The University of Adelaide

Facilities Investment Plan – 2019 to 2028

PRELIMINARY

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Foundation documents

The Facilities Investment Plan 2019-2028 has been informed by the following:

- Assetic – SAMP Modelling 2019
- Building Condition Audits 2018-2019
- Campus Sustainability Plan 2016-2020
- Conservation Management Plans (draft)
- Engineering, Computer & Mathematical Sciences Facilities Plan – April 2017
- Future Learning & Teaching Space Requirements Modelling – 13 May 2019
- Infrastructure Business Plan
- Infrastructure Investment Plan 2015 – 2019
- Laboratory Masterplan 2015 – 2020
- Library of the Future Masterplan 2016
- North Terrace Public Realm Concept
- Planning and Analytics student load projections – 12 April 2019
- Arina Research Spaces Study – 1 July 2019
- Campus Retail Refresh (Retail Masterplan) – December 2018
- University of Adelaide Campus Masterplan 2016 – 2035
- UniSA Strategic Plan 2016-2020
- UniSpace data Jan 2019 (space types, condition, quantum, capacity)
- 2019 University of Adelaide Strategic Plan: *Future Making*
- 2019 University of Adelaide Pillar Plans

Glossary of Terms

AAPPA (Australian Association of Higher Education Facilities Officers)
API (Asset Priority Index)
AIQS (Australian Institute of Quantity Surveyors)
ARV (Asset Replacement Value)
Capex (Capital Expenditure)
G08 (Group of Eight)
GFA (Gross Floor Area)
IBP (Investment & Business Plan)
NLA (Net Leasable Area)
Opex (Operational Expenditure)
PCE (Professional & Continuing Education)
SAHMRI 2 (South Australian Health & Medical Research Institute 2)
SAMP (Strategic Asset Management Plan)
TEFMA (Tertiary Education Facilities Management Association)
UFA (Useable Floor Area)

1. Executive Summary

1.1. Purpose of the Facilities Investment Plan

The University of Adelaide's *Facilities Investment Plan 2019 – 2028 (*The *Plan)* guides the University in its investment approach to address future facility and infrastructure requirements.

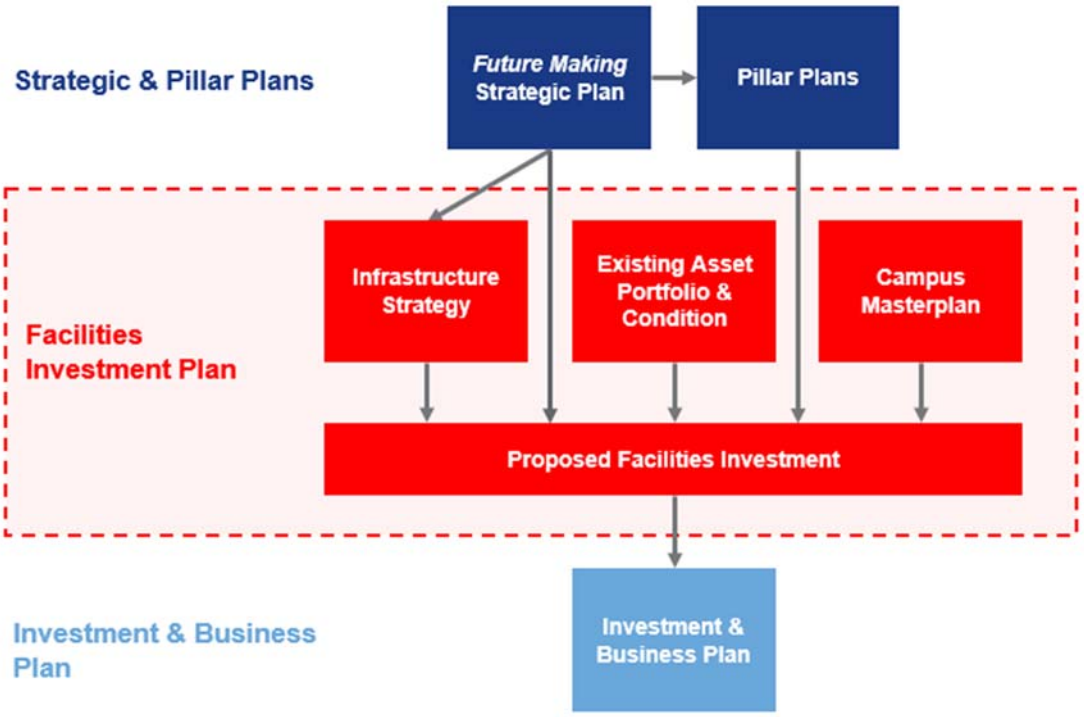
The *Plan* outlines the development of a proposed facilities and estate investment program to best support the University's strategic plan, *Future Making*, as well as optimising the spend within the available funding.

The *Plan* was informed by and summarises the following information:

a) The University's vision for campus master planning
b) The University's Infrastructure Strategy;
c) The University's existing asset portfolio, condition and capacity;

Figure 1 below shows how the *Plan* fits into the University's broader strategic, investment and business planning framework.

Figure 1: The University of Adelaide's Strategic, Investment & Planning Framework



The *Plan* incorporates responses to the University's strategic directions and objectives, plus changes in the internal and external environments, and identifies the infrastructure initiatives that the University will need to implement to achieve the success envisioned in *Future Making* and meet the forecast growth.

The facility and estate investments and the *Plan* will continue to be more clearly defined as the Pillar planning evolves. Accordingly, it is a living document that guides the University as it navigates its infrastructure challenges.

The overall campus vision provides a starting point for planning considerations to ensure that each campus will be developed in a manner that recognises and builds upon its own unique character and context. While the Infrastructure Strategy, provides the framework for investment considerations around the facility challenges of *Future Making*.

The *Plan* is informed by best practice principles for facilities developments, which emphasise the sustainability of the University's infrastructure investments, and a view of 'return-on-investment' that appropriately balances value for money with the attainment of qualitative outcomes, (such as improvements to the student, staff and community experience).

1.2. Summary of Proposed Facilities Investment Plan

The University's initial assessment of the infrastructure investment required is $1.8B from 2019 to 2028, in order to meet the following:

a) The University's ambitions of *Future Making;* and
b) Business continuity through an uplift in maintenance investment.

The total indicative funding available to deliver the *Plan* is $1.3B *from 2019 to 2028*.

Accordingly, the proposed investments which have been prioritised to fit within this funding envelope balance the following criteria:

- the infrastructure required to accommodate projected growth in student numbers and research income;
- the investments required for the University to maintain a competitive market position, deliver its mission, and meet its strategic objectives;
- the University's existing operations at their current levels, with some deterioration of condition for lower priority facilities and;
- investment in new buildings and adaptive reuse.

The following summarises the University's proposed investments for the ten-year period from 2019 - 2028:

Table 1: Proposed Facilities Investment

PROPOSED FACILITIES INVESTMENT - 2019 TO 2028		
	Total Three Year Expenditure ($'m) (2019 - 2021)	**Total Ten Year Expenditure ($'m) (2019 - 2028)**
Total Major Projects	**149**	**698**
Total Refurbishment & Minor Capital Works	**53**	**310**
Total Maintenance, Replacement and Planning	**72**	**306**
Total Proposed Facilities Investment	**274**	**1,315**

The proposed investment program is not "locked in", and remains subject to ongoing review.

The directions outlined in this document retain the flexibility to accommodate changes or new priorities as they emerge, ensuring that all developments will position the University well, both within the *Future Making* horizon, and beyond.

All major infrastructure initiatives are subject to intensive internal testing, evaluation and University approval processes before commencement.

Detailed planning to determine the teaching, research and other projects that will best deliver value for money and meet priority needs is underway. It is intended that these will be developed on a rolling three year cycle, the *Plan* will remain a living document that sets the overall direction, priorities, and objectives for the University's Infrastructure planning, but which retains the flexibility to respond to specific conditions or requirements as they emerge over the next ten years.

2. Campus Masterplan

The University of Adelaide Masterplan 2016 – 2035, provides an integrated, aspirational strategy for the University's built and urban environment in support of its strategic objectives, which articulates coherent and consistent development guidance for the University's campuses over the next twenty years and beyond. The Masterplan recognises the University's unique historical context, enhances the urban environment in supporting physical, social and cultural connectivity, embraces diversity and accessibility, and promotes sustainability and academic excellence, and informed the development of the Public Realm concept.

Initially endorsed by University Council in 2016, work is underway to review the plans for three campuses in the context of *Future Making*, incorporating the new directions and ambitions for the University and the new opportunities for expansion that exist adjacent to the North Terrace campus.

The underlying principle informing all Master Plans is that the physical development of the University will be guided by the learning, teaching, and research requirements of its community, while respecting the value the University places on its history and in particular the need to protect its heritage buildings.

The review will consider opportunities to:

- Co-locate complementary and similar activities through the establishment of functional precincts across each campus
- Maintain and enhance the iconic character of the campuses
- Contribute to the staff, student and community experience through facilities and the public realm
- Optimise the use of UoA assets in lieu of leased accommodation

3. Overview of the Infrastructure Strategy

The Infrastructure Strategy (*Strategy*) responds to the strategic priorities articulated in *Future Making*, as well as identified areas of need. The *Strategy* was developed through consultation with members of the University Executive, including the Campus Development Committee and it's supporting advisory committees, ongoing discussion with key research and other stakeholders from across the University community and consultant support where appropriate.

The *Strategy* builds on the *Campus Masterplans 2016 - 2035* and was further informed through the development of specific reports such as the North Terrace Public Realm Concept, Retail Masterplan update, the Library Masterplan, and the University Sustainability plan.

The *Strategy* comprises five key strategies, summarised below and is focused on delivering an exceptional student and staff experience, facilitating world-leading research, supporting the delivery of a 21st Century education for our diverse community of students, enabling the development of co-located partnerships and industry engagement opportunities, and transforming our campuses to improve engagement with the broader community.

Campus Experience

The Infrastructure Campus Experience strategy will deliver a re-energised and re-activated set of University campuses to foster greater engagement with students, staff, and the wider community; an integral enabler to the *Beating Heart of Adelaide* pillar plan.

Research & Innovation

The Infrastructure Research and Innovation Facilities strategy will ensure the University has the high-quality research facilities it requires to deliver world class research and raise its international rankings envisioned in the, *Research that Shapes the Future* pillar plan.

Learning & Teaching

The Infrastructure Learning and Teaching Facilities strategy, aims to provide world class learning and teaching facilities for students and academics, deliver courses that actively engage learners, and supporting the learning experience to support the *21st Century Education for a Growing Community* of Learners pillar plan.

Sustainability

The Infrastructure Sustainability strategy embodies the University's commitment to responsible environmental management and enable it to advance its climate change adaptation through the pursuit of low-carbon operations.

Strategic Asset Management

The Strategic Asset Management strategy will see the development of a Strategic Asset Management Plan (SAMP). The SAMP will align management of the University's built and other assets with service delivery needs and the strategic importance of the facility, improving life cycle management by balancing risk and costs against the University's strategic aspirations, identifying an optimised level of investment over a 25-year period.

The *Strategy* will underpin the more detailed project planning to be developed in consultation with the University's Faculties and Divisions.

The Strategy is detailed in Appendix 1.

4. Existing Asset Portfolio, Condition & Capacity

A comprehensive understanding of the asset portfolio is key to informing investment decisions as well as identifying building solutions and options to meet the strategic challenges.

A detailed review of the University's existing facilities, assessed current condition, identified strategic importance, and considered opportunities for adaptive re-use to create more efficient, functional and contemporary spaces.

The review included a floor-by-floor assessment of all University-owned space and an extensive desktop review of the current maintenance position of buildings at an elemental level.

Detailed assessments were also undertaken of the current state and 'future strategic fit' of our research and teaching facilities.

4.1. Asset Portfolio Overview

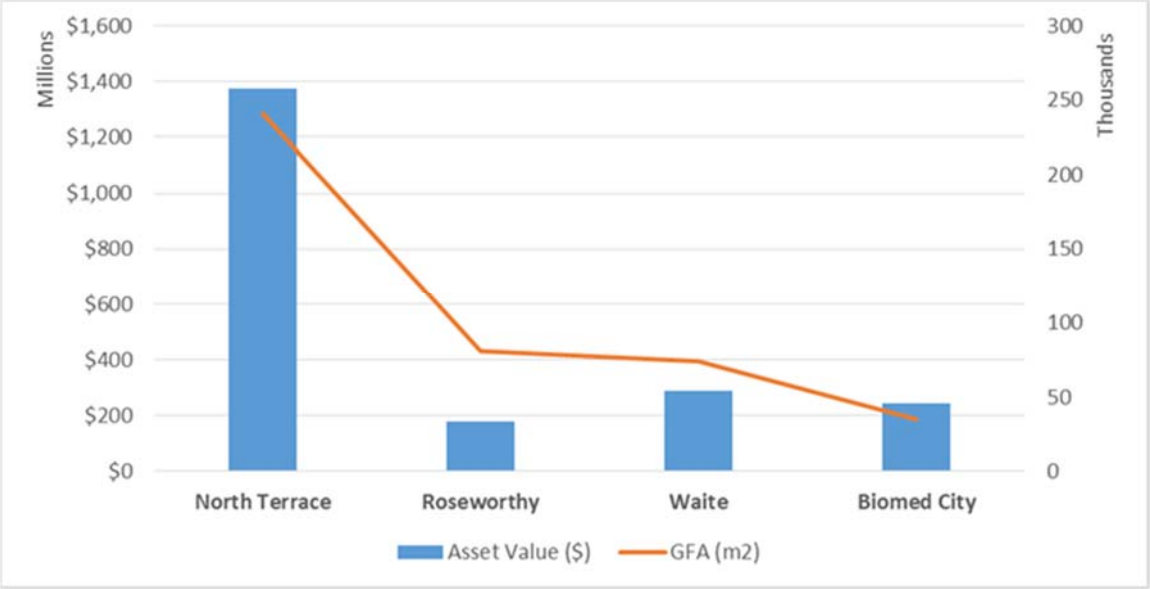
The University has a significant property portfolio across four main campuses, including teaching and research specialised facilities and infrastructure. It owns and occupies 487,715m^2 of gross floor space (GFA) in 371 buildings that cover 2,203 hectares of land, with an estimated value of $2.0B. In addition, we occupy approximately 16,500m^2 of leased accommodation.

Approximately 60% of its useable floor space is at the North Terrace campus; approximately 75% of University-owned land is at the Roseworthy campus.

The University's diverse property portfolio also includes additional assets located across the state, assets include farmland, housing, sheds and other built facilities.

The breakdown of the asset value and the GFA across the four main campuses is as follows:

Figure 2: Gross Floor Area & Asset Value Distribution



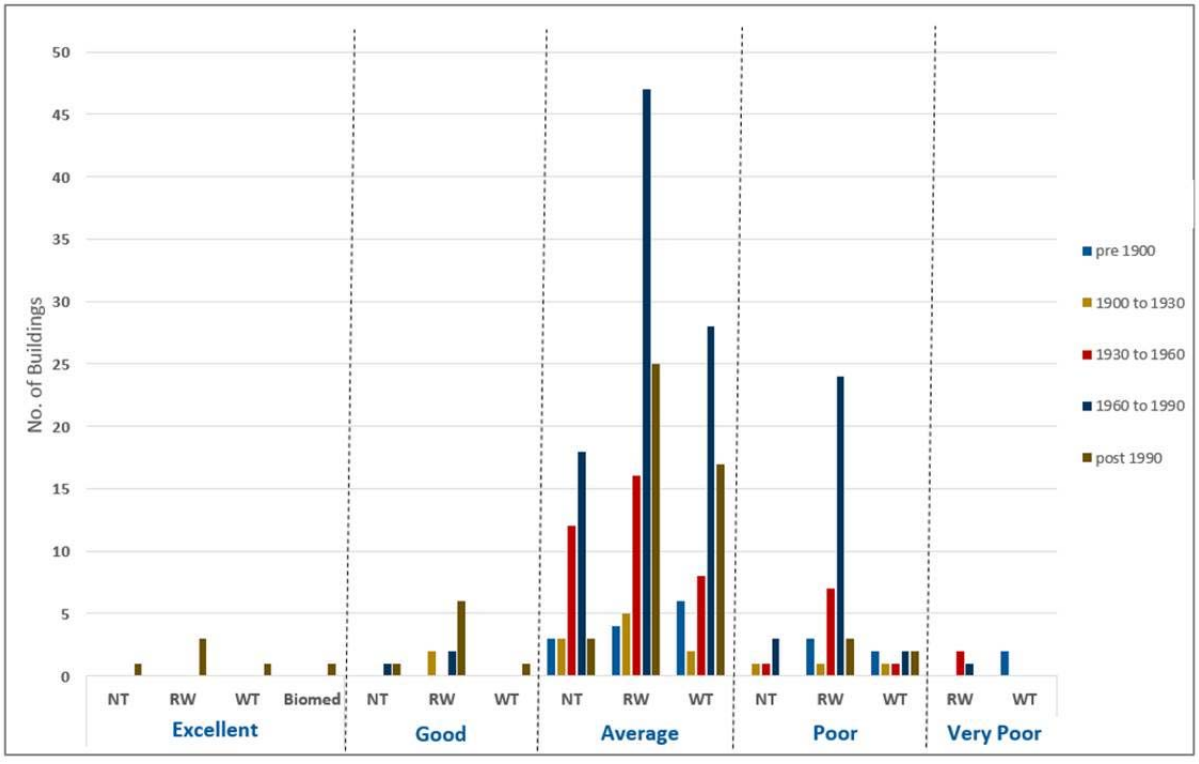
4.2. Age Profile

The age profile of the buildings on campus is a key contributor to the current state of the asset portfolio. For the University of Adelaide 88% of the buildings at North Terrace are older than 30 years and 36% of the buildings are over 60 years old. The average age of the University's built portfolio is 52 years.

Older buildings (greater than 30 years old) often require extensive remodelling to ensure the capability to support contemporary institutional programs (class sizes have increased significantly and teaching modalities have evolved). This is generally because these buildings are in poor condition due to degradation over time or their structure and layout are not conducive for reconfiguration for contemporary uses.

The age / building condition profile is represented graphically below.

Figure 3: Average Condition by Building Age



4.3. Asset Portfolio Condition

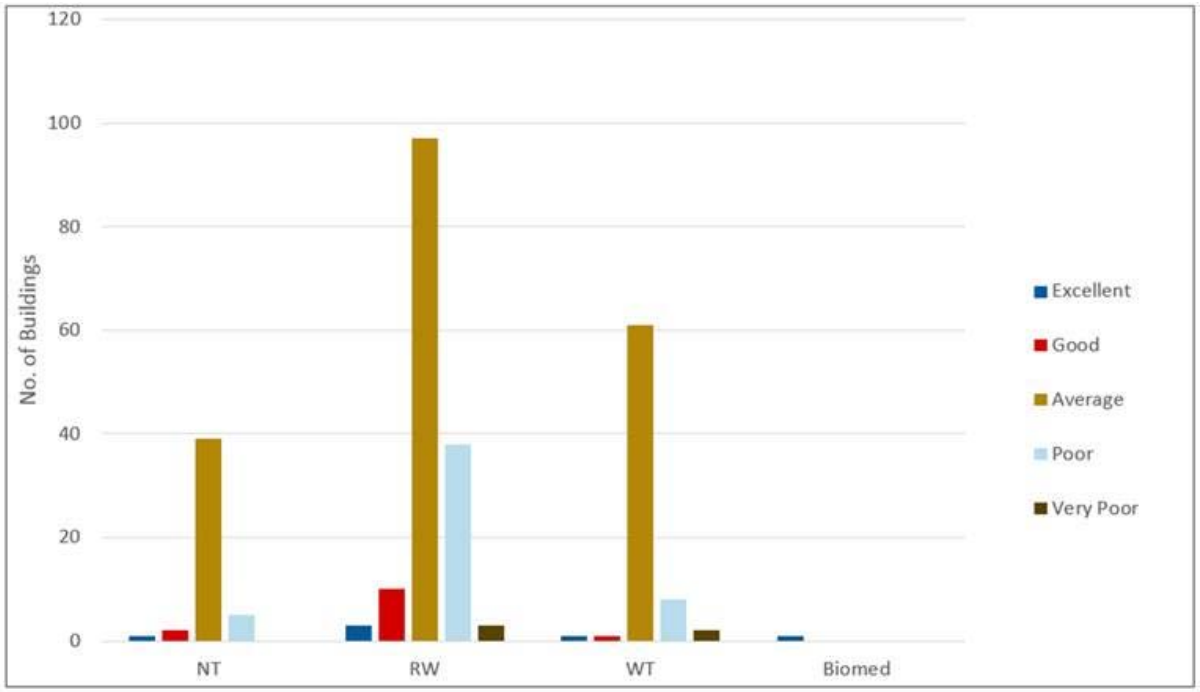
The physical condition of the assets is a key determinant of the portfolio performance. Sustained under-investment in facilities maintenance potentially leads to significant deterioration of the facility portfolio, to the point where it can no longer meet the needs of the business.

Assessment of the physical condition of the portfolio provides insight into the level of physical deterioration and operating performance and the identification of any issues.

Condition assessments across the University property portfolio are a combination of physical audit data and desktop assessments most recently updated in 2018 and 2019. These assessments have been undertaken using the 29 building elements Australian Institute of Quantity Surveyors (AIQS) system, rating each element from 1 - 5, where 5 is excellent.

The graph below presents the current condition status of the University estate with the majority of buildings assessed as in average condition.

Figure 4: Current University Estate Condition by Campus



4.4. Asset Priority

In order to prioritise ongoing facility investment within a constrained funding environment, assets have been categorised from high to low priority using an Asset Priority Index (API).

The API ranks buildings based on their alignment with three categories:

Strategic Alignment – alignment to the organisation's strategic plan, driven by the importance of the functions within the building);

Consequence - the implications for the service delivery if the asset is not provided and;

Mission Dependency - examines how the strategic plan outcomes are dependent on the asset solution).

Figure 5: Number of Buildings by Asset Priority Grouping

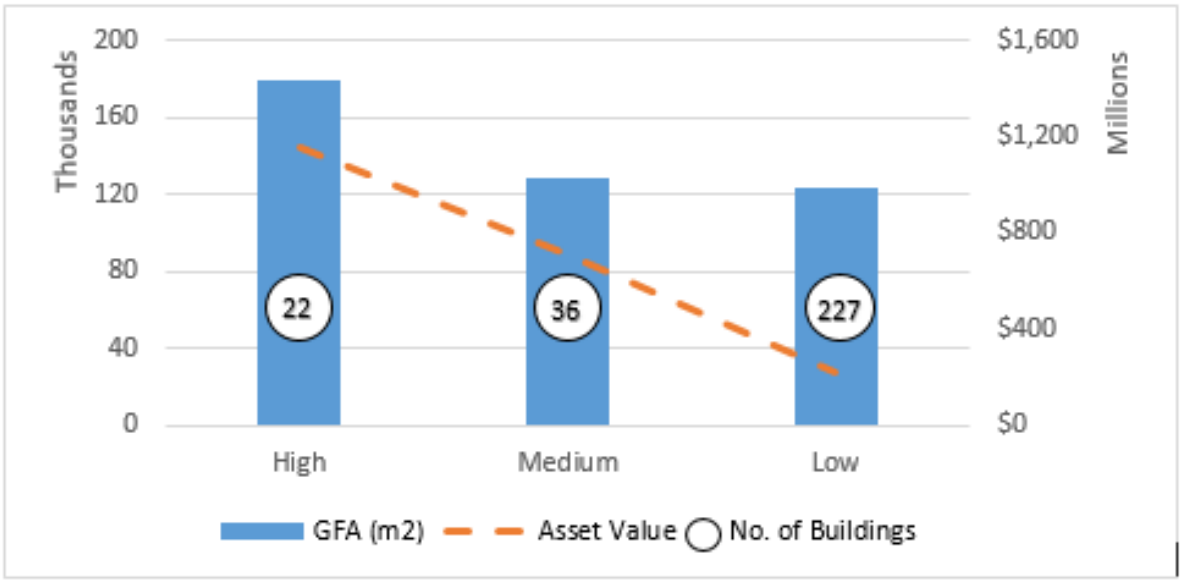
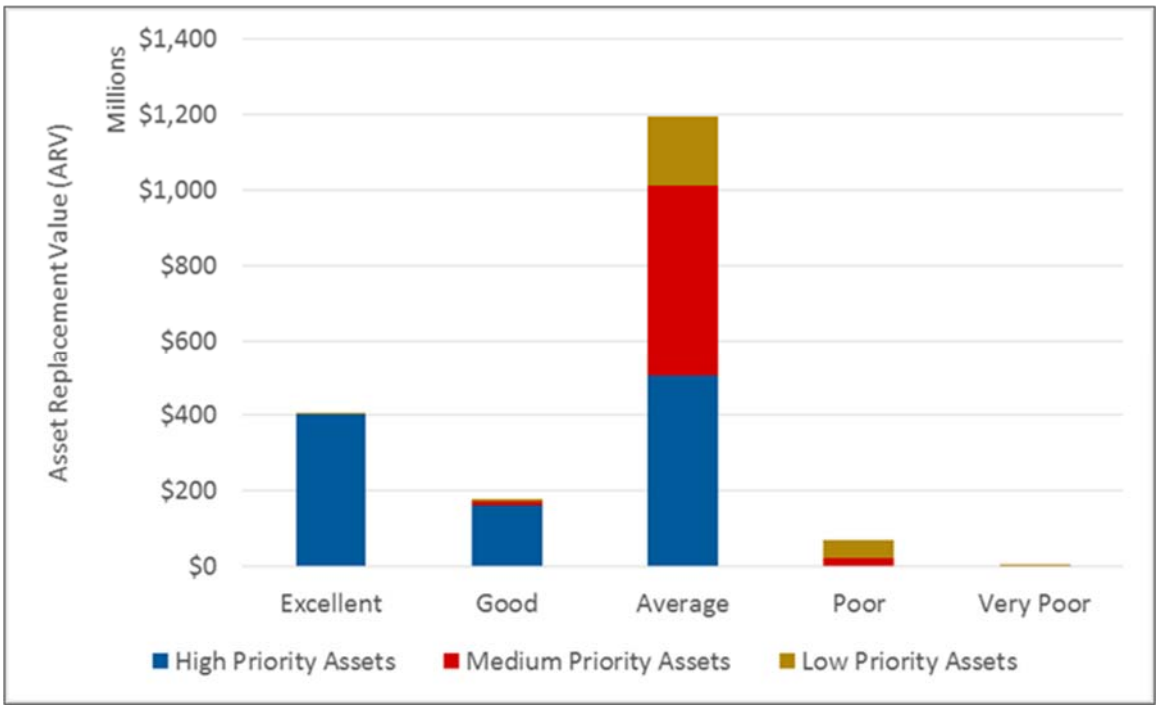


Figure 5 above shows the current distribution of the Gross Floor Area (GFA) and number of buildings within each Priority Group versus the Asset Valuation (2016 valuation indexed to 2020).

The University's high and medium priority buildings range from excellent to average condition. Generally, the buildings in poor condition are also of lowest priority.

Figure 6 below shows the relative condition against the building priority.

Figure 6: Asset Condition by Priority Grouping



4.5. Required Maintenance Investment

Reviewing the asset condition against the priority of the building allows focussed facility investment decisions.

The Australian Association of Higher Education Facilities Officers (AAPPA) has developed a benchmarking tool to enable institutions to evaluate the effectiveness of maintenance funding. Best practice suggests > 1.5% Asset Replacement Value (ARV) is required from building completion, to ensure maximum durability and use of assets over their lifecycle and that funding should be at levels to keep all capital assets in good repair and minimise a backlog.

The University's estimated maintenance expenditure in 2018 period was $28M, in the order of 1.4% ARV. This amount includes the expenditure on asset replacement undertaken through the delivery of refurbishment projects, operational maintenance programs and reactive maintenance (unplanned replacement of failed plant and equipment).

While indicatively expenditure is approaching the minimum best practice level, this needs to be considered in the context of the University's estate, including the high level of research intensive activities the portfolio supports, its age and heritage profile and the current condition of our facilities. The 2018 backlog liability reported to TEFMA was $65M based on asset management modelling to maintain priority buildings to agreed standards.

Work is underway with the other Go8 universities to better define benchmarks applicable to the cost of maintaining similar estate portfolios.

Asset modelling suggests the University needs to increase its overall maintenance investment to an average of $50M p.a to avoid a sustained deterioration in overall asset condition.

The University will continue to monitor the impact on asset condition and performance in line with available funding and a risk based approach to investment prioritisation.

4.6. Leasing Portfolio

The University currently leases approximately 16,500sqm of accommodation in the Adelaide CBD, North Adelaide and Thebarton. This space is predominantly office space but also includes workshops, laboratory research space, a wind tunnel and gymnasium.

An exit strategy is under development for leased space with the clear intention that as leases expire and subject to available space, the occupants would be relocated back onto campus and into University owned accommodation. These opportunities will be balanced against the increasing demand for on campus accommodation aligned to the core University activities of teaching and research and where space on campus is not available then a lease would be ongoing.

The following table details the University's lease expiry schedule for the next five years.

Table 2: CBD lease expiry by year, use and annual lease value

	Location	Total Space NLA	Primary Use	Annual Rent $'000
2019 CBD	part L2, 55KW	93	Unoccupied staff	42
2021 CBD	RMP	6,400	Professional Staff, HR, Research, Finance, ITDS	2754
2022 CBD	Freemason	753	Marketing	166
2022 Thebarton	Thebarton	2,678	IPAS towers & ECMS/Wind Tunnel	314
2023 CBD	115 Grenfell	2,588	PCE & Don Dunstan	1207
2024 CBD	55-77 KW	1,651	Robinson Institute & JBI	605

4.7. Research & Innovation Facilities

A detailed assessment of the University's Research & Innovation facilities has been undertaken, supported by an external consultant. The assessment of the Research & Innovation facilities is outlined below:

Table 3: Assessment of the University's Research & Innovation facilities

<table>
<tr><th>#</th><th>Assessment Description</th></tr>
<tr><td>1</td><td>The vast majority of the University's Research & Innovation Facilities are located in buildings which are over 41 years old, and have been assessed in the following condition (across all campuses):
<table>
<tr><td></td><td colspan="4">% Area</td></tr>
<tr><td>Space Type</td><td>Excellent</td><td>Good</td><td>Average</td><td>Poor</td></tr>
<tr><td>Academic Workspace</td><td>37%</td><td>21%</td><td>34%</td><td>8%</td></tr>
<tr><td>Lab Support (Ancillary and Animal Svcs)</td><td>22%</td><td>21%</td><td>50%</td><td>7%</td></tr>
<tr><td>Research Laboratory</td><td>28%</td><td>20%</td><td>43%</td><td>8%</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total</td><td>31%</td><td>20%</td><td>41%</td><td>8%</td></tr>
</table></td></tr>
<tr><td>2</td><td>More space than required for research activities compared to other Go8 universities. Much of our research space is at a lower standard than is desirable, with a contributing factor being the duplication of equipment and space types as well as aged equipment and legacy building stock.</td></tr>
<tr><td>3</td><td>Careful management of space allocation will assist in controlling costs, both opex and capex. As an initial objective, a 20-25 percent reduction in research space allocation appears to be achievable over a ten-year period.</td></tr>
<tr><td>5</td><td>It is likely that a significant portion of the existing research space will need to be replaced rather than refurbished.</td></tr>
<tr><td>6</td><td>Planned growth in research activity is in the order of 60%, this does not necessarily translate to an equivalent % increase in demand for space.</td></tr>
<tr><td>7</td><td>In general, research funding and quality of researchers are more likely to be attracted if high quality research facilities are available.</td></tr>
</table>

Key Outcomes

1. Delivery of flexible research spaces that support multi-disciplinary utilization facilitate cross-disciplinary interaction [Shared model where possible].
2. Implementation of a Laboratory management model [space allocation and duration of time].
3. Provision of a suite of 'generic' research spaces that have the ability to be responsive and agile to factors such as arrival of Top Talent.
4. A progressive rolling refurbishment of existing research spaces in our high value research buildings where validated / ongoing research takes place.

4.8. Learning & Teaching Facilities

The University has undertaken a detailed assessment of its Learning & Teaching facilities. The assessment follows:

Table 4: Assessment of the University's Learning & Teaching facilities

<table>
<tr><th>#</th><th>Assessment Description</th></tr>
<tr><td>1</td><td>The University’s Learning & Teaching Facilities have been assessed in the following condition (across all campuses):
<table>
<tr><td></td><td colspan="4">% Area</td></tr>
<tr><td>Space Type</td><td>Excellent</td><td>Good</td><td>Average</td><td>Poor</td></tr>
<tr><td>Computer Suite</td><td>21%</td><td>34%</td><td>42%</td><td>3%</td></tr>
<tr><td>Flat Floor</td><td>38%</td><td>21%</td><td>40%</td><td>1%</td></tr>
<tr><td>Informal Learning</td><td>31%</td><td>48%</td><td>21%</td><td>0%</td></tr>
<tr><td>Intensives</td><td>28%</td><td>66%</td><td>6%</td><td>0%</td></tr>
<tr><td>Laboratory</td><td>26%</td><td>17%</td><td>42%</td><td>15%</td></tr>
<tr><td>Lecture</td><td>24%</td><td>22%</td><td>52%</td><td>2%</td></tr>
<tr><td>Other</td><td>32%</td><td>43%</td><td>24%</td><td>0%</td></tr>
<tr><td>Specialists</td><td>59%</td><td>1%</td><td>40%</td><td>0%</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total</td><td>32%</td><td>29%</td><td>36%</td><td>3%</td></tr>
</table></td></tr>
<tr><td>2</td><td>Changing Student Profile – An increase in the student mix towards post-graduate students will require alternative teaching spaces</td></tr>
<tr><td>3</td><td>Careful management of space allocation and timetable will assist in controlling costs both opex and capex</td></tr>
<tr><td>4</td><td>Restrain Lecture Theatre growth – Do not build any more traditional Lecture Theatres, but retain a portion of the existing Lecture Theatres.</td></tr>
<tr><td>5</td><td>Existing teaching undertaken in small Lecture Theatres will transition to large scale flat floor, or active large scale teaching spaces.</td></tr>
<tr><td>6</td><td>High quality, flexible, multi-modal spaces that support active learning will require a larger area per seat than didactic spaces (i.e. a traditional lecture theatre averages 1.6 m2 per seat, compared to an active learning flat floor space of 2.5 m2 per seat).</td></tr>
<tr><td>7</td><td>62% of existing flat floor and lecture theatres combined support didactic teaching, therefore to move towards active learning additional benchmark areas are required to transform existing spaces.</td></tr>
</table>

Key Outcomes

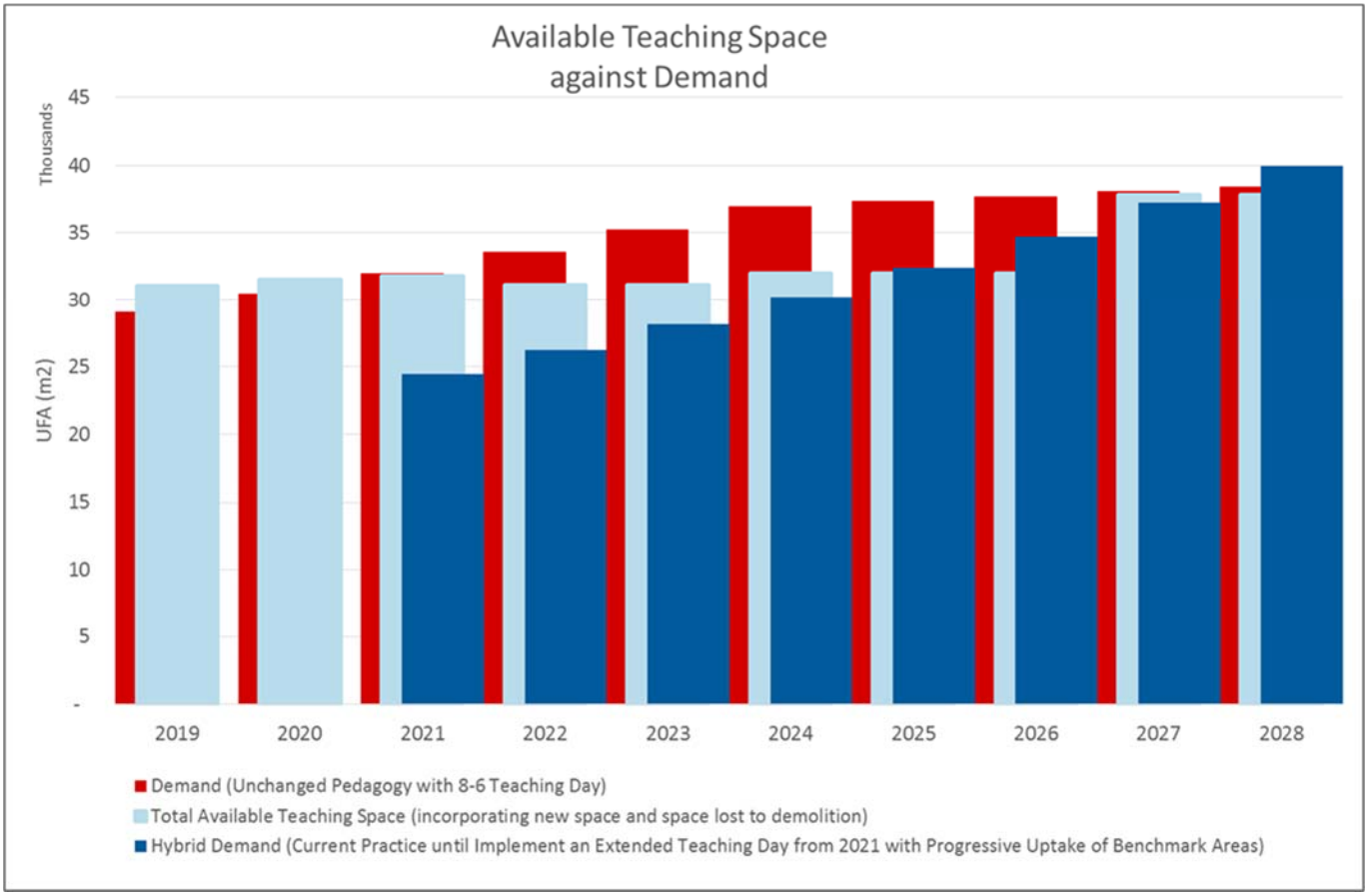
1. Increase teaching space on NT campus from 43,000m2 NLA to circa 59,000m2 NLA by 2028, inclusive of returning PCE teaching space to campus, identified new programs and replacement of Napier.
2. Increase informal learning space on NT campus by 7,000m2 NLA by 2028.
3. Provide an additional 16,000m^2 NLA L&T space in new building developments on NT campus by 2028.
4. Over 10 years, refurbish or transform existing teaching spaces across all campuses.
5. Create larger capacity, high quality, flexible, multi-modal spaces that support active learning.

4.9. Teaching Space Capacity Assessment

Careful management of space allocation and the timetable can assist in controlling both opex and capex, potentially limiting the extent of the investment needed in upgraded and new facilities. Utilisation audits indicate there remains capacity to work our assets harder even within the existing 'University day'.

Modelling indicates that without an increase in teaching space provision, or an extension to the teaching day, the demand for teaching space will exceed the available teaching space by 2022. However in order to increase active learning modality, and accommodate the introduction of new programs, additional refurbished space will be required earlier than this horizon.

Figure 7: Available Teaching Space against Demand



**Source data: EFTSL load targets, Planning and Analytics, April 2019 - Refer Future Space Requirements Modelling_V1_20.02.2019_L&T Facilities, (includes proposed new buildings and planned Napier demolition)*

Assuming the teaching day remains as 8am to 6pm and pedagogy remains unchanged, the projected demand for teaching space based on forecast growth, is projected to exceed the total available supply of teaching space from 2022 to 2028 (i.e. until the Creative Technologies building is completed in 2028)

However, if the teaching day is for example, extended from 8am to 8pm, with progressive uptake of new benchmark areas to support active learning, the demand for teaching space can be managed within a much smaller footprint, within the planned teaching space until 2024. The demand for additional space by 2025 may be mitigated by reviewing learning and teaching practices, otherwise additional space may be required in developments other than the Creative Technologies building, prior to 2025. As pillar planning for *A 21st Century education for a growing community of learners* evolves future facility requirements will be monitored and updated.

5. Proposed Facilities & Infrastructure Investment Plan

The initial assessment of the likely infrastructure requirements to meet the ambitions of *Future Making* together with the need to provision for an uplift in infrastructure (maintenance) investment identified an indicative funding requirement of $1.8B.

The University *Investment and Business Plan* (IBP), brings together the revenue and expenditure ambitions of *Future Making*, providing the indicative faculties investing capacity though both the projected operational surplus and to be sourced from borrowing.

The total indicative funding available to deliver the *Facilities Investment Plan 2019–2028* is $1.3B.

Proposed investments were prioritised to fit within this funding envelope and while further investment in both the University's existing assets and in the potential development of additional new space is always desirable, the proposed investments aim to optimise the balance between new build, refurbishment and portfolio maintenance within the available funding.

Proposals include a number of strategic developments, in the very early planning stages, including a presence at Lot Fourteen and the purchase of UniSA's City East campus. These will potentially provide a major contribution to addressing any gaps in the need for future growth and decant space,

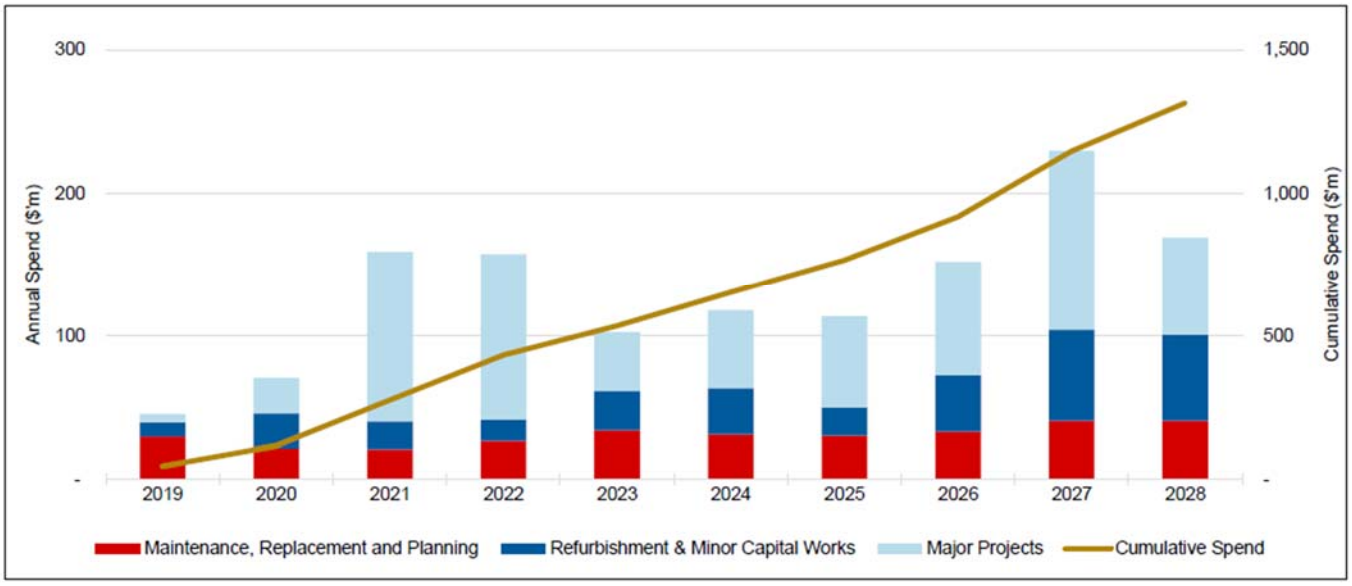
The *Plan* sets out:

- The proposed Major investments that are intended to take the University forward in line with the Pillar plans
- The level of investment provisioned to improve and adapt existing buildings and spaces to accommodate the student and research growth ambitions and address the quality experience expectations of our staff, students and the community
- The asset management approach to ensure business continuity, manage risk, and where possible reduce the gap in relation to overdue maintenance.

The chart below summarises the University's proposed facilities and infrastructure investments from 2019 to 2028, split out into the following categories:

1) Major Projects ($698m cumulative spend).
2) Refurbishment and Minor Capital Works ($310m cumulative spend); and
3) Maintenance, Replacement and Planning ($306m cumulative spend);

Figure 8: Proposed Facilities Investment (2019-2028)



This proposed investment plan has been prioritised to optimally balance:

- the infrastructure required to accommodate projected growth in student numbers and research income.
- the investments required for the University to maintain a competitive market position, deliver its mission, and meet its strategic objectives.
- the University's existing operations at their current levels, with some deterioration of condition for lower priority facilities.

A further $572M of other "Development Opportunities" have been identified, that will only progress with the identification of other funding sources.

5.1 Alignment to Pillar Plan investment

Future Making provides the strategic direction for the proposed investments and as the Pillar Plans were developed, the facilities required to support success were identified and incorporated in the initial scoping of the *Plan*. Following the review of the resource requirements across all Pillar Plans final funding was agreed.

The *Plan* incorporates all agreed Pillar Plan facility investments and a summary of the known and proposed facility and estate investments across the first three years as allocated to the pillars follows:

Table 5: Alignment of the Facilities Investment to the Pillar Plans

UNIVERSITY OF ADELAIDE - PROPOSED FACILITIES INVESTMENT RECONCILIATION TO THE PILLAR PLANS	
	Total 3-yr Infrastructure Investment (2019 - 2021) ($M)
Proposed Facilities Investment Reconciliation to the Pillar Plans	
Connected to the Global World of Ideas	0
Magnet for Talent	0
Research that Shapes the Future	11.5
21st Century of Education	26.1
Beating Heart of Adelaide	165.0
Total Proposed Facilities Investment Reconciliation to the Pillar Plans	***202.6***
Planning & Resource Allocation	14.5
SAMP / Facilities upgrade	57.1
Total Maintenance, Replacement and Planning Investment (Not Reconciled to the Pillar Plans)	***71.6***
Total Proposed Facilities Investment Spend	***274.2***

5.2 Major Projects

The *Plan* includes provision for a $700M investment in major projects that will see the University position itself strategically across an expanded footprint within the CBD, develop a new state of the art building and provide a significant uplift in the estate environment for staff, students and the wider community.

The timing and prioritisation of the Major project investments has been informed by a number of factors, including:

- alignment to projected funding capacity and cashflows
- external drivers around the timing of the opportunity (e.g. the Lot Fourteen Innovation Centre is in planning development, with construction commencing 2020)
- the need to ensure planning is sequenced to minimise campus disruption around teaching and research.

A high level overview of the proposed investments (Appendix 3) has been included for information, noting all are works in progress and the scope, cost and program are not yet defined or approved.

The major facilities and infrastructure projects that have been identified as priorities in supporting the implementation of the *Strategic Plan* are:

i) Lot Fourteen

The Lot Fourteen project, planned as a major presence in the Innovation Centre at the heart of the precinct, will deliver a facility of international standing for the University; one which is synergistic with the precinct vision and activities. The facility will enable delivery of the University's strategic *Information Advantage* agenda, incorporating the disruptive disciplines of artificial intelligence, machine learning and photonics and supporting emerging and allied disciplines such as cyber security, electronic warfare and social media analytics (big data).

Co-located with industry and government partners, the development will act as a true 'magnet for talent' and will support growth in the University's defence, cyber security, space and advanced technologies ambitions. The facility will provide infrastructure that focuses on flexible spaces for research, teaching and collaboration; shared facilities for prototyping, simulation fabrication and additive manufacturing and incorporate facilities such as a solutions lab.

Occupancy will be balanced, covering off on research and industry collaboration and include discipline related teaching, particularly for Masters and post graduate students.

The expanded presence at Lot Fourteen will extend the University's leadership in this important new innovation precinct and provide a visible demonstration of the University's contribution to the overall success of Lot Fourteen, fully supporting and advancing the University's strategic directions.

Work is continuing to determine the mix and scale of the activities that will best deliver on the University's strategic success for this development. A high level concept business case will be presented to Council in October, with a final business case scheduled for presentation in December 2019. An allocation of $150M is currently provisioned in the IBP for this project.

ii) UofA Sports Centre

This project will deliver new and expanded sports facilities on the North Terrace campus for use by University students, staff and the broader community. It will address an identified strategic shortfall in the University's ability to offer an outstanding and engaging campus experience, due to the limited nature of its sports facilities compared with the Group of Eight and other key tertiary competitors.

The University is one of only a few universities in Australia that does not have an on-campus Sports Hall. In addition, very few facilities exist for casual recreation and sports activities, limiting on-campus social opportunities for students and staff, and forfeiting the opportunity to bring the community onto the campus for recreational activities.

The development proposes:

- An indoor swimming pool
- An on-campus Sports hall
- A larger fitness centre
- Bookable space for non-ball recreation and sport activities (e.g. yoga, martial arts)

iii) Public Realm

The Public Realm project is a landmark intervention in the University's physical connection with the City of Adelaide and its place in the public life of the South Australian community.

This project will establish the North Terrace campus as an extension of the City of Adelaide, a place that attracts and engages students, staff and the broader public, allowing for social connection, events and smaller gatherings, and provides as a place of respite and inspiration as well as a site of active use both day and night. The Kaurna and Heritage Walks will be key features of the project.

Key components of this project include:

- Addressing entrances to the University
- Removal of the heritage fence
- Creation of stronger pedestrian pathways North-South and East-West across the campus
- Improved campus amenity

Whilst on a much smaller scale, interventions will also be undertaken at Waite and Roseworthy.

iv) STEM Precinct Uplift

Planning work is underway to create a more cohesive campus, including consideration of a precinct model based on functional themes. This would include the development of a STEM precinct, initially the six buildings centred around the Maths Lawns, with connections into Lot Fourteen.

The STEM Precinct Uplift project will commence with the upgrade of a number of Engineering, Computer & Mathematical Sciences (ECMS) buildings to activate the ground floor plane of key buildings, creating research labs and teaching spaces to meet new and expanded research and teaching programs, developing active learning hubs and industry engagement spaces, and establishing a pathway through to the proposed Lot Fourteen development.

The project will increase the adaptability and flexibility of the existing spaces, and address critical infrastructure items in delivering more contemporary environments and improving opportunities for industry engagement and collaboration for public engagement and industry partnerships to complement the Lot Fourteen development.

v) Creative Technologies Building

The Creative Technologies Building (New Napier) will be a purpose-designed destination space for University exhibitions, events and cultural occasions, while delivering new multi-modal teaching spaces, VR/AR labs, workshops and high quality student and staff spaces, supporting the University's growth and community engagement aspirations.

As a shared and collaborative space for the University, industry and cultural partners, the focus of this development will be to showcase technologies across multiple disciplines, centring around creative areas of strength and growth including:

- Augmented, virtual and mixed reality
- Sonic arts and music technologies
- Immersive technologies
- Multimedia installations
- Creative writing
- Kaurna language & culture
- Digital media
- Network arts
- Film and game music
- Digital education literacies and pedagogies & humanities

The new building will address the significant backlog and future maintenance liability associated with the existing Napier building, although the project has many challenges, including identification of decant space. Construction commencement is provisionally planned for 2025.

vi) Union House

The Union House project will reinvigorate the Union House precinct, making a major contribution to the campus culture and re-instating one of the University's most loved heritage zones as a destination for a new generation of students, staff and visitors.

Consultation on activities and functions that will ensure a consistently, highly activated precinct are progressing. Options include expanded informal social and learning space, health services, expanded teaching zones for both timetabled and short course education and potentially a new contemporary staff club. The proposed works will complement the recently completed upgrade and refurbishment works to the precinct and simultaneously address backlog maintenance and asset replacement costs.

This project will:

- Reinvigorate the precinct by creating a destination point for a range of activities that will draw staff, students and the community to the area.
- Restore the architectural heritage of the building and reinstate the large open spaces as functional and flexible facilities, improving circulation and celebrating the uniqueness of the built form.
- Establish the precinct as a destination through curated activities, food and beverage, retail, formal and informal places to meet and socialise, accommodating and bringing back to campus student activities, such as club meetings, and by providing dedicated spaces for specific needs, such as a prayer room.
- Extend the life of the building and create future flexibility for the building to adapt and change over the next 20-30 years through contemporary service design.
- Address deferred maintenance, asset replacement and any compliance issues through base building works, and generally upgrade the accommodation through refurbishment and renovation.

vii) City East Purchase

The University of South Australia's Strategic Plan identifies the consolidation of their activities onto two main campus – City West and Mawson Lakes signifying a relinquishing of assets at both the Magill and City East campuses.

This presents the University of Adelaide with an opportunity to expand the North Terrace campus through pursuing the strategic purchase of the City East campus. This would consolidate the University's presence in the cultural precinct and, provide capacity for temporary accommodation as required, future growth and a potential site for the proposed Uni Sports Centre, while strengthening our connection with Lot Fourteen along Frome Road.

The City East campus comprises 6 buildings and an approximate NLA of 46,000 m^2.

The following tables outline the University's projected investment in the major building and infrastructure projects from 2019 to 2028 and provide an indicative cashflow across the 10 year period.

Figure 9: Major Projects Spend (2019-2028)

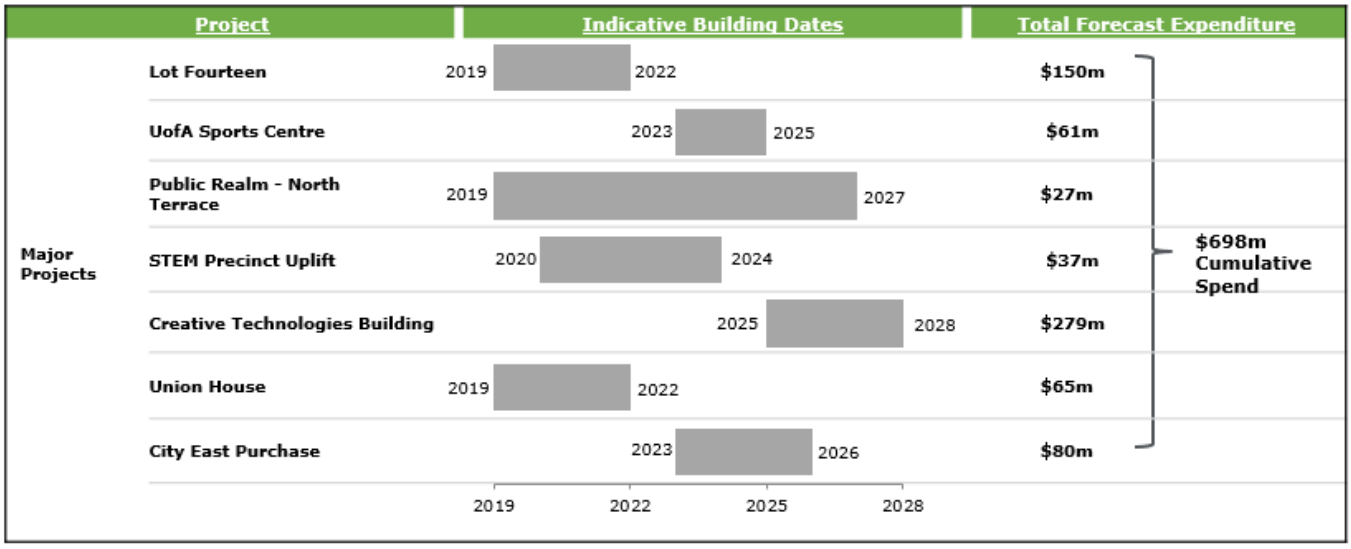
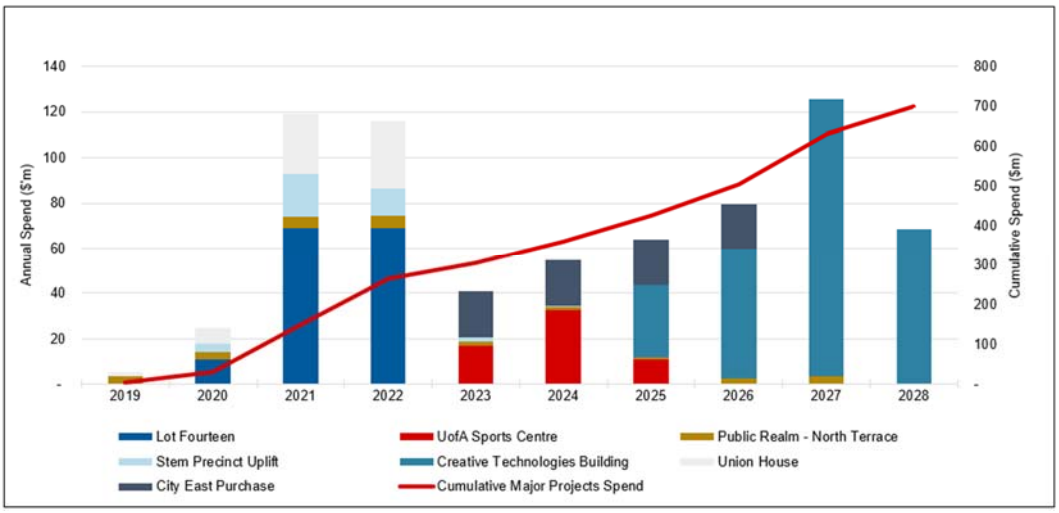


Figure 10: Major Projects Cumulative Spend (2019-2028)



5.3 Refurbishment and Minor Capital Works Overview

Investments in this category will accommodate the student and research growth ambitions and address the quality experience expectations of our staff, students and the community. Projects are predominately focussed on refurbishment and adaptive re-use of existing spaces.

Investments have been aligned with the business demands expressed in *Future Making* across the 5 pillars. As planning progresses, each projects will be evaluated for strategic alignment, value for money and the potential to address building infrastructure issues based on Strategic Asset Management Planning (SAMP) modelling.

Consultation to generate an initial list of projects was undertaken with each of the Faculties, DRI, DASE, the Learning and Teaching Advisory Group and the Campus Experience Advisory Group during 2018 and 2019 to understand future business requirements. Project concepts have been informed through consultation and cross referencing with the foundation documents listed on page three above.

Additionally ongoing refurbishment of the building stock will continue to assist in addressing backlog maintenance issues as an integral component of project delivery.

Project planning will take into consideration decanting needs, business disruption and value for money.

The opportunity to reduce our power consumption and price exposure through the cost effective, staged transition to become a High Voltage (HV) customer, with embedded power generation is currently under review and funding has been provisioned in the later years of the *Plan.*

Provisions have also been included for potential large scale facility re-locations that are likely during the planning period.

The table below summarises the projected investment in refurbishment and minor capital works from 2019 to 2028:

Table 6:Refurbishment & Minor Capital Works (2019-2028)

UNIVERSITY OF ADELAIDE - PROPOSED FACILITIES INVESTMENT - 2019 TO 2028					
		Annual investment expenditure ($'m)			
		2019	2020	2021	2022 - 2028
B	**Refurbishment & Minor Capital Works**				
1	Public realm - Waite	0.0	0.0	0.0	4.0
2	Public realm - Roseworthy	1.0	0.0	0.0	4.0
3	Teaching area spaces - upgrades / refurbishment	4.0	15.0	7.1	54.8
4	Research area spaces - upgrades / refurbishment	5.0	4.5	5.0	62.5
5	Staff and HDR spaces - upgrades / refurbishment	0.0	3.5	5.0	46.0
6	Sustainability	0.0	1.0	2.0	56.0
7	Site Relocations Provision	0.0	0.0	0.0	19.8
8	Research Infrastructure	0.0	0.0	0.0	10.0
	Total Refurbishment & Minor Capital Works Spend	**10.0**	**24.0**	**19.1**	**257.1**
	Total Refurbishment & Minor Capital Works Cumulative Spend	**5.0**	**34.0**	**53.1**	**310.2**

5.4 Maintenance, Replacement and Planning

Investment in the maintenance of the estate will fund the ongoing uplift in core infrastructure and other building elements, with a focus on a risk based management approach to ensure business continuity and a quality experience for our community.

It is known that the University's current level of investment in maintenance activities is below that needed to improve the overall condition of its built assets to the level required to support its strategic aspirations.

The indicative level of investment over the 10-year period is below the modelled need (average $50M p.a.), to maintain the University's Estate (high and medium priority buildings) at its current average condition of 4. Importantly funding does not provision for any uplift in overall estate performance or condition improvement (often referred to as backlog maintenance).

The available funding envelope is manageable in the near term (the first 5 years of the *Plan*) however overall deterioration of the University estate increases significantly beyond this time, with the likely need to increase reactive maintenance budgets to respond to breakdowns and the unplanned replacement of critical plant and equipment.

Strategic asset management planning is continuing, with overall condition and performance actively monitored and re-assessed as planning progresses and there is a more informed understanding of other planned project works that will be undertaken to improve this position.

Funding provisions are also included for planning and project management activities across all facilities investment.

5.5 Development Opportunities

In addition to the projects funded in the IBP, the University has a number of other infrastructure opportunities that may be pursued over the planning period. These projects are categorised as *development opportunities*, and would only be progressed should a commercial return be obtainable and third party capital available to fund the project.

Potential opportunities include:

i) Development of the Nexus site
ii) Major expansion of the Winery at Waite
iii) Creative Technologies Building Optimisation
iv) Multi-purpose entertainment venue / concert hall and
v) SAHMRI 2

The charts below summarise the University's potential "development opportunities" which, for the time being, have not been factored into the Capital Plan;

Figure 11: Development Opportunities (2019-2028)

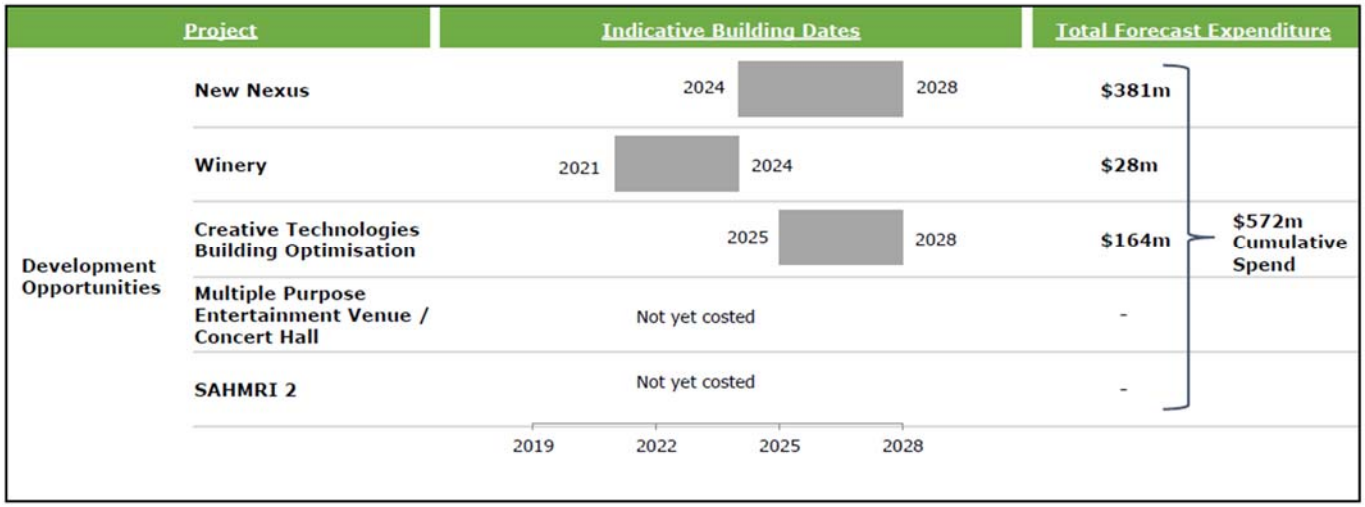
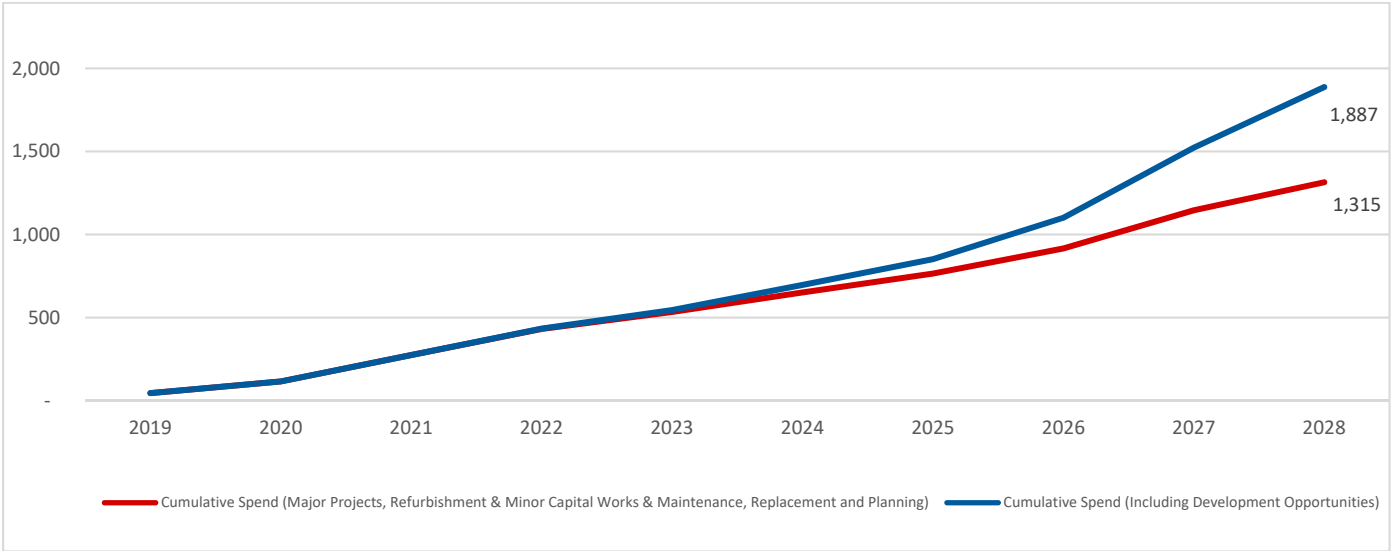


Figure 12: Development Opportunities (2019-2028)



Appendix

1. Infrastructure Strategy
2. Proposed Facility Investments from 2019-2028
3. Major Project Investment Summaries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STRATEGY
2019 – 2028
adelaide.edu.au/infrastructure

INFRASTRUCTURE STRATEGY

The Infrastructure Strategy comprises five key strategies that outline the facilities and estate response to the strategic priorities articulated in the University Strategic Plan, *Future Making*, as well as addressing a strategic approach to the overall management of the University's asset portfolio. They have been developed through consultation with the University Executive and stakeholders from across the University community.

The five strategies are focused on delivering an exceptional student and staff experience, facilitating world-leading research, supporting the delivery of a 21st Century education for our diverse community of learners, enabling the development of co-located partnerships and industry engagement opportunities, and transforming our campuses to improve engagement with the broader community. The Strategies are:

- Campus Experience
- Research and Innovation
- Learning and Teaching
- Sustainability
- Strategic Asset Management.

The Strategies build on and have been informed by the Campus Masterplans 2016 – 2035, incorporating new directions and priorities and through the development of specific reports such as the North Terrace Public Realm Concept plan, the Retail Masterplan update, the Library Masterplan, and the University Sustainability plan.

Key Objectives and Principles have been identified for each Strategy which will inform the development of the more detailed project planning that will support and respond to the needs of the University's Faculties and Divisions to meet the challenges of *Future Making*. Projects will be determined based on value for money and priority needs, aligned to funding in the Facilities Investment Plan 2019-2028.

All project proposals and opportunities identified in response to these Strategies will be reviewed against the outcomes of the Strategic Asset Management Plan (SAMP) to align development opportunities with the University's strategic asset priorities and that investments are optimized to balance risk, service levels and costs.

The Strategies sit under a framework initially established in the Infrastructure Strategy 2013 – 2017, updated to reflect the current environment.

Campus Development objectives

The infrastructure strategies outlined in this document are informed by existing University principles for planning and decision-making in relation to articulated facility requirements and the estate more generally.

They have been further guided by six Campus Development Objectives, which have been designed to ensure that as planning progresses, and investment is considered, proposed infrastructure developments satisfy at least one of these objectives:

1. Accommodate growth in student numbers.

2. Improve the learning experience and outcomes.

3. Accommodate changing research requirements and growth in alignment with *Future Making*.

4. Improve the on-campus experience for students, staff and the community.

5. Improve the functionality, quality and efficiency of University asset use and service delivery.

6. Ensure the sustainability of the University's assets and maintain business continuity via a risk-managed approach to asset maintenance.

The Objectives have been developed over time and are encapsulated in the existing Campus Master Plans, which provide a starting point for the vision for the development of the University's campuses and planning for future development. Work is underway to review these plans in the context of *Future Making*, incorporating the new directions and ambitions for the University, changes to our surrounding environment and new opportunities for expansion that exist adjacent to the North Terrace campus.

Master Plans ensure each campus will be developed in a manner that recognises and builds upon its own unique character and context. The underlying principle informing all Master Plans is that the physical development of the University will be guided by the learning, teaching, and research requirements of its community, while respecting the value the University places on its history and in particular the need to protect its heritage buildings.

This mix of objectives ensures that the University achieves an appropriate balance between adequately maintaining facilities and delivering targeted investments in areas aligned to its overall strategic directions.

The Campus Development Objectives are underpinned by a series of supporting principles to guide campus development, and are as follows:

Table 1. Campus Development Objectives

Campus Development Objective	Supporting Principles
Accommodate growth in student numbers	• Ensure appropriate facilities are available to meet benchmark student space standards
Improve the learning experience and support learning outcomes	• Learning outcomes are supported through facilities which reflect contemporary pedagogical needs • Support a consistent first year learning experience • Continue the roll-out of informal learning spaces to facilitate informal contact on campus and support the development of a lively intellectual community • Create new and refurbished teaching spaces • Provide access to the latest technology and wireless infrastructure
Accommodate changing research requirements and growth in alignment with Future Making	• Develop optimum floor-plate and layout for new builds to maximise flexibility and research activity per square metre • Consider and encourage sharing of lab and lab support facilities and functions where appropriate • Consider the development of additional shared analytical and workshop type facilities to support multiple Faculty requirements • Consider co-investment and flexible accommodation approaches to enable co-location of industry partners to support research ecosystems
Improve the on-campus experience for students, staff and the community	• Make provision for sport, recreation, student counters, retail, accommodation, health and wellbeing by maximising development of student and staff facilities around a campus 'heart' • Preserve and enhance the essential character of each campus by considering conservation and heritage, as well as landscaping • Promote the interaction between University campuses, community and industry • Improve connections and way-finding by activating the ground and lower levels of buildings to provide transparency and connection • Restrict vehicular access to enhance pedestrian experience and promote equity of access across each campus • Create safe 24/7 spaces to foster the community beyond traditional 9-5 hours
Improve the functionality, quality, and efficiency in the way we use our assets and provide services	• Treat all space as centrally-owned University space • Ensure all space is used for its highest and best purpose • Build flexible space (eg. generic labs) that can be used by the widest cohort possible • Optimise lecture room provision by providing the right ratio of available lecture rooms by size band • Release central space for learning, teaching and research activity by relocating administrative and non-academic support services (unless in high demand from a broad cross-section of the University community) towards the edges of the North Terrace campus • Reduce the reliance on leased CBD space • Create appropriate dedicated facilities to support interdisciplinary scholarship and research • Where possible, maintain and reinforce the continuity of academic program space by locating specialist teaching and research facilities in physically linked or proximate facilities • Enhance opportunities for meaningful collaboration by creating connections that enable easy, day-to-day contact between departments, faculties, and shared teaching and research spaces • Consider and encourage sharing of program space, particularly where related disciplines are located in combined or adjacent facilities • Provide good access to natural light and views from common amenity space and, where possible, provide adjacent exterior common space • Furnish and equip amenity space to support easy and comfortable access by a range of users, including the disabled • Cluster high use facilities and those used over extended hours, such as student services common computer labs, library collections, and study spaces, in central areas with convenient and safe access at night
Ensure the sustainability of the University's assets and maintain business continuity via a risk-managed approach to asset maintenance	• Reduce deferred maintenance to an acceptable level • Maintain a 'long term owner / operator' view of property by optimising energy efficiency, eliminating energy waste, and utilising low carbon sources across campus infrastructure and fleet • Maximise use of existing land and buildings, prioritise adaptive reuse • Where new building is necessary, build sustainable buildings, maximise their useability and energy efficiency, and minimise their greenhouse gas emissions • Minimise the University's resource footprint and strengthen its commitment to the future of SA's resources • Minimise the requirement for travel between campuses, interstate, and overseas through re-structuring timetables, providing teleconferencing and videoconferencing facilities, and flexible desktop capability • Minimise waste and maximise recycling opportunities • Encourage and provide the facilities to support sustainable transport options such as car-pooling, public transport, cycling, and walking; reduce on-campus carparking

Development Assessment Framework

The following principles guide the University's decision-making when it has been determined that existing facilities do not meet the standards and / or capacity required for current or anticipated programs.

The principles provide a framework for prioritising and assessing options to renew, replace, reallocate, or develop space.

In general, the University will look to adaptive reuse of space through intensifying or reuse of existing space as a first option, however, the best value for money investment will be preferred where this is affordable.

Table 2. Development Assessment Framework

Framework Steps	Supporting Principles
Reallocate existing space	• Reallocate existing space in order to make the best use of University facilities and achieve the best strategic fit
Renew or replace existing facilities	• If current facilities are not suited to University requirements, plan to renew existing facilities or construct replacement facilities • Give preference, where feasible and economical, to the reuse or redevelopment of existing facilities as opposed to their replacement.
Construct new facilities	• Before considering the construction of new facilities, conduct feasibility studies for (1) reallocating existing space and (2) renewing or replacing existing facilities • If it is established that new facilities are required, manage their construction consistent with the University's Campus Development Objectives and the relevant Campus Master Plan

Development Design Principles

These principles will inform the design approach taken to all new University development and construction work. They are an extension of the Campus Development Objectives and Development Assessment Principles described above.

Design decisions for new development work will be guided by principles of sustainability and the long-term needs of the University. Planning therefore needs to be sufficiently broad and flexible in its outlook to accommodate changing needs, opportunities, and priorities over an extended period, potentially in the order of 20 years at a minimum.

Table 3. Development Design Principles

Development Design Consideration	Supporting Principles
Improve space utilisation	• Consider shared development between departments or faculties • Reorganise and refurbish existing facilities to optimise their use • Improve the symbiosis between research and teaching by combining or sharing facilities where possible • Consider demolition and replacement of existing facilities to achieve more intensive land use
Building standards: quality, permanence, and economy	• Commit to high quality, permanence, and life-cycle economy in building and site development, design, construction, maintenance, and renewal • Base capital project design decisions on life-cycle as well as initial capital costs • Design new buildings for a minimum anticipated lifespan of 50 years and an extended lifespan in excess of 50 years for building envelope components • Design new buildings to meet the benchmarks for sustainable construction, and occupancy performance identified as University standard • Reflect the unique character of each campus
Energy and water conservation and waste efficiency	• Implement environmentally responsible practices and build and renew buildings, infrastructure, and landscapes in a manner that is land, energy, resource, and waste efficient • Actively explore alternative, low carbon energy sources such as solar, natural gas, and geothermal when upgrading and replacing the central plant or when planning services for new facilities that are remote from the central plant • For new development, utilise waterless processes and innovations to avoid water use and consider alternative methods for wastewater treatment and irrigation

CAMPUS EXPERIENCE

Scope

The Infrastructure Campus Experience strategy will deliver a re-energised and re-activated set of University campuses to foster greater engagement with students, staff, and the wider community.

The program will examine how the University campuses can become more valuable and relevant for the wider South Australian community and be considered as destinations in their own rights, reinforcing the University's place in the cultural landscape of our city and community.

This program will examine all campuses, social spaces, retail opportunities, recreational areas, sports facilities, service precincts, events spaces, and cultural facilities to identify the best opportunities for activation.

Key objectives

Enhance the campus experience

- Provide a competitive campus experience that encourages staff and students to attend and linger longer across the day and develop stronger connections between the campus and the community

Foster campus culture

- Create spaces for staff and students to collaborate, celebrate, study, exercise and relax on campus

Engage our community

- Elevate our campuses to community destinations in their own rights with welcoming entrances, exhibitions and events

Celebrate our legacy

- Strengthen our identity by celebrating the historic and living Kaurna culture, commemorate the positive achievements of our alumni, and congratulate our graduates through special ceremonies on campus

Key principles

Campuses are legible and connected

- Campuses are easy to navigate and move around for visitors of all ages and abilities
- Campus grounds are highly legible for pedestrians and cyclists to find their way
- Connections between campuses and immediate neighbours (eg. Art Gallery, SA Museum, State Library, New Botanic High School, BioMedical City, and Lot 14) are well articulated
- Access and wayfinding to and from public transport is highlighted
- Shaded and sheltered connections make the campus pleasant to walk around in all weather

Campuses are activated and engaging

- Informal places on campus invite small groups and individuals to stay and study
- Event and social spaces are destinations for students, staff, and the wider community
- Recreational spaces encourage students and staff to enjoy down-time on campus, breathing life into these spaces at all hours of the day
- Retail offerings, food-trucks and pop-up activities are supported, providing a changing menu of drawcard attractions
- Temporary furniture, activities and events activate the campus at key points throughout the year

Campuses are destinations in their own rights

- A family of well-connected public spaces and cultural landmarks complement and connect teaching and research precincts
- Community events, social spaces, recreational activities and flagship lectures enliven the campus day and night
- Iconic art and sculpture on campus re-asserts the University's place in the cultural life of the city, connected through self-directed walks
- Dedicated ceremonial spaces celebrate University and community events
- The diversity of University architectural styles and iconic heritage buildings are celebrated through improved interpretation for visitors
- Services for students, staff, and visitors are easily identifiable

Campuses are welcoming and accessible

- Distinctive and iconic entrances entice and invite visitors onto the University's campuses
- High quality ground level spaces and improved connections to the public realm to support the accessibility of the University as a destination for visitors
- Movement through the campuses is made safe and enjoyable by restricting vehicle access and consolidating back of house activities
- Maintaining safety measures to ensure that increased movement through ourcampuses is enjoyable for students, staff, and visitors

Campuses are cultural hubs

- The Kaurna culture is acknowledged and celebrated through ceremonial spaces, a reconciliation walk, and physical acknowledgments of Kaurna country on campus buildings
- Placemaking and storytelling activities create a sense of place throughout our campuses and at key sites
- The achievements of our alumni are celebrated and a deep sense of belonging cultivated through events and other opportunitiesfor reconnection
- Dedicated event spaces on campus provide a permanent home for community events
- The concept of a 'University town' is explored to further connect each campus with the cultural landscape of its community

RESEARCH AND INNOVATION

Scope

The Infrastructure Research and Innovation Facilities strategy will ensure the University has the high quality research facilities it requires to deliver world class research, raise its international rankings, and becoming a magnet for research talent.

In its Strategic Plan, the University has identified areas of strategic priority for its research programs and highlighted the importance of cross-disciplinary interaction and support for entrepreneurship in its research endeavours.

The spaces and facilities required to support these objectives must be of an international standard and flexibly configured in order to respond to emerging themes and opportunities. Multi-disciplinary spaces will play an increasingly important role in enabling a high degree of collaboration and cross-pollination between specialist areas and with industry. These spaces will feature:

Multi-disciplinary and shared laboratories, balanced alongside more specialised facilities

Co-located workspaces and maker-spaces for staff and students involved in research programs, adjacent to industry partners and visitors. The University must also address the following challenges associated with itsexisting infrastructure:

Benchmarking suggests the University has more space than required for its current research activities when compared to other Go8 universities, and that a considerable proportion of this space is in poor condition with low utilisation

A substantial capital works program is required to improve the quality of this research space to a level capable of supporting the University's aspirations.

Key objectives

Facilitate world class research

- Deliver research facilities of an international standard to enable our researchers to compete and excel on the global stage

Accommodate growth

- Deliver new and refurbished flexible spaces to accommodategrowth in the University's research programs and to enable the University to respond to emerging opportunities and new priorities

Support cross-disciplinary interaction

- Deliver flexible research spaces that support multi-disciplinary utilisation and facilitate cross-disciplinary interaction

Support industry engagement and colocation of external partnerships

- Provide colocation spaces to support and encourage interaction, collaboration and partnership building between researchers and industry leaders

Encourage entrepreneurship and innovation

- Invest in facilities that leverage interaction between researchers, business, industry, research trainees and research end-users for the delivery of direct economic and social benefi

Key principles

High quality, flexible spaces and multi-disciplinary facilities

- The quality, flexibility, and functionality of existing research spaces is renewed and improved.
- Multi-disciplinary laboratories and maker-spaces achieve increased flexibility of the University's research facilities and facilitate cross-disciplinary collaboration
- Shared analytical facilities, similar to the Adelaide Microscopy model, achieve the co-location of equipment and advanced instrumentation
- Inter-disciplinary HDR Hubs support the cross-pollination of ideas, skills and knowledge in the research training phase

Spaces accommodate growth and enable responsiveness to opportunity

- Research spaces and facilities are designed to enable flexibility and optimise utilisation through shared use of equipment and premium research space
- Facilities that are in poor conditionare closed, repurposed or refreshed in order to concentrate investment in state-of-the-art shared and flexible facilities
- Laboratory operating models are reviewed and, where possible, redesigned to enable spaces to be more responsive to new priorities andopportunities, and to accommodate high-growth research groups

Improved research experience for staff and students

- Research facilities of an international standard support the University to attract and retain the best talent from around theglobe
- Spaces for socialisation, informal work, and recreation foster a deepened sense of collegiality and belonging, attracting and encouraging staff and students to spend more of their down-time on campus

Spaces for industry engagement, colocation, global partners and innovation

- A range of formal and informal shared spaces support and encourage researchers, external partners and visitors to meet, exchange ideas, collaborate, and build partnerships
- Innovation and Accelerator Hubs at each campus support the University's entrepreneurship aspirations and attract involvement from business and industry
- Spaces equipped with virtual and augmented reality facilities facilitate communication with global partners and international research colleagues

LEARNING AND TEACHING

Scope

The Infrastructure Learning and Teaching Facilities strategy will enable the University to fulfil the ambitions outlined in its Strategic Plan: to provide world class learning and teaching facilities for students and academics, deliver courses that actively engage learners, and offer a 21st century learning experience to a growing community of learners.

To achieve these goals, the University's infrastructuremust evolve to respond to the challenges posed by substantial student growth, changing pedagogies, and contemporary student expectations. High quality, flexible, multi-modal spaces will be required, along with improved utilisation of facilities throughoutthe year and around the clock.

Contemporary pedagogies shift the focus from didactic instruction to active learning and hands-on, group-based work. Digital enhancement of learning will enable much access to content to move online, freeing more time and space for the interactive modalities to occur face-to-face. Students are also expected to spend more time working collaboratively together outside of formal contact hours.

In response, students expect the University to support extended hours for learning and teaching, offer intensive course options, and provide safe access to campus learning spaces outside of current core teaching hours.

The spaces and facilities required to support this way of operating are different from the legacy spaces that were suitable in the past. Principle differences include:

- the provision of flat-floored or semi-tiered spaces
- a higher minimum floor area per seat
- consistent minimum technological provisions in space design
- access across the extended day to informal learning zones, flexible labs

Alongside the transformation of existing spaces, the development of new space will be required to accommodate University student growth targets.

Key objectives

Support changing pedagogies

- Create high quality, contemporary spaces that engage learners, support active teaching and learning modalities and deliver informal areas for self-directed and group project work or informal study

Accommodate growth

- Ensure spaces and facilities are designed flexibly to optimise utilisation, improve timetable system functionality and efficiency, re-examine the structure of the teaching day/year, and explore options for the intensive delivery of courses

Respond to student demand

- Change how we deliver courses to engage and inspire learners, enable change and innovation, accommodate student demand for flexible and extended teaching schedules, and meet their expectations around the use of digital technologies

Key principles

Flexible, multi-modal spaces

- Active learning modalities are supported through the delivery of flexible flat-floor or semi-tiered spaces that enable interactive, hands-on and group-based learning
- A standard minimum provision for space and technology design is defined to enable flexible use of teaching spaces and consistent size banding (increments of 30) aligns space design with timetabling methodologies
- Bookable space is accommodated within the timetable to enable student collaboration and groupwork sessions outside of formal contact hours
- There is an increased provision of flexible specialist spaces such as laboratories, maker-spaces and computer labs, designed to support multi-disciplinary use
- Lecture theatres are limited in their number, encouraging the adoption of active learning as the preferred modality

Change how we deliver courses

- An extended teaching day and the increased use of intensives helps balance life and study
- Teaching spaces are safe and accessible during periods of low activity on campus
- Informal social spaces adjacent to learning and teaching facilities encourage students to feel welcome and linger on campus outside of designated lesson times
- Spaces suitable for 'block' use by intensives, short courses and Continuing Professional Development courses have access to informal break-out areas, amenities and refreshments outside of core hours
- Efficient campus operations are supported by creating active zones outside of core hours instead of activating the whole campus
- More teaching is transitioned from traditional lecture theatres into large scale flat-floor or semi-tiered spaces that support active learning and lecture theatre growth is restrained

Improved utilisation

- Flexible spaces available for multi-modal use across the extended day, ranging from formal teaching to industry and community engagement, including events and social activities
- Alternative timetabling models are explored (with the Division of Academic and Student Engagement) to improve timetable functionality and practices, and maximise the delivery of teaching over the whole year
- Room booking control is reviewed and the level of centrally controlled space is increased

Digitally enhanced learning

- Space design and technology provision enables students to participate in learning and teaching activities from off-campus locations and support global partnership initiatives
- The long-term requirement for formal computer laboratories is easedthrough University support for Bring Your Own Device
- Augmented and Virtual Reality technologies support the integration of blended learning modalities
- Online content creation is supported by video recording and production spaces

SUSTAINABILITY

Scope

The Infrastructure Sustainability strategy will embody the University's commitment to responsible environmental management and enable it to advance its climate change adaptation through the pursuit of low-carbon operations.

The program will guide investment in resource efficiency, low-carbon technologies, renewable energy and waste minimisation for our campus buildings and grounds. Resource efficiency of the University's built assets and energy procurement will be key areas of focus, as these generate the largest proportion of campus emissions.

The Sustainability strategy will be a high-profile demonstration of the University's leadership in reducing its environmental footprint and a platform for engaging with students, staff, and the broader community to foster collective action on climate change.

Key objectives

Reduce carbon emissions

- Deliver programs to reduce carbon emissions across the University's campuses as the foundation for achieving improved adaptation to climate change

Close the loop on resource use

- Design out waste and support the re-design and re-purposing of resources use on campus

Support responsible consumption

- Educate, enable and encourage staff, students, contractors and visitors to minimise waste, implement building water, waste and energy efficiency programs, and measure and monitor resource consumption on campus

Improve resilience against climate change

- Proactively design the physical landscape of our campuses to improve their adaptation to future climate conditions, including a possible increase in extreme weather events

Create a thriving sustainable campus community

- Foster a community of staff, students and alumni that value and embody the University's commitment to a sustainable future

Key principles

Reduced carbon emissions from energy consumption

- Emissions from energy consumption are reduced through energy efficiency technologies, the increased use of embedded power generation via renewable energy sources, the increased procurement of grid-sourced low carbon energy, and designing in low carbon technologies for new buildings on campus
- An emissions inventory and sustainability reporting framework is in place to enable the University to track and manage its environmental impact
- The creation of a revolving fund is considered, which will utilise the cost savings from energy efficiency projects to fund future low carbon projects

Lowered resource consumption

- Water efficiency programs and the increased use of recycled water on campus will enable the University to optimise its management of this precious resource
- Targeted waste avoidance and waste reduction programs educate, encourage, and enable staff, students and visitors to consume responsibly
- Explicit support for re-use, re-design, repair and re-purposing of materials is considered in all construction and maintenance programs
- The University proactively and comprehensively measures, monitors and reports resource consumption across all campuses

Resilience for climate change

- The University's campus grounds and other land holdings proactively support biodiversity and habitats for native flora and fauna
- Green spaces on campus connect students, staff and visitors with the natural environment, offering areas of shade and a respite from the built surrounds
- The strategic use of green corridors reduces heat build-up and funnels cooler air towards air-conditioning intakes to lower energy loads and associated carbon emissions
- Campuses are cyclist and pedestrian friendly, encouraging and enabling staff and students to adopt low impact methods of transport
- Emergency management plans and community safety hubs protect staff, students and visitors at times of extreme weather events

Community leadership in sustainability

- Continuous improvement of existing campus infrastructure performance demonstrates the University's commitment to responsible environmental citizenship and sustainable innovation
- Programs to raise awareness and foster collective action for campus sustainability engage students, staff, and the broader community
- The University demonstrates leadership in sustainability partnerships with business and industry

STRATEGIC ASSET MANAGEMENT

Scope

The University estate comprises of 371 buildings and built infrastructure with a valuation of circa $1.8B(2016 Asset Valuation).Investment in maintaining the estate has ensured that business continuity is managed and ongoing refurbishment of the building stock has assisted in addressing backlog maintenance issues as an integral component of project delivery. However, the rate of investment in the past has resulted in an overall deterioration of the University's facilities.Developing and implementing a strategic asset management plan (SAMP) establishes a detailed understanding of what physical assets are currently held, their value, future value, and costs associated with maintaining them or disposing of them. The SAMP aligns the management of the University's built and other infrastructure assets with the strategic importance of the facility.It guides optimal decision making over the life of the asset through prioritising, planning, investment, procurement, management while in use, through to disposal of the assets.Having a comprehensive strategic asset management plan in place ensures assets are maintained and services delivered as efficiently as possible, which is criticalin balancing risks, levels of service, and costs against the university's strategic aspirations by identifying an optimised level of investment over 25 years.Proposed investments in the IBP havebeen prioritised and scoped to align to available funding and proposed refurbishment works.

Key objectives

Optimise the current asset stock

- Improve the life cycle management of its built assets by balancing risk and costs against the University's strategic aspirations

Enable evidence based decision-making

- Collect and utilise data to balance risks, inform financial investment, and levels of service to its students and staff

Achieve best practice asset management

- Align University asset management planning with the principles prescribed by ISO55000

Key principles

An optimised asset management strategy

- University assets are managed in a way that achieves the required Level of Service delivery at an acceptable level of risk, at the lowest sustainable cost
- A framework and guiding principles that inform the development of the University's Capital Investment Plans and Maintenance Plans
- Projects, processes, resources and functional contributions are aligned across the University, replacing departmental silos and competing short-term priorities
- A transparent audit trail tracks what is done, why, and when with associated life cycle costs
- Asset performance is assessed against benchmarked KPIs
- Risk management practices effectively translate the assessment of infrastructure risks into business risks

Relevant, complete and current data is available to inform decision-making

- The collection and utilisation of data across the University's built assets is improved to provide the basis for informed and consistent decision-making
- Infrastructure KPIs are in place to link expenditure and associated outcomes with the University's corporate objectives
- Life cycle costing information is gathered from the estate level to the asset level
- There is a clear line of sight from corporate strategies to infrastructure decision making

University strategic asset management planning aligns with ISO55000

- The University's asset management practices demonstrably align with internationally recognised best practice standards
- Quality assurance guaranteed for users where assets play a key role in the provision and quality of products and services
- Users and other stakeholders derive confidence from the quality assurance, safety, and performance requirementsystems in place

FOR FURTHER ENQUIRIES

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Appendix 2 – Proposed Facilities Investment Plan

The below table sets out the Proposed Facilities Investment Plan from 2019 to 2028:

UNIVERSITY OF ADELAIDE - PROPOSED FACILITIES INVESTMENT - 2019 TO 2028									
		Project Timing		Total Three Year Expenditure ($'m) (2019 - 2021)	Total Ten Year Expenditure ($'m) (2019 - 2028)	Annual investment expenditure ($'m)			
		Start	Finish			2019	2020	2021	2022 - 2028
A	**Major Projects**								
1	Lot 14	2019	2022	**80.8**	**150.0**	0.5	11.2	69.2	69
2	UofA Sports Centre	2023	2025	**0.0**	**60.5**	0.0	0.0	0.0	61
3	Public realm - North Terrace	2019	2027	**10.8**	**27.4**	3.0	2.9	5.0	17
4	Stem Precinct Uplift	2020	2024	**22.4**	**36.9**	0.0	3.6	18.8	15
5	Creative Technologies Building	2025	2028	**0**	**279**	0	0	0	279
6	Union House	2019	2022	**35**	**65**	2	7	26	29
7	City East Purchase	2023	2026	**0**	**80**	0	0	0	80
									0
	Total Major Projects Spend			**149**	**698**	**5**	**25**	**119**	**549**
B	**Refurbishment & Minor Capital Works**								
1	Public realm - Waite	2025	2028	**0**	**4**	0	0	0	4
2	Public realm - Roseworthy	2019	2028	**1**	**5**	1	0	0	4
3	Teaching area spaces - upgrades / refurbishment	2019	2028	**26**	**81**	4	15	7	55
4	Research area spaces - upgrades / refurbishment	2019	2028	**15**	**77**	5	5	5	63
5	Staff and HDR spaces - upgrades / refurbishment	2020	2028	**9**	**55**	0	4	5	46
6	Sustainability	2020	2028	**3**	**59**	0	1	2	56
7	Site Relocations Provision	2023	2024	**0**	**20**	**0**	0	0	20
8	Research Infrastructure	2023	2026	**0**	**10**	**0**	0	0	10
	Total Refurbishment & Minor Capital Works Spend			**53**	**310**	**10**	**24**	**19**	**257**
C	**Maintenance, Replacement and Planning**								
1	Planning & Resource Allocation	2019	2028	**15**	**53**	5	5	5	39
2	SAMP / Facilities upgrade	2019	2028	**57**	**253**	25	16	16	196
	Total Maintenance, Replacement and Planning Spend			**72**	**306**	**30**	**21**	**21**	**235**
D	**Total Proposed Facilities Investment Spend (A + B + C)**			**274**	**1,315**	**45**	**70**	**159**	**1,041**

Appendix 3 – Major Project Investment Summaries

Lot Fourteen

Item	Description
Project overview	The Lot Fourteen project, planned as a major presence in the Innovation Centre at the heart of the precinct will deliver a facility of international standing for the University; one which is synergistic with the precinct vision and activities. The facility will enable delivery of the University's strategic *Information Advantage* agenda, incorporating the disruptive disciplines of artificial intelligence, machine learning and photonics and supporting emerging and allied disciplines such as cyber security, electronic warfare and social media analytics (big data).
Scope	Co-located with industry and government partners, the development will act as a true 'magnet for talent' and will support growth in the University's defence, cyber security, space and advanced technologies ambitions. The facility will provide infrastructure that focuses on flexible spaces for research, teaching and collaboration; shared facilities for prototyping, simulation fabrication and additive manufacturing and incorporate facilities such as a solutions lab. Occupancy will be balanced, covering off on research and industry collaboration and include discipline related teaching, particularly for Masters and post graduate students. The expanded presence at Lot Fourteen will extend the University's leadership in this important new innovation precinct and provide a visible demonstration of the University's contribution to the overall success of Lot Fourteen, fully supporting and advancing the University's strategic directions. Work is continuing to determine the mix and scale of the activities that will best deliver on the University's strategic success for this development. A high level concept business case will be presented to Council in October, with a final business case scheduled for presentation in December 2019.
Benefits	Strategic: • An expanded presence at Lot Fourteen will strengthen and extend the University's connection to the public realm along Adelaide's pre-eminent boulevard and provide a public showcase for the University's leadership and capabilities in the future-focussed disciplines, with public and industry engagement being a key focus. • The facility will be the new front door for innovation with world-class research, maker and simulation spaces acting as a 'magnet for talent', enabling the University to attract world-class researchers, industry, government agencies and community from different backgrounds and disciplines to develop and deliver innovative services and technologies. Space design principles that will deliver state of the art, technology rich spaces that promote an innovative, collaborative and progressive culture, encompassing University participants, secondary students, industry partners, and the broader community.
	Operational: The operating model will be determined as the sources of income to support the activities within the facility are further developed and the costs of operations are determined.
	Financial: • Depending on the building procurement approach there may be a lease arrangement with government in lieu of up front capital development May be an opportunity to secure short – medium tenants to support the building financially while activity grows
Indicative Timing	Construction scheduled to commence 2020/21
Indicative Cost	An allocation of $150M is currently provisioned in the IBP for this project.
Dependencies	Achieving agreement with SA Government Renewal SA on an acceptable site ownership or tenancy arrangement.
Opportunities	That the construction of a new building will provide the capacity to support University's Learning & Teaching and Research and Innovation strategies beyond its key objectives in the early start-up phase.

Public Realm

Item	Description
Project overview	The Public Realm project is a landmark intervention in the University's physical connection with the City of Adelaide and its place in the public life of the South Australian community. This project will establish the North Terrace campus as an extension of the City of Adelaide, a place that attracts and engages students, staff and the broader public, allowing for social connection, events and smaller gatherings, and provides as a place of respite and inspiration as well as a site of active use both day and night. The Kaurna and Heritage Walks will be key features of the project. The project will better connect the campus to the city and surrounds and focusses on improving the pedestrian experience of the campus by maximising space for pedestrian and bike movement, with improved greening and wayfinding, and the identification of key sites for activation. Key components of this project include: • Addressing entrances to the University • Removal of the heritage fence • Creation of stronger pedestrian pathways North-South and East-West across the campus • Improved campus amenity Whilst on a much smaller scale, interventions will also be undertaken at Waite and Roseworthy.
Scope	The core focus of this project is the public realm on campus. However, the surrounding context - particularly connections as part of the Cultural Precinct to the Art Gallery, River Torrens, Riverbank Precinct, Lot Fourteen, new Adelaide Botanic High School, AHMS and the CBD - have been taken into consideration. Key areas for potential activation are: • Victoria Drive - consolidated landscaping, improved connections to the riverbank, part removal of fences and car parks • Frome Road – improved connections with the Botanic Gardens and Lot Fourteen, part removal of fences • Western Drive – reinforcement as main pedestrian corridor from parklands footbridge to North Terrace, high-quality landscaping, rationalised service and emergency access University Square – new outdoor hub with improved pedestrian circulation, retail activation and spaces for events with minimised vehicle access • Engineering Gardens – new landscaped area in the Engineering precinct, improved connection from Lot Fourteen, UniSA and Maths Lawn • Western Gateway – reinforcement of Kintore Ave entrance as the principle connection to the Festival Centre precinct Public realm projects at the Waite and Roseworthy Campuses will be identified separately to improve the quality of the connections around highly trafficked areas and entrances.
Benefits	Strategic: • This project strongly supports the University's aspirations to become the 'Beating Heart of Adelaide' and, by elevating the connections between the North Terrace campus and its surrounds, improving the visual presence and accessibility of the University at key sites. • The physicality of the campus will be made more open and accessible, creating easy and pleasant thoroughfares for pedestrians and cyclists, and welcoming visitors onto the University grounds for a range of experiences, while the removal of fencing at key sites, for example along the River Torrens, will extend the campus beyond its physical boundaries. The project will also contribute to achieving deliverables of the Campus Experience and Sustainability programs outlined in the Infrastructure Strategy by creating new green spaces and outdoor areas for increased socialisation and recreation.

	Operational: • Increased facilities for recreational activities on campus, including more shade and seating, BBQs, hard courts, night lighting and outdoor spaces designed to support events and accommodate coffee carts and food trucks. • Rationalising of vehicle movement and car parking on campus to create safe and welcoming environments for pedestrians and cyclists. • Service hubs located in strategic locations around the campus to consolidate back of house activities.
	Financial: • There are no quantifiable direct financial benefits, however, public realm improvements support the core aspirations outlined in the University Strategic Plan by attracting staff, students and the wider community to campus. The Public Realm project is a significant enabler of the Beating Heart of Adelaide pillar and supports the University's brand and reputation locally and internationally.
Indicative Timing	• Under development aligned to available funding.
Indicative Cost	Preliminary costings indicate an investment requirement of $24.5M to undertake priority works aligned to available funding
Dependencies	Development approval to remove heritage fence.
Opportunities	Public realm improvements can be delivered through a staged, flexible approach as part of major projects or as stand-alone upgrades. Improvements to the grounds provides the opportunity to activate the campus, upgrade night lighting and highlight special cultural and heritage places on campus.

Sport Facilities

Item	Description
Project overview	This project will deliver new and expanded sports facilities on the North Terrace campus for use by University students, staff and the broader community. It will address an identified strategic shortfall in the University's ability to offer an outstanding and engaging campus experience due to the limited nature of its sports facilities compared with the Group of Eight and other key tertiary competitors. The University of Adelaide is one of only a few universities in Australia that does not have an on-campus Sports Hall. In addition, very few facilities exist for casual recreation and sports activities, limiting on-campus social opportunities for students and staff, and forfeiting the opportunity to bring the community onto the campus for recreational activities.
Scope	The development proposes: • An indoor swimming pool • An on-campus Sports hall • A larger fitness centre • Bookable space for non-ball recreation and sport activities (e.g. yoga, martial arts) New facilities should be easily accessible, clearly visible from primary pedestrian paths, and close to other facilities that are heavily trafficked by students and staff. The total space required to deliver these offerings will be in the order of 6,600m2 NLA.
Benefits	Strategic • New sports and recreation facilities will activate and energise the North Terrace campus and create a destination social environment for students, staff, and the broader community, supporting the University's aspiration to breathe new life into its campus culture and aligning with its vision to be the 'Beating Heart of Adelaide'. • These facilities will address a critical gap in student satisfaction with University facilities and strengthen the University's ability to compete for international students, who have provided feedback that sports facilities on campus are inadequate - the new facilities will also deliver improved opportunities for interaction between local and international students.
	Operational • The new space would bolster the bookable facilities available to the University's sports, social and hobby clubs (which are currently under-served), enable the Fitness Hub to expand its offering, and bring some University sports activity back on to campus from external venues.
	Financial • It is unlikely that an indoor sport and recreation facility will operate at a financial breakeven level – swimming pools in particular have high operating costs and there will be the expectation from students and staff that access to the facilities for some purposes (e.g. ad hoc use) will be free, with others on a pay-as-you-go basis. To maximise use of the sports facility and achieve the best financial outcome, it should be professionally managed.
Indicative Timing	Construction for the project is currently forecast to commence 2023.
Indicative Cost	This project has an estimated cost of $60.5M, including escalation to 2020. Additional costs may apply based on final site determination.
Dependencies	Scope and timing are dependent upon: • Identification and availability of a site

Opportunities	Planning advice indicates that a new development on a Frome Rd location could support a six storey building which would be an increase in height of two to three storeys on the base option, but would maximise the project's yield and could be used for teaching and learning growth, decant for other major developments, or other strategic opportunities.

Union House

Item	Description
Project overview	The Union House project will reinvigorate the Union House precinct, making a major contribution to the campus culture and re-instating one of the University's most loved heritage zones as a destination for a new generation of students, staff and visitors. Consultation on activities and functions that will ensure a consistently, highly activated precinct are progressing. Options include expanded informal social and learning space, health services, expanded teaching zones for both timetabled and short course education and potentially a new contemporary staff club. The proposed works will complement the recently completed upgrade and refurbishment works to the precinct and simultaneously address backlog maintenance and asset replacement costs.
Scope	Union House was purpose-built in the early 1970s to provide a campus focal point for student services and social experiences. It was designed to integrate architecturally with the Cloisters, Lady Symon and George Murray Buildings, built in the 1930s. As a whole, the Union House precinct is heritage listed and is an iconic part of the University's built form. With the changing demand for services over the years and the shift of campus population towards the south east, the Union House precinct has become under-utilised and presents a poor visual impression. Despite this, students have clearly voiced the importance of this iconic precinct to their campus experience and there exists an opportunity to renew the zone as part of the University's strategic focus on creating a welcoming and engaging campus. This project will: • Reinvigorate the precinct by creating a destination point for a range of activities that will draw staff, students and the community to the area; • Restore the architectural heritage of the building and reinstate the large open spaces as functional and flexible facilities, improving circulation and celebrating the uniqueness of the built form; • Establish the precinct as a destination through curated activities, food and beverage, retail, formal and informal places to meet and socialise, accommodating and bringing back to campus student activities, such as club meetings, and by providing dedicated spaces for specific needs, such as a prayer room; • Extend the life of the building and create future flexibility for the building to adapt and change over the next 20-30 years through contemporary service design; • Address deferred maintenance, asset replacement and any compliance issues through base building works, and generally upgrade the accommodation through refurbishment and renovation.
Benefits	**Strategic:** • This project will make a major contribution to the re-energisation of the North Terrace campus, aligning strongly with the University's strategic aspirations to create a welcoming and engaging campus for students, staff, and the broader community. • It will re-activate a historic and iconic area of campus, instilling it as a core part of the campus experience for a new generation of students and staff, and reconnecting alumni with this well-loved aspect of student life. • It will improve the student experience by delivering new spaces to meet student needs and expectations, provide more flexible space for use by student clubs, and create greater opportunities for socialisation and recreation on campus.
	Scope: • Provide the potential for intensive and short course, other teaching • Potentially a re-imagined contemporary staff club
	Operational: • There is a significant deferred and future maintenance investment required for Union House with issues relating to wear and tear, such as worn and damaged flooring, doors, walls, and ceilings; there are also a number of heritage, Disability Discrimination Act and Building Code of Australia compliance requirements that will be triggered by planned upgrade works to Union House. • This project will address these required investments while maximising the strategic use of the precinct.

	Financial: • This project will reduce the ongoing operational costs associated with aged infrastructure and inefficient service design.
Indicative Timing	The first stage of the project has already commenced with the completion of the new UniBar, Cloisters redevelopment and Exercise studio in Q1 2019. A staged approach will be undertaken for the redevelopment of the rest of the precinct with an anticipated completion date of mid to late 2022.
Indicative Cost	Preliminary costings indicate an investment requirement of $60M, including $20M to address backlog maintenance and upgrade services. Decanting costs of $1M to relocate Staff Club to a temporary location have been included.
Dependencies	Current advice indicates that it would be possible to undertake a major redevelopment of Union House with the Fitness Hub remaining in place (noting that the Staff Club would need to be relocated prior to works commencing). This being said, the completion of the refurbishment of the space currently occupied by the Fitness Hub would occur post their relocation into an alternate location which is currently being investigated.
Opportunities	N/A

STEM Precinct

Item	Description
Project overview	The STEM Precinct Uplift project will create a more cohesive campus, including consideration of a precinct model based on functional and emerging themes. This would include the development of a STEM precinct, initially the six buildings centered around the Maths Lawns with connections into Lot Fourteen. The project will increase the adaptability and flexibility of the existing spaces, and address critical infrastructure items in delivering more contemporary environments and improving opportunities for industry engagement and collaboration for public engagement as well as industry partnerships to complement the Lot Fourteen development.
Scope	The STEM Precinct Uplift project will commence with the upgrade of a number of Engineering, Computer & Mathematical Sciences buildings to activate the ground floor plane of key buildings, creating research labs and teaching spaces to meet new and expanded research and teaching programs, developing active learning hubs and industry engagement spaces, and establishing a pathway through to the proposed Lot Fourteen development.
Benefits	**Strategic:** • The initial projects will activate the existing Engineering precinct, creating an open and inviting aspect, and welcoming industry partners and collaborators into the space. This will facilitate the development of research and commercial partnerships for University researchers and create pathways for graduating students to enter into internships with industry partners. • This project will deliver upgraded learning and teaching and research facilities, suitable for supporting the requirements of active learning pedagogies as well as an increase in post graduate by coursework students • It will also pave the way for opportunity projects (able to respond to emerging themes) to be established in a highly visible area of the campus. • Once delivered, the project will provide approximately 3,500-4,000sqm of refurbished space, depending on final scope of works.
	Operational: • This project will deliver more flexible facilities to accommodate growth in the Engineering programs, optimise utilisation of facilities across the timetable, and encourage cross-faculty collaboration. • It will also provide an upgrade to ageing buildings, maximising the investment required to address backlog maintenance.
	Financial: This project will reduce the operating costs of the buildings in this precinct through the introduction of new energy efficient services infrastructure.
Indicative Timing	Planning has commenced in 2019, with construction forecast to commence in 2020 and conclude in 2024 for the initial works in the Engineering precinct. Further projects will be identified following a strategic consultation process with the Faculty of Sciences.
Indicative Cost	Preliminary costings indicate an investment requirement of $36.9M including.
Dependencies	For the initial works in the Engineering precinct, scope and timing may be dependent upon completion of Stage 1 of the Waite workshop project, should some of the large scale engineering activities need to be relocated off the North Terrace campus. This is currently factored in to the preliminary costings, but is subject to further investigation and fine tuning of scope to determine final requirements.
Opportunities	A STEM Precinct masterplan will be developed over the next 6 months to bring together planning for the STEM disciplines and establish an agreed pathway for investment in the broader precinct. This process is underway with the commencement of strategic visioning workshops for ECMS and Sciences to create a vision and explore opportunities for future infrastructure and precinct activation. The workshop outcomes will inform the STEM precinct masterplan.

Creative Technologies Building

Item	Description
Project Overview	The Creative Technologies Building (Napier site) will be a purpose-designed destination space for University exhibitions, events and cultural occasions, while delivering new multi-modal teaching spaces, virtual reality/augmented reality (VR/AR) labs, workshops and high quality accommodation supporting the University's growth and community engagement aspirations. As a shared and collaborative space for the University, industry and cultural partners, the focus of this development will be to showcase technologies across multiple disciplines including Arts, Engineering, Computer Science, and Architecture centring around creative areas of strength and growth including: • Augmented, virtual and mixed reality • Sonic arts and music technologies • Immersive technologies • Multimedia installations • Creative writing • Kaurna language & culture • Digital media • Network arts • Film and game music • Digital education literacies and pedagogies & humanities The new building will address the significant backlog and future maintenance liability associated with the existing Napier building, although the project has many challenges including identification of decant space. Construction commencement is provisionally planned for 2025.
Scope	The existing 8,790m² NLA Napier building will be demolished to make way for a new building with a height of 8 floors plus two lower podium(s), and 16,650m^2 NLA, which will: • Deliver drawcard exhibition spaces to generate improved cultural engagement with current and potential students and staff, and the broader community; and to create a destination on campus for local, national and international visitors • Deliver flexible, world class teaching facilities for use by students and staff from all Faculties • Provide high quality accommodation for the Faculty of Arts and specialist Arts teaching spaces with a focus on, theatre, dance and media • Deliver high quality facilities to support the University's engagement with industry, external colleagues, and community leaders, and to improve the campus experience for staff and visitors. This project presents a significant decanting challenge which will require the creation of decanting spaces suitable to accommodate relocated occupants and activities during the construction phase with the aim of creating future growth capacity and minimising sunk costs.
Benefits	**Strategic:** • The project presents the opportunity to create a high-profile destination address for the University at the intersection of the city's cultural precinct, business district and key recreational zones, enhancing the University's physical profile and improving its connection to the public realm. • The performance and exhibition spaces, coupled with the contemporary dining space, will provide a distinct destination for visitors, a home for major ceremonial occasions, and a space suitable for showcasing the diverse and contemporary nature of the University's identity. • The development of new teaching spaces will make a strong contribution to an improved student experience, accommodate growth and address the University's need for high quality, contemporary spaces that support active learning modalities.
	Operational: • By replacing the ageing Napier building, the amenity of the facilities on this site will be dramatically improved and raised to a standard appropriate for a world-leading university and suited to the requirements of contemporary teaching and learning practices. • This building will enhance the safety and utility of the University's connections with its surroundings by improving on the existing poor pedestrian access to the campus at this site, and

	creating a clearer access route from North Terrace and the tram extension through to the University. • The purpose-built nature of this project will eliminate current restrictions on the range of activities that can be undertaken in the existing space, which are limited by structural and load bearing issues with the courtyard and carpark below. • The development will need to consider accommodation needs for the Faculty of Arts Office, the School of Humanities and the School of Social Sciences currently located in Napier, and the future of The School of Elder Con Music and the specialist music teaching.
	Financial: • The Napier building was constructed in 1961 and many building elements are reaching the end of their serviceable life. Should the University intend to continue to use Napier for its current functions long term (25 years or more) significant investment in the order of $80M would be expended over that period to repair, replace and maintain various building elements, many of which are now due for replacement. • This investment does not include costs that may be incurred to upgrade the building to comply with legislative requirements triggered through changes in the buildings use or significant building upgrades. • These funds are better directed towards the construction of a modern purpose-built, state-of-the-art facility that better serves the University's operational and strategic requirements.
Indicative Timing	Construction for the project is currently forecast to commence 2025 to 2028.
Indicative Cost	This project has an estimated cost of $228M*, including escalation to 2020. The project will have significant decant challenges that will be met across a range of strategies yet to be finalized and may include City East and possibly short term use of Lot Fourteen. A provision of $28M has been included to cover anticipated costs.
Dependencies	Decant strategy to be determined, based on site selection.
Opportunities	• Consideration is being given to the opportunity to develop a concert hall as the entry to the building, however, this would most likely require demolition of the existing Ligertwood building and may limit expansion of learning and teaching spaces. This will add to the decant costs and is still being assessed. • The new building developed to the maximum height of 14 floors plus two lower podium(s) as allowed in the Adelaide Development Plan (Capital City Zone) has the potential to create a total of 31,000m^2 NLA, at a cost of an additional $122M (total $368M), that would allow for: o The consolidation of the Faculty of Arts from five buildings into one and create an Arts precinct. o Additional world class teaching facilities to support student growth. o Space vacated by Arts in Schultz, Hartley, Madley could enable the relocation of staff from leased office accommodation and relinquish leases for financial benefit. o The Madley Building has been identified as a future development site, therefore retaining it for current specialist music teaching could restrict future development opportunities. o The development on this site as one of the few remaining opportunities for the University to maximise footprint and NLA on the North Terrace campus to cater for forecast growth in student numbers and other strategic priorities.

**Expected level of accuracy on the estimate -10% / +10%*