



The Museum Project Brief

Adopted by the Canterbury Museum Trust Board November 2019
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1.0 INTRODUCTION

Canterbury Museum is an iconic feature of the Christchurch cultural precinct and the wider Canterbury region.

The Museum has the only remaining undamaged neo-Gothic building in the city as well as use of the Robert McDougall Gallery category 1 heritage building.

The Museum houses and displays more than 2.3 million items of Canterbury's heritage, our taonga/ treasures. The collections of the Museum have an estimated value in excess of 1 billion dollars.

In the seismic era, the Museum's guardians have also identified the imperative to "save and protect" the two heritage buildings and treat them as, in effect, the first two artefacts in the collection.

The Museum is an important and significant contributor to the city's and region's economy. Annual visitor numbers currently exceed 750,000 per annum and this is expected to rise to 1 million visitors with a redeveloped facility.

This document summarises the challenges facing the Museum as it looks forward 100 years to be a world-class facility for storing, protecting, celebrating and respectfully remembering our heritage and stories, including the earthquakes.

Even prior to the Canterbury earthquakes the Museum was facing a number of challenges operating within the current buildings including: increasingly high numbers of international and domestic visitors each year resulting from 29% growth over the last decade from 580,000 to 750,000 per annum, requirements for improved exhibition facilities and proper storage of collection items, the need for environmental control, significant structural, fire, safety and security upgrades, clarity in visitor circulation, integration of the Robert McDougall Gallery with the Museum buildings and improved customer facilities.

The Museum Board is embarking on redevelopment in response to the need to actively position and shape the Museum for its next 50 years – indeed 100 years – and because it believes it has to as a result of the challenges above – not because it is 'nice to do'.

The briefing information contained within this document outlines the deficiencies of the current buildings, the framework and principles unpinning any future redevelopment to resolve these issues and a detailed schedule of new and upgraded space and services requirements.

The result of the Canterbury earthquakes has increased the importance of seismic strengthening issues in relation to these buildings and the importance of the protection of its collections in an active seismic zone. Whilst seismic strengthening is a significant part of any redevelopment project to the Museum and Robert McDougall buildings, this has to be undertaken whilst also addressing other key brief requirements for 'The Museum Project', particularly:

- Respecting heritage
- Achieving additional space on the current site
- Protecting people, collections & buildings
- Expanding within planning and legislative requirements
- Storing collections properly, particularly providing environmental control
- Future flexibility



2.0 THE ROLE & FUNCTION OF CANTERBURY MUSEUM

Canterbury Museum provides museum and related facilities and services for the people of Canterbury, the wider New Zealand population, and international visitors to Canterbury.

Founded in 1870, the objectives of Canterbury Museum as expressed in the Canterbury Museum Trust Board Act 1993 are:

- To collect, preserve, act as a regional repository for, research, display and otherwise make available to the people of the present and future, material and information relating to the natural and cultural heritage of New Zealanders
- To promote interest and education in the natural and cultural heritage of New Zealanders
- To place particular emphasis on those activities as they relate to the greater Canterbury region, the Antarctic and Subantarctic, and where appropriate, their relationships in a wider global context.

Canterbury Museum acquires and cares for world-wide collections from human and natural history, with a focus on Canterbury and the Antarctic. Access to these collections drives research, inspires learning, and ignites imagination through stories that surprise and delight our visitors.

The Museum operates primarily from the main Museum buildings on Rolleston Avenue. It has the use of the Robert McDougall Gallery directly behind the Museum (currently closed to the public due to earthquake damage) and also currently leases premises at 299 Durham Street for its Quake City 'pay-for' earthquake exhibition. It is also developing Ravenscar House across Rolleston Avenue from the main site in conjunction with the Ravenscar Trust. It is envisioned that this will operate as a further standalone 'pay for' attraction from 2021.

Most visited cultural attraction in the South Island

Canterbury Museum is a cornerstone facility in Canterbury's heritage, cultural and tourism sectors and is the most visited cultural attraction in Te Wai Pounamu (the South Island). It attracts more than 750,000 visitors each year (766,235 in the 2018/19 financial year). On average, 32% of visitors to the Museum are local Cantabrians, 11% are other New Zealanders, and 57% are international visitors. With such high visitor numbers the Museum is an important and significant contributor to the city's and region's economies.

Internationally significant collection

As one of New Zealand's major metropolitan museums, Canterbury Museum holds a collection of regional, national and international significance: its 2.3 million collection items equate to approximately one-quarter of the national patrimony in terms of numbers, and recent inventory work indicates that the collection's conservative replacement value is more than \$1 billion.

A vital community social space

Canterbury Museum is also an integral part of the local community and the wider region. It engages with and supports domestic visitors through public programmes and exhibitions, and it also hosts visits from schools, community groups and tertiary institutions.

The Museum is also playing an active role in rebuilding the cultural and community wellbeing of Christchurch. It is one of the few places able to provide a safe place for community groups to gather and hold their exhibitions and continue to engage with their heritage.

Canterbury Museum partners with a diverse range of national organisations, education providers, universities, government agencies, museums, businesses, and other stakeholders.

A provider of life-long learning

The Museum provides a range of education and public programmes, which deliver significant educational benefits and opportunities. In the 2018/19 financial year, almost 35,000 individuals (including over 17,000 school students) participated in Museum education programmes, with a further 30,000 people participating in a Museum public programme.

A research hub

Canterbury Museum's researchers engage in a number of national and international collaborations. In the 2018/19 financial year, the Museum's researchers produced 19 peer-reviewed papers that

were accepted for publication, peer reviewed or supervised 45 external articles or theses and made 15 conference presentations – all helping to raise Canterbury's international profile.

A dynamic Museum

With many stages of active development, Canterbury Museum has been a dynamic site, adapting and evolving with the city since the first of its many buildings opened in 1870 on the current site. Until the last major development in 1995, the Museum had responded to Christchurch's growth, changing needs and opportunities to accommodate and present new discoveries and historic treasures from Canterbury, New Zealand and overseas.

To achieve the building developments completed to date, and the planning for new developments, the Museum partners with a number of external specialist companies who are familiar with the requirements of new buildings, and in particular the care and maintenance of heritage buildings.

An employer and business partner

The Museum engages with a substantial number of partners and stakeholders in the community, which produces wide-scale social, cultural and economic benefits for the Canterbury region. It also plays an important role within the city as an employer of a team of 90 staff, all of whom bring a wealth of experience to their specialist roles within the Museum. The operational teams within the Museum are:

- **Building Operations** maintains the Museum's buildings, particularly the heritage buildings, according to an agreed Building Conservation Plan and Cyclical Building Maintenance Plan. The team also ensures the health and safety of all people within the Museum including visitors, staff and contractors.
- **Collections Inventory** is a project team established to inventory the Museum's entire collection over a number of years. This helps to facilitate collections access, loans, research and exhibitions.
- **Collections Registration** ensures the ongoing preservation of, and access to, the Museum's collections by maintaining the collections database and data standards, managing collection stores and the movement of collection items.
- **Communications & Marketing** maximises public and stakeholder awareness and support of the Museum by developing and ensuring effective channels of communication with all stakeholders, and disseminating information about Museum exhibitions, collections, services and activities.
- **Curatorial** develops and curates the Museum's collections, contributing to the exhibitions and public programmes, and sharing research through published articles and being a centre of research excellence.
- **Customer Experience & Education** ensures the provision of outstanding customer service to all Museum visitors. Education makes knowledge, information and ideas freely available to our visitors through organised educational learning, and also through providing public programmes.
- **Exhibitions** develops and delivers an exciting programme of special exhibitions sourced from both the Museum's collections and also from the national and international markets, while also maintaining existing galleries to a high standard.
- **Finance & IT Services** provides financial and IT support for the Museum and is responsible for staff learning and development requirements across all Museum teams.
- **Projects** ensures the Museum follows a best practice project methodology, provides project management support to all staff, undertakes strategic projects, maintains policies and procedures and supports other Canterbury regional museums.
- **Protective Services** has responsibility for the Museum's daily security functions, undertakes security planning for all public functions and events, oversees the Museum's emergency response system and promotes risk assessment processes.
- **Volunteers** are a valuable resource to the Museum through their contribution in both time and expert knowledge. This enables many projects to be undertaken which would not otherwise be able to be achieved without their support.

3.0 STAGES OF GROWTH OF CANTERBURY MUSEUM

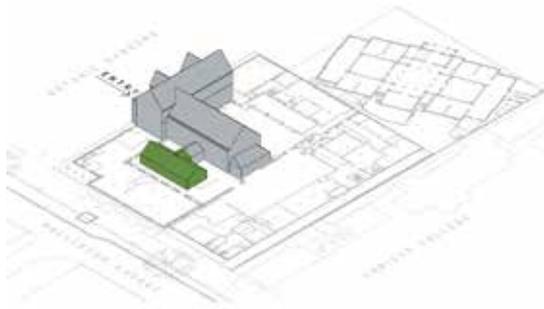
Canterbury Museum comprises a complex of seven separate buildings and numerous other smaller additions and alterations constructed over 150 years, together with the adjacent Robert McDougall Gallery. The following summarises the key building developments over this time period.



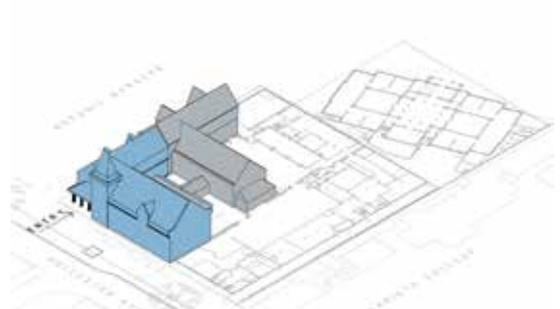
1870 - Moutfort



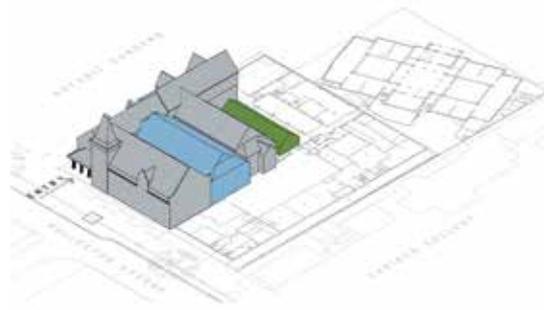
1872 - Moutfort



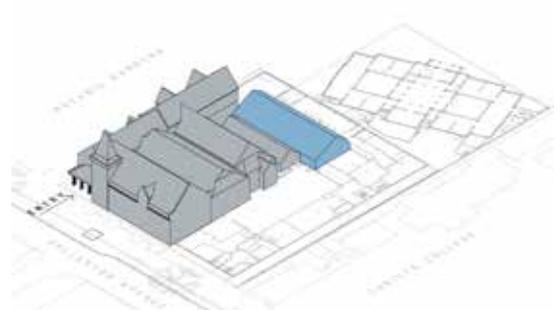
1874 - Whare Whakairo



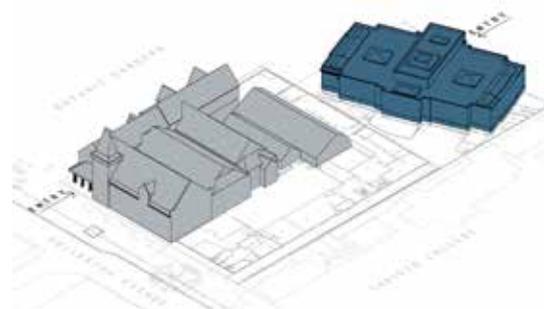
1877 / 1878 - Moutfort



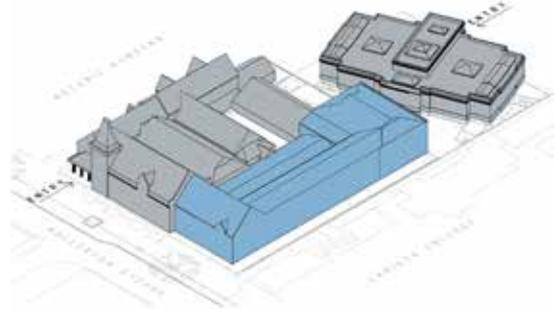
1882 - Moutfort & relocated Whare Whakairo



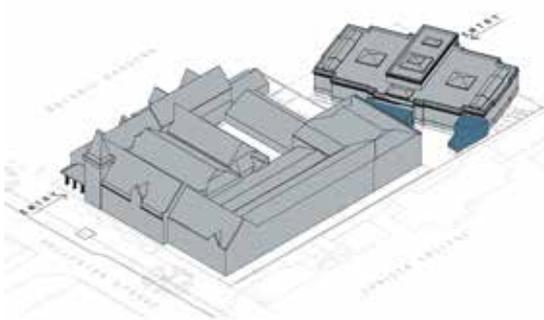
1910 - Addition



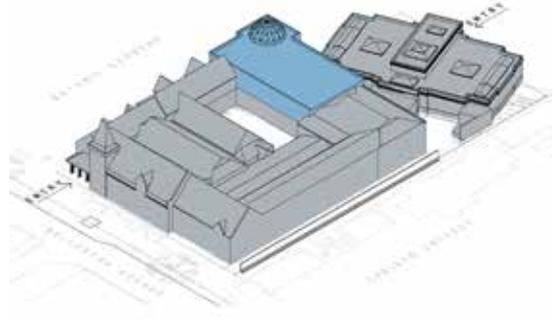
1932 - Robert McDougall Gallery



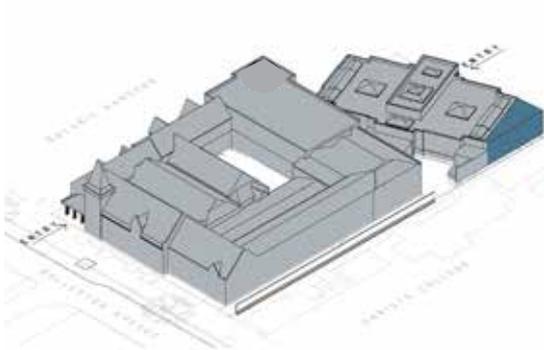
1958 - Centennial Wing



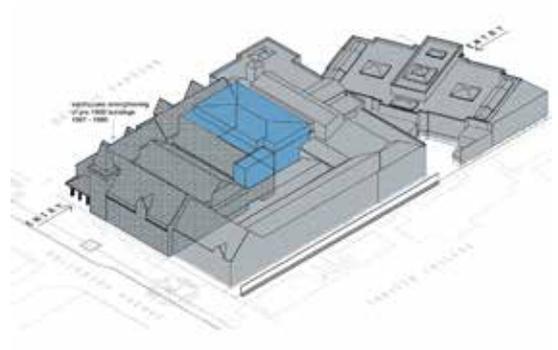
1962 - Additions to RMG



1977 - Roger Duff Wing



1982 - Canaday Wing to RMG



1995 - Garden Court & Seismic Strengthening

4.0 SITE & LEGAL

Canterbury Museum is governed under the Canterbury Museum Trust Board Act, 1993.

The Robert McDougall Gallery at Canterbury Museum is governed under the Christchurch City Council (Robert McDougall Gallery) Land Act, 2003

The legal descriptions of the two sites are;
 Canterbury Museum; Pt Res 25, SO 6610 area 4995m²
 Robert McDougall Art Gallery; Lot 1 DP45580 area 2216m²

A legal easement exists along the northern side of the Museum boundary.



5.0 CONTEXT AND NEIGHBOURHOOD

The Canterbury Museum and Robert McDougall buildings form part of one of the Central City's most recognised and valued neighbourhoods, the Cultural Precinct of Christchurch city. Together with Christ's College and the Arts Centre they present an important and attractive streetscape of heritage buildings, complemented by the open space and landscaping of the Botanic Gardens, Christ's College, Hagley Park, the hospital grounds and the Avon River. These all rest on pre-European sites important to Māori; Puāri Pa, Ōtākaro Waiwhetū & Waipara springs.

Redevelopment of a working Museum must ensure a positive relationship with its immediate neighbours and enhance this relationship. The most important are the Botanic Gardens, Christ's College, the Arts Centre, and the way the Museum relates to Rolleston Avenue and Worcester Boulevard.

An understanding of the surrounding environment, this history of the site and its influence on the way this building works will have a profound effect on any development and requires continuous consideration throughout the implementation of any changes. Consultation with the neighbours will be important within this process.

Christ's College - Due to the close proximity of Christ's College buildings to the north, views to and from both complexes are important. Opportunities should be reviewed to open glimpses of Christ's College and develop a modelling between these buildings, which doesn't currently exist.

Botanic Gardens - From the south and west the Museum and Robert McDougall Gallery are buildings within the Botanic Gardens. Their relationship physically and visually with this important Christchurch visitor destination can be enhanced through the redevelopment of the Museum. Specific discussion shall be held in relation to the removal of the brick public toilet block adjacent the main entrance to the McDougall and relocation of this public facility within the redeveloped complex (as referenced in the CCC Botanic Gardens Masterplan)

Worcester Boulevard - The predominant wider entrance experience for the majority of visitors is via Worcester Boulevard and the Arts Centre and appropriate consideration should be given to the introduction to the Museum from these perspectives. Located at the opposite end of Worcester Boulevard from the Museum, an important historic relationship exists between ChristChurch Cathedral and the east elevation of the Mountfort Museum building.

Rolleston Avenue - The Rolleston Avenue frontage provides a critical introduction to the Museum itself and any redevelopment should include consultation with the local authorities and the Botanic Gardens to enhance this space as the entry threshold to Canterbury Museum. Within this consultation attention should be given to the resolution of the issue of visitor coach parking immediately outside of the Museum frontage and creating a positive urban space.

Canterbury Museum also operates **Quake City** located nearby on Durham Street and will operate **Ravenscar House** (currently under construction) which is located directly opposite the Museum on Rolleston Avenue.



figure 5.1 Canterbury Museum within the Cultural Precinct

6.0 CULTURAL NARRATIVE

The Museum Project shall be unpinned by the Canterbury Museum Cultural Narrative, developed by Puamiria Parata-Goodall, September 2019. This section of the Brief is a summary of key aspects of the Cultural Narrative but the complete Cultural Narrative shall be referred to during the project design phases.

The Cultural Narrative weaves together the cultural values, traditions and history of Ngāi Tūāhuriri. It recognizes the rights and guarantees provided under the Treaty of Waitangi and respects the mana of the local hapū, iwi and all peoples now resident in this land.

The purpose of the Canterbury Museum Cultural Narrative is to do the following;

- Provide an insight into the local history and cultural mindset.
- Highlight opportunities for rebalancing the history of Christchurch.
- Encourage the opportunity for the Museum to consider how it might best think about its connection and engagement with the whenua, the people and their stories and the pre European history of this place.
- Provide a number of threads for the Museum to weave into the new Museum development project to recognise a shared history and an authentic bi-cultural approach based on the kawa and tikanga of mana whenua.

There are five core principles for urban design which drive the narrative, principles that are embedded in the cultural practices and understanding of Ngāi Tūāhuriri.

Whakapapa

Identity and connection to place

Mahinga kai

The knowledge and values associated with customary food-gathering places

Manaakitanga

The extension of charity, hospitality, reciprocity and respect to others

Mana motuhake

Being able to act with independence and autonomy – being ourselves in our places

Ture Wairua

Being able to exercise faith and spirituality

NGĀ PUNA WAI | The Springs

Central Christchurch is built upon a network of wetlands and springs. Within the immediate vicinity of the museum are springs, several with known names, others with names forgotten to history.

The name of the Christchurch Art Gallery recognizes the spring 'Waiwhetū', the artesian spring it rests upon. Waiwhetū is also the name of a tributary of Ōtākaro, the Avon River. Waipapa is the name of another main spring, often cited as being located in the vicinity of the museum and Hagley Park. Hagley Community College recognizes the spring in its name, as does the Botanic Gardens. Waipapa is also sometimes used to refer to Little Hagley Park.

Springs are very symbolic in Māori worldview. They are not only sources of sustenance for the whenua and people but symbolically are bearers of knowledge and wellbeing.

The Museum rests upon a spring. Whether placed on this spring by design or by mistake, it is important that the Museum acknowledge this connection to its landscape and water.

KO TAKU AO HURIHURI | My Changing World

Telling the stories of the ancestors falls to this generation, as has happened to previous generations. If we understand where we have come from then we can navigate forward into a world which recognizes and acknowledges our founding histories.

What does whakapapa have to do with Canterbury Museum?

There is always a story to be told. Whakapapa is all about story, about the layering of information. Whakapapa is about identity. Story can be told in the patterning and design work, placement of that pattern and its interpretation. It can be told in the materials, in the form of the landscape, in the colour palette and integrated art. It can be told in the exhibitions and displays. It can be told in the way the Museum team views and interacts with the world at large. Whakapapa is about a way of being and understanding.

Whakapapa can be conveyed through the spatial layout and relationship of functions within facilities. The considerations of tapu and its relationship to noa are important, as are the sight lines from entrances and the recognition of thresholds.

For Teone, water played a significant part in the creation and maintenance of whakapapa. The Museum is surrounded by springs. Te Puna o Waiwhetū, Te Māra Huaota o Waipapa both recognize two of the named springs. The significance of puna (springs) in Māori worldview is connected to mahinga kai (resource and food gathering practices) and knowledge. Puna are quite literally, fountains of knowledge. The environment, the elements and the resources provide the knowledge. The knowledge comes from Ranginui, Papatūānuku me ā rāua tamariki mokopuna – Ranginui and Papatūānuku and their descendants.

The Treaty of Waitangi and the Ngāi Tahu Settlement Claim consumed generations of Ngāi Tahu, Ngāti Māmoe and Waitaha. The whakatauki 'he mahi kai hoaka, he mahi kai takata' refers to this ongoing battle. The phrase means 'much like the sandstone eats away at the precious pounamu, so too does work eat away at man.' It is more than appropriate that Ngāi Tahu and Ngāi Tūāhuriri are able to share this story, the story of the nine tall trees of Ngāi Tahu and the many stories of the early life in Ngā Pākihi Whakatekateka o Waitaha and Te Pātaka o Rākaihautū in the redeveloped museum. It is their story to tell as the active participant.

MAHINGA KAI | Working Our Resources

Mahinga kai is more than just the harvesting of food. It includes the nourishment and care of the environment and ecosystem to prepare and sustain harvest. It is a mechanism that drives formal and informal economy. Most importantly, mahinga kai is about tribal identity and pride.

How can Canterbury Museum engage with mahinga kai?

Ōtākaro is a significant source of mahinga kai. Mahinga kai includes not only the act and knowledge of gathering food, it includes the preparation of land and water to sustain the practice of mahinga kai, the gathering of building materials, cultural material for use as rongoā (medicines), mahi raranga (weaving), mahi toi (art), mōkihi (reed canoes), kākahu (clothing) and household implements.

Ensuring the minimalization of contaminants released into the waterways, particularly overflow discharge, stormwater and wastewater, would go a long way in helping to clean up the water and encourage the revitalisation of mahinga kai. The regeneration of native eco sourced plantings in the landscape and use of swales and wetlands to polish the water would also help.

There are lots of creative ways to celebrate the myriad of mahinga kai species within close proximity of the museum and also to re-learn and re-imagine the various traditional practices of food gathering, canoe building, wharerau construction, weaving of nets, carving of hooks and preparation of tools to name a few examples. Some of this can be done through exhibitions and future joint programming with the Botanic Gardens.

When Henare Rakihia Tau lodged the formal claim in 1986, the evidence was presented as the 'Nine Tall Trees'; recognising the eight major land purchases and mahinga kai. It is significant that mahinga kai is listed as its own separate kaupapa. Being able to tell the Ngāi Tahu story by referencing the nine tall trees will help to highlight this.

MANAAKITANGA | Being A Good Host

Manaakitanga, mahinga kai and whakapapa are intrinsically linked. Having the ability to welcome and provide hospitality to visitors speaks to the wealth and health of the whānau and hapū. This wealth is not measured by a fiscal scale but rather by the hapū's ability to demonstrate cultural confidence, the quality and quantity of local resources, and their ability to share without expectation of reward or payment.

WHAKAMANUHIRI | The Ritual Of Welcome

For Ngāi Tūāhuriri, whakamanuhiri is the term used to describe the rituals of welcome. The generally accepted forms of welcome are pōwhiri, mihi whakatau and mihimihi. The 3 rituals range from the very formal welcome on the marae to the informal greetings of individuals to individuals in various forums.

What does manaakitanga have to do with the Museum?

It is important that the Museum consider how its guests and visitors will be welcomed into the museum and how they will be hosted once they are in the museum. There are tikanga associated with whakamanuhiri, thresholds and spatial layout that should be recognised and represented in the redeveloped museum.

Significant consideration and consultation will need to be undertaken regarding the re-erection and appropriate placement, based on kawa and tikanga, of Hau Te Ana Nui o Tangaroa. There is a significant whakapapa relationship between Te Whānau a Ruataupare, Te Aitanga a Hauiti and Ngāi Tūāhuriri which will need to be carefully navigated and negotiated through.

MANA MOTUHAKE | Our Independence

Mana motuhake provides for the rights of tribal groups to maintain and assert their chieftainship, authority and independence over their resources, their traditions and their practices. Mana motuhake builds upon the foundations of our whakapapa and gives vitality and breath to our existence.

How can the Museum give effect to mana motuhake?

Recognition of the bi-cultural history of the land and the traditions and knowledge of its indigenous people helps to create a strong foundation for the museum. This is the perfect opportunity for the museum to take the lead to tell our bicultural story and educate the future generations about some of the many bicultural layers of history, technology, science, arts and heritage.

Consideration of the inclusion of the bi-cultural story throughout the museum, location of the taonga Māori galleries and the ceremonial space, wayfinding and increased use of te reo Māori are examples of ways of giving effect to mana motuhake. The key to recognizing mana motuhake will be to ensure consultation with mana whenua.

TURE WAIRUA | Spirituality, Religion And Faith

Spirituality, religion and faith are expressions of ture wairua. Although different, all encapsulate elements of love, compassion, reflection and awakening. Ture wairua is ultimately about how one interacts with the world and understands it.

How can the Museum engage with Ture Wairua?

Tapu and noa or sacred and non-sacred govern tikanga and set the framework for how man will interact with the world. All iwi ascribe to some form of tapu and noa. Tapu is said to reside within the whare tangata (womb) and is encompassed in the pō (the darkness). The above passage provided by Judith Binney acknowledges this and explains why it is an older woman who usually removes the tapu. Puhi or young women who are pre-menstrual are also used in tapu lifting ceremonies. However, often it is preferred that it is an older woman.

If the museum redevelopment were being built as part of a traditional pā there would be considerable protocols and restrictions put into place to ensure the maintenance of tapu and noa.

Within the spatial layout of the museum tapu and noa play a significant role. It should be taken into consideration when deciding orientation of entrances, layout of services, placement of sacred and non-sacred space e.g. food areas in relation to toilets and the wāhi tapu or crypt. The purposeful design of water facilities close to sacred areas to allow for ritual cleansing, the placement of the wāhi tapu and the designing of unambiguous furniture are important detail to work through.

The incorporation of karakia and whakamoemiti (prayers) as a normal part of ceremony and exhibitions will help to remind visitors and staff alike about tapu and noa and the importance of acknowledging a cultural practice.

Understanding and taking into consideration the cultural practices and beliefs of Ngāi Tūāhuriri will bring a richness and depth to the redevelopment project.

KO TE HAU MUA, KO TE HAU MURI | The Gathering Of Knowledge

Our tohunga lived in a world driven by an understanding of the intrinsic relationship between the natural world and man. They understood that nothing existed in isolation. They knew that the wind/breath was born of the first primordial parents – Ranginui and Pōkoharuatēpō. That first human was created by Tānemahuta. Some believed that all life emerged from water. All believed that all things in life and nature were connected and for man to be well, nature and the gods had to be made well. They understood that whakapapa was the basis of our being.

TE ANGA WHAKAMUA | The Steps Forward

Cultural narratives are windows into an alternate worldview. For Ngāi Tūāhuriri and Ngāi Tahu, whakapapa, mana motuhake, manaakitanga, mahinga kai and ture wairua can only be truly understood when seen and experienced. The earthquake provided the ultimate platform for the people of Christchurch to engage and learn more about a way of being that has existed in Ngāi Tahu and Māori communities for generations.

This narrative was written to provide cultural context and background from the perspective of mana whenua, Ngāi Tūāhuriri. The underlying narrative talks about the connection of land and water to people. It also begins to unpack the story of Ngāi Tahu's struggle to remain an equal in their own land.

The Museum is well placed to embrace and create its own unique expressions of a shared history. The distinctive Gothic Revival period of architecture already firmly places the Museum within a very European framework, the challenge now is how to incorporate into that strong cultural context, the culture of the indigenous people, in a way which complements and strengthens the Museum's unique identity.

Mana whenua seek the opportunity to work collaboratively to bring these stories back to the surface. Together to make a difference and build a strong bicultural whāriki on which to welcome and embrace diversity. Mana whenua envisions a world where there is a balance of visual cultural indicators and sense of cultural wellbeing.

7.0 HERITAGE

Canterbury Museum is listed as a Category 1 Place by Heritage New Zealand Pouhere Taonga. The nineteenth century buildings and their setting are listed as "highly significant" in the Christchurch City Council District Plan, while the Rolleston Avenue facade of the Centennial Wing and the south and west facades of the Roger Duff Wing and their settings are listed as "significant".

The present Museum nineteenth century heritage buildings constructed between 1870 -1882 have been subject to a great deal of change, largely due to seismic strengthening of the heritage fabric in the early 1990's. This has resulted in the removal of and covering of important heritage elements, original galleries changing use and courtyards in-filled.

The Robert McDougall Gallery building is listed as a Category 1 Place by Heritage New Zealand Pouhere Taonga and is included in the schedule of historic buildings within the Christchurch District Plan. The McDougall comprises an original building constructed in the 1930's which has been added to over subsequent years.

Any Museum redevelopment shall not diminish either of the buildings cultural value as outlined within the building conservation plans of the respective buildings. It should endeavour to correct some inappropriate alterations to historic fabric where possible and practicable and allow for some conservation works to be incorporated. The redevelopment shall look at opportunities to enhance and celebrate heritage by the unveiling of heritage fabric which is currently hidden and this may include; original stone walls, original timber roof trusses & views of the roof of the Robert McDougall Gallery.

The redevelopment on the Museum buildings should be discussed at an early stage with Heritage New Zealand and the Christchurch City Council heritage team, to ensure that the work is generally in accordance with the principles and policies as set down in the conservation plans and the requirements of the ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value. Appropriate standards should be maintained when work is carried out to the buildings. Records should be kept of any changes that might occur to the buildings. This is particularly important in areas where heritage fabric is being removed or modified.

A Heritage / Conservation Architect shall be engaged as part of the consultant design team to provide input during all stages of the redevelopment process. Any deviation from the Building Conservation Plan's policies and recommendations shall be clearly noted for review by the Board.

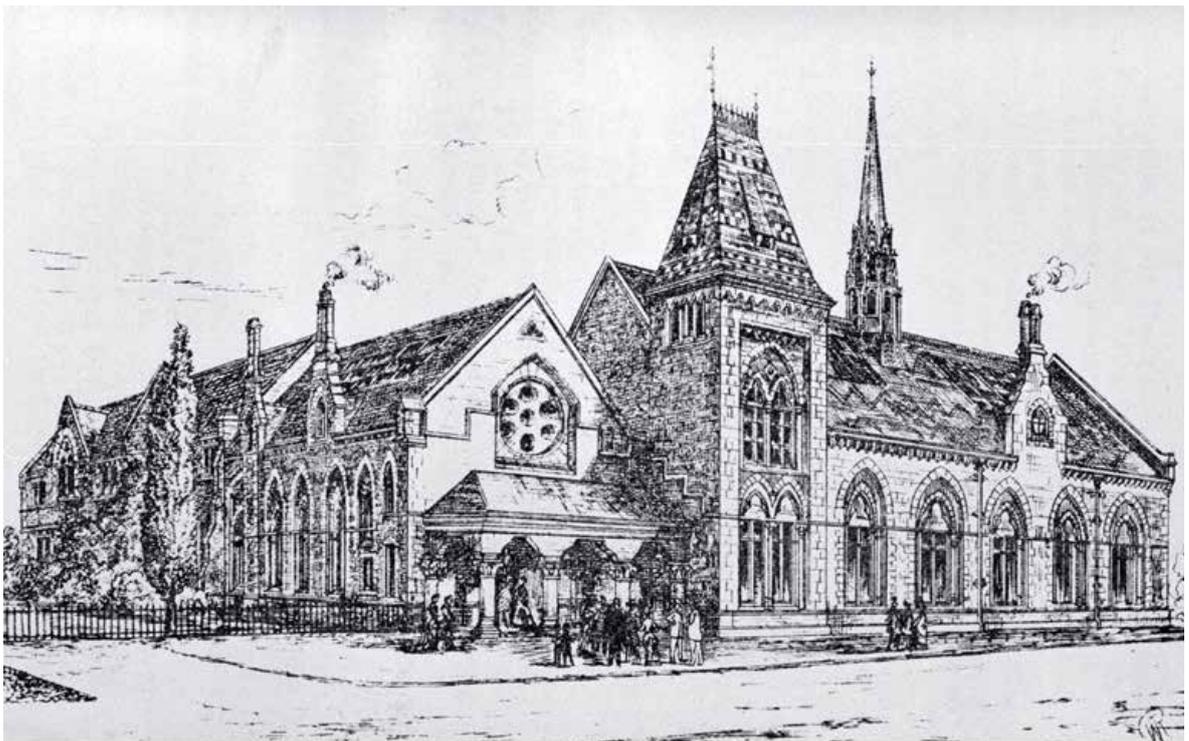


figure 7.1 The Mountfort buildings, c1887

7.1 BUILDING CONSERVATION PLANS

Separate Building Conservation Plans for Canterbury Museum (2019) and Robert McDougall Gallery (draft 2014) have been prepared for these buildings by DPA Architects, in consultation with the Museum Board, Heritage New Zealand and the heritage advisors of the Christchurch City Council.

The Conservation Plans are intended to provide guidance for the general management of the buildings as well as enabling future planning and redevelopment work. These documents shall be important guidance documents for the redevelopment.

A key part of the Museum Conservation Plan is the Statement of Significance.

STATEMENT OF SIGNIFICANCE: CANTERBURY MUSEUM

The Canterbury Museum is of national significance for its finely executed Gothic Revival architecture and its historic and continuing function as a major purpose-built museum. The Museum is of significance for its role in housing taonga and retains community connections with Canterbury's past.

The prominent location of the Canterbury Museum at the end of Worcester Boulevard, with its tower acknowledging the spire of the ChristChurch Cathedral in the square and its grey stone and elegant Gothic Revival detailing matching the buildings across Rolleston Avenue, make it a central pivot of a visually unified townscape.

National Significance

The Museum is nationally significant because of its ongoing operation as a major cultural institution on the site, since 1870.

The nineteenth century buildings at Canterbury Museum are of national **architectural and aesthetic** significance as outstanding examples of the Gothic Revival style as designed by the pre-eminent nineteenth century architect Benjamin Woolfield Mountfort, the proponent of this style in New Zealand between 1850-98. The Mountfort designed buildings embody a localised form of Gothic architecture which unites the Gothic Revival style from Great Britain and locally sourced New Zealand materials, creating an architectural expression that is distinct from the language of Gothic Revival architecture in Great Britain. Mountfort is regarded as one of the most important nineteenth century architects in New Zealand, and his Canterbury Museum buildings as amongst his finest works.

The Mountfort buildings are of national **contextual** significance for their major contribution to the wider Gothic Revival precinct within Christchurch which creates an identifying architectural style for the city.

The Canterbury Museum is of national **historical and social** significance for its association with the distinguished geologist Sir Julius von Hasst, the Museum's founder and first director and Benjamin Mountfort as the architect of the complex of nineteenth century buildings.

Local Significance

The Mountfort buildings, constructed over a period of 17 years, are of local **technological and craftsmanship** significance demonstrating the latest developments in Victorian museum design and advancements in building technology. The large open span achieved in the gallery of the 1882 building is particularly significant. The fine masonry used on all of the Mountfort buildings and, in particular, the 1878 entry porch demonstrates fine craftsmanship.

The Canterbury Museum has particular local **cultural** significance to the communities of Christchurch and Canterbury as an important reference point in community identity. This sense of enduring and contemporary connection is strongly expressed today in an appreciation of elements of the Museum buildings and in its role and functions. The Canterbury Museum is of local **cultural** significance as a symbol of continuity, familiarity and survival, holding safe the stories, objects and knowledge that are regarded as community treasures.

Canterbury Museum is of local **cultural and spiritual** significance to many tangata whenua for the taonga held within the Museum, and for the relationships between people, objects and stories facilitated by the Museum's existence, values and roles which have existed since its inception.

The Canterbury Museum is held in high community esteem for its **aesthetic** qualities derived primarily from the nineteenth century buildings and its contextual setting. It is a cultural and physical landmark with its position on a major city axis symbolising its important role as a cultural guardian.

The Canterbury Museum is of local **contextual** significance as an outstanding feature within the wider arts and education precinct, contributing to both these precincts and helping to define the streetscapes of both Worcester Boulevard and Rolleston Avenue. Through its strong visual relationship with Christchurch Cathedral, the Canterbury Museum contributes to the significance of the wider city centre. Its relationship to the Botanic Gardens is also significant.

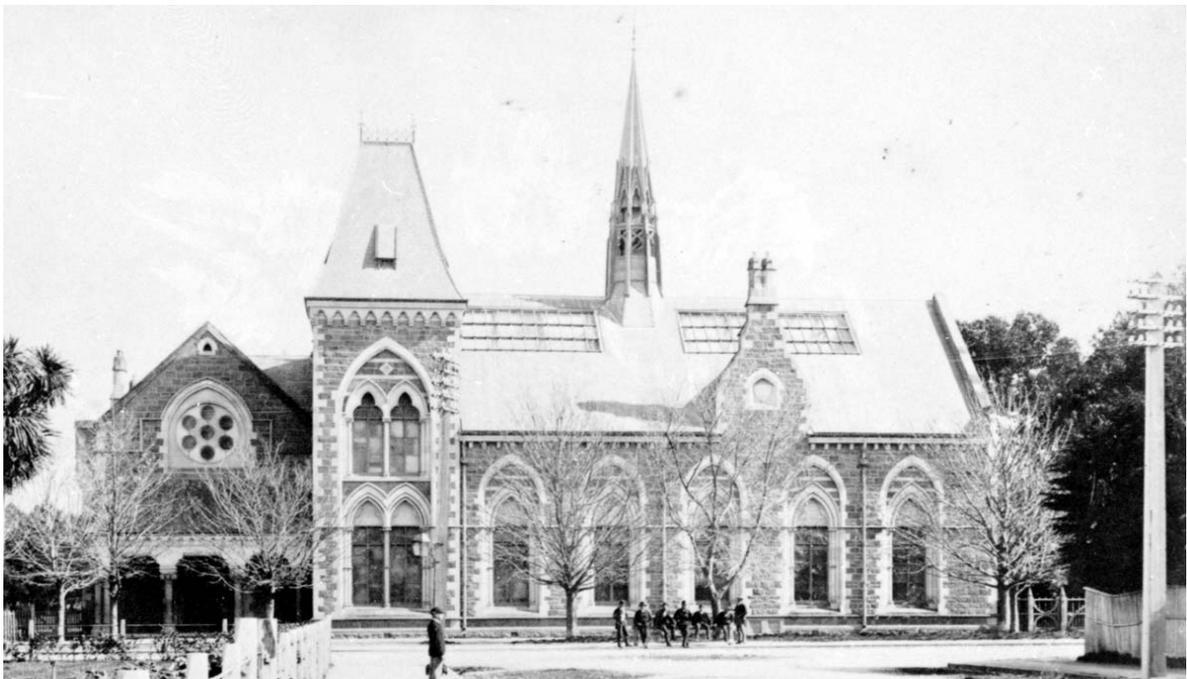


figure 7.2 Canterbury Museum, c1887

STATEMENT OF SIGNIFICANCE: ROBERT MCDUGALL GALLERY

In the Building Conservation Plan the Robert McDougall Gallery is a place of considerable significance in Christchurch because of the following;

- The building's association with Robert McDougall, James Jamieson and their philanthropic donations which marked the foundation of the gallery;
- Its association with the development of the arts scene in Christchurch and with the Christchurch Art Society;
- Its design and character as an Early Modern Neo-Classical art gallery;
- A rare example of a permanent purpose-built regional art gallery;
- Its technical significance as an example of a roof lighting system specially designed by Samuel Hurst Seager;
- Its intact and largely original condition;
- Its setting as a landmark within the Christchurch Botanic Gardens;
- It combines with Christ's College and the Canterbury Museum to form a significant group of historic buildings that are also associated with the Botanic Gardens.

7.2 HERITAGE PROTECTION

Relevant documents and legislation which will need to inform any redevelopment of Canterbury Museum are;

HERITAGE NEW ZEALAND POUHERE TAONGA

Canterbury Museum is listed as a Category 1 Place by the Heritage New Zealand Pouhere Taonga Act 2014, under the list number 290. The listing appears to make no distinction in the value of the component parts of the Museum. Category 1 Historic Places are defined as to places of special or

outstanding historical or cultural heritage significance or value. The Board of New Zealand Heritage Pouhere Taonga agreed in December 2013, that the status of the Canterbury Museum entry remains open and is to be progressed in conjunction after completion of the Conservation Plan for the whole site - which is nearly finalised.

The Robert McDougall Gallery building is listed as a Category 1 Place by the Heritage New Zealand Pouhere Taonga Act 2014, under the list number 303.

CHRISTCHURCH DISTRICT PLAN

In the Christchurch District Plan , the Canterbury Museum (1870-1882 buildings) and setting are identified as being “highly significant” and are scheduled as Category 1 items. The later parts of the Museum being the Roger Duff Wing (south & west facades and setting) and the Centennial Wing (east facade and setting) are identified as being “significant” and are listed as Category 2 items in the Plan.

The relevant objectives, policies and rules of the City Plan shall be carefully considered during the design development stages of the redevelopment which shall comply with these wherever practically possible. The extent of any non-compliant aspect of a proposed design shall be kept to a minimum.

ICOMOS NEW ZEALAND

ICOMOS stands for the International Council for Monuments and Sites and is a world-wide body dedicated to the protection of heritage. In 1993 ICOMOS New Zealand was established with its own Charter (revised 2010) and that continues to be the principle guiding document for heritage conservation in this country.

As a way of maintaining the integrity of the place all work should conform to principles set out in the ICOMOS New Zealand Charter (revised 2010).

RESOURCE MANAGEMENT ACT

The Resource Management Act of 1991 is the formal legislation that manages the environment. Section 6 of the RMA refers to Matters of National Importance. The RMA Amendment Act 2003 added “the protection of historic heritage from inappropriate subdivision, use and development” to the list of matters of national importance.

As noted, the Canterbury Museum is listed as a Category 1 historic place by Heritage New Zealand Pouhere Taonga. The nineteenth century buildings are listed in the Christchurch District Plan as “highly significant” historic heritage items while sections of the later parts of the Museum are listed as being “significant”. The interiors are currently not included in the District Plan listing.

It is highly likely that a Resource Consent will be required for any redevelopment of the Museum as it is likely there will need to be modification to the exterior envelope. It is noted that under the Christchurch District Plan that the interior of the buildings are not currently protected and therefore changes can be made to the interior without the need for a Resource Consent.

BUILDING ACT 2004

The Building Act is the legislative framework to comply with the New Zealand Building Code with the primary purpose that buildings are safe & sanitary. There are currently aspects of the existing building, including fire & accessibility issues, which will need to be rectified and incorporated into any redevelopment.

BUILDING CONDITION & CYCLICAL BUILDING MAINTENANCE REPORTS

Separate Building Condition Reports for both the Museum and McDougall buildings have been completed by Fulton Ross Team Architecture in December 2009. Essential remedial work to the exterior of the heritage buildings has been identified to protect these buildings for future generations. The redevelopment project shall include the completion of these repair works by appropriately qualified tradesman under the supervision of a conservation architect.

A Cyclical Building Maintenance Plan has also been completed to ensure on-going protection and retention of the Canterbury Museum and McDougall heritage buildings.

7.3 SPECIFIC WORK TO HERITAGE BUILDINGS

PRE-1900 MUSEUM BUILDINGS

The nineteenth century Museum buildings form an important part of the Museum and offer an opportunity to inform the history and development of Canterbury Museum. Adopting conclusions from the Skelton Report and from the experience of the previous revitalisation project, intervention work to the nineteenth century buildings shall be kept to a minimum. Along with this the existing entrance to the Museum shall be retained as a public entrance to Canterbury Museum.

The predominant original heritage elements of Canterbury Museum are experienced by the public on the southern and eastern exterior elevations of the 1872 and 1877 Mountfort buildings. The redevelopment offers an opportunity to enhance the conservation and integrity of these important buildings.

The project should look to reinstate or reconstruct original exterior heritage elements on the nineteenth century Museum buildings, including;

- the fleche on top the 1877 wing which aligns with Worcester Boulevard and ChristChurch Cathedral
- chimneys to the 1877 and 1872 wings.
- repair of building fabric as outlined in the Building Condition Report

The intervention of seismic strengthening in the nineteenth century buildings during the early 1990's resulted in a lack of original heritage fabric remaining within the interior of these buildings. Although limited opportunities now exist, during the fitout of these gallery spaces into long-term flexible exhibition spaces and creation of improved circulation within the Museum complex, opportunities shall be explored to enhance and expose original heritage elements.

Existing heritage gallery spaces shall progressively be upgraded over time to long-term flexible exhibition spaces, with work to include; installation of air conditioning system, electrical upgrade (re-wiring), general refurbishment & the installation of a raised access floor.

The option for an additional public entrance to the Museum in the Centennial Wing shall be explored to facilitate the resolution of the current poor visitor entrance and circulation experience.

ROBERT MCDUGALL GALLERY AT CANTERBURY MUSEUM

The decision to proceed with a new Art Gallery in Christchurch enabled the Museum to consider the introduction of the Robert McDougall Art Gallery space with the Canterbury Museum. The integration and connection of this currently discrete building with the Museum building complex forms part of the redevelopment project.

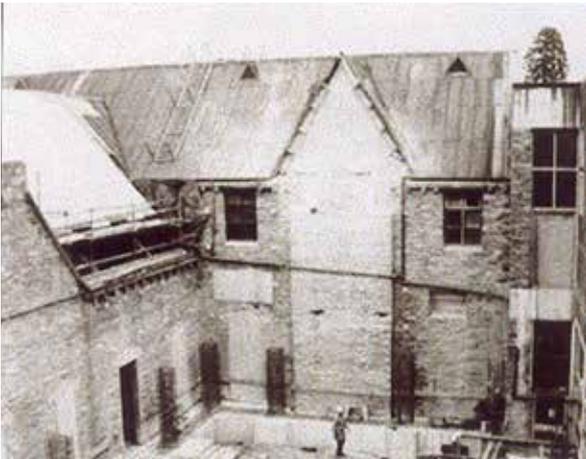
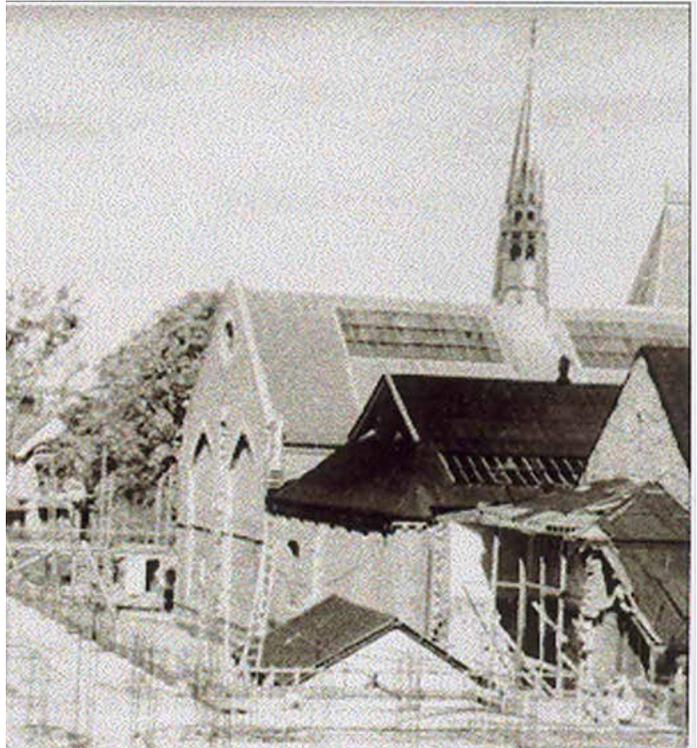
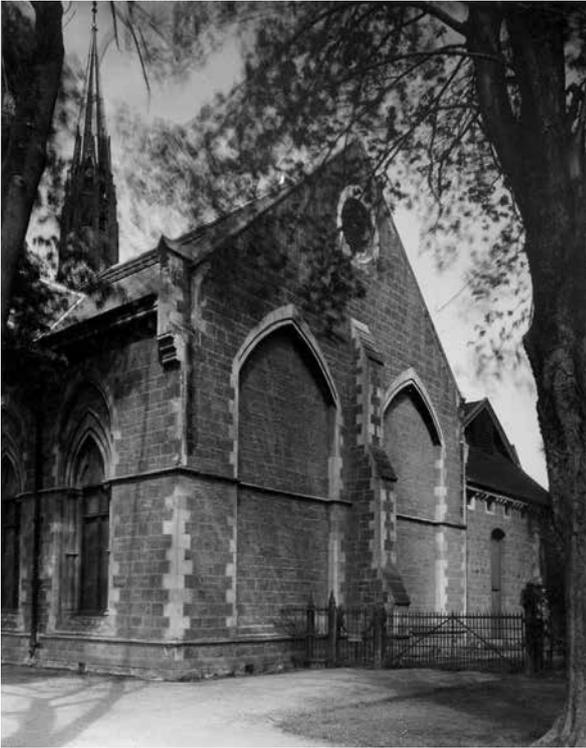
The McDougall allows the Museum expansion in area for exhibition and collection storage. The building is also deficient in some practical aspects in respect to visitor facilities (for example the current building has no access to toilets for visitors). The redevelopment shall address improving the visitor facilities, either within the building itself or immediately adjacent.

The Robert McDougall Gallery building will be returned, as far as practical, to its original form and design. Since it was built, various additions and alterations have been made, some of which will be removed as part of uncovering original heritage fabric.

Work required to the McDougall is likely to include;

- Earthquake strengthening in association with the building owners, the Christchurch City Council.
- Building services upgrade
- Linkage into the Museum complex at both the basement and exhibition floor levels.
- Improvement of visitor facilities
- Repair of heritage fabric

All amendments shall be undertaken with reference to the Building Conservation Plan, with particular attention to retention and enhancement of original heritage elements.



figures 7.3 - 7.7 Many opportunities exist with a redevelopment project to rediscover and celebrate original heritage fabric and views which are currently hidden from public view

8.0 EXISTING DEFICIENCIES FOR RESOLUTION

The following identifies present deficiencies with the current Museum buildings and operations;

8.1 NZ BUILDING CODE COMPLIANCE

Fire Safety

The building does not meet the current New Zealand Building Code for fire safety. The NZBC requirements in relation to fire were also revised and came into force in April 2013, which is likely to have additional compliance requirements over the previous code. A comprehensive fire review of the building is currently in progress.

Building H&S / exit routes

In emergencies, exit routes are congested and at times the Museum must monitor visitor occupancy numbers to ensure it does not exceed current visitor capacity numbers for fire regulations.

Accessibility

Parts of the existing building are inaccessible and therefore do not meet the current New Zealand Building Code for accessibility and the Museum's aspirations for Universal Access Design. This cannot be easily rectified.

8.2 BUILDING ENVELOPE

Roof Junctions & Flooding

Due to the staged development over a long period there is a plethora of roof forms which has resulted in disparate and poorly considered junctions and internal gutters between the various buildings. Problems have followed for the Museum with flooding and other on-going significant maintenance issues. There have also been issues with flooding in the existing basement, particularly around the entrance in the south-west corner.

Weather tightness problems

There are significant areas of exterior wall cladding which have weather-tightness issues and are coming to the end of the material's life and require replacement as soon as possible.

Asbestos

The roofing of the 1958 Centennial Building is almost entirely cementitious asbestos sheeting and is in a severe state of deterioration. Multiple repairs have been undertaken over recent years, but the material is brittle and will continue to deteriorate. The roofing requires full replacement as soon as possible.



There are still existing areas of the complex which require additional seismic strengthening and earthquake crack repairs to the roof, exterior cladding and internal walls / floors behind linings and fittings. There is also level and verticality variance post 2011 earthquake to walls and floors.

8.3 VISITOR EXPERIENCE

Entrance

There are congestion issues due to the size of the existing entrance way and the increasing volume of visitors.

Arrival / Orientation

Within the arrival foyer there is insufficient space for individuals or groups to assemble or to orientate themselves to the layout of the building. There is no obvious route to the upper floors or visually identifiable indication that a significant part of the building is located there.

There is a lack of appropriate ceremonial space.

Interior Circulation

The present circulation through the building lacks legibility and focus. There is no clear central area which leads to galleries, to act as a point of reference to which a visitor may return for orientation. There is no recognition of vertical circulation and that there is a significant upper exhibition level. There is inadequate lift access to upper levels, including no goods lift.

Customer Facilities

Canterbury Museum's current buildings and facilities are overstretched and ill-equipped to cope with the growing number of local, national and international visitors to the Museum.

Visitor numbers have almost doubled since the Museum's last building expansion in 1995 (the small Garden Court building). At that time visitor numbers totalled 390,000 per year, compared to the current 750,000+ per year.

Over the last decade visitor numbers have increased by almost 30% – from 580,000 to more than 750,000 per year. In the busy summer months the Museum regularly has more than 20,000 visitors a week, and at times more than 25,000. This leads to crowded and overheated Museum galleries (the Museum does not have the ability to control the environment), which has a negative impact on the visitor experience.

The current facilities are substandard – with one lift, limited toilets (no parents room), a small café, and a small retail shop. There are no specific areas set aside for public programmes, visitor gathering spaces, including a reception area.

These issues will only worsen as visitor numbers are expected to continue increasing in coming years.

Café

The café, whilst enjoying panoramic views of the Botanic Gardens, is not well located for public access and use.

8.4 COLLECTIONS

Collections

Many parts of the collection are inadequately housed in locations having no or little control over temperature or humidity and there is insufficient space for expanding the existing collection. The lack of on-site storage space is impeding operations, putting the collections at risk and constraining growth.

The Museum currently has an estimated 2.3 million items in its collection, valued at over \$1 billion. The various collections are stored in a piecemeal fashion throughout the building, in collection stores that are congested and that have poor environmental controls. This has resulted in deterioration of the Museum's collection.

Further, some of the larger items in the collection cannot easily be moved from their storage space,

as the store rooms have been built around them.

To combat the lack of storage space in the short term, the Museum has been forced to reduce the number of items it will accept into the collection each year.

8.5 EXHIBITIONS & PUBLIC PROGRAMMES

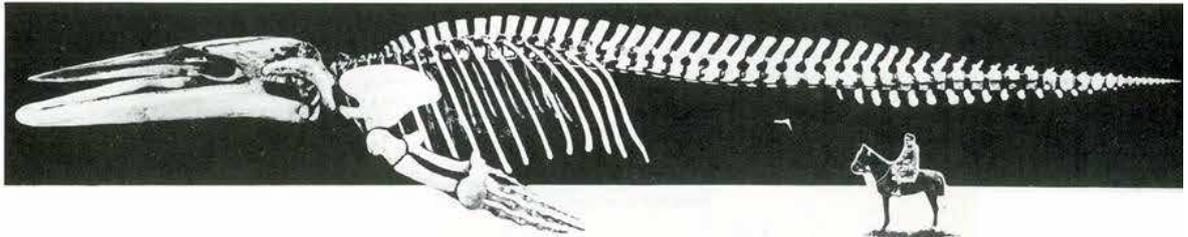
Special Exhibitions

The Special Exhibition area is poorly located, with no adjacent preparation space and is too small for some overseas exhibitions. When separated from the other exhibitions during pay-for special exhibitions it has a significant adverse impact on the circulation pattern of the ground floor.

Exhibitions

Space constraints mean only a very small fraction of the collections can be displayed and makes redevelopment of out-dated exhibitions more challenging. At present only 1% of the Museum's collection is on display at any one time because of the lack of gallery space. This means the Museum is currently unable to display its significant art collection.

Large, significant items in the collection such as the whare whakairo and blue whale skeleton cannot be displayed at all. Limited exhibition spaces also means that only a small number of items of Ngāi Tahu taonga and objects from the Antarctic collection can be displayed.



The Okarito blue whale skeleton (Photograph The Press, 1909).



Education / Public Programmes

The education room is small and not easily accessed, and there are no specific areas set aside for public programmes. There is nowhere visiting schools can eat their lunch during wet weather visits.

Environmental Control

There are inadequate environmental controls within spaces for the benefit of patrons and collections within exhibition spaces.

Back of House Areas

Many functions are split between different locations, which reduces efficiency. Internal spaces are poorly arranged causing operational difficulties.

Service Access

The existing loading bay and service access is very tight and difficult to use - particularly in relation to the delivery, setting up of and removal of special exhibitions.

8.6 GENERAL APPEARANCE

Exterior

Externally, because there are galleries beyond displaying collection items, many windows have been blacked out. This is particularly noticeable behind the Rolleston Avenue frontage. This results in a blank, cold and unapproachable appearance to the building as a whole and there is little connectivity or activation between the exterior and internal spaces along the Rolleston Avenue frontage.



Historic Appreciation

The exterior of the complex retains most of the original facades. Inside there is little appreciation of the separate buildings and original fabric.

Impression of the Interior Unattractive

Because the complex is formed of many relatively small spaces linked by small openings, the Museum as a whole has a somewhat gloomy and piecemeal interior.

9.0 PRINCIPLES UNDERPINNING REDEVELOPMENT

The Canterbury Museum Trust Board has adopted the following eleven principles to underpin any redevelopment project;

9.1 MAINTAIN PRESENCE ON SINGLE EXISTING CITY SITE

Aim for single city site solution whilst meeting remaining principles

Reasons

- Conserve primary significant heritage value of Museum being on site since 1870
- Operationally superior and more economically viable if everything on one site
- Maintain primary tourism attraction in the city centre
- Anchor the Cultural Precinct
- Able to incorporate an appropriate use of the Robert McDougall Gallery building

9.2 RESPECT HERITAGE VALUES

Respect built heritage, maintain and enhance heritage values according to Building Conservation Plans and ICOMOS Charter.

Reasons

- Canterbury Museum cares for its built heritage as it cares for the taonga within its walls
- The heritage protected buildings form an integral part of the 'Canterbury Museum story'
- Canterbury Museum is obligated to protect our heritage buildings under the Christchurch District Plan
- Canterbury Museum Heritage Buildings are recognised by the Heritage New Zealand Pouhere Taonga Act 2014
- Maintain original context - deliberately placed axially on Worcester Boulevard with ChristChurch Cathedral, with the Botanic Gardens and educational facilities (University now Arts Centre and Christ's College)

Notes

- Refer to the Building Conservation Plan policies and recommendations.

9.3 DESIGN WITHIN DISTRICT PLANNING RULES

Design within District Plan rules and tie development into wider urban planning context

Reasons

- Compliance with District Plan will make for a smooth consent process
- Protect the building and contents from damage caused by seismic events
- Show respect to rationale for height and visual plane requirements
- Complement city urban design aspirations of slowing traffic and enhancing pedestrian access and amenity in the cultural precinct

9.4 BASE ISOLATE THE BUILDINGS

Base isolate the buildings to 100% of the New Building Standard (NBS) for an IL3 building (buildings serving large crowds or holding contents valuable to the community).

Reasons

- To bring the buildings up to 100% NBS, base isolation is the only effective seismic protector of people, buildings and contents
- Base isolation is the recognised international industry standard and provides the most suitable form of protection of heritage and museum buildings and collections in active seismic regions
- Base isolation will provide the necessary resilience to significantly improve public safety, help protect the heritage buildings and help protect the Museum's heritage collections
- Other seismic strengthening options would provide significantly less protection of the building and its contents
- Without the protection afforded by base isolation the Museum is unable to adequately insure its building and collection for earthquake damage as the cost of premiums is prohibitive
- Without base isolation the Museum is unable to attract and host national and international temporary exhibitions containing valuable and vulnerable collection items

9.5 BI-CULTURAL BY DESIGN

Demonstrate commitment to bi-culturalism through new building design

Reasons

- We are a bicultural nation
- Acknowledgment of European expression of earlier built forms and now to be complemented with design incorporating Māori design or principles
- Interior design will also find expression of bi-culturalism and acknowledge multiculturalism of Canterbury
- The Cultural Narrative shall inform the building design

9.6 SAFE AND ACCESSIBLE BUILDINGS

Demonstrate the Museum's commitment to universal access and health and safety

Reasons

- Ensure equitable access for all
- Public and staff safety and comfort (expecting over a million visitors a year and 150 staff in the foreseeable future)
- Collection security and protection
- Ethical and statutory requirement

9.7 PROTECT AND CONSERVE COLLECTIONS

Provide international standard collections storage facilities for all collections

Reasons

- Statutory requirement of Canterbury Museum Trust Board Act 1993
- Appropriate kaitiakitanga for Canterbury's local, national and internationally important taonga
- Improve access to collection resource for exhibition and research purposes
- Ensure the preservation of collections long-term

9.8 VISITOR EXPERIENCE

Enable visitor access to the collections through a welcoming reception area that is respectful of traditional access points, gallery spaces and related visitor facilities that meet the expectations of over a million local, national and international museum visitors a year

Reasons

- Need to accommodate and orient large numbers of visitors coming independently or in large groups
- Recognise need to maintain traditional entrances of the Museum and Robert McDougall Gallery
- Need to provide modern visitor facilities capable of meeting the broad physical, intellectual, technological and language needs of locals and tourist alike
- Maintain access to much-loved community facility for local population
- Maintain relevance to audience, realise Museum vision and enable mission
- Acknowledge need to include well-loved exhibitions and themes with new content in a format that is contemporary and flexible but at the same time our style

9.9 ENVIRONMENTAL SUSTAINABILITY

Incorporate good environmental design which reduces reliance on non-renewable energy resources, secures our own energy supply if possible, enables passive environmental control, embraces principles of Crime Prevention through Environmental Design and improves future environmentally sound operability

Reasons

- Good corporate citizenship - setting an example
- If we can source our own energy we will minimise operational risk
- Economically sustainable as well as good for the environment
- Look at national / international best practice vs on-going costs of operating

9.10 LIFE EXPECTANCY AND FLEXIBILITY

Aim for a 50-year solution to Museum's needs incorporating as much flexibility as possible

Reasons

- Unlikely to have major capital investment for at least 50 years
- Reasonable time period for return-on-investment for a project of this cost size
- Fit-for-purpose for the expected growth in visitor numbers, number of staff and increase in collections
- New build and redeveloped spaces to be designed to maximise future flexibility as to their use

9.11 OPENNESS & TRANSPARENCY

Undertake redevelopment in as open and transparent a manner as possible

Reasons

- Meet the community's expectations
- Build public confidence in solutions proposed
- Create positive climate for fund-raising

10.0 VISION FOR A REDEVELOPED MUSEUM

The over-arching vision for a redeveloped Canterbury Museum is;

We want to maintain the 'familiar' much-loved quirky, intimate feel.

While we want to embrace the contemporary and the technology to enable access and interpretation we still want to keep it reasonably discrete – a tool rather than a draw card in itself.

We would like to increase the sense of discovery, surprise and never being quite sure what's around the corner.

We want to continue with a variety of styles in presentation of collections and stories.

International and domestic visitors should get a sense of Canterbury and ideally come away with an understanding of the South Island's unique history, identity and characteristics.

Local visitors should find the place relevant to them, enough familiarity to feel like home and yet open them up to a world beyond Canterbury.

The collections should be stored safely and securely with ease of access and movement around the buildings.

Staff should have the space and facilities to undertake all their work including international level research, exhibition development, education and public programmes.

Quake City and Ravenscar House will remain separate to the main Museum complex.



11.0 SPACE & FUNCTIONAL REQUIREMENTS

11.1 VISITOR EXPERIENCE

A key requirement of the development of Canterbury Museum is to provide clearly articulated circulation along with identifiable and accessible public exhibition spaces. The foyer space is to be of sufficient size to establish visitor introduction appropriate to this important building and its use. The entrance foyer shall enhance the uniqueness of the Canterbury Museum experience.

Special attention shall be given to the resolution of the existing issues around the deficiencies of the existing entrance, particularly given the potential increase in visitor numbers from 750,000 to 1 million patrons per annum. The existing entrance shall be maintained as a public entrance, but alternative options shall be explored to enhance access for the increasing number of visitors to 1 million and large groups. For education groups, options shall be considered to avoid congestion within the main entrance spaces.

For security of collections and enjoyment of the customer experience, staff and public circulation shall be made separate wherever possible.

Entrance

Visible and inviting. Able to deal with large numbers including school groups and coach groups. Includes an airlock for climate control and includes automatic doors for equitable access.

Signage easy for visitors to understand.

Opportunities to integrate the Museum's cultural narrative into the entry experience shall be considered e.g. mauri stone outside of the front entrance and / or use of traditional Māori entry makers.

Foyer and Circulation

Welcoming orientation space / foyer that is not cavernous nor intimidating, but works to handle different kinds of groups (school children / coach load). Access to other language, digital screening and other orientation formats. Meeting point for tours etc. Enough seating for people to wait for others in their party. Ability to insert possible security screening point at a later date.

The entrance and foyer should also consider ceremonial welcomes.

Good sized cloakroom area for secure storage of handbags through to hiking backpacks and prams/strollers. Special attention is required to accommodate school group bag storage – however this may be adjacent to a separate education group entrance.

Reception desk; needs to be capable of providing ticketing service for special exhibitions.

Small meeting room; 10 person multi-functional interface room / meeting space is required for collection viewing, i.e. public bringing items to the Museum and for public to view Museum collections. This could also double as a first aid room.

Entrances to galleries to be obvious, flow through spaces to be intuitive.

Between galleries there are to be rest areas & interstitial spaces to combat museum fatigue and orient the visitor. Natural light to be introduced wherever possible - at least in these spaces.

Dedicated visitor lifts appropriate to the number and needs of visitors in the Museum.

Food and Beverage

Food and beverage outlets are an important component of the modern museum visitor experience, particularly with larger Museum complexes like the Canterbury Museum. They are a place for visitors to pause, relax and recharge during a visit, thus extending the potential length and increasing the enjoyment of the Museum experience.

As recognised in the Skelton Report, the placement of the food & beverage facilities was an issue with the previous revitalisation project. Options for the positioning of food & beverage within the Museum complex shall be explored during the concept design process.

It is likely that two quality food and beverage outlets will be required - one family friendly style and one more upmarket. These are designed to drive longer visits by providing sustaining 'time out'.

Retail

Reference to the High Court decision and the Skelton Report needs to be considered with all commercial activities within the Museum redevelopment. All commercial activities (incl. F&B and retail) shall be ancillary to main Museum functions.

An allowance for additional retail space reflecting the potential 50% increase in visitor numbers shall be provided.

The retail flavour shall be funky, New Zealand, Kiwiana, arts and crafts, Museum memorabilia and further information about collections. Showcasing the best of New Zealand culture - not tourist tacky. To be off the foyer but not in the foyer.

If the building egress is through the retail space then consideration needs to occur on how to maintain egress after a seismic event

Events / Functions

Provide versatile spaces to allow to host events and functions. These may be held in the Museum entry space, McDougall centre court, auditorium / lecture theatre, classrooms or exhibition spaces (when not in exhibition mode).

Provide setdown space for food / catering preparation. This area should have benches for laying out food and room for a couple of large fridges, plus storage for cutlery, crockery and some beverages. This would be used as the main food prep / assembly area but ideally there would also be smaller food prep / layout areas adjacent to and serving the main catering spaces (Foyer, McDougall, Lecture Theatre).

Attention to access (particularly after hours) and operations requirements for function visitors and external catering will need to be considered in the proposed design. Food service spaces should remain separate and remote to areas of collections and exhibitions.

Auditorium for 200

Ideally flat floor with pull out raked seating. Technically savvy enough to make connections and televise anywhere in the world. Access from foyer/entry to enable secure use after hours. Green room with auditorium. Catering space adjacent. Chairs, lectern, function gear are all required.

Visitor Lounge

Comfortable lounge area for visitors wanting a little time out to combat museum fatigue. Have dedicated quiet space off this for special needs visitors who may have auditory / visual issues.

Toilets

Toilets to be located on each gallery level of the Museum, shall be generous in quality and size with user friendly parenting facilities. It is important to have some facilities close to main entry foyer. Allow for Male, Female and Unisex.

11.2 EXHIBITIONS

There are a number of long-term cornerstone exhibitions proposed for the Museum visitor experience, including;

- Antarctic Experience
- Blue Whale
- Discovery Centre
- Whare
- Paua Shell House
- Pounamu
- A Christchurch Street

In association with these are number of other galleries, some of which are already dedicated and treasured by visitors to Canterbury Museum and will be complemented by exhibitions which will

rotate more regularly to display selections of the Museum collections.

To enhance the Museum experience and reduce fatigue, a number of relaxation / green spaces shall be provided between galleries. These spaces shall accommodate seating, natural light and views wherever possible.

General

Gallery spaces to make the most of the space, e.g. heritage spaces to showcase the heritage.

All galleries to have;

- Wifi – fast speed
- Use of visitor personal electronic devices to help enhance the visitor experience by providing self-guiding / interactive explanations of museum exhibitions, eg the “O” around galleries like at MONA, Tasmania and the “wand” from CooperHewitt Museum in NYC
- Smartscreen/touchscreens
- Augmented reality enabled
- Film and sound
- Be designed with acoustics in mind
- Multiple Load points
- Secure space for multi-media components/servers etc
- Galleries able to be closed off with no or minimal impact on other galleries
- Galleries that have minimum door widths of 2.0m and a cherry picker can travel on floors without damage

SHORT-TERM SPECIAL EXHIBITIONS

A new enlarged, flexible Short-term Special Exhibitions space shall be provided which is large enough to take biggest international opportunities (3 every 2 years), but flexible to take lots of smaller locally produced and touring shows. It requires a high level of environmental control suitable for the strict requirements of travelling international exhibitions.

Allow for an overall net area of a minimum 600sqm; sub dividable with a movable wall system, into three spaces of 300sqm, 150sqm & 150sqm. To allow for up to three paid-for exhibitions to be able to be held concurrently each space shall have an independent entrance directly off a public circulation space. Allow for ticketing for pay-for exhibits to be issued either at main reception counter in entry foyer or at entrances to the short-term special exhibitions. Short-term special exhibition retail shall be included within exhibition space with ideally one staff member able to control both retail and admission.

The placement of the Short-term Special Exhibition space shall ensure that when there is restricted entry this shall not interrupt the circulation flow of the rest of the Museum complex and it is preferable that the location is close to the main entrance foyer. Preference is also for the location to be close to (ranked in high to low priority) storage space, loading bay, goods lift and workshop spaces.

The ceiling height to be a minimum of 4.5 metres and the ceiling shall include a grid of structural fixing points at 5m centres which will be suitable to hang items, banners, signage, etc. A raised accessible floor is to be provided for the reticulation of power and data with outlets on a 5m grid under the floor.

Separate store space required adjacent to contain large travelling exhibition crates (separate to general display case / props store). Setup of exhibitions within this space shall not conflict with the Museum visitors or other Museum functions.

Wall linings shall be solid durable panel system to allow for flexibility for fixings (or moveable wall partitions on sliding / roller system embedded in floor / ceiling). A suitable hanging system integrated into wall design of a robust and aesthetic design shall be explored. Finishes shall minimise maintenance requirements after each exhibition.

Preferable to be able to allow in natural light if desired to full or part of space.

LONG-TERM CORNERSTONE EXHIBITIONS

Retain or re-install much-loved Canterbury favourites;

- Blue Whale
- Christchurch Street
- Paua Shell House
- Expanded Discovery Centre (to also include human and documentary history)
- Expanded Antarctic experience focused on heroic era of Discovery to complement airport Antarctic Attraction (to be pay-for)
- Develop new national pounamu experience.

Whare

Provision shall be made for a whare experience which will be used as an educational resource as well as a major cornerstone exhibit. This shall be located on the ground floor. This shall include the reinstatement of the Whare Whakairo Hau-Te-Ananui-O-Tangaroa, one of the great treasures of the Museum collection, as well as a newly commissioned modern, contemporary whare or mahau. These exhibits would not be a marae, but would form an important ceremonial bi-cultural space within Canterbury Museum.

The Whare Whakairo Hau-Te-Ananui-O-Tangaroa was originally carved for Ngati Porou by artists Hone Taahu and Tamati Ngakaho, with the unfinished house carvings purchased by Canterbury Museum. These have been located in a number of positions around the Museum from 1875 to 1956. They are currently retained in a Museum collection store and have not been on display since the commencement of the construction of the Centennial Wing in 1956.

The Whare Whakairo Hau-Te-Ananui-O-Tangaroa would not be used as a ceremonial space as it doesn't have a direct connection to Ngai Tahu. A separate new contemporary whare / mahau is to be provided which will cater for ceremonial and education purposes and sleep overs. This new contemporary, symbolic whare / mahau would be approximately 6 x 7m, and wouldn't require any cladding / enclosure - it could be a skeletal frame or similar. Ideally this whare would be open to the sky, but as it needs to be located on the ground floor this may not be possible.

For use as an educational resource the whare exhibit area will need to accommodate classroom size numbers of people, possibly on overnight stays (up to 30 children & 10 adults). To do this there will need to be a bag storage area, a mattress store, ablution areas and a kitchen/dining area reasonably adjacent. Associated with the above spaces is the need for a forecourt in front of the whare for formal occasions, which could also be used as a recreational space when there are groups staying overnight. Attention to after hours entry would need to be considered.

A small collection store containing the highly tapu toi mōkai and kōiwi tangata would need to be located adjacent the new whare, however this should not be in front of any whare and in a basement location directly under the whare would be more appropriate.

The integration of both Māori & Pakeha art through out the Museum, including appropriate use and referring of Māori patterning and spatial design which has been informed by the cultural narrative, shall form part of the re-development project. Mana whenua shall have an active role in telling of their story.

Blue Whale

One of the treasures of Canterbury Museum, the Okarito Blue Whale skeleton (26.5m in length), requires a space appropriately sized to allow for a dynamic and exciting display of this large and important exhibit. The bones are now fully conserved but not as yet assembled as a whole skeleton.

Antarctic Experience

Provision of a large 1,200sqm space for a specific Antarctic exhibition is required. This expands on the current Antarctic exhibition and will include many oversized elements which have loading, access and space requirements which will need to be specifically addressed in the design.

Within this pay-for exhibition space allowance shall include for;

- approx 300sqm double height space for the Sno-Cat crevice proposal & Hallett Station dome.
- cashier set up for selling tickets and retail as a stand alone business
- access to toilets
- raised accessible floor for flexibility
- specific requirements for an Ice Wall exhibit.

Discovery Centre

The redevelopment shall allow for the increase in area to a minimum of 400sqm for an expanded Discovery Centre - an exhibition targeted for children of all ages. This exhibition is unlikely to continue as a paid for experience. A raised accessible floor is preferable within this space.

Robert McDougall Gallery at Canterbury Museum

The Robert McDougall Gallery high quality exhibitions spaces would be used in a very similar way, and with a similar ambience, to the previous use as an Art Gallery. These would be used as long-term flexible exhibition spaces.

The Christchurch City Council (Robert McDougall) Land Act 2003, which defines the use of this space, specifically notes that the gallery is for 'the purpose of a public gallery for the display of art and decorative arts and crafts and ancillary activities'.

The Museum has an extensive heritage art collection suitable for display in the Robert McDougall Gallery, and is able to borrow further works from the Christchurch Art Gallery heritage art collection to display.

The Museum will primarily display two-dimensional works of art, as provided for in the Robert McDougall Land Act.

LONG-TERM FLEXIBLE EXHIBITIONS

Collections rich - more collections on show and greater turnover. Ability to tell lots of stories - large and small - over time. Committed to retaining key elements:

- Māori
- Early Canterbury
- Canterbury today and our place in the world (including our multi-cultural communities)
- Dioramas
- Treasures (Canterbury, NZ, World)
- Acknowledge the generosity of Cantabrians and others – eg showcase new acquisitions

11.3 COLLECTIONS & CURATORIAL

A key driver of the redevelopment project is to address the current poor state of current collection stores and to provide an increase in space and quality of collection storage to international standards. The increase in storage size shall meet 50 year growth with a strategy developed for further growth after this time. All new collections stores shall have air conditioning to meet the specific environmental conditions for the collections held and spaces shall have wifi for inventory control.

The likely location on site of a major large collection storage space to accommodate the briefed requirements would be in a new basement area with potential connection into, and improvement of, the existing basement of the McDougall. Construction methodologies and design detailing for any collections within new basements areas shall ensure there are multiple levels of waterproofing protection to minimise risk and this shall be undertaken to international best practice. To minimise risk to collections, all water borne services shall be kept out of collection stores. Electrical switchboards or access hatches to services shall not be located in collection stores.

The design shall endeavour to provide the largest flexible space free of obstructions as possible, with a minimum 2.7m high clear space (of all services) for shelving units. Specialised storage systems and access equipment shall be reviewed and integrated into the design to maximise the storage potential of the spaces formed.

Special attention shall be given to accommodating and providing access for the larger and heavier items within the collection. Allow for approximately 600sqm of double height space is required for oversized objects and a pallet storage system.

There shall be optimal access to collections for exhibitions, programmes and research purposes. These must meet tikanga requirements for storage of and access to taonga Māori.

Collection Storage (Special Needs)

- Photography cool store
- Film / negative cold storage
- Secure firearms and weapons storage
- Freezers for DNA storage (deep freeze)
- Costume / textile storage
- Bunded room for wet collections
- Storage of dangerous items (eg asbestos, radium etc)
- Safe / extra secure storage for high value items
- Kōiwi tangata
- Large items
- Specialised storage for vulnerable collections (eg plastics, food etc)

Collection Workspaces

A loading dock is required where a forklift can operate securely with the door shut and transfer material directly into the Special Exhibition space. A separate staff entry shall be provided to the loading dock circulation.

Direct access from the loading dock is advantageous to;

- Collections receiving room (store crates for exhibition, allow acclimatisation and space to unpack and undertake a condition assessment)
- Quarantine room (capable of being fumigated safely) include freezers for pest control. Close to loading bay, but away from collections stores.
- Large and heavy objects lift (capacity to be confirmed)
- Whānau room which can be accessed both from public and back of house circulation areas. Include facility for cultural practice (e.g. tapu to noa) or space for researcher (multipurpose facility)
- Photography room
- Wet lab and dry lab
- Conservation lab
- Storage for Emergency supplies and equipment (collection disaster and otherwise)
- Trolley parking lot
- Storage of flammable liquids
- Storage for Conservation packaging / materials
- Workrooms (double the size of current conservation workroom) with temporary collection store near them
- Dedicated lift/s for movement of collection items across different Museum floor levels (not to be shared with visitors)

11.4 EDUCATION & PUBLIC PROGRAMMES

Canterbury Museum provides organised educational experiences for school groups and an informative calendar of public programmes for the wider public. School trips can be up to 3 hours duration, with children's ages 3 year and up. These support whole-of-life learning opportunities, create an atmosphere where self-learning is easy and offer more in-depth knowledge to those desiring it by a range of secondary means.

Currently 37,000 individuals (including 23,000 school children) engage in education programmes per annum at the Museum which is predicted to rise to 45,000 individuals (30,000 school children per annum). A further 31,000 individuals attend public programmes at the Museum each year and this is expected to increase to 35,000 post development.

Within any 30min period there could be up to 160 children in the Museum at any one time. Currently it is difficult to control large groups of children, particularly within the main entry foyer which causes disruption to other visitors. To address this, options shall be explored for alternative entrances and waiting areas for educational groups.

Consideration shall also be given to where school groups can eat within the Museum complex – currently there is nowhere. A possible option could be to utilise the classroom for this purpose, however this will require special attention for storage and secure waste disposal.

Specific spaces required for Education and Public Programmes include;

- Classroom / Seminar spaces; multifunctional space for curatorial and education programmes which includes good storage within the space. Space shall be 140sqm in total, divisible into two 70sqm independent spaces and shall be located close to toilets and parenting facilities. These spaces should be set up to be capable of throwing water, paint, clay etc, as well as smart screens, digital connection to the rest of the world, 3D printing etc
- Lecture Theatre; tiered seating included for 150 - 200 people for lectures and cultural performances. Ideally adjacent to the classroom with a large performance area at the front and separate back of house entrance. Consider retractable seating for greater flexibility.
- Education Store; a 25sqm space for storage, with access independent of the classrooms.

Consideration is required for after hours access to both the classroom and lecture theatre.

11.5 OFFICE AND WORKPLACE

Any new design shall plan to limit public access to the exhibition floor levels only. Staff shall be located on one floor in open, flexible spaces encouraging a 'one team' approach and easy communication. There shall be sufficient space to carry out the various required tasks. The staff room shall be on the same floor as the offices.

The extent and necessity of cellular offices shall be reviewed as part of the design process with the overall desire to provide a high quality functional work environment which also considers the operational issues and costs with future potential change.

Currently there are 80 FTE staff positions, consisting of 87 staff. This includes 68 back-of-house workstations, 10 visitor hosts, 6 PSO's housed in the Security command centre and 3 visitor hosts housed at Quake City. There are also 5 workstations provided for regular researchers and volunteers.

Allowance shall be made for the increase in staff numbers to 150 individuals.

Separate circulation shall be provided for staff, which means that exhibitions can be set up, material can be delivered and collections can be moved without effecting security or conflicting with public movement and access.

The ability for direct public access to the administration reception area would be preferable.

A staff locker space for 60 lockers, shower and toilet facilities close to the staff entrance and bike parks for 30 shall be accommodated within the redeveloped plan.

General

The current feedback suggests that two open plan areas for 120 staff in total with 30 private office spaces are required, however a more detailed workplace assessment should be undertaken during the concept design stages to test what the most appropriate workspace is for the activities that are undertaken at the Museum. Include an office for the Director and adjacent EA space of appropriate size.

Four joint project working rooms for teams of 8 (people come together for project for 2-3 months etc and leave). These shall be fitted out with smart screen planners etc. A creative space as well as ability to work.

Storage for collection finding aids near office workspace with room for researcher

20 people Board Room (with IT/sound/video conferencing etc) with adjacent kitchenette and ideally with direct access from a publicly accessible space.

Walk in safe for money and legal documents

Storage for stationary, publications, uniforms, marketing collateral, files, registration files and other storage materials

Bike storage internally undercover, showers, lockers, change rooms

Staff room for 150 people (at tight fit) with outdoor area and located close to staff work areas if possible with equitable access for all staff

Separate room for photocopier/printers (noise and fumes)

Emergency supplies (Collection disaster and otherwise)

Kitchenette on each office level if staffroom not located on that level

Quiet Room/Sick Bay

Exhibition Workspaces

The present back-of-house areas have over the years been accommodated in the most expedient way so that there is now no clear overall logical arrangement of identifiable departmental areas. The present impression is of a rabbit warren of interconnecting spaces.

The following spaces should be located adjacent to the loading bay or goods lift (if adjacent goods lift then it is not necessary for these spaces to be on ground floor):

- Carpentry Workshop; used by exhibitions and building services and can be reduced to half the current size by relocation of building maintenance storage.
- Metal Fabrication Workshop
- Paint Workshop
- Clean & Dirty Fabrication Workshop; one large space for mounting paper based exhibit material and fabrication of exhibits. A sink required within this space and not accessed via dirty spaces to ensure collections are protected.
- Media / Photographic Studio; 25sqm windowless space for photography of collection and exhibit items.
- Sound room for digital/film/sound production
- Storage is required for display cases etc. The preference is one large space, however it may be split into several smaller spaces throughout the complex.
- Maintenance and cleaning equipment, PPE and similar supplies
- Trolley/Dolley parking lot
- Lighting equipment storage
- Space for large scale printing

IT

Data server rooms

Faster network speed, larger storage capacity with comprehensive hi speed wifi coverage

Comprehensive cellphone coverage

Direct links to Ravenscar House

More 'portable' workstations so people can move around to work

Storage room for computers and related equipment

Security

Security Control Room

Other

Cleaning supplies

Other Design Considerations & Requirements

During the design stage the following specific design exercises shall be undertaken;

- Check journey of items around the buildings in public and back of house spaces
- Show an average size crate moving around exhibition spaces from loading dock
- Make sure workspaces have correct adjacencies
- Check journey of food and beverage from delivery point through to serving for venues and function spaces.
- Show movement of appropriate sized scissor lift around building
- Look at flow of water/sewerage around building to make sure not over or in collection spaces.

12.0 TECHNICAL DESIGN REQUIREMENTS

12.1 STRUCTURAL

The Museum's nineteenth century neo-Gothic buildings were extensively earthquake strengthened from the late 1980s to the early 1990s. Following the major Canterbury earthquakes of 2010 - 2011 all the Museum buildings were not structurally compromised leading to permissions from Christchurch City Council and Canterbury Earthquake Recovery Authority to reopen to the public, albeit with conditions of further strengthening of some components of the building to be carried out within 3 years. The Museum Project is the appropriate vehicle for any additional strengthening works to be completed.

Following an initial engineering evaluation in April 2012 the Museum was closed for a period of time as many component buildings were found to be close to the 34% NBS earthquake prone building mark. Subsequently the Museum was reopened to the public in phases, however the RMG is still closed until some further repair works are undertaken.

POST EARTHQUAKE ASSESSED BUILDING STRENGTHS

Canterbury Museum buildings as a whole are assessed as IL3 (Importance Level 3) on the basis of the value of the collections held to the community. The four importance levels are:

- IL1: Farm sheds, etc
- IL2: Normal commercial and residential buildings
- IL3: Buildings serving large crowds or holding contents valuable to the community (eg museums, parts of hospitals not required for immediate post-disaster functions)
- IL4: Facilities required to operate immediately post-disaster

The site is comprised of fourteen different building stages which are simplified into five main components for seismic strength purposes. The seismic properties of each of these five components are shown below in figure 12.1

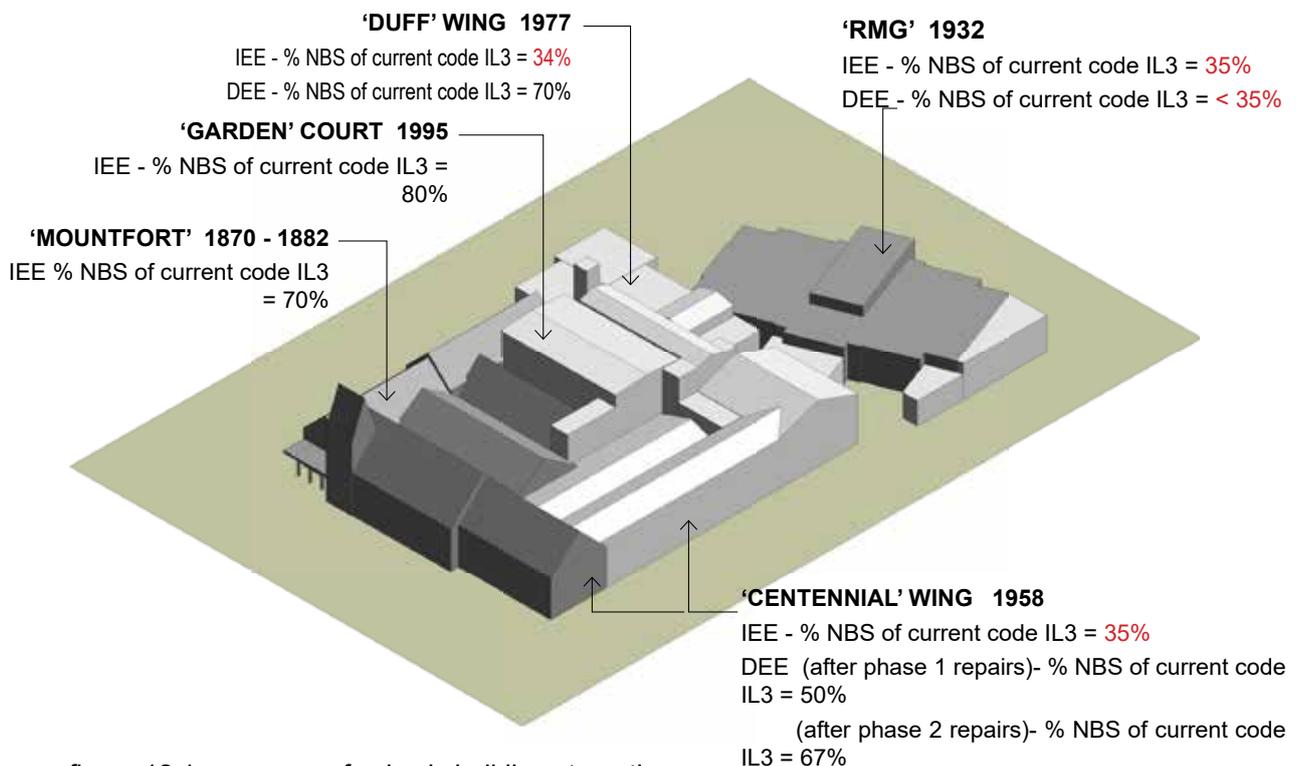


figure 12.1: summary of seismic building strength
initial engineering evaluation (IEE), april 2012 / detailed engineering evaluations (DEE), nov 2012

THE MUSEUM BUILDINGS

The Museum Board requires all Museum buildings to be strengthened to 100% or greater of the New Building Strength (NBS).

ROBERT MCDUGALL GALLERY

A building report prepared by the Christchurch City Council in 1994 described the building as 'Earthquake Prone' (in terms of Section 66 of the Building Act) and states that it is of 'average' structural condition.

The Robert McDougall Gallery performed reasonably well in the 2010 & 2011 earthquakes, however additional assessments have been undertaken by structural engineers to determine the full extent of damage from the recent earthquakes, identify structural weaknesses and have proposed a repair and strengthening methodology of the structure. Special attention will need to be given to parapets and the out of plane strength of the unreinforced masonry walls.

FLOOR LOADINGS TO NEW ADDITIONS TO THE MUSEUM BUILDINGS

The following are the design floor loadings;

Collection Stores	7 - 10KPa
Remaining Building Spaces	5KPa

Collection Storage spaces shall be designed for compactor type storage units, with tracks set flush with the finished floor level.

Structural loading for major collection items, particularly vehicles, will be need to be specifically addressed.

SEISMIC STRENGTHENING

A key component of the Museum redevelopment is to provide greater resilience to both the Museum & RMG buildings, exhibitions and collections during seismic events. Options shall be considered to seismic strengthen the existing buildings and with any new additions to achieve this objective.

12.2 ENVIRONMENTAL CONTROL (HVAC)

The review of the existing systems and conditions within the Museum has identified the following:

- the existing conditions within the Museum are far from ideal for the long term preservation of collections.
- the controls system in some areas are not operating correctly in respect of collections preservation.
- in areas of the building there is a general lack of fresh air.
- high infiltration rates occur, especially affecting galleries adjacent to the main entrance.
- the conditions within the pre-1900 Mountfort Galleries and Special Exhibition Space do not meet international standards
- conditions within the basement areas are unacceptable
- the distribution switchboards in the 1958 building are overdue for replacement.
- some substandard cable reticulation and installation.
- the location of the main switchboard in the entrance corridor to the workshop is unsuitable.

A number of key amendments shall be considered;

- to reduce the effect of present air infiltration loads, it is recommended that the building fabric is sealed wherever possible.
- the mechanical systems should be designed to create a positive pressure regime within areas containing sensitive collections.

At the completion of redevelopment, all public gallery spaces, old and new, shall provide comfortable condition for visitors and will properly protect the Museum's valuable collection when they are on display. The short-term special exhibition areas will be provided with conditions to a higher level which meets internationally required standards for travelling exhibitions.

The scope of mechanical services shall include;

- All existing space and new additions shall have appropriate air conditioning to meet best practice international Museum standards
- McDougall Art Gallery – existing system requires a full upgrade
- Rising damp in existing basement is to be addressed (humidity control very important in collection stores)
- Location of plant to be mindful of noise transfer
- Building Management System is required
- Review options for advantage and disadvantage of centralisation / decentralisation of plant
- Independent energy audit to be completed on proposed design. Running costs - quality equipment, insulation, remedy infiltration, good controls, quality oversized filters etc
- Attention to be given to providing a good thermal envelope, including above code insulation.

12.3 ELECTRICAL SERVICES

The summary scope for new electrical services requirements are;

Power & Data

- A new substation with 2 no. 750kVa transformers is required to replace existing transformers within the 1958 wing and McDougall courtyard.
- A new main switchboard is required. There shall be suitable cable terminations provided on the MSB to facilitate the temporary installation of the portable generator should an emergency power supply be required in the event of a major power failure.
- In the exhibition and gallery spaces there shall be one double outlet per 3m of wall plus there shall be dual compartment metal trunking with stainless steel lid recessed into the floor at 4m centres.
- Majority of existing reticulation and subboards are to be progressively upgraded as existing spaces are improved. Important to consider staging implications with this.
- Communications and phones - new backbone structure picking up existing hubs.
- Integrate data / power reticulation wherever possible.
- Review option for plug-in generator, or providing a generator to ensure business continuity.

Lighting

- Lighting to exhibition halls and galleries shall generally be with suspended track lighting with attached fittings arranged in a 6m x 4m grid type layout.
- All track lighting shall have the facility to be dimmed.
- Lighting to other public areas including cafe and retail shop will be designed to provide aesthetically suitable lighting for the location.
- Emergency lighting will be provided in all areas. This will be installed to operate on power failure to the local lighting supply circuit only.
- Ground floor relocation for MSB preferred (ventilation, fire rating will be issues)
- Could possibly service the building with 1 rather than 2 transformers
- Energy efficient lights and control systems

12.4 ENVIRONMENTALLY SUSTAINABLE DESIGN (ESD)

The redevelopment of Canterbury Museum, which is an important public building, provides an opportunity to showcase community leadership in constructing a building which demonstrates good practice for Environmentally Sustainable Design (ESD).

There has been considerable recent work around more passive HVAC systems in Museum buildings internationally which lower operational costs and these need to be reviewed during early design stages. Opportunities in the design, construction and ongoing operations of the building shall be considered to incorporate ESD into the redevelopment. Within the design process specific cost analysis shall be undertaken against these objectives to allow for due consideration by the Museum Board of these ESD options.

Many of these requirements are the same or similar to those which have been developed by the Green Building Council of New Zealand for their Green Star office Environmental Rating System, however no Green Star rating tool is available for Museums.

12.5 FIRE PROTECTION

A detailed review of the current system shall be undertaken and an increase in passive and active fire protection shall be included within the new redevelopment to bring the total building up to meet current New Zealand Building Code requirements. Work to include;

- Fire cells integrated with evacuation system – simplify existing system
- Zoning - pressurisation consideration
- Sprinkler system linked with public address facility (PA system to be provided which will allow for formal staged evacuation system)
- Fire cells - strategy for loss control; limiting fire spread

Consideration within the design shall be given to:

- Verification that a Type 7 sprinkler and smoke detector system is required throughout the Museum.
- Smoke extract systems are required for any atrium areas, as well as smoke control in air handling systems, emergency lighting in exitways and public areas, hand held fire fighting equipment throughout, a fire hydrant in new stairs, and NZFS lift control for the lifts.
- Vesda systems for IT spaces

The McDougall is to be included in any analysis

- Considerations for 'out-of-hours' use
- Ensuring all stairs outside of any atrium areas are safe paths and exit direct to outside
- All exitways serving Gallery spaces open directly into the Gallery or are easily accessible
- External walls only assessed for 'Spread of Fire to Neighbouring Property' if they are being significantly altered as a result of the revitalisation work.
- Any link to the Robert McDougall Gallery at Canterbury Museum needs to be recognized as a Caveat or Memorandum of Encumbrance on the respective Site Titles.

The Fire Engineer needs to be closely involved in the planning for construction staging. Issues that will require a Fire Engineer's input includes:

- Allowing the non-construction areas to remain open and accessible. This requires a Fire Safety Review for each scenario, and specific application to the Christchurch City Council and FENZ. It is likely that consequential work will need to be designed and implemented to assist in the process
- Advising on option for managing Staged Construction, with specific reference to fire protection and egress design.
- Advising on precautions to be adopted within construction areas to minimise risk of fire and damage to building fabric and contents. The highest exposure to fire for buildings usually occurs during construction activities.

12.6 SECURITY

A specialist security consultant, familiar with specialised Museum security, shall be engaged to provide input into all design and documentation stages of the redevelopment process. A summary of the security objectives, considerations and requirements is outlined below.

Objectives

A comprehensive programme of protective services and loss control is to be provided to safeguard the Museum's staff, members of the public, visitors and contractors, and the collection itself. The programme will also allow the Museum to fulfil its published institutional objectives, and to demonstrate prudent and appropriate stewardship of the items entrusted to its care, which includes being able to attract and safeguard travelling exhibitions of major significance.

The protective services and loss control programme is an implicit component of any redevelopment strategy taken into account during all phases of the design and achieved by the three interdependent strands of 'environmental design', 'technology', and 'management'.

Environmental Design

The main protective considerations within the 'environmental design' strand which need to be balanced with other design requirements include:

- Supporting the principal functional elements of any Concept Plan; improved and open circulation, maximising the Museum experience for the public, addressing the opportunities and constraints provided by the existing structures; maintaining flexibility: and meeting the project budget.
- Wherever practical, planning the various spaces to reflect a hierarchy of efficient access control. This involves attempting to: consolidate public, private and restricted spaces; minimise the number of control points; and rationalise vertical and lateral circulation with a view to separating the movement of members of the public, staff, collections, supplies, and waste; in order to keep protective services staffing at a sustainable level, and to minimise initial and ongoing expenditure on excessive security equipment.
- Recognising the loss prevention challenges and marketing opportunities associated with tour groups, onsite commercial entities, school parties, after hours lectures and functions, etc.
- Detailed design and placement of toilet facilities, the security control room and outlying security positions, reception and customer service desks, cloak and bag storage, and the design of doors and windows.

The design team shall give special consideration to loss prevention and to the management of risks associated with fire, flooding, vermin, dust, vibration, and earthquake related damage, along with unscheduled disruptions to certain vital building services, both during the construction phase and thereafter, as best as can be achieved within the budget.

Protective Services Technology

The protective services technology strand comprises the security systems and building services systems. These are required to manage risks and to provide early warning of conditions requiring control and mitigation.

It is expected that security systems will include;

- personal assistance alarms for staff at public desks and counters;
- electronic and mechanical access control;
- communications systems;
- exhibit and intruder alarms;
- closed circuit television (CCTV); security lighting;
- an integrated security management computer system;
- moisture detection;
- fire protection interfaces and building services systems monitoring;
- 24hr staff on site

The extent of security equipment installed in the Museum will largely depend on how the space planning evolves within the design phase.

Certain security and building services systems shall allow the Museum or its agents to monitor, diagnose and if necessary control particular conditions from off-site locations, especially after-hours.

Loss prevention concepts shall also be incorporated within the design of fire protection and other building services. To the extent allowed by the budget, normal design standards may well be exceeded for loss prevention purposes, in recognition of the unique risks associated with Museum collections and operations.

Management

The risk 'management' strand affects, and is effected by, the 'design' and the 'technology' aspects of the programme. Staffing implications of any proposed design or technology must be taken into account because of the potential consequences for ongoing staffing numbers and costs. Risk Acceptance

The objective is to achieve the right balance between the design, the technology and the management strategies. Once sketch plans have been developed, a Protective Services Brief shall be prepared in a matching level of detail. This document will record the rationale and details of all the protective services arrangements and later, will form the basis for the Museum's ongoing Protective Services Programme.

12.7 ACOUSTICS

An acoustic engineer shall be engaged during the design and documentation stages to review any proposed design, identify areas which are likely to require specific acoustic input and propose options for acoustic treatment which will be compatible with the architectural design. Spaces requiring specific attention shall be; entrance foyer, atrium spaces, lecture theatre, classroom, galleries, office spaces and plantrooms.

Assessment of noise from mechanical plant at the boundaries and neighbouring properties shall be included within the scope.

12.8 SIGNAGE

The redevelopment project shall include the inclusion of all exterior and interior wayfinding, building compliance and information signage to ensure a fully integrated solution which is complementary to the architectural design and unique nature of the Canterbury Museum complex. A graphic designer shall be utilised to provide input to the signage works.

12.9 VEHICLE / SERVICE ACCESS

The Museum and Robert McDougall complex have historically experienced problems in efficient servicing and loading, by the very nature of the site and the relationship between the Museum and its immediate neighbours. Loading and unloading of Museum goods and exhibitions will continue from the access driveway on the north side of the Museum.

A loading bay shall be provided with access for 'B-train' sized vehicles and options shall be explored for the unloading of crates and containers, especially in relation to short-term special travelling exhibitions. A gantry system shall be included in the project to facilitate the unloading and loading operation.

Courier van and delivery truck access shall be provided which is separate to all other public entrances. A secondary staff / trade entrance shall be provided which is associated with the loading bay and security room for the monitoring of the movement of goods and people.

Access to the McDougall and associated legal easements shall be considered. Options for remodelling the existing driveway in conjunction with Christ's College shall be considered to provide the maximum benefit to both the Museum and the College

No on-site vehicle parking needs to be provided.

12.10 VERTICAL CIRCULATION / ACCESSIBILITY

Currently there are public areas within the Museum which don't meet New Zealand Building Code requirements for accessibility. The redevelopment project shall rectify this, including provision for accessible access to the mezzanine of the 1870 wing.

The existing Museum building complex has one poorly located lift, which inadequately serves both staff and the public. A new public lift shall be provided, close or easily visible from the main entrance. A new large goods lift shall be provided which links to all exhibition and collection storage floors and shall be close to the loading bay. It shall be sized to accommodate some of the largest collection items. Access to collection and exhibition spaces for those out-sized items which cannot be accommodated within the goods lift shall be considered in the design process.

An option for an escalator shall be considered in the design process.

12.11 STAGING OF WORK

The Museum needs to remain a viable visitor attraction and operating entity throughout the development, either onsite or offsite. There has to be an adequate quantity of Museum experience kept intact at any one time and works are required to be completed as early as practicable to minimise the overall period of disruption.

A staged approach to the development may need to be adopted if all the works outlined within this brief are not achievable within the current budget provisions.

Given the potential scale of redevelopment, the option to fully relocate the Museum's operations during the construction period should be considered.

12.12 FUTURE PROOFING & DURABILITY

The redevelopment project is being designed to accommodate Museum requirements over the next 50 -100 years. However as part of the design process, options shall be explored to accommodate potential future expansion opportunities after this period of time. This shall include options around increases in collection storage, exhibitions, plantrooms, offices, retail and food & beverage. To allow for change over time future flexibility shall be built into as much of the redevelopment project as possible, for example raised floors in exhibition spaces, large open collection storage volumes, open plan offices etc...

The selection of all materials and associated detailing shall be based on at least 50 yr + life and shall be of an appropriate quality to be respectful of the existing heritage buildings and as one of the most important public buildings in Canterbury.

Finishes & materials should be selected to satisfy the following criteria:

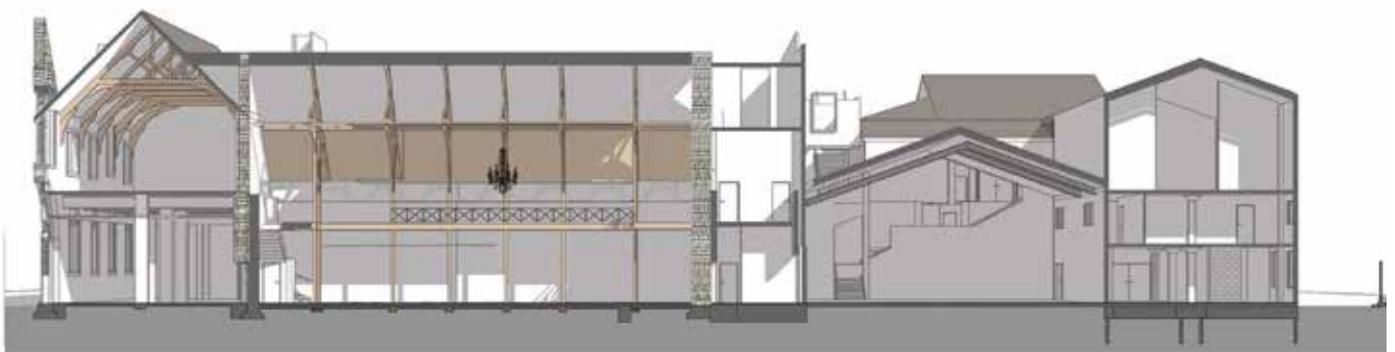
- Highly resolved & sophisticated in the use of materials and in the detailing
- Durability and in-service longevity
- Image & identity within public spaces; to enhance visitor experience and be consistent with Museum identity.
- Appropriate language in association with original heritage fabric and consistent with ICOMOS charter and other heritage considerations.

13.0 SUMMARY SCOPE OF WORKS

The primary requirement of the redevelopment of Canterbury Museum is to upgrade the existing facility to provide more space and to meet current international standards for Museums, especially in relation to visitor experience, exhibitions and collection management. This all needs to occur along with the complex overlay of working within the seismic strengthening, heritage, planning, constrained site and cost parameters which exist with this project.

The following is a summary of the scope of work required with the new redevelopment.

- International standard seismic strengthening for Museum Buildings
- Meet fire safety and other building code obligations
- Improve vertical access via stairs, lifts and possibly escalators
- Simplify public circulation routes
- Provide fitting arrival/orientation space
- Improve visitor experience and facilities
- Provide bigger, more flexible special exhibition space able to take major international shows
- Provide flexible, fully upgraded spaces for longer-term flexible exhibitions
- Provide human comfort heating, ventilation and air conditioning (HVAC) for public spaces
- Upgrade security provisions
- Consolidate staff offices into one area
- House reserve collections to accepted international standards
- Share workrooms, collection stores across disciplines
- Celebrate the heritage values of the Museum and McDougall buildings and underpin the whole development with Building Conservation Plans agreed with the heritage authorities and ensure compliance with the Christchurch District Plan where possible / practical
- Demonstrate commitment to bi-culturalism through new building design
- Link the Robert McDougall Gallery to the Museum buildings
- Conserve and re-display the Blue Whale skeleton
- Conserve & re-erect the Whare Whakairo Hau-Te-Ananui-O-Tangaroa and provide a new whare experience
- Future proof the Museum for the long term



14.0 APPENDICES

APPENDIX 14.1 EXISTING FLOOR PLANS & FUNCTIONAL LAYOUT

14.1 EXISTING PLANS & FUNCTIONS



Existing Plans of Canterbury Museum
01 March 2010 L0



Existing Plans of Canterbury Museum
01 March 2010 L1



Existing Plans of Canterbury Museum
01 March 2010 L4



Existing Plans of Canterbury Museum
01 March 2010 L5

APPENDIX 14.2 SPACE SCHEDULE

APPENDIX 14.2 SPACE SCHEDULE

THE MUSEUM PROJECT; PROVISIONAL SCHEDULE OF SPACE REQUIREMENTS				
Draft 30 August 2019				
Ref.	Type of Space	Existing Area (sqm)	Briefed Area (sqm)	Comments / Notes
A	Exhibition Galleries			
A1	Special Exhibition	570	600	Adjacent loading bay / good lift / subdividable - ideally would be larger than 600sqm
A2	Antarctic Exhibition	440	1200	
A3	Discovery Centre	260	400	
A4	Bi-Cultural Exhibition	-	200	
A5	Paua House	170	170	
A6	Blue Whale	-	250	
A7	General Exhibition	2600	*	*Redevelopment shall maximise area for additional general exhibition.
	<i>subtotal</i>	4040		
A8	Robert McDougall Gallery	960	960	
	Total Exhibition	5000		
C	Collection Management			
C1	Collection Stores (acceptable standard)	1120	*	*Redevelopment shall maximise additional collection storage.
C2	Collection Stores (yet to be upgraded)	1670	0	
	<i>subtotal Museum site</i>	2790	0	
C3	RMAG Collection Stores (link)	0	*	
C4	RMAG Collection Stores (double height under existing building)	410	*	Redevelopment shall maximise additional collection storage.
	Total Collection Stores	3200		
C4	Natural History Dirty Workroom	31	30	
C5	Natural History Wet Workroom	21	20	
C6	Natural History Dry Workroom (offices)	125	125	
C7	Quarantine Room	7	10	Adjacent loading bay
C8	Conservation Workroom	183	75	Ex Comprises 69sqm level 2 & 114sqm level 5
C9	Clean Workroom	-	60	
C10	Viewing Lounge	19	20	
	<i>subtotal</i>	386	340	
D	Education & Public Programmes			
D1	Lecture Theatre	-	200	
D2	Classroom	73	75	
D3	EPP Store	154	25	
D7	Plating Kitchen to Seminar Space	-	20	
D8	Furniture Store to Seminar Space	-	20	
	<i>subtotal</i>	227	340	

E	Offices			
E1	Reception / Waiting	40	50	
E2	Office / Enclosed & Open Plan	674	1200	total no. of offices & open plan workpoints t.b.c, incl circulation (approx 120-150 staff)
E3	Board Room	40	60	
E4	Meeting Rooms	36	60	mix small & medium meeting spaces
E5	Resource Room	17	30	
E6	Staffroom	68	120	
E7	Staffroom deck	68	40	
	<i>subtotal</i>	<i>943</i>	<i>1560</i>	
F	Back of House Exhibition			
F1	Clean / Fabrication Workroom	45	80	
F2	Carpentry Workshop	130	130	
F3	Metal (Hot) Workshop	14	20	
F4	Paint Workshop	40	30	
F5	Photography Studio	-	30	
F6	Loading Bay	35	40	
F7	Special Exhibition Store	-	30	
F8	General Storage		100	
	<i>subtotal</i>	<i>264</i>	<i>460</i>	
G	Food & Beverage			
G1	Public Café (FOH)	150	200	incl mezzanine
G2	Café Kitchen (BOH), incl chiller & stores	25	50	
G3	Office	-	10	
	<i>subtotal</i>	<i>175</i>	<i>260</i>	
H	Retail			
H1	Retail FOH)	88	120	
H2	Store	15	20	
	<i>subtotal</i>	<i>103</i>	<i>140</i>	
J	Public Areas			
J1	Reception Foyer	90	150	
J2	Bag Store / Lockers	14	20	
J3	Meeting Room	-	10	
J4	Visitor Lounge		100	
	<i>subtotal</i>	<i>104</i>	<i>280</i>	
K	Toilets & Amenities			
K1	Public Toilets	72	160	

K2	Staff Toilets	90	120	
K3	Parenting Room	6	10	
K4	Cleaners Cupboards	15	15	
K5	Male / Female Changing Rooms	-	25	12sqm each (1no. shower / 1no. wc / locker space per changing room)
K6	Cleaners Lockers / Store	14	20	
	<i>subtotal</i>	<i>197</i>	<i>350</i>	
L	Plantrooms / Service Spaces			
L1	Security Store	20	20	
L2	Electrical Switch Room	25	30	
L3	Server Room	8	20	
L4	Main Plantrooms / Additional Services Spaces	350	600	briefed estimated - tbc by services engineers
L5	Chiller Deck	40	100	
	<i>subtotal</i>	<i>443</i>	<i>770</i>	
M	Miscellaneous			
M1	Electrical Store	-	5	
M2	Staff Entry	-	10	
M3	Security Room	15	20	Adjacent staff entry and loading bay Proposed L1
M4	Waste / Recycling Storage	10	10	
M5	Cycle Parks	10	20	Number tbc
M6	Goods & Staff Lift	0	tbc	
M7	Public Lift		tbc	3 levels
M8	General Circulation		tbc	tbc
	<i>subtotal</i>		<i>tbc</i>	

