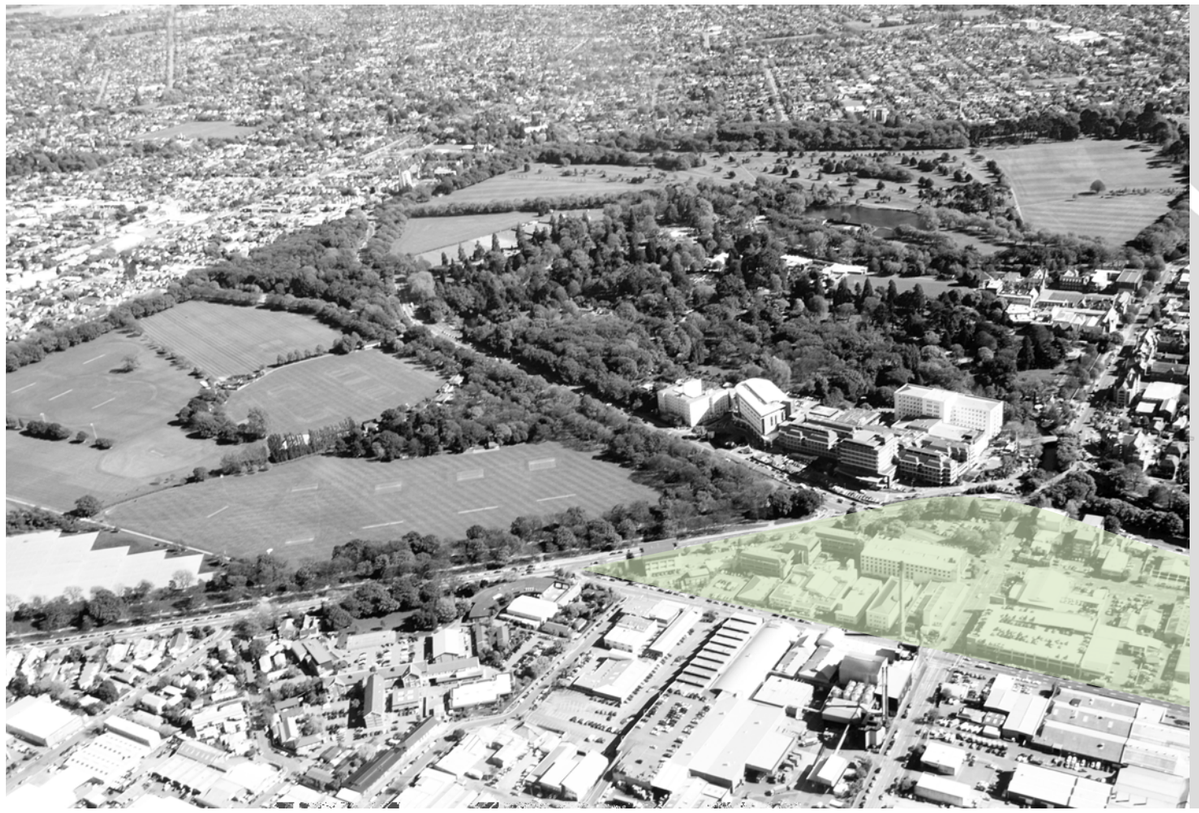

CHRISTCHURCH HEALTH PRECINCT MASTER PLANNING ADVICE

Christchurch Health Precinct Master Planning Advice
MAY 2013

BVN Donovan Hill

Jasmax

CERA Canterbury Earthquake Recovery Authority

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The Health Precinct is the hub of a creative and inspiring network that integrates world-class healthcare, research and innovation, education and industry with a strong emphasis on population health. It will accelerate economic growth, act as a magnet for talent and promote community wellbeing.
- Vision statement, stakeholder workshop, December 2013

The Canterbury health system is characterised by strong relationships, interconnected services and shared delivery aspirations across public, private and non-government organisations, underpinned by one of the busiest tertiary hospitals in Australasia. The building blocks for a world-class Health Precinct are already present in Christchurch. The synergies created by co-location will have the potential to further enhance the development of educational, research and investment opportunities.

This document presents the advice provided to the stakeholders of the Health Precinct (Canterbury District Health Board (CDHB), Canterbury Earthquake Recovery Authority (CERA), CPIT, University of Canterbury and University of Otago) in May 2013. The master planning process assumed a blank canvas and allowed us to imagine how the Precinct could look, unconstrained by existing buildings. During this process we adopted a ‘green fields approach’, proposed specific sites for certain uses and added high amenity areas to respond to the public’s request for a green and more vibrant, pedestrian/cyclist friendly city. The results of this process are provided here as a record of these aspirations and design concepts. From that point, we have worked steadily towards identifying specific features of the built environment that will enhance existing and future partnerships. For this reason, current plans for the Precinct have evolved from this master planning advice to reflect a blend of aspiration and practicality. The updated concept for the Precinct is in the Appendix.

The Health Precinct stakeholders have made great progress and we are pleased to see the private sector progressing their own development plans. The Health Precinct will benefit Christchurch and is seen as a key development in enhancing and strengthening the health system and its workforce now and into the future. The Health Precinct will also boost the economy, and bring benefits not only to Christchurch but also more widely to Canterbury and New Zealand.

We are excited by, and committed to taking advantage of the opportunity that exists in Christchurch to create a true ‘health precinct’. We see this as a place where associated, complementary and ancillary activities and services that support the delivery and development of the health system sit alongside our redeveloped hospital and a new combined research and education hub. With our collaborative focus and common goal, we will create a world-leading health precinct.

Warwick Isaacs
Director, Christchurch Central Development Unit

CONTENTS

1.0 INTRODUCTION

1.1 The Health Precinct Vision

"The Health Precinct is a creative and inspiring campus that integrates world class health care, industry services, research and education. It will accelerate economic growth and inner city renewal. It is a place where people will want to work and socialise."
14 November 2012

1.2 The Purpose of the Master Planning Advice

The Canterbury Earthquake Recovery Authority (CERA) has established the Christchurch Central Development Unit to deliver the Christchurch Central Recovery Plan that was approved by the Minister for Canterbury Earthquake Recovery on 30 July 2012. The Christchurch Central Recovery Plan calls for a world-class Health Precinct that will play a leading role in catalysing the recovery of the central city, including related private sector investment. The Health Precinct is broadly defined as the area bounded by Hagley Avenue, St Asaph Street, Montreal Street and Oxford Terrace, and has had three of the four blocks of land designated as part of the Christchurch Central Recovery Plan.

The Health Precinct is to provide a precinct focused on medical, health and education near the main Christchurch Hospital, and more effectively link the health system with industry to commercialise health technology products and services. It is proposed that this area will bring together parties in medical, nursing and allied health research, health sciences, tertiary and postgraduate education and research, and business innovation.

In this inspirational project, hospital facilities, private research and professional partners, educational and medi-hotel facilities will be within walking distance of the main hospital site, the amenities and services of the new central city, the related health and wellbeing functions of the Metro Sports Facility, Te Papa Ōtākaro/Avon River Precinct, and Hagley Park. It has the potential to be a world class facility for learning and teaching in health care including nursing, medicine and allied health. It is designed to play a vital role in accelerating the economic growth of the inner city, greater Christchurch and the region.

1.3 Project Governance

A Leadership Executive and a Steering Group were developed for the governance of the Health Precinct Master Planning project. Both groups have met regularly during the process.

Members of these groups are:

Canterbury Earthquake Recovery Authority

Canterbury District Health Board (CDHB)

University of Otago

University of Canterbury

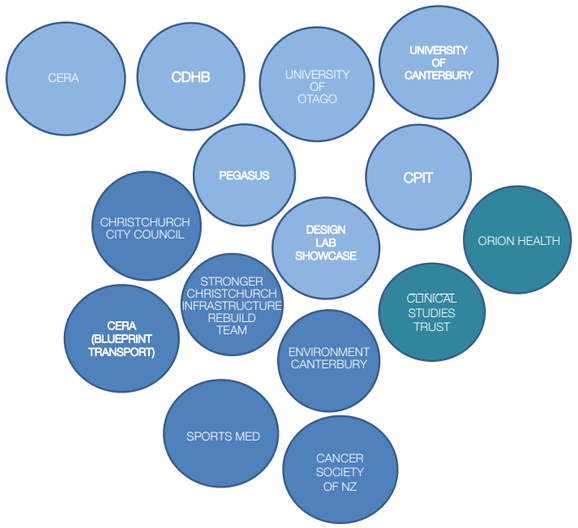
Christchurch Polytechnic Institute of Technology (CPIT)

Cancer Society of NZ

Health IT Sector

1.4 Project Stakeholders

Discussions were held with the following key stakeholders in the Christchurch Health Precinct to develop the masterplan.



1.5 Project Client and Consultant Team

CERA

BVN Donovan Hill

Jasmax

MA International

Aurecon

Rider Levett Bucknall

Impact

Deloitte

MacDonald Consultancy

Studio Nield

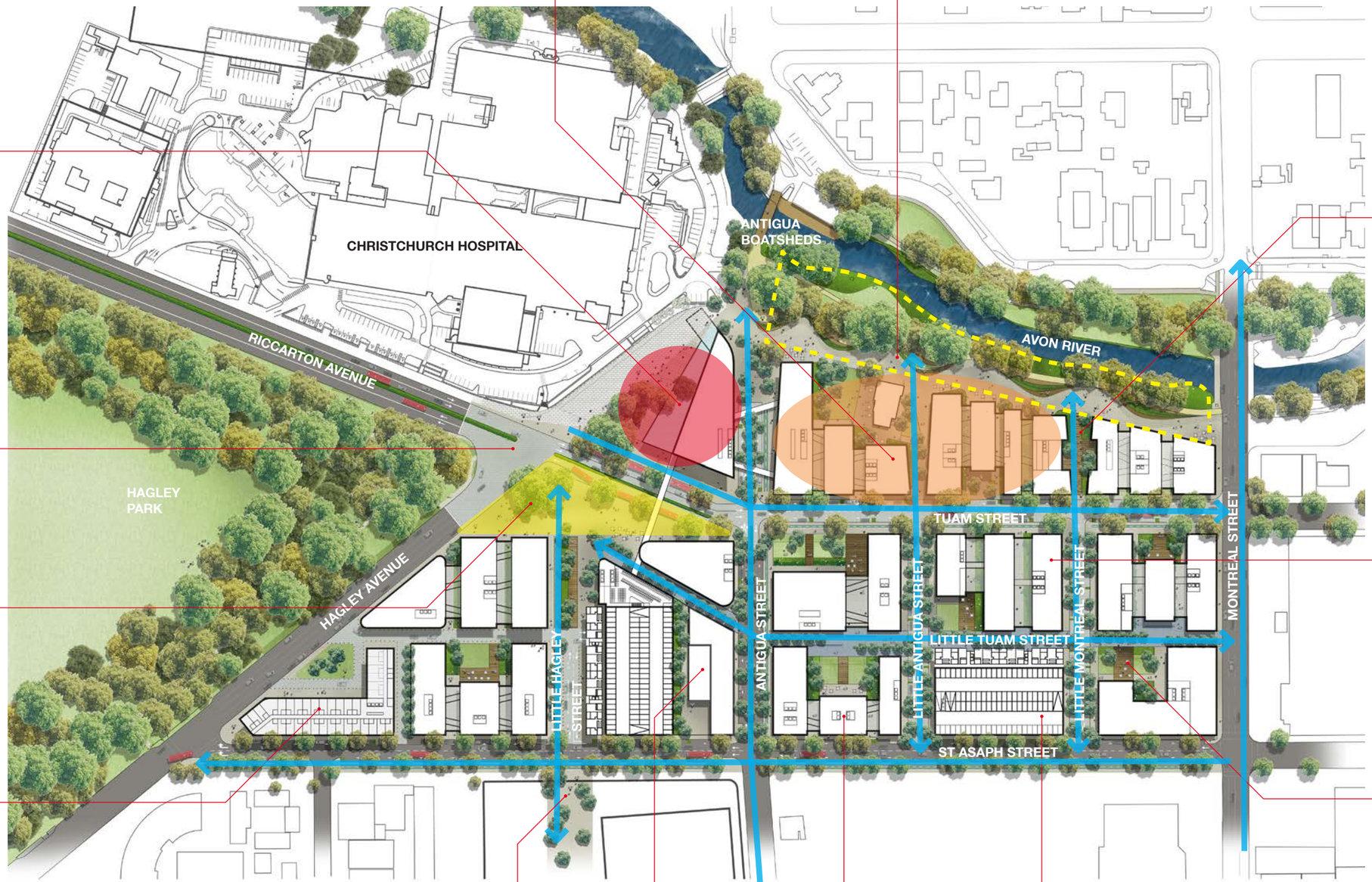
ICONIC ACADEMIC FACILITIES ANCHOR THE HEALTH PRECINCT ALONG THE RIVERFRONT – CREATING THE OPPORTUNITY FOR NEW COLLABORATIVE TEACHING MODELS, HOUSED IN A HEALTH PRECINCT TO RIVAL THE GREAT ACADEMIC CLUSTERS ELSEWHERE IN THE WORLD.

VITAL AND EXCITING URBAN ENVIRONMENT – NEW NORTH-FACING RECREATIONAL AND SOCIAL HUB WILL BE CREATED ALONG THE RIVER, ANCHORED BY THE HISTORIC PEGASUS ARMS.

THE HEALTH PRECINCT WILL PLAY A CENTRAL ROLE IN THE WELLNESS OF THE CITY AND WIDER COMMUNITY. PUBLIC ENGAGEMENT IN HEALTH WILL BE A KEY ENDEAVOUR. EMBEDDED WITHIN THE AMBULATORY/ OUTPATIENTS ZONE. THE HEALTH INFORMATION CENTRE WILL BE THE FOCUS OF THIS ASPIRATION – IT WILL BE THE HUB FOR THE HEALTH PRECINCT, AND SERVE AS A RECEPTION FOR THE PUBLIC.

NEW NORTH–SOUTH STREETS AND LANES PROMOTE THE ENGAGEMENT WITH THE THE RIVER AND FACILITATE COLLABORATION AND CONNECTION IN THE HEALTH PRECINCT.

NEW TRAFFIC-CALMED INTERSECTION – TO IMPROVE ACCESS AND FLOWS FOR PEDESTRIANS, BUSES AND CYCLISTS.



A FINER GRAIN OF BUILDINGS ON A HUMAN SCALE, JOINED BY A NETWORK OF NEW STREETS AND LANEWAYS. CONSISTING OF APPROXIMATELY 19% OF THE SITE, THIS NETWORK WILL FORM A NEW PUBLIC REALM. THE PATHS AND SPACES WILL OFFER BOTH SAFETY AND AMENITY TO PEDESTRIANS.

WESTERN GATEWAY INTO CITY – BUILDINGS ARE SET BACK TO CREATE A NORTHERN PUBLIC PLAZA INTEGRATED WITH THE NEW PUBLIC TRANSPORT SUPER STOPS, AND TO ENHANCE THE CONNECTION BETWEEN HAGLEY PARK AND THE HEALTH PRECINCT.

HOTELS AND RESIDENTIAL OFFERINGS IN THE HEALTH PRECINCT COMPLEMENT THE HIGH-QUALITY COMMERCIAL AND INSTITUTIONAL PROGRAMMES, TO CREATE A VITAL AND SAFE PLACE WITH ROUND-THE-CLOCK ACTIVITY.

RAINGARDENS AND PERMEABLE PAVING ARE PROPOSED WITHIN THE STREET NETWORK TO FILTER AND PURIFY RUNOFF INTO THE STORMWATER SYSTEMS.

MAXIMISE PHYSICAL AND ECONOMIC SYNERGIES AND LINKAGES WITH METRO SPORTS FACILITY THROUGH NEW CONNECTION BETWEEN THE SITES.

SHARED ‘GREEN’ POWER GENERATION AND SUPPLY FOR THE HEALTH PRECINCT AND SURROUNDING DEVELOPMENTS.

SIGNIFICANT AREA ZONED FOR PRIVATE STAKEHOLDERS – PROMOTING HEALTH INNOVATION AND TECHNOLOGY, TOWARDS ECONOMIC GROWTH.

CENTRALISED CAR PARKING PROMOTES ACTIVE STREET FRONTAGES ON COMMERCIAL SITES.

BVN Donovan Hill

CHRISTCHURCH HEALTH PRECINCT MASTER PLAN PROPOSAL NOT TO SCALE

2.0 EXECUTIVE SUMMARY

With potential for over 150,000m^2 of new and existing built area across 72,000m^2 of land, the Health Precinct can play a leading role in catalysing the recovery of the central city.

- The Christchurch Health Precinct has been **shaped by the input and keen interest of a range of stakeholders**. The Canterbury District Health Board (CDHB), the University of Otago, the University of Canterbury and CPIT are the primary institutional anchors for the Health Precinct. In addition, there is significant interest from the private sector, including health related information technology and sports medicine companies. With these organisations in place from the outset, aligned organisations will follow their lead.

- The Master Planning Advice of the Health Precinct is underpinned by extensive stakeholder engagement, is designed with a clear understanding of the economic opportunities available, and has the opportunity for **generating significant economic activity**. Biomedical and clinical research, health sciences education, health-related information technology and sports medicine treatment and research will be generated by a range of private, academic and government organisations.

- **At the heart of the Health Precinct is an iconic academic health science facility** based on collaboration between the University of Otago, University of Canterbury, CPIT and the Learning and Development component of the CDHB. It will enhance and extend existing research and teaching capabilities of the individual organisations, as well as create the opportunity for new collaborative teaching models, housed in a Health Precinct to rival the great academic clusters elsewhere in the world.

- The Health Precinct will play a central role in the wellness of the city and wider community, and **public engagement in health** will be a key endeavour. Embedded within the Ambulatory/ Outpatients Zone, the **Health Information Zone** will be the focus of this aspiration – it will be the hub for the Health Precinct, and serve as a reception for the public. The CDHB's Ambulatory/Outpatients Zone is the pivotal component linking the hospital campus with the Health Precinct.

- The Health Precinct will **foster collaboration across various sectors** through its design. Organisations are connected via a network of intricate linking spaces, both on ground and above ground. In this way, they can share amenities, which encourages fertile exchanges and a multi-disciplinary approach to teaching and research. A proposed governance model will be developed to facilitate this collaboration.

- The Health Precinct also seeks to **maximise synergies and linkages with other new developments** in Christchurch – the Metro Sports Facility and Convention Centre Precinct and Te Papa Ōtākaro/Avon River Precinct. This will do so through physical links and connections, through shared research and business opportunities and through future programmes that build on the opportunities developed in the precincts.

- The Health Precinct will form the western gateway into the city centre. A tree-lined boulevard opening into a new urban square will welcome visitors to central Christchurch. It will be a **vital and exciting urban environment** with a pedestrian and cyclist zone and calmed traffic. Buildings are set back to create a northern public plaza integrated with the new public transport super stops, and to enhance the connection between Hagley Park and the Health Precinct. A new north-facing recreational and social hub will be created along the river, anchored by the historic Pegasus Arms.

- The urban design of the Health Precinct places the pedestrian experience as the main priority – **urban design focused on wellness**. Active street frontages characterise the Health Precinct, and car parking is centralised. The Health Precinct is interspersed with a variety of public spaces and green zones, as places of respite for the local community. A public transport node is integrated into the central plaza, further adding to the amenity of the Health Precinct. Multiple modes of transport will be balanced; transport routes within the Health Precinct will be on shared zones within a high-quality public realm. Hotels and residential offerings in the Health Precinct complement the exceptional commercial and institutional programmes, to create a vital and safe place with round-the-clock activity.

- The Health Precinct will be an opportunity to **showcase sound, sustainable urban design**. Shared 'green' power generation is being considered both within the Health Precinct and with adjoining developments, and increased areas of green space have been provided. Raingardens and permeable paving are proposed within the street network to filter and purify runoff into the stormwater systems, while inert building materials will be specified that prohibit deposit of heavy metals into the stormwater system. There is also a focus on sustainable forms of transport with priority given to pedestrians, cyclists and buses.

- The proposal is for **finer-grained and comprehensive development with new public realm**. Consisting of approximately 19 per cent of the site, a network of new streets and laneways will form a new public realm. The paths and spaces between buildings of a human scale will offer both safety and amenity to pedestrians. The resulting urban form is permeable, and comfortable to navigate. The urban design links the rest of the Health Precinct with the incomparable amenity of the Ōtākaro/Avon riverfront, and strengthens existing desire lines as well as creating new paths to the river. It will provide a high level of public amenity and enhance links to the Ōtākaro/Avon River. The density of the buildings will be planned to maximise the number of sites available and create a critical mass to support activity. The result will be a place of intensity, an exciting Health Precinct that will be an inspiration to those who occupy it as well to the national and international community.

The Health Precinct Master Planning Advice seeks to align the strategic vision of the Christchurch Central Recovery Plan with a new urban framework that will enrich much more than the built environment.

CHRISTCHURCH HEALTH PRECINCT MASTERPLAN PROPOSAL AERIAL VIEW

3.0 NATIONAL, REGIONAL AND SOCIAL ECONOMIC CONTEXT

Health Precinct concept
The Precinct concept is to develop a strong cluster of mutually supporting activities that builds out from the existing Christchurch Hospital and the University of Otago Medical School. Activities on the site will include a range of medical, allied health, technology, biomedical and supporting services including accommodation, as well as retail activities.

The proposal is in line with the Academic Health Science Centre model which has been disseminated across the developed world over the past decade.

The model usually involves collaboration between a medical school and its associated teaching hospitals, who integrate their shared goals of clinical service, education and research. When research institutes and private research and development organisations are co-located, partnerships and synergies flourish.

The Health Precinct Master Planning Advice recognises the significant economic and social value of Christchurch Hospital. It aims to use the Government's $500 million investment as a springboard to facilitate health, allied business and urban revitalisation into the Precinct.

The Precinct is strongly positioned to take advantage of the current institutions, advanced infrastructure and proximity to the city centre. Through developing a leading cluster of health, education and research activity, it has the potential for growth and development in integrated health education and translating medical research into clinical practice. The improved health outcomes that result will then bring substantial economic benefits for greater Christchurch.

The Health Precinct Master Planning Advice seeks both economic and social benefits for:

- the greater Christchurch community – by providing more effective evidence-based health services
- industry and enterprise – through economic returns on intellectual property, job creation, product development and commercialisation, and the flow-on attraction of funds, talent and industry
- the research, education and health care community in greater Christchurch – by increasing the opportunities for world-class, integrated health teaching and translational research and development.

Health sector
As noted by the Canterbury Development Corporation, Christchurch is the lead health hub for the South Island, providing a full range of medical services. The health sector contributes significantly to the region's economy as an employer, but also in terms of its growth into education and medical research and development, and its attraction of highly qualified human capital.

The health sector in Christchurch:

- contributes approximately $1.33 billion to Christchurch in gross domestic product (GDP) (Infometrics' Estimate annual average 2010/2011, current prices, "Health and Communication Services")
- accounts for around 9 per cent of the GDP in Christchurch
- comprises around 1,600 business units (2011, Health only, StatsNZ)
- has around 15,800 employees (2011, Health only, StatsNZ).

Sector involvement
Collaboration to drive innovation within the Precinct is vital to its ongoing status as a world-class biomedical precinct. It is also essential if the Precinct is to deliver major health, social and economic benefits for the region and New Zealand.

Already a variety of sectors such as health information technology companies and sports medicine have indicated a high level of interest in the Precinct. Once established as an education, training and services hub for the health sector, the Precinct can be expected to attract medical diagnostics, biotechnology, medical imaging and potentially pharmaceutical industries.

- Research and education

  The large base of research and development organisations in Canterbury give the region a strong focus on lifelong learning and a head start in the knowledge economy.

  The clustering of research in the Health Precinct will both keep that research activity in Christchurch and enhance it by increasing the opportunities for collaboration with other organisations on site.

  Another important advantage is that the Health Precinct is expected to cluster the education of doctors, nurses, enrolled nurses and other health specialist training, providing a more integrated approach to education.

- Health information technology

  The health information technology (IT) sector is a large component in the success of New Zealand's high-performing IT sector. According to New Zealand Trade and Enterprise (NZTE) data:

  - OECD rankings (2010 data) put New Zealand first in the developed world for quality of care. Per capita costs in New Zealand are lower than other comparable countries such as the United Kingdom, Canada and Australia, and are just one-third of the cost in the United States. OECD notes this intersection of quality and cost-efficiency is the setting for new generation health technology development.

  - New Zealand's innovative health technology solutions have been at the forefront of addressing global health care challenges. It has a particular expertise in health IT, with solutions that work across the continuum of care from hospitals and community clinics to telemedicine and home care. New Zealand is a world leader in health informatics and is well known for its expertise in medical technologies, which are developed at the convergence of life sciences, technology and engineering disciplines. New Zealand has been able to leverage strengths in biological and medical sciences, niche manufacturing, information technology and the development of specialised electronics, to get the most from this cross-over.

- Biotechnology

  This research environment has helped the region to become a New Zealand leader in software development, biotechnology and numerous high technology manufacturing industries.

  Christchurch is New Zealand's second largest region for technology business.

- Medical devices

  The medical device industry is an emerging sector reliant on innovation to help commercialise improvements in health care technologies with potential to add high value. IBIS World Industry Report (31 March 2009) reported a domestic market of $6 billion and exports of $1.6 billion with a growth estimated at 5.6 per cent per annum.

- Short-term accommodation – 'medi-hotel' and serviced apartments

  Part of the vision and opportunity of the Precinct is to provide a hotel-style (low–medium cost) accommodation for family members and carers, non-acute patients needing accommodation prior to outpatient or day surgery, and patients receiving repeat treatments over a number of days who are not assigned a hospital bed. This accommodation would be supplemented by traditional hotel beds for the commercial market.

  The specialist facilities previously developed near Christchurch Hospital by Ronald McDonald House and the Bone Marrow Cancer Trust have proven that there is strong demand for this type of accommodation. Given that the new accommodation will be available for more general use and located in or close to the Health Precinct, it is expected to be well supported.

Economic opportunity
The Precinct is expected to be a major driver for jobs and urban renewal identified in the Christchurch Central Recovery Plan. The Health Precinct will provide opportunities to expand the local health sector, which will in turn stimulate urban revitalisation and public realm improvements.

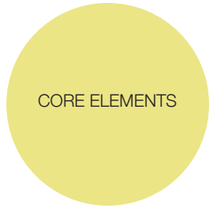
The Health Precinct Master Planning Advice has identified there is at least 150,000m^2 gross floor area (GFA) available in the precinct. Of this total, interest has already been indicated in 71,000m^2 of GFA, along with another 25,000m^2 GFA of car parking required for private operation. That amounts to a GFA of 96,000m^2 with a capital expenditure of over $200 million over the next five years.

Public organisations (ie CDHB, CPIT, the University of Otago and the University of Canterbury) are likely to either own or lease about 59 per cent of the 96,000m^2 earmarked so far. Another 15 per cent may be used by private investors affiliated with the health industry, and 26 per cent by a private car parking operation.

Summary

Function and capacity	• Expansion of the hospital site • Health, education, research and innovation Hub • Structured parking for up to 1,000 cars • 300 hotel beds (medi and standard) • 90 serviced apartments (studio, 1 and 2 bed)
Proximity and associations	• Christchurch Hospital • Metro Sports Facility • City centre – retail and commercial • Convention Centre Precinct • Public transport super stops • Bus Interchange • Hagley Park • Ōtākaro/Avon River
Approximate areas	• Clinical, treatment, research, teaching, laboratory, medi-hotel, serviced apartment space
Sector Involvement	• Health information technology • Biotechnology • Medical devices • Medi-hotel • Sports medicine
Commercial opportunities	• Serviced accommodation • Retail • Hospitality
Approximate areas	• Site area: 72,000m^2 • Up to 71,000m^2 GFA current indicated interest, excluding car parking (59% public, 15% private investor, 26% private car parking operation) • 150,000m^2 GFA potential total development capacity • Capital expenditure of over $200m over the next 5 years
Interested organisations	• CDHB • University of Otago • University of Canterbury • CPIT • Orion Health • Pegasus • McKesson • Chiptech • Incisive Medical Systems • ARANZ Medical • Toniq Ltd • SportsMed • Epilepsy NZ • Canterbury Business Solutions • CSC iSoft

4.0 STRATEGIC DRIVERS / OBJECTIVES



1. Core elements of the Health Precinct

The Health Precinct will provide a medical, health and education focused precinct near the main Christchurch Hospital, and more effectively link the health system with industry to commercialise health technology products and services. It will bring together parties in medical, nursing and allied health research; health sciences, tertiary and postgraduate education and research; and business innovation in this area.

It will include:

- knowledge campus
- research campus
- health innovation hub
- medi-hotel
- private and public health care.

2. Create a world-leading health, education and innovation hub

The Health Precinct will be a world-class facility for learning and teaching in health care including nursing, medicine and allied health. It will prepare future students, researchers and innovators to be break-through thinkers and doers. It will create a vibrant professional community that others will want to join. It will also be a source of city pride with a reputation and brand for serious innovation, ‘clever, joined-up thinking’, and collaborative mindsets.

It is an inspirational project in which hospital facilities, private research and professional partners, educational and medi-hotel facilities will be within walking distance of the main hospital site, the amenities and services of the new central city, the Convention Centre Precinct, and the related health and wellbeing functions of the Metro Sports Facility, Te Papa Ōtākaro/Avon River Precinct, and Hagley Park.

3. Use health, education and innovation design thinking to inspire multi-disciplinary teams

The Health Precinct is dedicated to the spread of health education and innovation design thinking and the application of its principles to real-world problems. It is an opportunity to provide an environment to bring together specialists, educators, innovators, scientists, programmers, students, researchers, engineers and many more.

4. Foster radical collaboration between providers, students, faculty and industry

Collaboration is the currency of innovation, and many new ideas lie at the intersections of disciplines. The Health Precinct should provide an environment for teams to work together to tackle big projects and use prototyping to discover new solutions. It should be a home for innovative ideas, for creative thought and for cross-disciplinary discussion and research.

5. Make the Health Precinct Autonomous and Self-Sustaining in Achieving its Vision

The combined size and potential of health related organisations (such as Christchurch Hospital, the University of Otago, the University of Canterbury, CPIT and many private sector groups) makes this sector a powerful engine of economic recovery and growth for the city of Christchurch and the South Island.

The new forms of collaboration and innovation developed as part of the response to the earthquakes have created the conditions necessary to deliver a new model for health and education. Coupled with the special powers of central Government this has created a new environment, and it is incumbent on all stakeholders to maximize this opportunity.

6. Linked spatially and economically with the new central city

A key objective of the Christchurch Central Recovery Plan is to ensure the Health Precinct is integrally linked, both spatially and economically, with the new central city.

There is also both a need and an opportunity to create a physical and virtual network that connects to the other precincts – for instance sport, innovation and conventions – and to make both social and public contributions to the city. Most importantly, a vibrant Health Precinct can potentially benefit the city's economy by capturing capital investment and generating national and international interest in the region.

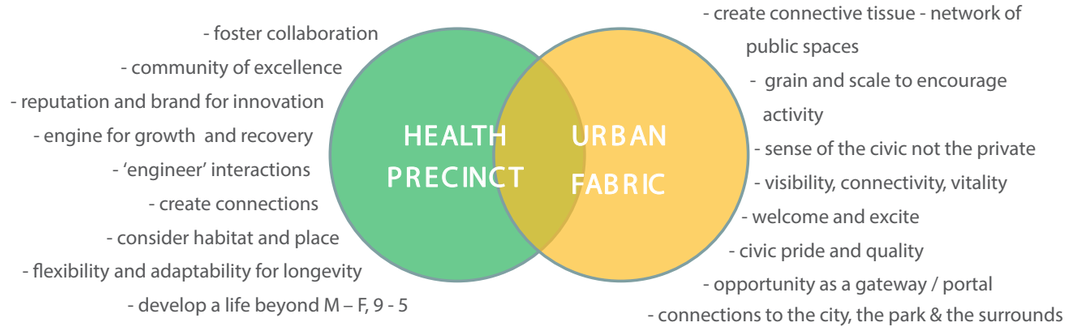
7. Creating place

As well as being a permeable environment, with boundaries that are visible and accessible, the Health Precinct should link back into the city. Edges should reach out to the public domain and share spaces, offer facilities and give back to the life and culture of the CBD.

The design of the Health Precinct should foster a strong sense of a community, with an emphasis on spaces that enable collaboration and communication. This kind of continuous environment encourages informal learning and sharing of ideas. It enables occupants and participants to develop, learn and research together, to socialise, to eat and to relax – to give life, activity and extended operation to the urban realm.

8. Sustainability

Sustainable communities embody sustainable development principles to enhance and integrate the goals of ecological restoration, economic development, cultural recognition and social equity, both now and in the future. The Health Precinct Master Planning Advice provides the ideal opportunity to introduce new sustainable practices and should enhance the socio-cultural experience of the community. Centralised and green energy, water quality and re-use, building orientation and public amenity in parks and urban spaces should be considered.



5.0 STRATEGIC BRIEF

5.1 SUMMARY

This strategic brief of the Health Precinct presents bold concepts, founded on the opportunity for participants to develop a new operating paradigm of cooperation, collaboration and trust.

A zonal model (rather than an institute model) is proposed for the precinct.

The following are key components of the zonal model:

- The CDHB will develop a purpose built, world-class Ambulatory/Outpatients Zone linking the hospital campus with the rest of the Precinct. Embedded in this zone is a Health Information Centre.
- Academic and teaching facilities will bring together, or cluster, the University of Otago, Christchurch, the University of Canterbury, the CPIT and the Learning and Development component of the CDHB. The goal is to create a cluster that can rival excellent academic clusters elsewhere in the world.
- A Technology and Innovation Zone will facilitate collaboration and show-case the innovation that has always characterised greater Christchurch.

5.2 PURPOSE

The strategic brief represents the outcomes of discussions between the Master Planning team and key stakeholders, including representatives of the current and prospective occupiers of the Health Precinct. It also draws on the experience of the Master Planning team in other countries and other contexts.

5.3 ACADEMIC HEALTH SCIENCE SYSTEMS / CENTRES

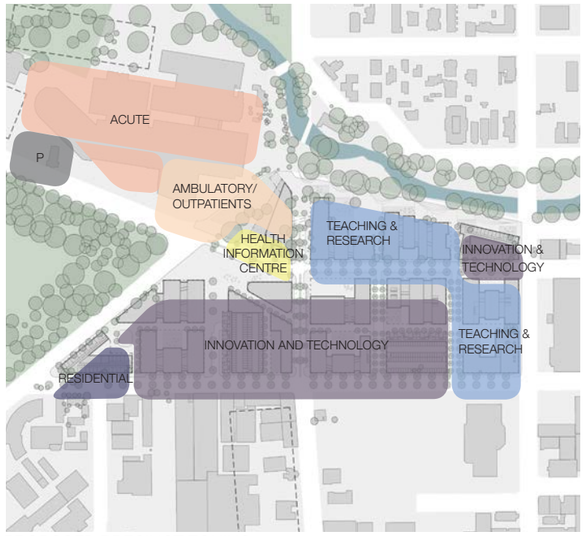
The Academic Health Science Centre (AHSC) model usually involves collaboration between a medical school and its associated teaching hospitals, who integrate their shared goals of clinical service, education and research. When research institutes and private research and development organisations are co-located, partnerships and synergies flourish.

In recent years the AHSC model has expanded to include partnerships with primary and public health institutes that extend beyond the physical boundaries of the health precinct. This latter model has been renamed the Academic Health Science System (AHSS).

In Australia, the National Health and Medical Research Council has proposed that an AHSS could:

- promote excellence in health and medical research where clinical care is provided
- encourage collaboration between researchers on these campuses
- encourage health centres to use research finding to improve clinical practice
- develop innovative models of care
- ensure efficient use of research facilities on the campus
- foster research training for health care professionals
- provide national leadership in excellence in research translation, to provide the whole health care system with flagship examples.

The emphasis on teaching and research is based on evidence from around the world that academic health centres provide care that is not only of high quality but also cost-effective.



PROPOSED PRECINCT ZONING

5.4 PLANNING MODELS FOR HEALTH PRECINCTS

Throughout the second half of the 20th century, hospital practice changed with the emergence of ambulatory care.

Over the last decade or so there are different models developing as a result of the evolution of ambulatory care and changing care. Hospital designers and planners have been debating two seemingly conflicting models for the design and layout of a hospital or health service campus. The two models are the institute and the zonal.

First, under the zonal model, the campus is divided into functional zones – such as an ambulatory/outpatients zone, inpatient zones, critical care zones, research zones – which are designed and located to specifically meet the requirements of the users of these services. This is the model thought to deliver more patient-focused care.

The institute model is the other model that features in recent debates. Here the full range of services are grouped around a particular sub-specialty or set of sub-specialties for a clinical programme. For example in a cardiac institute the inpatient beds, diagnostic facilities, coronary care unit, ambulatory clinic, research spaces, academic offices and teaching spaces etc for cardiac-related services would all be located on the same floor, or even in some cases, occupy an entire building. Critics of the institute model say that it encourages sub-specialties to become fiefdoms, separate from the corporate identity.

In reality, most health services finish up with a mixed model that combines elements of both these models.

With innovative design, using both horizontal and vertical integration, a health precinct can incorporate the best of both models.

For the Christchurch Health Precinct a zonal model is preferred. This reflects the reality of the advanced state of planning for the hospital campus and the physical layout of the proposed Health Precinct. The activities proposed for the Christchurch Health Precinct can be readily allocated to a number of zones. Importantly these zones do not necessarily identify existing or proposed ownership or even require such labels as hospital or university.

Possible zones could include:

- Acute Care
- Ambulatory/Outpatient Services
- Health Education and Information
- Diagnostics including Pathology and Imaging
- Teaching and Research
- Residential
- Inpatient
- Technology and Innovation.

These zones are demonstrated in the adjacent diagram. Consistent with the conceptual nature of this document, the diagram is illustrative rather than a technical blueprint. A brief description of each of these zones and some of the strategic and planning imperatives follows.

The Acute Care Zone
The Acute Care Zone is part of the main hospital development, in which the Master Planning team has not been involved. The team therefore acknowledges that the Acute Care Zone is included in this Master Planning Advice simply to help give the context for the linkages between the Health Precinct zonal model and the main hospital development.

Discussions with the CDHB indicate that the first component of the main hospital development will be the so-called ‘hot floors’, which will involve the Emergency Department, Intensive Care Unit and operating suites. Stage II will involve the further development of that block with four floors of acute wards.

These planned developments are logical and will result in a clearly demarcated Acute Care Zone on the north-west corner of the Christchurch Hospital campus. Although not lending itself to an institute model, this configuration does link well with the zonal model proposed by the Master Planning team.

The Ambulatory/Outpatients Zone
Ambulatory care is not just another term for outpatients. It embodies a new philosophy in which complex, sophisticated health services are provided in a setting orientated to the needs of the patients and consumers without requiring them to have an overnight stay.

Every branch and every discipline of clinical medicine has embraced these concepts.

In contrast to the traditional notion that a hospital is an austere tower block designed around the needs of people staying overnight, the hospital of the 21st century will have as its centrepiece the ambulatory care facility.

Ambulatory care has developed haphazardly in many hospitals, with various facilities being added to or built around ward blocks, or squeezed into existing outpatient facilities. Teaching, research and office spaces are usually inadequate.

With the development of the Health Precinct there is an opportunity for ambulatory care to take centre stage. It is logical for the Ambulatory/Outpatients Zone to link the existing hospital campus with the wider designated precinct.

The location of the Ambulatory/Outpatients Zone must be carefully considered in terms of access for both vehicles and pedestrians.

By definition patients, their families and carers will be coming to, and leaving, the Ambulatory/Outpatients Zone on the same day. Parking, drop-off points, bus stations, etc must therefore be planned as part of the Ambulatory/Outpatients Zone.

The Health Information Zone
Within the Ambulatory/Outpatients Zone there is potential for a Health Information Zone. This dedicated public interface would be a centre for health education activities, public lectures and meetings, a resource centre, health screening programmes, exercise classes and similar activities. This zone could also offer office and shop-front exposure for a large range of non-governmental organisations relocating to the Health Precinct and could offer the opportunity for Canterbury health technology to showcase its expertise. The zone could become the public face of the Health Precinct and the portal for community involvement.

However, decisions on the zone need to be made in conjunction with the overall CDHB health services plan, to ensure that services are well coordinated and cover the full continuum of care, with the patient at the centre. Specifically the decisions on the zone should consider linkages with primary care services. For example, the zone may be counterproductive to any objective to encourage patients to attend primary care services rather than hospital services.

Further analysis is required before including such a zone within the Ambulatory/Outpatients Zone.

The Diagnostic Zone - including Pathology
The pathology building is presently located outside Christchurch Hospital campus but within the Health Precinct. However in the long term, a more appropriate diagnostic and clinical support zone could be re-located within the main hospital campus. This zone could link the Acute Care and Ambulatory/Outpatients zones.

Many health systems have separated pathology from hospital campuses over the past 20 years based on the view that pathology is about machines and remote. However today this approach is seen as a mistake. Clinical pathologists are an integral part of the health care team. The emergence of molecular pathology, genetics and genomics has highlighted that automation is only a small part of an academic pathology service.

The preferred location of the Diagnostic Zone is to be determined in subsequent planning stages of the main hospital redevelopment.

The Teaching and Research Zone
There are three academic institutions involved in the Health Precinct:

- the University of Canterbury
- the University of Otago, Christchurch
- CPIT.

All three academic institutions are involved in teaching graduate and undergraduate programmes across a range of health disciplines as well as collaborating in various research centres and institutes. The CDHB (Learning and Development section) also has a significant teaching, training and learning requirement in order to support clinical education and practice simulation.

The University of Otago, Christchurch has a physical presence on the main hospital campus. The building has already had significant money spent on it to repair earthquake damage.

The CPIT and the University of Canterbury have both indicated a desire to have a presence in the Health Precinct.

The Master Planning team proposes that, instead of three independent facilities built according to need and available finances, a combined health sciences academic complex is developed with state-of-the-art teaching spaces, skills and simulation laboratories and common platform technologies. This complex can be the defining concept of the Health Precinct and should transcend the traditional model of independent buildings that have little if any interaction between occupants. The complex can still meet the goal of delivering a series of linked buildings with strong interconnections and centralised, shared facilities.

Management of the Health Precinct is an important consideration for the future growth of the Health Precinct. Getting the management right will create significant opportunities for the Health Precinct and the Canterbury region. However, the challenges are also significant and will include setting aside old rivalries and tensions. If the key stakeholders develop a management framework based on cooperation, collaboration and trust then the Health Precinct can become a world-class area where other health organisations, both public and private, want to be located.

Residential Zone
Medi-hotels have been identified as a desirable feature of the Health Precinct. The concept of a medi-hotel is very broad, ranging from a private hospital with hotel facilities to hotels adjacent to public hospitals. Further analysis of the requirements is needed. At first glance the options for a medi-hotel within or near the Health Precinct include:

- convalescence after inpatient stay
- an alternative to inpatient stay
- accommodation for patients who are frequent and protracted ambulatory treatment eg radiotherapy
- accommodation for the family and carers of inpatients
- patients who don't require hospitalisation but are from rural and district areas
- international patients and their families.

The concept can be expanded, probably in partnership with a private provider, to include international and academic visitors to the Precinct and temporary accommodation for new staff and conference delegates.

While the medi-hotels are identified within the Health Precinct, the proposed residential zones are dictated by the boundaries of the precinct. The significant redevelopment of greater Christchurch due to the earthquakes has created opportuities to develop medi-hotels and residential zones located close to the Health Precinct, which would not detract from the concept or the suggested options.

The Technology and Innovation Zone

Greater Christchurch has a remarkable track record in the discovery and development of health technologies and related ICT. It is proposed that a significant proportion of the Health Precinct is allocated to these activities.

Around the world, numerous technology and innovation zonal models have been developed and implemented. For example, the technology park or village model is common. In Christchurch a model implemented in the aftermath of the earthquakes encourages promising industries to become established.

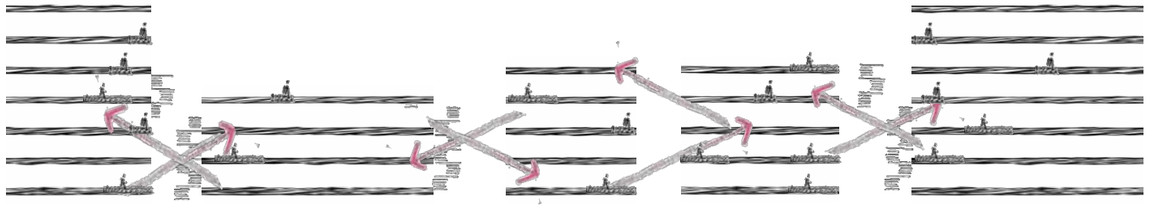
The Technology and Innovation Zone proposed within the Health Precinct will have the added advantage of being physically co-located with health service providers and researchers, from which competitive advantages follow.

One or two major players, particularly in the IT field, may decide on their own buildings and identity. However, this should not be seen as a deterrent to the zonal model. Rather any such investment could attract smaller players to co-locate within the proximity of the major player(s).

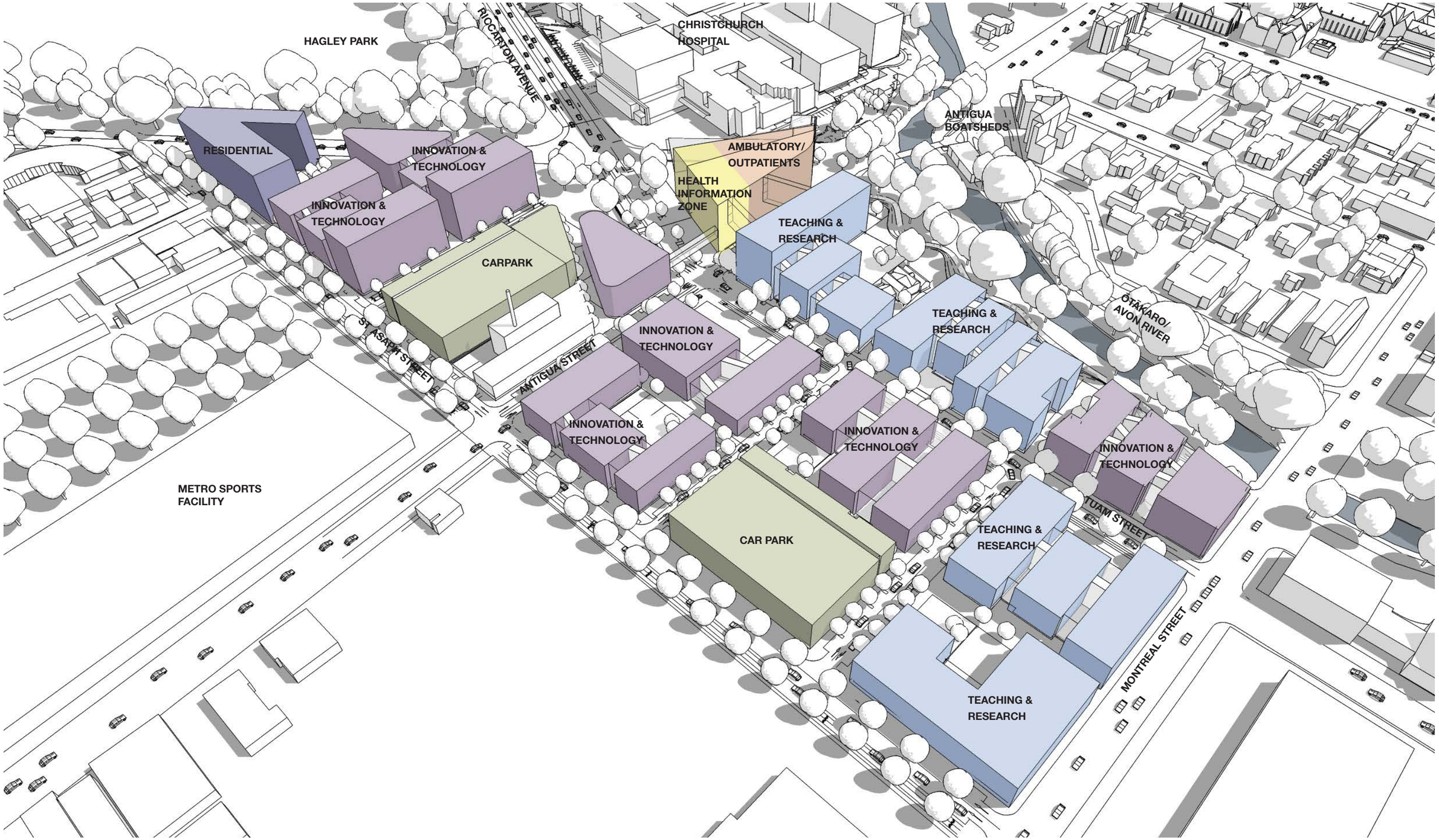
Some areas to develop and pursue are industries such as Medical Physics, Bio-mechanics, Medical Technology, Private Research (Clinical Trials Providers), Molecular Biology /Genetics/Genomics, Pharmaceutical, Sports Medicine and Private Imaging which have been shown in other health and research precincts to form important partnerships and synergies. As much as possible, a unifying concept should be considered to leverage opportunities, but should not be a disincentive for innovation. For example, limiting the technology and innovation to preferred sectors/industries could impact on the opportunities.

Showcasing the technology and innovation is a key part of the marketing and branding of the Health Precinct. A version of the CDHB Health Showcase and Design Lab to form a focal point to the precinct. A smaller version could be used as a finishing laboratory for design and innovation generated in the Technology and Innovation Zone.

The facility could also double as a mini conference centre for occupants in the Health Precinct and provide opportunities for the convention centre facilities, which are planned within walking distance of the Health Precinct, and facilities within the residential zones.



COLLABORATIVE MODEL - PAVILION STYLE DEVELOPMENT



CHRISTCHURCH HEALTH PRECINCT PROPOSED ZONING AERIAL VIEW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5.5 GOVERNANCE OF THE HEALTH PRECINCT

Governance is critical to the success of a precinct. Many well-intentioned precinct proposals fail because governance issues have not been addressed at an early stage. The Master Planning team has first-hand experience of precincts where governance issues have delayed and continue to delay development. For example, the development of an academic health precinct on the old Kai Tak airport site (Hong Kong – involving both medical schools and the Hospital Authority) has been delayed because of differences in the aspirations of the partners.

Examples of good governance structures assisting development include the Comprehensive Cancer Centre in Parkville, Melbourne and the Francis Crick Institute in London.

There are many options and interpretations of appropriate governance models for health precincts that involve complex interactions of hospitals, universities and research institutes – the Academic Health Science Centres. Sudden changes of location and operating frameworks (as a result of the earthquakes) present governance opportunities, including the opportunity to create a new operating paradigm and value proposition. But these changes can also constrain the development of a government model because it can take time to align the different needs and priorities and resolve traditional tensions.


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6.0 DESIGN PRINCIPLES

6.1 ESTABLISHING A CENTRE

The Ambulatory/Outpatients Zone will act as both a gateway to Christchurch city, and an identifiable centre that defines the Health Precinct and reflects its identity. It will be part urban square, part public plaza and part public building.

The Health Precinct will play a central role in the wellness of the city and wider community, and public engagement in health will be a key endeavour. Embedded within the Ambulatory/Outpatients Zone, the Health Information Centre will be the focus of this aspiration – it will be the hub for the Health Precinct, and serve as a reception for the public. Developed jointly with the CDHB, the world-class Ambulatory/Outpatients Zone is the pivotal component linking the hospital campus with the Health Precinct.

Its urban purpose is to inject activity and public amenity into the centre of the Health Precinct. It is to become a destination to which staff and visitors gravitate, a way-finding device and a landmark.

The central location mediates the dominating natural attractions and physical borders of the Health Precinct, Hagley Park and the Ōtākaro/Avon riverfront. It provides a forum to welcome and foster social and business interaction and offers amenities at the heart of the Health Precinct.

In addition, smaller-scale social and recreational hubs should be located at key areas around the Health Precinct to provide finer-grained amenity.

6.2 DRAWING THE PARKS IN

The site, especially the north-west corner, is located at the confluence of Te Papa Ōtākaro/Avon River Precinct, Hagley Park and the Christchurch Botanical Gardens. The aspiration for the green city as identified in the Christchurch Central Recovery Plan, extends the values of Te Papa Ōtākaro/Avon River Precinct, enables the Plan's vision for the South Frame and encourages a strategy to visually and physically link the physically separated parks and draw them into the campus. This link will be made by:

- blurring boundaries between Te Papa Ōtākaro/Avon River Precinct and the Health Precinct along the northern edge overlooking the river and encouraging complementary activities such as hospitality, recreation and circulation in the former Oxford Terrace area
- drawing an informal arrangement of native plantings in a north-south alignment through the campus
- providing generous view shafts and pedestrian linkages that emphasise the Precinct's connections with Te Papa Ōtākaro/Avon River Precinct
- treating the northern half of the campus, between Tuam Street and Te Papa Ōtākaro/Avon River Precinct, as a soft parkland with hard spaces and building platforms cut out to accommodate development and circulation
- best-practice Low Impact Development treatment of stormwater on site before it is released into the Ōtākaro/Avon River system
- setting back the building alignment to open the vista to Hagley Park – drawing a more formal arrangement of exotic street trees through from Hagley Park in an east–west direction into the city and forming a central city gateway.

6.3 PERMEABLE PRECINCT

For this urban precinct at the edge of the city's centre, the Master Planning Advice proposes that there are no boundaries, fences and formal gateways that may be found in a more traditional 'campus' environment.
The Health Precinct should have an urban character, with buildings up to the street edge. It has a responsibility to contribute to both the physical and cultural life of the city.

This principle also allows the philosophies of the Health Precinct as an innovative and educational environment to be reflected in its built environment.

Aspiring graduates, researchers, academics, clinicians, programmers and innovators look forward to a working career based on diversity and integration, free of borders. The Health Precinct has the opportunity to offer a built fabric that reinforces these fundamental principles.

The Health Precinct is designed with the pedestrian experience as a main priority. Numerous streets, lanes, connections and building entries are located across the site, creating an accessible network in which people can move between buildings at a ground level. It will also offer an easy route in and out of the city.

6.4 CREATING A FINER GRAIN

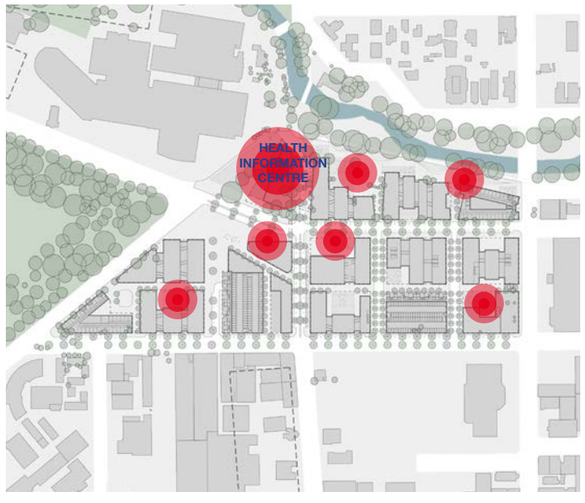
The urban form is fine-grained, creating an appropriate density that relates to human scale. The Precinct design breaks down the large blocks currently in private ownership by adding a network of proposed new streets and laneways that will become new public spaces. These create a variety of paths and spaces between buildings, a woven network interlinking key destinations, and providing a choice of walking and cycling routes. The Precinct is interspersed with a variety of public spaces and green zones, as places of respite for the local community.

Walking and cycling are encouraged by creating an inviting public realm with good amenity. Active street frontages characterise the Health Precinct, offering safety and amenity to pedestrians. The resulting urban form is permeable, and comfortable to navigate.

The majority of new streets and lanes run north–south, culminating in Te Papa Ōtākaro/Avon River Precinct. The paths open up towards the river, strengthening links from the urban fabric to the riverfront.

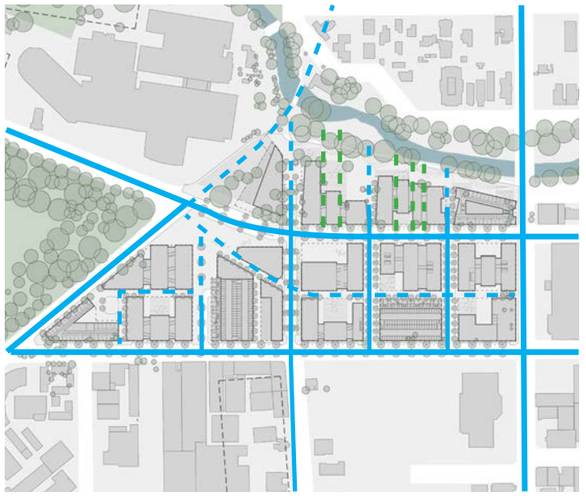
In general, the design aims to keep blocks of buildings small. Where larger contiguous spaces are needed, sections of the ground plane and street frontage should be kept accessible and open to the public through retail and hospitality tenancies and building lobbies and gathering spaces. Such features will enhance connectivity and permeability across the Health Precinct.

POSSIBLE SMALL HUBS SUCH AS RECREATIONAL HUBS, CAFES AND RETAIL



SUGGESTED BUILDING ENTRIES
VISUALLY ACCESSIBLE STREET FRONTAGE

EXISTING / NEW STREETS
NEW PEDESTRIAN LANEWAYS
SUGGESTED ARCADES / VIEWS THROUGH BUILDINGS



6.5 INTEGRATION AND CONNECTION

The Master Planning Advice seeks to create clear spatial presentation and organisation of the Health Precinct by:

- strengthening the identity and experience of the public thoroughfares that surround and penetrate the campus
- locating and emphasising major gateways into the Health Precinct and the city
- identifying and creating a network of external and internal circulation routes
- providing a travel experience throughout the Health Precinct that offers amenity, places of activity and respite, variety and visual interest
- creating a zoned precinct to achieve efficiency, identity and the optimal inter-relationships.

Te Papa Ōtākaro/Avon River Precinct zone
A new north-facing recreational and social hub will be created along the river, anchored by the historic Pegasus Arms. The Academic Zone is located along the length of this new pedestrian-focused area. It opens up the opportunity for a variety of cafes and restaurants to be be established, taking full advantage of this northern frontage.

New north–south streets
New north-south streets and laneways are proposed that provide multiple links and views from the site to the river. The streets north of Tuam are laneway/mews in style with minor service vehicle access; south of Tuam are tree-lined streets with two-way vehicular access.

East–west connection
A new east–west public laneway is proposed that provides a pedestrian connection through the Health Precinct. It crosses Antigua Street and terminates at the public plaza that is located at the intersection of Tuam Street and Hagley Avenue.

Hagley Avenue link
It is proposed to pedestrianise the northern extension of Hagley Avenue (beginning of Oxford Terrace) and create a public plaza associated with the new Health Information Centre. This will draw pedestrians through the centre of the site and link to Te Papa Ōtākaro/Avon River Precinct frontage and the city via the Antigua Street footbridge.

Metro Sports connection
The Precinct design includes a link for pedestrians and limited vehicle access between the hospital campus and the Metro Sports Facility to the Hospital Campus via the intersection of Hagley Avenue and Tuam Street.

Significant new buildings that mark key 'entries' to the health precinct
The Health Precinct requires identity as an important area in the city.

To reinforce its cohesiveness, gateways to the Health Precinct, its buildings and spaces need identification.

There will be a hierarchy of these urban gateways, and their design should respond to their significance and their location. These gateways should be seen in an urban sense – not as gates or signs, but as dynamic building entries, or as two buildings that sit either side of a precinct public space, designed to work together to reinforce the notion of entry and portal.

Buildings at the entry points can create more impact by being built to greater height (six storeys) and scale. These would feature at:

- the western entry at Tuam Street – a six-level building is proposed for the Ambulatory/Outpatients Zone and the Health Information Centre
- the northern entry to Te Papa Ōtākaro/Avon River Precinct on Antigua Street
- the eastern entry to Tuam Street
- the southern entry to Hagley Avenue

Integration with surrounding developments
As a key precinct in the Christchurch Central Recovery Plan, the site has been strategically located alongside or close to a series of other anchor projects. Significant projects include the Metro Sports Facility and the Convention Centre Precinct, both which offer excellent opportunities for integration, as well as Te Papa Ōtākaro/Avon River Precinct, the Bus Interchange, and the Innovation Precinct.

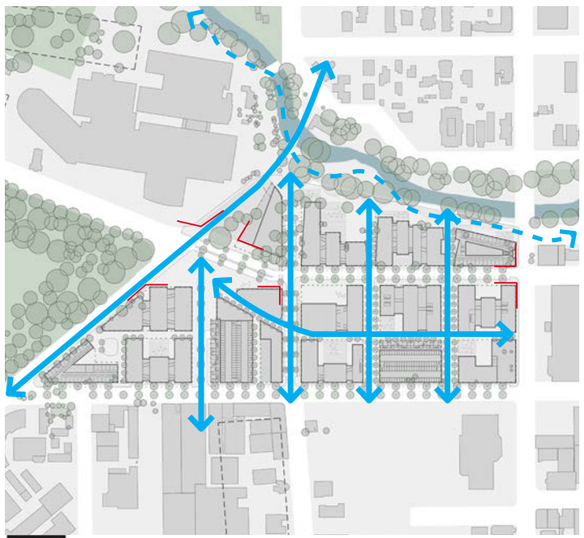
- With the Metro Sports Facility, synergies and opportunities include an emphasis on health and wellness in both treatment and research, sports medicine and research, rehabilitation, diagnostics and imaging, and hydrotherapy. In addition, of course, the Facility offers amenity for those working in the Health Precinct.

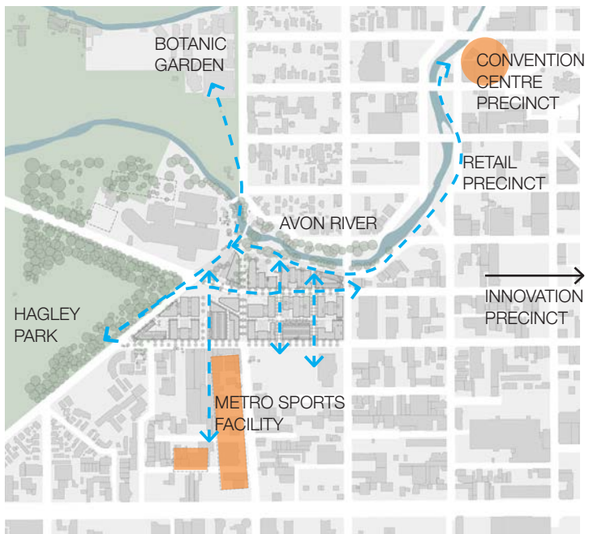
- The links with Convention Centre Precinct provide the opportunity to showcase and display research and discovery generated in the Health Precinct, as well as to share facilities such as high-tech simulation environments as part of health and research conferences. The Convention Centre Precinct could also potentially engage the health IT sector in developing new technologies to develop, refresh and reposition the approach to running conventions.

Metro Sports Facility
One of the most important parts of public infrastructure in the Health Precinct is a tree-lined pedestrian boulevard running north-south. It connects the main plaza and the Health Precinct gateway, Ambulatory/Outpatients Zone, and Bus Interchange at its northern end, transects across the Health Precinct, and extends through into the Metro Sports Facility at its southern end. It is a significant urban design gesture, linking key public amenities, pedestrian and cycling paths, and creating the main pedestrian crossing on St Asaph Street. As it extends into the Metro Sports Facility, it is envisioned that it will form the spine of the development.

The result will be a seamless connection between the Health Precinct and the Metro Sports Facility, encouraging pedestrian and cycling movement.

RIVERFRONT ACCESS
POTENTIAL GATEWAY BUILDINGS
IMPORTANT NEW AND EXISTING LINKS (PEDESTRIAN, CYCLE AND VEHICULAR)





Donovan Hill

6.6 ZONES AND DEVELOPMENT SITES

A zonal proposal has been developed for the Health Precinct to identify development areas. This reflects the reality of the advanced state of planning for the hospital campus and the physical layout of the proposed Health Precinct.

The activities proposed for the Health Precinct as developed through the stakeholder meetings and discussions can be readily allocated to a number of zones, including:

- Ambulatory/Outpatients Zone
  As a CDHB clinical environment, this has a critical location alongside the hospital – and requires direct access into the hospital building
- Health Education and Information
- Teaching and Research
  By closely locating the hospital, Ambulatory/Outpatients Zone and the teaching and research facilities, this site offers major advantages to clinicians and researchers who work across these areas. The ability to attract world-class researchers into prime facilities and location such as this is an important component of the siting
- Residential
  The residential zone has been located to take advantage of amenity and views to Hagley Park
- Technology and Innovation
  The needs of the private sector are well served by efficient and cost-effective sites that are close to central car parking, and that can include flexible floor plates. Sites can be developed to suit both large and small tenants. The higher-grade zone has a strong link to the HSAC.

A brief description of each zone and some of the strategic and planning imperatives in the Section 5.

6.7 SAFETY AND AMENITY

The Master Planning Advice has followed the principles of Crime Prevention Through Environmental Design (CPTED) as a fundamental tenet of the planning. As noted in *Safer Canterbury Creating Safer Communities*:

> The design of buildings and the arrangement of streets, parks and other outdoor spaces can influence the opportunity for crime and the level of fear of crime. Careful environmental design can help make places less susceptible to crime and enable people to feel more comfortable outdoors.
>
> Crime statistics indicate to individuals that there is no significant risk of becoming victims of crime. However, these figures bear no resemblance to the level of fear individuals may have at the possibility of becoming a victim. It is this fear of crime which inhibits the mobility of community members, particularly in women and the elderly. An improvement in the quality of life, by reducing crime and the fear of crime, is essential and a basic right for everyone.

Planning with safety and the principles of CPTED at the forefront creates not only safe environments, but spaces with high levels of amenity that are successful and enjoyable to be in.

Some of the key principles are:

- public buildings overlooking streets and public spaces
- clear sight lines along paths and routes
- good lighting along paths as well as roads
- design for activity – pedestrians, places with real amenity, public spaces that are visible from surrounding buildings, mix of spaces for constant use
- avoiding entrapment – variety of routes, no dead ends
- clear ownership and propriety – no ambiguous boundaries.

6.8 SUSTAINABILITY

The ecologically sustainable development component of the Health Precinct is based on seven key principles:

Energy, transport, stormwater systems, daylight, public amenity, wellness and flexibility

Energy
Most of the new Health Precinct buildings will have varying demands for space heating, domestic hot water, space and process cooling, and these demands may differ at any one time. For example, one building may have a significant cooling requirement, resulting in heat being rejected while another building may have a high demand for that heat. If such requirements are considered collectively, the buildings could benefit from a central plant generating heating or cooling or get significant benefit from being connected to each other. This approach is known as district energy.

District energy systems are a way of sharing energy efficiently across a development to reduce energy costs for all of the Health Precinct. They can reduce overall energy consumption and use the most cost-effective or environmentally friendly available source of energy such as biomass, waste heat or geo-exchange heat pumps.

There is an excellent opportunity for the existing hospital boiler to be used as a shared facility for the CDHB, the Health Precinct and possibly the Metro Sport Facility. It would support the CDHB's plans to install biomass storage and convert the facility to operate on wood chip rather than coal.

The combination of the Health Precinct, the Metro Sports Facility and the hospital makes a district energy system an attractive proposition for an energy supplier willing to purchase the boiler house from the hospital, make the required upgrades to the facility and install the reticulation system.

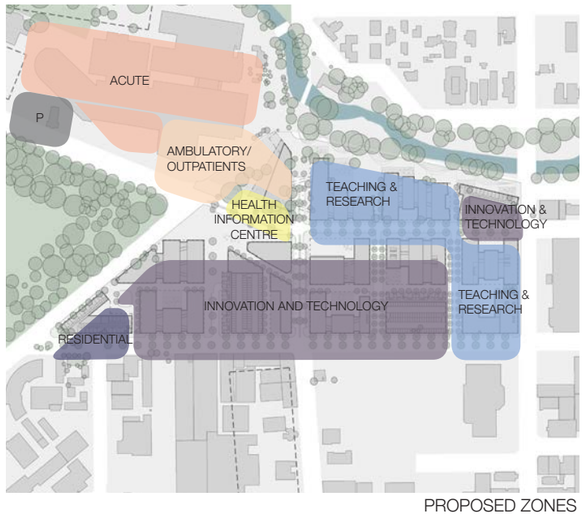
Transport
The urban design of the Health Precinct places the pedestrian experience as the main priority. Cycling and public transport are also emphasised. Key features include:

- a traffic-calmed intersection at the western entrance into the Health Precinct
- a network of dedicated cycle routes
- bus super stops at the western entrance within a visible and safe public plaza with high levels of amenity
- a network of publicly accessible, tree-lined footpaths and crossings throughout the Health Precinct.

Storm water systems
Along with roads, car parks are some of the most contaminated surfaces in an urban environment. Concentrating car parking in parking buildings can significantly reduce runoff from contaminated surfaces.

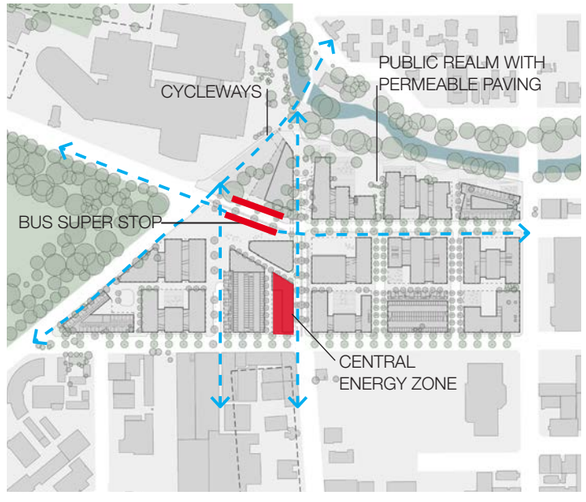
Reusing runoff from roofs for irrigation helps to reduce flooding and reduces water usage overall. Reducing flows into Otākaro/the Avon River also helps to reduce erosion associated with peak discharges.

Installing permeable paving in pedestrian areas allows rainfall to infiltrate naturally, reducing the amount of water entering the stormwater network and helping to maintain groundwater at natural levels.



PROPOSED ZONES

PROPOSED DEVELOPMENT BLOCKS



Treating runoff from hardstand surfaces such as roads and access lanes will help improve water quality in Ōtākaro/the Avon River. Green stormwater infrastructure, such as raingardens, use natural processes to treat stormwater and give a second purpose to landscaped areas. Even in densely developed urban environments, tree pits on street fronts can become treatment facilities, filtering and purifying runoff.

Use of modern inert roofing materials for new buildings reduce the uptake of zinc and copper metals.

Daylight
Access to daylight and sunlight in both buildings and public spaces is a key consideration of the Master Planning Advice. It is recommended that building footprints have a variety of arcades and atrium through their centres, to balance the needs of large, flexible floor plates with the need to bring daylight and sunlight into the heart of the facility.
Major public spaces have been located with a northerly aspect, such as the Academic Zone, the public plaza at the western end, and the street frontages along Tuam Street.

Public amenity
The Master Planning Advice aims to increase the public amenity through new public spaces, and greater access to significant parks and gardens.

- Parts of the site will be returned to the public realm which will create a variety of paths and spaces between buildings that are of a human scale. The resulting urban form is permeable, and comfortable to navigate, offering safety and amenity to pedestrians
- The urban design links the rest of the Health Precinct with the incomparable amenity of Te Papa Ōtākaro/Avon River Precinct, and strengthens existing desire lines as well as creating new paths to the river.
- Buildings are set back to create a northern public plaza integrated with the new public transport super stops, and to enhance the connection between Hagley Park and the Health Precinct.
- A new north-facing recreational and social hub will be created along the river, anchored by the historic Pegasus Arms.

Wellness
The urban design of the Health Precinct places the pedestrian experience as the main priority. It is urban design focused on wellness.

- Active street frontages characterise the Health Precinct, and car parking is centralised, encouraging and supporting pedestrian activities.
- The Health Precinct is interspersed with a variety of public spaces and green zones, as places of respite for the local community.
- A public transport node is integrated into the central plaza, further adding to the amenity of the Health Precinct.
- Multiple modes of transport will be balanced; transport routes within the Health Precinct will be on shared zones within a high-quality public realm.
- Hotels and residential offerings in the Health Precinct complement the high-quality commercial and institutional programmes, to create a vital and safe place with round-the-clock activity.
- The Health Precinct will play a central role in the wellness of the city and wider community, and public engagement in health will be a key endeavour. Embedded within the Ambulatory/ Outpatients Zone, the Health Information Centre will be the focus of this aspiration – it will be the hub for the Health Precinct, and serve as a reception for the public.

Flexible and adaptable buildings
- Buildings should be designed with flexible floor plates and effective floor-to-floor heights to maximise their ability to adapt to changing tenant demand and requirements in the future.
- Loose fit / long life philosophy maximises the useable life of buildings with the intelligent planning of spaces within buildings and the generic design of the buildings themselves.

6.9 LANDSCAPE CHARACTER / OUTDOOR ROOMS

The Health Precinct is highly permeable to encourage pedestrian and cycle movement within and through it as a public facility and as slow zone to work, live and play in. The hierarchy of routes through the Health Precinct ranges from generous roadside pavements through to shared surfaces, lanes and the east–west mews between Tuam and St Asaph Streets. A string of north–facing courtyards, lawns and decks provide sunny areas to occupy and commercially activate within the campus and against public streets and Te Papa Ōtākaro/Avon River Precinct.

The “Drawing the Parks In” concept and respect for the environmental and cultural values associated with Ōtākaro/the Avon River are the drivers to maximise permeable surfaces such as lawns, planting and permeable pavements and showcase passive stormwater treatment devices. Urban form is given to stormwater treatment such as raingardens, basins and pavements. Pavements are broken up with changes in texture and geometry, while furnishings to provide a human scale environment within the campus. Water, and its treatment, are visible and character-forming components of the Health Precinct landscape.

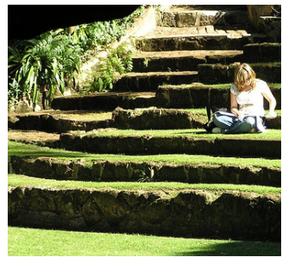
Emphasis is placed on the legibility and character of key gateways including:

- Central City Gateway / Tuam Street Super Stop – characterised as a parkland gateway with street trees, soft surfaces, change of pavement treatments and architecture of transport infrastructure to provide a sense of enclosure and a human-scale, parkland character in this vehicle-dominated environment
- Health Precinct Gateway – generous space between gateway buildings aligned to frame views to Ōtākaro/the Avon River. Pedestrian priority area with mature trees, soft surfaces and landscape furnishings to provide a plaza that is unique to this gateway and parkland confluence
- Ōtākaro/Avon River Frontage – pedestrian-focused, north-facing, passive recreation area stepping down to the riverfront with numerous street and laneway connections to the whole of the Health Precinct.







6.10 ARCHITECTURAL CHARACTER AND IMAGE

Cities are often distinguished by the quality of their architecture, through which they instill a sense of pride and history. As cultural buildings with a long life span, university buildings can contribute substantially to the cultural life of the city, and have not traditionally been subject to the dictates of developers and the commercial realm.

Over the last decade, universities in Australia have been remaking their campuses through an investment in design. Significant buildings have been commissioned to provide improved campus facilities and to project a more attractive and modern image in an increasingly competitive tertiary education market. The physical environment of the campus is regarded as vital to the reputation and identity of the university, and representative of its attitude to the delivery and quality of its educational programmes.

Success must be considered on a number of fronts. Considerations include the quality of the architecture, the quality of spaces created and their urban response. Most importantly, the new spaces must enable and reflect developments in teaching, learning and research, and continue to be relevant and flexible as tertiary institutions and teaching methods change and develop.

With potential for some 150,000m^2 of new built area, the Health Precinct will have a significant impact on the urban realm and built form of the city. The new development sites will have a significant impact on the surrounding streetscapes with extensive new built frontage to public streets.

The character and identity of the western entry into the city will be transformed by 2020, as this Precinct develops.

The approach that is needed is to align the strategic vision of the Health Precinct with its new built and architectural character. It is an approach that will enrich much more than just the built environment.

The character of the Health Precinct needs to be developed as a diverse collection of acquired and purpose-designed buildings that knit together to comprise a rich and interesting city campus and urban environment, as opposed to a singular, massive institution that overwhelms the city and its streets.

Regardless of a building's capital budget (as there will be a range of types and costs on the Health Precinct) the philosophies of Design Excellence identified below need to be considered.

Sense of community

- Health Precinct buildings need to strengthen and reinforce a sense of community, but not obliterate it with a 'sameness' of built language. Academic, research and business communities are full of diversity, and the buildings and spaces should reflect this.
- New buildings need to be accessible, visible and perforate.
- The buildings need to engage with and respond to external spaces – both public streets and Precinct-specific environments. Circulation hubs, retail spaces and building entries should be located so as to relate with and look back to the wider community.

A sense of place

The buildings should respond to the context of the streets and environments they sit within – striking and emblematic to Tuam Street, finer scaled and more detailed to Ōtākaro/the Avon riverfront and the new smaller streets and lanes.

- The new river frontage should be considered as a collection of three buildings, not one continuous and homogeneous façade. The Master Planning Advice recommends creating vertical visual breaks in this building's major new façade in the form of fissures that provide laneway and arcade entries into the building from the street. These vertical fissures could also respond to the creation of multilevel activity hubs within the building that surround the main vertical circulation paths.
- Each development block should contribute a portion of site area to public space, both open and enclosed. These spaces create a vital communal focal point on each development block. This public forecourt will be an opportunity for retail activity and extends active street frontages on the site.

A sense of identity and pride

- The buildings and the campus should demonstrate the innovative health and knowledge precinct, be engaging and varied, experimental and research based. They should also represent the Health Precinct as a vibrant and professional community that others will want to join and that will be a source of city pride with a reputation and brand for serious innovation, clever thinking and collaborative mindsets
- Transparency is an important part of the new built language. It will speak of a precinct that is proud of the knowledge, communication and innovation that occur within it.
- While the Health Precinct requires strength and identity, so too do the organisations within it. Each organisation should have its own identity reflected in its architecture, creating its own unique brand. All Health Precinct buildings should have an identifiable entrance, visibility across many levels, and clear shopfronts, lobbies and/or gathering spaces at their main entries.

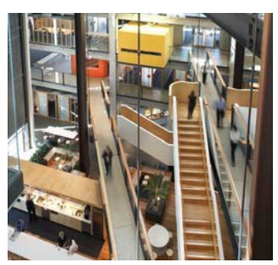
Legibility

- All buildings and spaces play an important part in creating a series of links and thoroughfares through the Health Precinct, and indeed the city.
- New buildings will define important gateways to both the city and the Health Precinct.
- Building entries will be clear, welcoming and unambiguous.
- Colonnades and awnings should be positioned in meaningful locations to encourage dwelling and gathering spaces, and to activate the edge of public areas such as Tuam Street and the pedestrianised Oxford Terrace.

Design Excellence

- There should be no instituted or homogeneous built style for the new buildings on the Health Precinct. Controls should encourage quality and creativity in design, rather than dictating design responses.
- Design Excellence is not just the quality of a building's facades. In part, it is the quality of the spaces it creates, and its urban response. Most importantly, it is the building's ability to enable and reflect developments in health and patient care, teaching, learning and research, and to continue to be relevant and flexible as institutions and organisations change and develop.

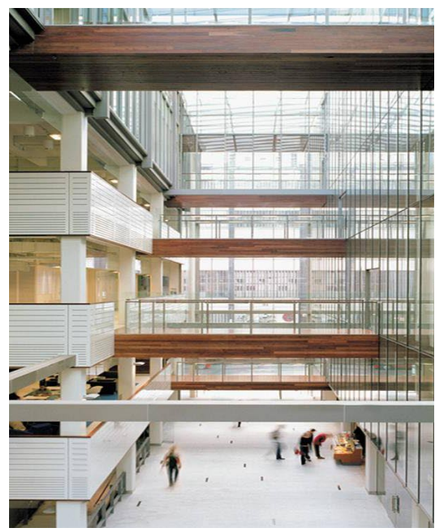

VIEW FROM ANTIGUA BOATSHEDS


INTERNAL ARCADES IN BUILDINGS


COURTYARDS BETWEEN BUILDINGS


COURTYARDS BETWEEN BUILDINGS


INTERNAL COLLABORATION AREAS


INTERNAL ATRIUMS


AERIAL VIEW

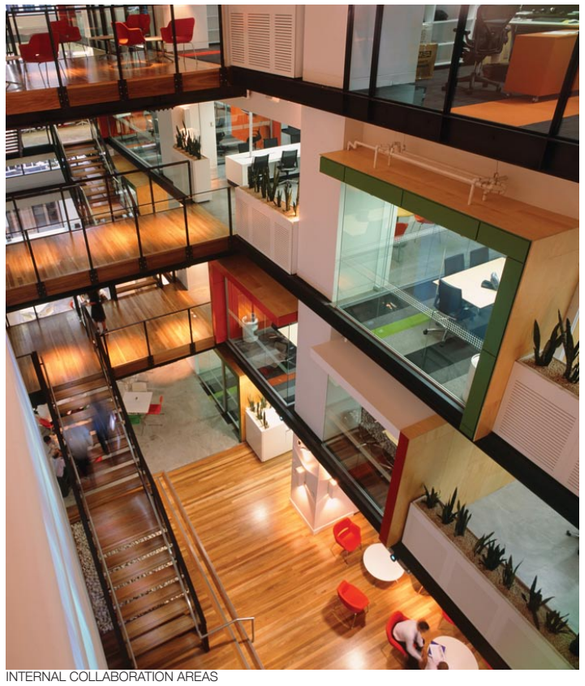

BUILDING LANEWAY

ENGAGING BUILDING ENTRIES

The new built environment will be of exemplary design quality, and will be rich and diverse. The quality of the buildings will be judged by the quality of the spaces they create, the way they integrate with the city, their relevance and flexibility to current and future practices, and the manner in which they facilitate human engagement. It is this human engagement that is vital to the communication exchange and collaborative dialogue of an innovative environment.

Flexible and adaptable buildings

- Buildings should be designed with flexible floor plates and effective floor-to-floor heights to maximise their ability to adapt to changing tenant demand and requirements in the future.
- Loose fit / long life philosophy maximises the useable life of buildings with the intelligent planning of spaces within buildings and the generic design of the buildings themselves.



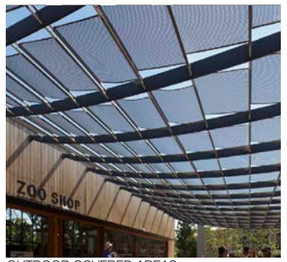
INTERNAL COLLABORATION AREAS

BUILDINGS FRONTING LANDSCAPE

COURTYARDS OUTSIDE BUILDINGS

COURTYARDS BETWEEN BUILDINGS

INTERNAL ATRIUMS



OUTDOOR COVERED AREAS

INTERNAL COLLABORATION AREAS

AERIAL VIEW

PUBLIC OUTDOOR SPACES

INTERNAL COLLABORATION AREAS

INTERNAL ATRIUMS

DISPLAY ON BUILDINGS

PUBLIC PLAZAS

STUDENT COMMON SPACES

BUILDING ARTWORK

TRANSPARENCY

CHRISTCHURCH HEALTH PRECINCT MASTERPLAN PROPOSAL AERIAL VIEW

A NEW AMBULATORY CARE FACILITY FOR CDHB – WITH THE HEALTH INFORMATION CENTRE AT THE GROUND LEVEL THAT WILL BE THE HUB FOR THE PRECINCT, AND SERVE AS A RECEPTION FOR THE PUBLIC.

OVERHEAD LINK INTO HOSPITAL WITH PUBLIC THOROUGHFARE UNDERNEATH.

POSSIBLE OVERHEAD BRIDGES TO CONNECT ACADEMIC FACILITIES TO HOSPITAL.

AN ICONIC ACADEMIC FACILITY ANCHORS THE PRECINCT ALONG THE RIVERFRONT – A COMBINATION OF PUBLIC AND PRIVATE OWNERSHIP.

NEW NORTH-FACING RECREATIONAL AND SOCIAL HUB WILL BE CREATED ALONG THE RIVER, ANCHORED BY THE HISTORIC PEGASUS ARMS.

NEW COVERED PUBLIC PLAZA ALONGSIDE THE AMBULATORY/OUTPATIENTS ZONE/HEALTH INFORMATION CENTRE WITH PEDESTRIAN AND CYCLEWAYS THROUGH TO ANTIGUA STREET FOOTBRIDGE.

ANTIGUA STREET PUBLIC DROP-OFF TO AMBULATORY/OUTPATIENTS ZONE.

OVERHEAD PEDESTRIAN BRIDGE CONNECTING HOSPITAL PUBLIC CAR PARK AND AMBULATORY/ OUTPATIENTS ZONE.

FUTURE EXPANSION ENVELOPE FOR HOSPITAL AMBULATORY/OUTPATIENTS ZONE WITH POTENTIAL FOR UP TO 25,000M² AREA.

NEW TRAFFIC-CALMED INTERSECTION – PEDESTRIAN ZONE, BUS AND CYLIST FOCUSED ZONE.

WESTERN GATEWAY INTO CITY – BUILDINGS ARE SET BACK TO CREATE A NORTHERN PUBLIC PLAZA INTEGRATED WITH THE NEW PUBLIC TRANSPORT SUPER STOPS, AND TO ENHANCE THE CONNECTION BETWEEN HAGLEY PARK AND THE PRECINCT.

POSSIBLE 150 BED HOTEL LOCATION – WITH EXCELLENT OUTLOOK ONTO HAGLEY PARK.

PEDESTRIAN LINK FROM METRIO SPORTS FACILITY THROUGH SITE.

CDHB MULTI-DECK PUBLIC CAR PARK (FOR 500 CARS) PROMOTES ACTIVE STREET FRONTAGES. SERVICED ACCOMMODATION PROPOSED ALONG CAR PARK EDGE – STUDIO, ONE- AND TWO-BED APARTMENTS, CONSIDERING PRECINCT DEMAND FOR STUDENTS AND VISITING STAFF AND RESEARCHERS, FINANCIAL RETURNS AND INCREASED POPULATION ON SITE. ACTIVATES METRO SPORTS LINK.

NEW NORTH–SOUTH STREETS AND LANES PROMOTE THE ENGAGEMENT WITH THE THE RIVER AND FACILIATE COLLABORATION AND CONNECTION IN THE PRECINCT.

PROMINENT COMMERCIAL BUILDING ON RIVER FRONTAGE WITH GREAT ACCESS TO HOSPITAL AND CITY.

TUAM STREET AS PAVED AND TRAFFIC-CALMED 30KPH ZONE – WITH PEDESTRIAN, CYCLE AND BUS FOCUS.

NEW LANE/MEWS ALONG EAST–WEST AXIS OF SITE CONNECTS THROUGH TO TUAM STREET INTERSECTION AND HALGEY PARK.

A FINER GRAIN OF BUILDINGS ON A HUMAN SCALE, JOINED BY A NETWORK OF NEW STREETS AND LANEWAYS. CONSISTING OF APPROXIMATELY 19% OF THE SITE,THIS NETWORK WILL BFORM A NEW PUBLIC REALM. THE PATHS AND SPACES WILL OFFER BOTH SAFETY AND AMENITY TO PEDESTRIANS.

CENTRAL PRECINCT MULTI-DECK CAR PARK (FOR 500 CARS) PROMOTES ACTIVE STREET FRONTAGES. SERVICED ACCOMMODATION PROPOSED ALONG CARPARK EDGE – STUDIO, ONE- AND TWO-BED APARTMENTS, CONSIDERING PRECINCT DEMAND FOR STUDENTS AND VISITING STAFF AND RESEARCHERS, FINANCIAL RETURNS AND INCREASED POPULATION ON SITE.

CDHB STAFF CAR PARKING ON METRO SPORTS SITE, INTEGRATED WITH METRO SPORTS FACILITY CAR PARKING.

EXPANSION OF HOSPITAL BOILER – FOR SHARED ‘GREEN’ POWER GENERATION AND SUPPLY FOR PRECINCT AND SURROUNDING DEVELOPMENTS.

SIGNIFICANT AREA ZONED FOR PRIVATE STAKEHOLDERS – PROMOTING HEALTH INNOVATION AND TECHNOLOGY GENERATION.

RAINGARDENS AND PERMEABLE PAVING ARE PROPOSED WITHIN THE STREET NETWORK TO FILTER AND PURIFY RUNOFF INTO THE STORMWATER SYSTEMS.

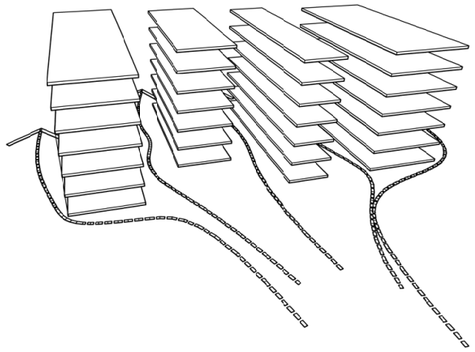
7.0 DESIGN GUIDELINES

7.1 PERMEABLE BUILDING MASSING

The building massing should be permeable from north to south. No large blocks should run east to west. This will maximise connectivity to the river and achieve the largest possible active ground floor frontage.

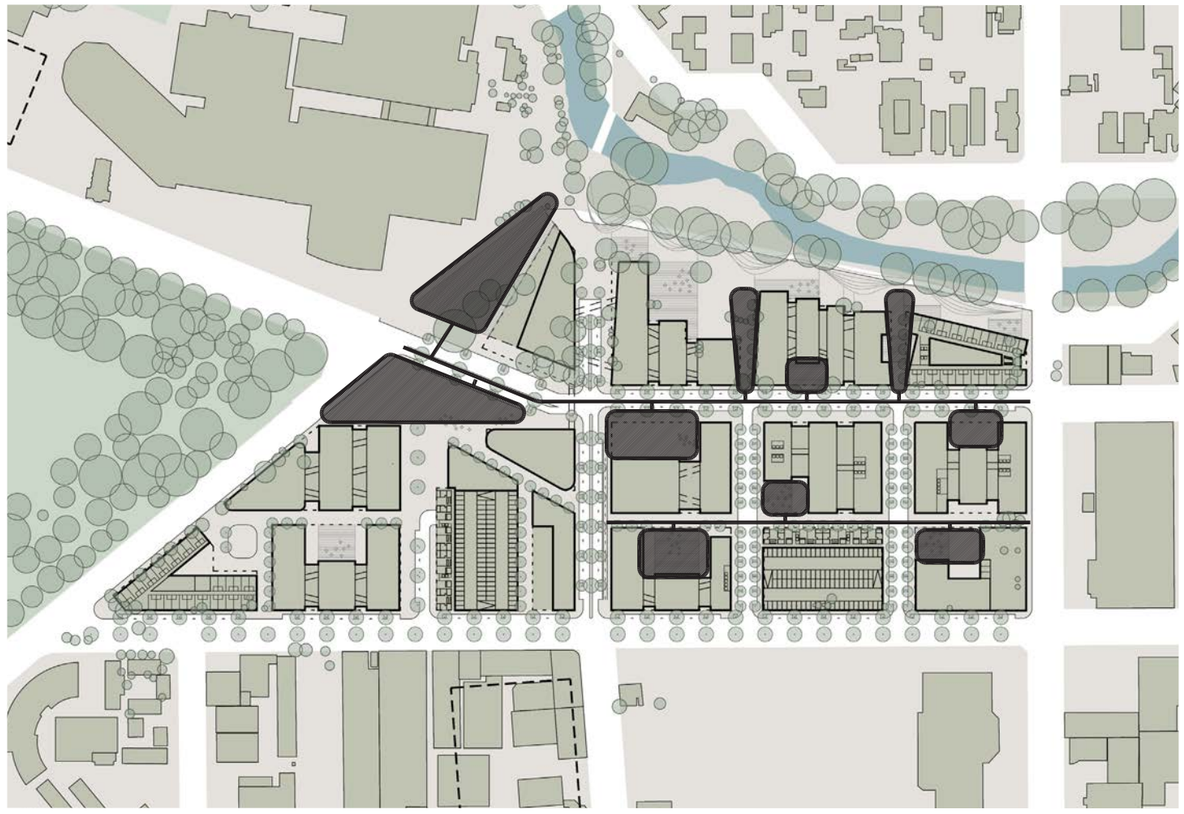
The resulting north–south spaces between building blocks are oriented for solar access, and create a range of public spaces of different scales. Some could be open to the sky, while others could be enclosed under glazed atria.

These laneways within each title should be accessible to the public at ground level, creating opportunities for human scale, fine urban grain and opportunities for retail and street activation.



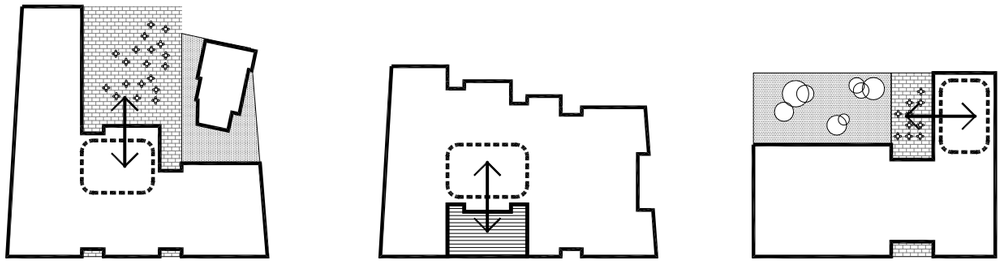
7.2 PATHS AND NODES

The public realm is organised around a series of key public spaces, linked by a continuous pedestrian path. The intention is to create a network of public spaces within a few minutes' walking distance of each other.



7.3 PUBLIC SPACE CONTRIBUTION

Each development block should contribute a portion of site area to public space, both open and enclosed. These spaces create a vital communal focal point on each development block. This public forecourt will be an opportunity for retail activity and extends active street frontages on the site.



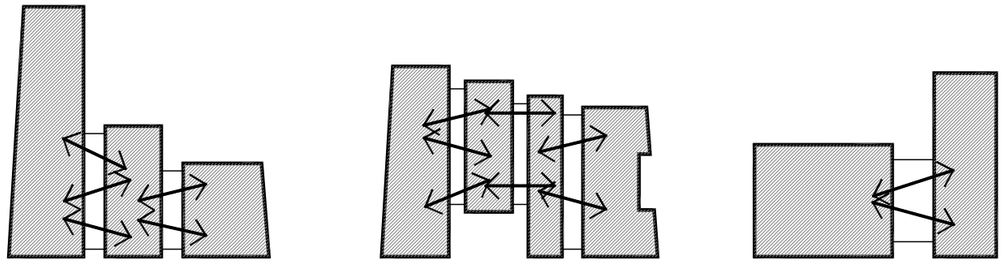
7.4 CONNECTION TO THE RIVER

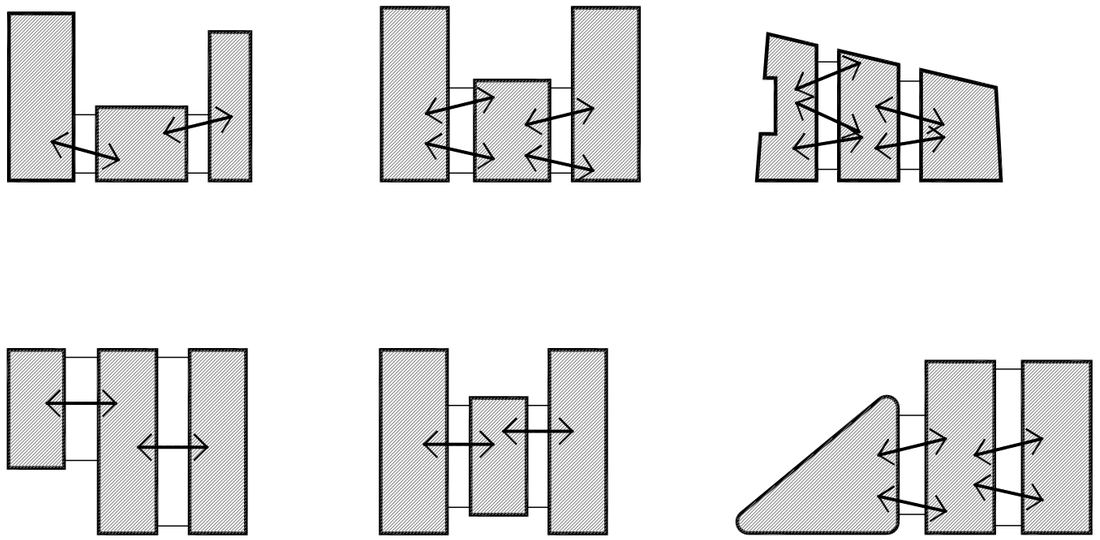
The landscape and public realm will reference Ōtākaro/the Avon River and the springs that feed it. Water will be a central theme, used to enrich public spaces and extend the experience of the river through interactive water installations.

7.5 NARROW FLOOR PLATES

Each development block should be made up of smaller floor plates connected with bridges. This will encourage connectivity across floors.

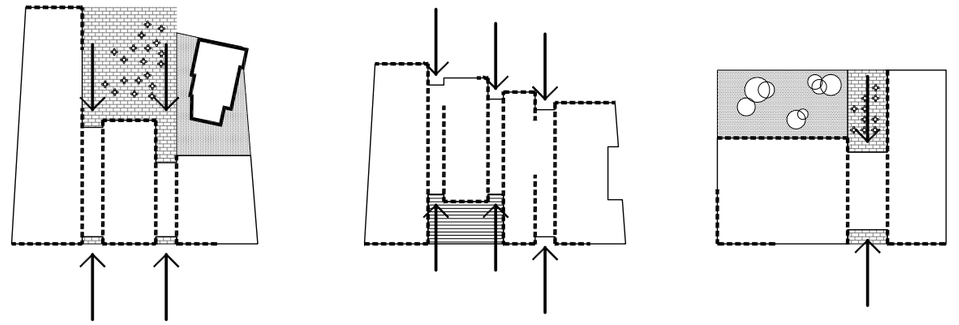
The smaller floor plates allow a range of tenancy sizes. The narrow floor plates will maximise daylight penetration and allow natural ventilation, contributing to the wellness of the building occupants.

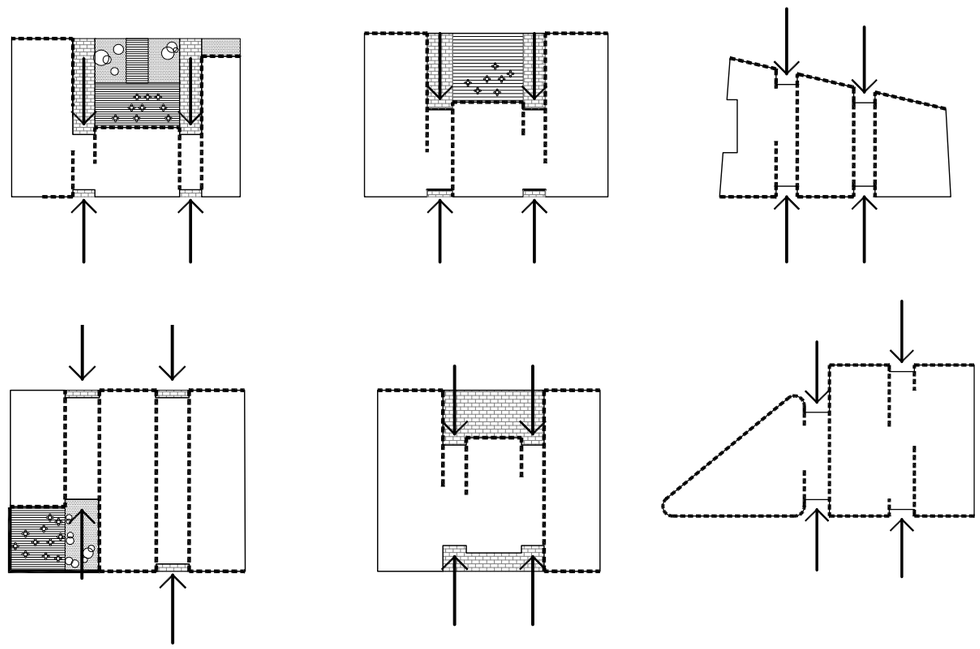




7.6 ADDRESS AND ACTIVE GROUND FLOOR FRONTAGE

A fine urban grain is encouraged. All large blocks should be divided into numerous street addresses, creating interest and activity at ground level. The retail opportunities at ground level will extend around the outside of the block, wrapping into the internal public lanes and opening out into the internal and external courtyards.





7.7 LANDSCAPE DESIGN GUIDELINES

The landscape scheme has identified and built upon the qualities that define Christchurch's landscape character and anticipated enhancements to its urban landscape as a result of rebuild, and in particular, the development of Te Papa Ōtākaro/Avon River Precinct. These qualities are embedded into the scheme based on:

1. a landscape that is continuous with Te Papa Ōtākaro/Avon River Precinct
2. respect for the cultural and environmental dimensions of the Christchurch landscape and its waters
3. prioritisation of pedestrians and cycles
4. a precinct that links parks, networks and civic facilities
5. a precinct that is safe to use at all hours
6. a mix of working, living, health care and recreation.

More specifically, the landscape scheme could include the following activities:

- Treat all stormwater on site, in small, blocks using permeable surfaces to recharge groundwater and reduce the scale of infrastructure. Adopt urban geometry consistently to form raingardens, drainage basins and vegetated swales. Where these other features are not possible, use stormwater treatment cartridges to filter runoff before the water enters the Ōtākaro/Avon River system. Make stormwater treatment a feature of the site with bridges and characterising vegetation.
- Arrange plantings that are native to greater Christchurch in an informal geometry on the north–south axis to connect with Te Papa Ōtākaro/Avon River Precinct and contrast with the formal east–west alignment. Use highly charismatic species to strengthen character.
- Adopt a unique and highly characterised nodal precinct in the north-west corner to accommodate and celebrate the confluence of the three parks. Continue through into the Health Precinct Gateway to characterise and connect with Te Papa Ōtākaro/Avon River Precinct.
- Blur the boundaries between Te Papa Ōtākaro/Avon River Precinct and the northern edge of the Health Precinct by sharing geometry, materials and furnishings and by reducing pavements to a more intimate scale.
- Replace selected roadside car parks with street trees and stormwater treatment build-outs.
- Adopt shared surfaces in the south-west corner to accommodate all modes of transport and reduce traffic speeds.
- Arrange bands of different plant mixes that are native to greater Christchurch on the north–south axis between buildings for legibility, visual diversity and biodiversity and to reduce the apparent scale of the campus.
- Protect views through the campus to Te Papa Ōtākaro/Avon River Precinct in the north and the Port Hills in the south.
- Characterise the east–west link through the campus between Tuam and St Asaph Streets with its own unique geometry and character consisting of linear bands of pavement materials, plantings and raingardens as well as seating and lighting.
- Accommodate build-outs at all road crossings and, wherever possible, raised tables or road surfaces to prioritise pedestrians and cyclists.
- Adopt highly legible markings and materials on cycle paths on the south side of Tuam Street to separate flows and pedestrian pavements and address safety at road crossings.
- Provide clear lines of sight and design out areas for concealment to provide an environment that is perceived to be safe at all hours. Lighting will play a key role.
- Adopt timber surfaces for bridges, decks and alternative surfacing at selected building entrances and minor north–south routes through the campus.
- Develop a Low Impact Development philosophy to guide the design of the campus and selection of materials and furnishings, including low-energy smart lighting and stormwater treatment.
- Collaborate with iwi and artists to embed cultural narrative into the campus environment.
- Adopt and adapt local materials and planting species to generate a strong sense of place that is consistent with greater Christchurch.
- Retain and protect as many existing trees as possible.

PROPOSED VIEW FROM ANTIGUA BOATSHEDS FOOTBRIDGE LOOKING SOUTH

HEALTH PRECINCT DRAFT CONCEPT AS AT AUGUST 2014

The recent formal signing of a collaboration agreement is a significant step forward for the Precinct. Representatives from Canterbury District Health Board (CDHB), Canterbury Earthquake Recovery Authority (CERA), CPIT, University of Canterbury and University of Otago ('the stakeholders') are working together in the new Precinct. They are incorporating health services alongside state-of-the-art research and teaching facilities and exploring opportunities for bio-medical, clinical and population health research, health sciences education, health innovation, health information technology and industry partnerships with a range of public and private organisations. While overseas examples generally involve collaboration between a single medical school and a teaching hospital we are in the privileged position of having three providers of higher education in medical and health sciences, and the South Island's major tertiary hospital, ready to collaborate and integrate their shared goals of clinical service, education and research.

Since the Health Precinct Master Planning Advice, we have worked steadily towards identifying specific features of the built environment that will enhance existing and future partnerships. For this reason, current plans for the Precinct have evolved from the Master Planning Advice to reflect a blend of aspiration and practicality. These changes have been reflected on the map overleaf.

Examples of updates to the Master Planning Advice include:

- a reduction in the requirement of space for the initial education and research facilities through shared amenities (as a result of more detailed work with the CDHB, CPIT, University of Canterbury and University of Otago).

- retention of the existing CDHB carpark instead of forcing a demolition and building a new carpark on an adjacent site.

- amendments to the placement of laneways and greenways to retain existing buildings which can be aligned with the Health Precinct vision.

THE STATE-OF-THE-ART FACILITIES FOR CDHB, CPIT, UNIVERSITY OF CANTERBURY AND UNIVERSITY OF OTAGO ANCHOR THE PRECINCT AND PROVIDE OPPORTUNITIES FOR NEW COLLABORATIVE RESEARCH ACTIVITIES AND TEACHING INITIATIVES.

A NEW NORTH FACING RECREATIONAL AND SOCIAL HUB WILL BE CREATED, ANCHORED BY THE HISTORIC PEGASUS ARMS AND ALONGSIDE THE HIGH-QUALITY GREEN SPACE OF TE PAPA OTĀKĀRO/ AVON RIVER PRECINCT.

A NETWORK OF OPEN SPACES WILL PROVIDE PLACES FOR PEOPLE TO INTERACT AND CONNECT, AND WILL ENHANCE THE AMENITY FOR RESIDENTS AND BUSINESSES.

A REACTIVATED AND ENHANCED LANE NETWORK WILL CREATE ADDITIONAL STREET FRONTAGES, INJECTING PEOPLE INTO THE CENTRE OF THE EXISTING LARGE CITY BLOCKS AND REVITALISING THE URBAN ENVIRONMENT.

NEW TRAFFIC CALMED INTERSECTION – TO IMPROVE PEDESTRIAN, BUS AND CYCLIST ACCESS AND FLOWS.

WESTERN GATEWAY INTO CITY – BUILDINGS ARE SET BACK AND INTEGRATED WITH THE NEW PUBLIC TRANSPORT SUPER STOPS TO ENHANCE THE CONNECTION BETWEEN HAGLEY PARK AND THE PRECINCT.

PROPOSED HOTELS AND RESIDENTIAL OFFERINGS IN THE HEALTH PRECINCT COMPLEMENT THE HIGH QUALITY COMMERCIAL AND INSTITUTIONAL PROGRAMMES, CREATING A VITAL AND SAFE PLACE WITH ROUND-THE-CLOCK ACTIVITY.

SHARED 'GREEN' POWER GENERATION AND SUPPLY FOR THE HEALTH PRECINCT AND SURROUNDING DEVELOPMENTS.

MAXIMISE PHYSICAL AND ECONOMIC SYNERGIES AND LINKAGES WITH THE METRO SPORTS FACILITY.

SIGNIFICANT AREA ZONED FOR PRIVATE STAKEHOLDERS PROMOTING HEALTH INNOVATION AND TECHNOLOGY.