Comparing some of these trips to 2017 shows that the share of staff travelling by car is lower in 2019 than 2017 – specifically, private vehicles or a UTAS fleet car (non-hybrid or electric vehicle).
  - Fewer staff took the bus in 2019 than in 2017, though there is an increase in the number of staff choosing active modes in 2019 (12% walking or cycling).
  - A notable increase in taxi use, with 35% of staff using this mode in 2019 versus 5% in 2017.
- IMAS-Salamanca - Sandy Bay inter-campus trips (and return)
  - 44% of 2019 trips for this journey type used more sustainable modes (UTAS eco-fleet vehicle, motorcycle, bus, walk, cycle), and 31.5% by active modes (walk and cycle).
  - IMAS-Salamanca to Sandy Bay (or return) had the highest share of cycle trips across all journey types (12.5%).
  - A greater share of staff reported taking the bus for this journey type.
  - The proportion of staff taking a taxi for this journey type was lower in 2019 than 2017.
- Inveresk - Newnham inter-campus trips (and return)
  - The dominant mode of choice for this journey type in 2019 was private car as sole driver (71%). No fleet vehicle trips were recorded in 2019. In 2017 sole drive private car and fleet vehicles accounted for 79% of trips.
  - Some 29% of trips were taken by taxi in 2019 while no one reported taking a taxi in 2017.
- Hobart - Launceston inter-campus inter-regional trips
  - Most trips (78%) made for this journey type used a UTAS fleet vehicle (46% as sole driver and 32% in a multi-occupant vehicle) while 21% of staff travelled by private vehicle.
  - A small number of staff chose to take the bus/coach for this journey type (2%).

Not shown in Table 3.3 are shorter trips in and around the Hobart CBD (e.g. MSP to CftA or IMAS-S), or Sandy Bay). The vast majority of these were reported as walk trips.

Four main observations on the change in staff work trips including inter-campus trips since 2017 include:

1. An increase in the number and share of land-based work trips not linked with intercampus trips.
2. An increase in the share of staff using taxis or Uber for intra-city trips.
3. An increase in active mode choice for intra-city Hobart trips (walk and cycle).
4. A reduction in UTAS fleet vehicles for intra-city trips.

### 3.4 Bus use

As demonstrated in section 3.1, the most striking and consistent increase in mode share since 2013 across most regions and major campuses has been bus use in Tasmania (and public transport use more generally in Sydney), particularly among students. The TBS survey also seeks feedback on the use of public transport service information and auto-tap ticketing cards. This information helps us understand the level of awareness of, and engagement with, local public transport services.

#### *Greencard and Opal card ownership*

The proportion of university staff and students in Tasmania and Sydney with auto-tap public transport ticketing cards has continued to increase since 2013 and is at its highest for staff in 2019. For staff based in Tasmania, 49% own Greencards with 81% of these having regular credit on it. This compares to an ownership rate of only 28% in 2013. Greencard ownership is higher in southern Tasmania (55%) than in northern Tasmania (28%). In Sydney all staff respondents reported owning the equivalent Opal card with regular credit on it.

#### *Use of online public transport information and apps*

In 2017 and 2019, we asked respondents how frequently they accessed public transport websites or apps such as the *Metro Tasmania App* (Tasmania) or *Opal Travel App* (NSW). Such tools include trip planners, timetable information, service updates and fare information. As shown in Figure 3.27, Sydney students reported the highest degree of access to such information. In Tasmania, the highest levels of access were in the south (Hobart) where some 46% of students and 45% of staff had accessed such information at least a few times a year, and 26% of students and staff had accessed weekly or more. The proportion of staff in Tasmania's south accessing such information has increased most notably since 2017 when the proportion accessing at least a few times a year was less than 30% and the proportion using weekly or more was less than 5%. The use of such information has also increased in all other locations.



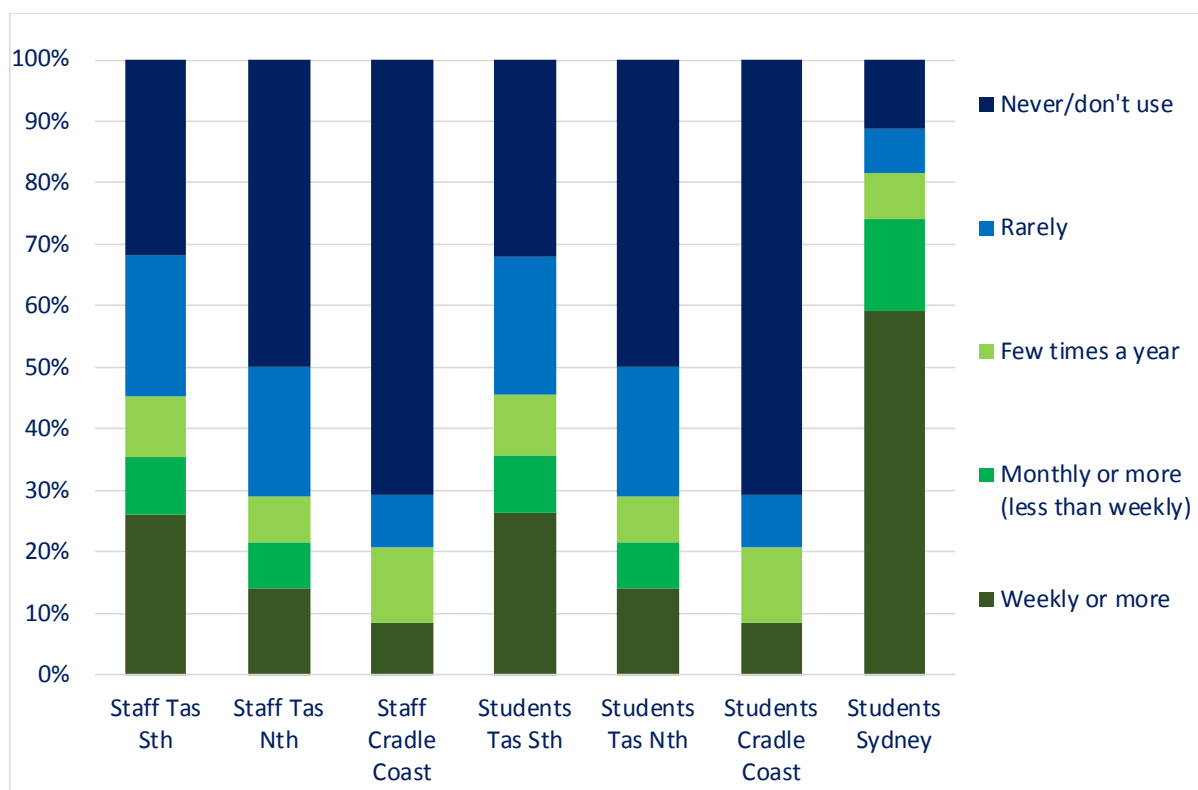


Figure 3.27: Use of a public transport information website or app (including trip planner) – all students and staff 2019

### Bus use incentives

In the 2019 TBS we also asked whether Tasmanian students and staff had taken advantage of any public transport incentive schemes, particularly the following:

- Free Greencard without credit provided (provided by UTAS, Tasmanian University Union and Metro Tasmania)
- Free Greencard with some credit provided (provided by UTAS, Tasmanian University Union and Metro Tasmania)
- One week of free travel (provided by UTAS)
- Free before 7am bus service (provided by Metro Tasmania across Greater Hobart)

Only 6% of student bus users in southern Tasmania had taken advantage of the Metro Tasmania ‘Free before 7am’ incentive scheme within the previous year, while 25% of student bus users in southern Tasmania had used a free Greencard with or without credit on it. Some 9% of staff bus users in southern Tasmania had taken advantage of the Metro Tasmania ‘Free before 7am’ incentive scheme within the previous year.

In the 2019 survey, staff were asked: i) how likely they would be to take up an offer to salary-sacrifice annual bus fare expenses for the journey to and from work at UTAS; and ii) what the likelihood was of them using the bus more to get to or from work at UTAS if they were able to salary sacrifice the annual cost of their bus fares.

Some 16% of staff respondents stated that they would be either likely or extremely likely to take up such a salary sacrifice initiative with a further 15% unsure. The share stating that they would be extremely likely or likely is lower for non-bus users at 5%, with 11% being unsure. The degree of interest is greatest in southern Tasmania, however, where 18% of respondents stated they would be either likely or extremely likely to take up such a salary sacrifice initiative and a further 18% stated that they were unsure. Some 6% of southern Tasmanian non-bus users stated they would be extremely likely or likely to take up such an initiative with 14% unsure.

While such figures appear low, especially for non-bus users, even a modest shift away from single occupant car use can remove a considerable number of cars from our roads and car parks. For example, for every 1000 staff driving a vehicle to work, a shift of 6% of these to bus use would mean the removal of 60 cars.

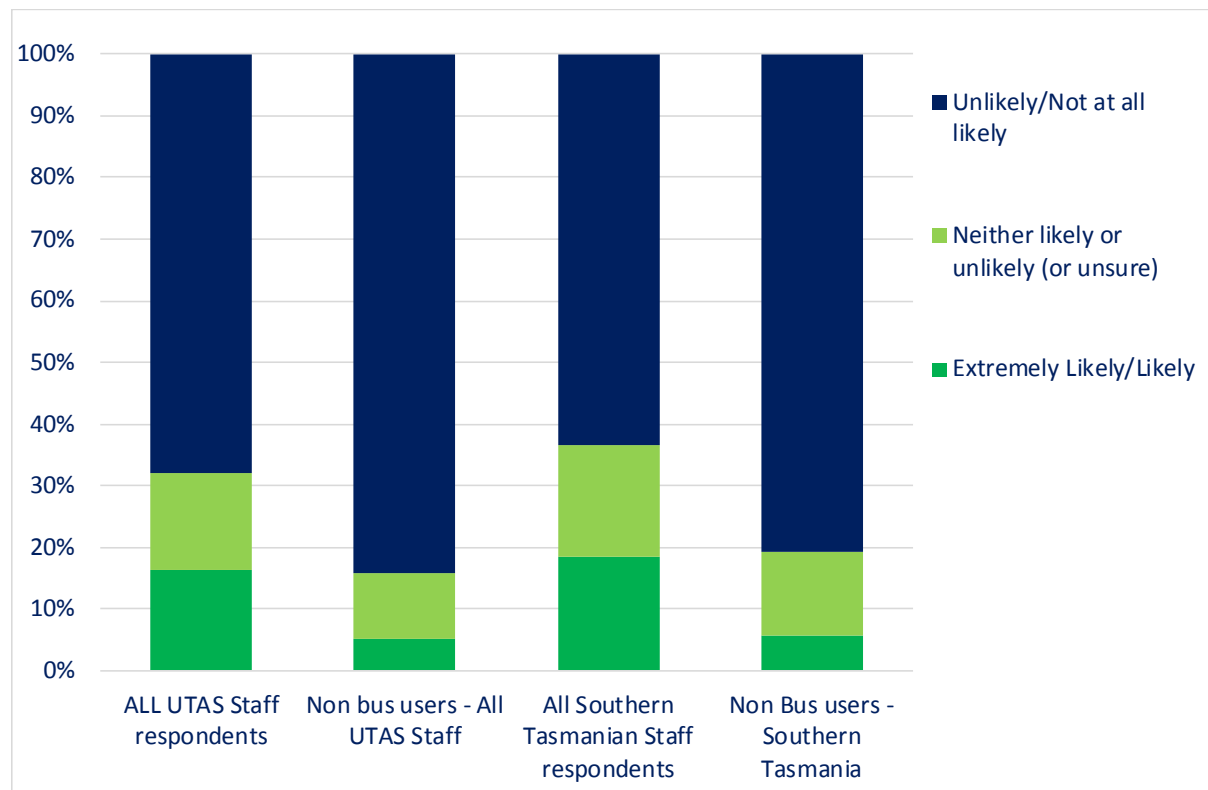


Figure 3.28: How likely would you be to take up an offer to salary-sacrifice annual bus fare expenses for the journey to and from work at UTAS?

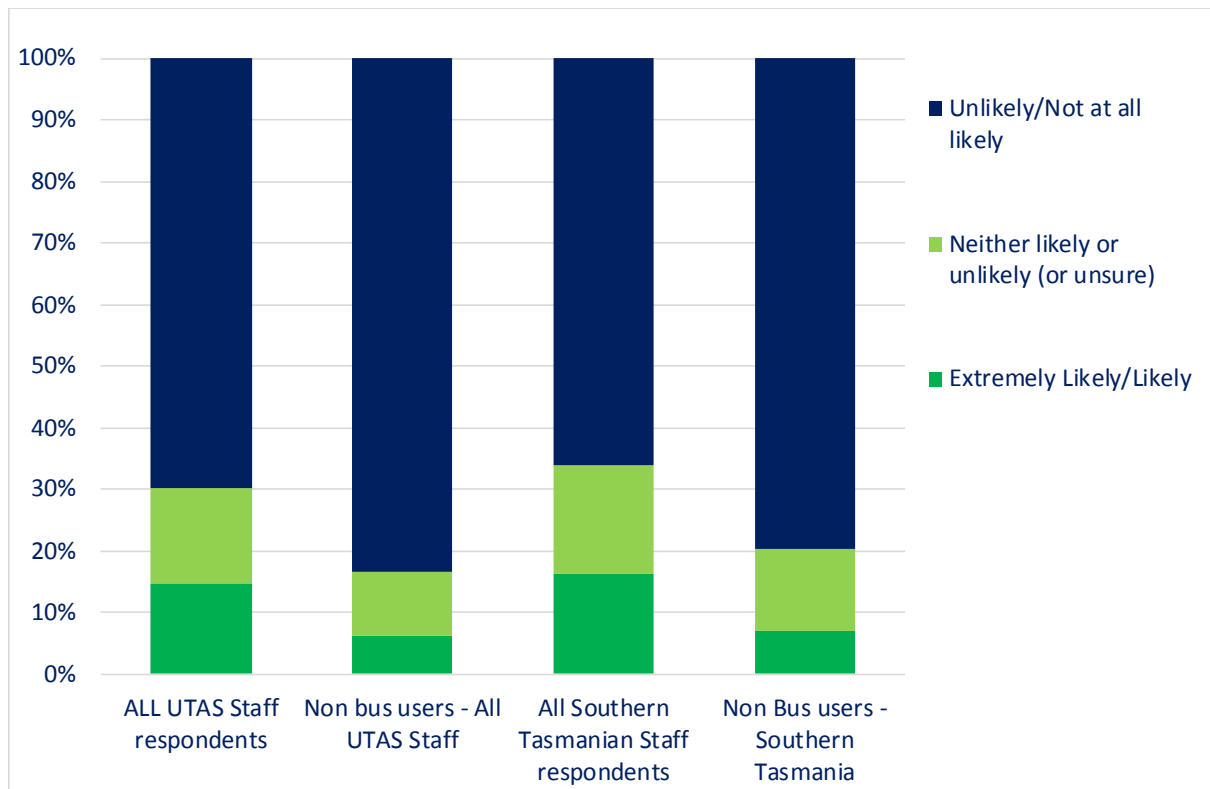


Figure 3.29: What is the likelihood of you using the bus more to get to or from work at UTAS if you were able to salary sacrifice the annual cost of your bus fares?

### Bus service challenges

While we have seen an increase in bus use for students and staff over time, and the introduction of through bus services to the Sandy Bay campus in recent years (the 501 from Glenorchy and 601 from Howrah), there remains significant variation in bus service level across the Greater Hobart region. The survey included a question about the use of bus services that did not require a transfer in the city to get to Sandy Bay campus.<sup>17</sup> From this, and the residential postcode and suburb of origin, we are able to identify areas of lowest public transport access, as well as those areas benefiting most from direct bus services.

Overall the survey tells us that 70% of student bus users took one bus. While this may mean that some are mixing modes (such as travelling as a car passenger to access a direct bus route), the share suggests a good level of access overall. Inner suburbs and middle suburbs near high frequency corridors tend to have the best levels of direct service to the Sandy Bay campus. Outer suburbs to the north, east and south, and middle suburbs away from high frequency corridors, frequently require transfer in the city and at least two buses to access the Sandy Bay campus. From Table 3.4 we can see that the southern suburbs (Kingborough area specifically) have a particularly higher proportion of students needing to catch more than one bus to the Sandy Bay campus (76%), as does the outer northern suburbs postcode, 7011.

<sup>17</sup> If you travelled on a Metro Tasmania bus to the Sandy Bay Campus last week and travelled through the city, did you use a bus service that did not require a bus transfer in the city (e.g., routes 501, 601)?

While some middle northern suburbs have good levels of access to direct services, such as New Town, neighbouring Lenah Valley does not – here all student bus users reported needing to change buses in the city.

*Table 3.4: Student bus users needing to transfer buses*

Urban region	Postcode of residential origin	Student bus users needing to transfer every time	Student bus users needing to transfer every time as percentage of total bus users
North	7008 (New Town, Lenah Valley)	32 (Lenah Valley 14)	53% (Lenah Valley 100%)
	7010 (Rosetta, Montrose, Glenorchy, Goodwood)	6	28%
	7011 (Chigwell, Claremont, Berriedale)	7	78%
South	7050, 7052, 7054, 7055 (Kingborough - Kingston, Kingston Beach, Blackman's Bay, Huntingfield, Howden, Margate, Electrona)	22	76%
Fringe - North and East	7130, 7170-7173, 7019 (Brighton, Bridgewater, Rokeby, Acton Pk, Cambridge, Midway Pt, Sorell, Dodges Ferry)	7	44%
	<b>All 'bus' students attending Sandy Bay</b>	<b>100</b>	<b>30%</b>

Table 3.5 shows the availability of direct bus services to Sandy Bay and the likely number of buses required from various Hobart suburbs. It demonstrates where there is a need to focus attention on either bus service improvement in areas where multiple buses might be required or bus route access, potentially through park-and-ride facilitating access to higher frequency corridors and most direct services.

It is anticipated that with a shift of main campus activity from Sandy Bay to the Hobart CBD over the next decade that the issue of through servicing will become less of an issue while improved services in service-deficient suburbs will need to be the focus.

Table 3.5: Direct bus services to Sandy Bay and the need for multiple buses by suburb

Suburb of Student Origin – Greater Hobart Region	Direct Bus to Sandy Bay option available (limited by location and time)	Number of buses required		
		1 or 2	2	2 or 3
<b>Metro Fringe (25km+)</b>				
Brighton				✓
Dodges Ferry			✓	
<b>Outer (15 – 25km)</b>				
Austins Ferry			✓	
Chigwell				✓
Rosetta			✓	
Old Beach			✓	
Margate			✓	
Howrah	601	✓		
<b>Middle (5-15 km)</b>				
Glenorchy	501	✓		
Goodwood	501	✓		
New Town	501	✓		
Blackmans Bay			✓	
Kingston	429 (via Taroonna)	✓		
Lindisfarne				✓
Lenah Valley			✓	
<b>Inner (5km or less)</b>				
West Hobart	401/501/601	✓		
South Hobart (2-7km)	401/501/601	✓		

This question was asked of student and staff bus users attending Sandy Bay campus specifically. For students attending campuses in the north similar issues are likely, particularly access to Launceston’s Newnham campus from outer growth suburbs. In Launceston we have seen growth in bus use largely attributed to the introduction of the high frequency Metro Tasmania Turn-up-and-Go bus service between Launceston city and Newnham campus. This service was established with support from the University and State Government and is also improving bus access and service quality for the wider community who live along its route.

### 3.5 Bicycle use

The University seeks to encourage cycling. This is a relatively inexpensive and healthy way to get around, particularly when the journey is considered a little too far to walk. Travelling to work or study by bicycle appeals to some more than others, with personal factors (health and enjoyment related) identified as significant motivators for urban cycling. Factors constraining cycling are largely reported in the literature as environmental concerns related to traffic conditions, motorist aggression and safety, with women reporting more constraints than

men<sup>18</sup>. In Tasmania, hilly topography and seasonal change (i.e. cold or wet weather, dark evenings) are often referred to as limiting cycling take-up. Literature on shifting behaviours also points to other social, personal and external constraints (such as the influence of social norms, personal habits and time constraints, and cycling competency and confidence issues) that are perhaps not commonly considered in the development of strategies to grow cycling<sup>19</sup>.

In the TBS, we measure bicycle mode share for the journey to work or study and also ask how cyclists are using university bicycle infrastructure and information.

### *Change over time and gender*

Change in the share of bicycle as the main mode for the journey to/from work or study is inconsistent across campuses and depends on whether you consider student or staff travel behaviours. Figures 3.30 and 3.31 show that there is a greater fluctuation in cycling mode share for staff than students, and generally higher mode share rates for staff than students. Overall there has been little change since 2013 in bicycle mode share despite the upswing for Hobart CBD students between 2013 and 2017 (Figure 3.30) and all staff over the same period due to a significant drop in the North and at Sandy Bay (Figure 3.31). The limited change in bicycle mode share over time most likely points to the limits imposed by urban cycling infrastructure and cycling road safety conditions.

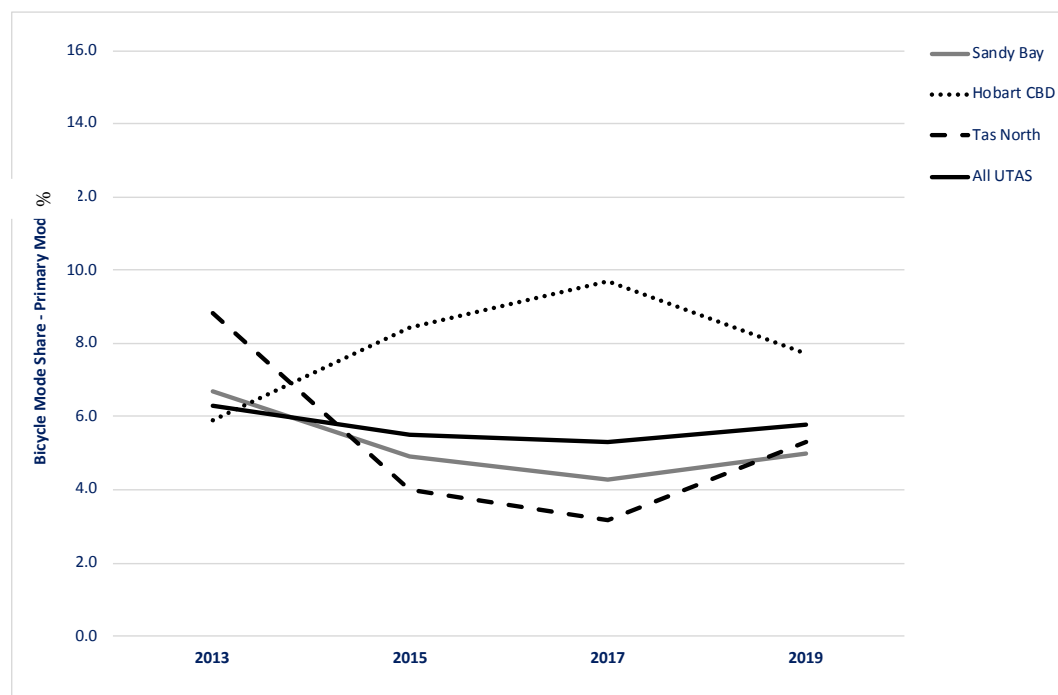


Figure 3.30: Bicycle as main mode (%) – students – change over time

<sup>18</sup> For example, see Heesch, K.C., Sahlqvist, S., Garrard, J. 2012. Gender differences in recreational and transport cycling. *Intl. J. of Behavioral Nutrition & Physical Activity*, 9(106). DOI: 10.1186/1479-5868-9-106.

<sup>19</sup> For example, see Shove, E. 2010. Beyond the ABC: Climate Change Policy and Theories of Social Change. *Environment and Planning A*, 42(6): 1273-1285.

Cupples, J., Ridley, E. 2008. Towards a Heterogeneous Environmental Responsibility: Sustainability and Cycling Fundamentalism. *Area* 40(2): 254-264.

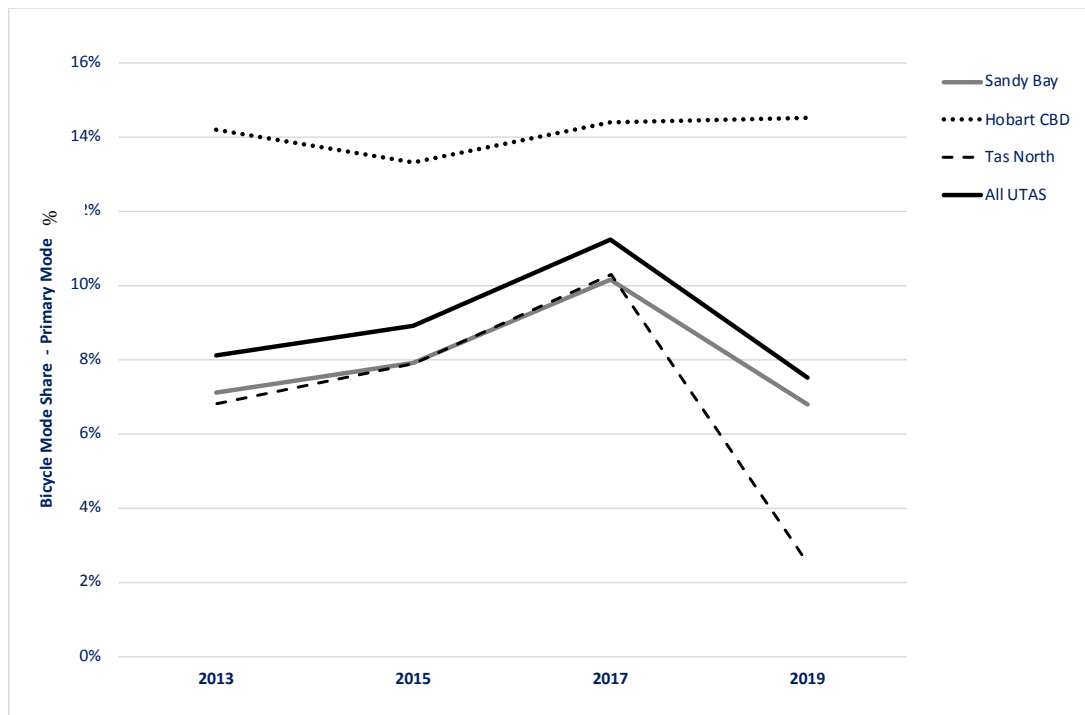


Figure 3.31: Bicycle as main mode – staff – change over time

An interesting feature of bicycle mode share change revolves around the gender breakdown of cyclists. Table 3.6 depicts the proportions and ratios schematically of male to female cyclists over the period 2015-2019 for the University's largest campuses and overall. In the 2015 TBS report, we discussed the male gender bias in cycling nationally and how this was also evident across the university community<sup>20</sup>. The 2015 TBS showed that university female staff and students cycled less than male staff and students, with the male to female cycle ratio across the University being 3:1 in 2015<sup>21</sup>. Having normalised the 2015 and 2017 data to account for gender bias in survey participation, we find that the male to female ratio is now much less stark across all major campuses and campus groupings<sup>22</sup>. Overall, in 2019 the University has a male to female cycling ratio of three to two (or 1.5 male riders for every female ride).

<sup>20</sup> Lyth, A., Archer, A., & Peterson, C. 2015. University of Tasmania Travel Behaviour Survey: Summary of findings, University of Tasmania, Hobart.

<sup>21</sup> In Queensland, Heesch et al. found that only 24% of transport cyclists are women, while in Sydney only 17% of bicycle commuting trips are made by women (a male to female ratio of nearly 6:1) with the ratio in Melbourne 4:1 (Heesch, K.C., Sahlqvist, S., Garrard, J. 2012. Gender differences in recreational and transport cycling. *Intl. J. of Behavioral Nutrition & Physical Activity*, 9(106). DOI: 10.1186/1479-5868-9-106).

<sup>22</sup> 2015 and 2017 data has been standardised according to the university population and to adjust for the female gender bias in survey response.

Table 3.6: Proportions and ratios of male to female bicycle riders 2015, 2017, 2019

Note: Male to female ratios have been rounded

Primary location of work/study	2015 Male:Female	2017 Male:Female	2019 Male:Female
Sandy Bay	2:1	2:1	2:1
Hobart CBD	4:1	1:1	1:1
Northern campuses	10:1	2:1	1:1
All UTAS	3:1	2:1	3:2

### *Use of bicycle infrastructure*

The TBS asked participants to give feedback on the bicycle infrastructure and information they used if they had ridden a bicycle to the University on any day in the previous week and asked whether anyone had ridden an electric bicycle or scooter.<sup>23</sup>

The University of Tasmania policy to embed environmentally sustainable design elements in all capital works projects includes a commitment to Green Building Council of Australia's Green Star ratings for major projects. With this commitment, all new facilities or major refurbishments since 2011 have included significant provision for cyclists and other active transport users. End-of-trip (EoT) facilities include secure bike parking, electric bike (e-bike) charging stations, maintenance station, water stations, showers and lockers.

Figure 3.32 outlines the facilities and information both student and staff bicycle riders reported using the week prior, ranging from different types of storage to maintenance and information.<sup>24</sup> The Hobart CBD shows the highest levels of usage of secured or covered storage, reflecting the high-quality infrastructure installed at several facilities there. There is little storing of bicycles in workspaces/offices in Hobart CBD facilities, whereas this is still done at northern campuses and Sandy Bay. Water stations, showers, and repair facilities were moderately used and highest in locations where such facilities were more prevalent or of higher quality.

The survey did not seek feedback on opinions surrounding the quality of this infrastructure and information, although ad hoc user opinion surveys are undertaken from time to time.

<sup>23</sup> Electric scooters are plug-in electric vehicles with two or three wheels powered by electricity. Electric scooters (as distinct from motorcycles) have a step-through frame.

<sup>24</sup> The Decide Your Ride videos are a series of online cycling videos for those interested but unsure about cycling to and between Sandy Bay and Hobart CBD campuses, and Newnham and Inveresk campuses in Launceston. The videos and commentary show safe and 'bikeable' introductory routes. Decide Your Ride is not just about route selection; it's also about route riding, including taking advantage of footpaths, passing parked cars and dealing with intersections – a virtual buddy system.



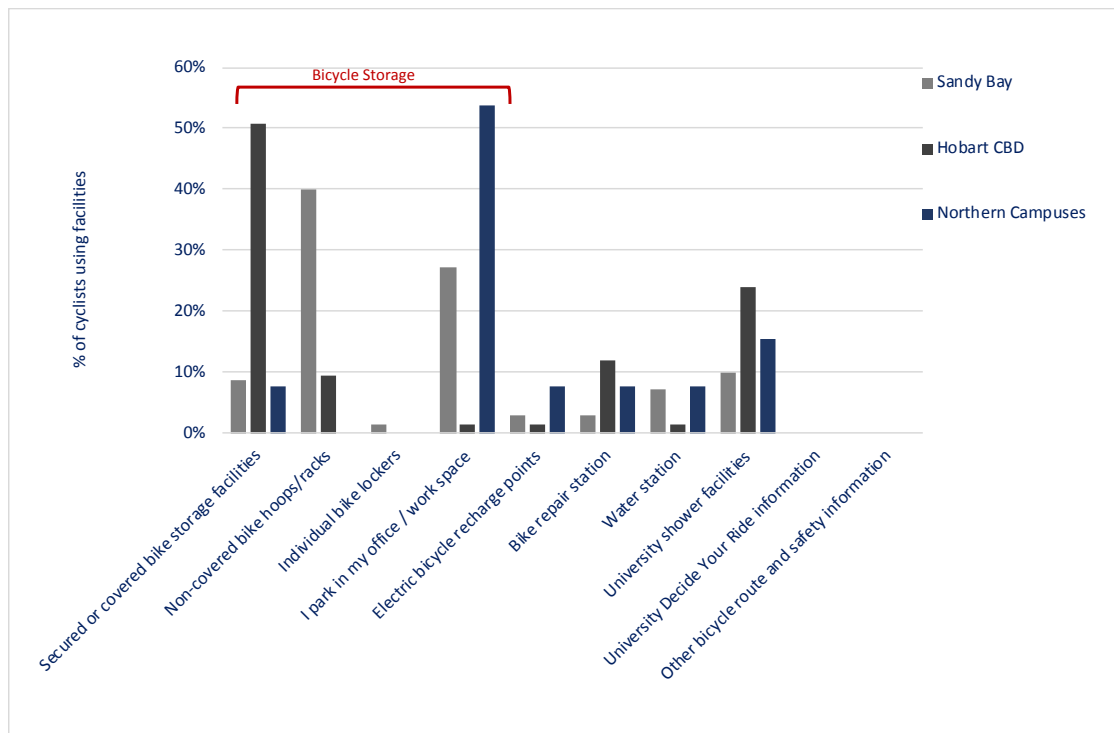


Figure 3.32: University facilities or information used by bicycle riders (staff and students)

### Electric bicycles

While the share of e-bike users reported in the 2017 TBS dropped to 9% from 10% in 2015<sup>25</sup>, the 2019 TBS observes an increase in e-bike use, with the share of e-bikers now at 12% (students and staff combined). The figure for staff e-bikers is highest at 17% of all staff cyclists.

The potential to grow the electric vehicle market, including e-bike use, is anticipated to be significant in the next 5-10 years as electric vehicles become more prominent and economically viable<sup>26</sup>. Australian trials of e-bikes show that once on an e-bike, most people like them<sup>27</sup>. Further, electric vehicle stakeholders have recommended financial incentives for take-up in the Australian market and measures to encourage the supply of supporting infrastructure (such as charging facilities and dedicated parking).<sup>28</sup> The University has become an early Tasmanian adopter of electric vehicle fleet conversion and charging infrastructure for electric cars and e-bikes and has even included motorcycle charging points at the newest accommodation facilities. Further attention thereby points to other stakeholders to help grow this initiative, including the improvement of bicycle route connectivity and safety, and system-wide e-vehicle infrastructure in a State that enjoys the benefit of renewable energy supply.

<sup>25</sup> The decline is only marginal at 1.3% and due to the survey margins of error may not reflect much of a change overall.

<sup>26</sup> ClimateWorks Australia, 2017. The State of Electric Vehicles in Australia. Report prepared on behalf of the Electric Vehicle Council. <https://climeworks.com.au/publications> (accessed 22 July 2017)

<sup>27</sup> Bowen, N. 18 April 2017. The rise of electric bikes: Bridging the gap for commuters, Royal Automobile Club of WA (RAC). [https://rac.com.au/car-motoring/info/future\\_the-rise-of-electric-bikes](https://rac.com.au/car-motoring/info/future_the-rise-of-electric-bikes) (accessed 22 July 2017)

<sup>28</sup> Climate Works Australia, 2016. The path forward to electric vehicles in Australia: Stakeholder recommendations.

### 3.6 International and local students

With the notable increase in on-the-ground international student enrolments, UTAS has a duty to ensure students are accommodated appropriately and can get to and from classes efficiently and without significant cost to themselves or the community. International students have varied backgrounds with different transport experiences and expectations. Many have experienced high-quality public transport systems back home or different bicycle use cultures and are challenged in shifting to a largely car-based transport culture.<sup>29</sup>

#### Mode share differences

As an indicator of difference, we compared international and Tasmanian students attending Sandy Bay and the Hobart CBD. For international students mostly attending Sandy Bay campus, 74% were living in Sandy Bay (postcode 7005) or surrounding suburbs (7007, 7004, 7000, 7053) compared to 34% of Tasmanian students. These suburbs are largely accessible by walking, cycling, or bus. For international students attending the Hobart CBD, some 88% lived in Hobart (7000) or neighbouring suburbs to the south and north (7004, 7005, 7008) compared to some 46% of Tasmanian students. For international students in the south some 26% live in UTAS student residences (a higher share for those attending Hobart CBD facilities) compared to 7% of Tasmanian students. In the north the share of international students living in UTAS student accommodation is 50% compared to 8% for Tasmanian students.

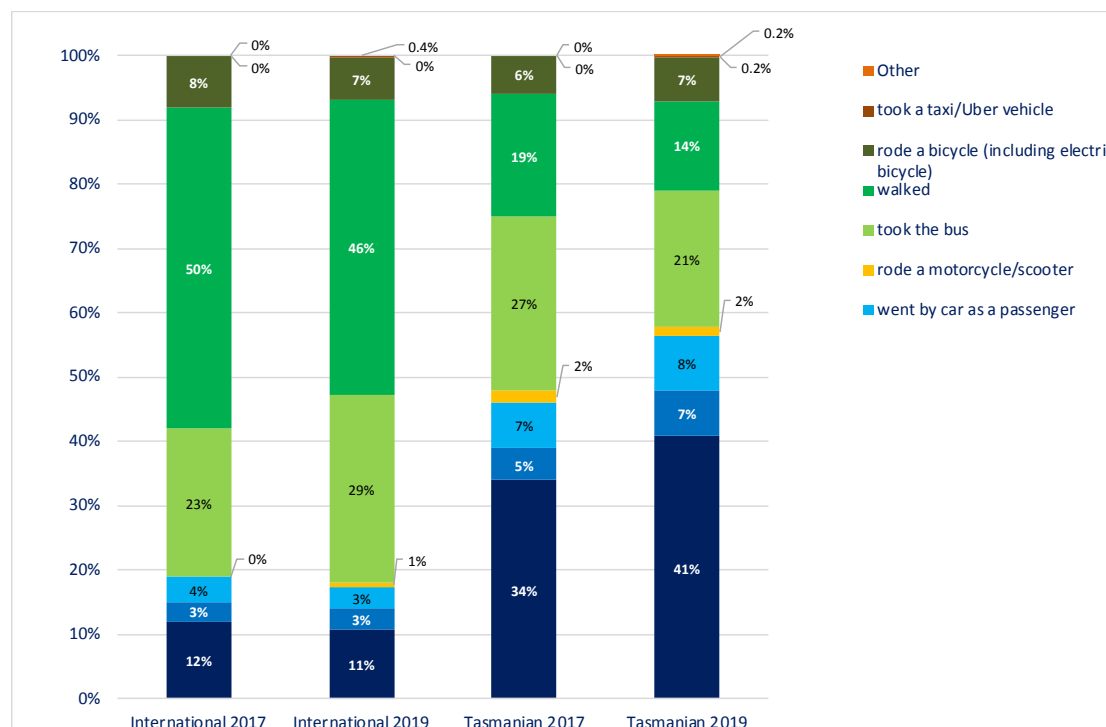


Figure 3.33: Main mode of transport to UTAS – comparing international and Tasmanian students

<sup>29</sup> Yelan Yang, 2017. *Understanding transport experiences and expectations of Chinese students in Hobart*. Thesis submitted in partial fulfilment of the requirements for Masters of Planning, School of Land & Food (Geography), University of Tasmania.

As shown in Figure 3.33, Tasmanian students are more likely to travel by car than international students (some 41% of Tasmanian students as sole driver compared to 11% of international students). This is most likely influenced by a range of factors, including the much more dispersed residential locations of Tasmanian students across (and outside) Greater Hobart and Launceston relative to the more centralised residential locations of international students; and public transport service quality and journey time from outer urban areas. The Australian culture of car use and the option for some local students to use family vehicles are also likely other contributors. Figure 3.33 also shows that international student car use has remained low since 2017 with 82% of international students opting for sustainable modes in 2019 up a little from 2017 (53% opting for active modes and 29% taking the bus). For Tasmanian students, car use as sole driver increased by 7% since 2017 and sustainable modes are down by 10%.

#### *International students - car ownership and use*

In 2019 students were asked about whether they owned a car/motorcycle for their sole access or had regular access to a shared car. Almost a third of all UTAS international student respondents stated they either owned a car (or motorcycle) for their sole use or had regular access to a shared vehicle. The proportion was slightly lower for those attending Sandy Bay campus primarily and a little higher for those attending Launceston campuses. The most interesting finding, however, is the use of such vehicles. For those students based primarily at the Sandy Bay campus with regular access to a car, only 19% stated that they did not drive to the university at all in the week prior to the survey (meaning 81% drove to the university at least once in that week). This is very different to international students primarily attending Hobart CBD facilities. Here, of the 32% of students who owned a vehicle or had regular access to one, 75% did not use it to drive to the university at all in the prior week. In Launceston the share reported is 61%. The significant difference in car usage between Sandy Bay international students and Hobart CBD international students despite car ownership/access suggests that for Hobart CBD students, their vehicles are largely used for trips not associated with movements to and from the university, such as weekend activities. The observation also points to the more restrictive parking environment in the Hobart CBD compared to the Sandy Bay campus, which undoubtedly influences the degree of car usage in Hobart.

These observations point to the value of a car-share membership scheme for students that allows access to a vehicle for trips where alternative modes are unrealistic. Such a scheme would reduce the need for students to seek and purchase parking and avoid the cost of maintaining their own vehicle. The relatively low degree of car usage despite vehicle ownership or access in Launceston likely reflects the very high proportion of international students living on, or very close to, campus at Newnham or Inveresk.

Table 3.7: International student car ownership/access and use

Primary place of study	Own a car/motorcycle for sole use most of the time or share a car with regular access (% of international students)	I did not drive to or from the University at all last week (as a % of international students who own or have regular access to car)
	2019	2019
All UTAS international students	32.5%	39%
International students studying at Sandy Bay primarily	30%	19%
International students studying in Hobart CBD primarily	32%	75%
International students studying in Launceston (all campuses)	38%	61%

### 3.7 Parking

For those students and staff that drove to university campuses and facilities, we asked what type of parking they used in order to get a sense of:

- demand for parking at different campuses;
- the potential impact of parking in neighbourhoods surrounding university facilities; and
- the take-up of paid and non-paid parking options.

The proportion of parks by parking category are presented in Figures 3.35 and 3.36.

Figure 3.34 shows the number of parking events per week per car driver to each campus or location. For students, Cradle Coast and Hobart CBD have the fewest car parking events per week and Sandy Bay the most, although there is little variation. For staff, the Hobart CBD destination has the fewest parking events and Cradle Coast the most. Comparing the Hobart CBD with Sandy Bay, Sandy Bay has almost 50% more parking events per week.

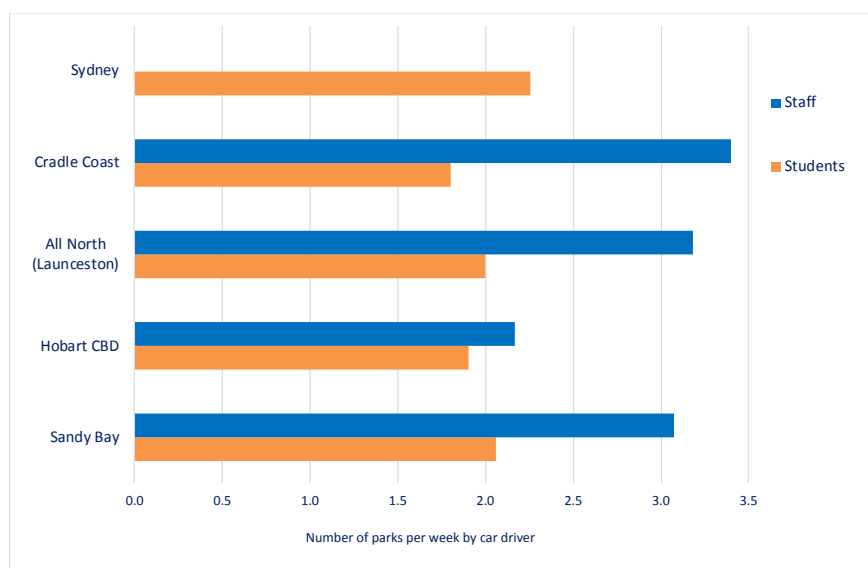


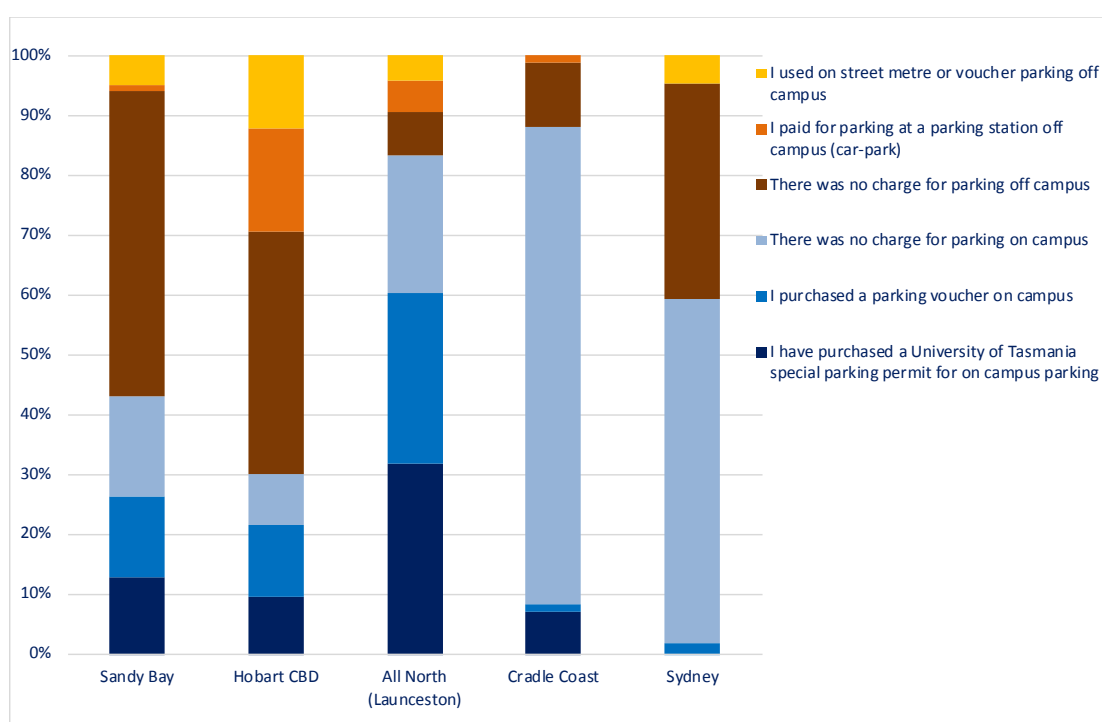
Figure 3.34: Number of parks per week by car driver

### Student parking

For students attending the Sandy Bay campus primarily, some 566 students reported parking their vehicle at some point Monday-Sunday. Some 26% of the vehicles parked by students attending Sandy Bay in 2019 were on-campus with purchased permits or vouchers, a reduction from 31% in 2017. Some 51% of student vehicles were reported as being parked off-campus at no charge in surrounding streets in 2019 compare to 43% in 2017. Some 17% of student vehicles were parked on-campus at no charge.<sup>30</sup>

For students attending the Hobart CBD primarily, some 272 students reported parking their vehicle at some point Monday-Sunday. Some 40% of students attending Hobart CBD facilities parked off-campus at no charge. This is a small increase from 2017 though the number of students attending UTAS in the Hobart CBD is higher in 2019. Such parking is likely on city fringe streets largely accessible by foot. Some 51% paid for parking in some way, this share being the same as 2017. Approximately 57% of paid parking was either obtained in a parking station or on-street parking meters, the remainder obtained on University parking premises.

At the northern campuses some 60% of students parked their vehicles on-campus with paid vouchers or permits in 2019, a reduction from 68% in 2017. Some 23% of students parked their vehicles on-campus at no charge, with just 7% off-campus at no charge in 2019. At Cradle Coast, the vast majority parked at no charge (91%). Some 80% parked on-campus at no charge and 11% off-campus at no charge. In Sydney (Rozelle and Darlinghurst) almost all students reported not paying for parking (93%), with the majority of these being on-campus.



<sup>30</sup> Sandy Bay Grace Street carpark provides free car parking for students with a permit to search for a park there.

Figure 3.35: Students – % of cars parked by category Mon-Sun

### Staff parking

More than half of staff who reported parking Monday-Sunday parked to attend the Sandy Bay campus (60% of all staff reported parking). Some 71% of Sandy Bay staff parking involved the use of purchased parking permits or a paid parking voucher. This proportion is down a little from 2017. Some 24% of parking was reported as being off-campus at no charge in 2019 - this is up from 19% in 2017.

Staff parking vehicles in the Hobart CBD accounted for 12% of total university staff parking reported Monday-Sunday. Of these, 39% were on-campus (or UTAS dedicated city parking) paid parking permit or voucher parks in 2019 – down from 2017. Another 27% of staff drivers obtained parking in CBD parking stations or on-street meters. Some 30% parked off-campus at no charge in 2019 – similar to 2017.

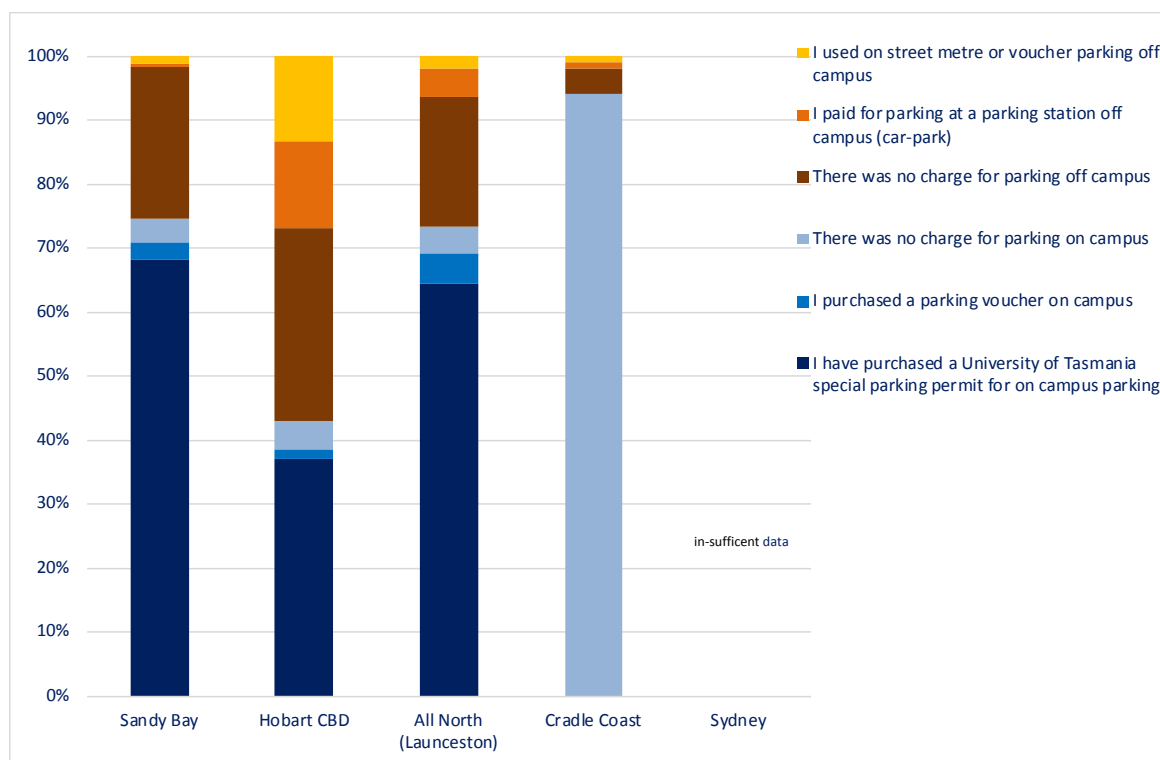


Figure 3.36: Staff – % of cars parked by category Mon-Sun

## 4 TRACKING PROGRESS

The University community has a mixed outcome over time in terms of demonstrating more sustainable travel behaviours. Figures 4.1 to 4.4 show the change between 2013 and 2019 for students and staff in all regions and larger campuses or campus groupings according to key performance indicators - 'main mode to university' and 'active modes'. Overall the story is positive especially for students although for staff there is some variability between campuses and regions.

### 4.1 Students

For students, the largest population group, the picture is positive with a consistent decline in the proportion of student drivers of single occupant vehicles. All regions and larger campuses have noticeably grown the proportion of students using sustainable modes, though it is the increase in public transport use that is the most striking change over time (Figure 4.1).

The most obvious and consistent improvement has been the increase in public transport use (bus only in Tasmania and bus/train/light rail in Sydney) within the sustainable mode category, with changes in the walk and bicycle mode more variable depending on the campus or region. In addition to provision of bus stop shelters, improvements to Metro Tasmania bus services to University campuses in both Launceston and Hobart (especially through services which avoid bus changes in the Hobart CBD and service frequency) continue to impact on student bus patronage levels.

Where there has been a decline in walking as the main mode for students, such as at the Sandy Bay and Newnham campuses, this has been offset by a marked increase in bus use. Since bus use usually involves walking either end, walking activity associated with this is hidden, as it is with those drivers parking vehicles some distance from a campus (Figure 4.1). Between 2013 and 2019 the only campus increasing the share of students primarily undertaking active modes to get to university were those attending city facilities – Hobart CBD and Inveresk (Figure 4.2). This reflects the growing proportion of students living in and around these locations, facilitating the option to walk, run or cycle.

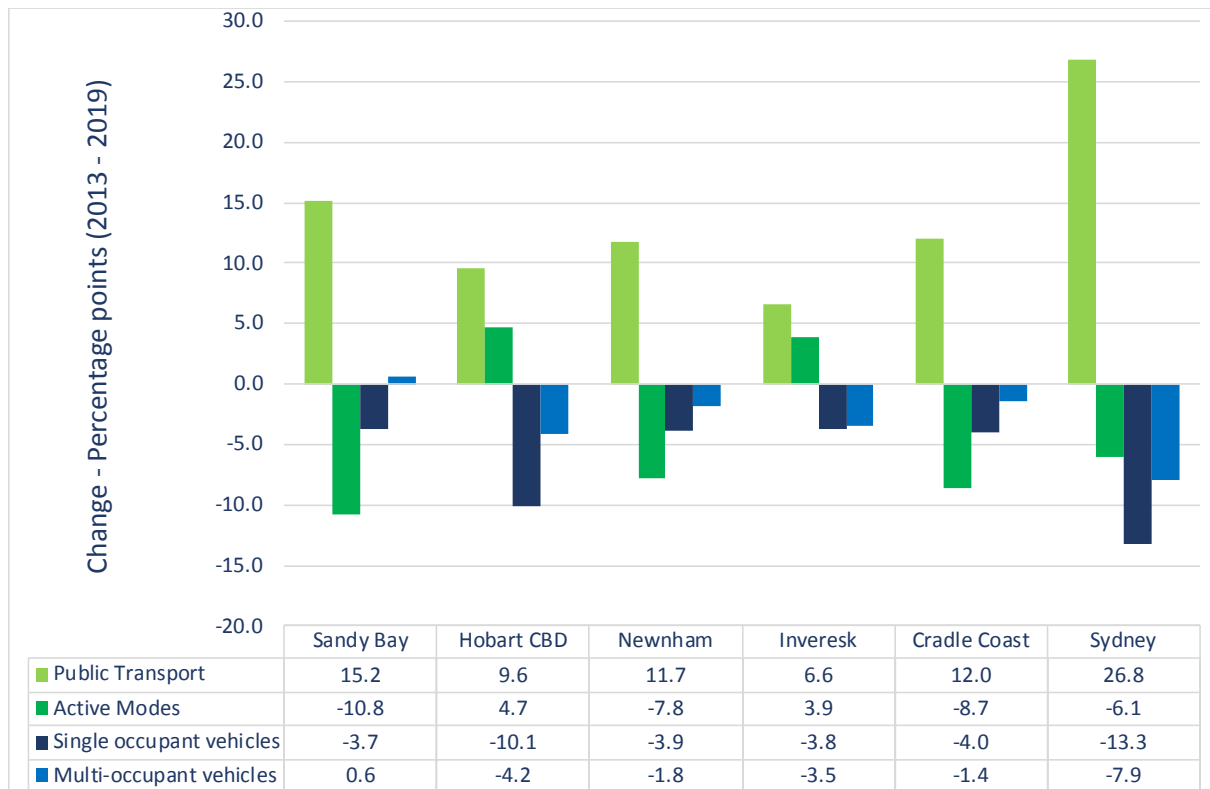


Figure 4.1: Student mode change over time by campus location – main mode to UTAS

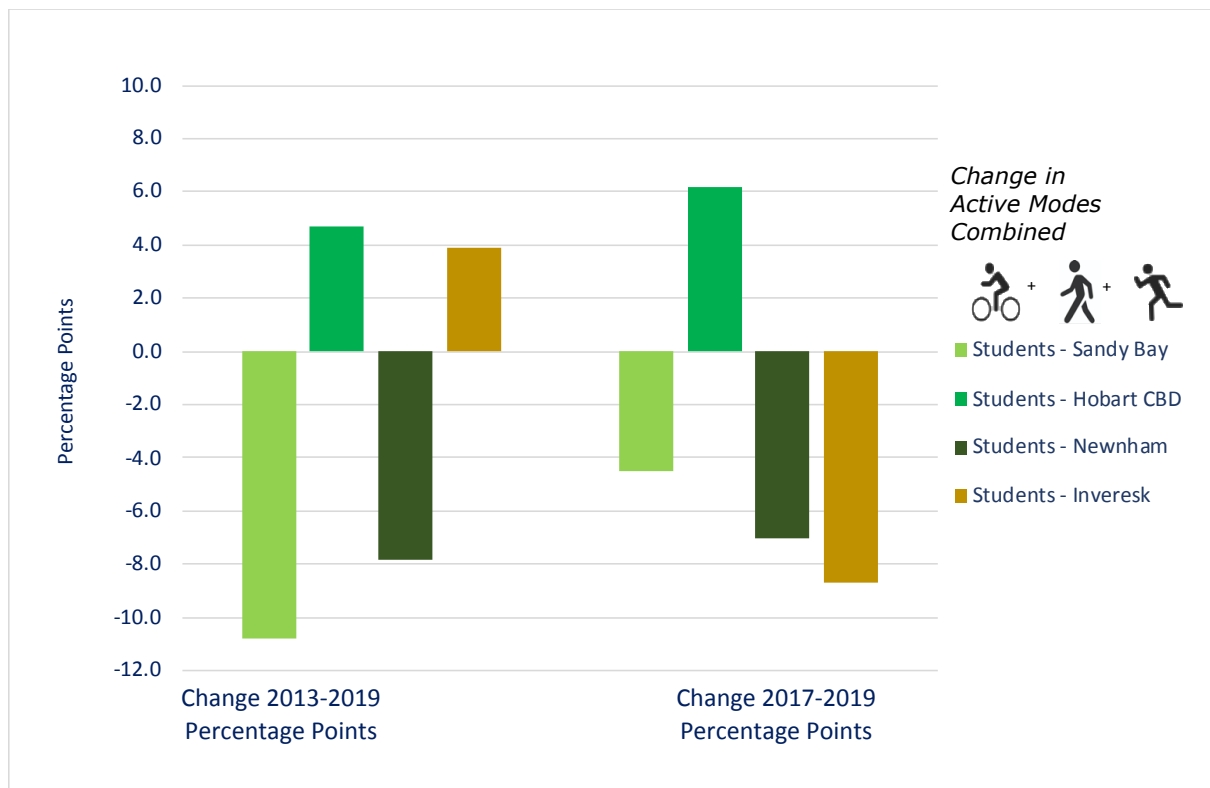


Figure 4.2: Student active mode change by major campus 2013-2019 and 2017-2019



## 4.2 Staff

For staff there is evidence of a small shift to sustainable modes away from single occupant vehicle drivers across the whole University. The shift is largely attributable to an increase in bus use, though this is from a low base. There is also evidence of a small shift to car-pooling, where staff are arriving as a car passenger or as a driver with multiple occupants. This is largely informal car-pooling.

At Newnham, and to a much lesser degree Sandy Bay, we see a reduction in active modes for the period 2013-2019 despite an increase in bus use (Figure 4.3). This suggests that some walk or cycle journeys are being replaced by bus journeys, though for Newnham there has also been an increase in vehicle use since 2017, reversing some of the gains made between 2013-2017.

For staff attending Hobart CBD facilities we see an increase in active modes, the only notable increase for major campuses where we have good sample sizes (Figure 4.4). While there are many staff living near to the Hobart CBD, enabling the option to walk or cycle, some of these active mode journeys to work are also multi-mode journeys where a staff member drives and parks on the city fringe (or further afield) and then walks more than 10 minutes.

A final overarching observation for staff is the increase we have seen in staff business land trips, though there has been a reduction in inter-campus movements. This increase suggests that staff are undertaking more external activities requiring local transport decisions. While a growing number of such trips are by active modes, there appears to be a need to facilitate efficient, sustainable and healthy work practices and movements.

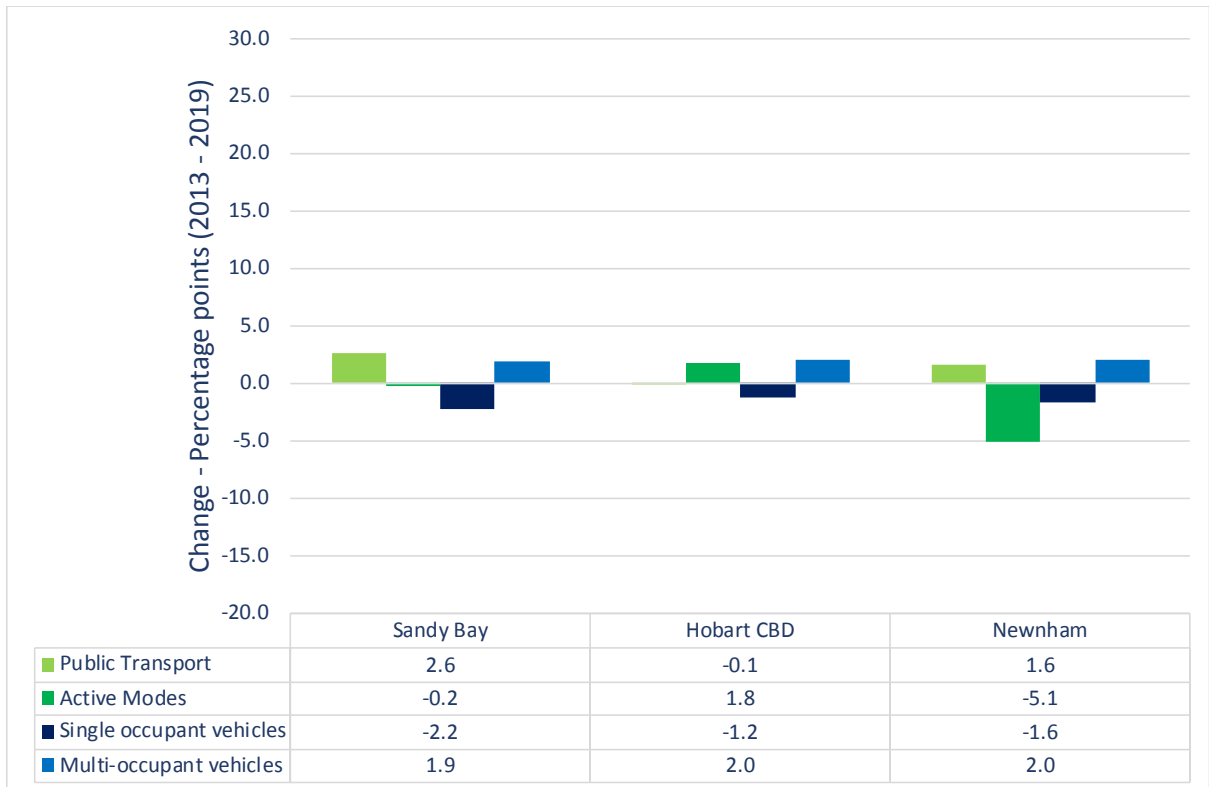


Figure 4.3: Staff mode change over time by campus location – main mode to UTAS

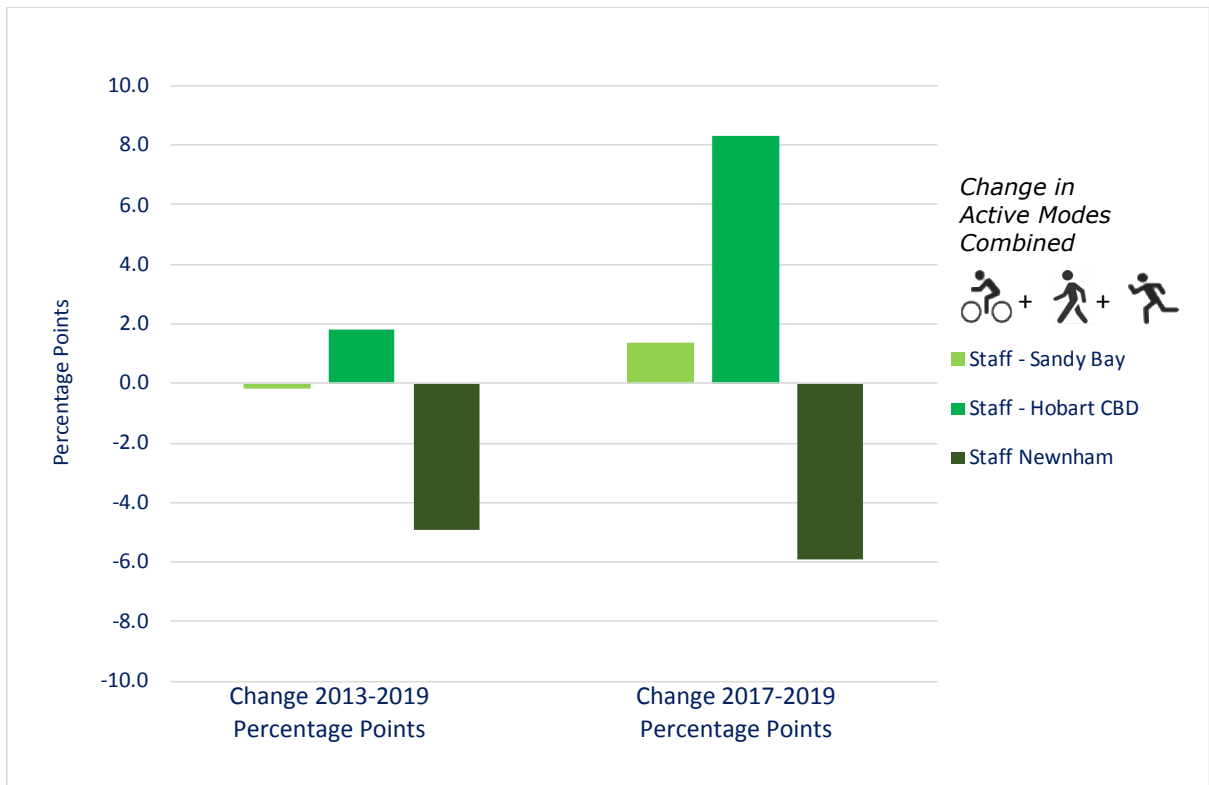


Figure 4.4: Staff active mode change by major campus 2013-2019 and 2017-2017




## 5 OPPORTUNITIES AND CHALLENGES





As a reminder, the UTAS Sustainable Transport Strategy 2017-2021 has these objectives:

1. Maximise and promote access to the University by sustainable, healthy and safe means
  - University access and equity improvement
  - Health, safety and wellbeing enhancement
  - Increase in no or low carbon transport modes
  - Community co-benefits and collaboration
2. Increase sustainable transport mode choice and reduce incidence of unnecessary travel
  - Increase in no or low carbon modes
  - Travel demand reduction
  - Single occupant vehicle parking demand reduction
  - Community co-benefits and collaboration
3. Reduce greenhouse gas emissions from university transport sources and work towards transport carbon neutrality
  - Increase in no or low carbon modes
  - A carbon neutral university fleet
  - Reduce university vehicle fleet costs
  - Community co-benefits and collaboration
4. Demonstrate leadership in sustainable transport practice
  - Community co-benefits and collaboration
  - Collect and share transport data and knowledge
  - Support innovative practices and processes
  - Integrated operations and academic programs

The current strategy is the second five-year sustainable transport strategy focused on supporting modal shift through improved infrastructure and services within UTAS' control or direct influence through stakeholder partnerships to also influence broader community changes, such as safer active transport connections between UTAS facilities. TBS results validate these efforts with successful modal shift evident and enable fine grain assessments of the impact of specific initiatives and interventions to support such modal shifts.

The following schematic summarises key observations from the survey and trends over time for transport modes of most significance and suggests key opportunities for further action. To address the above strategy objectives, the focus has basically been to increase bus use and active mode choices and reduce the share of students and staff driving as sole occupants.

<b>Main Observations</b>	 <ul style="list-style-type: none"> <li>▪ The shift to public transport is the most positive and striking change across all regions</li> <li>▪ Most significant shift is among students with a marginal shift by staff</li> <li>▪ Bus service improvements in Hobart and Launceston have contributed to the shift: <ul style="list-style-type: none"> <li>– Direct and higher frequency routes to Sandy Bay</li> <li>– Launceston 'Turn-up-and-go' higher frequency service</li> </ul> </li> </ul>	 <ul style="list-style-type: none"> <li>▪ Walking as main mode varies according to UTAS destination and residential origins</li> <li>▪ City locations (Hobart CBD and Inveresk) have highest share of walkers with share increasing over time</li> <li>▪ Bus use increase has sometimes been at the expense of walking, though walking still occurs in a bus journey</li> <li>▪ Increase in inter-campus intra-city walking</li> </ul>	 <ul style="list-style-type: none"> <li>▪ Relative consistency in cycling for journeys to UTAS – largely stagnant over time though some campus-specific fluctuations</li> <li>▪ Inconsistent ridership across campuses - Hobart CBD facilities (MSP and IMAS-S) have highest share of cyclists and best end-of trip facilities</li> <li>▪ Increase in inter-campus intra-city cycling</li> <li>▪ More UTAS women cycling</li> <li>▪ E-bikers on the increase</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>▪ Extend direct services in highest demand corridors - outer north, south, east</li> <li>▪ Improve access to direct and high frequency routes (park and ride, local pedestrian access)</li> <li>▪ Introduce incentives for bus use (reduce relative cost of bus, provide real-time information)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Continue to support students living locally (reduces student transport costs and traffic and parking pressure)</li> <li>▪ Continue improvements in Launceston and Hobart to local pedestrian access – grow city pedestrian zones</li> <li>▪ Improve pedestrian access to direct and high frequency bus corridors in suburbs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Attention to end-of-trip and on campus infrastructure is not sufficient to promote wider take up though is essential to support/maintain cyclists</li> <li>▪ Attention needed to wider community infrastructure – connected, direct and safe route network</li> <li>▪ Potential for e-bike schemes or supporting infrastructure for intra-city movements</li> </ul>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Main Observations</b></p>	<div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>▪ Steady reduction in SOV use for main mode overall - most significant change in Hobart CBD and Sydney</li> <li>▪ Overall staff SOV use has reduced but only marginally</li> <li>▪ Staff SOV use has increased in Launceston since 2017</li> <li>▪ Initial shift of students away from cars to bus but momentum slowed</li> <li>▪ Tasmanian students drive much more than international students (residential origin influence)</li> <li>▪ One third of international students own or have access to a car but these are mostly used for non-UTAS trips</li> </ul>	<div style="text-align: center;">  </div> <p><b>What UTAS can do</b></p> <ul style="list-style-type: none"> <li>▪ Continue to implement the Sustainable Transport Strategy 2017-2021</li> <li>▪ Development plans and new builds – embed sustainability objectives early in planning and design processes</li> <li>▪ Targeted incentive and awareness programs – students and staff</li> <li>▪ Business and workplace policies and practices</li> </ul> <p><b>External to UTAS</b></p> <div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>▪ Integrated transport planning – particularly focused on public transport improvement and investment</li> <li>▪ Region-wide parking strategies</li> <li>▪ Grow connected, direct and safe cycle network (especially inner and middle suburbs)</li> </ul> <p><b>Collaboration is key</b></p> <div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>▪ Inter-agency</li> <li>▪ Working for community-wide benefits</li> <li>▪ Partnerships</li> </ul>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Opportunities</b></p>	<ul style="list-style-type: none"> <li>▪ Parking limitations in Hobart CBD and no supply of UTAS parking at some CBD facilities has led to behaviour adjustments (students and staff) – apply learnings in campus masterplanning for Hobart CBD and Inveresk campuses.</li> <li>▪ Parking challenge for future will be managing on-street parking on city fringes – requires a city-wide and regional parking strategy integrated with a public and active transport improvement strategy</li> <li>▪ Trial and support inner city car-share scheme (initially for students living in Hobart CBD) – potential to grow</li> </ul>	

## APPENDIX

### Question topics - the University of Tasmania Travel Behaviour Survey 2019 (Students and Staff)

- 1 Students and staff were asked which University of Tasmania campus they attended for work or study on each of the previous seven days (list of campuses was provided).
- 2 For each day of the previous week, students and staff were asked:
  - whether they travelled to/from home to work or study at a UTAS campus;
  - what their main mode of transport from home to work or study was (options included: drove a car as a sole occupant, drove a car with multiple occupants, went by car as a passenger, rode a motorcycle/scooter, took the bus, took the train or light rail (NSW participants only), walked, ran, rode a bicycle (including electric bicycle), took a taxi/Uber vehicle, took a water taxi/ferry, other (e.g. skateboard, hoverboard));
  - what time they arrived at their UTAS destination
  - what trip steps were made for the journey (by mode and approximate time).
- 3 For sole and multi-occupant car drivers and for each weekday (Monday-Friday), students and staff were asked whether they combined their trip to work or study with any other activities (such as picking up or dropping off family members, visiting shops, gym etc.).
- 4 For sole and multi-occupant car drivers, students and staff were asked how they paid for parking in the previous week.
- 5 For each of the previous weekdays (Monday-Friday), staff were asked whether they undertook travel for UTAS work purposes and if so, what trip steps were made for the journey (by campus or non-campus destinations, mode, and approximate trip distance).
- 6 Referring to the last year, staff were asked how frequently they had used the following types of ICT for work purposes (teleconference using conventional telephone, teleconference or videoconference using Skype for Business, UTAS video conference facilities, webinar, personal Skype or other similar, Facetime/Google Hangouts or similar on smart phone, other ICT).
- 7 Students and staff were asked whether they had a Metro Transport Greencard (Tasmania) or Opal Card (Sydney, NSW) for public transport use and whether they usually had credit on it.
- 8 Students and staff were asked how frequently they used a public transport website or app (such as the Metro Tasmania app or Opal Travel app) to help them plan their public transport travel, receive information about public transport or manage their travel card.
- 9 For students or staff that cycled to work/study in the previous week, they were asked:
  - what university facilities or information they had used/accessed (a list of facilities and information options were provided);
  - whether their bicycle or scooter was electric or electric assisted.
- 10 In 2019, students and staff were asked whether they had taken up/made use of any public transport incentive schemes offered over the past year. These include:

- Use of free Greencards (with and without credit on them)
- Free travel periods
- The Metro Tasmania 'Free before 7am' scheme offered in Hobart

**11** In 2019, students and staff who travelled on a Metro Tasmania bus to the Sandy Bay Campus last week and travelled through the city were asked whether they used a bus service that did not require a bus transfer in the city (e.g. routes 501, 601)

**12** In 2019, the staff survey asked a couple of opinion questions on possible salary sacrifice initiatives, specifically how likely they would take up an offer to:

- Salary sacrifice the cost of bus fares to and from work
- Salary sacrifice the cost of bicycle purchase (to a limit) for use to and from work

Staff were also asked how likely such initiatives would be to encourage them to use public transport or cycle more.

**13** Other information collected:

- Main campus of work or study
- Staff employment status (full-time, part-time, casual/short term contract)
- Student enrolment status (full-time, part-time, international, interstate or Tasmanian student)
- Student origin (Tasmania, inter-state, international)
- Residential postcode and suburb
- Student accommodation residence
- Gender