The University of Waikato
Te Whare Wananga o Waikato

SITE DEVELOPMENT PLAN
2002 REVIEW

Opus International Consultants Limited
Architecture, Hamilton
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0.1 SITE DEVELOPMENT PLAN REVIEW

0.1.1 UNIVERSITY OF WAIKATO CHARTER

The campus Site Development Plan is periodically reviewed; this process involving input from campus management group and the campus community in general. The University of Waikato carries out this consultation to its best endeavours.¹

Development stimulation and control is the responsibility of the University of Waikato Council, overseen by the Site Committee.

This is the second review of the University of Waikato Site Development plan since it was first prepared in 1966, and reviewed 1989.

This review was presented for discussion at a public meeting on 25 August 1999, as the 1998 review. Over the next three years the Hamilton City Council has released a Proposed District Plan, and submissions and hearings have followed. The University of Waikato Site Development Plan is a formal document to be used in association with the District Plan as a guide to development of the campus. As a consequence the release of this plan has been delayed to allow overlapping issues to be resolved. This has now happened and the Site Development Plan is now released as the 2002 Review.

0.1.1.1 Basic objectives of this review

1. To ensure that land is put to an appropriate use, developed to a suitable density, and that functions are integrated effectively, efficiently, economically and pleasantly.

2. To define sites where development may take place and sites which are to be protected from further development.

3. To provide a structured framework for the on-going development of circulation, site services, open space planning,

¹ The University of Waikato Charter; Charter Goals; (the Charter Goals have been extracted from Section 1.3 of The University of Waikato Charter, signed by the Minister of Education on 1 April 1993); Goal 12: "To maintain and improve the campus and buildings of the University and to provide for new developments consistent with a campus development plan periodically reviewed."
Identify overall campus patterns, relating particularly to pedestrian movement and landscaping.

4 To provide guidelines on the general bulk, architectural design, form and colour of buildings. The guidance provided is to be extended to car parking design standards, pedestrian route widths, building materials, street furniture and site services (including storm water drainage).

5 To allow, within that framework, the freedom to consider different options to suit changing needs.

6 To ensure a balanced development, achieving a cohesive site in both the short and long term planning.

7 To record the basic philosophy behind planning decisions, so that revision can be easily done as policy changes occur.

8 To develop a campus environment which reflects values appropriate to this University community, and in which students and staff can pursue their individual and collective cultural and intellectual interests with benefit to themselves and others.

9 To provide a concept plan and record of reference for formal submission to the Territorial Authority under the Resource Management Act 1991.

0.1.1.2

The University of Waikato has defined its distinctive character in The University of Waikato Charter in the following way:

"The University of Waikato/Te Whare Wananga o Waikato is constituted as a university under the University of Waikato Act 1963 for the advancement of knowledge and the dissemination and maintenance thereof by teaching and research. The University is established in schools of studies to assist and enhance interdisciplinary offerings and the interaction of knowledge. The University serves the central and northern communities of the North Island of New Zealand and, while remaining an integral and effective part of the national network of New Zealand universities, has a strong regional character: it aims especially to reflect the demographic, cultural and economic life of its region. It recognises its obligations, responsibilities and place in the international world of scholarship, research and learning. The University has an awareness of and sensitivity to equity issues and its policy is to achieve equality of opportunity in education and employment. It has made a notable contribution to women's studies in New Zealand through pioneering its development as an academic discipline. In particular, the University seeks to incorporate into its life and activities, the diversity of Maori interests within its region as well as its associations with other tertiary education institutions. It has a distinctive character which is reflected at the local, regional, national and international levels, with their corresponding communities."

2 University of Waikato Statement of Objectives 1997 – 1999; Statement of Distinctive Character, Educational Purpose and Values; reference to The University of Waikato Charter (signed by the Minister of Education on 1 April 1993).
0.2 CAMPUS DEVELOPMENT

0.2.1 DEVELOPMENT OBJECTIVES

0.2.1.1 Growth Potential

The University of Waikato is developing to meet the needs of a growing population, and from a relatively low University participation rate in its region. The Site Development Plan is based on development of the University of Waikato at above the growth rate for other New Zealand universities.

The gross floor area that can be provided in the Academic Precinct will accommodate an annual growth of about 2% over about 35 years.

The University of Waikato student numbers grew by about 10% per annum in the period 1986 to 1996. However projected growth rate is less. This is very unpredictable, and growth in student numbers may be overridden in significance as a site capacity determinant by other factors, such changes as increasing post-graduate student ratio.

0.2.1.2 The Nature of the University

STRATEGY Designers are to provide convenient, user-friendly and architecturally attractive buildings, coherent within a University site context, yet reflecting the devolved nature of the University's organisation.

0.2.1.3 Development Density

The original campus plan developed in 1966 was said to be for a campus of 10,000. In 1996 the University reached a total EFTS number of 9,945, an academic staff of 538 (full time equivalent), general staff 709 (full time equivalent), plus a number of other people on campus working for contractors, various commercial premises, Student Union Services (Campus Services Limited), and two Crown Research Institutes etc. It needs to be borne in mind, therefore, that compared with the 1966 plan, the campus could be said to be "full", yet it is apparent that the University will still grow and that sites for further buildings are to be found, and functions of existing buildings may need to be (and are), modified from time to time.
**STRATEGY**

Maintain a compact central core to the campus, to provide short walking times, particularly important for students between lectures. There is an associated economy in provision of access and services to buildings.

There are nevertheless problems associated with compact planning. Buildings must be serviced from motor vehicles (whether that service is from a fire engine or a copy machine service van). Visitors, students and staff expect (and sometimes need) ready vehicular access to buildings. A pleasant environment for people is generally one that removes the conflict of pedestrians and vehicles, and provides quality hard and soft landscaping.

These two conflicting requirements are another challenge to planners. Over time the campus core density is expected to increase, for an increasing occupancy, with the benefit of:

1. More frequent chance meetings, resulting in greater interaction between staff and students, benefiting academic development.
2. Closeness, shorter travel distances, reducing travel time, or increasing facilities within range.
3. Greater use of land area, with reduced costs and better utilisation of a finite resource.
4. Shorter site services runs and building servicing distances.

The disadvantages of closeness relate to:

5. Reduced open spaces.
6. Reduced opportunity for landscaping.
7. Increased shade and reduced sunlight.
8. Traffic congestion.
9. Reduced opportunity for parking, especially as this may relate to parking for people with disabilities.

0.2.1.4 Outdoor Meeting Places

**STRATEGY**

The provision of meeting places within the Schools for the purpose of social and cultural exchange, possibly associated with outdoor areas, is encouraged as a means of focusing this activity.
0.2.1.5 Environmental Objectives

**STRATEGY**

The University of Waikato is committed to establishing and maintaining a high standard of environmental awareness and quality. This commitment to environmental care is to be reflected in the campus environment.

**STRATEGY**

The energy management procedures adopted by the University of Waikato include consideration of efficiency and appropriateness of energy use. This is to include consideration of such issues during design, especially in material and component selection, and detailing of buildings.

0.2.1.6 Development Conflicts

The concept of eight storey tower blocks was proposed in 1966, central to the four storey CDEFG/ IJK block crescents. This was considered suitable as a development form in 1966, but further development of that concept is not recommended as a campus form or a planning arrangement.

0.2.1.7 Hamilton City Council, District Planning Scheme

There are five specific features which are indicated by the Hamilton City Council of the campus concept plan 3.

1. "The open space character of the northwest sector of the site should be maintained as much as practicable."
2. "High rise buildings should preferably be concentrated on the Hillcrest Road Ridge" or nearby.
3. "Retail activities, restaurants or licensed premises should be grouped away from the street frontages..."
4. "Commercial, social and intensive recreational facilities and large scale buildings should be grouped away from or neighbouring residential zones to minimise adverse affects on adjoining residential amenity values”.
5. "Any parking facilities to be sited and grouped and any vehicular entry/exit should be located to appropriately serve the facility while minimising any conflict with the arterial road system and any detraction from residential amenity values.”

3 Hamilton City, Proposed District Plan, November 2001, Major Facilities Zone, Performance Outcomes 4.7.6 b), c), f).
Town planning rules require the University to keep a minimum setback from boundaries of five metres\(^4\); buildings are not permitted within five metres of road frontages and side boundaries. There are also detailed requirements over the height of buildings which, in essence, permit the University to build at least three-storied buildings 15m high at the five metre setback, and buildings of a greater height, whose maximum heights are controlled by a height control plane rising at an angle of 45 degrees from those boundaries (the details of which are contained within the plan)\(^5\).

Refer to the Scheme documents for further details which include landscaping, parking, screening, glare and lighting, noise, signs, subdivision, utilities and aerials.

0.2.2

PRECINCTS

0.2.2.1

Precinct Information

The following are the precincts identified, and the precinct descriptions generally used within the Site Development Plan, 1998 Review:

<table>
<thead>
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<td>Central development</td>
</tr>
<tr>
<td>2 Social</td>
<td>Welfare, Culture and Sport, Commercial</td>
</tr>
<tr>
<td>3 Residential</td>
<td>Student Village, University Lodge, Bryant Hall, College Halls, Orchard Park</td>
</tr>
<tr>
<td>4 Joint Facilities</td>
<td>Sports fields, Sports Pavilion, Campus Pool, Lakes, East, Fernery</td>
</tr>
<tr>
<td>5 Recreation</td>
<td>Facilities Management</td>
</tr>
<tr>
<td>6 Support</td>
<td>West, East, North, Future</td>
</tr>
<tr>
<td>7 Parking</td>
<td>Scotland Place, Silverdale Road residential areas.</td>
</tr>
<tr>
<td>8 Excluded areas</td>
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</tbody>
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\(^4\) ibid 4.7.3 c).
\(^5\) ibid 4.7.3 b).
0.2.2.2 Space Needs

For the purpose of overall planning of site capacity, a total of 15 square metres of gross floor area is required per student. It is expected that the University of Waikato will increase the area per student to improve its ratio over time. It is noted that some specialised activities, such as Science and Performing Arts, require a greater area per student than some other areas such as "The Liberal Arts" and "Business".

0.2.2.3 Future Locations for Building Development

There are areas of the site within the central academic area that are set aside for future buildings. This is to allow continued development of buildings in this area to meet developing needs, with the minimum of relocation and shuffling. Some of these areas only become available if existing single storey buildings are relocated or removed.

0.2.2.4 Development Tolerance

The definition of precinct boundaries has been based on nominal lines that are drawn to reflect existing constraining features of the site. It is not intended that precinct boundaries be rigidly followed, where the sensible interpretation of this site development plan can be met with precinct boundary tolerance, especially away from the site boundaries.

However there are also precinct boundaries that relate to leased areas and associated legal boundaries, and these boundaries are defined to normal land survey accuracy and are to be used as such. These areas are:

- Bryant Hall.
- National Institute of Water and Atmospheric Research Limited.
- Landcare Research
- Joint Facilities Lot 3.
- Te Kura Kaupapa Maori O Toku Mapihi Maurea.
- Facilities Management Division.

This distinction is shown on the drawings associated with this development plan.

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6 Statistics from the 1998 AAPA Benchmark Survey Report for returns from 78 institutions for the 1997 year; Australasian average 15.1 square metres per EFTS, New Zealand average 14.8 square metres per EFTS, University of Waikato 13.5 square metres per EFTS.
DRAWING 1: SITE DEVELOPMENT PLAN: PRECINCTS

Precinct:
1 Academic
   a Central  b Development  c Future
2 Social
   a Welfare  b Cultural and Sport  c Commercial
3 Residential
   a Student Village  b Bryant Hall  c College Halls  d Orchard Park
4 Joint Facilities
5 Recreation
   a Sports fields  b Sports Pavilion  c Campus Pool  d Lakes  e East  f Fernery
6 Support
   a Facilities Management
7 Parking
   a West  b East  c North  d Future
8 Excluded Areas

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For clarity not all building identifiers have been included.
DRAWING 2: SITE DEVELOPMENT PLAN: BUILDING FOOTPRINTS

These building footprints are foreseen as the most practical form of development at present. This is expected to change over time as more long term buildings are constructed.
0.2.3 PEDESTRIAN CIRCULATION

0.2.3.1 Pedestrian Circulation

STRATEGY Pedestrian areas are to be safe for pedestrian use, by separating vehicles from people.

STRATEGY Vehicle routes are generally around the campus perimeter as far as reasonable towards the site boundaries. From these routes, controlled-use spurs provide necessary vehicle service access. These access spurs are to be kept clear of significant pedestrian areas where possible. Vehicle areas are to be delineated by high kerbs, fixed bollards, rocks, planting etc, to prevent casual vehicle infiltration, except where removable bollards are provided.

STRATEGY Within pedestrian areas a pedestrian priority is to apply, and be supported by detailed design of areas involved (particularly related to cobbled surfaces).

0.2.3.2 Pedestrian Crossings

It has been generally recognised that there is confusion between vehicle and pedestrian rights of way associated with crossings. This is particularly the case when cobbled pedestrian routes cross roadways, but also applies when vehicle routes pass through pedestrian areas on private land. A formal pedestrian crossing is the only clearly pedestrian priority area. It is uncertain what rules apply on private land and this should be recognised in the design of such features.

STRATEGY Where pedestrian routes cross roadways, design of intersections are to enhance pedestrian safety. Such intersections on campus are not to be confused with formal pedestrian crossings.

0.2.3.3 Campus Walkway

The main Campus Walkway is to cover all of the campus Academic areas. Secondary walkways are identified, where there is significant use, but they are not necessarily accessible and wayfinding support is not necessary.

Unfamiliar campus users are expected to park in the Gate 1 and Gate 10 car parks, and the Gate 2b North car park. Other vehicle access gates generally have restricted parking, although there is some general parking in the Gate 3a car park. The Campus Walkway provides an accessible and signposted access to the campus buildings; especially along the main east-west route.
STRATEGY

Campus Walkways provide a primary route to most parts of the campus, albeit in some cases via secondary footpaths. It is important that this feature be available to all users at all times. This will involve providing for the personal security needs of users, as far as this can be done with physical environment features.
DRAWING 3: CAMPUS WALKWAY AND CYCLEWAY
0.2.3.4 The Gateway

The Student Registry (Academic Services Division), in Block TSR, is the focus of student enquiries and for general visitors on campus. Access to this building is important; it is to relate in a direct manner to the Campus Walkways to assist wayfinding, and to be accessible.

0.2.3.5 Accessibility

**STRATEGY**

The University of Waikato is committed to providing a campus that meets the needs of a range of students, staff and visitors including provision of access for people with disabilities.

Building codes require wheelchair access, associated car parking, toilet facilities, Braille markings (such as walkway studs and contrasting colours), signage and other features. There are to be access routes with features for people with disabilities to all areas, and accessible routes suitable for wheelchair users to the car parking areas. Car parking, Campus Walkway and accessible routes are to be designed to meet this range of needs.

0.2.3.6 Wayfinding

Wayfinding is greatly assisted by lines of sight. While people will travel beyond the point where they are sure they are on the right route, this is limited to relatively short distances. Clear lines of sight of the objective are preferable. To assist in campus wayfinding the lines of sight from the Campus Walkways to a significant feature on campus should be clear.

**STRATEGY**

Generally provide building fronts, and main entrances and access to focal points, to be directly oriented towards the Campus Walkways, much as a street.

There are two schools on campus where pedestrian routes diffuse before the building entrance. These are the School of Education and School of Science and Technology. Redesign of these areas would improve wayfinding.

0.2.3.7 Campus Signs

**STRATEGY**

Maintain consistency and suitability of signs on campus, as has been developed over time and documented in the signs manuals (Campus Sign System and Building Sign Manual).
These are primarily for symbols where they are generally suitable, and otherwise for English language signs and bi-
lingual English/Maori language for main signs.

0.2.3.8 Main Lecture Theatre Blocks

The unique form of the Block S Lecture Theatre Block roof is such that it provides a visual focus and reference point to
assist in general wayfinding, and to highlight the presence of this facility.

0.2.3.9 Performing Arts

Provision has been made within the Social Precinct for the WEL Energy Trust Academy of Performing Arts. This has
involved a close relationship with night pedestrian routes for personal security, and the accessible Campus Walkway
for access from main car parking areas and for wayfinding support. The centre is used at night by the wider
community, who are less familiar with the campus, making this more important.

0.2.4 VEHICULAR CIRCULATION

0.2.4.1 Access

Vehicular access to the campus is from three surrounding roads: Knighton Road, Hillcrest Road and Silverdale Road.
There are nine numbered main entrances off these streets and several secondary ones. Numbered entrances have been
used for some time and have established a pattern that should be retained.

STRATEGY Main general parking areas at present are accessed from Gate 1, Gate 10 and Gate 2b, to simplify wayfinding and car
parking process for visitors and first time users. Reference to other gates should be limited.

Access from Gate 1 onto Knighton Road has been improved by the provision of two exit lanes, but this has not eased
the difficulty of turning across Knighton Road traffic. Provision of a roundabout may need to be considered, in
collaboration with the city, if this difficulty increases.

Regular users of the campus are familiar with access and the parking constraints.

STRATEGY Pedestrian access routes from major car parks are to be improved to serve the needs of people moving from the car
parks to the Academic precinct in particular.
Provision is to be made within the campus for service vehicles, the delivery of goods and the removal of waste, as appropriate for the building and its use.

0.2.4.2 Parking

It is desirable to provide car parking for campus users and to minimise conflict with adjoining land owners. It is also expected that car parking provision will meet Hamilton City Council planning requirements in relation to screening with a five metre wide strip of planting or similar, and as quantified within the Hamilton City District Plan.

Anticipated growth of student enrolments and associated development of the academic precincts (and to some extent recognise the ultimate potential for development of these areas) should be matched by a corresponding allowance for support activities, including car parking. The area presently designated for car parking by Gate 2b and Gate 10 has an allowance for the development of further parking spaces but this allowance is unlikely to be sufficient for the longer term.

Additional areas are included as car parking precincts in this review, accessed from Gate 2b and to the northern part of the campus from Gate 3a, to be developed in the future as demand requires.

Car parking areas to date have been in exterior uncovered parking areas. Only limited areas of the campus can now be foreseen as being available for further open car parking areas. Any greater area will be at the expense of Reserve precinct or other landscaped areas, or by providing multilevel parking buildings with associated higher costs per park. At present costs a parking building is about eight times more expensive per park than conventional car parking areas, and unlikely to be economically viable in the near future.7

0.2.4.3 Conflict With Pedestrians

STRATEGY Access roads into car parks represent the most intensive vehicle activity on site. It is important to avoid conflict between these vehicle access roads and pedestrian routes, where this is possible.

7 Rawlinson's New Zealand Construction Handbook 2001; $1,250 - $1,500 per open parking space, $10,350 - $13,350 per space in a three level building (excluding GST).
0.2.4.4  Car Parking Layout

Car parking areas are often designed around existing constraints. However experience has shown that a layout based on a 90 degree angle park, 2.300 x 5.000 m spaces, 16.500 m overall width and two way aisles is appropriate for the campus, and is the standard that will generally be used. The resulting density is 19 square metres per space.

0.2.4.5  Public Transport

Provision is to continue for the public bus route onto campus extending to Block K, and with a kerbside bus stop close to Gate 9.

STRATEGY  Continue to collaborate with Hamilton City Council and Environment Waikato for the provision of public transport to and from campus.

0.2.4.6  Cycles

Hamilton City is relatively flat and suited to travel by bicycle, albeit with occasional small hills. Although the University of Waikato is sited on one of these small hills, this does not inhibit a large number of students and staff from travelling to and fro by cycle.

Hamilton City has provided for the establishment of cycle ways. This ideally would provide for the safe passage of cycles, independent of the threat of motor vehicles at open road speeds and clear of possible pedestrian confrontation. In the vicinity of the University of Waikato there have been some road margins marked for cycle use, but this does little to address issues that cause cyclists and pedestrians great concern - particularly at intersections. The Hamilton City Council has created a cycle link from the University of Waikato to the central city.\(^8\)

Progress has been made in the formalisation of cycle movement on campus. There is scope for greater provision; and this is intended.

\(^8\) Hamilton’s Strategic Plan 2002-2012 (Draft), Strategic Plan Goals; Strategic Area B, Growing Hamilton, Project 44; Construction of on-road cycle facilities at various locations throughout the city; recent example.
0.2.4.7 Development of Cycle Areas

STRATEGY Features that are to be recognised in campus development to improve provisions made for cycles are:

1. Nominated entrances to the site.
2. Segregated routes if possible, where cycles generally are given priority and right of way.
3. Focused cycle parking areas.

0.2.4.8 Motorcycles

Motor cycle parking areas are marked as such, but not at Gate signs on the surrounding streets. It is intended that first time visitors or unfamiliar users of the campus, on motor cycles, park in Gate 1 or Gate 10 parking areas. Familiar users will find dedicated motor cycle parking off Gate 7.

STRATEGY Motor cyclists are treated as road users on campus, and the only segregation is at entrances to motor cycle parking area, to exclude cars. Motor cycles are not permitted on cycle or pedestrian areas.

0.2.5 DESIGN

0.2.5.1 Design Guidelines

STRATEGY Design guidelines are provided in various University of Waikato documents that have been developed over time. These documents provide the basis for appropriate design of the University of Waikato campus, and are to be met in design of campus buildings and associated features.

Existing documents are:

1. University of Waikato Standard Brief to Architects and Building Consultants (revised at least annually).
0.2.5.2 Identity and Image

The University of Waikato image is related to impressions gained from the campus, generally as the campus is used, but also as it is seen.

STRATEGY The built environment issues important to the University of Waikato in support of its image are:

1. presence without grandeur
2. dignity
3. order
4. multifocal
5. co-ordinated

STRATEGY There is a need for campus users to identify readily with the foci of the campus.

Building fronts (as this relates to the presentation of the building to users, and to main entry points and wayfinding for visitors) are to be located to suit orientation to the campus walkways where possible.

0.2.5.3 Building Expression

The first buildings on the campus were based on the initial campus development plan and associated model. This resulted in buildings of a similar style. At about the same time, the School of Education (Hamilton Teachers College) was being developed, in a different style. Since then, the changing nature of the university, changing technology, new building materials and construction methods, changing skills and funding constraints make previous models less relevant. There is now a wider range of building forms, with common elements in most, but also with variations. This range reflects changes which have taken place in building styles over 30 years.

STRATEGY To maintain harmony on campus, building expression is to be constrained to a defined range.
Features of building expression include colours, materials, form and detail. These are physical campus features that are seen and felt, are remembered, and are photographed. The most significant manifestation of this is the view of the Block M Library across the lake from Knighton Road. As a guide to design, reference is made to dark red window frames, green roof colour and cream exposed aggregate spandrel panels. These are representative of the science block style, and this is the basis for the design framework. It is intended that ongoing building development styles be based on existing styles, with an emphasis on the whole rather than parts, and on general quality, rather than isolated gems.

0.2.5.4 Building Services

STRATEGY There is a potential for building services to be seen as visual clutter. This effect is to be minimised where possible, by concealment, uniformity or by gathering them into a few defined localities.

0.2.5.5 Building Scale and Height

The University of Waikato campus is located on relatively high ground, and is visible from many parts of the city and surrounding countryside. The outline of buildings is significant, as is the general form of buildings and arrangement of major elements.

STRATEGY The co-ordination of major elements on campus is important, and expression of building elements repeated elsewhere is preferable to developing new elements (where there is no other specific need).

Hamilton City Council development rules restrict building height near boundaries of the site where there is residential development adjacent.

STRATEGY Height restriction, as an inclined height limit plane rising away from the boundary, are to be observed where it applies. Similar limits are preferred to other site boundaries, in keeping with the general character of the locality, except where other considerations overrule.

0.2.5.6 Soil Conditions

Underlying soil conditions on campus are such that heavier buildings are more suited to the Hillcrest Road ridge. The surrounding flat area to the west (Knighton Road) is generally soft, and to the east (Silverdale Road) it is generally soft and overlying a gravel layer.
0.2.5.7 Noise

The University of Waikato campus is an area where quietness is valued. It is conducive to learning, study and research. This is so in the Academic precinct and especially by Block M, the Library. This value should be reflected in the segregation of activities that generate uncontrolled noise and selection of plant and machinery.

0.2.5.8 Designing for the Future

Provision within educational buildings for teaching and future research technology is a significant challenge for physical planners and designers. Campus development has met, and must continue to meet, this changing need over time.

STRATEGY The future can only be guessed. Design processes must include consideration of the following:

1. uncertainty
2. flexibility to allow for continuous and rapidly changing need
3. flexibility to allow for cost effective refurbishment
4. the advantages of a "loose fit"

0.2.5.9 Design for a Multicultural Population

STRATEGY The style and form of campus development is to be designed to enhance empathy and acceptance by the wide range of cultures existing in the campus population. Features that alienate in any context are to be avoided.

Physical campus development has been supplemented by carvings at focal points, especially entrances. Provision of such artworks and cultural signatures is best considered at the design concept stage, and included “in the round”, to avoid discordance and facadism. Such an approach is encouraged.

0.2.5.10 Interests and Customs

STRATEGY The University of Waikato has been established as an institution that caters for the multicultural needs of students; academically, socially and culturally. There is scope for this to develop further with involvement of their respective communities over time in focal points with cultural significance, and establishing other features to cover the range of ethnic, religious and cultural backgrounds that are involved in the university community, either directly or indirectly.
0.2.5.11 Recognition of Contributions

Recent changes to University funding have placed a greater emphasis on the relationship between the University and business community. This is often by means of research commissions, by students being supported in their final year of study under a bond or studentship, but can also be as sponsorship, endowment and other gifts. Development on campus may need to be staged or fragmented to make use of funding opportunities. There may need to be recognisable features in recognition of such contributions made by others. This does not require development freedom outside of the site development plan, but may require a sensitivity to the balance of University versus business community values.

0.2.5.12 Endowed Facilities

While the University of Waikato is actively seeking private donations funding significant buildings and provision needs to be made in planning the campus for endowment of facilities and features that this might be expected to involve.

**STRATEGY**

The University of Waikato will generally wish to recognise the existence and value of any endowments made. This may involve naming the facility, and expression and identification of it as discrete element of the campus. For buildings and parts thereof, this differentiation is expected to be within overall design guidelines for campus buildings.

0.2.5.13 Sports, Leisure and Recreational Facilities

University sports, leisure and recreational facilities are provided at various locations on the campus. This is a result of development over time, with changing circumstances. Use of such facilities is encouraged if facilities are clearly visible, attractive and located at student focal points on main pedestrian routes and not at a distance from regularly used academic and catering facilities. This is not unlike the shopkeeper’s requirement; on a main road with an attractive and visible frontage.

**STRATEGY**

Sports, leisure and recreational facilities are to be clearly visible, attractive and located at student focal points.

Failure to do so can render their ongoing operation uneconomic. Such facilities are often used by students in association with vehicular transport. Location and access should reflect this.
0.2.6 LANDSCAPING

0.2.6.1 Initial Development

Campus development has included both soft and hard landscaping features. Over the years soft landscaping has developed to the point where the initial open farmland and orchard character is all but forgotten. Trees and lakes, while being features that were only established after the site was taken over for university purposes, are now regarded as a critical feature of the campus, and are a major factor in the beauty of the University of Waikato environment.

STRATEGY Careful management of the landscape is required to enhance or at least maintain its beauty.

STRATEGY Development of larger scale and more formal landscaping features in some areas is now appropriate.

Care has been taken over recent years to establish planting in areas where no new construction is foreseen. Eventually, however, there are some trees which will have to be sacrificed to allow for further campus development as necessary.

0.2.6.2 Lakes

The campus lakes are artificial and were created by excavation during 1967-1972. Excavated material was used to create raised land forms adjacent, to relieve what was at that stage a featureless area. They have become a major feature of the campus.

STRATEGY The lakes and their immediate surroundings are a special place, as a sanctuary from the more lively built environment beyond, and are to be maintained as such.

In addition to their landscaping and aesthetic attributes, they convey the storm water discharge to the public drains. In doing this they provide a degree of surge control and generally slow the discharge rate.

0.2.6.3 Sports Fields

The sports fields are well maintained and are used by the university and community in general.
0.2.6.4  Open Views

Hamilton City Council development rules restrict development at the northwest sector of the site (by the corner of Ruakura Road/Knighton Road), to preserve the open space character of the campus. Refer to the Hamilton City Council Major Facilities Zone Rule 4.7.6 f) i).

**STRATEGY** Limit the development at Ruakura Road/Knighton Road corner, to preserve views of the campus as a city amenity.

0.2.6.5  Open Space Amenity

**STRATEGY** More could be done to develop identifiable landscape and paved areas in the immediate vicinity of the schools.

There have been few areas developed as enclosed outdoor people spaces (for example courtyards with a people or pedestrian focus, such as the School of Law courtyard). It is proposed to allow for specific areas in association with the schools of study for outdoor activities.

0.2.6.6  Paving and Furniture

**STRATEGY** Hard landscaping is at a stage of development where consolidation, formality and enhancement is appropriate.

Recent paved areas rumbled cobbles, 190 mm x 230 mm, and 80 mm thick, except that where there is no truck access they are 60 mm thick. Where there are no conflicting requirements this is the preferred material, for consistency and to allow for relatively convenient access to underground services.

For narrow paths in more remote areas on site, subject to very light pedestrian traffic, an asphaltic concrete surface has been used. This has proved suitable for such applications.

0.2.6.7  Security

The green landscape is greatly appreciated by students, staff and visitors. Some planting, however, conceals buildings from visitors, obscures significant or desirable sight lines of campus features and views of the surrounding city, makes signage and night lighting difficult and creates maintenance problems. It can also provide opportunities for concealment adjacent to Campus Walkways and other main pedestrian areas (particularly undesirable when they are frequently used at night). This has a significant effect on personal security.
**STRATEGY**

The campus is a man-made landscaped area, and requires careful ongoing management to maintain the appearance of natural growth without the security conflicts that uncontrolled growth would create.

**0.2.6.8 Botanical Selection**

There is a stand of kahikatea by Block MS5. This is believed to be a remnant of the original natural vegetation of the district. It is being maintained by flooding of the roots with storm water.

A fernery is being established in the vicinity of Block C (west, on the slope). This special collection is to be preserved.

**STRATEGY**

The selection of trees and major shrubs which have some particular botanical interest is an important priority.

**0.2.7 SITE SERVICES**

Continuing development of the campus precipitates development of a site services infrastructure. Development to date has involved routes with buried underground services and the progressive development of a computer cable duct system.

**0.2.7.1 Major Service Ducts**

**STRATEGY**

The campus does not have the intensity of services that necessitates major accessible underground services ducts, although this is starting to change as building development intensifies. The opportunity is to be taken to develop such systems in association with future projects.

**0.2.7.2 Alternative Supply**

**STRATEGY**

The main water, electricity and gas site services are generally configured in a ring main or equivalent format, to allow alternative or reverse feed during planned and emergency disruption to supply. This concept is to be enhanced as site services are developed.

**0.2.7.3 Future Development**

Controlled development of the campus allows supporting services to be planned and established in advance, especially to suit an intensively developed core area. Conversely building development can be controlled within the capacity of the services.
STRATEGY

Further future development sites need to be identified which can be economically and sensibly provided with services.

0.2.7.4

Water

The site water supply pipes to the central area are configured in a ring main format, to allow reverse feed during planned and emergency disruption to supply. This is to be extended as water supply pipes are upgraded or developed to the whole campus.

0.2.7.5

Surface Water

Surface water drainage to upper parts of the site is generally well established. The exceptions are a few short sections of pipe that have proved unable to cope with extremes. These drains discharge on the west into the campus stormwater detention lakes, then into the Hamilton City Council drainage network along Knighton Road.

The east side of the campus has a similar pattern of drainage, but discharge is directly into an open drain managed by the Hamilton City Council, part of which has been landscaped by the University.

0.2.7.6

Foul Water

Foul water drainage is generally by gravity to the Hamilton City Council drainage system, with pumping stations where necessary. This includes drainage from the laboratories, after initial dilution, neutralisation or other pre-treatment.

Two Hamilton City Council sewer lines cross the campus taking waste from east to west. Both have the potential to cause problems on campus and are regularly monitored.

0.2.7.7

Electric Power

The main underground supply cables are configured in a ring main format, to allow alternative feed during planned and emergency disruption to supply. This is to be extended as supply is upgraded or developed to include all parts of the campus.
There are three 110 kV overhead power transmission lines in the north corner of the campus, and they will impact on the
development in that area. A zone 14 metres to each side of the transmission line is identified as probably subject to some
limitations of height, as a result of proximity to the lines, to be confirmed when detailed proposals are being prepared
(clearances in accordance with NZECP 34).

The electromagnetic field strength has been measured on the site and is well below the National Radiation Laboratory
guidelines for electromagnetic field strength limit, as recommended by the National Radiation Laboratory for 24 hours per
day exposure.

**0.2.7.8 Lighting**

Street and area lighting is a significant feature of the campus at night, both aesthetically and related to security. The
lighting has been developed with night pedestrian routes in mind, and to provide a degree of security in main car park
areas and service yards.

**0.2.7.9 Gas**

The campus is supplied with natural gas from the Natural Gas Corporation mains in perimeter streets. There are several
points of supply to the campus, each separately metered.

**0.2.7.10 Telephone**

The telephone system was originally established by the New Zealand Post Office, with ducts and cable drawing
chambers to suit incoming mains. This has been developed further, with integration of telephone and computer cabling
by the University's Information and Technology Services Division. There is no longer a separate telephone cable or
ducting system.

**0.2.7.11 Data/computer**
The data cabling system has developed on campus over a short period of time. It is generally campus wide, and in the form of uPVC ducts between buildings, based on original telephone ducts and chambers. The technological changes that have occurred (for example from copper to fibre optic cables) have resulted in upgrading at relatively frequent intervals. This is expected to be the future pattern. Provision of adequate ducting is vital to providing flexibility for such changing requirements.

0.2.7.12 Fire Alarms and Associated Fire Panels

**STRATEGY**

Routes have been identified as fire appliance access, to allow for fire appliance access around campus. They are to be maintained as accessible to fire appliances unless alternative provisions are made to allow access to affected areas.

The location of fire alarm panels is subject to negotiation with the New Zealand Fire Service. This is established on a project by project basis, with systems being of a stand alone style.

0.2.7.13 Discharges to Air and Disposal of Hazardous Substances

The activities of the university necessarily require the storage of hazardous substances, generates fumes that are discharged by fume cupboard exhausts and other hazardous waste and similar unavoidable risks. Such activities and procedures are carried out under existing legislation and protocols appropriate for university research laboratories, and are not covered by this site Development Plan.

0.2.8 LEASED LAND

0.2.8.1 Tainui Maaori Trust

The land on which the University of Waikato is sited was previously a research farm associated with the Ruakura Agricultural Research Centre. The land was owned by the Crown, and upon establishment of the University of Waikato it was designated for the University of Waikato and Hamilton Teachers College. With the 1996 Waikato Raupatu Claims between the New Zealand Government and the Tainui people, the ownership of the site was passed to the Tainui Maaori Trust and then leased to Tainui Development Limited. The University of Waikato is a sub-lessee of the land, and this is anticipated by both parties to be a long term tenure.

0.2.8.2 Other Properties Leased by the University of Waikato
The Site Development Plan excludes properties that may from time to time be leased by the University of Waikato.

0.2.8.3 Properties Subleased to Others

Where land is subject to a lease, there may be legal requirements for the land to be set aside in separate title. This is the case for land that is subject to a lease (or sublease) of twenty years or more, where a separate subdivision of the land and associated Resource Management Act provisions apply. Provision for separate titles is beyond the scope of this site development document.

Refer to the following drawing, showing the areas subleased by the University of Waikato to others. Buildings or parts of buildings (as distinct from land) that are subleased are not separately noted in this document.

0.2.8.4 Bryant Hall

The Bryant Hall student residential area was established during the initial phase of campus development, on a part of the site set aside in a lease with the University of Waikato. This area is managed by the Bryant Hall Trust Board, with general building and planning standards as though the area was part of the University of Waikato.

0.2.8.5 National Institute of Water and Atmospheric Research Limited and Landcare Research NZ Limited

These two Crown Research Institutes occupy campus land under a sublease from the university in the joint facilities precinct of the campus.

The sublease agreements allow for the general building and planning standards in the sublease areas to be managed as though the area was part of the University of Waikato.

1 National Institute of Water and Atmospheric Research Limited
   The research and administration building was established by the Department of Industrial and Scientific Research as a Water Quality Centre, also on a part of the site leased from the University of Waikato.

2 Landcare Research NZ Limited
   Occupied their new building in January 1999.
0.2.8.6 Te Kura Kaupapa Maori O Toku Mapihi Maurea

Te Kura Kaupapa Maori O Toku Mapihi Maurea was established on the University of Waikato campus in 1995. The land is set aside for a period of 10 years for this purpose, or until such time that the land is required for specific University of Waikato purposes.

0.2.8.7 Facilities Management Division

The Facilities Management Division occupies a purpose built building leased from Tainui Development Corporation. The land is subject to a separate sublease and title.
DRAWING 4: LAND LEASED FROM THE UNIVERSITY OF WAIKATO

- Land subject to sublease
- Boundary of site
1.1 DESCRIPTION

This precinct is the core area of the university. The academic function is fundamental to the university, with all other areas being in support of this core activity. This area has three parts: the Central area, where academic activity is established, the Development area, where there is less intensive development and less formal establishment, and the Future area, where recreation use will continue until this area is required for development.

The inclusion of the future Academic Area represents a significant change in the extent and shape of the academic area, the patterns of use and distribution of functions. There are no formal proposals to build specific buildings within this area at this stage, but it is important to recognise the form that development is expected to take so that the future inclusion of this area will follow naturally. This will be recognised in any infrastructure development and also in any projects adjacent to this area. Until such time as the Future Academic area is required to allow building projects to precede, the use is to be as a Sports Fields Recreation area.

The precinct activity is intense and becomes the natural focus for associated support and social functions. While the precincts generally segregate conflicting uses, there will be some overlap, as indicated in the Social Precinct where it is noted that some functions will be dispersed. Similarly the Academic Precinct may contain residential uses such as a cluster of serviced apartments located discretely within the precinct.

1.1.1 CENTRAL ACADEMIC AREA

The concept for the next phase of campus development is an extension of the academic precinct northwards. The area identified for the extended area includes the north west sloping bank;

- north of Block M,
- west of Block TA, and
- half of the cricket “oval”.

The northern demarcation of the area is at the north end of the School of Education. The area’s western boundary is the planted knoll north of the lakes.

1.1.1.1 Pedestrians
Pedestrian routes on campus are focused on the west-east walkway.

The main link from this walkway to the extended area is north from Block L lower foyer, at a low part of the campus, so that the height difference (between the access and the lowest ground level) is minimised. It also relates more positively to student activity by the lake and shops.

There are several pedestrian focus areas and these are generally on the main pedestrian routes. The area by Block L/S lecture theatres and Block M Library is the main focus, and it is important to relate this to pedestrian routes to the new academic area. The other pedestrian focus area to be recognised is by the shops/lake.

It is appropriate to create a focus in the new academic area, with enclosure by buildings and related to the sports fields.

It is also proposed that in the longer term, as the development in the Future Academic area is established, a focus of activity be provided north of Block B by the Gateway, adjacent to a pedestrian link to the extended area. This area would be suitable for formal outdoor university activities.

The initial stage of the car parking area north of the lakes (Precinct 7c) has been developed with Gate 2b vehicle access. There is a proposed walkway to link this car park to paths around the lakes, for pedestrian access to the rest of the campus.

1.1.1.2 Vehicles:
Existing gates, buildings and contours restrict road access to the extended academic area. The objective is to provide reasonably easy access to all buildings.

Access is provided from Precinct 7c (the Gate 2b car park), through the landscaped knoll. This will provide the easiest and most convenient access. Extended access from Gate 3 south along the bottom edge of the bank will provide access to further parking in the vicinity.

Access from Gate 5 at present creates problems, with traffic noise and pedestrian conflict. Extending this access route will exacerbate the problem. It is proposed to reduce the dependence on Gate 5 and not increase it.
1.1.3 Form:
The form of building is envisaged as low-medium rise, suitable for natural ventilation and lighting (this places constraint on the width of the building form). Heights may vary from about two/three stories by the lakes, to minimise intrusion on the natural landscape, rising to about five or six stories where rising ground contours reduce effective height to about three floors (access mainly by stairs is still viable).

It is preferable that the shapes of buildings provide positively formed spaces between buildings.

1.2 DESIGN

1.2.1 BUILDING

The university campus was initially developed in the style of the science blocks, as was proposed in the 1966 Site Development Plan. This had been suitable for initial buildings, but with increasing variation in the form of buildings there has been an associated need for variation in expression. The science buildings also have their critics. While they are successful when viewed as distant landscape elements, they are generally unfriendly close up. The same can be said for the Library, with its strong and somewhat brutal exterior concrete louvres.

The campus design must build on the successful features, and over time replace the shortcomings.

It is not necessary to prescribe the expression of buildings on campus to maintain a feeling of coherence and unity. Building styles are not predefined in this development plan, but must reflect some of the desirable characteristics of existing buildings to achieve this:

1. strong horizontal bands
2. vertical stair tower panels
3. cream colourings
4. solid construction
5. course ribbed finishes

There is expected to be contrast, highlights and interest in building design, but without the variations overriding the sense of coherence. It is not intended that any specific building will dominate the campus with a strong style, however important the project is at the time of design.
The School of Education buildings are also relevant to the overall campus character. They are a significant portion of the building stock, although they are not of the same style as other buildings. It is anticipated that over time they will be blended in with the rest of the campus, as opportunities arise.

The colours and materials used for the buildings on campus have been guided by a limited colour palette, as set out in the previous site development plan. The range of colours has been reviewed recently in a separate document. Reference to this colour guideline document is necessary to achieve the intended style and appearance of development on the campus, with a view to unifying building shapes that have developed on the campus over time to meet the varying needs. Note that there is a preference for natural finishes with low maintenance requirements.

1.2.1.1 Central Timetabled Facilities:
STRATEGY
Future centrally timetabled facilities are to be central and close to existing main lecture facilities. Walking distances are to be generally limited to five minutes between extreme locations.

1.2.1.2 Science:
STRATEGY
The School of Science buildings are to form a cohesive streetscape with the other buildings on the west of Hillcrest Road.

1.2.1.3 Block B:
STRATEGY
A formal entry from Hillcrest Road to the front of Block B is to be emphasised by landscaping.

1.2.1.4 Covered Ways:
STRATEGY
The development of further covered links is to be provided (or at least considered at the design stage) for any new development.

1.2.1.5 Parking:
STRATEGY
Parking (except the area in front of Block B) is only to be provided in the Academic Precinct as opportunity exists, and is subject to review for building or pedestrian use.
2

PRECINCT 2
SOCIAL

2.1
DESCRIPTION

This precinct covers the welfare, culture and sport, and commercial functions that are centralised on the campus, but may also serve the wider local community. This does not preclude some of these functions also being dispersed around the campus, where centralisation is not appropriate.

2.1.1
USE

2.1.1.1 Welfare:
Welfare services include medical and health services (including counselling), chaplaincy and other student support services.

2.1.1.2 Culture and Sport:
Culture and sport facilities are limited to those that benefit from proximity to the student focus and main car parking, but do not have a conflicting scale. They also add to the vitality of the Social Precinct, and benefit commercially oriented activities; a growing trend.

2.1.1.3 Commercial:
Commercial activity is necessary on campus for the convenience of staff and students, who are constrained on campus during most of the day and cannot easily get to local shops in nearby suburbs. With changes to retailing hours, this is changing the needs on campus; this change is expected to continue. Such commercial activity is not subsidised by the University of Waikato, and is dependent on the development of the campus to maintain commercial viability, especially related to pedestrian flow and exposure. The shops may also serve the wider local community, but only so far as this is secondary to serving the campus, and not directly competing with other retailing nearby.⁹

⁹ Hamilton City Proposed District Plan, November 2001, Major Facilities Zone, Performance outcomes 4.7.6 b) ii);...grouped away from street frontages of the site to facilitate the concept of a campus and to minimise potential conflicts at the periphery of the site.
2.1.4 Catering:
There are catering facilities located on campus in student facilities area in Oranga, the Student Union Building, Block TC.1, The Station Café and the East Side Cafe. These are areas of campus most heavily used during lunch breaks. The dispersed nature of these catering facilities is necessary, and to continue.

2.1.5 Childcare Facilities:
The University of Waikato is committed to providing of facilities for children directly associated with the needs of the university community. Campus Crèche and Te Kohanga Reo o Nga Kuaka have both been established on the campus in buildings that had previously been residential. Changes have been made and new buildings provided on an ad hoc basis to allow for the special needs of children and supervisory staff. As a consequence siting issues which might be appropriate for the long term have not been addressed.

The safe delivery and collection of children is important, with associated parking requirements. This requires easy car access, security of a defined area and associated outdoor space. Easy pedestrian access from the Academic Central precinct is an advantage. Locating these facilities in the Social Precinct would be appropriate, although a change is not expected without a more detailed consideration, especially relating to area requirements and establishment costs. The relocation of Campus Crèche to allow more intensive development on Hillcrest Road east is a long term objective, although there is no time frame set for this.
3 PRECINCT 3
RESIDENTIAL

3.1 DESCRIPTION
The University is committed to providing a good standard of residential accommodation on or near the campus for as many students as possible. However, capital costs and running costs are two key elements. The student accommodation revenue will bear a very close relationship to the market for student accommodation prevailing in the private sector in Hamilton. Supervised traditional hall of residence accommodation is clearly more expensive than a place in a flat in Hamilton East, and students will express their preferences very quickly according to economic conditions. The University must allow for sites to enable the establishment of further halls of residence or alternative types of accommodation but cannot afford to have a significant surplus. This market is very much demand driven.

Halls of Residence are not simply a means of accommodating students living away from home; they aim to provide more than board and lodging. There are distinct advantages to be gained by students living in a situation where interests may be shared, where interchange of ideas is stimulated and where the process of education includes an experience of community life. Social development, while not formally addressed, is significant for many first year students.

3.1.1 EXTENT
The University of Waikato has four areas of student accommodation on the main campus (Student Village, Bryant Hall, Orchard Park and College Halls). While there is provision for a limited degree of expansion of each of these areas, there are no additional areas on campus set aside for further residential developments. Growth can be met in the longer term by redevelopment of Orchard Park in a higher density, and vacant land between the existing Orchard Park buildings and Te Kohanga Reo o Nga Kuaka.

3.1.1.1 Pedestrian Routes:
STRATEGY Paths that pass close to individual student accommodation bedroom units are of greatest concern, and not to be subject to heavy use.

3.1.1.2 Traffic Routes:
STRATEGY Residents vehicular traffic is to be isolated from main campus traffic, as is the case for pedestrian movement.
4 PRECINCT 4
JOINT FACILITIES

4.1 DESCRIPTION
Government policy for the research funding make it necessary for the University of Waikato to maintain a flexible approach to applied research opportunities. To provide this flexibility a precinct for joint venture facilities, located on the periphery of the campus, has been included in the campus development plan. This precinct provides an area on campus, connected to the University services as necessary, and linked into campus pedestrian and vehicular circulation routes.

The key to the presence on site of any joint venture development is the academic connection; the need for co-operation with the University teaching and research activities.

It is desirable (although not essential) for joint venture facilities to be close to their respective academic research areas; distance has a significant adverse effect on effective dialogue and interaction. However locating these facilities in the Academic precinct would result in a conflict of priorities over the use of space in this already congested precinct.

The development of the joint venture facilities in the precinct set aside primarily for them will avoid such conflict while maintaining reasonable closeness. There are special needs for joint venture facilities relating to identity, vehicle access, security of tenure etc for the partner that cannot be met in a more central area.

The area for Joint Facilities is made up of three defined areas (lots). Two are presently built on, by NIWA and Landcare Research, and the third is for future development (known as Lot 3).

4.2 DESIGN
4.2.1 BUILDING
Buildings similar in scale to the NIWA buildings are anticipated, although height may be increased to three levels reflecting limitations on site area and development pressure. Height must be limited adjacent to the boundary to recognise the character of adjacent residential development, consistent with standards specified within the operative planning ordinances rules for the Hamilton city.

The University retains the right to approve design and construction details of joint venture partner's proposals, and to insist on compliance with items such as campus signage and design standards as applicable. Developments are to be self supporting as far as landscaping and delivery/waste disposal are concerned, although it may be preferable to share the use of parking areas (this has not been the case to date, by agreement).

4.2.2 LANDSCAPING
In general, the perimeter of the campus is landscaped to provide a buffer to adjoining residential properties, and to provide a managed street frontage. This precinct is to be developed in the same manner.

4.2.2.1 Pedestrian Routes:
Campus pedestrian routes are to extend seamlessly to the Joint Facilities Precinct, reflecting the positive link to the joint venture partner in the use of this precinct and the university campus. There should be no significant differences of style, wayfinding or personal security related features, to the rest of the campus.
5 PRECINCT 5
RECREATION

5.1 DESCRIPTION

The campus is a pleasant natural environment, fostered by the quality of the soft landscaping. This has been recognised by the University in its commitment to the development and maintenance of the lakes and recreation areas devoted to soft landscaping in the Recreation Precinct, in addition to landscaping within other precincts.

5.1.1 EXTENT

It is recognised that the campus has had a large amount of open space within its campus boundary. This was a natural consequence of developing a new campus to allow a "land bank" which would be developed as needs dictated. The area is reducing with time, and especially more recently in the east part of the campus. There is, however, a commitment to retaining recreation facilities on campus that are necessary for balanced development within a large community, and including open sports areas.

Three areas of existing playing field have been set aside for development. The areas have easy access to the rest of the campus and surrounding public roads. Their development does not jeopardise the present long vistas across open campus. They are the north area, developed for the Facilities Management Division; the area on Knighton Road, for car future parking, and the cricket pitch oval, for future academic development.

5.1.2 Protected Features:

There is a need to protect features that are particularly sensitive to development. These features, primarily soft landscaping features, are given Protected Features status to ensure their survival is not jeopardised. It is intended to retain the character of these features, although the detail will inevitably change over time with both natural growth of vegetation and other minor changes. There will inevitably be conflicting demands by users of the campus. Any changes should be made with great care.
**STRATEGY**

The features regarded as having sufficient merit to be worthy of protection, and hence not available for any development, are:

1. The three lakes, including the landscaped areas at the edge of each lake.
2. The knoll with its tree planting, within the sports fields and north of the lakes.
3. The heavily planted area between the Gate 1 Carpark and Block I/Block J/Block LAIN.
4. The two areas of kahikatea trees to the east of MS6 and MS8.
5. The fernery between Block R and the grounds maintenance area.
6. The east Recreation area, and including the memorial plantings.

These areas are designated on the plan "Protected Features". It is noted however that there will be a limited need for access through these areas as the campus develops.

**5.1.2.1 Storm Water:**

Storm Water: Lake water quality is sensitive to the impact of the storm water disposal and changes to storm water system are to be carefully considered with this in mind.
DRAWING 5: PROTECTED FEATURES
6  PRECINCT 6
SUPPORT

6.1  DESCRIPTION
This precinct is for facilities that support or service teaching and academic functions on campus, or the wider area of the University of Waikato activity off campus.

6.1.1  EXTENT
There is one area where a Support Precinct has been defined. The Facilities Management area has been recently established at the north end of the campus. The site is located north of the Pavilion/tennis courts (and including Te Timatanga Hou), at the Silverdale Road/Ruakura Road intersection. It has been developed by Tainui Development Limited and the building is leased to the University of Waikato.

The grounds maintenance area includes minor buildings and a yard, in an area where there is no immediate need to review priorities for land use; however this is not expected to last forever, and this grounds maintenance area has been included in the Academic Precinct.
7  PRECINCT 7  
PARKING

7.1  DESCRIPTION
The University of Waikato provides access and car parking for campus users. Provision of such facilities is a requirement of the Territorial Authority, and is to be met within the overall campus development, although the requirement by the authority is related to specific building projects. Such parking, although a Territorial Authority requirement for general campus use, is private parking in the sense that control is by the University of Waikato to suit its needs.

The car parking precincts are those main areas where car parking is predominant. There are other smaller parking areas on campus, and it is not intended that these be disestablished merely because they are not in the Parking Precinct. However it is proposed to reduce the number of spaces in central campus areas over time, while increasing peripheral parking to cater for increasing demand. This increase will initially, but not exclusively, be in the Gate 10 Carpark, and to the north of the lakes in the Gate 2b carpark.

7.1.1  EXTENT
There are two main student car parking areas, identified as Precincts 7a and 7b. These areas are the Gate 1 carpark and the Gate 10 carpark respectively. There is also a car parking area in Precinct 7c, the Gate 2b carpark, established at the same time as the WEL Energy Trust Academy of Performing Arts and with a direct and obvious link to Knighton Road. This is particularly suitable for infrequent campus users at night, in association with the WEL Energy Trust Academy of Performing Arts.

There are three other future areas of parking to the north, each identified as Precinct 7d. Two are the development of the Gates 3a and 3b carpark areas, and the third is a new central area with access from Gate 2b to be associated with the Future Academic area.

There are also smaller areas of car parking associated with specific buildings (eg Block B) or clusters of buildings (eg Blocks C, D, E and F).
8 PRECINCT 8 EXCLUDED AREAS

8.1 DESCRIPTION
This precinct defines the parts of the university campus that are not within the scope of the Site Development Plan. Note that areas beyond the Hillcrest campus are also excluded from the Site Development Plan.

8.1.1 EXTENT
There are two such areas at present. They are excluded as a result of differences in scale and function, their independence of management and ownership.

8.1.1.1 Scotland Place Flats:
The University of Waikato owns a block of eight one bedroom flats in Scotland Place, which are available for rental by graduate students. These are on land zoned Residential, subject to Territorial Authority control, and are outside the scope of the site development plan.

8.1.1.2 Silverdale Road Residences:
The University of Waikato owns a group of five self contained houses on Silverdale Road, which are rented by staff and students. These are on land zoned Residential, subject to Territorial Authority control, and are outside the scope of the site development plan.
CONCLUSIONS

Implementation of the 1966 Development Plan has established a campus of unique character with a quality of buildings and landscape worthy of the University of Waikato. The 1966 Development Plan has served the University well, and many of its concepts should continue to guide the campus development in the long term.

Much of the success of the campus development so far can be attributed to the resolute implementation of the intentions of the plan in the initial development, combined with sensitive interpretation of its specific provisions to suit the University’s developing culture and resources. This has resulted in a cohesive campus development within which refinement and maturing will continue.

The 1966 Development Plan was in the form of specific prescriptions for the design of landscape and buildings. This was subsequently replaced by a precinct development plan.

The objective of this review has been to re-state the development plan in a way which will enable it to continue to serve the University for the next period. It identifies those aspects of the completed landscape and buildings which give the campus its unique character and quality. These have been documented as intentions which can be progressively interpreted in terms of current values and resources to extend and enhance the established character of the campus.

To ensure that this review document remains relevant, it is envisaged that it will be supplemented over time with specific focus studies to also guide development. Together they will form the basis for the briefing and evaluation of project proposals.
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