



THE UNIVERSITY OF  
WESTERN AUSTRALIA  
*Achieve International Excellence*

# Crawley Campus Planning Review 2010



ACHIEVE INTERNATIONAL EXCELLENCE

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## Crawley Campus Planning Review 2010

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EVERY 10 YEARS  
THE UNIVERSITY OF  
WESTERN AUSTRALIA  
PREPARES A CAMPUS PLAN  
WHICH PROVIDES THE  
STATE GOVERNMENT AND  
THE COMMUNITY WITH  
INFORMATION ON THE  
UNIVERSITY'S PLANNING  
INTENTIONS FOR ITS  
CRAWLEY CAMPUS.

## Foreword

The University of Western Australia is one of Australia's finest with an international reputation for excellence in teaching, learning, research and community engagement. A dynamic and progressive institution, the University is a member of the prestigious Group of Eight (Go8) partnership of leading Australian research-intensive universities and offers a diverse range of courses across nine faculties.

The University has set itself an ambitious goal of being counted as one of the top 50 Universities in the world by 2050 (as measured by the Shanghai Jiao Tong University's Academic Ranking of World Universities). An interim goal is to be in the top 100 by our centenary in 2013. In 2010 the University was placed 112th in the world.

The University's position as the first and the only research-intensive university in Western Australia has ensured a unique relationship with the community, government, business and the professions. An independent economic analysis has forecast that over the next 40 years, the University will contribute more than \$60 billion in value to the Western Australian community through its research programs, educational functions, capabilities, relationships and investments.

The Crawley Campus Planning Review 2010 (the Plan) is an important planning document to support the University in achieving its ambitious goal and attaining international excellence.

I would like to take this opportunity to thank all those who have given their time and expertise in contributing to this Plan.

I am pleased to endorse the Crawley Campus Planning Review 2010.



A handwritten signature in black ink that reads "Alan Robson".

Professor Alan Robson AM CitWA  
Vice-Chancellor

## Preface



The University of Western Australia acknowledges that its campus is situated on Noongar land, and that Noongar people remain the spiritual and cultural custodians of their land, and continue to practise their values, languages, beliefs and knowledge.

The Campus Planning Review 2010 (the Plan) guides the physical planning of the University. The Plan is the key tool to guide the University in its decisions on the functional layout and future development of the Crawley campus.

The Plan builds upon the 2000 Campus Planning Review (2000 Plan), taking into account changes in economic, social, and environmental contexts over the past decade.

The focus is on the decade 2010 – 2020, but the Plan also sets the foundations for campus development through to 2060. It seeks to provide a continuity of the planning ethos that has underpinned the development of the University.

The Plan is firmly focused on the future, creating flexibility to meet needs and opportunities that will arise as the campus develops further. In this context, it is important to recognise that some of the most appreciated features of the campus were considered bold and controversial when they were first proposed.

Changes to the funding of universities, along with greater emphasis of sustainability, frame the structure of this document. As a result this plan is quite different from the 2000 Campus Planning Review, with future development based much more on a contextual background and a more flexible, principles-based approach.

There is more emphasis on a series of layered principles which highlight where growth can occur. Essentially the Plan provides a greater degree of flexibility in the planning and design of the Crawley campus without compromising the attributes that make the campus such an enjoyable place in which to learn, work and live.

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# Introduction

The physical planning of The University of Western Australia is guided by the Campus Planning Review 2010 (the Plan). The Plan is the key tool to guide decisions on the functional layout and future development of the Crawley Campus. It is reviewed every 10 years.

The Plan builds upon the Campus Planning Review 2000 (2000 Plan), taking into account changes in economic, social, environmental and governance contexts over the past decade. While the focus is on 2010 – 2020 it also sets the foundations for campus development into the future beyond 2020.

The Plan is the document that reports to State Government, through the Western Australian Planning Commission (WAPC), on the physical development and planning issues that have an impact on the Crawley campus. It is used by the WAPC to assess the University's major new developments. Further it is used by the University to plan for new infrastructure and development as well as building upon the current form and feel of the widely admired campus.

The Plan is based on a set of principles and recommendations to guide development.

It is intended that the Plan will drive the physical elements in support of the University's Strategic and Operational Priorities Plan which focuses on the provision on quality research, teaching and student experience.

## Objectives

**The objectives of the Plan are to:**

- Ensure there is sufficient land and buildings to accommodate teaching, research and other needs over the next 10 years; and
- Place the University to the best advantage to meet external, often unforeseeable situations, over the next 50 years.

## Approach

The Vice-Chancellor's Campus Planning Review 2010 Steering Committee (Appendix A) was appointed in November 2009. The role of the Committee was to prepare a planning document for approval by the University's governing body, the Senate. The Plan will be lodged with the Western Australian Planning Commission (WAPC) as the planning guide for the Crawley campus over the next decade and beyond.

**The Committee considered:**

- Planning and design principles – the cultural, architectural, heritage and landscape values, that have underpinned the quality of the Crawley campus since its establishment;
- The development on the Crawley campus and adjoining landholdings over the last decade, and the physical development since Campus Planning Review 2000;
- Physical planning outcomes needed to support the University's vision, strategic plan and operational priorities into the future;
- Government and other external policies and strategies impacting on the campus plan;
- The requirement to ensure there are sufficient land and buildings to accommodate teaching, research and related needs over the next decade; and
- Placing the University in best physical planning advantage to meet external, often unforeseeable situations over the next 50 years.

The development of the Plan included a consultation process with a public comment period from 4 August 2010 to 17 September 2010 engaging stakeholders such as:

- Local community;
- Local Government;
- State Government;
- Government stakeholders;
- Convocation;
- Colleges;
- Student Guild;
- University staff;
- University governance and management groups.

## University Property Portfolio

The Crawley campus is the major landholding of The University of Western Australia. Activities carried out on the Crawley campus are linked with those at the QEII campus, Claremont campus, UWA Sports Park, and Field Station Shenton Park. Similarly, across the metropolitan area the University has a number of facilities and accommodation arrangements with partners such as the teaching hospitals. The University also has regional campuses at Albany and Geraldton and a number of further properties throughout the State supporting education and research. This plan focuses solely on the Crawley campus.

## Campus Location

The Crawley campus is 3.5 kilometres southwest of the Perth CBD. The setting on the banks of the Swan River and the adjacent Kings Park offers the Crawley campus a high level of natural amenity.

The location offers the University many opportunities but also limits possible growth of the campus to the east and north-east of campus.

## Scope of the Plan

Over the years the University has expanded beyond the original campus, and the 'edges' of the University are no longer distinctly defined. The University has actively purchased property around the campus since the 1960s and University developments on what was traditionally residential land have become common-place. Developments such as the Ken and Julie Michael Building at 7 Fairway are an example of successful campus growth into the community.

The land referred to as "the campus" in this document refers to and is zoned under the Metropolitan Regional Scheme for University Purposes. It also includes adjacent areas that have either high levels of University ownership, or are used for University related purposes, or may determine the planning outcomes within the campus. In summary for the purposes of this plan, the Crawley campus of 53.3 hectares consists of properties listed in Appendix B.

It includes the area between the Crawley campus and Broadway, where more than 40 per cent of the land is owned by The University of Western Australia. The University acknowledges that there are many other landholders in this area. Nevertheless, this area is included in the campus plan to provide an indication of how the land could ultimately be developed. The Plan signals the University's direction for its land holdings within the area and provides information for private landowners, who are respected as neighbours.

The vision for the Crawley campus area is inclusive of all in the community. The wider community is welcome to continue to use and engage with the facilities contained on campus land.



# Part One Context

# Part One – Context

## University Overview

The mission of The University of Western Australia is:

“To advance, transmit and sustain knowledge and understanding through the conduct of teaching, research and scholarship at the highest international standards, for the benefit of the Western Australian, Australian, and international communities”.

The University strives to achieve international excellence, as measured by academic ranking among the world’s universities. The University aims to be among the top 50 Universities in the world by 2050.

## Recognitions and Awards

The University continues to increase its international ranking according to the Shanghai Jiao Tong University’s Academic Ranking of World Universities. The University was ranked 112th in 2010, the highest ranked University in Western Australia and the 5th ranked University in Australia.

The research focus and track record, and the calibre of the student body, including postgraduates, have enabled the attraction and retention of academic staff with outstanding credentials by international standards. In 2010, the University counts among its staff the 2005 Nobel Laureate for Medicine or Physiology, seven Australian Laureate Fellows, five Federation Fellows and six Premier’s Fellows. University researchers have received numerous awards and fellowships for their respective contribution to research, including but not limited to: Australian Laureate Fellowships, Future Fellows, Premier’s Fellows and WA Premier’s Science Awards including WA Scientist of the Year, as well as numerous international disciplinary bodies’ awards, scholarships and prizes.

## Student Profile

The University has the highest quality student and graduate profile, a key driver in achieving international excellence. This level of student talent reflects and defines the University’s aim for quality.

The University’s graduates are sought after by employers, with the proportion of graduates in full-time employment within five months of completing studies the highest of all Western Australian universities and among the highest in Australia. The ongoing achievement of student and graduates provides generations of cumulative benefit to the community. The University counts among its alumni a former Prime Minister, a Chief Justice, six past Premiers of Western Australia, a high proportion of other State and Federal politicians, high profile professionals in engineering, law, business and medicine and major contributors to the arts and sciences. The University is similarly proud of the contributions of its students with numerous team and

individual achievements at state national and international level. University students and graduates have been successful in obtaining Rhodes Scholarships, Fulbright Scholarships, and numerous other recognitions including Human Rights Awards, Prime Minister Awards, and Australian of the Year and Young Australian of the Year Awards.

## Teaching and Learning

The University of Western Australia was ranked second in Australia for the quality of its undergraduate programs. The University’s high calibre staff are committed to deliver a high quality learning experience.

The University and staff have been recognised for outstanding teaching by national awards and teaching citations from the Australian Learning and Teaching Council.

In 2009 the University received \$3.9m from the Federal Government in recognition of its excellence in learning and teaching, among the highest per capita in Australia. The University was also recognised for top levels in teaching and learning in several disciplines reflecting the University’s commitment to providing a teaching and learning environment that aims to achieve international excellence.

## New Courses 2012

Past recognition has not stopped the University from reforming and improving undergraduate and postgraduate education. The University will continue to develop the potential and skills of its high calibre students with the implementation of a new course structure in 2012. This is undoubtedly the biggest academic change in the University’s soon to be 100 year history. The proposed new undergraduate course structure is based on a simple and flexible framework, providing a broader education with a strong emphasis on developing whole-of-life skills in research, innovation, critical thinking, communication and cultural competence. This repositions the development of specific professional skills into postgraduate studies.

These changes will bring the University into line with many of the top universities in the world and is aimed at skilling graduates with the versatility for a changing world.

## Research and Research Training

The University is the major research-focused university in Western Australia. As a member of Australia’s Group of Eight, the University is responsible for the majority of the State’s university-based research and development.

With research activities across a wide range of disciplines, the University has several major research themes:

- Plants, animals, agriculture and environment (including management of natural and agricultural systems);
- Exploration, production and utilisation of minerals, oil and gas;
- Fundamental bio-medical and translational approaches to health;
- Indigenous knowledge;
- Bio-engineering and bio-imaging; and
- Neurosciences (including psychology).

Further to its existing portfolio of research projects, the University has recently been engaged in the following projects that are of significance not only to the University, but also the state as well as the nation as a whole, for example:

- The International Centre for Radio Astronomy Research (ICRAR); and
- The Indian Ocean Marine Research Centre (IOMRC).

## Benefiting the State of Western Australia

In 2010, Western Australia had the strongest State economy in Australia, with generally strong growth and low employment, supported by the resources sector. However the State faces increasing challenges from emerging issues, such as climate change and financial instability.

The Western Australian resources and agricultural sector, both widely seen as the backbone of the State, are highly knowledge-based sectors. They are reliant on new technologies suited to local conditions to push the competitive boundaries of exploration, production and processing activities.

The Western Australian Premier and Treasurer, The Honourable Colin Barnett, MLA expressed the following view:

*“The State Government’s priorities in 2010 will see an increased focus in the areas of social and environmental policy whilst continuing to concentrate on driving economic development to sustain growth and prosperity into the future. The Government continues to work to position the State for future success and competitiveness, entering into a new period of growth...”*

February 2010



Areas identified as key to the Government's priorities for the State include:

- Economic development and responsible financial management;
- Advancing infrastructure;
- Providing better core services of health and education services;
- The protection and management of the State's renewable natural resources – land resources, marine resources, water assets and biodiversity; and
- Delivery of modernised State services models that are innovative, effective and efficient.

The University provides valuable contributions to the State of Western Australia through generating skilled graduates and postgraduates, offering employment opportunities and providing community services via teaching and learning, research and development, social and cultural activities as well as sporting events, in an environment that actively supports equity and diversity.

In 2009, the University engaged ACIL Tasman to conduct an assessment of the value the University offers the State. The assessment noted that the areas in which the University has distinguishing strength, "align well with the structure and needs of the WA economy, with its current strong sectors and with prospective new sectors"; and "these areas alone support strong conclusions as to very high value delivered to WA by the University – and great potential for the future".

The report forecasts that over the next 40 years the University would contribute more than \$60 billion value to the Western Australian community through its research programs, educational functions, capabilities, relationships and investments.

## Social and Economic Benefit

The University is a major participant in the local community. "Benefit to the community" is embodied in the University's mission statement to advance, transmit and sustain knowledge and understanding through the conduct of teaching, research and scholarship at the highest international standards, for the benefit of the Western Australian, Australian and international communities. Most importantly, the University's core teaching and research functions over almost 100 years have developed the potential of more than 100,000 graduates, many of whom are inextricably linked to the state's social, cultural and economic development. For most of the past century, the University has been alone in supplying the state with the key professionals (such as doctors, dentists, lawyers, engineers, architects) who continue to support the State's development.

Many of the University's 3,400 staff live close to the University, derive their family incomes from the University and transact their day-to-day business locally. Many hundreds of local businesses rely on staff and students of the University for their livelihood and that of their staff, and the University engages many local service companies to help with operations on the campus.

The cultural impact the University has on the city and regions should not be underestimated. More than 221,000 people visit the University each year to attend events at theatres, exhibitions, public lectures and seminars. In addition to the more than 300,000 people who enjoy events each year during the Perth International Arts Festival and the 15,000 attending UWA Extension courses, tens of thousands of Australians use the University sporting facilities each year. The University also sponsors many local groups who use the campus, such as the Rotary Club's Subiaco Craft Fair and the Perth Sun Fair. In fact, the University – both the institution and the individuals who make up the University community – underpin the amenity and prosperity of the suburban landscape around it.

The number of students in and around the campus provide local economic stimulus, evident by observing opening hours of businesses that follow the University's academic year. In 2010 approximately 7,500 students and 900 staff live within 8km of the Crawley Campus. This provides a source of employees and clients for many local businesses.

With a high level of public transport to the University there are opportunities for all residents to access a far greater range of services than would otherwise be viable. There is access to the city, Subiaco and the suburban train system. These services are likely to increase as the University continues to grow, again benefiting the region.

The campus is also a significant tourist attraction. In addition, its landscaped grounds, architecture, theatres, art galleries and amenities supplement those provided by the local government, and are freely open to the public.

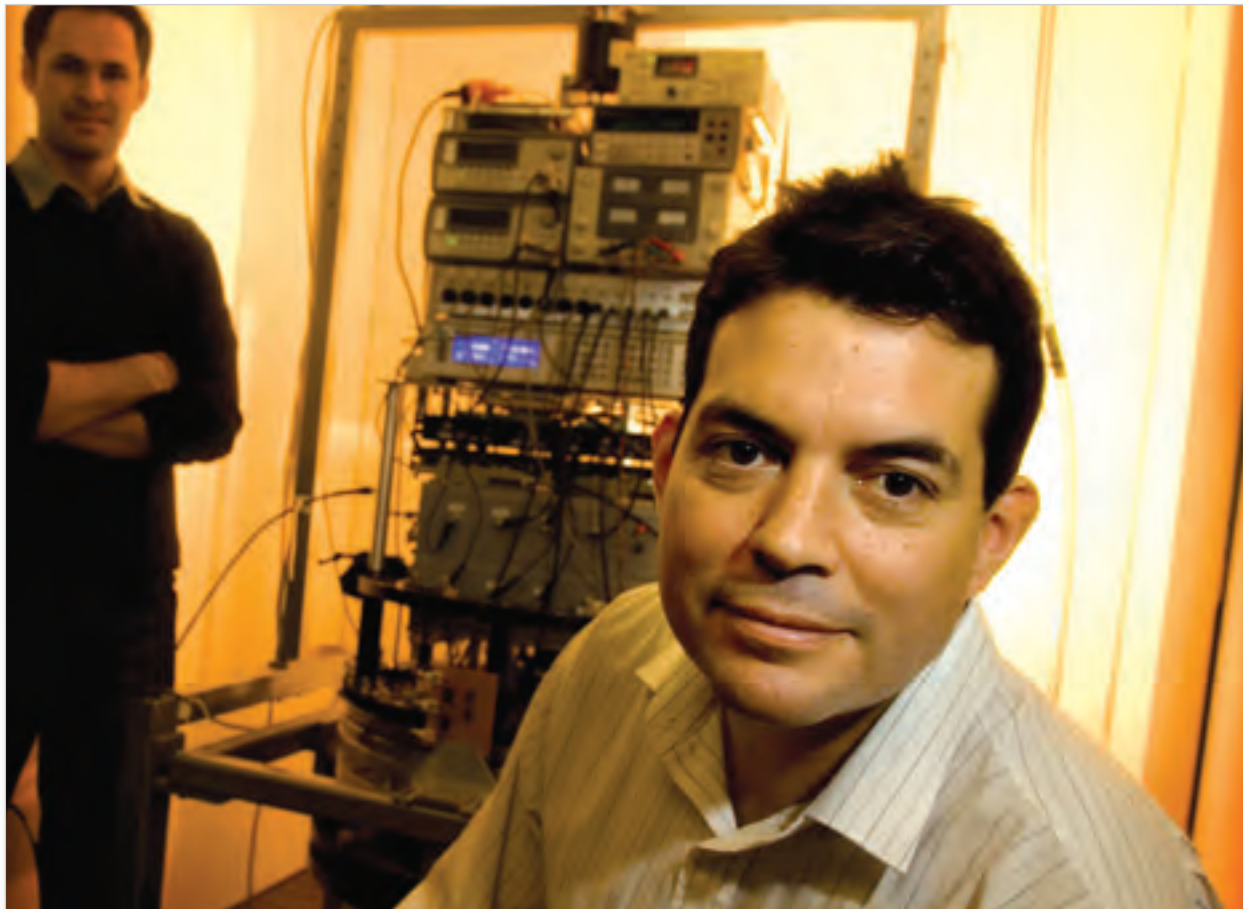
## University Snapshot in 2010

Almost 100 years after its foundation, The University of Western Australia (in 2010):

- Has an operating budget in excess of \$750 million a year, and assets totalling of more than \$1.5 billion;
- Provides teaching and/or employment for more than 24,000 people and, with the QEII Medical Centre, is the second largest commuter destination in the Metropolitan region outside of the CBD;
- Provides the premier undergraduate education in the State, and has a student intake with a high proportion of school leavers with TEE marks in the upper percentiles. In 2009 the University enrolled 89.6 per cent of the State's top 5 per cent school leavers and 86.3 per cent of the top 10 per cent of school leavers who were enrolled at Western Australian universities;
- Made a record of more than 4,400 offers for undergraduate courses. The number of offers has risen by three per cent from 4,296 in 2009 to 4,435 this year including 640 offers to students in rural WA and 136 to 'second-chance' students through the University's Mature-age Access Program;
- Is in partnership with numerous government, industry, business, professional associations and other institutions. These collaborations involve mutual benefits such as the sponsorship of research, scholarships, named professorial chairs and visiting professor appointments;
- Is part of two global university networks. The Worldwide Universities Network is a partnership of research-focused universities based in Europe, North America, China and Australia (and of which the University's Vice-Chancellor is Chair). The seven-strong Matariki Network of Universities, of which The University of Western Australia is a foundation member, and boasts member universities based in Europe, North America, Canada and New Zealand;
- Is involved in joint research and teaching, and student exchange programs with more than 30 other universities in Asia, Europe and North America;
- Establishes strong infrastructure links with the State Government such as contribution to public transport funding, integration of the University library with the State Library of Western Australia and significant teaching and research facilities in Western Australia's major hospitals;
- Provides a wide range of educational courses within the community beyond the traditional undergraduate teaching (such as UWA Extension); and
- Provides a range of cultural and sporting facilities in the region including art galleries, museums, contributions to cultural events such as the Perth International Arts Festival, more than 30 sports clubs, and a range of community sport training programs including the provision of facilities for elite athletes.

## Summary 2010

|                                           |         |
|-------------------------------------------|---------|
| Student Enrolments 2010                   | 22,590  |
| Student Load (EFTSL) 2010 (Preliminary)   | 19,122  |
| Commencing Students 2010                  | 8,494   |
| Postgraduate Enrolments 2010              | 5,371   |
| Higher Degree by Research Enrolments 2010 | 2,104   |
| Total Staff (FTE) 2010                    | 3,526   |
| Academic Staff (FTE) 2010                 | 1,445   |
| Course Completions 2009                   | 4,733   |
| Research Income 2009 (\$'000)             | 159,671 |
| Weighted Research Publications 2009       | 2,000   |
| Total Income 2009(\$'000)                 | 737,906 |
| Total Expenses 2009 (\$'000)              | 685,537 |



## The University of Western Australia Strategic Plan

The University's Strategic Plan articulates a set of defining characteristics:

- High quality, as the pervading criterion for all our activities;
- Comprehensive, with a broad teaching and research profile in the arts, sciences, and professions;
- Selective, within a comprehensive base, to develop particular areas of research strength and emphasis;
- Research-intensive, with a strong teaching and research nexus across all our disciplines;
- Internationally focussed, for both the content and standards of our activities;
- Technologically innovative, to maximise our flexibility; and
- Responsive, to meet the needs of the community, our students and our graduates.

## Growth of the University

The University has already achieved substantial growth over the last decade through investment in research and teaching facilities and the continued attraction of high calibre students and staff. In 2010, the University enrolled more than 22,500 students and employed more than 3,500 staff. Further growth is anticipated with both State and Commonwealth Government policies having a significant effect on student intake over the next few years. The University aims to grow to 25,000 enrolments within the next 10 years. The University is currently reviewing its optimal size.

The day-to-day population of the University is now greater than that of some metropolitan local authorities. It reflects the changes in required infrastructure and services from that of a small University campus to that of a small city.



# Planning Context

## UniverCity: Strategic Asset Review of University Landholdings

Following a series of workshops held in 2006 and 2007 with senior University academic and administrative staff, the University set out a regional planning framework that allows a high degree of flexibility. The themes that emerged from the workshops included:

- Retaining the Crawley campus as the focal point for university activity;
- Working the University assets harder to underpin funding for educational programs and infrastructure;
- Vigorously pursuing opportunities for high quality research programs in partnership with other organisations;
- Providing sufficient land and/or floor space to establish a high quality research environment;
- Improving accessibility to the University by alternative transport means to private cars, especially in the face of escalating demand for a diminishing supply of fossil fuels;
- Improving the diversity and proximity of activities to encourage walking and cycling between them, and reduce car dependence;
- Providing more opportunities for staff and students to live close to the University (and QEII);
- Retaining the ‘garden’ character of the University’s Crawley campus and extending its influence through to QEII; and
- Improving the physical and educational relationship between the University’s Crawley campus and the QEII health campus.

## Directions 2031 and Beyond

Released in 2010, the State Government’s report *Directions 2031 and Beyond* provides the overarching spatial framework for the Perth and Peel regions. Part of the framework’s strategic vision is to make the city more compact, accessible and sustainable. As such, limiting suburban expansion into the hinterland and developing strong activity centres linked with efficient transportation networks is seen to be vital to the successful achievement of the vision. An Activities Centres Policy has also been developed to establish a hierarchy of centres, with the higher level centres generally being located on major transit networks for accessibility reasons.

The University of Western Australia (UWA), with the QEII Medical Centre, is the second largest commuter destination in the metropolitan region outside the CBD. *Directions 2031 and Beyond* promotes public transport, walking and cycling as an alternative to private car use at activity centres such as UWA-QEII.

It also promotes higher density development in appropriate locations including around transit nodes, with decreasing density as the distance from the centre of the hub increases. In the context of managing change it aims to achieve a 47 per cent target for infill development which currently only provides about 30 per cent of growth.

Within the activity centres hierarchy four ‘specialised centres’ have been identified including UWA-QEII. These are represented as key drivers of innovation and information exchange and generators of employment. They provide significant opportunities for the development of business synergies and agglomeration of like activities. Due to their specialised nature, these centres have a wide catchment and rely on a high level of access, particularly by public transport, for their effective operation. Specialised centres should:

- Provide adequate locations for business and smaller institutions related to the main institutions;
- Have places for general commercial and community services to support employees, students, visitors and residents; and
- Provide places where interaction can occur between user of the centre so the stronger links can be facilitated across a range of organisations and businesses in the area.

## Central Metropolitan Perth Sub-Regional Strategy

The Central Metropolitan Perth Sub-Regional Strategy provides a broad framework for delivering the objectives of *Directions 2031 and Beyond*. The anticipated growth in infill development is specified in housing targets: for Perth 12,600 new dwellings; for Subiaco 3,000 new dwellings; and for Nedlands 3,500 new dwellings. The UWA-QEII Specialised Centre has been identified as potentially making a significant contribution to housing growth with a range of additional dwellings being estimated from 2,950 to 4,390. The Sub-Regional Strategy includes more detail in relation to the UWA-QEII Specialised Centre stating that:

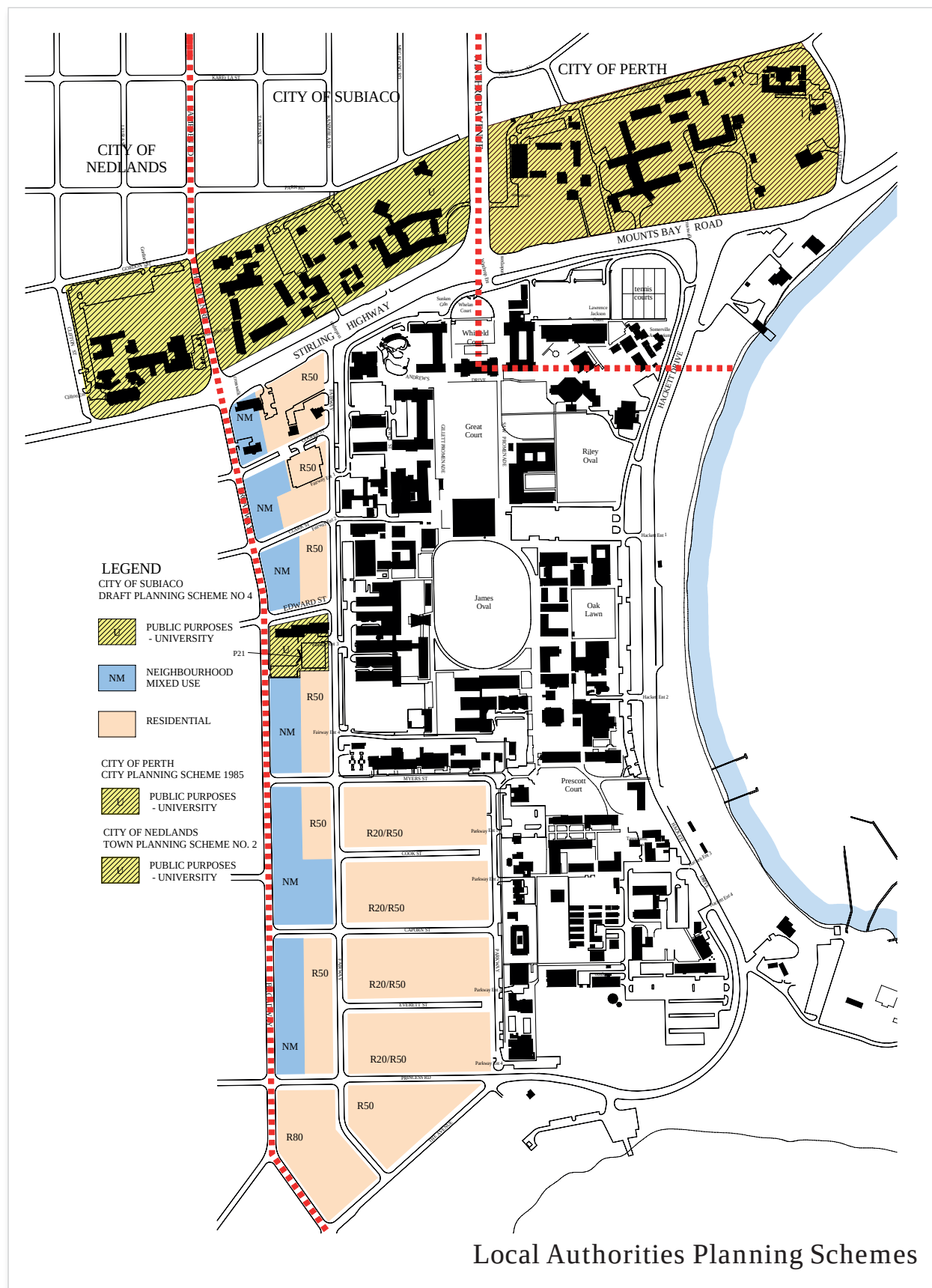
*UWA-QEII is focussed on the delivery of high order education and health services from the University of Western Australia and Queen Elizabeth II Medical Centre campuses. UWA-QEII provides significant employment opportunities not only for the western suburbs, but for the broader knowledge-based sector. The current land uses generate significant movement of students, staff, patients and visitors, and opportunities exist for the improvement of public transport connections. UWA is also increasingly becoming a tourist destination.*

*UWA is the only Western Australian university with both a medical school, and a tradition and recognised capability in medical research – and its international reputation in this area is very high. It has an inherent synergy with QEII, which was established with the aim of developing a medical centre of national and international repute. In 2010, the QEII Medical Centre is beginning a six year transformation to become one of Perth’s largest medical and research facilities. Sir Charles Gairdner Hospital at QEII is a progressive, fully accredited teaching hospital, which is closely associated with UWA. Each year the hospital treats approximately 75,000 inpatients, 45,000 emergency presentations and 500,000 outpatients. The hospital employs approximately 2,740 full-time equivalent staff.*

## Capital City Planning Framework

The Western Australian Planning Commission’s (WAPC) Capital City Planning Framework focuses on planning of the 5km radius around the CBD of Perth, to provide a basis for cooperation by local and State Government in the context of:

- Targeting areas for residential consolidation in and around activity centres and along transport corridors including the use noted in the central subregion strategy;
- Prescribing opportunities for the enhancement of activity centres inclusive of strengthening interrelationships and linkages between them;
- Identifying key movement networks to ensure that central Perth functions harmoniously and efficiently; and
- Prioritising key movement network initiatives and other community infrastructure projects for implementation.



## Metropolitan Region Scheme

The main campus area is reserved for public purposes with the designation of 'university' on the Metropolitan Region Scheme (MRS) including some riverside land east of Hackett Drive. The college row east of Winthrop Avenue is also reserved for public purposes as is the part of the campus located west of Hampden Road. However the portion of the college row between Hampden Road and Winthrop Avenue is zoned urban.

The approval of the WAPC is required for any development on these reserves. Applications for approval are considered against an adopted Master Plan taking into consideration the recommendations of the relevant local authority. Land located between the main campus area and Broadway is zoned urban and falls under the control of the City of Subiaco as is the urban zoned part of the college row.

## City of Subiaco Planning Scheme and Planning Policies

City of Subiaco Town Planning Scheme No.4 reflects the reserves shown in the MRS, but also includes a public purpose reserve over the section of college row between Hampden Road and Winthrop Avenue with split R20/50 residential zoning between the main campus area and mixed use design along Broadway. The City of Subiaco planning objectives of this precinct located between the main campus and Broadway are to encourage:

- A mixed university / residential precinct with mixed use pockets along Broadway;
- The development of a university residential village through redevelopment in the area north of Princess Road;
- High quality medium density residential development in the area south of Princess Road; and
- A harmonious interface of university campus development and the surrounding area.

# Planning History – The Campus over Time

Planning has been a key feature of the growth and development of The University of Western Australia since its establishment in 1911, its acquisition of the Crawley land in 1914 and its permanent move to the Crawley site in 1929. See Appendix D.

In 2000, Gus Ferguson, with Bill James (Consultant Landscape Architect) and Frank Roberts (University Architect), recognised that if the University was to continue to expand, and maintain the character of ‘buildings in a landscape setting’ then expansion beyond the campus would be needed.

The aim of the Campus Planning Review 2000 (2000 Plan) was to retain the ambience, beauty and functionality of the campus, and give scope for future development (*actions initiated or implemented between 2000 and 2010 are highlighted in italics*):

## Campus Structure

- *Acquire properties in the Stirling Highway, Fairway, Broadway and Cooper Street location and the Park Way, Cook Street and Caporn Street location to add to those already owned by the University to facilitate expansion of the campus. Continue to acquire properties adjacent to the campus boundaries and particularly in selected groups to facilitate appropriate redevelopment;*
- *Work with the City of Subiaco and the Western Australian Planning Commission to pursue an amendment to Council's Town Planning Scheme No. 4 in the relevant precincts west of the campus to Broadway. Secure land use zoning and other control mechanisms compatible with appropriate redevelopment of these precincts;*
- Negotiate controls adequate to compensate the cost of providing landscaped spaces;
- Close Parkway between Myers Street and Caporn Street. Absorb road reserve. Open Everett Street to Parkway;
- In the Park Way, Cook Street and Caporn Street location, extend campus planning structure to provide a major green space and building sites;
- As properties are acquired and developed:
  - Extend the western north-south pedestrian way (Gillett Promenade) to, at least, the properties between Caporn and Everett Streets;
  - Extend the east-west pedestrian ways to Broadway north of Myers Street and to Fairway south of Myers Street; and
  - Extend the east-west pedestrian way south of the expanded Biological Sciences Library to link Fairway and Hackett Drive;

- *Close Cooper Street between Broadway and Fairway. Absorb road reserve. Explore third level bridge connection between new development in Fairway and the Nedlands site utilising lifts and escalators to connect to the main body of the campus;*
- *Extend north-south pedestrian way east of Law to development in the south-east corner of the campus and southern entrance; and*
- *Create western landscaped pedestrian entrance to the campus at Edward Street.*

## Traffic, Parking and Access

- *As redevelopment permits, reduce parking spaces to around 2,000 on the main body of the campus; reduce to a total of around 3,000 including Car Park 23, the Nedlands and redeveloped Park Avenue sites and expanded Car Park 21; and maintain the existing total of around 4,250 including adjacent road verge parking;*
- *Avoid the concentration of vehicles in multi-level car parks on the main campus. Consider naturally ventilated car parks under new buildings where appropriate and ground levels permit;*
- *Minimise the number of vehicles penetrating the inner pedestrian precincts of the campus;*
- Complete the campus ring road system utilising Parkway, Everett and Caporn Streets and sections of Fairway as part of the ring road;
- *Reinstate two-way traffic on the ring road between the Winthrop Entrance and existing University House site. Relocate the tennis courts ring road exit at Hackett Drive to the site of the existing University House;*
- *Continue to pursue means of accessing the campus other than by private motor vehicles; and*
- *Provide easily identifiable and protected bus and taxi stops at prominent locations.*

## Environmental Qualities

- *Maintain the established character of courtyarded low-scaled buildings set in an open landscaped campus;*
- *Maintain the contextual qualities of the campus buildings;*
- *When opportunities arise address the imbalance between the character and qualities of the northern, middle and southern campus precincts by reducing the impact of some car parks;*
- Eliminate Car Park 2 with relocation of University House to the new Riley Complex and landscape;
- Eliminate Car Parks 11 and 12. Redevelop with major green space;
- Reduce size of Car Park 14. Landscape strip north of Central Plant and future building;
- Reduce extent of ring road Car Park 15. Maintain and landscape ring road;

- Reduce size of Car Park 18. Landscape strip south of General Purpose building;
- Eliminate Car Park 19 except for services access and create landscaped courtyard;
- *Demolish shed north of Sanders Building. Create landscaped court;*
- *Demolish part of middle wing of existing Chemistry when vacated and provide landscaped court;*
- Create major landscape space between Botany, Zoology and Combined Workshops;
- Formalise central landscaped court on the Nedlands site;
- Create an internal landscaped court on the Park Avenue site when site is redeveloped;
- Create internal landscaped courts in new development in Stirling Highway, Fairway, Broadway and Cooper Street location as extensions of the main campus green spaces;
- Explore landscaped links between the main campus and expansion zones;
- *Confine taller buildings to the higher ground on the Fairway flank of the campus but avoid a continuous wall of tall buildings. Appropriate sites: Car Park 14; Engineering site; Child Study /Media Services site;*
- *Provide maximum flexibility in new buildings to allow for growth and contractions of departments and changes in disciplines;*
- Limit the concentration of public facilities in the northern campus precinct. Disperse these facilities, especially to the southern campus precinct;
- *Utilise the site in the south-east corner of the campus for a prominent group of buildings with the qualities, presence and community interface of the Hackett Memorial Buildings; and*
- *Prepare a Campus Conservation Plan. Acknowledge the Indigenous heritage of the campus site and address the maintenance of the campus buildings and spaces of historic significance.*



### Building Sites

- Retain tennis courts site for expansion of Music but consider relocation of Music in long term;
- Explore Boatsheds Site for University/community riverfront development;
- Provide site for Museum building in Car Park 20;
- Construct new Riley Complex on Riley Oval adjacent to Car Park 3;
- Redevelop Child Study Centre/Media Services site for major building. Include chilled water storage facility. Possible high building (six to eight floors);
- Redevelop Engineering site. Possible high building (six to eight floors);
- Construct new building on Car Park 14 site adjacent to Central Plant. Possible high building (six to eight floors);
- Eliminate Car Park 13 to provide major building site. (Science Building);
- Demolish northern wing of existing Chemistry when vacated and provide major building site;
- Demolish southern wing of existing Chemistry when vacated and provide building site;
- Demolish remnants of Old Pharmacology building and minor structures east of Agriculture. Redevelop as prominent building site. Protect Prescott Court and maintain river views.
- Provide major building sites north and south of new major green space at Parkway closure;
- Develop linking extension between Botany and Zoology;
- Relocate Zoology secure car park to Shenton Park to provide building site;
- Demolish existing large animal house and provide building site for new animal house;
- Develop south-east corner of campus including portion of Car Park 9 as major and prominent building site;
- Provide site for Human Movement expansion at Car Park 33;
- Develop Nedlands site with new buildings on north and south flanks to enclose an internal landscaped court;
- Develop Park Avenue site to complement 1925 Biology Geology building and to enclose an internal landscaped court;
- Develop properties in Stirling Highway, Fairway, Broadway and Cooper Street location for University/community use; and
- Develop an example of residential buildings enclosing a communal landscaped court on properties owned by the University between Caporn and Everett Street.

Since the Campus Planning Review 2000

The 2000 Plan provided flexibility and responsiveness to the complex and continual demands that are required of the campus. The 2000 Plan has been used to locate significant developments across the campus over the past decade including the construction of: <sup>1</sup>

- Ken and Julie Michael Building – March 2003;
- Bayliss Building – January 2005;
- Water Sports Complex Building – May 2005;
- The University Club of Western Australia – February 2005;
- Business School  
Stage 1 – February 2009, Stage 2 – May 2009;
- Expansion of St George’s College  
Stage 1 – November 2007, Stage 2 – April 2010;
- Sciences Library  
Stage 1 – June 2009, Stage 2 – February 2010.

This capital development has strengthened the University’s asset base. In addition, as flagged in the 2000 Plan, a new traffic roundabout on Hackett Drive completed after the Business School was opened in 2009 forms a new south entrance to the campus.

The capital development on Crawley campus over the past 10 years has demonstrated a need to ensure flexibility within any future campus plans. The constant review and questioning of the principles has led to better design solutions and highlighted the need for a less prescriptive campus plan with more emphasis on principles.

<sup>1</sup> Completion dates for buildings constructed since 2000.





Part Two  
Key Planning Elements:  
Principles and Recommendations

# Part Two – Key Planning Elements: Principles and Recommendations

## Background

To analyse the opportunities on the campus, each of the key elements impacting on the campus have been examined independently with a series of principles and recommendations required for the University to develop sustainably, while retaining the amenity that is enjoyed by students, staff and the community.

The key elements analysed to give form to the campus plan are:

- Student life;
- Land use – teaching and research;
- Land use – non-traditional activities;
- Community and culture;
- Sports and recreation;
- Architecture and built form;
- Landscape;
- Heritage and conservation;
- Infrastructure;
- Access;
- Security and safety; and
- Governance.

Universal access, occupational health and safety, and compliance to design and statutory requirements underpin all aspects of the Plan.

In addressing these principles there will be some repetition as they are relevant to more than one topic. Future development may not be able to satisfy all principles and value judgements will need to be made by the University's management over the importance of the principles.

## Principles and Recommendations

### Student Life

Enhancing the student experience is a key outcome of the University's Strategic Plan. There are many physical implications of delivering a quality student environment, with a focus on providing flexible spaces for learning environments and affordable student accommodation near campus.

Development of suitable learning spaces has been a key element in the delivery of new buildings over the past 10 years. Buildings such as the Business School, Sciences Library and the Bayliss Building offer a range of teaching and learning spaces, especially for formal and informal collaborative work, in addition to the traditional teaching spaces.

With the implementation of New Courses 2012 suitable student centres in easy to find ground floor locations continue to be provided.

Student hubs, and student presence generally in overlapping activities within a relatively small area, will promote more face-to-face social contact.

Recognising that the majority of the world's top 50 universities are residential institutions, the University is focused on the delivery of further student accommodation. A report on the world's top 50 universities indicated that these universities, including Harvard, Cambridge, Oxford, Stanford, Yale, have between 90 per cent and 100 per cent of their students in residence.

While longer engagement with students on campus is proven to lead to better learning outcomes, student accommodation around the campus is becoming less affordable. The urban renewal of the Crawley area, in addition to higher demand for rental properties, has limited student opportunities to live close to the University.

The location of additional student accommodation is important to the future built form of the University area. The options include development of additional accommodation in existing residential colleges; renovation of existing University property; the construction of new accommodation on University owned land; and/or the development of accommodation integrated with new multi-purpose buildings on and around the campus.



Staff housing is also a priority as the University attracts and retains quality staff (one of its operational priorities). For newly-appointed staff, short stay accommodation would allow more time for staff to look for permanent accommodation to rent or buy. It is not the intention to displace private residents from the Crawley area with student and staff housing, but to retain and add to the existing diversity of the area.

The University provides a number of sporting, educational and cultural activities involving the local community. The addition of many more students and staff living in the local community will bring demand for an increase in these activities. Students and staff will continue to play a significant role in the life of the local community.

There is evidence of students wanting to spend more time on campus. The Law Library operates 24 hours a day due to demand, and further use of the campus outside of the core weekday hours will lead to better use of space and more efficient use of buildings.

#### Principle:

- To make the student experience at University as fulfilling as possible.

#### Recommendations:

- Develop a range of accommodation types, to suit shared, single and family accommodation for students and staff, and also for those with special requirements or different cultural needs;
- Ensure the ground or entry level of buildings on campus includes student engagement areas and showcases the use of the building;
- Encourage the integration of learning and living at residential colleges, and at other student residential complexes;
- Develop flexible and adaptable learning spaces to allow for future change;
- Cluster after hour facilities to ensure passive surveillance and increased safety for all users;
- Plan for student presence and encourage more face-to-face social meetings, rather than the social isolation of the virtual world;
- Prepare development plans for the College sites to include higher densities as proposed in *Directions 2031<sup>1</sup>*;
- Increase the University's residential accommodation around Crawley to accommodate all first year undergraduate enrolments; and
- Encourage development along transit routes and other places within a 10 minute commuting time from Crawley campus.

<sup>1</sup> Western Australian Planning Commission (2010) *Directions 2031 and Beyond*.

## Land Use – Teaching, Learning and Research

While land use in and around the Crawley campus is dominated by teaching and research, the University recognises it is a significant part of the greater Crawley community and business area. Other uses are discussed in ‘Land Use – Non Traditional Uses’.

### Teaching and Learning

The University’s current Strategic Plan articulates a vision which includes the following defining characteristics:

- High quality, as the pervading criterion for all our activities;
- Comprehensive, with a broad teaching and research profile in the arts, sciences, and professions;
- Selective, within a comprehensive base, to develop particular areas of research strength and emphasis;
- Research-intensive, with a strong teaching and research nexus across all our disciplines;
- Internationally focused, for both the content and standards of our activities;
- Technologically innovative, to maximise our flexibility; and
- Responsive, to meet the needs of the community, our students and our graduates.

The Operational Priorities Plan 2009 – 2013 states that the University will continue to support a strategy of seeking and achieving funded growth commensurate with the University’s comprehensive teaching and research character, a commitment to quality and a target of 25,000 students by 2020.

The physical location of faculties on campus has generally followed Gordon Stephenson’s 1954 principle of ‘locating like departments and facilities in functional groups’.

### Research

Research activity has increased dramatically since 2000 with numerous research centres established at the University. There have also been increased partnerships and collaborations between the University and Government, industry, and other institutions, including:

- The \$100 million International Centre for Radio Astronomy Research (ICRAR);
- The Ion Probe Facility; and
- The \$63 million Indian Ocean Marine Research Centre (IOMRC) comprising UWA’s Oceans Institute, Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Australian Institute of Marine Science (AIMS).

Increased funding has also come through the Western Australian Government, with research facilities such as the Western Australian Marine Science Institute (WAMSI), Western Australian Institute for Medical Research (WAIMR) at QEII and the Fiona Stanley Hospital underway. The University has determined six strategic research themes, and several emerging and seed priorities to provide focus and direction.

The strategic themes are:

- Plants, animals, agriculture and environment, including management of natural and agricultural systems;
- Exploration, production and utilisation of minerals, oil and gas;
- Fundamental biomedical and translational approaches to health;
- Indigenous knowledge;
- Bio-engineering and bio-imaging; and
- Neurosciences, including psychology.



Organisations in partnership with the University currently occupy 3.5 per cent of all campus building space. The University also has staff on other institutions' sites, such as CSIRO at Floreat. The University expects further research partnerships will see additional staff and researchers located on University land over the coming decade as research becomes more collaborative.

Research facilities are space and service intensive. The University's growth plans project a greater requirement for this type of accommodation.

There is an increased demand for temporary accommodation or pre-built flexibly serviced workspace into which the University can house researchers on appointment while specific construction projects are completed for more permanent housing. There is potential for dedicated research hubs and sites will be required for business incubators to transfer research to industry.

#### Principles:

- Maintain Crawley campus for core teaching, research activities, locate land-intensive research and community activities on other sites;
- Co-locate complementary activities in appropriate facilities;
- Provide maximum flexibility in new buildings to allow for growth and changes in activity requirements;
- Provide sufficient land to establish a high quality teaching, learning, research and community engagement environment; and
- Consider the development of buildings that reflect a more cross-disciplinary approach in teaching and research.

#### Recommendations:

- Work towards grouping centres with common needs together to facilitate better resource sharing, such as libraries;
- Align campus and accommodation planning with the University's strategic goals, review current space standards and building layouts in the light of changing technology/learning methodology and establish accurate student space standards for each discipline;
- Ensure the efficient use of existing accommodation and the timely provision of future accommodation;
- Extend the academic timetable to increase the utilisation of teaching facilities;
- Upgrade existing teaching infrastructure; and
- Re-locate activities that do not directly enhance the University experience to an off campus location.

# Land Use – Non Traditional Uses

A modern university consists of more than just lecture theatres and research spaces. There are many uses critical to the running of a university within a broader precinct that may not have been previously considered.

A university can best be compared to a small city, with elements of retail, commercial, residential, sporting and cultural amenities and green spaces all needed to support teaching research.

The University of Western Australia and surrounding areas are coming under increasing pressure from development markets other than education. There has been a marked increase in demand for residential and office space. The acquisition of properties in the land between campus and Broadway, a farsighted program begun in the 1960s, means the University now holds 40 per cent of the surrounding land area and will play a key role in determining the future of Crawley.

As part of becoming a sustainable hub and fulfilling the objectives of an Activity Centre (*Directions 2031 and Beyond*), the UWA-QEII land area will likely have a population by 2020 of 50,000 and more (UWA 25,000 plus students, staff and up to 20,000 QEII staff, patients and visitors). The population of the area is comparable to the City of Albany and comes with a recognition that the area will require the services of a regional city, without compromising the viability of the University or QEII.

The University is a popular venue for conferences and seminars. With the addition of the University Club of Western Australia, the campus now offers a range of venues competing with other conference facilities in Perth. While the campus offers good connectivity to the central business district, there is demand for visiting delegates, as well as guest lecturers, scholars and artists in residence, and parents of students, for accommodation on campus.

A number of university campuses – including the Australian National University in Canberra and many overseas institutions – offer on-site, short-stay accommodation. This is in addition to the student colleges, which can provide accommodation outside of the academic year. These short-stay facilities could also be used for crisis-care accommodation, for newly appointed staff and for people undertaking continuing professional development and skills ‘top up’ courses.

The area around Crawley has attracted professional associations such as the Institute of Architects and the Australian Medical Association, who have strong links with the University. The ability to share resources and to use University facilities such as University Club, lecture theatres, specialist libraries and seminar rooms means that Crawley will continue to be an attractive location. Roads such as

Broadway have many boutique office developments, as well as attracting larger engineering companies. It is likely that demand for office space will continue to grow over the coming decades and some larger building footprints off-campus should be identified in planning schemes as commercial hubs.

With emerging research being conducted on campus, there may be a market for business incubators to help ensure that the University retains staff taking the next step in developing their own research products. This may also attract a knowledge-based business centre, which would have synergies with University research and education.

The UWA-QEII Activity Centre needs to be able to offer facilities for the daily lives of the significant population in the area. The ability to reduce trip generation by offering a range of services and facilities in one place has a strong nexus with public transport usage. This population brings spending power to the area each day and this spending employs many people in local businesses.

There are opportunities to develop an integrated urban retail centre adjacent to campus to cater for the daily requirements of University and QEII staff as well as local residents. Such a centre would complement the existing Broadway Fair centre and could be located centrally between UWA and QEII. A mixed-use development would follow the principles of public use on lower levels, with accommodation being incorporated on upper levels.

Individuals are living longer and seeking additional intellectual, educational and recreational stimulation. UWA Extension’s range of non-degree courses and units can meet many of these needs.

The University has partnered with Study Group Australia to set up a Foundation College. The buildings were opened at UWA Claremont in 2006 to provide pre-university education. There is a demand for more local residential accommodation for students, in addition to the 24 students housed at Currie Hall.



Principle:

- Develop Crawley area as a small city, meeting the day-to-day needs of residents, visitors, students and staff and recognising that an expanding student population will require additional services.

Recommendations:

- Work with Government to improve legislative planning reform to support UWA development plans;
- Encourage community engagement through mixed-use models of development on- and off-campus:
  - retail/community engagement;
  - commercial/administration;
  - teaching/research; and
  - residential adjacent to the campus;
- Support the development of the Nedlands site as a town centre/transport hub. Relocate the faculties currently housed at Nedlands back to the Crawley campus and create the Nedlands site as mixed use commercial residential to support the growing day-to-day service requirements of the University and local community.

## Community and Culture

Since its establishment in 1911, the University developed a unique relationship with the WA community, being the first university in the State with traditionally close ties to the community. It has a reputation for quality, and through its endowments, bequests and other private income, has been able to maintain a prominent role in the cultural life of the community.

One of the key priorities is to improve the University's positioning and reputation, developing strategic relationships and community engagement. World-class universities are recognised as strong intellectual and creative resource to the communities they serve and while this service is primarily through its graduates and research, leading universities also make a major contribution to the intellectual and cultural life of their communities.

A key initiative of the University is the development of a Cultural Precinct. With the interaction between the Precinct and the teaching, learning and research activities associated with a new undergraduate Design degree, there will be increasing community and cultural activities.

The University provides a number of educational facilities and services for the local community. UWA Extension is involved with community education programs. UWA Extension provides more than 550 individual community education programs, events, workshops, seminars and customised courses for the wider community and private business each year, as well as Community Education courses. The University of the Third Age (U3A) offers non-award courses as a series of monthly lectures. There are also continuing education courses run by faculties, centres and schools, and lectures and symposia by prominent speakers across all disciplines. The University's Institute of Advanced Studies conducts cross-disciplinary programs for students, staff and the wider community, attracting eminent international scholars.

UWA Publishing holds regular book launches, panel discussions and lectures.

The University provides a number of cultural facilities and amenities for the community. The Perth International Arts Festival was founded in 1953 by the University to provide evening entertainment for people at Summer School. It has retained this relationship with the University, but has grown to become a major State institution as a festival for film, visual and performing arts and literature. The University's theatres, such as Winthrop Hall, the Octagon Theatre, Dolphin Theatre, Sunken Garden and the New Fortune Theatre also host several hundred events every year. The School of Music has an extensive concert program. Many of these events celebrate the diversity of local ethnic and cultural communities.

The Lawrence Wilson Art Gallery is both a centre for research and scholarship in the visual arts and a major gallery showing the UWA Art Collection and significant visiting exhibitions. The Berndt Museum of Anthropology was established to house the Berndt collection of Indigenous and Asian artefacts, and is also known for its linkage to Aboriginal communities and support for cultural maintenance. The Edward de Courcy Clarke Earth Sciences Museum houses geological specimens, maps and other exhibits. SymbioticA was established in 2000 within the School of Anatomy and Human Biology and is now recognised internationally as a centre of excellence in bio-art. The Cruthers Collection of Women's Art was donated to the University in 2007, and is housed within the Dr Harold Schenberg Arts Centre. The Cullity Gallery, within the Faculty of Architecture, Landscape and Visual Arts, provides a showcase on activities of the Faculty and provides an exhibition venue for the wider community.

The University has promoted links with primary and secondary schools, including Shenton College, and runs numerous cultural courses with school age children, such as SmARTS and the UWA Junior Music School.

The University manages or hosts numerous community events, including Science Fair, Perth Sun Fair, Save the Children Book Sale, Antiques Fair, and Upmarkets.

The University has an 'open campus' policy, which encourages the informal use of campus grounds, including family picnics and passive recreational use by local residents. Car parking bays and other facilities are available to the general public out-of-hours and outside of the academic year.

The University has a number of heritage places (buildings and gardens) at Crawley which are of significant tourist value. The campus is a popular venue for weddings, conferences, photographic sessions and film settings. The iconic value of the Hackett Memorial Buildings is recognised by local, State and Federal heritage agencies. Throughout the gardens are sculptures and artworks, as well as other notable buildings by leading architects. The heritage significance of campus buildings, landscape and external artworks have been detailed in the Crawley Campus Conservation Management Plan 2008. The campus attracts many local, interstate and overseas visitors. The UWA Visitors Centre is a focal point for visitor information and activities.

The University's libraries are part of the Library Information Service of Western Australia run by the State Library. The University's specialist libraries (such as Humanities, Law, Architecture/Education, Sciences) are regarded as some of the State's most valuable reference resources.

The University Club of Western Australia opened in March 2005 and has become the premier venue for social events for the University and many community organisations.

The University values the ongoing participation of its alumni and the local community in its cultural life on-campus. There are many clubs and activities under the Cultural Precinct umbrella in which alumni are encouraged to participate, including groups such as the UWA Graduate Dramatic Society (GRADS).

The University promotes numerous societies and 13 friends groups with a focus on arts and culture, including UWA Historical Society, Friends of Grounds, and Friends of the Lawrence Wilson Art Gallery.

### Principles:

- Provide a source of enjoyment and intellectual stimulation, enliven the campus, enrich the curriculum and encourage critical engagement with contemporary arts practice;
- Acknowledge that the University is situated on Noongar land, that the Noongar people remain the spiritual and cultural custodians of their land and continue to practise their values, languages, beliefs and knowledge; and
- Involve the community in place-making.



### Recommendations:

- Establish a dynamic, creative and intellectually rigorous program of exhibitions, performances and associated cultural activities that amplify current concerns, flag future issues and provide a perspective from which to view the past;
- Develop strategic relationships throughout the community to improve the University's positioning and reputation;
- Make a major contribution to the intellectual and cultural life of the University and outside communities;
- Showcase the creative work of staff and students;
- Link and fuse arts and cultural elements within an educational environment and encourage innovative collaborations;
- Plan for the new Cultural Precinct: Stage One development of a new museum building for the Berndt collection supporting Aboriginal culture and society;
- Consider new technologies to link the UWA Cultural Precinct with other sites including the UWA Albany Centre, the UWA Claremont campus and the variety of cultural activities;
- Continue to develop the Lawrence Wilson Art Gallery (including an exhibition space for the Berndt Museum);
- Plan for the co-location of community and cultural activities within a proposed Design Precinct, and establish a continuous pedestrian link between UWA Nedlands and the Crawley campus;
- Showcase the University by housing community and cultural activities in buildings fronting Broadway and Hampden Road, and contributing to campus and community interaction;
- Plan for the new AXS/lab (Art meets Science lab) to showcase the research activity of the University at the interface of Art and Science, as well as a teaching facility for Design studies;
- Consider the re-location to Broadway and Hampden Road of on-campus commercial and retail operations, which are used by the University and outside community, such as the Bookshop; and
- Scope design of an extension to the Octagon Theatre foyer to improve access, space and services of public areas.

## Sports and Recreation

The University provides sporting facilities on and off-campus for students, staff, alumni and the general community. These include the Recreation and Fitness Centre, Watersports Complex, Boatshed, and the Aquatic Centre. There are also College facilities which are available to all residential college students on a reciprocal basis. UWA Sports Park, which includes McGillivray Oval and the Tennis Centre, is five kilometres away and the International Martial Arts Centre is located at UWA Claremont.

UWA Sports coordinates a range of sporting competitions and activities including inter-faculty, inter-college and inter-university sport. It organises major local, national and international events such as the Indian Rim Asian University Games and the Australian University Games, and Recreate programs (in which 40 per cent of participants are from the general community). For young people there are Uni Sport for Kids providing sport-based programs to primary school children during school holidays, and Campus Challenge, a live-in orientation camp introducing high school students to university activities including sport and culture.

The UWA Sports Council is the governing student body of sport at the University, responsible for overseeing 32 sports and recreation clubs covering 36 sports. Clubs have around 2,500 members of whom 40 per cent are students and staff, 30 per cent alumni and 30 per cent general community. Though most of the sporting clubs are based at UWA Sports Park, the University Cricket Club plays first grade cricket at James Oval which is considered to be one of the finest cricket wickets in the State and the venue for occasional interstate and international matches.

As staff and student numbers grow, particularly as the University develops its residential capacity, there will be a need for more sports and recreation facilities on campus or close by.

There are difficulties retaining and allocating high-value land for sport when there are competing teaching, research and other needs. For example, the tennis courts occupy half a hectare of prime on-campus land. Consideration will be given to share campus land footprints, such as having tennis courts on the tops of buildings, or for other organisations (such as colleges and the cities of Subiaco and Nedlands) to share the provision of facilities.

The lack of public transport between Crawley campus and UWA Sports Park is an issue for Crawley-based students. This is a significant factor in any consideration of re-locating sports and recreation facilities from Crawley to UWA Sports Park.



### Principles:

- Develop sporting and recreation strategic relationships, collaboration and engagement with the community and other organisations to improve the student, staff and community experience reinforcing the University's positioning and reputation;
- Ensure sports and recreation make a major contribution to the cultural life of the University and wider community;
- Negotiate with other organisations in the western suburbs to avoid duplication and gain maximum utilisation of sporting facilities through shared access arrangements;
- Better promote the University's contribution to sporting activities; and
- Consider the development of facilities that reflect a more cross-disciplinary approach in sport, recreation, health and wellbeing, teaching and research.

### Recommendations:

- Ensure there are sufficient permanent green spaces and sports facilities at Crawley to meet the sports, recreation and fitness needs of an expanding University;
- Promote improved public transport between Crawley and UWA Sports Park, as well as other campus sites such as UWA Claremont to ensure greater use of sporting infrastructure;
- Work with State Government to create the regional sports precinct at UWA Sports Park, combining Government and University interests and the sharing of resources;
- Prepare further studies for the development of a Sport Science and Health Institute within a Centre for Health and Sporting Excellence (CHASE) at UWA Sports Park, and for adoption as a priority area in UWA Strategic Research Initiatives and a future Commonwealth Government funding application; and
- Ensure future developments consider sports and recreation requirements of students at Crawley, including those in residential accommodation as well as staff and community needs.

Landscape

The advice of Sir John Winthrop Hackett in selecting the Crawley site for The University of Western Australia in 1913 was that campus design should be based on convenient, wide and spacious lines and that the riverfront provided one of the rarest attractions offered any of the universities in Australia.

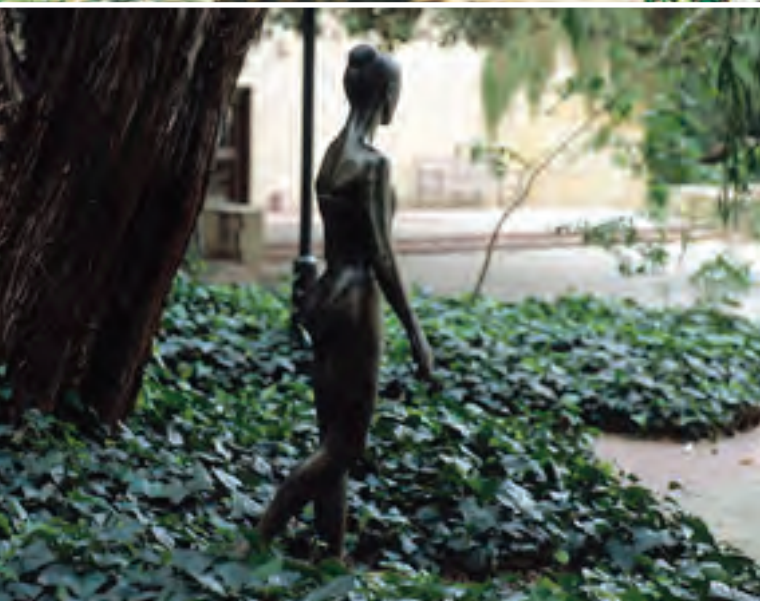
Harold Desbrowe-Annear won the 1914 competition for ‘laying out the Crawley site for University purposes’; however it was the 1927 Wilkinson plan which has primarily influenced the development of the campus.

Despite considerable development on campus, the planning approach of ‘buildings in a park’ still prevails and the campus is defined with equal importance given to the buildings and the landscape. Several landscape places have been listed by the National Trust, and the entire campus was adopted into the National Estate in 1980 by the Australian Heritage Commission. As well, the University received the inaugural WA Civic Design Award in 1986 and there are many formal spaces listed on the State Heritage Register and Municipal Heritage Inventories. While many of the landscape qualities of the campus are accepted today, ideas such as creating a cathedral of pine trees (Somerville Auditorium) were quite radical for their time and not part of the original planning. The Sunken Garden was created out of the opportunity to find a use for an excavation site, and the Tropical Grove was another unplanned accident – a screen of vegetation to conceal gardeners’ huts.

The quality of the landscape differs greatly across the campus, from the very formal north to the less developed south, and with imported trees complementing European-style architecture and native trees on the campus perimeter. The University has been developed around the provision of generous open spaces and intimate courtyards, often with colonnades and cloisters. The landscape is characterised by generous tree canopies, large fig trees and eucalypts, magnificent specimens of European trees, remnant indigenous trees, expansive open green spaces, semi-secluded courtyards, pedestrian areas, river views and abundant and exotic vegetation.

As the campus expands westward towards Broadway, there is an opportunity to integrate the campus landscape approach. The expanded University will include a more diverse style of development where precincts will be characterised by a mix of accommodation, research, retail and service facilities. This urban neighbourhood style of mixed use development will add positively to the economic and social vibrancy of the community and will contribute to environmental sustainability through increased land use efficiency and a reduced carbon footprint.





There are opportunities to further enhance the setting of the campus through improved links with Matilda Bay and Kings Park; elements that already contribute to a single landscape of major regional significance. The campus has strong north-south linkages through its walkways, landscaped spaces and roadways. The east-west landscapes are somewhat less defined and will need further landscape consideration in an attempt to knit together the campus and the predominantly residential area to Broadway.

### Principles:

- The expanded landscape will be characterised by the features of a ‘university in a park’ for the main campus, and a ‘university in a town’ character for the expanded campus, as well as a hybrid of the two as a transitional zone;
- Develop a mix of expansive open green spaces and semi-secluded courtyards;
- Create clear pathways and signage (wayfinding) opportunities through clear logical routes on the campus;
- Conserve and enhance the exotic heritage landscape and remnant native landscape;
- Introduce green infrastructure landscapes as a sustainability measure;
- Retain and enhance passive and active green spaces;
- Support biodiversity through design and maintenance of the campus; and
- Offset tree removal with additional planting to preserve the carbon sequestration capacity of the campus.

### Recommendations:

- Acknowledge Indigenous heritage of the campus through local Indigenous plantings and use of Indigenous nomenclature;
- Maintain the inner pedestrian precinct and restrict vehicles to the campus perimeter;
- Reinforce planning spines north and south and create strong spines running east and west;
- Enhance the river presence with river views;
- Make proper provision for artworks, street furniture and lighting;
- Link buildings by broad, well-lit pedestrian ways and create a continuous system of colonnades as part of campus pedestrian system;
- Establish locations for permanent landscaping, which will never be built over;
- Rationalise and simplify paving materials across campus, following the landscape manual and agreed hierarchy;
- Ensure signage and graphics are consistent, hierarchical, direct and informative, and fully reflect identity of building and users; and
- Consideration should be given to prioritising green space over other spaces such as parking and access roads (currently 11 per cent of total campus land area).

Heritage and Conservation

The Crawley campus is renowned for its heritage architecture and landscaped grounds. It contains a number of heritage listed buildings and landscaped gardens, see Appendix C.

Planning for the physical development of the campus while retaining its heritage significance is one challenge facing the University. The Crawley Campus Conservation Management Plan (CCCMP) 2008 identifies all buildings, places and artworks of significance on campus and is considered as the definitive conservation manual for the campus. The CCCMP makes recommendations for their conservation where necessary, and indicates sensitive areas, which future development should acknowledge.

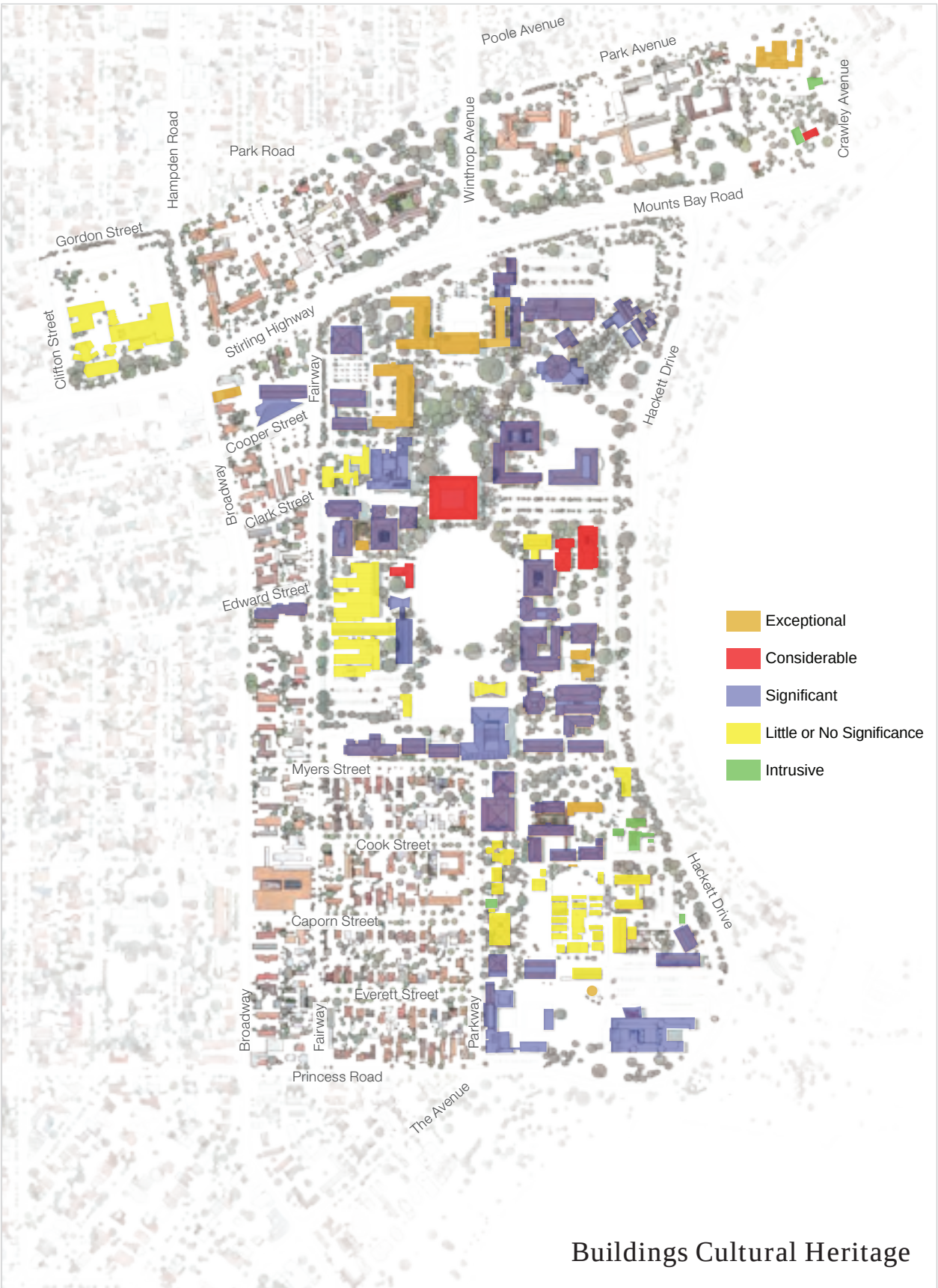
The various architectural styles present on the campus have been identified in the CCCMP and it is accepted that quality design will govern the future built environment. Where possible, examples of different styles will be retained to show the evolution of the campus over the past 100 years.

Some the University’s off-campus properties have heritage significance and examples of these styles will be retained where practicable. The Nedlands Park Masonic Hall in Broadway is one example.

All buildings and landscaped areas on the campus have been listed according to their heritage significance. Significance does not imply a building cannot be demolished or substantially altered. However, the higher the degree of significance, the more care must be taken when alterations, extensions or refurbishments are carried out. Procedures for monitoring such works are now in place. Where necessary, guidance will be sought from a consulting heritage architect, landscape historian or art historian.

Significant vistas across the campus which should be retained have also been identified. For example, distant views of the campus and Winthrop Tower, and campus engagement with the river, should be maintained and enhanced.

There is continued support for the qualities of the campus and the value of its ongoing preservation. Many of the heritage features, such as Somerville Auditorium and the Sunken Garden, were bold developments for their time and were not part of any defined campus plan. It should always be possible to allow for the innovative, the accidental and the unexpected.





### Principles:

- The University's major cultural heritage significance is the University as a whole, not simply the buildings or landscape; it includes its ethos to educate, carry out research and engage with the community;
- The Crawley campus is effectively a series of 'buildings within a park' and courtyard buildings which enclose space, with equal importance given to landscape and architecture;
- The campus is more than the sum of its parts with individual elements evaluated in relation to the overall setting – heritage places can be demolished or altered but only where there is to be a development of greater significance;
- The orientation of the campus towards the river should be encouraged where possible; and
- Buildings, landscaped areas and artworks with a high level of heritage significance are to be conserved, whilst appreciating the necessity for flexible development in places which do not have heritage implications.

### Recommendations:

- Consider the campus to be a single place, not a collection of individual buildings;
- Acknowledge that the campus will change to meet different requirements and must constantly review campus assets;
- Contextual excellence is to be pursued in any new development to provide a sense of continuity between generations;
- Alternative innovative methods of interpreting the heritage of the campus are to be explored, in preference to external visual interpretation (such as plaques);
- Delegation of heritage matters is to be negotiated with Heritage Council, to ensure appropriate levels of scrutiny by Council (and others) and to maintain the University's development options; and
- Retention of a limited number of representative architectural examples is to be negotiated with the Heritage Council, and a constructive approach is to be taken by submitting selected University-owned properties for heritage listing (for example, Love House).

## Architecture and Built Form

The Crawley campus is considered one of the most beautiful in the world and since its establishment great care has been taken to prepare periodic development plans to establish principles to underpin the quality of the campus

An international competition was used to find designs for the Hackett Memorial Buildings, of which Winthrop Hall is the centrepiece. These buildings responded well to the Wilkinson Plan 1927 and became the exemplar of future campus architecture. The grandeur of composition, richness of detail and colour of the buildings have set a formidable design standard for subsequent development.

In the main, later development has respected the qualities of the original buildings and the University enjoys a campus with a totality of design rare on campuses developed over a period of time and under a variety of influences.

### Architectural Style

The architectural success of the campus is built on individual buildings, each successful architectural statements in their own right, yet designed to be compatible with their neighbours. Examples at Crawley of where the University has diverged from its simple contextual design approach include the Physics, Chemistry and Engineering buildings, constructed in the 1960s.

Campus buildings free from passing fashions achieve individual merit by contributing to the success of the total campus, and to depart significantly from the established image and maintain architectural integrity may be impossible. A test of this is to ask if proposed buildings are timeless through their architecture and their contribution to the overall campus.

Matters of overall style are paramount: whether fashion is followed, or architectural integrity is maintained by staying with the established direction of prior plans.

In 2002, the University built its second major building off-campus at the Ken and Julie Michael Building, 7 Fairway. Designed by Steve Woodland (Cox Howlett & Bailey Woodland,) the building re-interprets the campus aesthetic while introducing different materials and an architectural form influenced by the original commercial function of the building and local planning constraints. On campus buildings are not subject to rules such as set-backs and height restrictions. Colonnades on the building help link it back from Broadway to the campus, with Winthrop Tower as an end vista. There will be many more University buildings built between campus and Broadway, and the Michael building is seen to be an urban planning exemplar of meeting University and community expectations.

*Directions 2031 and Beyond* classified UWA-QEII as a Specialised Strategic Centre, and signals improvements in public transport and the need for higher density development, possibly setting minimum densities as well as maximum. Buildings of greater scale will be considered though increased height should not unduly overshadow landscaped and other spaces.

In 1959, Gordon Stephenson recommended that it was undesirable to make provision for undergraduate classes in buildings beyond the third level. While this has not been adopted as a principle, it is preferable that the entry level of a teaching building on campus is the location of major undergraduate activity.

The provision of mixed-use buildings is encouraged in *Directions 2031 and Beyond* as a means of enlivening streets and sharing resources such as car parking. Off-campus buildings, or those on the perimeter of campus, particularly fronting ‘active’ streets such as Broadway and Hampden Road, have the opportunity to interact with the community, through the use of ground floor retailing or university uses, with research or residential accommodation on the other floors.

Some sites on campus are more architecturally significant than others. The Reid Library, for instance, is located in the Great Court opposite Winthrop Hall. The building is prominent in its architecture, scale and use.

The siting of the Business School (2009) on the southern edge of campus not only gave the Faculty prominence, but also helped restore balance to a campus which had for many years been focused on the Hackett Memorial Buildings at the northern end. A new roundabout and entrance off Hackett Drive gave additional prominence to the Business School, which now fulfils a similar ‘anchor’ role to the campus as Winthrop Hall. The completion of the green space west of the Business School will add further to the significance of this southern edge of the campus.



### Principles:

- Commission architecture of high design quality;
- Produce buildings which are timeless, free from passing fashions, and which achieve individual contemporary merit in their contribution to the success of the whole campus, whilst acknowledging the existing University palette;
- Confine larger-scale built form to the higher western flank of campus between Fairway and Broadway, but avoid a continuous wall of high buildings, and lessen the impact of Fairway as the campus edge;
- Incorporate cutting edge knowledge into building design and strive to keep research, teaching and learning environments up-to-date;
- Construct buildings with due consideration to whole-of-life implications and environmental sustainable development better practice; and
- Provide flexibility in new buildings to allow for a variety of uses over time.

### Recommendations:

- Embrace the concept of larger-scale structures and prepare planning studies to ensure open space is not compromised;
- Embrace the concept of a hybrid architecture within a different form of urban place-making between campus and Broadway;
- Consider opportunities for a different built form, particularly in mixed use buildings, as the University expands towards Broadway;
- Accept the current architectural approach but encourage commissioned architects to innovate, particularly on sites deemed to be of greater prominence or significance than others;
- Continue to provide coherence through the colour palette, and through the placement/design of some sites/buildings which encourage use/connection between both inside/ outside spaces. This is a strength that would be beneficial to maintain in further development of the campus and its stakeholders;
- Offer varying opportunities for expressive form of architecture within the colour and material palette on selected sites around campus;
- Accept the future challenge of changing building types, materials and technology; and
- Ensure that the clear needs/function of certain spaces, such as teaching spaces, are maintained.

Infrastructure

While the University has an efficient campus infrastructure system, there are opportunities to improve and extend the system.

Early campus plans developed a planning structure based on a rectangular grid, which made possible a simple underground services corridor system in primary and secondary easements. Services outside the grid have largely been re-routed to conform. With the planned expansion of the University across Fairway towards Broadway, the expansion of QEII affording opportunities to link up and/or provide back up capacity, and the proposal to increase student residential accommodation around the campus, there will be a need to increase infrastructure and to extend service easements off-campus. There may also be opportunities for sharing infrastructure services with the community.

Energy costs on campus are projected to increase approximately 35 per cent from 2010 to 2013. Air conditioning accounts for between 20-23 per cent of the University's total power consumption and air conditioning alone creates 11,100 tonnes of CO2 emissions each year (approximately 3,500 cars worth of emissions). New development practices to reduce the dependence on such cooling infrastructure are considered critical.

Chilled Water Storage

The installation of a chilled water storage tank at the south end of campus in 1998 resulted in cheaper energy costs and increased supply capacity. Much of the chilled water is used for the purposes of air-conditioning. Given our climate, and specific research activities, the University acknowledges the need for climate control within buildings. However, the University will encourage the utilisation of passive design within buildings where possible. Campus Plan 2000 highlighted the need for an additional similar size tank in the north end of campus. A proposal to construct a four megalitre tank near the Physics building did not proceed and the campus system is now at capacity. A new 6.5 megalitre storage tank would provide the University with sufficient chilled water without having to run chillers during 'normal' (that is, overly hot) days. The provision of the second chilled water tank will take advantage of the wider gap between on- and off-peak tariffs and enable the University to enter into demand side response programs. A third tank of two to three mega litres should be considered as part of the design for buildings planned in the northwest corner of the expanded campus.



### Alternate Sources of Energy

Alternate sources of energy will continue to be considered when appropriate (eg, geothermal energy).

### Sub-Station Upgrade

The QEII-Hollywood Hospital sub-station is being expanded (2011) as part of a western loop linked to the University. It has flagged the need to expand the campus electrical sub-station. The sub-station serves both the University and the local neighbourhood. Space will be allocated in the plan to meet this need. The proposed change is from low voltage electricity supply from 6.6 kilovolts to 11 kilovolts.

### Services Precinct

A proposal has been developed to create a services precinct off Fairway Entrance 4. This will co-locate and conceal industrial type operations, including engineering workshops, waste facilities including biochemical and electronic waste. A second services precinct is also suggested, preferably at UWA Nedlands, where additional infrastructure is required.

Engineering redevelopment, planning of which will begin within the next 10 years, should be co-located within the proposed services precinct to enable Engineering to exploit teaching and research synergies with on-campus utilities.

### Principles:

- Expand campus infrastructure in a logical and practical manner as new buildings are added, identifying expansion needs;
- Increase renewable energy, recycling and water reuse to decrease the carbon footprint;
- Maintain in-ground ringed services corridors across campus. Wherever possible lay and maintain services under hard landscape with easily identifiable segregated alignment with appropriate access with suitable expansion capacity;
- Whole-of-life design will underpin the acquisition and management of infrastructure; and
- Consider the impact of climate change on campus infrastructure and buildings, particularly rising water levels.

### Recommendations:

#### Management and maintenance

- Integrate infrastructure (e.g chillers) into built form where possible;
- Locate service easements north-south or east-west but not in a diagonal direction;
- Ensure services are ringed wherever possible to maintain security of supply and to minimise pressure differentials;
- Ensure campus-wide back-up data protection and disaster recovery systems;
- Establish looped electronic communication linkages between existing and newly acquired remote sites, such as UWA Sports Park, Claremont, and the main campus at Crawley to the single campus vision;
- Centralise research activities, wherever possible, so as to improve resource use, services back up and continuity of supply;
- Centralise service facilities into a services precinct and plan for a second services precinct at UWA Nedlands or a location west of Fairway; and
- Ensure special purpose requirements (such as security of supply) are in place for buildings with ongoing research needing continuity of services, including Molecular and Chemical Sciences and Physics.

#### Sustainable development

- Maximise water reuse;
- Aim for zero waste through encouraging recycling and reuse practices; and
- Ensure infrastructure design and planning accords with energy efficiency, environmental sustainability, practicality and life cycle costing requirements.

Access and Parking

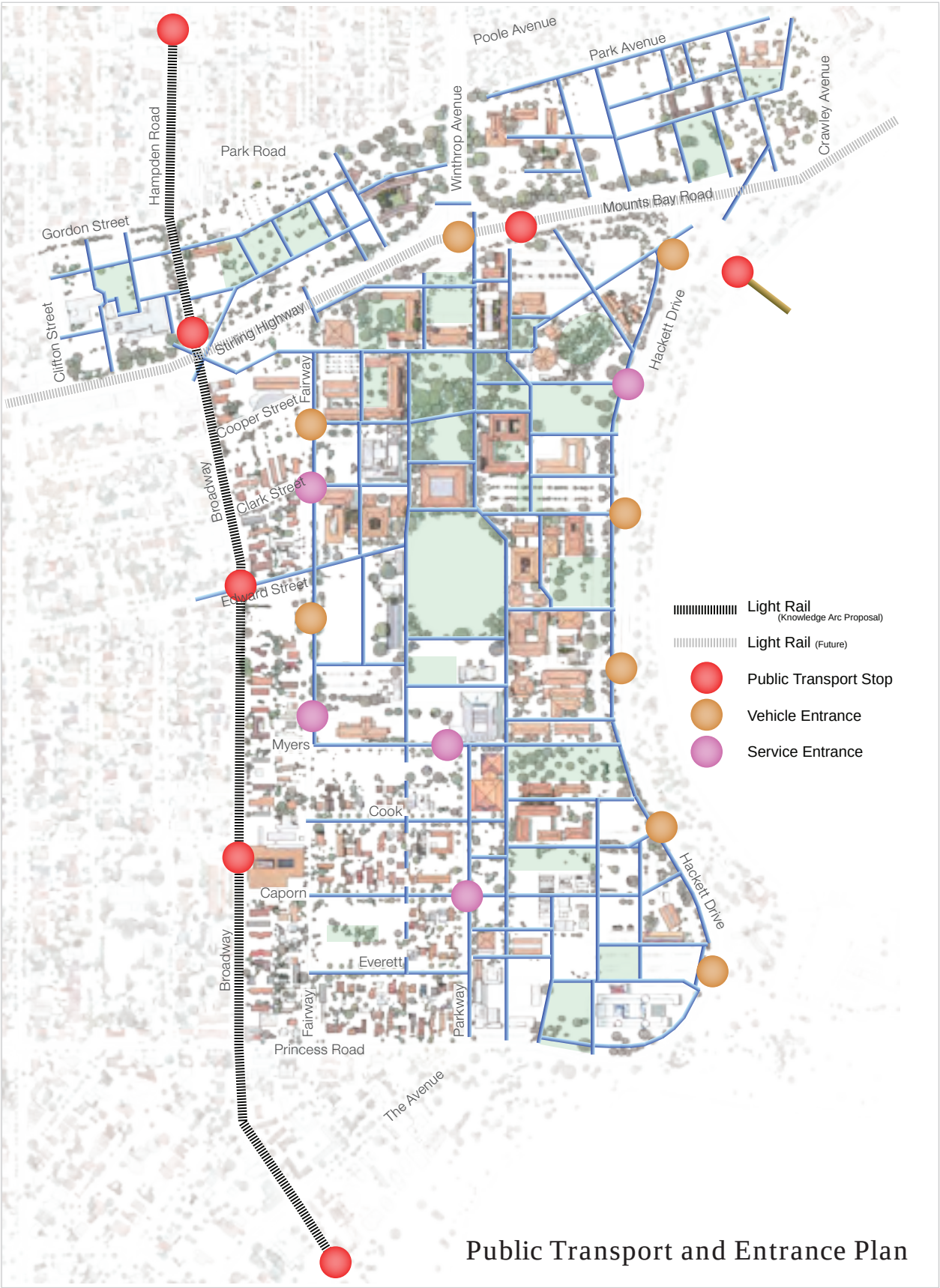
The future development of the campus is dependent upon creating better transport linkages with the City of Perth and other metropolitan centres.

The 1990 Campus Plan signalled an end of the campus being a primarily ‘drive to’ destination and the provision of public transport, cycling and walking access to the campus was further developed.

Despite being located away from the rail network, the University is accessible through road and public transport (bus) options available to the area. The ability of the University to grow remains linked to the ability to bring students and staff to and from the campus.

In Campus Plan 2000, the University’s parking numbers were capped – a policy that has been supported by the Western Australian Planning Commission. The 2000 Plan capped parking at 4,250 bays, of which 3,300 were controlled by the University and the remaining 950 by local governments. It is intended to continue this cap. The University has continued to grow in student numbers despite the cap and will grow to 25,000 students by approximately 2015, indicating that access has been accommodated by means other than private vehicle and will continue to do so. The policy of having more students living closer to Crawley is likely to result in an increase in walking and cycling access to campus. As the campus land area expands, the associated parking provisions for teaching and research buildings will be maintained. However, consideration will need to be given to additional parking for other uses such as residential, collaborative research and commercial.

Over recent years there have been issues with student parking in surrounding streets. While the University is asked from time to time to address this problem, the University is only able to create parking by-laws over the land which it controls. The University has supported the cities of Subiaco, Perth and Nedlands amending and enforcing their own parking laws.





### Transport Policies and Plans

The campus includes an internal ring-road that was developed to help students travel between car parks on campus. The ring-road mirrors the function of the adjacent roads, resulting in a replicated internal road network. The introduction of a narrower bike lane that can be used by service and emergency vehicles, has proved successful. This model can be continued around the campus without having an impact on accessibility.

The University is completing the UWA Transport Plan (2010) to provide a strategy for the day-to-day and longer-term direction for transport for the University. The transport-related objectives of Campus Planning Review 2010 include:

- Efficient and equitable management of the limited parking supply;
- Provision of a high quality and range of non-automobile transport alternatives;
- Minimising the impact of parking and access on the physical campus environment; and
- Making better use of campus land area currently used for surface parking and ring roads.

The UWA Transport Plan (2010) makes recommendations in five broad areas:

- Behaviour change and review of programs;
- Improvement of the public transport network that services the University;
- Provision of high quality walking and cycling facilities to the University;
- Increasing the supply of local residential accommodation for students; and
- Reform of the University parking system.

### Principle:

- Minimise single occupant vehicle use to campus and encourage increased usage of alternative modes of transport such as cycling, walking and public transport.

### Recommendations:

#### Alternative modes of transport

- Proactively explore public transport solutions while supporting the systematic increase in public transport capacity by the Public Transport Authority, including buses and light rail;
- Allocate space for future public transport requirements such as light rail stops/depot, bus interchanges and ferry terminals;
- Encourage sharing alternative transport resources and parking with the general community;
- Increase supply of local residential accommodation for students, which (coupled with improved public transport) will reduce demand for car ownership and parking; and
- Develop a guaranteed ride home programme for users of alternative transport.

#### Parking

- Consider parking as a regional issue – ensuring sufficient parking for the area, not a specific campus use.

#### Ensure the architecture and landscape quality of the campus is enhanced by:

- Providing underground parking, integrated within and under buildings where possible and economically sound;
- Removing smaller surface car parks when the opportunity arises, delivering small building sites or landscape opportunities;
- Reducing the use of cars on campus; and
- Ensuring the architecture and landscape quality of the campus is not compromised by roads and parking facilities.

## Security and Safety

The University is committed to best practice in safety risk management. The physical environment; movement of vehicles; cyclists and pedestrians; criminal acts and environmental related events (storms, lightning) all impact on the personal safety of those on our campus.

The establishment of the Risk Management Division in 2009, to cover Internal Audit, Business Risk Management, and Insurance Services, recognises the increasing complexities, regulatory requirements and stakeholder expectations facing the University. The University now has a cohesive, strategic and structured approach to managing risk.

The University is committed to providing a safe and secure environment on campus through design and practices such as:

- Building access control and intruder detection;
- Well-developed services covering campus security; and
- Personal safety and property protection.

The planned Emergency Call Points program and access control of buildings will improve security and personal safety. As the campus and off-campus population increases, there is a growing risk of personal injury from the intermingling of transport modes – pedestrians, cyclists, service vehicles, public transport and general traffic. Vehicle access control (remotely controlled barriers with inter-visibility and communications) will reduce the number of vehicles using the inner campus and enhance pedestrian safety.

The University has Emergency Plans and Procedures and a Critical Incident Management Plan in place. Emergency Response procedures (booklets, posters, emergency phone numbers) are displayed across the campus and included in staff and student inductions. The University has installed emergency warning systems, emergency control procedures and emergency control organisations. A building-specific and campus-wide public address system would greatly assist in emergency related communications including for building lockdowns.

It is envisaged that planned additional student accommodation will bring about more activity 24 hours a day, year round. For safety and security, future planning should incorporate the principles of crime prevention through environmental design and use a scale and quality of development to stamp a ‘university city’ cultural brand on the area.

Student presence in overlapping activities within a relatively small campus and off-campus land area will also encourage more face-to-face interaction and a greater understanding of the personal, social and educational wellbeing of students.



### Principles:

- Ensure the Crawley campus has a high perceived and actual sense of safety for all students, staff and the community. Develop a strong sense that the University is a safe place in which to visit, work and study; and
- Maintain the campus as a University without fences with a strong intuitive wayfinding system across campus and through buildings, improving ease of access for all.

### Recommendations:

#### Universal Access

- Integrate best practice universal access design principles into developments;
- Provide continuous pathways of travel for simplified access to buildings; and
- Wayfinding to incorporate emergency access routes for all campus users.

#### Security

- Integrate crime prevention through environmental design principles and integrate risk management in asset acquisitions, including buildings;
- Provide passive surveillance of pedestrian paths and courtyards from buildings. For example, locate staff offices and other 'populated' spaces on building perimeters. Use opportunities to construct mixed use buildings on and off-campus to increase the hours of operation, and to provide surveillance;
- Establish a network of wide, well-lit pathways throughout campus. Avoid the placement of dense shrubbery close to pedestrian pathways;
- Broaden the network of emergency contact points throughout the campus (and at particularly vulnerable locations, such as bus stops) connected back to Security;
- Protect inner campus and vulnerable pedestrian spaces from vehicles by the use of bollards, operable or fixed. Increase pedestrian safety with better separation from cycle routes and major traffic routes at entries to the University;
- Minimise the number of entrances to buildings to enable more effective security. Main entry doors and heavy traffic areas should lead to reception or administrative offices; and
- Locate meeting rooms and other public accessible spaces close to the building main entrance to minimise penetration of the building by non-occupants, and allow more out-of-hours use of these spaces.

## Governance

The Campus Plan, developed every 10 years, is the document that informs State Government, through the Western Australian Planning Commission (WAPC), about the physical development and planning issues that have an impact on the Crawley campus. In the past, WAPC and Department of Planning have viewed the document as the University's planning strategy, setting out how it will expand. The approval of the WAPC is required for any development on these reserves. Applications for approval are considered against an adopted Master Plan taking into consideration the recommendations of the relevant local authority.

The University of Western Australia Act 1911 gives the Senate, as the governing authority of the University, responsibility for "...the entire control and management of the affairs and concerns of the University and may act in all matters concerning the University in such manner as appears to it best calculated to promote the interests of the University". Therefore the Senate is responsible to the public for the stewardship of the University as an institution of excellence and integrity, and for the custodianship of its future prosperity.

Subject to the University Act and the Statutes, the University Senate has the following powers in relation to the management of the University's physical assets (extract from The University of Western Australia Act 1911):

*"14. The Senate shall have the control and management of all real and personal property at any time vested in or acquired by the University; and may set out roads, streets, and open spaces, and erect and maintain buildings upon and otherwise improve any land or other property as in their absolute discretion they may think fit, and may apply any trust funds of the University to any such purposes.*

*15. The Senate, in the name and on behalf of the University, may grant leases of any lands vested in the University for any term not exceeding twenty-one years, and, with the approval of the Governor, but not otherwise, may grant building leases for any term not exceeding ninety-nine years, and may, with the like approval, mortgage such lands.*

*16. The Senate, in the name and on behalf of the University, may dispose of any real or personal property acquired by gift, devise, or bequest as they may think fit, subject only to the express trusts of any deed, will, or instrument under which such property is acquired."*

In addition, the University Act outlines responsibilities for Endowments and Revenue<sup>1</sup>. Real property vested in the "The Trustees of the University Endowment" became the property of the University on the appointment of Senate: the Endowment Fund is a trust fund and must be managed as such, pursuant to the trusts enacted in the University Act. Senate alone holds the property power.

Other key legislative documents related to the governance of the University's interests are:

- University Colleges Act 1926 – An Act to establish and endow residential colleges within The University of Western Australia; and
- University Buildings Act 1952 – An Act relating to the provision of certain buildings for The University of Western Australia and for other incidental purposes.

Under the University Act, Senate has the authority to approve the layout of the campus. This includes decision-making for the acquisition, disposal, use, physical design and planning functions. These functions are delegated through the Senate on approval of the Campus Plan to:

- The Vice-Chancellor, and further delegated through levels of management;
- Governance committees including:
  - The Strategic Resources Committee, whose role is to<sup>2</sup>
    - "(b) monitor campus planning and advise Senate on major physical developments and associated policy issues";
    - "(d) within the limits of agreed delegations, make decisions or recommendations to Senate on investments within a framework of strategy approved by the Senate";
- The Planning and Budget Committee, whose role is to
  - "(a) advise and make recommendations to the Vice-Chancellor on behalf of the Academic Council on the following matters:
    - (i) the formulation of the University's strategic and operational plans;
    - (v) the setting of priorities and the allocation of funds for major building works and any major re-allocation of space within a faculty or among faculties;
  - (e) advise and submit recommendations to the Academic Council on policy matters and on major procedural matters relating to University accommodation."<sup>3</sup>

The University is subject to a wide range of decision-making bodies, legislation, regulations and standards. The Crawley campus is located within three local governments (Perth, Nedlands and Subiaco), with some portions subject to State Government Department of Planning and the WAPC. The University is also subject to government agencies such as Main Roads, the Swan River Trust, the Heritage Council, the Department of Environment and Conservation, and the Botanic Gardens and Parks Authority (Kings Park).

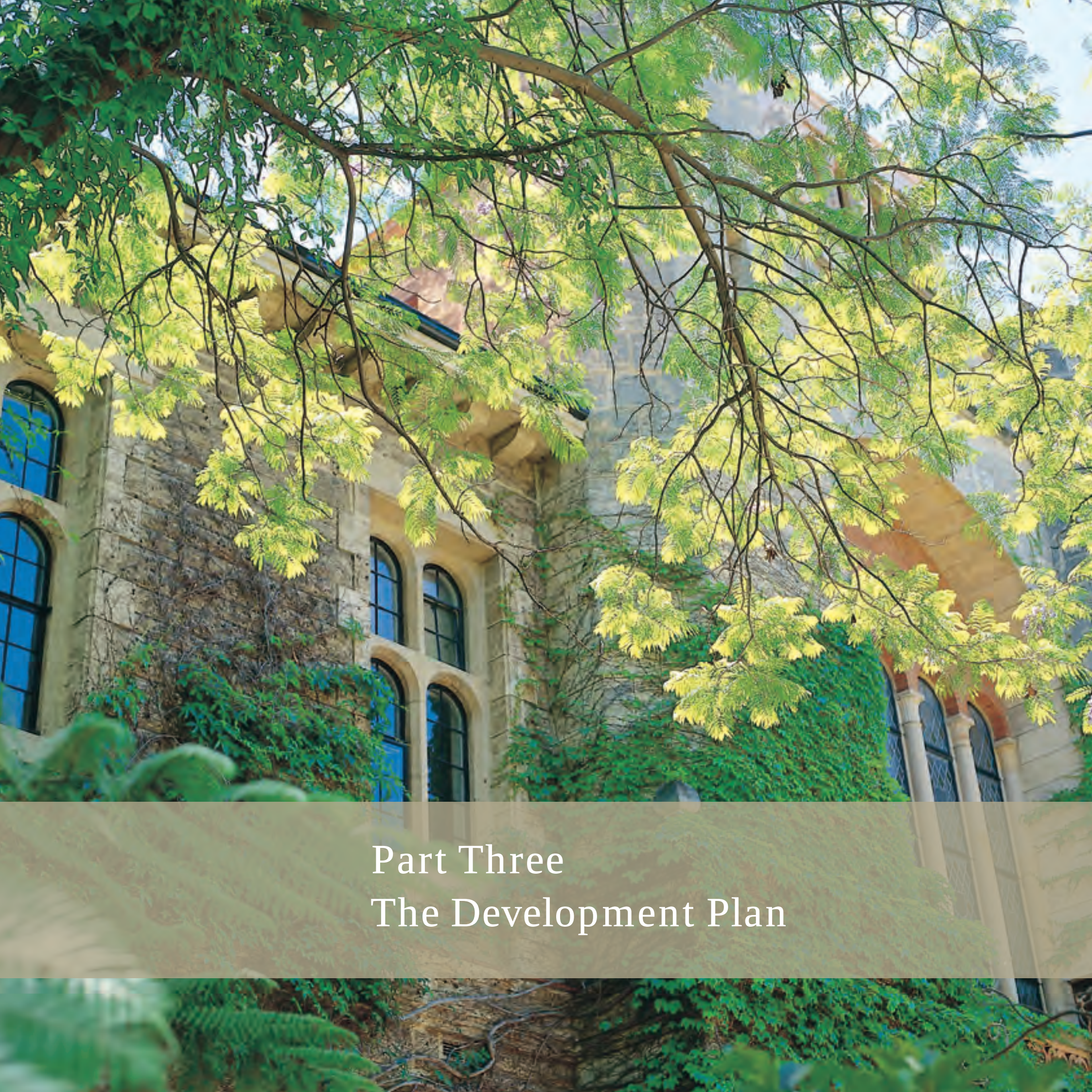
### Principle:

- Ensure all campus development is in accordance with statutory and University governance requirements.

### Recommendations:

- The University processes and decision-making of the acquisition, disposal, use, physical design and planning functions is transparent and communicated broadly to both internal and external stakeholders; and
- Continue to be involved in local Government change and State planning reforms.

<sup>1</sup> The University of Western Australia Act 1911 – Endowments and Revenue – Section 35 to 38  
<sup>2</sup> Strategic Resources Committee – Constitution  
<sup>3</sup> Planning and Budget Committee Constitution and Membership



# Part Three The Development Plan

# Part Three – The Development Plan

## Emerging Themes

Clear themes emerge over the future development of the campus through the coming decade and beyond. These themes are expected to shape the development of the campus and will define in which areas the campus will grow.

### University Expansion and Linkages

The University recognises the opportunity of its proximity to the City of Perth, Swan River and Kings Park, and looks to embrace the unique setting building on linkages to enhance the campus.

As development occurs to the west and north, the University has an enhanced opportunity to add to the vitality of the campus and surrounding community with a clear vision of a new distinctive place – a University in a town. The ‘University in a town’ will have a different and complementary texture to the ‘University in a park’. Integration with greater permeability to the western edge of the campus is planned, bringing development and shared resources into the mixed-use areas of Crawley, merging the edges of the campus and community. These two visions, the established ‘University in a park’ and the new ‘University in a town’ are the direction that will inform the social, economic and environmental sustainable development of The University of Western Australia and its community.

The University made its intentions clear in the 1980s to continue expansion of the University into the land between the main campus and Broadway. This will continue during the 10-year life of the Plan.

Linkages north of the campus are likely to become important over the coming decades as the UWA-QEII activity centre develops.

The University plans to reduce the impact of perimeter roads, such as Fairway and Stirling Highway, on campus users. Effective crossings will be considered to ensure student and community safety, while maintaining permeability of the site. The provision of better pedestrian and habitat links between the University and Broadway, Matilda Bay and Kings Park will also be a key to ensuring amenity and usability of the area.

## Growth Opportunities

The University is currently determining its optimum size. The Plan accommodates the University’s current growth aspirations. State Planning’s *Directions 2031 and Beyond* has recommended higher density development in the UWA-QEII Activity Centre. The Plan has considered growth in the context of preserving the area’s amenity whilst increasing higher density development.

The University currently has 275,000 square metres of gross floor area (GFA) at the main campus, which includes the Nedlands and Park Avenue sites, 39 Fairway and 7 Fairway, but excludes the residential colleges and the remainder of University-owned land between the main campus and Broadway. This equates to approximately 15 square metres per full-time student equivalent.

Research facilities are space- and service-intensive. The University’s growth plans project a greater requirement for this type of accommodation so a figure of 20 square metres per full-time student equivalent has been used in the following growth projections. The figures are a conservative estimate; some teaching and research takes place away from Crawley and there is non-University activity through collaborations and partnerships on campus.

The Plan demonstrates the campus’ student capacity (with its current land holding at 20 square metres per full-time student equivalent) is over 35,000 EFTSL.

The Plan accommodates:

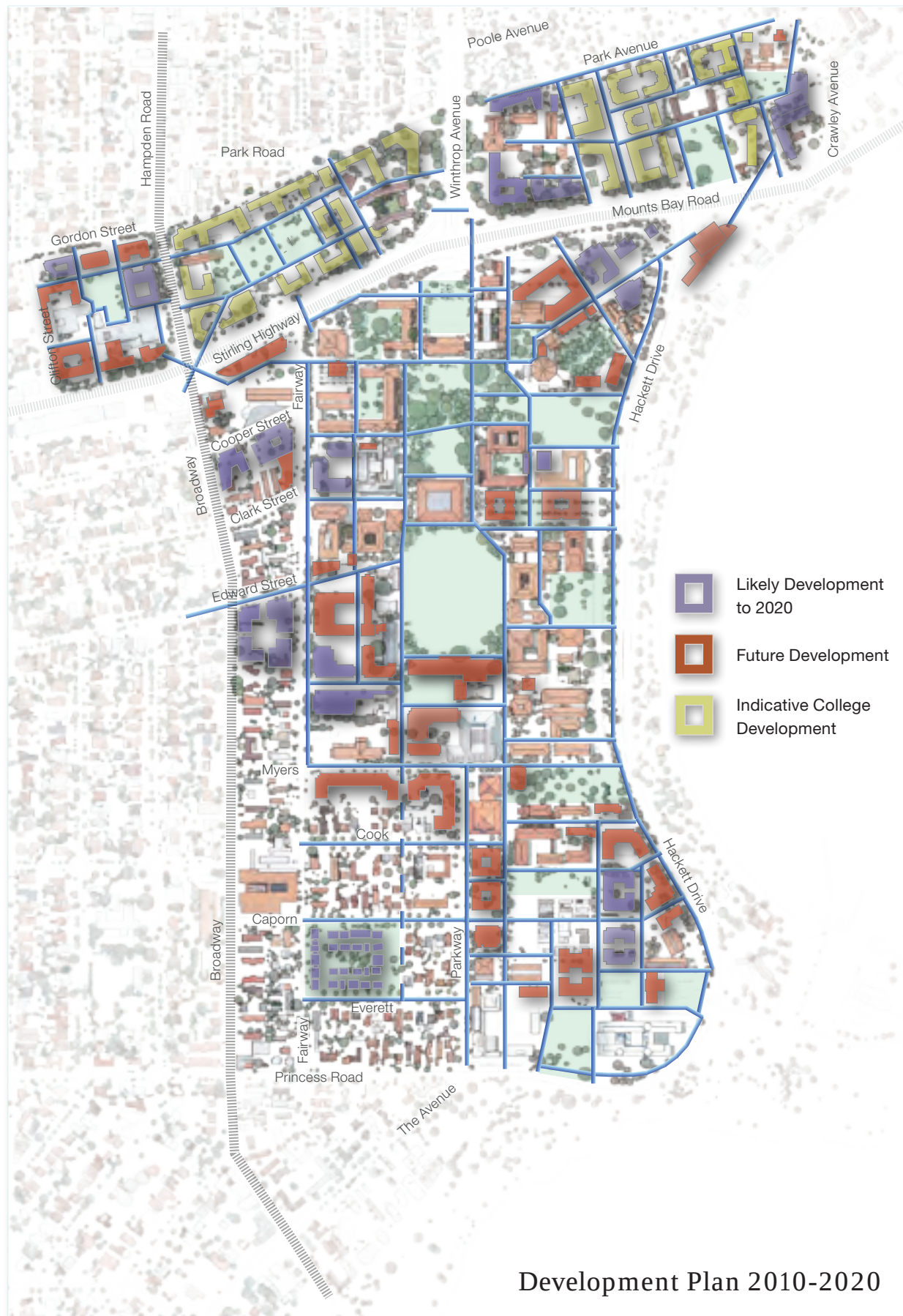
- Current building GFA of 275,000 square metres;
- Demolished buildings total 90,000 square metres;
- New buildings shown on the main campus, Nedlands and Park Avenue sites total 550,000 square metres GFA;
- Totalling 735,000 square metres GFA or some 35,000 full-time student equivalents.

## Sustainable Development

The Plan has been written with sustainable development as an overarching theme. This focus encompasses the social, environmental and economic decisions that the University will need to make in developing the physical layout of the campus.

The University will integrate sustainability into built form. This will include decisions on whole-of-life costing, materials and location and orientation of buildings.

The State Government has recognised the significance of the University community in *Directions 2031 and Beyond*. The themes of *Directions 2031 and Beyond* – liveability, prosperity, equity, accessibility, sustainability and responsibility – set a framework for the University to engage with State, local government, and industry to achieve a sustainable future for itself and for the communities it serves. Specifically, teaching and research can contribute



to understanding and disseminating findings in relation to important sustainability issues, while there are opportunities to exploit the activities of the University in areas such as energy production, water and waste management to achieve sustainable outcomes across the UWA-QEII Specialised Strategic Centre.

The commitment to achieving a sustainable future is clearly articulated in the University's Operational Priorities Plan 2009-2013. Strategies have been formulated with due consideration to the expected impacts on the University's triple bottom line (social, environmental and economic) and includes specific strategies to meet the requirements of the National Greenhouse and Energy Reporting Act 2007. Key areas to be addressed include:

- Water – over the next 10 years the University should manage its water use through water harvesting, water recycling and ensuring all irrigation is achieved through non-potable water sources;
- Recycling – management practices to minimise waste production and maximise the recovery of energy and materials through recycling are being adopted by the University. To support these activities an onsite storage facility to manage waste streams prior to collection could be integrated into a services precinct, which will contain similar industrial activities within the one location on campus is currently being proposed;
- Building – it is recognised that it is important to encourage not only the use of environmentally sustainable design principles in the development of new buildings, but also the re-use and refurbishment of existing buildings to lengthen the productive life of buildings on campus; and
- Landscape – sustainable landscape development will include the use of green infrastructure such as green roofs, vertical gardens, and water harvesting in the landscape and on the buildings to increase the operating efficiency of buildings and add to the biodiversity of the campus. As the University expands into the town, the landscape will be used to visually integrate the campus and create an urban ecology to promote biodiversity, improve the operating efficiency of the built form and promote health and wellbeing.

## Statutory Responsibilities and Links to Other Plans

The nomination of the UWA-QEII land area as a Specialised Strategic Centre (SSC) under *Directions 2031 and Beyond* is recognition of the importance of this region of Perth to the State's prosperity. In response to this, the University:

- Supports the Governments objectives for the growth and development of the UWA-QEII SSC;
- Supports the need to greatly increase the amount of housing around the University as part of a regional strategy for targeted infill development;
- Supports the need for substantial upgrading of public access to the University including a light rail connection to central Perth;
- Seeks support for the up-coding of the R20/50 lands between the campus and Broadway and introduction of a more diverse range of land uses;
- Seeks a commitment for the timely completion of the urban design study and structure plan for the SSC and the consideration of the potential for the WAPC to introduce an Improvement Scheme; and
- Supports investigation of the potential introduction of an Improvement Plan and Scheme to achieve the full potential of the SSC.

Further direction is expected from State Government over the future of the Crawley area. It will be important to embrace these opportunities by continually reviewing the University's development plans in light of State planning. This may include the development of a 'city' centre to the area and providing opportunities for higher-density living and supporting emerging land uses not generally considered to be part of a university.

## Access

There is possibly no better-located site in the city of Perth to promote a sustainable approach to transport and access. In line with sustainable best practice, the University will continue to discourage single-occupancy vehicle access to the campus. Improvements to public transport; encouraging pedestrian/cycling access to the UWA/QEII centre; and provision of student housing near to campus will be important for the sustainable development of the University.

The University will need to support purpose-built public transport nodes and improve destination facilities. Better servicing is needed to strengthen linkages between QEII, UWA Crawley campus and Shenton Park.

Continued development of public transport connections – both bus and potentially light rail – will be essential to support the growth of the University as part of the SSC. It is noted that the Draft Central Metropolitan Perth Sub-Regional Strategy makes reference to the potential for an underground rail connection. This is not considered to be viable or practical for many years and the focus should be on the provision of a light rail connection linking UWA Crawley campus with the Perth CBD and beyond.

## Student, Staff and Community Engagement

The need for better engagement to improve learning outcomes is an important part of the University's future development. The strong link between academic success and time spent engaging on the campus (often in a residential setting) is a common trait of the top 50 universities in the world. It is therefore in the interests of students' education to pursue additional housing on or near campus.

The University recognises that a residential experience is a valuable component of a student's time at university and accordingly seeks to increase available accommodation for students. A broad spectrum of accommodation types should be offered to meet preferences and affordability of students. Living adjacent to the campus offers students direct access to the broader amenity of the campus 24 hours a day.

The development of student housing in future planned developments on college sites or through other accommodation initiatives will be encouraged. All but one college is independently operated and as such the University cannot mandate their development. However in the past it has financially supported development of additional housing.

With an increasing student load, the University will need to develop further open spaces to meet the needs of new students, with a range of places for activity, quiet reflection and enjoyment. A purpose-built student centre or series of centres is also likely.

# Precincts and Commentaries

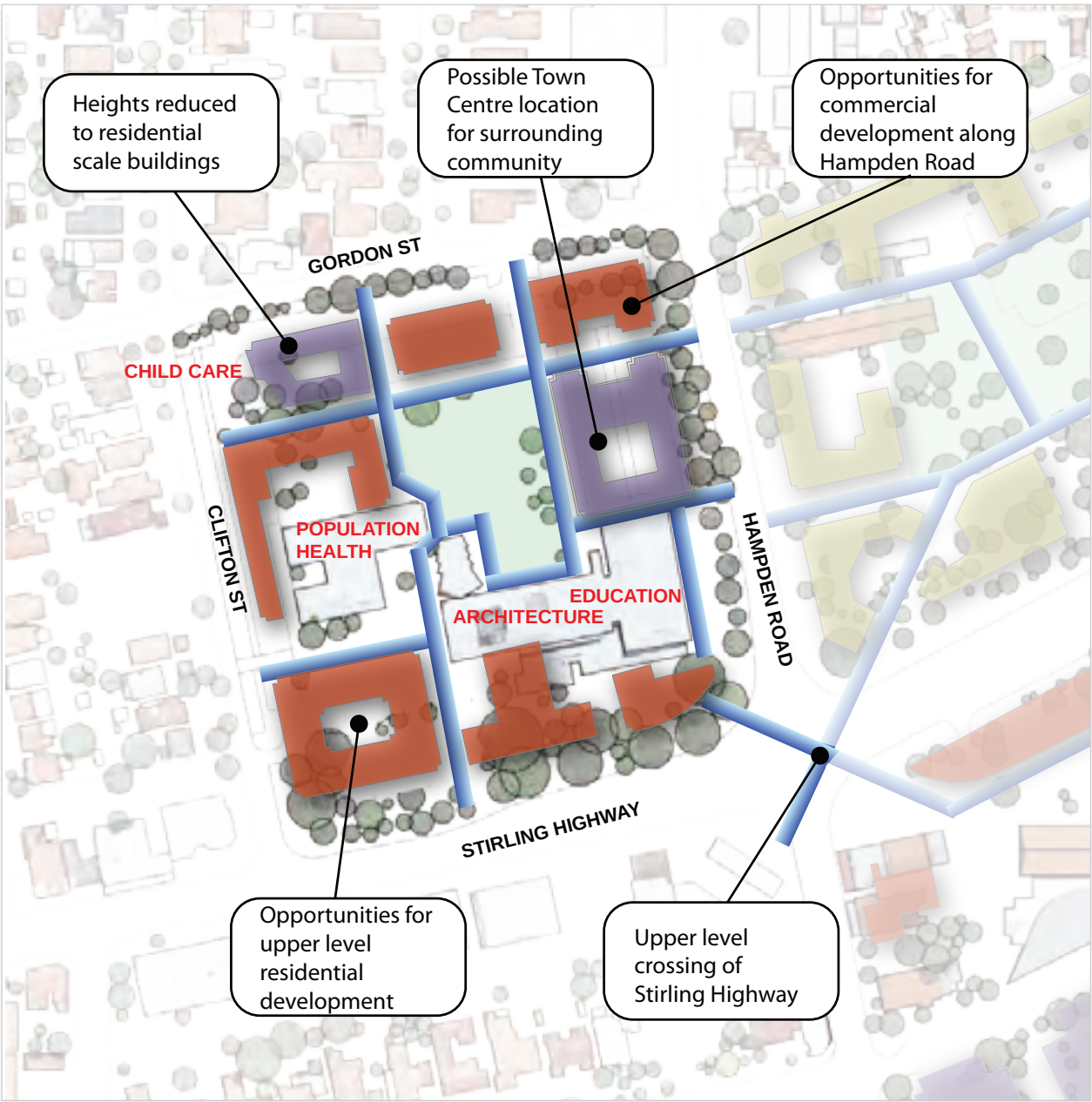
## Nedlands Precinct

The University strongly supports the establishment of light rail north-south connecting UWA Crawley campus through to QEII campus to further enhance the linkages between these sites and the connectivity to Subiaco and the City. The development of the Nedlands site offers opportunity for a light rail terminal underground. Hampden Road continuing on to Broadway is the preferred route for improved public transport.

The University’s Nedlands site is recognised as being under-utilised and there is an opportunity increase density on the site, especially along the Stirling Highway and Hampden road frontages. Many of the buildings on the site will need to be replaced over the coming 50 years, with major refurbishments required on those that will remain. This site has the opportunity to act as a Town Centre to the wider area with a mixed use, commercial development providing services for a growing UWA/QEII activity centre. Current institutional activities could be consolidated in other locations to support this use.

Upper-level connections between new buildings on the Nedlands site bridging across Stirling Highway and Hampden Road are planned, linking higher new developments at the Stirling Highway/Broadway intersection.

Development on this site would best accommodate commercial activation at the lower levels engaging with the street, with teaching and research activities and/or student housing in upper levels.



-  Likely Development to 2020
-  Future Development
-  Indicative College Development