

## **Southern Future Business Case Report - Introduction**

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In 2019, as we looked to the future, the University needed to make a choice between our current distributed Hobart campus and consolidating in the city. From a range of expert advice, feedback from students and staff and broader community organisations, we knew our facilities did not meet contemporary standards around student experience, accessibility, and sustainability.

Staff were fragmented between Sandy Bay and the city. And we knew we needed a lot more than just renovations to bring our facilities up to standard. At the core of this decision was the need to secure the future of higher education for Tasmanians in a world of constrained funding. We needed to think innovatively about how to provide better access to education for all Tasmanians, how to give our students a better experience, how we should work together, and how we could do this affordably.

The 'Southern Future Business Case' concept was created to help the University make the strategic decision about its future, by considering a range of distinct quantitative and qualitative criteria. In 2019, the University Council weighed the criteria and evidence to determine that consolidating in the city was the best way to advance the University's mission, strategy and to meet its obligations to deliver high quality higher education and research for as many Tasmanians as possible.

Since this business case was prepared, the University has significantly evolved its strategy to self-fund the transformation of its southern campuses to provide critical teaching and research facilities in the heart of the CBD, including in relation to STEM facilities. This has included an extensive master planning process involving community consultation through multiple processes, with learnings from these processes continuing to inform future plans for how we can best provide modern purpose-built STEM facilities in southern Tasmania. It should be noted that the 'Southern Future Business Case' and associated documents was intended for University Council rather than as a public document. However, given the interest in the document from a range of parties, it is now being released in full, while recognising that many of the considerations have now been further developed.

University of Tasmania

# Southern Future

Business Case

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## Executive Summary

### Context

The University of Tasmania has a commitment and a social mission to deliver higher education to a greater number of Tasmanians. Infrastructure and facilities are vital to this mission as they are key to delivering world-class teaching, learning and research, and creating a desirable and competitive student and staff experience.

In recent times, the University has pursued state-of-the-art developments in the Hobart CBD, although its southern operations hub remains the Sandy Bay campus. City infrastructure projects totalling more than \$220 million have been completed, with further proposals to create a Science and Technology Precinct and additional student accommodation. In contrast, the majority of buildings at Sandy Bay have reached end-of-life, are rated poorly and are not competitive relative to institutions elsewhere.

With these factors in mind, the University has a decision to make: should it invest in its Sandy Bay campus to bring infrastructure up to modern standards, or should it move further into the CBD, creating a precinct of connected research, learning and living facilities?

This decision point represents an opportunity to forge a deliberate, long-term strategy for the development of the southern campus, aligned with our vision and supported by effective planning processes.

### Urgency

Business as usual is not an option – the state of key buildings and infrastructure is poor, carrying a current maintenance backlog of \$135 million. The results of a recent building condition audit have reinforced Project User Group meetings conducted in August 2017. Representatives from all colleges and faculties emphasised a lack of fit-for-purpose facilities, the impact of that on their ability to provide contemporary learning and teaching, and the poor standard of facilities for researchers.

Whatever broad strategic direction is adopted by the University to address these issues, significant investment is required to bring the facilities up to a contemporary and fit-for-purpose standard.

### The Current Situation

The University of Tasmania faces a challenge to manage ageing infrastructure at its Sandy Bay campus. Some buildings need significant refurbishment while others may need to be demolished and rebuilt entirely. The majority of Sandy Bay buildings are between 40 and 60 years old, meaning they are past or nearing their end-of-life in economic terms. This is supported by the results of the condition and functionality audit undertaken in 2017, which established an average overall building condition rating of fair-to-poor.

The majority of these buildings were built during a period of teaching and research practices that have been superseded and do not align with our current needs. The ways we teach and learn are changing rapidly and our facilities must be capable of adapting to accommodate these shifts. To date, the majority of Sandy Bay buildings have been unable to adequately meet the changing needs of students and staff.

The Building Condition Report, endorsed by Council in August 2018, concluded that in most cases it would be a more responsible economic approach to rebuild, rather than refurbish current buildings. Two broad strategic directions have been considered as a means of addressing these challenges: firstly, to continue the recent shift by the University to the city centre, or to rethink and redesign its operation at Sandy Bay.

## The Options

There are many benefits to retaining a Sandy Bay campus, with its connection to the water and surrounding bushland and recreational areas. However, the existing footprint is relatively large for its student and staff population and a majority of buildings and facilities are not configured for learning in the 21<sup>st</sup> century. To be sustainable longer-term, a future Sandy Bay campus would need to operate on a significantly reduced footprint, by increasing student and staff density, and dealing with current issues such as disability access and low utilisation rates of facilities. In this business case, we will refer to this as the **distributed campus model**.

A second option is to relocate the entire campus into the CBD, creating a single city campus made up of precincts across the Domain, the central city and waterfront. This would bring the University's facilities and services, which are currently disaggregated across Sandy Bay and the city, into one area and improve access from the high-population suburbs north and east of Hobart. The University's oval and sporting facilities would remain in Sandy Bay, along with specialist research and teaching spaces and some student accommodation. We will refer to this as the **city-centric campus model**.

Under either option, the opportunity exists for the University to act as a steward for the Sandy Bay location in the years ahead, managing the area to realise great value for both the institution and the broader community.

## Evaluating the Choices

Like the campuses of the Group of Eight (G8) universities, the University of Tasmania's Sandy Bay campus is located in a suburb that is positioned in the highest socio-economic index decile. This 'elite' status reinforces the negative stigma associated with higher education by those from socioeconomically disadvantaged backgrounds. This is a significant deterrent to potential participation in higher education by those experiencing disadvantage. Such groups are under-represented within universities due to a range of issues, which can be beyond the influence of tertiary institutions. For this university, a campus relocation has the potential to directly improve visibility and accessibility, and address the negative stigma associated with the current location.

On the other hand, many past and present students and staff have a strong connection to the Sandy Bay campus and value highly its role in the history of Tasmania's cultural, economic and social fabric, as well as its natural setting and proximity to river and bushland. This strong sense of connection and the many positives of the Sandy Bay setting should not be underestimated when deciding on the future of the University in southern Tasmania.

In order to assess the benefits and relative strengths of both options, a set of eight criteria was proposed. An engagement process was undertaken with the University staff, students and other stakeholders in an installation room, where the two options were presented, along with the eight criteria. [Appendix 1](#) provides the digital version of the posters presented in the installation room.

Feedback from the University community was gathered in a variety of ways, from immediate informal feedback to online submissions, direct email, and a series of focus groups involving staff and students. The criteria were generally seen as appropriate, with the following seen as the most important to be considered:

Criteria for Decision	Survey Respondent Feedback
Access for students through location	50% of staff rated as important and <u>75%</u> of students rate as important
Impact of development on staff, students and University operations	63% rated as important
Coherence of University community	63% rated as important
Sustainability of transport options	62% rated as important
Ease of collaboration and access to shared resources	55% rated as important
Ongoing financial sustainability	48% rated as important
Differentiated campus experience	42% rated as important
Connection with broader community	42% rated as important
All of the above ( <i>also included in criteria above</i> )	23% rated as important

Even taking into consideration that with the lowest levels of support (at 42% of respondents) it is clear that all of the criteria need to be understood and considered to determine the future of the southern campus. The feedback gained from the engagement process is summarised in Appendix 2.

### ***Differentiated Campus Experience***

The differentiated campus experience was a very strong point of feedback from the engagement process, whereby staff felt clearly that the beauty of the Sandy Bay views and green spaces and the mid-century buildings provided a very distinctive experience for students and staff. People value the ability to walk through much of the campus without the interruption of traffic and the ability to interact with colleagues in outdoor common spaces. Some feel that the natural environment of the campus and its segregated location provide it with an atmosphere that encourages study and research.

The use of good design to link the green space on the Domain and its historical buildings, combined with the Melville Street area and the waterfront, means that both the distributed and city-centric models could deliver a distinctly Tasmanian experience.

### ***Coherence of the University Community***

It was clear from both staff and student focus groups that the sense of community experienced in the current southern campus configuration, split as it is between Sandy Bay and city operations, has diminished. Both the distributed and city-centric campus models will need careful design of spaces and amenities to support a heart and sense of community. In a distributed campus model this coherence will need to be developed in two places, and there's likely to be a differing culture and atmosphere.

A strong theme which has emerged through the engagement process is that people struggle to understand how a city-centric campus will work as a cohesive whole. People see this model as a collection of buildings that have no relationship to each other and that do not encourage interdisciplinary collaboration, both on formal and informal levels. There is a perception that in the city-centric model, buildings will be located further apart than in the current model, making it more

difficult for staff and students to make classes on time, and the physical distances mean that people will confine themselves to their immediate work area. This perception is magnified by comparing their lived experience of the Sandy Bay campus and a hypothetical city-centric campus model.

### ***Connection with the Broader Community***

There is a perception that the University's current inner-city buildings do not provide a welcoming environment for the broader population. Anecdotally, staff based elsewhere feel intimidated and unsure if they are able to access buildings such as the Institute for Marine and Antarctic Studies (IMAS) and Medical Science Precinct (MSP). Similarly, in Sandy Bay, the general community venture onto the University site for a limited number of reasons - such as specific events, open days and the utilisation of sporting fields. In a distributed campus, the ability to change this is limited, and will require significant outreach to attract people into the facilities. The ability to share public spaces, such as libraries, and design welcoming spaces for the wider community are considerably stronger in the city-centric campus model. In addition, the ability of our international students to interact as part of a true multicultural experience was identified by students themselves as being lacking with the current Sandy Bay campus.

From the feedback, both staff and students who considered this criterion to be important saw the city-centric campus model to be a considerably stronger offering than the distributed campus model.

### ***Impact of Development on Staff, Students and University Operations***

The likely timeline for either broad strategic direction will be more than a decade. For the city-centric campus model, timelines will be dictated by access to funding and planning constraints, but ostensibly, much work could be undertaken in parallel, resulting in the ability for operations to move with a one-time disruption. In the case of a Sandy Bay redevelopment, the timeline will be driven by the need to limit the impact on staff and students, minimising the decanting of people, as well as freeing up space to construct new buildings. In addition, given funding constraints discussed below (and the need for construction to proceed sequentially) it is envisioned that construction on the Sandy Bay campus would be undertaken over a period of 10-15 years.

### ***Ease of Collaboration and Access to Shared Resources***

The inner-city location of IMAS (with its proximity to CSIRO) and MSP (adjacent the Royal Hobart Hospital) has resulted in tangible improvements in collaboration and a positive impact on research outcomes. Research on the relationship of colocation to research excellence by Massachusetts Institute of Technology (MIT) shows a proportional drop as proximity widens. The benefits of the combined STEM facility in either option will be clear. However, with more than 30% of academic staff already in the CBD - more than 3.5km from the remaining academic population - the links and distances between the various schools and colleges need to be considered.

The distributed campus model requires additional running costs to duplicate facilities for staff and students in both clusters of activity. A reconsolidated Sandy Bay campus would be in a closer area (500 metres) than the city-centric model (750m), but with 3-4km between the distributed sites, facilities such as student support services and library spaces cannot be shared. With campuses in Burnie and Launceston already providing duplicate services to students, the operating cost is having a considerable impact on our ability to provide sufficient and efficient support. The duplication of



these resources in both the city and Sandy Bay – which is considered as mandatory in a distributed model given the numbers of staff and students in both places – will be a considerable strain on the ongoing operating budget, and the level of efficiency in the use of space that is required to be financially sustainable in the long term.

Feedback from the engagement process also showed that many of the Sandy Bay-based staff saw little difference between the two options in terms of their relative strengths in this criteria, but the clear differential came from those currently based in the CBD. This was also borne out by more descriptive feedback, where city-based staff and students conveyed a feeling of isolation, excepting within their schools, and a general lack of support services; whereas Sandy Bay staff felt the existing situation worked well.

### ***Location and Accessibility of the University***

Discussion has previously centred around the stigma of the Sandy Bay campus; however, while anecdotally this may be the case, it is difficult to separate the impact of stigma from overall educational ambitions, limited exposure to University operations, and the limitations of our public transport. It is clear, however, that increasing accessibility and improving the completion rates to a wider population of Tasmanians is fundamental to meeting our overall ambitions and supporting the outcomes of the State. With residents of the faster-growing suburbs and municipalities of Tasmania taking more than an hour to reach Sandy Bay, we currently have low student representation from these areas. Improving the proportion of students from these areas going to university and planning for the growth of the population base in these areas will require us to improve the accessibility of our facilities. It is also clear that success rates of students who are first-in-family or from lower socioeconomic backgrounds are higher for those where face-to-face tutelage and engagement is supported.

In either option, supporting the improvements in public transport planned in the Hobart City Deal will be critical to achieve our mission of improving the education outcomes of Tasmania. However, the hub model (necessitating for many an interchange in the city) will be a considerable barrier for students studying at Sandy Bay under a distributed campus model. Work with Metro Tasmania has improved the public transport options for Sandy Bay in recent years, but many staff and students from the outer suburbs and regions continue to access the campus by car. This is itself an economic barrier, while student feedback indicates an 86% dissatisfaction level in the parking situation at the current Sandy Bay campus.

Seventy-five percent of students in feedback considered location and accessibility of the University as important criteria to be considered, and they considered the city-centric campus model to be a considerably stronger proposition. Factors such as the ability to easily access part-time jobs, reliable transport options, and a wider range of suburbs for housing options were raised in supporting a city-centric campus model. Concerns around childcare options and parking were raised by staff around the city-centric campus model, and from staff consultation in the IMAS building, it is clear that transition support for staff and students would be required in any move to the CBD.

### ***Sustainability of Transport***

Our current facilities in the CBD show a significant change in travel behaviour of both staff and students. It also demonstrates the effectiveness of sustainable transport options on a suburb-by-suburb basis.

- Use of sustainable transport has grown rapidly in the past five years, aided by the introduction of express buses. Now up to 61% of students in the south walk/run, cycle or catch buses.
- Staff using sustainable options has remained stagnant at 26%.
- Staff and students working in the CBD have far less car usage than those at Sandy Bay. By continuing to build on this and working with community partners, there is a clear opportunity to reduce impact on the environment and decrease traffic congestion.
- Extensive modelling on the effect of a move to the city on the traffic in Hobart has been undertaken. In partnership with Hobart City Council and Metro Tasmania, considerable work is being done to investigate options including bike paths and lanes, park and rides, carpooling, traffic management and public transport frequency. It is clear from the modelling that the impact of our current footprint is not well understood, with considerable cross-town traffic affecting the flow of the main arterial routes of Macquarie and Davey streets and the ability of traffic controllers to 'flush the city' when congestion has occurred. As a result, with reasonably conservative assumptions of behaviour change and measures to address traffic flow, the impact of a city-centric campus would overall improve the average speed of traffic in Hobart during peak hours, and improve many roads, with less than one minute added to travel times along the major roads of Davey and Macquarie streets at peak times.

### **Cost Difference**

A significant portion of this study has been to understand the cost difference between shifting the remaining Sandy Bay facilities into the CBD and retaining the current dispersal of disciplines across Sandy Bay and the city. Naturally, a shift to the CBD will require investment in new facilities that will result in several benefits. It is important to understand that retaining the current teaching and research programs at Sandy Bay will also require a significant remodelling and consolidation of the entire campus, with many buildings needing to be replaced and others substantially refurbished.

The 2017 Condition and Functionality Audit Report of existing Sandy Bay buildings highlights that many are beyond their economic life (typically between 40-60 years). Planned maintenance has been deferred and operating costs have increased, resulting in expensive, inefficient infrastructure unable to service the needs of students and staff.

In the following assessment of both options, rationalised and efficient space standards have been adopted. It has been estimated that modernising the Sandy Bay campus would result in capital costs about 3% lower than would be the case with an entire CBD relocation due to the ability to refurbish some Sandy Bay buildings.

However, if the University vacates the Sandy Bay campus, the site then becomes available for redevelopment over time. In that scenario, remaining at Sandy Bay would be \$120 million more expensive than the city-centric campus option. A summary of the development options and their associated cost is tabled below.

Development	Sandy Bay	CBD	Difference
CapEx	\$657m	\$677m	-\$20m
Sandy Bay land Realisation value	-\$40m	-\$200m	\$160m
Land acquisition cost	Nil	\$20m	-\$20m
<b>Total Capital</b>	<b>\$617m</b>	<b>\$497m</b>	<b>\$120m</b>
EO: Taroona IMAS CapEx	\$37m	\$37m	Nil
OpEx (indicative) pa	\$10.3m	\$9m	\$1.3m
<b>GFA (2038)</b>	<b>90,000m<sup>2</sup></b>	<b>78,000m<sup>2</sup></b>	<b>12,000m<sup>2</sup></b>

### **Weighing up the Benefits of Rebuilding at Sandy Bay or Relocating to the City**

Although it would result in a continuing disaggregation of faculties and services, a rebuilt, consolidated Sandy Bay campus would allow the University to continue its legacy of academic excellence in the suburban location. Such a redevelopment would allow the University to make better use of space, creating state-of-the-art buildings and a vibrant, welcoming environment.

However, this model means students and staff are unable to enjoy the benefits of Hobart's city precincts and the culture of the CBD. The University has the potential to play a key role in adding to these precincts and culture by integrating all of its faculties and services into the city. An urban campus would enable the University to shrink and grow as required and foster greater partnerships with community, industry and government, and ultimately better meet its commitment to improving the education and economic outcomes of the State.

## 1. Background

### Tasmania – A State in Transition

Tasmania is navigating a transition from commodity-based industries to innovation-based industries born from human ingenuity and new knowledge. There are promising signals that the State is turning the corner after decades of economic stagnation. CommSec recently rated Tasmania fourth in the country for economic performance, thanks to strong population growth and investment in infrastructure. In 2017, Tasmania had the strongest relative population growth in the country at 0.72% - 32.5% above average growth over the past decade and its fastest growth rate in seven years. At 6%, unemployment is almost two per cent below the decade average, although it remains higher than the national average of 5.6%. Industries such as advanced manufacturing, precision agriculture, natural resource management and aquaculture are on promising trajectories. These require ongoing science and technological innovation to ensure their continued growth.

Yet, at 14% in 2017, the State’s economic growth continues to lag behind the rest of Australia. Tasmania, like the rest of Australia, performs poorly on measures of innovation. Relative to the rest of the nation, economic transition to new industries is hindered by the State’s low level of education attainment, which has been identified as the single biggest reason for its relatively poor productivity. Tasmania is almost 20% less productive than the national economy and productivity in most Tasmanian industries is 15.45% below the rest of Australia. Tasmanians earn the lowest weekly full-time wages in the country, taking home \$175 less per week than the national average.

“Many of the challenges confronting Tasmania can be traced back to our historic poor education outcomes,” said Paul Harris of Deloitte Access Economics.

### Tasmania has lower educational attainment

*Proportion of persons with at least a Bachelor degree  
% of 20-64 year olds, 2014*

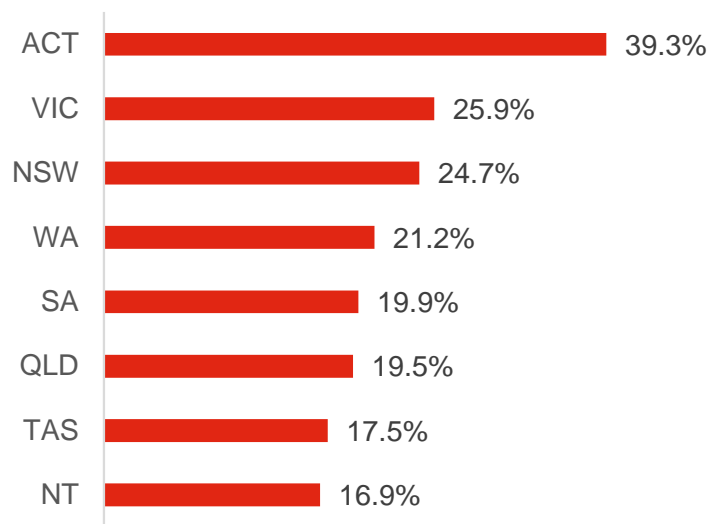


Figure 1: Higher Education Attainment in Australia

### Hobart as an Innovative, Modern Capital City

Hobart is leading the State’s economic revival, with the capital enjoying a period of rapid growth while also experiencing the growing pains that come with it. By February 2018, Hobart City Council had issued \$215 million in development permits for the 2017-2018 fiscal year, already surpassing the previous financial year by \$12 million. Yet the new developments won’t address the current acute

housing shortage that is driving up rental costs and pricing many people out of the Hobart housing market. This is impacting current and prospective students, many of whom are struggling to secure affordable and appropriate housing. In February 2018, up to 200 students were being housed in 'inappropriate' accommodation, with the University announcing immediate additional accommodation provisions for 140 students in the CBD by May, which would increase to 170 by the start of Semester 1, 2019.

Overall, Tasmania's population growth will continue to put pressure on Hobart's infrastructure, which is not configured for growth. Hobart requires a comprehensive, coordinated, long-term development plan that leverages its unique attributes and builds the foundations for innovation and continued economic growth. The presence of a number of flagship scientific centres, together with cutting-edge research and innovation at the University of Tasmania, are among Hobart's great advantages. Of the more than 6000 businesses operating in Hobart, the highest number (933) are in the professional, scientific and technical services sector. Education is also a key industry, with 4576 people employed. Despite this, infrastructure is not connected in a way that supports collaboration, either across academic disciplines or across industry sectors.

The City of Hobart has committed to focus its efforts on supporting city growth, vibrancy and culture by enhancing participation in city life. It has identified higher education as a key sector for future development, providing the University with a great opportunity to collaborate with the Council to enhance the city for the entire community.

#### [What is the Role of the University within Tasmania in Social and Economic Renewal?](#)

The University has a critical role to play in Tasmania in leading innovation and building human capital.

Tasmania's unique social and economic challenges, as well as the central role of the University and the southern campus in the State, provide this institution with a responsibility to lead and support Tasmania's people as the economy transitions away from extractive industries to a knowledge and service-based economy.

The University has a pivotal role to play in building the capability and capacity of Tasmania's human capital and revitalising the community. By strengthening connections between Tasmania and the rest of the world the University can continue to drive world-class research and innovation. The University's southern campus can connect with the community and complement the campuses in Burnie and Launceston, creating a vibrant network of students, researchers, industry, government and community.

The University seeks to contribute to the State's social and economic renewal by:

- Raising educational attainment across Tasmania
- Directing its research to support the growth of innovation-based industries
- Growing the Tasmanian education industry by attracting more international, interstate and local students.

Collaboration and education underpin innovation-led city renewal and drive greater prosperity. Higher rates of university participation are linked to greater productivity, higher living standards and higher wages, even for those without a university degree. Businesses that collaborate with research organisations are more productive and innovative.

The University is a significant institution in the context of the State. It is Tasmania's second largest employer, with more than 7500 employees, serving 37,000 students. Its operations total \$0.6 billion

and it is the largest non-government organisation in terms of capital expenditure. In 2014, the University's economic contribution to Tasmania was calculated at \$1.7 billion, including \$930 million to Gross State Product, equivalent to 3.7%. From 2011-2015, University infrastructure spending accounted for 13% of the State's total expenditure on building and structures and 9% of total asset purchases.

### Transformation of Hobart CBD and the University's Identity

Similar to the revitalisation of the City of Newcastle, the greater Hobart area is currently experiencing a considerable transformation. As a result, Hobart now offers an increasingly urban lifestyle, experience and adventure alongside its traditional nature-based offerings.

As with the University of Newcastle's recently completed NewSpace development, the creation of a modern, fit-for-purpose University of Tasmania campus embracing the new urban lifestyle of Hobart's CBD has the potential to capture the interest of a greater number of interstate and international students. It would embed the University within Hobart's cultural hub.

The literature reviewed for the study indicates relocation to the CBD could have a positive socio-economic impact by enabling greater access to, and participation in, higher education, particularly by those experiencing social and economic disadvantage. A city-centric university would bring the University within a one-hour public transport catchment of some of the more disadvantaged and fastest-growing areas of greater Hobart. While proximity to a campus alone does not improve retention and ultimate completion of studies, it does address some of the key barriers to entry noted.

### What is Happening in the Tertiary Sector?

Ernst and Young's 2018 Report *Can the universities of today lead learning for tomorrow?* highlights the importance of higher education to Australia. It is a central pillar of the Australian economy, employing 8% of the population and generating more than \$30 billion in revenue.

The University of Tasmania's position as the only university in the State produces a number of benefits. However, it is subject to the same competitive market conditions experienced on the mainland. With travel becoming more available and affordable, students are willing to relocate both domestically and internationally to receive the highest quality education. To remain both relevant and competitive, the University of Tasmania will need to reposition itself in deeper partnership with community, government and industry, and further embrace an agenda of distinctiveness built around its place in the world.

### History of the University of Tasmania in Sandy Bay

The University of Tasmania was founded in 1890 on the Queens Domain in Hobart, housed in the sandstone building now known as Domain House. In 1943 the Commonwealth granted a rifle range site at Sandy Bay to the State Government for construction of a new university during the post-war 1950s. Newspaper reports from the period reveal community concerns about the "inaccessible" bushland setting of the upper part of the land. It is now this bushland setting, with good access to walking trails and overlooking the River Derwent, that is one of the most prized features of the campus.



Purpose-built buildings were constructed through the late 1950s and early 1960s, resulting in the mid-century architecture that still dominates the campus. Wooden buildings were erected for Physics, Botany and Zoology from 1945 and 1949, and Geology was established at Sandy Bay in 1947. By 1954 all the sciences except Chemistry were located at Sandy Bay. Meanwhile, the rest of the University was crowded into the Domain and adjacent buildings, but some indication was now at least given that it was on the move.



This unusual arrangement didn't seem to bother the students, who were otherwise preoccupied with studies and socialising, according to reports at the time. Removal to a new site scheduled for the distant future aroused little enthusiasm among the student body, while mid-course disruption was dreaded. Thus, as long as conditions were relatively stable, the students showed little discontent with their surroundings.

The year 1959 was an important one for the University. In May the Tasmania University Union, the Engineering Department and Hytten Hall at the new Sandy Bay campus were formally opened. However, the crucial year of transfer was 1961 when the University (with the exception of Psychology and part of Education, which remained at the Domain until the end of 1962) was, after 15 years, united at Sandy Bay.

Although recent consultation with academic and professional staff has raised numerous concerns about the current condition and functionality of Sandy Bay buildings, the process also highlighted the deep affection that many employees feel for the campus, its buildings and – especially – its setting.

#### [Current University Infrastructure](#)

The University of Tasmania has a significant portfolio of capital infrastructure and assets in southern Tasmania, predominantly spread across the Sandy Bay campus and the City of Hobart. This includes

approximately 100 hectares at Sandy Bay and a number of individual sites spread across the Hobart CBD and the Domain.



*Figure 2: Southern Infrastructure  
(excluding Taroona and Cambridge)*

In recent years, the University has been rationalising the use of buildings on the Sandy Bay campus, concentrating functions previously undertaken above the main body of the University campus onto the grounds below Churchill Avenue.

In the CBD, construction of the new \$65 million student accommodation on the corner of Melville and Elizabeth streets, funded through the National Rental Affordability Scheme, was

completed in early 2017. In addition, in 2018 the University acquired the 75-bed Fountainside Hotel and the 140-bed Midcity Hotel for student accommodation. Works have also started on:

- The Hedberg, a new creative industries and performing arts development adjoining Hobart's historic Theatre Royal; and,
- Development of a new purpose-built student accommodation building on Melville Street, adjacent to the proposed STEM precinct.

Each of these projects complements other inner-city developments completed in recent years, including MSP on Liverpool Street and IMAS on the Salamanca waterfront.





*Figure 3: Medical Science 1 and 2*

### The Southern Infrastructure Project

The Southern Infrastructure Project team was tasked with developing a master plan strategy to guide future asset management and capital works in southern Tasmania. The strategy will provide a clear set of objectives and actions to guide future investment in campus infrastructure while considering the commercial and financial viability of the University. It will also reflect the need to integrate the campus with the economic and social fabric of Hobart and Tasmania while maximising the visual impact of key buildings and locations in the development and their functionality.

The University is considering two scenarios:

- Option 1: Distributed campus model – consolidate and reinvest in Sandy Bay below Churchill Avenue
- Option 2: City-centric campus model – relocate the majority of Sandy Bay facilities to the Hobart CBD.

The University has developed a set of principles to enable its Built Environment and Infrastructure Committee to guide decisions on the most appropriate development option. These principles seek to ensure that the preferred option can meet the following tests:

- enhances the student experience
- enables excellence
- improves porosity, permeability and connectedness
- facilitates industry and government innovation
- ensures the viability of the University
- increases impact and delivers value
- provides infrastructure for the future

- delivers a positive community outcome.

The University engaged a consortium of advisors led by North Projects to work in collaboration with the project team to review the options for future development. The consortium consisted of:

- North Projects (Consortium lead)
- PwC (Education and Real Estate Advisory)
- MCR (Architects)
- Irene Inc (Planners)
- University of Tasmania project team led by Professor Noel Frankham (Academic Lead); Penelope Ratcliffe (Project Director) and Daniel Robinson (Project Manager).

The project was structured into two phases:

- Phase 1: Development of the Southern Infrastructure Framework that forms the brief for the development of the master plan business case.
- Phase 2: Southern Infrastructure master plan and business case.

### Project Consultation

The University, together with the consortium, has undertaken an extensive program of consultation with key internal stakeholders. A 'diagonal slice' approach was adopted to ensure insights were captured from a range of levels and disciplines. The consultation has involved:

- 23 workshops with academic and professional staff
- Meetings with senior executive members
- Project Coordination Group and Steering Committee meetings
- Reporting to BEIC and Finance Committee
- More than 1100 staff and students attending an active installation room
- More than 400 survey responses and direct feedback from staff and students.

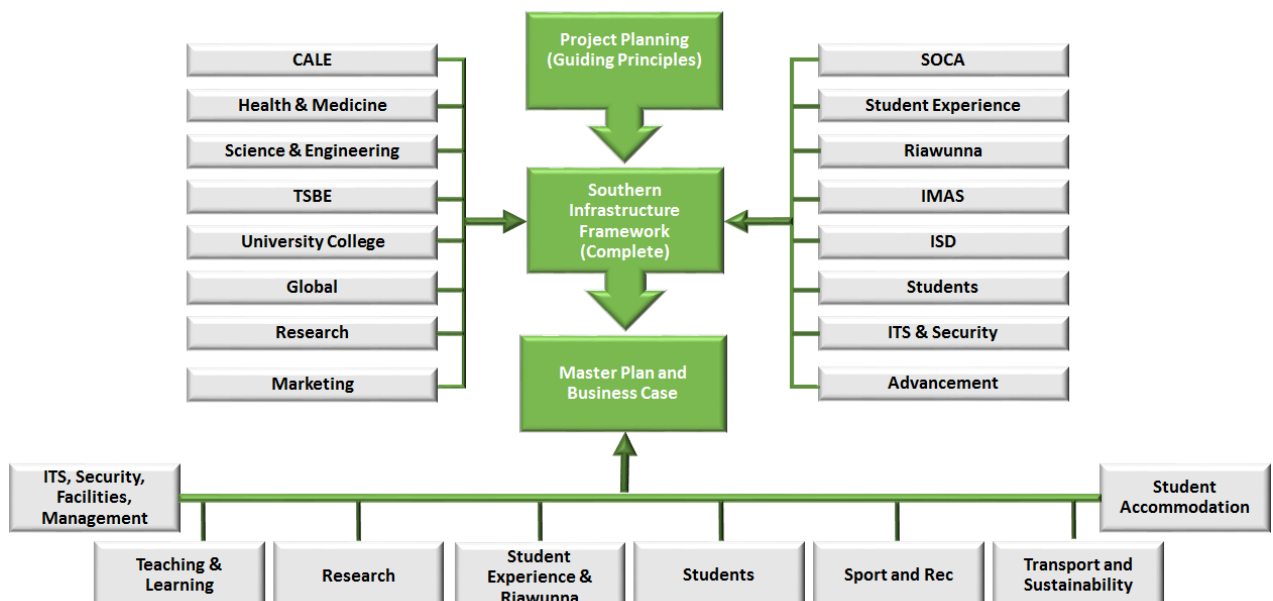


Figure 4: Project engagement process

## Works Previously Completed

The Southern Infrastructure Framework was completed and endorsed by University Council in November 2017. The framework was developed following significant internal stakeholder consultation and indicated that the option to relocate to the CBD most aligned with the academic vision and the project's guiding principles. However, there were some key challenges and risks identified, including:

- Accessibility to green space, and sports and recreation facilities
- Transport opportunities
- The creation of a vibrant student community and experience
- Nostalgia for the Sandy Bay campus and impact on the surrounding community.

The framework included development of the Academic Vision for Southern Tasmania through consultation with senior executive members and multiple groups of academic and professional staff across the University. This is outlined below:

*The University of Tasmania in Southern Tasmania will connect academics and students with the community to create world-class teaching, research and new knowledge*

*It will be a vibrant, contemporary and innovative environment shaped by place and culture*

*It will be visibly at the heart of the communities it serves*

*It will broaden access for students of all backgrounds and support them to achieve, thrive and benefit their communities.*

In November 2017 the University Council agreed to the following motions:

- Council approves the development of a master plan and business case for a CBD campus and the future use of the Sandy Bay campus so that an informed decision can be made about the future of the southern campus
- Council approves the development of a financial and socio-economic analysis as part of the master plan business case for a CBD campus and the future use of the Sandy Bay campus, with the analysis to include a comparison against a realistic alternative.

The option to relocate to the CBD was noted as the preferred option as it most aligned with the project's guiding principles. It was agreed the business case would be developed with an assessment against the realistic alternative of reinvesting in and consolidating the Sandy Bay campus.

The initial assessment determined that further disaggregation of the current campus, i.e. relocating STEM to the CBD but maintaining the bulk of services and facilities in Sandy Bay, was the least preferred alternative.

The Southern Infrastructure Business Case and Master Plan Report builds on the information gathered in the framework and responds to the requirements of the University Council motions of 10 November.

## 2. The State of the Existing Infrastructure at Sandy Bay

The majority of Sandy Bay buildings are between 40 and 60 years old, meaning they are reaching or are at the end of their viable economic life. This is supported by the results of the condition and functionality audit undertaken in 2017, which established an average overall building condition rating of fair-to-poor. The University Council noted in 2012 that a rating of 'good' should be targeted for all University buildings. The complete results of the condition and functionality audit can be found in [Appendix 3](#).

### Review of the University's Current Built Infrastructure

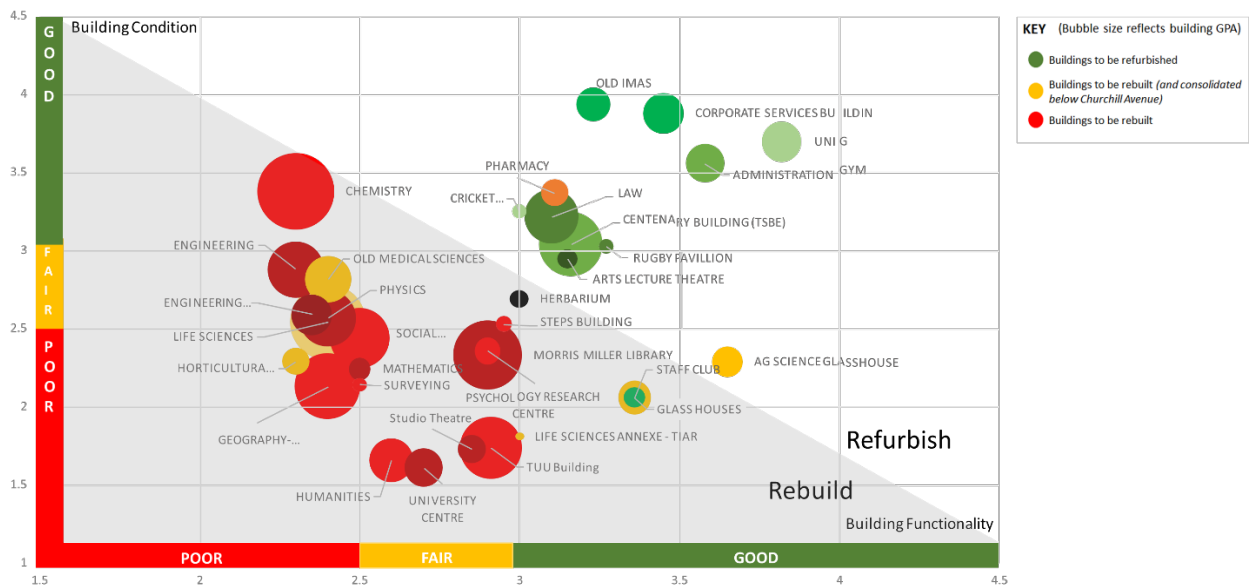
A review of the existing infrastructure at Sandy Bay was undertaken to develop an understanding of which facilities could be refurbished and retained long term, compared to those facilities that would need to be replaced. Buildings were assessed using an approach of:

- A review of each building, including age, current use, suitability, opportunity to achieve a condition score of 4 (good), and the cost-effectiveness to refurbish the building based on existing and actual GFA requirements
- The TEFMA rating system and building condition assessment undertaken by Infrastructure Services and Development within the Condition and Functionality Assessment 2012, and Condition and Functionality Audit 2017.

Other factors taken into consideration with the assessment include:

- Modern-day building code compliance requirements - particularly about accessibility
- Costs and works required to ensure building resilience - further exemplified by the flooding experienced in May 2018
- Age of the existing buildings and the refurbishment complexities anticipated, such as the presence of hazardous materials, non-flexible building footprint and ability to upgrade base build services
- User-group feedback on building condition and how fit-for-purpose the infrastructure is for current and future teaching requirements.

Findings suggest that due to building age and maintenance history, overall condition and functionality are poor and fair respectively. The recommendation from the building assessment notes that 36% of the existing buildings would be suitable for refurbishment, with the remaining 64% requiring replacement over the next 20 years, as shown in the diagram below.



The detailed building condition report is attached in [Appendix 3](#)

The TEFMA 2014 report lists the University of Tasmania as the poorest-rated institution in Australia and New Zealand, with a Facility Condition Index of 0.845, representing the current condition of the assets measured relative to its as-new condition. Given the competitive nature of the higher education sector, it is imperative to upgrade our facilities to continue to attract both domestic and international students.

### Sandy Bay Consolidation

The option to consolidate at Sandy Bay utilises the data provided in the 2017 Condition and Functionality Audit. Each building was assessed and replacement and refurbishment estimates calculated, and an understanding of the best option for each building was established, based on the most economic outcome.

Buildings with a combined OCR/OFR rating of less than 6 typically have an asset priority index of greater than 3. Their core functions align closely with the University's strategic plan but are difficult to replicate elsewhere on campus and unable to be delivered differently.

In these cases, the option to build new elsewhere on campus while maintaining University services in existing buildings over the short-term appears preferable. This aligns with the 2012 University Council requirement to move towards an overall building condition rating of 4.

Though buildings can be extensively refurbished as an alternative to the above, there are some significant risks. The delivery of University services during the construction program will be adversely impacted, and the refurbishment may be unable to create fit-for-purpose facilities able to meet student and staff needs. These factors should be investigated in greater detail if a decision to adopt a distributed campus model and rebuild at Sandy Bay is endorsed.

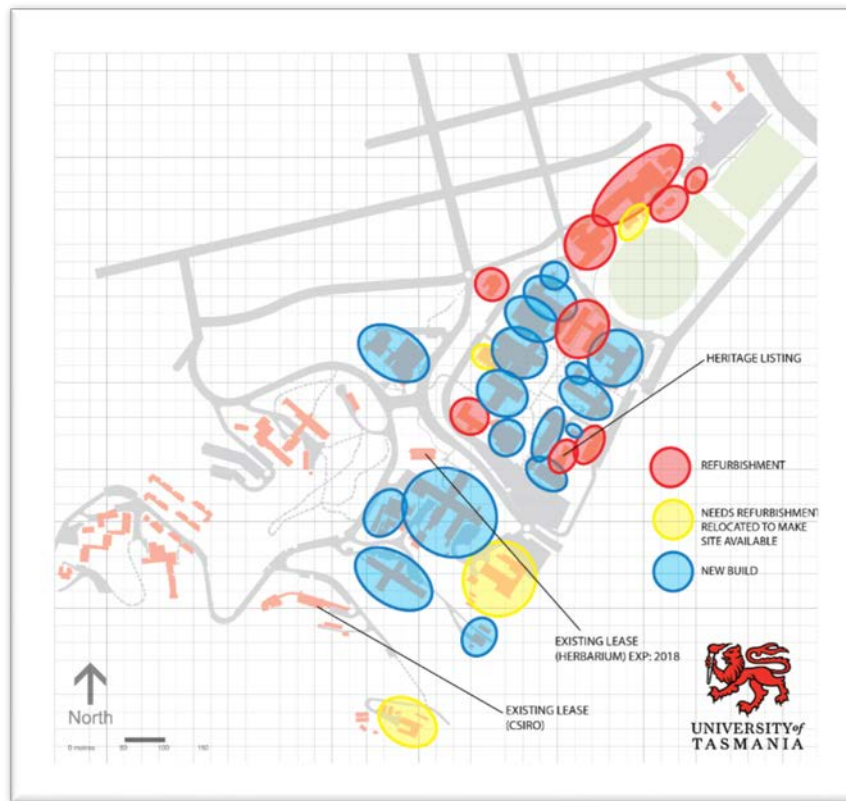


Figure 5: Sandy Bay building condition assessment

## Student and Staff Experience

An engagement activity was undertaken during the orientation and welcome week of semester 1, 2018, to collate feedback from students on their experience of infrastructure and amenities at the Sandy Bay campus.

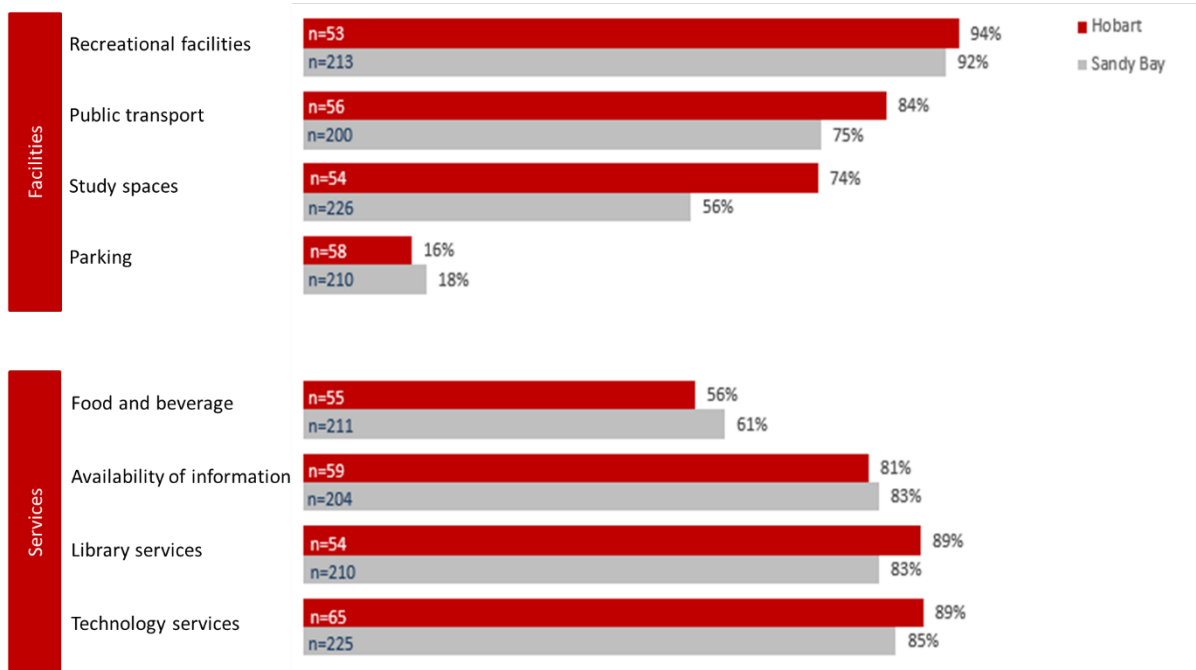
The response rate exceeded expectations, with 1096 individual responses received.

The main findings from the exercise included:

- Students need more efficient and reliable public transport, with more than 20% of respondents providing a negative response;
- Students are generally positive about the amenities at Sandy Bay campus. However, there is a noted issue with the topography and mobility between facilities;
- Students want a wider range of affordable food options; and
- Students want a great library, informal meeting spaces and a vibrant social scene.

Subsequent to this work, the Institute for the Study of Social Change undertook an analysis of the numerous surveys collated by the University to understand further the student needs and opinions and to assess the impacts of the proposed relocation to the CBD. The report in [Appendix 4](#) provides an overview of the key challenges currently facing Southern Tasmania and some of the opportunities that may arise from a campus relocation.

### Students who agree that they are satisfied with facility or service, %



Study spaces and parking are the areas in need of most improvement when we consider the future of the southern campus. Forty-five per cent of mainland students say that café and dining options are lower or much lower than expected, and 30% of mainland students say that the on-campus experience and campus life is lower or much lower than expected.

Seventy-four per cent of students are satisfied with study spaces in the CBD while only 56% are satisfied with those in Sandy Bay.

The 2018 Library Survey of 27 universities ranked University of Tasmania facilities in the bottom 25%. The top three areas for improvement were the availability of computer workstations, quiet places to study and places to work in a group. The full report is attached in [Appendix 5](#).

### Staff Amenities

While a large focus is on the student experience, the staff experience should also be considered. A well-apportioned workplace which encourages collaboration and also makes the workplace an inviting and attractive place is critical in today's effort to attract the best employees.

There is great concern among many of the academic staff about open-plan working, and this was a common aspect of feedback during the staff consultation phase. The balance of open plan and private offices and the need to enable networking and collaboration is a choice that must be made.

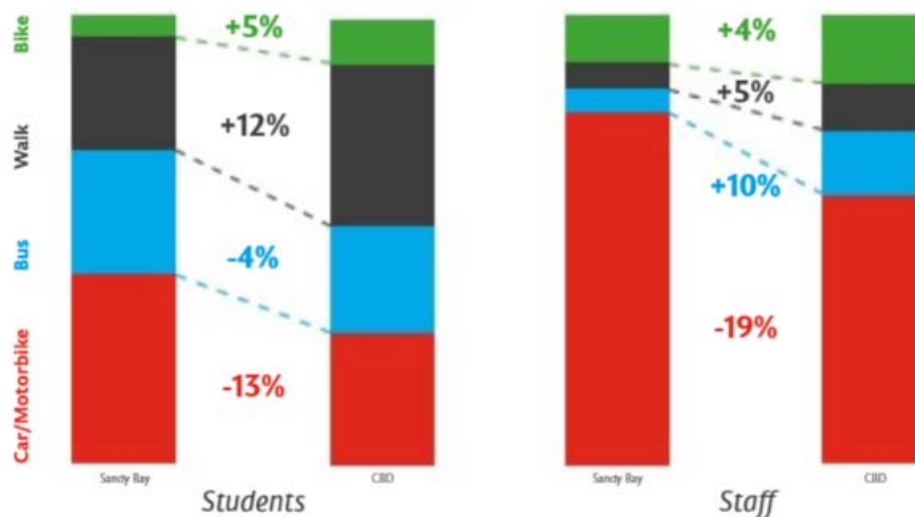
As well as the leafy setting, staff value highly the relative ease of parking at Sandy Bay. The 2017 Travel Behaviour Survey, based on 2671 staff and student responses, found that 77.3% of staff at Sandy Bay arrived at work by car (73.4% as a driver and 3.9% as a passenger), compared with the 59.3% of University workers based in the Hobart CBD who arrived by car. The full report is attached in [Appendix 6](#).

Interestingly, staff who both lived in Sandy Bay and worked on the Sandy Bay campus were more likely to drive to work than those who lived at Sandy Bay but worked in the city. Of the 17% of Sandy

Bay-based staff who resided in Sandy Bay, 67% drove to work and 29% walked/cycled. Of the 16% of CBD-based staff living in Sandy Bay, 27% drove a car and 53% walked/cycled.

University staff living in the northern, southern and eastern suburbs of Hobart and working in the CBD were much more likely to use public transport than if they were working at the Sandy Bay campus. Of the Sandy Bay-based staff who resided in the northern suburbs, 92% drove to work and just 4% caught a bus, while 74% of CBD-based staff who resided in the northern suburbs drove and 16% caught a bus. Similarly, 83% of staff using the Southern Outlet to get to the Sandy Bay campus drove their car and 7% caught a bus, while 65% of CBD-based staff who travelled on the Southern Outlet drove, with 17% catching a bus. For those coming across the Tasman Bridge, 86% of Sandy Bay workers residing on the Eastern Shore drove and 3% caught a bus, while 77% of CBD workers residing on the Eastern Shore drove and 15% caught a bus.

**Mode of transport, by campus, current %**



### Values of Sustainability and Access

Due to the age of the buildings on the Sandy Bay campus, many items do not meet current Australian building code standards for disability access. Generally, the width of doorways and internal walkways are issues for individuals in wheelchairs while signage and paint colours of doors, architraves and skirting were not designed as aids for visually impaired individuals. Other notable challenges faced by people with disabilities are that the bathroom doorway width is inadequate, the space for circulation too small and the door handles and fixtures to sliding doors inappropriately placed. Finally, the campus is inconsistently equipped with pathways and ramps to buildings which allow wheelchair access. Some of the natural slopes occurring, especially above Churchill Avenue, are too high a gradient while handrails are not always available. The University intends to provide access to people of all abilities, however its current built infrastructure is not supporting those values.

While the more recent build infrastructure in the CBD is Green Star-rated, 66 of 67 buildings in Sandy Bay are more than 10 years old and not evaluated for sustainability. IMAS and MSP, both with a 5 Green Star Rating, consume about 50% less energy and water than the Sandy Bay buildings. A disproportionate amount of maintenance expenditure is being incurred by the inefficient operation of the Sandy Bay buildings and the University is not meeting its sustainability objectives.



### Low Utilisation of our Facilities

There are opportunities to consolidate and improve the use of facilities at Sandy Bay. An inefficient timetable means teaching and learning facilities are vacant for significant periods during the day, resulting in lower than average utilisation. The University has approximately 17% utilisation for lecture theatres, significantly less than the national average of 29%. Similarly, the University has approximately 20% utilisation for flat-floored teaching space, yet the national average is approximately 28%. Contributing to this issue are the antiquated designs of the buildings, including narrow, long corridors that cannot be easily used for social and collaborative purposes, while consuming large amounts of floor space. Inefficiencies are also demonstrated in the replication of large-capacity spaces across multiple buildings, each with low utilisation and specialist labs that were not designed for multiple purposes.

The Sandy Bay campus has a relatively large footprint for its student and staff population, with a 100Ha site and 115,000m<sup>2</sup> of GFA. There are abundant and definite ways this space can be reduced and utilisation improved through the implementation of efficiencies in both development options.

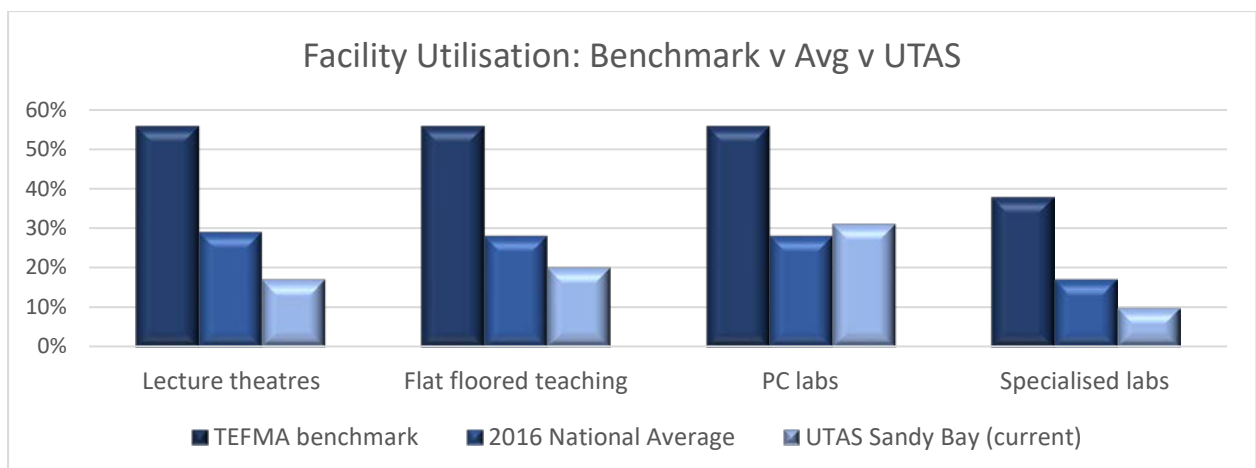


Figure 6: Sandy Bay campus space utilisation

### Sport and Recreation

Sandy Bay offers a unique and extensive range of sport and recreation opportunities. The abundant presence of green space is complemented by the availability of sporting facilities. The University currently has a focus on the 'big six', namely athletics, cricket, AFL, hockey, rugby and soccer, due to the widespread interest in these codes. The elite sports program is another key priority, which requires a certain standard of accommodation, facilities and clubs to gather interest. Existing facilities are struggling to meet the University's needs due to the range of sports offered, the required level of facility standards, and the rapid increase in interest from female students in sports such as rugby and football. Furthermore, operation and maintenance requires significant ongoing University funding.



*Figure 7: Sandy Bay football oval and green space*

### 3. The Choice We Face

The University has two broad strategic options through which to address the future infrastructure needs, a city-centric campus model and a distributed campus model.

The master plan for both alternatives is informed by key common components, which underpin the infrastructure requirements:

- Master plan design principles
- Student and staff growth forecasts
- Space demand requirements and utilisation assessment
- Building condition assessment of the existing infrastructure
- Existing University policy and strategy.

#### Master Plan Design Principles

To enable a level of control and consistency in the conceptual master plan and all future Southern Infrastructure Strategy programs of work, a set of design principles was developed. The principles are rooted in the core elements of **placemaking; governance, operations and delivery; and building fabric**. They incorporate a range of contemporary, best-practice examples, and urban design strategies that were informed through internal user-group consultation and University strategy.

#### Placemaking

All future developments should strive to create a critical mass of people to activate the University and the Hobart CBD. This can be achieved by aggregating University facilities through the co-location of teaching, research and student experience spaces within 400m, or a five-minute walk, of the *centre of gravity* (the weighted centre of the University's floor area). Buildings should be as welcoming as possible, inviting staff and students of all backgrounds and the community to enter.

#### Governance, Operations and Delivery

The University must ensure broad-based engagement and support for the master plan and building projects, fostering a shared sense of purpose built on the academic vision and in response to the guiding principles.

It should endeavour to create an aspiringly space-efficient campus and to maximise use of facilities. This can be achieved through the strategic location of shared facilities with the wider community and an exploration of potential partnership with the private sector. Key industry players can be utilised to inform the procurement process through market sounding, while potentially adding value and mitigating risk. The design process should be used to support the transformation of operations such as the academic calendar and timetable to increase use of facilities during the traditional downtimes.

#### Building Fabric

The building fabric should be designed for long life (30-50 years) and flexibility to allow for changing pedagogical strategies and ensuing needs with respect to research and fit-out. Spaces should foster cross-disciplinary knowledge sharing and create nodes of shared specific infrastructure such as fabrication labs and immersive environment labs. A full copy of the master plan design principles is attached in [Appendix 7](#).

#### Student and Staff Growth - EFTSL Modelling

A significant contributor to space demand and infrastructure requirements is the forecast student load. While there is significant complexity in forecasting long-term student load, a 30-year baseline is

necessary to ensure the infrastructure solution is developed to accommodate anticipated growth in students and staff. PricewaterhouseCoopers (PwC) was engaged to develop an EFTSL demand 30-year forecast based on both infrastructure options.

PwC undertook a low-, medium- and high-case scenario, with the medium forecast utilised as the key assumption for EFTSL growth. The core assumptions of the medium growth scenario include:

- Central growth in international students
- ABS mean case population growth
- Retention uplift in move case associated with increased accessibility
- Realistic progression assumptions
- In both scenarios new infrastructure works would be staged over a 10-year period from 2018-2028.

The key findings from the modelling indicate that:

- Relocation of the campus from Sandy Bay into the CBD will see EFTSL growth from 11,510 in 2018 to 16,116 in 2048, a total increase of 4606 EFTSL
- Consolidation at the Sandy Bay campus will see EFTSL growth from 11,510 in 2018 to 15,418 in 2048, a total increase of 3908 EFTSL
- A staged move of the Sandy Bay campus to the CBD has a marginal impact on EFTSL demand of approximately 700 EFTSL.

The full EFTSL modelling report from PwC is attached in [Appendix 8](#).

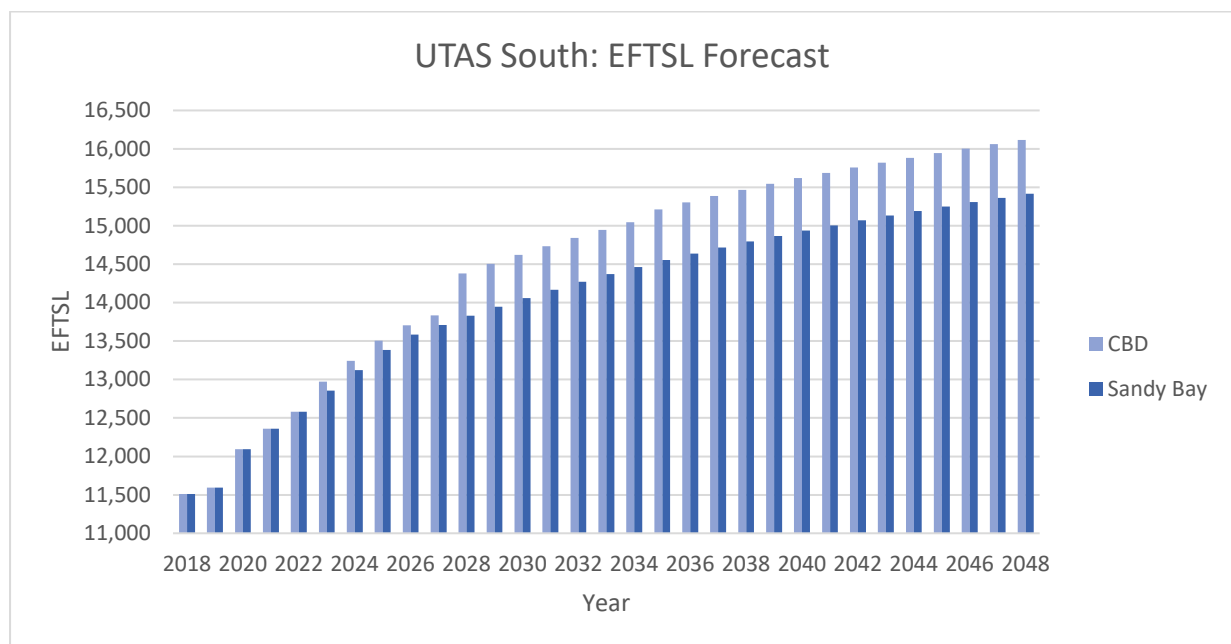


Figure 8: EFTSL forecast model

#### University Policy and Procedure

The space demand analysis has been developed by taking into consideration the University's existing policy and strategic documentation, including:

- The Strategic Asset Management Framework 2015
- Space Allocation Guidelines 2014

- The Space Management Policy 2014
- Sustainable Built Environment Design Policy 2015
- Parking Policy.

#### Space Requirements: Utilisation and Timetable Assessment

The Gross Floor Area (GFA) space demand analysis is the foundation of the southern infrastructure conceptual master plan. It is a critical component in the identification of potential CBD locations and the design of potential new buildings for Sandy Bay and required yields. This analysis includes 2028 demand and further cold shell space for expansion to 2038.

This analysis brings together the EFTSL demand forecast undertaken by PwC, a top-down approach using industry area benchmarks, and a more granular bottom-up approach to form a transparent and robust opinion of the space needs of the University in Hobart into the future. The primary data source has been the University's database for enrolments, timetable, TEFMA benchmarking and ISD space utilisation surveys. A copy of the analysis is included in [Appendix 8](#).

#### **The Analysis is Built up from Contemporary Best Practice University Space Strategies**

The requirement for teaching space was determined by examining the Sandy Bay Syllabus Plus timetable and allocating spaces to every subject in the Peak Week (semester 1, week 2). The teaching spaces required include a wide range, from 300-seat lecture theatres (required for the current large classes occurring on Monday mornings) to 30-seat Harvard-style rooms and a 200-seat SuperLab. These spaces were benchmarked against current industry standards and validated by sketches. They ranged from 1.5m<sup>2</sup> to 3m<sup>2</sup> per student depending on classroom typology.

It is important to note that the approach is robust and not 'over fitted' - no changes were made to the existing timetable, minimal effort was made to improve efficiency, and an additional allowance is included for growth to 2038.

The results of this analysis were surprising - research space required is a low proportion of the GFA, for instance, STEM teaching space is 16%, which is supported by the MSP at 15%. A summary of the functional space allocation for each college is noted below.

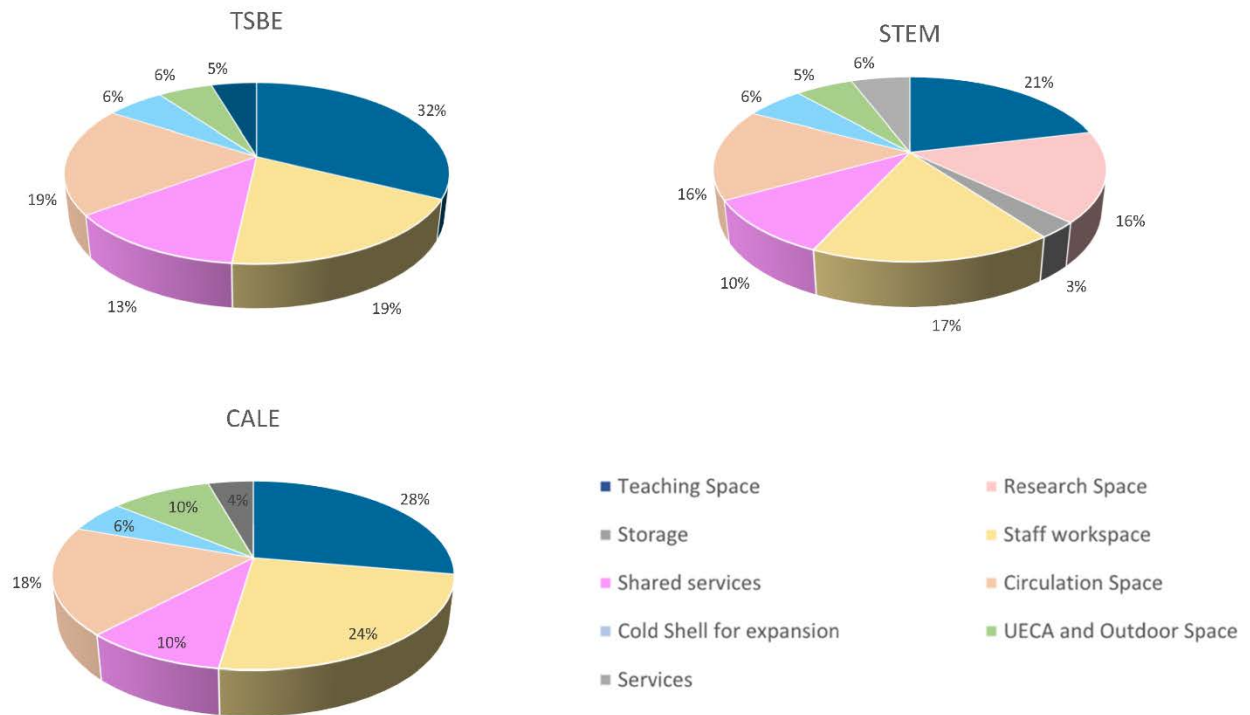


Figure 9: Space allocation by college

Furthermore, the analyses suggest that based on 2018 EFTSL the University currently requires 72,417m<sup>2</sup>. This is 21,419m<sup>2</sup> (23%) less than the current GFA occupied at the Sandy Bay campus and is further evidenced through the poor utilisation data discussed earlier, indicating the University operates significantly below the national average and industry benchmarks for most spaces.

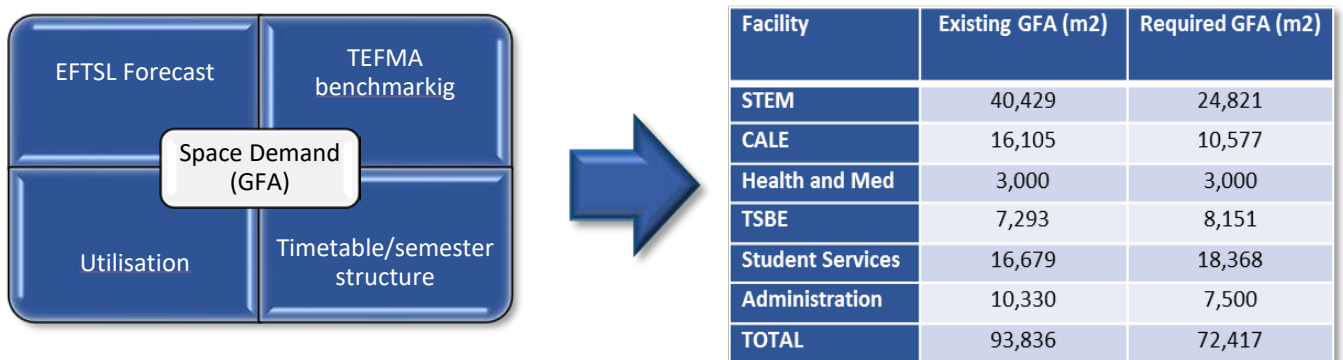


Figure 10: Analysis of the existing Sandy Bay campus facilities and GFA requirements

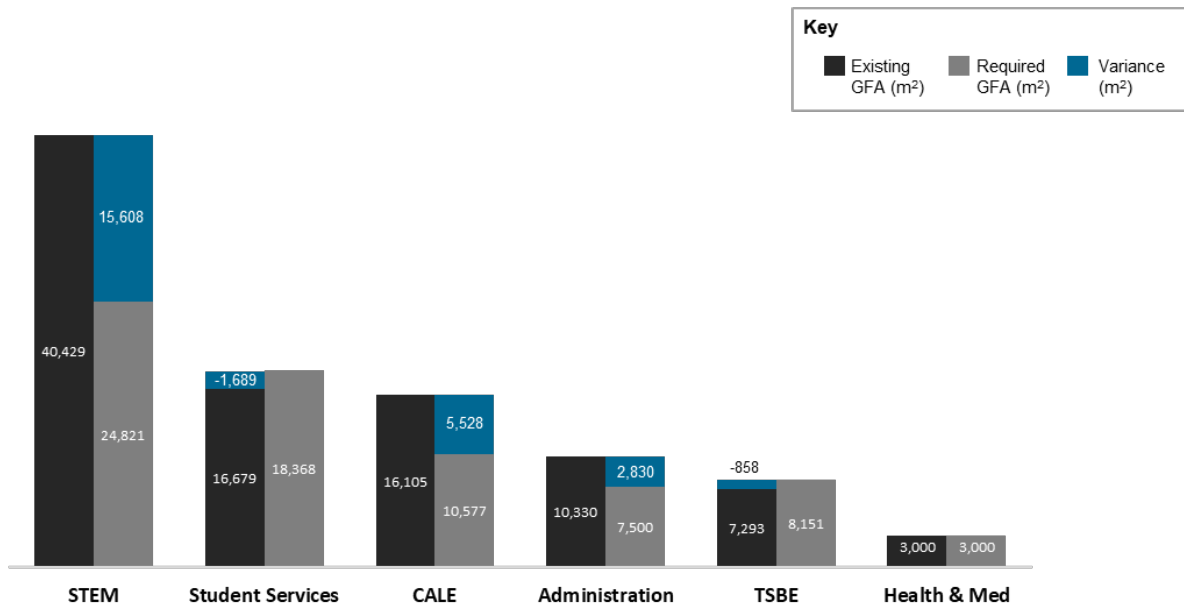


Figure 11: Assessment of the GFA required compared to the current GFA

### What are the University's Southern Campus Space Requirements for the Future?

Both top-down and bottom-up analyses suggest a total campus building area of approximately 83,000m<sup>2</sup> will meet the needs of the University for the next 20 years.

Floor Requirements 2038	GFA (m <sup>2</sup> )
Science, Technology, Engineering and Mathematics (STEM)	26,435
College of Arts, Law and Education (CALE)	11,272
Tasmanian School of Business and Economics (TSBE)	8686
College of Health and Medicine (CoHM)	Excl.
Administration	7500
Student Services	19,610
<b>Sub Total</b>	<b>73,503</b>
Taroona (optional)	4385
Cambridge (optional)	3940
<b>Total</b>	<b>81,828</b>

Figure 12: GFA forecast for 2038

Notwithstanding the above, further GFA reductions may be possible through operational efficiencies such as smoothing of the current academic timetable and review of the semester structure. These opportunities are noted in further detail within the commercial plan.

### Planning Evaluation of the Conceptual Master Plans

To assist with the direction of the Southern Infrastructure Strategy, town planners were engaged to undertake a preliminary assessment of the conceptual master plan and associated potential yields.

This includes an assessment of the building envelopes and the possible floor area yield.

All potential development sites are located within the Central Business Zone and have been assessed under current planning schemes with respect to the following:

- *Hobart Interim Planning Scheme 2015*
- *Height Standards – Performance Criteria Review, 2016, Leigh Wooley Architect*
- *Tasmanian Heritage Register (24/05/17)*
- *Site data sourced from the LIST.*

Though use and function vary significantly throughout University facilities, the Central Business Zone use status of sites is unlikely to restrict activities.

### Achieving Sustainability Outcomes in New Infrastructure

All future southern infrastructure development should endeavour to achieve a 5-Star Green Star rating as per the University's Built Environment Designs policy.

Furthermore, as the State embodies and promotes a 'clean, green' image, there is the opportunity for the University to not just meet the expectation of the Tasmanian community but to promote sustainable design and construction initiatives.

The benefits of green buildings can be grouped into three categories: environmental, economic and social.

#### **Environmental**

Green buildings aim to reduce or eliminate negative impacts on the environment both during construction and occupancy, and they can also have a positive impact by generating their own energy or increasing biodiversity.

#### **Economic**

Green buildings have been shown to reduce operating costs in relation to energy and water use and lower long-term operations and maintenance costs. Energy savings generally exceed increased design and construction costs within a reasonable period.

On average, Green Star-certified buildings:

- Produce **45% fewer greenhouse gas emissions** than if they had been built to meet minimum industry requirements.
- Use **50% less electricity** than if they had been built to meet minimum industry requirements.
- Use **51% less potable water** than average buildings.



**Social**

Additionally, green buildings produce positive social impacts. Many of these benefits are around the health and wellbeing of staff and students. Green buildings consistently outperform non-green buildings in terms of comfort and productivity. Research by the University of Technology Sydney demonstrated a direct link between sustainable building design and employees' assessment of their ability to work.

The City of Melbourne's Council House 2 (CH2) was Australia's first 6 Star Green Star – Office Design v1-rated building. A post-occupancy survey has found that productivity increased by 10.9 per cent after the move into the green building, with estimated annual cost savings of \$2 million.

## City-centric Campus Master Plan

### Context

This master plan will increase the presence of the University within the city by building upon the core principles of placemaking, governance and building fabric. Aligning with the academic vision, the University will visibly exist at the heart of the community it serves. The co-location of new University sites among existing urban precincts will help to shape a vibrant, contemporary and innovative environment.

The relocation of the Sandy Bay campus creates a unique opportunity to consolidate growth in the inner city. Architect and urban design consultant Leigh Woolley describes it as an embracing of the University's commitment to sustainability, which extends its role within public and civic spheres. Through consolidation within central Hobart, the University will generate built forms needed within the precinct to create a new *centre of gravity*.

The development of the campus will have an undeniable effect upon the CBD. By broadening access for all, a critical mass of people will activate both the University and the Hobart CBD. As outlined in Woolley's Central Hobart Framework document, the conceptual precinct of the University and surrounding urban fabric should maximise connectivity and permeability. The creation of a centre of gravity will promote and develop urban design principles as fundamental spatial intentions.

The conceptual master plan design principles will encourage placemaking through an active ground-level environment as well as the formation of a principal public realm within the University. The surrounding building fabric should encourage permeability throughout the campus and create linkages between civic space and public institutions. This creates opportunities for the spaces between buildings to create a 'light touch', which adds to the fine grain of the CBD's existing building fabric (Woolley, 2013).

Woolley outlines the core spatial values of connectivity, integration, consolidation, equity and outreach.

The integration of new facilities within the existing urban fabric should be achieved through public, semi-public and open spaces. Encouraging 24-hour access and public realms within the University will further encourage the integration. Campus permeability is created through arcades, alleys and streets that reference the existing urban fabric and break down the facades, encouraging activity and articulation along the ground plane. Points of choice should be located no more than 75m apart and dead ends should be discouraged, prioritising walking over cycling and cycling over public transport.

The University currently has an extensive presence throughout the inner city. A relocation of its remaining Sandy Bay assets provides a unique and unparalleled opportunity for the University to re-orient itself as an urban campus.

### Key Sites and Precincts

In developing the spatial master plan, key CBD sites and precinct zones were identified to inform future growth.

These included:

- Medical
- Retail
- Government and legal
- Cultural.

The master plan design principles provide a framework for the integration and engagement of the University with the broader community.

The creation of a variety of public, semi-public and private spaces encourages the sharing of facilities with the wider community, including the exploration of partnership options with sporting and industry facilities. This overlapping of different function, program and users can help to establish a campus that impacts a much broader section of society. The extra facilities and amenities that are provided should be located within convenient and safe walking distances from other public facilities, activating a larger area of the inner Hobart area.

New spaces and the places between buildings will be looked at with a set of broad-spectrum ideas meant to prevent crime. CPTED (crime prevention through environmental design) guidelines advocate visibility and activity to help reduce anti-social behaviour. Alongside principles of universal access, the buildings, products and environments will be inherently accessible to older people, and people with and without disabilities.

The campus and the identity of the University should create linkages and relationships between existing and future facilities to ensure this institution connects with life within the city.

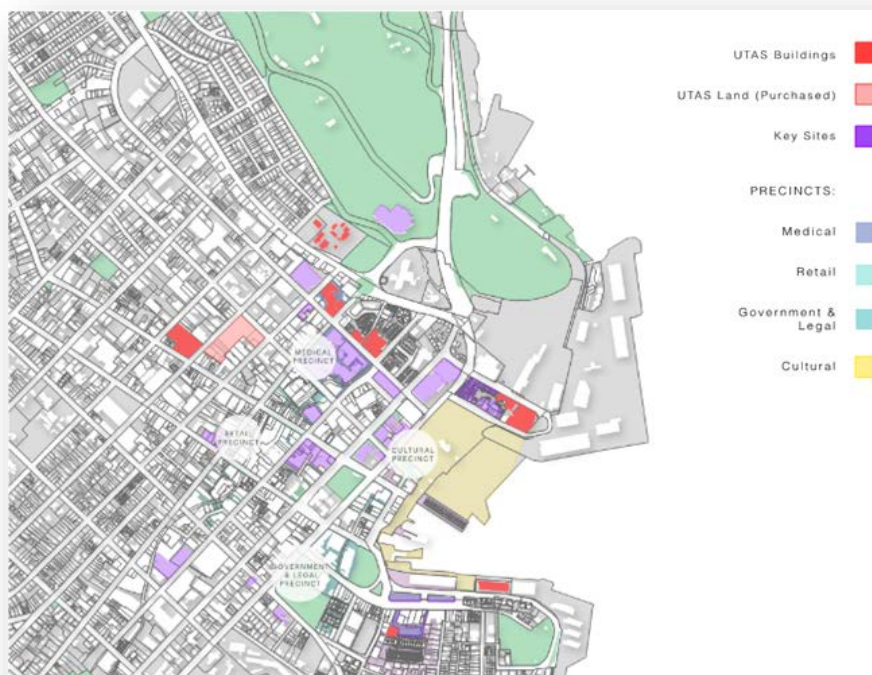


Figure 13: City precincts

### Accessibility and Mobility

Active and public transport options have been analysed throughout the CBD conceptual master plan, taking into consideration existing University facilities. Excluding IMAS and the media school, key university learning and teaching facilities will be accessible by foot within 10 minutes. Ancillary facilities such as sport and recreation and student accommodation can be located outside of this zone and should be accessed through a combination of active, public and shared transport options depending on staff and student circumstances.

The incorporation of an integrated wayfinding system allows students, staff and the public to orient themselves not only within the campus but the CBD. Using sightlines and visual connections to existing cultural, research, legal and sporting facilities encourages integration with the broader urban environment.

### Integrating the University into the City

New buildings should have distinctly identifiable silhouettes that contribute to the Hobart skyline. This will help to establish the University as fundamental to the identity of the CBD, by embedding itself both physically and visually into the urban context. The development of the campus across the identified sites provides an opportunity to create regions of differing and unique visual character.

The distinctive identity of each site, alongside vistas and views, can help to inform the placement of well-structured paths and landmarks offering visual cues to orient oneself within the campus. Utilisation of a variety of techniques and extending the wayfinding outside of the University boundaries can encourage greater connection and linkages with the broader context.



Figure 14: Existing and owned sites within walking distances

### The CBD Master Plan: Zone of Influence and Key Precincts

The image below depicts the proposed arrangement of faculties in the context of the University's existing infrastructure. There is a clear *zone of influence* developing throughout the city, which will create an active flow of students and staff between the key university precincts.

The master plan utilises the existing network of University-owned sites across the CBD to create a new *zone of influence*. This t-shaped zone connects the two main axes of the University, extending their influence into the broader urban context. Stretching from the heritage zone of the Domain through to the Forestry site and the Tasmanian College of the Arts, this area determines the key sites identified for future growth. The planned new sites aim to preserve the city grain, by activating the ground plane through a network of connections within the ecosystem of different precincts. This strong network of walkable facilities within existing precincts will provide greater opportunities for collaboration and partnership with industry and the community. It will create a campus that responds to the delivery of a sustainable future, prioritising public transport and social connectivity.

The key proposed precincts of the University include CALE on the Domain, STEM at the Webster site, Student Services and Administration in the Melville Street precinct through the McCanns, PBSA2 and Webster sites, and the Tasmanian School of Business and Economics and University College at the Forestry Building, as well as the areas between that connect the Domain through existing University precincts to the new heart of the University. It will be important for the University to work with the City to connect the Webster site through to MSP and the Domain. Getting that connection to work will also help to strengthen the interconnectedness of the University with TasTAFE and create a network of educational and industry facilities throughout central Hobart.

### CBD Master Plan: Zone of Influence and Key Precincts

The co-location of STEM, TSBE, student services and administration on the Melville Street sites will create a critical mass of staff and students activating the University and the Hobart CBD. Encouraging 24-hour access through this site and the co-location of different functions creates a campus that is active for longer hours and during different times of the year. This will not only contribute to the life of the campus but that of the CBD as a whole.

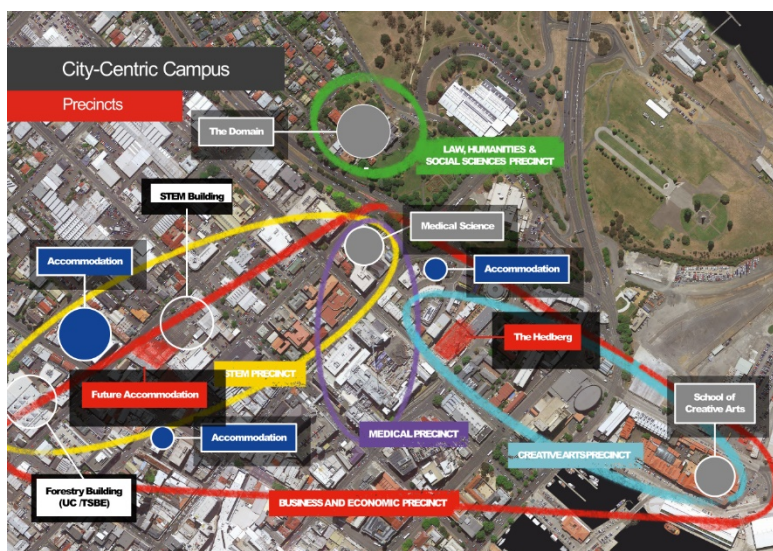


Figure 15: CBD Precincts

In doing so, it will provide the opportunity to create a *principal public realm* that is identifiable at the heart of the University and visible and accessible to the community. The location of these facilities at the periphery of this zone of influence creates a greater area of activation, with students travelling from the accommodation and student services across the CBD. The Webster site includes close proximity to heritage buildings which through preservation and integration will foster the retention of the existing urban grain.

Located along this new axis between the Domain and the Forestry building are areas identified as high strategic importance for future growth. A system of universally accessible and safe pathways through the campus buildings and the spaces in between them will encourage a porous and active network through the city.

By utilising the Domain as a potential site for CALE, the University will leverage the abundance of outdoor space and build on the existing CBD character by contributing to its evolving history. The University's currently owned facilities can be cohesively connected under the below scheme to create a campus that is safe, pleasant, diverse, efficient and lasting.

#### A Campus Heart

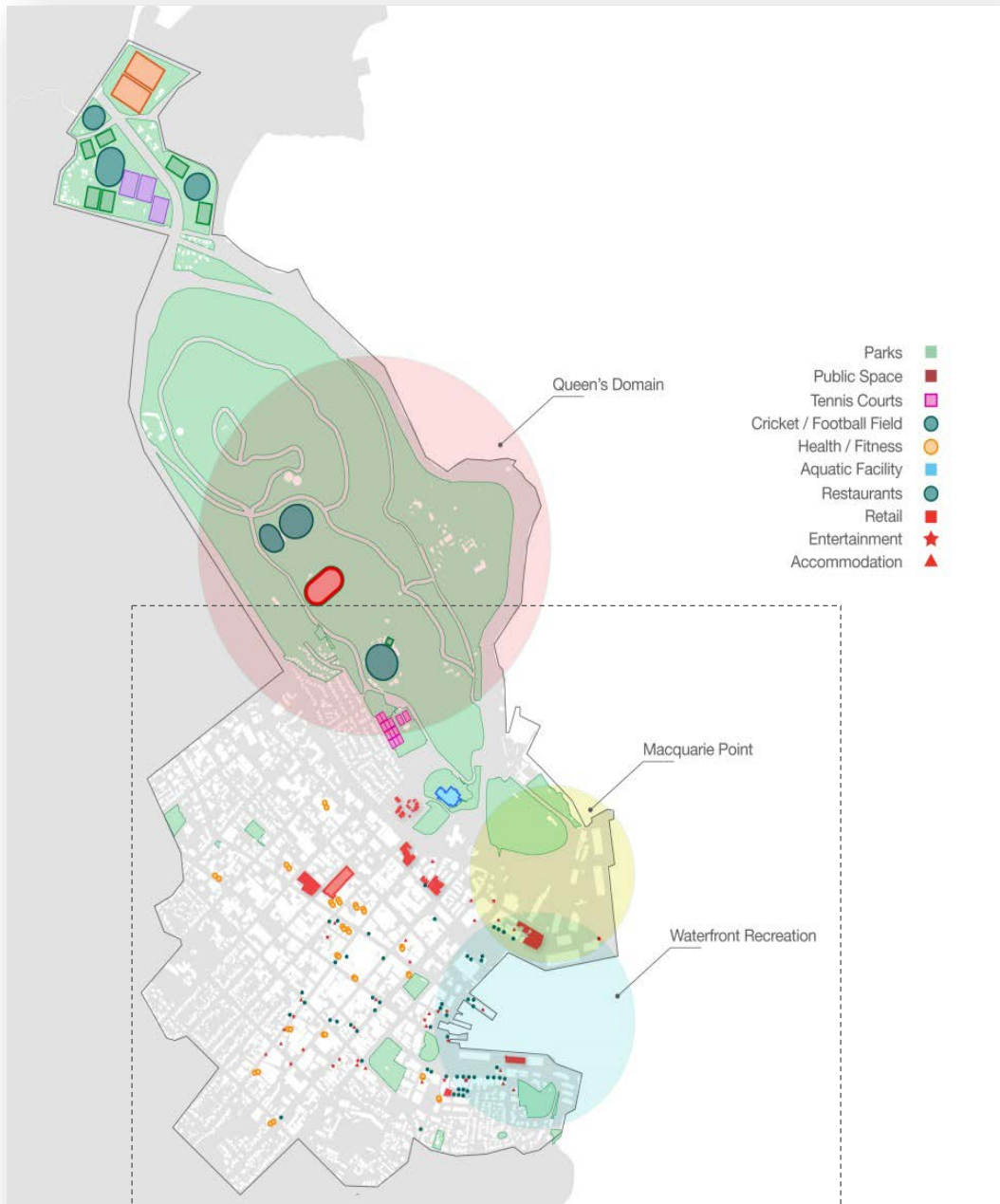
It is very important for the coherence of the University that it has a clear heart. The Webster site offers the opportunity to create a place of convergence and identity for the University. It could be the home to a public university square bordered by a central library and shared student and staff services.

With 1500 students living a few minutes from the library and these spaces, there will be a critical mass of people to ensure this is a vibrant place throughout the day and well into the evening.

In relocating the College of Science and Engineering to the CBD, there is opportunity for some agricultural teaching and research facilities to be retained at Sandy Bay, or transferred elsewhere.

Further expansion of the Cambridge site should also consider relocation of research facilities adjacent to the existing breeding facility. This would mitigate current risks associated with animal transportation and enable additional space within the existing Medical Science Precinct for repurposing. These opportunities would be explored with internal and external stakeholders in greater detail if the inner-city relocation was the preferred option. There is also the possibility of retaining some facilities on the Sandy Bay site.

A relocation to the inner city would create partnership opportunities with local and State sporting bodies, i.e., cricket, rugby and soccer. This may be facilitated through the utilisation of public facilities at the Domain and Cornelian Bay, however, the supply is not expected to meet current demand. A potential strategy to mitigate this undersupply would involve the public use of facilities at Olinda Grove and/or dual funding of additional facilities by the University and partners. The utilisation of existing parks and urban space for informal recreation activities offered by the TUU will assist in meeting supply gaps. Such practices would produce a critical mass and subsequently promote synergies with the community as well as the City of Hobart.



*Recreation partnership opportunities located close to the CBD*

## Sandy Bay Consolidation Master Plan

### Context

University Council, BEIC and Finance Committee requested that any business case for Hobart CBD campus should include a comparison against a realistic alternative. For the purposes of this business case, the realistic alternative stipulates that University operations remain as is, unless:

- Minor refurbishment is required (i.e., business as usual) or;
- Infrastructure beyond economic life requires major refurbishment or rebuild in-situ on the existing campus.

### Site Considerations

Generally:

- STEM facilities will remain on the Sandy Bay campus
- EFTSL demand modelling will align with the 'business as usual' forecast.

CBD properties:

- Current University of Tasmania occupancy in the CBD is unchanged, i.e., Medical Science, SOCA, IMAS and The Hedberg
- The CBD site earmarked for STEM on Melville Street to be developed for student housing with the balance to be kept
- Domain and Forestry facilities to be retained or divested
- No further land purchases in the CBD required

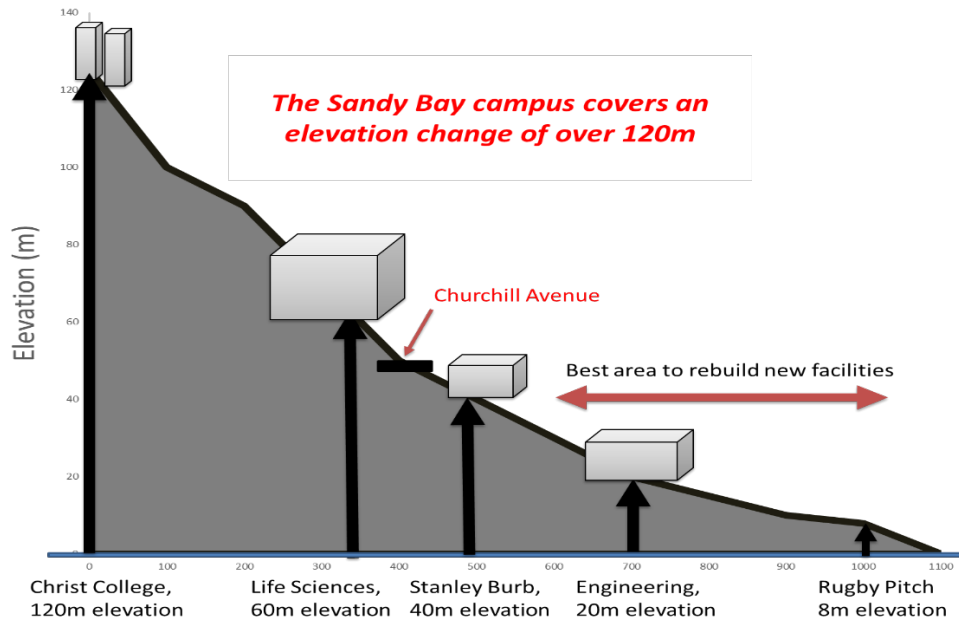
Sandy Bay site:

- Sandy Bay campus will be consolidated as much as possible below Churchill Avenue to allow value to be realised over time of the existing campus and above Churchill Avenue.
- Decanting will be a single step, i.e., new facilities will be constructed on available Sandy Bay land, operations will move into the new facility, and the redundant facility will be demolished to create vacant land.

Refurbishment and redevelopment works will require compliance with the Building Code of Australia, laboratory standards, the Disability and Discrimination Act, and environmental performance.

As indicated in the diagram below, the initial considerations are that the optimal location for a reconsolidation is the area immediately west of Sandy Bay Road. The gradient enables a more economic build, more accessible ramps for people of different abilities, and as discussed below, allows a construction profile that would limit the initial impact on staff and students.





The image below shows a potential plan for the consolidation of the University to below Churchill Avenue. The sports and student facilities along the oval would be retained, as would the Centenary, Administration and Law buildings and the Arts Lecture Theatre, identified as being able to be refurbished in the Building Condition Report. Many of the other existing buildings have been identified as needing to be rebuilt. This master plan option places the STEM facilities towards Sandy Bay Road, creating a new pedestrian gateway to the University. This gateway includes the creation of a green spine that runs through the campus towards Rifle Range Creek, enveloping the existing oval and surrounding the Centenary and Administration buildings. This green spine would be flanked by two new precincts, which would include buildings for CALE, administration and staff and student services.

The consolidated plan shows all buildings built to four levels and with a greater efficiency of floor space than the existing conditions, hence the smaller building footprint of the new campus provides more green space, encouraging greater permeability and connection throughout the campus. This plan would encourage the creation of an increased water management and drainage system, mitigating potential future flood damage. Car parking would be provided along the periphery of the campus, with vehicle access restricted to the exterior ring of the campus, with an increased pedestrian, cycling and public transport network aligning with the surrounding urban fabric. The development of the campus north of Churchill Avenue into residential and mixed-use facilities would increase the usage of Churchill Avenue as a thoroughfare. The green spine would encourage surrounding residents to use the campus as a parkland, increasing usage and activation hours of the University.



Figure 17: Sandy Bay campus consolidation plan

Under the consolidation plan, the majority of sport and recreational facilities are retained. The rugby pitch in the north-east corner of the campus is lost to facilitate the construction of a new STEM facility. However, this may be substituted with a multi-purpose indoor facility. As discussed above, while sport and recreational facilities in Sandy Bay are abundant there are quality issues and supporting infrastructure gaps, i.e., female change rooms, that require immediate attention.

#### Potential Timelines for Each Option

The potential timeline for a reconsolidation and modernisation of the Sandy Bay campus would involve refurbishment of some existing buildings through 2019 and early 2020, followed by design and construction of a new STEM building, with a forecast build timeline of mid-2021 to the end of 2024.

Construction of a new Arts complex would begin in the latter half of 2025, through to mid-2026, while the existing Tasmanian School of Business and Economics would be refurbished in 2024 and early 2025. Construction of a new Student Experience centre and library would begin in early 2027, with an estimated completion in early 2029. In late 2029 construction of a new Administration building would begin, with completion likely toward the later part of 2031.

The potential timeline for a Hobart city relocation would begin with refurbishment of existing CBD buildings to house a new Student Experience centre through 2019 and early 2020. Concurrently, a full master planning exercise for the CBD would be undertaken and heritage assessments of the Domain concluded. From mid-2019 refurbishment of existing buildings to house the University Centre and Tasmanian School of Business and Economics would run from mid-2019 to early 2021.

From mid-2020 planning and subsequently construction of a new Law building, which would involve some refurbishment of an existing building, would occur concurrently with construction of a new Arts complex and refurbishment of a building that would house Education.

Construction of a new library and STEM building would occur concurrently from early/mid-2022 to late 2024. A new Administration complex would be built or refurbished through 2024, with completion likely in early 2025, its site would be an outcome of the detailed master-planning process.



## 4. Important Considerations for the University and the Community

### An Assessment against Qualitative and Quantitative Criteria

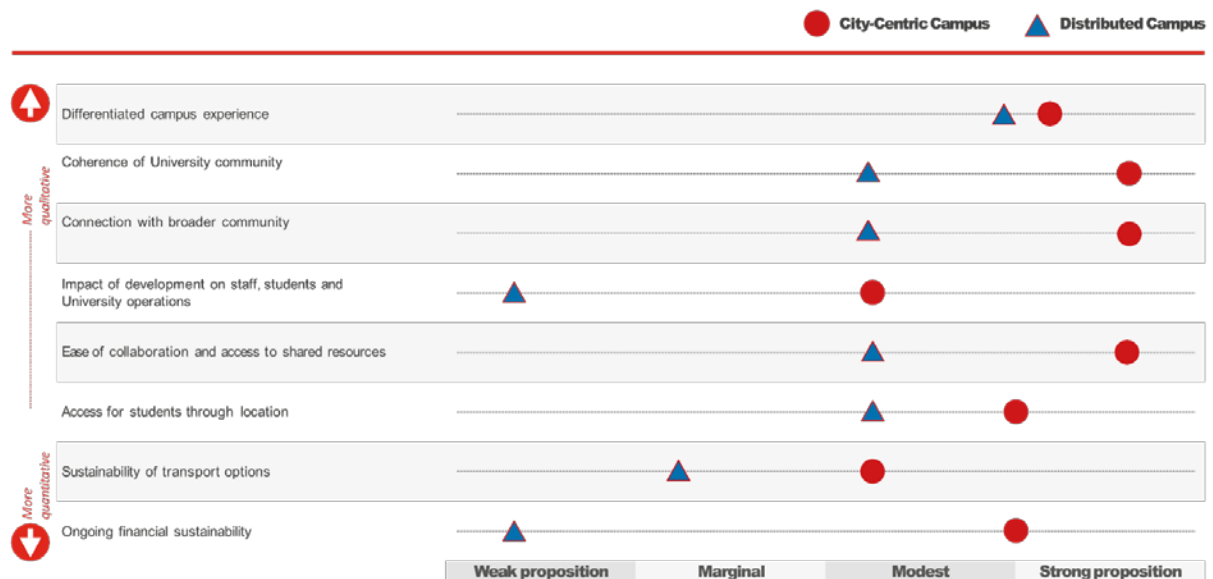
Based on the overall University strategy, eight criteria were developed to compare the two potential options. These criteria were tested in the consultation process and there was a high degree of alignment about their importance.

Criteria for Decision	Survey Respondent feedback
<b>Differentiated campus experience</b>	42% rated as important
<b>Coherence of University community</b>	63% rated as important
<b>Connection with broader community</b>	42% rated as important
<b>Impact of development on staff, students and University operations</b>	63% rated as important
<b>Ease of collaboration and access to shared resources</b>	55% rated as important
<b>Access for students through location</b>	<b>50% of staff rated as important but <u>75%</u> of students rate as important</b>
<b>Sustainability of transport options</b>	62% rated as important
<b>Ongoing financial sustainability</b>	48% rated as important
<b>All of the above (also included in criteria above)</b>	23% rated as important

It was recognised that assessment of these criteria would range from the more qualitative through to the quantitative.

The strength of each option was assessed, based on the articulated criteria and the understanding of how each option could reasonably address these evaluation criteria.

The overall assessment of these options was:



Working from the most qualitative to quantitative we step through the rationale for these assessments.

### Differentiated Campus Experience

Creating a distinctive campus experience is important as the University's future is dependent on being able to offer a differentiated offering to its competitors. A campus is an important way to give expression to those differences.

Investment in new or considerably refurbished buildings will deliver state-of-the-art research and teaching infrastructure in either scenario. High-quality learning and research facilities need to be in place for a university to be attractive to prospective students.

The question is about what can differentiate a university. The difference comes from the distinctive history that buildings can connect people with and the way the infrastructure is used and integrated into its surrounding environment.

Thousands of tourists descend daily to enjoy the unique beauty of Hobart as a city, its mix of early sandstone buildings, the waterfront area and the bushland visibly surrounding the city in almost every direction. As a university, by virtue of our location in Hobart and in Tasmania we already have a compelling differentiated location. To build on this, the future campus needs to leverage the use of historic buildings, the integration with the natural environment, the benefits of its urban setting, and the relative closeness with professional and industry partners in multiple fields. It is important, however, to consider that a differentiated campus experience is not purely one of location, but how we use this.



A city-centric campus leverages the site of the original University - the Domain - while also incorporating new facilities in the Melville Street precinct. Domain House, and the Phillip Smith, Old Electrical Engineering and Waterworth buildings, together with a new building centred around a green quadrangle and incorporating the historic rose garden, would be a compelling home for the College of Arts, Law and Education. Such a home evokes the imagery of traditional liberal arts colleges, with the uniqueness of the Domain bushland on its immediate boundary and treelined views over the City, Mt Wellington and Derwent River. However, a two-minute walk over the pedestrian bridge brings staff and students into the heart of the city and to other University areas. For the residents of the new buildings along Melville Street, there is a less than a kilometre from the door of an office or a formal learning space to bushland. The ability to integrate natural bushland into teaching is currently done in some areas in Sandy Bay. In the city-centric campus model, the proximity of the Domain and Botanical gardens enables this to continue - a unique experience.

The distributed campus model will mostly be based in new buildings, with the conceptual plan showing the most economic and less disruptive future footprint close to Sandy Bay Road, while maintaining the beloved green leafy spine. As in the city, we retain our link to the close bushland, with access to the reserves a similar distance – i.e., less than one kilometre.

As discussed in the [Building Condition and Functionality Report](#), it is possible for many of the 1960s buildings in Sandy Bay to be refurbished. However, it is more expensive and will limit the flexibility to change floor plates and involve a significant disruption to staff and students.

Through engagement with staff, it is clear that they value the natural environment in which the Sandy Bay campus is situated, and it is also enjoyed by students. The city-centric campus model provides access to the Domain and any future design will need to incorporate natural spaces that speak to this deeply-engrained value. Conversely, having access to an urban setting is difficult to achieve in Sandy Bay, being embedded in a largely residential neighbourhood. Finally, logistical barriers are presented by distance, separating learning from the spaces where professional and clinical experiences take place. A prime example is the research and teaching value gained from situating the Medical Science Precinct close to the Royal Hobart Hospital.

Respondents to the survey overall favoured the distributed campus model when it came to the differentiated campus experience. As in all of the criteria discussed below, this needs to be viewed in the context of the information presented and discussed in the room, and their own interpretation of what makes a differentiated campus experience. However, the focus groups also underscored the great love that many have for the beauty and site of the current Sandy Bay campus.

Interestingly, however, when asked to consider which of the eight criteria was important to consider when making a decision, only 19% nominated a differentiated campus experience. In addition, only 23% of respondents believed all eight should be considered equally, which is the lowest ranked of all.

Further detail on the feedback from the staff and students can be found in [Appendix 2: Engagement Summary, Mar 2019](#).

### Coherence of the University Community

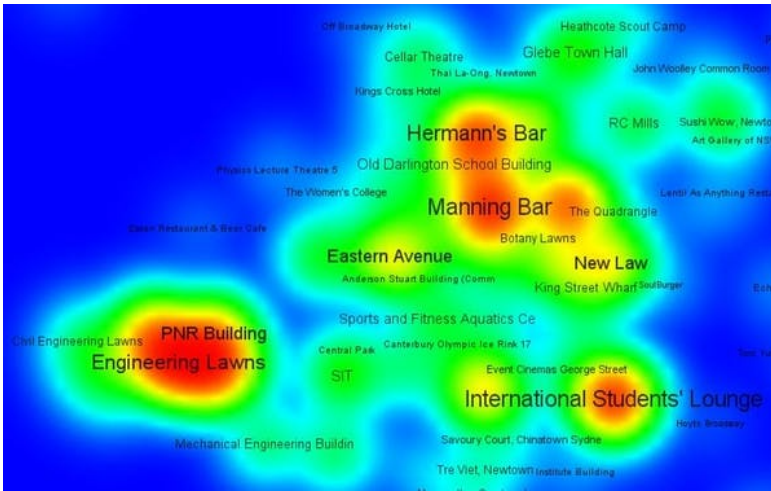
A coherent University community speaks to staff and students feeling connected by a campus heart. Determining how such coherence could be best achieved requires considering such questions as:

- How will it create or achieve an attractive, connected 'place' – a 'heart and soul'?
- Will the proposal enhance the student social interaction and deliver collaborative learning spaces (e.g., library) cohesively?
- Will the design enable formal and informal opportunities for staff to connect?
- How are social places created to provide a sense of belonging and create a sticky campus?

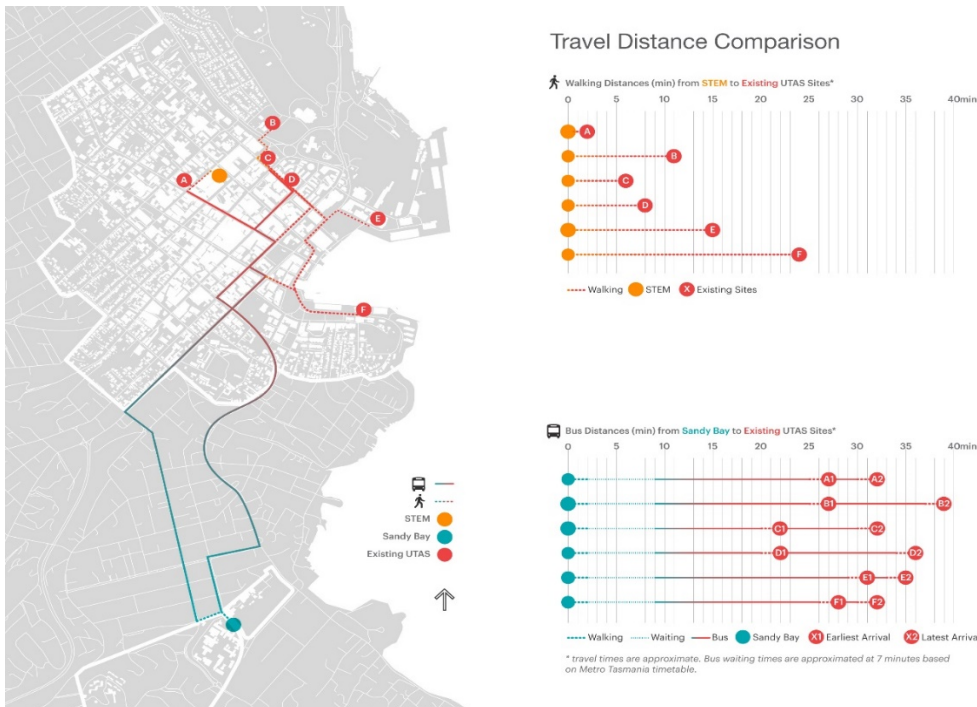
Common feedback from both staff and students throughout the stages of the development of the business case is that the heart of the campus today has been lost. While there is vibrancy for one or two weeks during the start of semester, that dissipates quickly, with students choosing to spend far less time on campus, for a variety of reasons, including their ability to access lectures online, work and family commitments, or a distinct lack of heart or community norms that encourages them to stay.

Coherence and the campus heart come from creating opportunities for staff, students and the community to come together to learn and study, get help and support, socialise and relax. It isn't necessarily just one single physical location, but common spaces where there is opportunity to work quietly, to share ideas and relax with each other. It requires providing multiple options for people to interact in differing ways. Understanding what type of places work to promote cross-discipline

engagement is key. Examples such as the University of Sydney heat map below shows where some of the most common interactions occur.

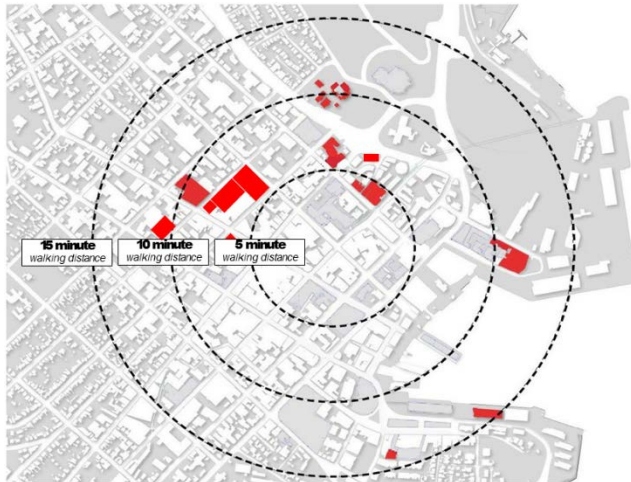


The lack of interaction between students studying in the city and those in Sandy Bay has been clearly identified, but less so is a staff disconnect between those locations. While the map below shows the travel distances between two areas, the reality is that much engagement between staff is via Skype.



A city-centric campus model will enable up to 90% of the University's southern-based population to be within 750m, an area smaller than the current expanse of the Sandy Bay campus below Churchill

Avenue. A distributed campus model would enable the reconsolidated Sandy Bay campus population to be even closer – within 500m - but still 3.5km away from a third of the University.



Under a city-centric model, the Melville Street area would form the backbone of most student services and study spaces, including the major library. Bookended by the Domain and Forestry, it provides an area for student life to centre around. Additional spaces would be required in the individual buildings to provide informal meeting places. In the case of a distributed model, the Morris Miller Library would be rebuilt following the

STEM construction. A new library or larger study spaces in the city would also be required to support the students already there.

Although staff engagement provides mixed feedback on the strength of a current campus heart at Sandy Bay, it will be paramount in the design of a future campus model. This will be more challenging to establish if Sandy Bay is rebuilt as the distribution between facilities at Sandy Bay and in the city will require an approximate commute of 20-30 minutes on public transport, while a city-centric campus will enable a maximum 20-minute walk from the farthest sites. With 30% of Hobart academic staff and 21% of students already based in the city, some feel disconnected from their colleagues and peers in Sandy Bay. Staff engagement has already raised the question of how specialist facilities, if they were to remain in Sandy Bay, would function with the city-centric model. Consideration around teaching methods, as block or hour-long, would also need to be factored in.

Further detail on the feedback from the staff and students can be found in [Appendix 2: Engagement Summary, Mar 2019](#).

### Connection with the Broader Community

Determining how the options best connect with the broader community requires considering such questions as:

- How will the proposal impact on the surrounding areas?
- Will the proposal deliver benefits to the community and region?
- Will it contribute to the vibrancy and rejuvenation of the area and region, delivering a positive community outcome?
- How does the proposal enable collaboration with industry partners for both research and student benefits?
- Can the closer proximity of the University increase the opportunities to share facilities and infrastructure between State and local government?



Our connection with the broader community is critical to achieve our strategic aims and that of the State and region. Our experience with the infrastructure already in the CBD supports the view that a city-centric campus will further establish collaborative working arrangements and increase work-based experiences with private and public entities.

The enlivening of the northern side of Elizabeth Street since the opening of the Hobart Apartments, with its 470 students, is a precursor of the increased activity, vibrancy and business growth that would be offered by the city-centric model. Support for retail businesses, including cafes, restaurants, speciality shops and general services, will be significant and provide further employment opportunities for students who are currently limited to a number of establishments on the Sandy Bay campus. In addition, the increased presence will enable private enterprise to provide services and start businesses in response to the demand, as opposed to the deployment of University capital and subsidisation on an ongoing basis.



Given the hub and spoke design of Hobart's transport, for those not located in the central city area it would be far easier to travel to the University and for staff and students to reach them. That ease of access is particularly important for the University to connect with industry, much of which is located on the transport route up the Derwent.

However, the existing buildings in the CBD do not provide a welcoming environment for the broader population. Anecdotally, staff based elsewhere feel unsure if they can access University buildings in the CBD. Future buildings, including the new student accommodation building on the former Red Cross site, would seek to change this. But a city-centric approach would need to work closely with the Hobart City Council and State Government departments (including TasTAFE) to ensure that the precinct is designed holistically to encourage multipurpose use of facilities and spaces that are welcoming to the general community.

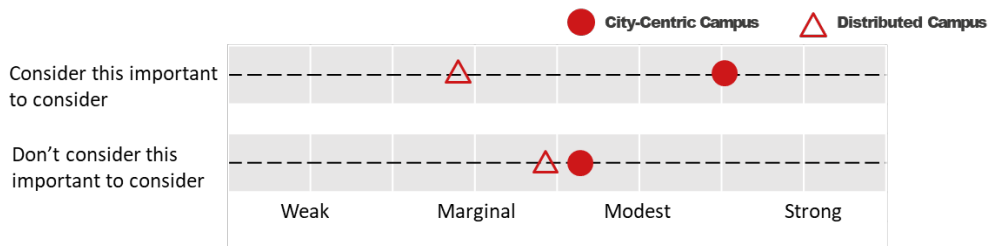
The city-centric campus model provides a much stronger basis for working with partners. It would bring the University into a much closer relationship with key partners in the government and business community located in the City.

In Sandy Bay, the general community venture onto the University site for a limited number of reasons, such as specific events, open days, and the utilisation of sporting fields. In a distributed

campus, the ability to change this is limited, and will require significant outreach efforts to pull people into the facilities.

The staff and student feedback on this point held the greatest levels of differing opinions of any of the eight criteria. People who felt that the connection of the broader community was an important criterion to consider saw a clear difference between the two options, whereas people who considered it less important did not.

#### How do you rate the connection to the broader community?



Further detail on the feedback from the staff and students can be found in [Appendix 2: Engagement Summary, Mar 2019](#).

#### Impact of Development on Staff, Students and University Operations

The decision on how the southern operations of the University will be developed over the next 10-15 years will have an immediate impact, but also long-term implications. Although the decision to continue as a distributed campus or change to a city-centric campus is one that will last for generations, it is important to recognise the relative short-term experience of staff and students while development takes place.

In both cases, the proposals will support the long-term mission of the University to pursue knowledge, empowering free enquiry and delivery to 21<sup>st</sup>-century teaching and learning through the investment in new fit-for-purpose infrastructure. As the most realistic option for remaining a distributed campus and redeveloping at Sandy Bay is to rebuild rather than refurbish, then clearly both proposals will contribute to the sustainability objectives through efficient building design and applicability of appropriate supporting services. The important consideration in the longer term is ensuring that both models provide the ability to scale for growth and adaptability as learning and working models change. Both conceptual plans have building design and shell space factored into costings to allow the deliverance of quality infrastructure that supports the needs of the University for the next 50 years. Hence, the proposed models both deliver the outcomes required in the long term.

The likely timeline for the entire city-centric redevelopment program is more than 10 years. For this model, timelines will be dictated by access to funding and planning constraints, but ostensibly, much work could be undertaken in parallel, resulting in the ability for operations to move with a one-time disruption.

The proposed STEM building will have an estimated 12-18 months predevelopment phase, with construction likely taking two-three years. Impact on staff and students will be limited to the 421 students in the adjacent new student accommodation building, which should be completed before construction of the STEM building would start, and to a lesser degree, on those in the Hobart City Apartments in Melville Street. Noise from construction will be the primary area of disruption— but

only during daylight hours, and mitigated by the utilisation of concrete construction materials and double-glazed windows. Vehicular access to the site would be predominantly via Argyle and Bathurst streets, with minimal impact on the student population. Upon construction, the COSE schools and disciplines would make a one-time move, without need to decant or use temporary facilities.

Similarly, the Forestry site for the potential tenants of TBSE and University College would be a one-step process. However, the impact of works at that building should have little impact on the students in the area.

Development on the Domain will have a longer timeline due to the complexity of the site, both in predevelopment and in construction. It is envisioned that immediate works could commence on the Waterworth building to rehouse Education, but the longer-term redevelopment of Domain House as well as the new building could take up to 2028. Construction noise and traffic could impact the staff and students in Education and Nursing, but there are buffer buildings that would reduce that.

In the case of a Sandy Bay redevelopment, the timeline is driven by the need to limit the impact on staff and students, minimising the decanting of people, as well as freeing up space to construct new buildings. Given funding constraints discussed below and the need for construction to proceed sequentially, it is easily envisioned that construction on the Sandy Bay campus would impact materially for a period of 10-15 years.

The STEM building would be constructed on the current rugby pitch. With similar timelines to above, the construction window is likely to be between 2022-2024. This should have limited impact on ongoing operations, with the exception of staff and student parking. Already of great concern to both populations, alternative options will need to be identified to support a temporary parking solution. The general noise and construction traffic will be of limited impact on staff and students, but more so to the local residents. Following the completion of the STEM building, there would be a one-step relocation to the building by the COSE schools and disciplines. This will then enable the vacated buildings to be demolished, including Engineering, Geology/Geography, and progressively, Maths and Physics. This would then see a period of approximately 5-10 years where the campus will be split by a construction zone, immediately adjacent to Law and surrounding TSBE in the Centenary Building. Noise and traffic will impact daily operations. In addition, the move to the lower campus of the STEM-related subjects will leave Administration and Arts and the Morris Miller Library separated by empty buildings, requiring either a consolidation (and subsequent decanting and increasing noise impact) to maintain vibrancy for students or the prospect of a disjointed campus with little heart for the decade of construction.

With a total of 63% of respondents rating the impact on staff and students as being an important factor, this was one of the highest concerns from the survey population. The responses and qualitative comments from the focus groups show quite a diversity of opinions – some clearly show that the timeline wasn't explained to a level of detail to which people were able to make an adequate comparison, but others felt that all change is hard, but that it was necessary for long-term gain.

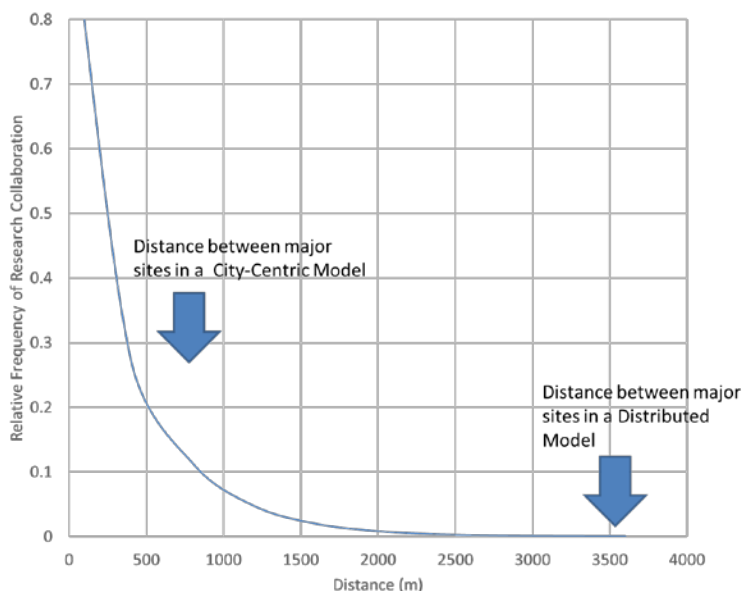
Further detail on the feedback from the staff and students can be found in [Appendix 2: Engagement Summary, Mar 2019](#).

### Ease of Collaboration and Access to Shared Resources

It is important to consider how we better foster innovation and collaboration while being fiscally prudent and using our resources efficiently.

Compare the current distance of 3500m between the University's Sandy Bay and current city facilities with the potential to reduce the distance to 750m between most facilities in the city-centric model.

While it is intuitive that proximity assists innovation, and is a major reason why co-location occurs in innovation precincts, a study at MIT put evidence behind the relationship when it comes to research collaboration. The study found that the likelihood of research collaboration dropped exponentially with increasing distance. With more than 30% of southern academics based in the city, many have limited interaction with academics based in Sandy Bay.



For the University, having medical and other sciences separated creates important constraints on obvious areas of collaboration. For the State's future, having medical sciences and the creative arts separated from colleagues in business limits the opportunities for potentially highly productive research collaborations and the creation of start-ups. Similarly, having engineers separated in an era where medicine and machines are fusing is to constrain important opportunities.

An increase in proximity would enable the sharing of common resources that may otherwise be under-utilised, such as student services that in the city may not have as much patronage. The distributed model requires additional running costs to duplicate facilities for staff and students in both clusters of activity. A consolidated Sandy Bay campus would be in a closer area (500m) than the city-centric model (750m), but with 3-4km between the distributed sites, student support services and library spaces are unable to be shared. With campuses in Burnie and Launceston already providing duplicate services for students, the operating cost is already having a considerable impact on our ability to provide sufficient and efficient support. The duplication of these resources in both the city and Sandy Bay – which is considered as mandatory in a distributed model, given the numbers of staff and students in both places – will be a considerable strain on the ongoing operating

budget, and the level of efficiency in the use of space that is required to be financially sustainable in the long term.

Feedback from the consultation process showed that many of the Sandy Bay-based staff saw little difference between the two options in terms of their relative strengths in this criterion, but the clear differential came from those currently based in the CBD. This was also borne out by more descriptive feedback, where city-based staff and students conveyed a feeling of isolation, except within their schools, and a general lack of support services; whereas Sandy Bay staff felt the existing situation works well. These experiences of the inner-city staff do not figure much in the views of Sandy Bay staff precisely because of the extent of separation.

Further detail on the feedback from the staff and students can be found in [Appendix 2: Engagement Summary, Mar 2019](#)

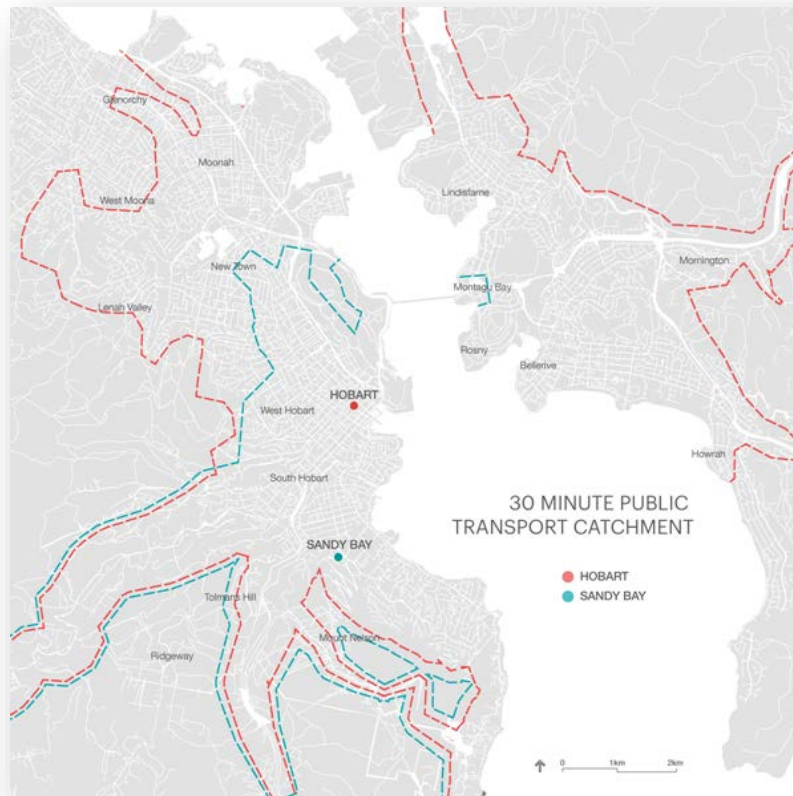
### Access to the University

- How will the proposal deliver a university that is accessible by all, through appropriate connection to sustainable transport options and effective community integration?
- Will the proposal improve accessibility and visibility of university education to the broader community?
- Can it deliver learning zones for all - engaging and connecting the community and the University in a collaborative endeavour (via digitisation, smart buildings, etc.)?

As the physical distance between a student's home, work and university increases, the likelihood is of enrollment decreases as noted in an RMIT study by Cooper, Baglin and Strathdee. This is further exacerbated by the time, cost of, and means of travel to the relevant campus. Public transport journeys that require multiple changes is an additional deterrent to undertaking further education.

Public transport services (frequency and cost) are a critical factor for university cities in attracting and retaining students. In addition, multiple mode changes to arrive at a campus is a deterrent to undertaking further education. Across Australia, the average distance travelled by a student attending a university located in a capital city is between 11 kilometres and 15 kilometres from their usual place of residence. The University of Tasmania Sandy Bay campus is more than 15 kilometres from many of the younger and growing suburbs where potential students reside (particularly those experiencing disadvantage). Most bus journeys from these areas require multiple public transport changes to access the campus.

The diagram below highlights the difference in the 30-minute public transport catchment between the Sandy Bay campus and the Hobart CBD. Moving the campus closer to the high population suburbs north and east of Hobart will extend the University's 30-minute bus journey zone out to Glenorchy (compared with New Town for the Sandy Bay campus) and to Geilston Bay and beyond Mornington (compared with Montagu Bay for the Sandy Bay campus).



*Figure 18: 30-minute public transport catchment comparison between the Sandy Bay campus and Hobart CBD*

A relocation of the southern campus to the CBD also has the potential to improve access to the University for people living in regional areas. The below diagram highlights the difference in the 60-minute public transport catchment between the Sandy Bay campus and the Hobart CBD.

A CBD campus would allow for single bus trips of one hour or less from Clifton Beach, Sorell, Campania, Brighton and New Norfolk, while only causing a slight trip-length extension for students living south of Huonville and Kettering.

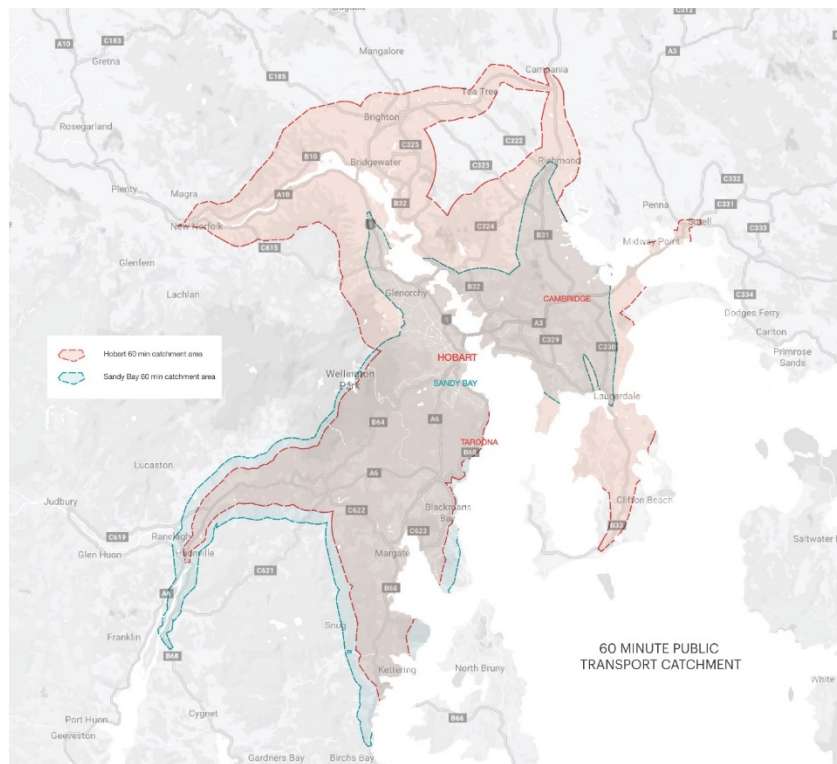
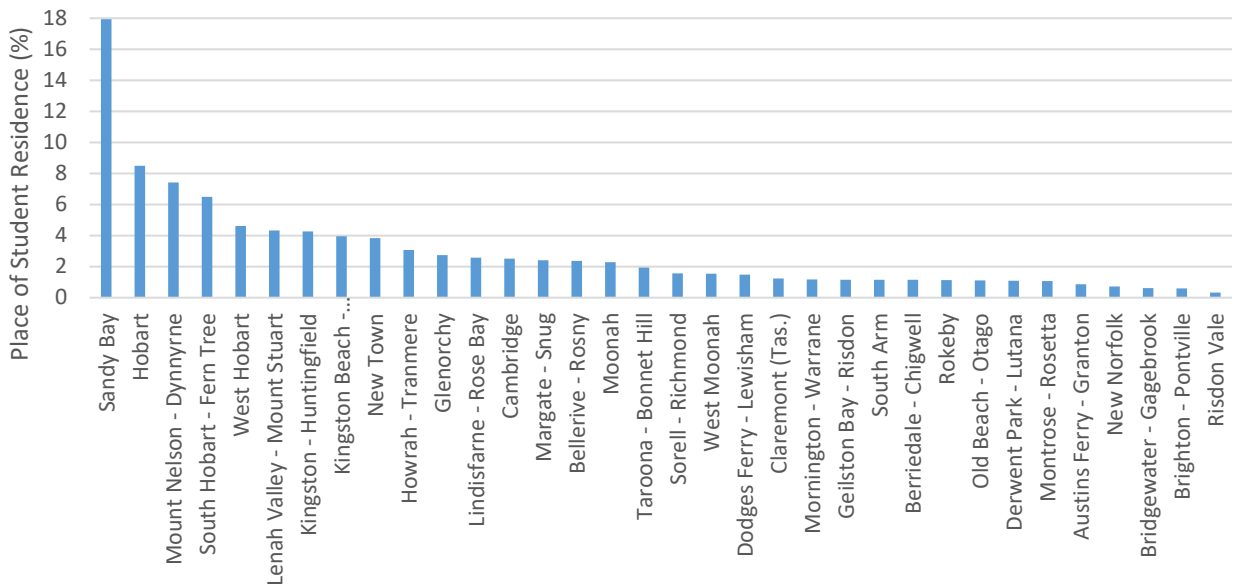


Figure 19: 60-minute public transport catchment comparison between the Sandy Bay campus and Hobart CBD

As discussed in the socio-economic impact study carried out for this business case, disadvantaged groups are under-represented within universities due to a range of social, educational, geographical, and economic factors. While most of these are generally outside of the scope of influence of tertiary institutions, the University is in the unique position of being able to consider these factors and improve participation in higher education through campus location and access. The study concludes that a relocation of the southern campus has the potential to impact those experiencing disadvantage for two reasons: reducing the stigma associated with the campus location in Sandy Bay as well as improving greater proximity to and from students' (and potential students') usual place of residence and employment.

The chart below shows the location of student residences, with the high proportion of students based in Sandy Bay, South Hobart and the city driven by the student accommodation offerings. Our catchment area for the Hobart campus includes the municipalities of New Norfolk, Brighton, Sorell and the Tasman Peninsula, and Huonville.



In addition, up to 80% of our student body, both international and domestic, are either employed or looking for employment, demonstrating the need to enable employment by locating the University closer to the CBD.

#### Domestic students by employment status

	Full-time	Part-time/casual	Unemployed- looking for work	Unemployed- not looking for work
17-19 years	1.3%	50.4%	28.8%	19.5%
20-29 years	6.2%	58.6%	17.9%	17.2%
30-39 years	14.3%	50%	14.3%	21.4%
40 years and over)	29.7%	29.7%	18.9%	21.6%

Source: Commencing and Lost Students Survey, 2018

#### International students by employment status

	Full-time	Part-time/casual	Unemployed- looking for work	Unemployed- not looking for work
17-19 years	0%	21.1%	52.6%	26.3%
20-29 years	0%	13.5%	65.1%	21.4%

Note: Very low sample size in survey of international students over 30 years

Source: Commencing and Lost Students Survey, 2018

Further detail on the feedback from the staff and students can be found in [Appendix 2: Engagement Summary, Mar 2019](#)



## Sustainability of Transport Options

The impact of our future location will have a material impact on the traffic and use of sustainable transport. The criteria addresses:

- Will it impact positively or negatively on the community (e.g., transport logistics)?
- Can the University be part of a solution to increased sustainable choices by the broader community?

Red Sustainability Consultants and GHD were engaged to investigate the likely traffic implications resulting from a relocation into the Hobart CBD. A spreadsheet model was developed to reflect traffic generation and distribution for a baseline (current) situation and various University facility development and travel behaviour scenarios. The modelled scenarios provide an indication of potential changes in travel activity and parking demand between the scenarios.

The focus of the assessment was on travel during the AM peak period, nominally between 8am and 9am on a weekday. Travel patterns in the PM peak tend to be more complex, due to an increased occurrence of non-home-based trips and trip chaining. However indicative results are provided for the PM as well. The full report is attached in [Appendix 9](#).

### Key Findings

An important feature of the change in on-campus student population in Hobart has been the growth in international student enrolments and the increasing percentage of international students on-campus in Hobart. The significance of this is relevant to travel behaviour as the majority of the international student cohort tend to live nearer to their main place of study than domestic (especially Tasmanian) students.

Residential location plays an important role in travel mode choice. The residential location of many international students in the vicinity of Hobart campuses enables active modes, particularly walking. Domestic students live in a greater diversity of locations throughout southern Tasmania and have much higher levels of car use, as do staff.

The modelling reveals a likely reduction in trips made by car to the University with a relocation to the Hobart CBD and associated changes in mode share and/or residential location. The impact of this on the road network is varied. Roads that connect between the Hobart CBD and the existing Sandy Bay campus will generally see a significant reduction in traffic activity. There will be relatively minor increases in traffic on roads such as Macquarie Street and Sandy Bay Road northbound, although given existing volumes on these roads are already approaching capacity at peak times, the potential implications of this could be significant. These impacts will need to be modelled in more detail.

### Transport Opportunities

Travel demand and mode share profiles will be impacted by a range of factors into the future. However, it will be the way the University develops its facilities in the context of a changing urban-regional environment that will be most important in managing changes in travel demand and urban traffic.

Working collaboratively with relevant agencies will be crucial in helping people make the shift from single vehicle use to other forms of transport, including public transport.

***Better integrate strategic University transport planning with master-planning and facility design***

Maintain the practice of undertaking strategic sustainable transport planning to reflect the changing nature of the University and the urban and regional environment and better scaffold the strategic planning objectives and principles into University master plans, and the design of specific facilities and infrastructure.

***Plan for university population diversity and change***

Continue to distinguish between planning for local and international student demands, as well as staff, as response strategies will require different emphases.

***Grow the number of students living in central Hobart***

Growing the number and proportion of students living in central Hobart and neighbouring areas will be crucial for reducing student vehicle use and parking demand. It is strongly recommended that the University takes a proactive role in meeting the housing needs of both domestic and international students. The ability of the Hobart CBD to accommodate a significant increase in car driver trips is limited, with impacts expected to spill into surrounding areas and affect the wider Hobart community. This aim will be assisted by the already greatly superior public transport access to the CBD from all areas compared to Sandy Bay.

***Work with external agencies to grow public transport mode share***

Growing the public transport mode share of the university population to reduce the risk of excessive car use, traffic congestion and parking demand would need to be a central aim of any city consolidation strategy and will require working closely with Metro, Hobart City Council and State Growth.

The consolidation of the University in the CBD presents an opportunity for a step change in the operation and perception of public transport across the Greater Hobart Region. Corridors with particularly high car-use and growing travel demand are most suitable for priority mode shift initiatives. Initiatives could include:

- Real-time bus service information to improve ease of public transport use and enhance customer confidence in bus arrival and departure times;
- Review of the suitability of bus services according to demand and latent demand (routes, frequency and peak periods);
- Increase the frequency of bus services in high-use corridors and facilitate the reliability and efficiency of these services through appropriate infrastructure and road network adjustments (e.g., transit lane provisions);
- Promote a regional park-and-ride network to facilitate access across the region (particularly outer urban growth areas) to high-frequency bus corridors; and
- Consider incentives for public transport use, including rewards schemes, and the potential re-structure of bus fares, and reduced fares in off-peak periods.

***Work with external agencies to develop sustainable parking responses***

It will be important to carefully consider parking strategies as part of any move to the inner city. This requires partnering with local and state governments to roll out measures that maximise alternative

transport choices and consider the impact of public and University parking supply and mix (parking location, parking type, parking cost).

We have found that while there is concern about access to parking, with easier access to the University in the CBD the demand for parking will reduce by as much as 21% for staff and 11% for students.

The current ratio of driving staff and students to parking spaces in Sandy Bay is 3.71, and with the current transport trends in the CBD, increased student accommodation and the potential to add University parking the ratio for the city-centric model is expected to be 3.51. This will be reduced even further when private parking is factored in.

Since dealing with parking agendas in any CBD is a challenging task, public and institutional discussion needs to be packaged with the heightening of community (and institutional) awareness of the links between parking supply, public transport patronage, traffic congestion, amenity in central city areas and the cost of both parking and public transport.

Ultimately, parking strategies that aim to limit parking in central areas cannot be pursued without significant attention to private-vehicle travel demand management strategies. Without a highly reliable, efficient and cost-effective alternative to private car usage, there will be limited incentive for an individual to change their travel behaviour.

### ***Enhance active mode accessibility and amenity***

With an increase in the number of people working, studying and living in the Hobart CBD there will need to be due consideration to improving pedestrian amenities within the CBD and safe, integrated cycle networks and end-of-trip infrastructure. Again, it will be essential for the University to continue to work with local councils and other relevant agencies, and for the University to incorporate these elements in its own master-planning and facility design stages.

Further detail on the feedback from the staff and students can be found in [Appendix 2: Engagement Summary, Mar 2019](#)

## Commercial Plan

### Overview

What are the cost implications of the proposal, including the capital expenditure of any new builds, acquisition of land or buildings, refurbishments and transition logistics?

What impact will the proposal have on the future capacity of the University to fund research and ensure academic excellence?

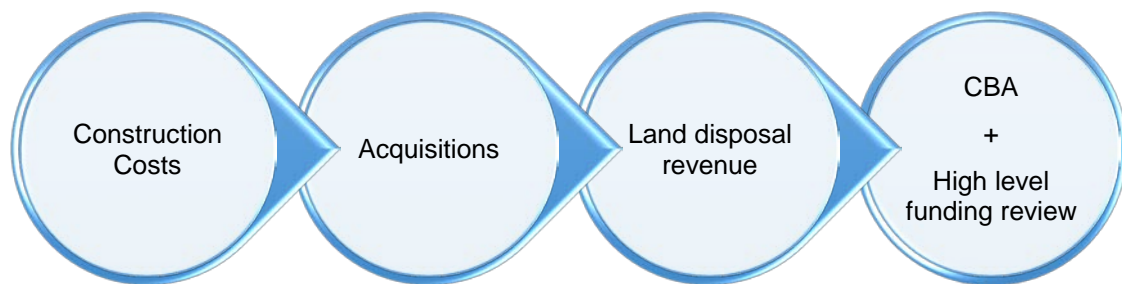
What is the likelihood of being able to dispose of surplus buildings and land?

Will the proposal provide the flexibility for the University to grow in the long-term?

The Spatial Master Plan provides the detail required to inform commercial planning to provide a high-level indication of funding opportunities and the associated risk:

- A quantity surveyor-prepared indicative cost plan of the two development options based on the GFA analysis and building condition report.

- Property acquisition requirements identified in the master plan with indicative allowances for purchase.
- A master plan strategy for realising the value at the Sandy Bay campus for each development option, including how to enhance the land value while mitigating the University's risk and ensuring a good outcome for the surrounding community.
- High-level funding assessment incorporating a cost-benefit analysis and a mix of funding options to align with the University's credit rating.



PwC was engaged to assist with the development of high-level financial models and investment cases for commercial opportunities and ownership strategies associated with the master plan. Following phase one, PwC has undertaken an analysis of preferred campus infrastructure scenarios, based on the review and analysis outlined in previous phases and cost, staging, asset realisation and decant plans, in order to consider funding requirements and approaches to procurement.

### Construction Costs

An indicative cost plan for each development option has been prepared by a quantity surveyor. The assessment has been undertaken using the bottom-up area analysis introduced in the Gross Floor Area Requirements Analysis Report and the data provided in the Condition and Functionality Audit 2017 (Lower Campus Buildings). Costs are based on current-day values and do not allow for escalation.

The project consists of seven main areas: STEM, student/staff services (including the resource centre), CALE, TSBE, and the Taroona, Cambridge and Administration facilities. The aim of this feasibility study is to explore facility development options and provide recommendations based on cost, scope and outcome. It should be noted that the costs are built up by specialist areas, and the final construction cost of individual buildings will be determined by the detailed design process. As an example, the previously proposed STEM building estimated at \$400 million included significant floor space allocated to student experience and library space in addition to the needs of the COSE, Pharmacy and Psychology.

The current estimated costs for the project, excluding GST, are:

- **CBD relocation:** \$ 677,145,237
- **Consolidate & Reinvest:** \$ 656,413,706.

## Construction Price Details

### CBD Relocation and New Build

Building/Area	GFA	Total
STEM	26,435	\$223m
Student services	20,610	\$153m
CALE	12,472	\$93m
TSBE	9,186	\$73m
Taroona*	4,385	\$38m
Cambridge	3,940	\$21m
Admin	7,500	\$55m
Carparking (200) *	6,000	\$18m
Demolition Allowance (15,000)	NA	\$3m
<b>Project Total</b>	<b>84,528</b>	<b>\$677m</b>

### Consolidate and Reinvest in Lower Sandy Bay

Building / Area	GFA	Total
STEM	26,435	\$223m
Student / Staff Services	21,066	\$157m
CALE	16,872	\$110m
TSBE	7,705	\$43m
Taroona	4,385	\$38m
Glasshouse, Sample Storage, Horticultural Research	4,205	\$23m
Administration	9,761	\$53m
Carpark	NA	NA

Decanting	24,457	\$1m
Demolition	61,506	\$7m
<b>Project Total</b>	<b>90,429</b>	<b>\$657m</b>

## Realising value from Sandy Bay

The Sandy Bay campus is a 100-hectare site spanning from Sandy Bay Rd to the top of Mount Nelson. The University has a social mandate to ensure the future development of this site results in positive social and environmental outcomes. As a sensitive site, there are areas within the campus that have complex planning overlays, including heritage sites, bushfire-prone areas and environmental protection zones, as well as areas which are frequently used by the community. To ensure a positive outcome for Sandy Bay and the wider Hobart community, the University would maintain stewardship of the area. In addition, by maintaining control over the area the University will be able to maximise the realisable value of excess land over the long term.

The most recent valuation undertaken by Opteon in 2015 suggests a lower range value of \$60 million based on current use and planning scheme restrictions. However, through strategic planning and maintaining the stewardship of the site, the value of the site can be substantially increased through amendment to the existing planning scheme to minimise existing development constraints, and to allow structured use and development of the site. Preliminary analysis suggests that the entire site could yield from \$150M up to a high-end value of up to \$200M. This valuation assumes Hobart City Council and the Tasmanian Planning Commission would approve the changes required through the normal rezoning and planning processes. The North Projects report in [Appendix 10](#) references the work undertaken and considerations in which to justify these indicative valuations.

The land realisation value has been assessed through a yield study on an indicative plan, determining the potential for development and environmental management across the Sandy Bay campus in discrete lots. The indicative plan is based on discrete areas for the purpose of determining a valuation, however the eventual master plan would require considerable community consultation and stakeholder engagement. The feasibility model consolidates the project investigations and calculates a residual value for the site. It was developed to ascertain the forecast revenue attainable with each development option (consolidate in Sandy Bay, or relocate to the CBD). The land value has been validated through market analysis and subsequent weighted average cost analysis.

Recent work has considered further the potential mode for managing the excess land in order to further maximise the benefit to the University, which is the subject of a separate business case.

## Land Disposal Opportunity and Risk

### **Planning Constraints (Long-term engagement)**

The Sandy Bay campus is currently subject to the provisions of Particular Purpose Zone 3 – University of Tasmania (Sandy Bay Campus) within the Hobart Interim Planning Scheme 2015. Current zone standards are drafted in such a way as to largely restrict development consistent with the prepared master plan. A scheme amendment for the site is necessary to implement substantial redevelopment of the land. For a site of such scale a scheme amendment should be based on an assessment of strategic regional and local land-use issues, stakeholder consultation and a subsequent master plan.

The conceptual master plan shows a reasonable interpretation of the maximum yield possible for development of the University's land, subject to limitations. Further investigations include bushfire hazard, natural values, traffic, services infrastructure, geotechnical issues and heritage.

### **Stakeholder Engagement and Community Consultation**

The success of the University's southern infrastructure aspirations is heavily dependent on the influence and interests of people outside the project team. Key stakeholders or influential, interested people should be engaged. This can be achieved through the various approval authority meetings, including University Council, Finance Committee, Built Environment and Infrastructure Committee (BEIC), Steering Committee and Project Control Group.

Regular community consultation meetings and platforms should also be established to ensure alignment with the community and mitigate planning risks in future.

### **Environmental Factors**

The Sandy Bay site is prone to extreme weather events, including bushfire, inundation, landslip and erosion. Each super lot requires further investigation and reporting with respect to environmental factors. Indicative advice has been received from a town planner regarding the potential impacts, and this has been factored into the current proposal, however, further investigations will be required moving forward. This includes the management of both native and introduced flora and fauna, such as the swift parrot.

### **Market Conditions**

The feasibility model utilises current and historical market data. Though recent market conditions throughout Hobart have been strong, future market conditions remain uncertain and are a critical consideration for the University.



## Cost-benefit Analysis

A conventional economic CBA methodology has been applied to the costs and benefits that can be monetised for the two development alternatives. The cost and benefits for each option are compared against each other, with the net position for the CBD in comparison to the Sandy Bay consolidation presented in the marginal contribution table below.

The cost-benefit analysis has been undertaken based on the following key assumptions:

- EFTSL growth - PwC medium forecast for each development option
- Evaluation Period – 30 years. All benefits accrued in this period are measured for their useful life
- Base year – 2018. All costs and benefits are measured in real 2018 dollars
- Construction period – 10 years, 2020-2030, with both development options separated into two building stages
- Land disposal value- \$150m for a full relocation and \$40m for Sandy Bay consolidation as per North Project’s disposal strategy
- Residual building value – depreciated useful life (40 years).

The benefits of an investment in higher education to the broader community is difficult to monetise and hence, this CBA should be considered in conjunction with the broader social, environment and economic impacts of the project.

### Net Present Value

The present value of costs and benefits for each development option are summarised in the following table. The core assumption forming the basis for the NPV is the growth forecasts undertaken by PwC against a baseline (based on no capital expenditure with growth in line with the past five years).

CBD Relocation					
NPV (real discount rate)					
	4%	5%	6%	7%	10%
<b>Costs</b>					
Capital Cost	569	547	527	508	457
Additional Teaching Costs	169	141	119	100	62
Land Acquisition Costs	19	19	18	18	17
<b>Total Cost</b>	<b>757</b>	<b>707</b>	<b>664</b>	<b>626</b>	<b>536</b>
<b>Benefits</b>					
Additional Student Revenue	273	228	192	163	101
Research Benefits	114	95	80	67	41
Maintenance and Utilities Savings	28	24	20	18	12
Residual Building Value	312	309	306	303	295
Land Disposal	109	101	94	87	70
<b>Total Benefits</b>	<b>835</b>	<b>757</b>	<b>692</b>	<b>637</b>	<b>519</b>

Figure 22: CBD relocation NPV

Sandy Bay Consolidation					
NPV (real discount rate)					
	4%	5%	6%	7%	10%
<b>Costs</b>					
Capital Cost	518	491	466	442	379
Additional Teaching Costs	123	103	87	73	46
Land Acquisition Costs	-	-	-	-	-
<b>Total Cost</b>	<b>641</b>	<b>594</b>	<b>552</b>	<b>515</b>	<b>425</b>
<b>Benefits</b>					
Additional Student Revenue	187	159	135	116	75
Research Benefits	75	63	53	45	28
Maintenance and Utilities Savings	19	16	14	12	8
Residual Building Value	302	299	296	293	285
Land Disposal	38	36	33	31	26
<b>Total Benefits</b>	<b>621</b>	<b>572</b>	<b>532</b>	<b>497</b>	<b>422</b>

Figure 23: Sandy Bay consolidation NPV

### Key Findings

Figure 23 outlines the marginal benefits and costs for the CBD development option in comparison to consolidation at Sandy Bay. The comparison clearly demonstrates the major drivers of benefits as the student outcomes, research output and revenue received through land disposal.

#### Increased Student Revenues

As noted within the EFTSL modelling undertaken by PwC in the table, it is forecast that there would be a greater increase in EFTSL from a CBD relocation on the back of improved student retention. This in turn would result in an increase in the student revenue and teaching costs.

#### Benefit of Vacated Sandy Bay Land

The University is currently assessing the potential benefit that could be derived from land that would be vacated through either consolidation below Churchill Avenue or a relocation to the CBD. Both development options will unlock value in the Sandy Bay site, with a total relocation creating an additional approximately \$100m revenue in comparison to consolidation on the Sandy Bay campus. Further detail on the opportunity for property disposal is noted in the 'Land disposal business case' attached in [Appendix 10](#).

## 5. Recommendation

As identified by the above analysis, both options 1 and 2 require significant capital expenditure. Noting this, long-term considerations regarding social and economic impact were critical determinants when developing this recommendation.

Option 2 is the recommended option as it provides the greatest benefit in terms of social and economic considerations. It aligns closely with the University's strategic objectives, supports the Academic Vision for Southern Tasmania and adopts the guiding principles. A relocation of the entire Sandy Bay campus to the CBD will produce improved outcomes for teaching, learning and research while further establishing the University as an integral part of the Hobart community

Irrespective of which of the above options is endorsed, significant improvements need to be made to facilities management and operational expenditure to ensure the University remains a competitive academic institution of the national and global stage.

## Appendix Listing

[Appendix 1: Consultation Installation Room Digital Posters, Feb 2019](#)

[Appendix 2: Engagement Summary, Mar 2019](#)

[Appendix 3: Sandy Bay Building Condition and Functionality Report, July 2018](#)

[Appendix 4: Analysis of Potential Impacts of Relocation of UTAS, Dec 2018](#)

[Appendix 5: University of Tasmania Library Client Survey Key Findings, May 2018](#)

[Appendix 6: University of Tasmania Travel Behaviour Survey Report, Aug 2017](#)

[Appendix 7: Master Plan Design Principles, Feb 2018](#)

[Appendix 8: Southern Infrastructure GFA Requirements Analysis, Mar 2018](#)

[Appendix 9: University of Tasmania Southern Campus Relocation Option Analysis of Hobart CBD Traffic Modelling, Feb 2019](#)

[Appendix 10: Sandy Bay Realisation Assessment, June 2018](#)