Rebuilding Christchurch

Rebuilding History

An architectural research project that examines how a theatre proposal may instigate an architectural dialogue with/or about the heritage of Christchurch in a post-earthquake context.

Master Thesis explanatory document
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This research project Rebuilding Christchurch – Rebuilding History, addresses the historical pieces of architecture that have survived the devastation of the Christchurch earthquake.

What happens to these remaining fragments of history is one that will affect the architectural landscape in Christchurch as we see it now. The earthquake has presented Christchurch with a unique opportunity to build a central city with new and exciting buildings for the residents of Christchurch to enjoy. But what is to become of the surviving fragments of Christchurch’s architectural history? These are the buildings which helped to form the identity of the city; they are what people remember from the past. This project tries to find the balance between responding to the past, while looking towards the current needs of the city to generate architecture that is reflective of the city and its people.

Abstract

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What happens to these remaining fragments of history is one that will affect the architectural landscape in Christchurch as we see it now. The earthquake has presented Christchurch with a unique opportunity to build a central city with new and exciting buildings for the residents of Christchurch to enjoy. But what is to become of the surviving fragments of Christchurch’s architectural history? These are the buildings which helped to form the identity of the city; they are what people remember from the past. This project tries to find the balance between responding to the past, while looking towards the current needs of the city to generate architecture that is reflective of the city and its people.
1.0 Introduction

1.1 Research Question

How might a theatre proposal instigate an architectural dialogue with/or about the heritage of Christchurch in a post-earthquake context?

1.2 Outlines of the Project

On September 4, 2010, a 7.1 sized earthquake hit Canterbury at 4:05 in the morning, changing perceptions that Christchurch was one of the few cities immune from earthquakes in New Zealand. Christchurch remained relatively intact after the initial earthquake, but this all changed on February 22, 2011, when Christchurch was hit by a magnitude 6.3 earthquake located 10 km south east of the city centre. The earthquake initially brought panic and confusion to Christchurch’s 375,000 residents. Buildings collapsed in the central city crushing people, and the suburbs were swamped by liquefied silt coming from the ground below. Power went out, radio was down, and the phone lines were instantly overloaded. Over time the liquefaction was cleared in the suburbs, and those whose homes were destroyed, moved in with family or moved out of the city altogether. As time went on the initial recovery phase passed, and the shock started to wear off. The earthquake has destroyed 70% of the buildings within the central business area. Disaster specialists recognise three main phases following a major natural disaster: immediate response (crisis/rescue); recovery (aftermath/relief); and reconstruction (rehabilitation/closure). Christchurch is now approaching the reconstruction stage, which is expected to take over 20 years to complete. The Christchurch earthquake is ranked as the third most financially expensive disaster in the world at $40 billion – this is so high because of the extensive insurance held by owners which makes it disproportional to the actual physical event.

"Place, Culture and Landscape After the Christchurch Earthquake," Space Place

Ibid., 4.

1.2.1 The Architectural Problem

Christchurch is precarious placed in terms of it's future. Many of it's historical buildings have disappeared from the physical landscape only the memories remain. These are buildings with values, stories and cultural heritage that have been taken from the city forever. That is not to say that all of the historical buildings in Christchurch have been erased. Efforts have been made by community and heritage groups to try to save as much as possible to safeguard these buildings for future generations. These groups do face political pressure. Some say that they are slowing the rebuild down, and that these buildings were not satisfying the current needs of the community. Then there are the safety concerns with these buildings, as well as the increase in building regulations that have required earthquake prone buildings to be strengthened to 33% of the building code, and this was only enforced if a significant alteration was to be undertaken. The new policy requires any building damaged in the earthquake or built before 1976 to now meet 66% of the building code. This makes pieces of heritage which are still standing, and are reincorporated into the city, very special. Due to the "sacrificing" of these places, the way that we deal with these fragments of history is incredibly important. This project looks at how we can incorporate these pieces to not only preserve them into the future, but how we can also reuse them as something useful for people to experience in an everyday environment. Christchurch architects have lost almost all of their entire life works. There is no way to get this back, and for the current time, businesses and people are moving away from the central city to the Western suburbs, and satellite towns to the North and South. This presents a dilemma for city planners and architects; if the city is rebuilt slowly, residents will adjust to living without a central business district. Instead a series of smaller isolated communities will develop. But, if the city is rebuilt too fast then heritage groups may not see that they are slowing the rebuild down, and that these buildings are the safety concerns with these buildings, as well as the increase in building regulations that have required earthquake prone buildings to be strengthened to 33% of the building code, and this was only enforced if a significant alteration was to be undertaken. The new policy requires any building damaged in the earthquake or built before 1976 to now meet 66% of the building code. This is a challenge in historical buildings which have been designed with little regard to seismic design, and it is often not commercially viable for the building owner to repair them. As a result many buildings that survived are now too costly to get up to 66% of the building code.

1.2.2 A Theatre for Christchurch

Adding to the psychological and physical trauma, there are no stadia, town halls, cathedral or any of the buildings where people gathered for entertainment, worship, sports and social events. Residents' favourite lunch and night spots were destroyed. People now only have a few places left in the suburbs to share stories and experiences. Everyone in Christchurch on February 22, 2011, has a unique and harrowing story to tell. For some it is tragic, for others it involved hard work helping others in the following months. For everyone it involved, the trauma is incredibly important. This project looks at how we can incorporate these pieces, the way that we deal with these fragments of history is incredibly important. This project looks at how we can incorporate these pieces to not only preserve them into the future, but how we can also reuse them as something useful for people to experience in an everyday environment. Christchurch architects have lost almost all of their entire life works. There is no way to get this back, and for the current time, businesses and people are moving away from the central city to the Western suburbs, and satellite towns to the North and South. This presents a dilemma for city planners and architects; if the city is rebuilt slowly, residents will adjust to living without a central business district. Instead a series of smaller isolated communities will develop. But, if the city is rebuilt too fast then heritage groups may not see that they are slowing the rebuild down, and that these buildings are the safety concerns with these buildings, as well as the increase in building regulations that have required earthquake prone buildings to be strengthened to 33% of the building code, and this was only enforced if a significant alteration was to be undertaken. The new policy requires any building damaged in the earthquake or built before 1976 to now meet 66% of the building code. This is a challenge in historical buildings which have been designed with little regard to seismic design, and it is often not commercially viable for the building owner to repair them. As a result many buildings that survived are now too costly to get up to 66% of the building code.
1.3 Aims and Objectives

The focus of this project is to design a theatre that is reflective of Christchurch’s present context and identity. It examines theories and precedents of buildings that have been concerned with the same question. It looks to reuse parts of the heritage of Christchurch to create architecture that is reflective of the past experience of the city. This project aims to encourage people back to the city with architecture that connects to their senses and memories.

1.4 Scope and Limitations

The project accepts the Blueprint, and looks to fit within it as much as possible, while maintaining its focus on the physical remains of Christchurch. This project is not to be seen as a rulebook for designing new buildings in Christchurch, but to act as a catalyst for conservation in Christchurch. It is trying to open up a conversation on the historical remains of buildings left behind from the earthquake. The project is split into two sections.

2.0 Survey of Existing Knowledge

The first section is concerned with the pragmatics of theatres and examines three types of theatres before concluding what is the best format for a 350-400 seat theatre. It examines precedents and analyses circulation within a theatre, and the connections between theatres and the city. The second section looks at the importance of identity, place and experience in contemporary culture. It explores the relevance of Critical Regionalism to contemporary culture. The viewpoints expressed by these architects vary, but they all created architecture that is unique to the context of its place.

2.1 Program - Intimacy, Immediacy and Audience Cohesion in a Theatre

The auditorium space is the most important space within a theatre as this is where the performance happens. Theatrical intimacy, immediacy and audience cohesion are the essential parts of a good auditorium design. For the audience the experience of live theatre involves a sense of participating in the ‘event’, and being part of a group. From the performer’s point of view, a good space achieves the feeling of being embraced by the audience. Theatrical intimacy is about enclosure and being taken away by the story being performed. There are many different ways to achieve this; one is increasing the rake of the angle of the seating to get the audience closer to the performer.

A steeply raked theatre gives a perception of closeness as well as providing the audience with a clearer view of the stage. Alternatively this can be achieved by "painting" the walls with people in a series of shallow balconies at various heights. Performances in a theatre require a certain level of control by the director to control how the performance is delivered. Acoustics, sound, lighting and temperature, all need to be fully controlled to take the audience on the journey that the director has set for them. A degree of ‘closeness’ allows each gesture and expression performed by the actor to be appreciated by every member of the audience. This may require a smaller auditorium and/or by wrapping the audience around the stage, or even intermingling the action with the audience.

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Guthrie Theatre
Location: Minneapolis, Minnesota, USA
Architect: Jean Nouvel
Date completed: 2006

The Guthrie Theatre is an example of an amphitheatre style seating arrangement. When arranging the theatre, Jean Nouvel chose to organise the theatre vertically. The ground floor is given over to an open public space, with the box office, bookshop and restaurant occupying the space. Escalators rise nearly 15 meters to the first lobby space serving the amphitheatre (thrust) and proscenium theatres, where an enormous cantilevered viewing platform provides sweeping views of the river known as the “Endless Bridge”.

Ibid., 70.

The end of this bridge is a small seating area that allows for people to sit and experience the Mississippi River, connecting the theatre to the city. Any member of the public can enter the lower levels and the bridge area, not just theatre goers. What Nouvel is trying to achieve is a civic building that is as much as a public building as it is a theatre. The design of the thrust stage was to replicate the original Ralph Rapson design of the old Guthrie Theatre as closely as possible while making improvements to comfort, and sightline problems.

Ibid., 233.

The form of the building is developed by expressing the functions on the exterior. For example, the curve of the amphitheatre is expressed on the outside, and in places the underside of the seating is exposed as well. The outside of the building is covered in large panels which display photographs from past plays. This is clearly visible at night, and helps to connect the city with the theatre. This project is as much about the public space as much as the internal world of the auditorium. It tries to find the balance between the internal world of the theatre with the openness of a civic building.

There are three main types of theatre formats that are used to arrange the audience around the stage; proscenium theatres, amphitheatres, and in-the-round theatres. These formats have advantages and disadvantages that are dependent on the type of performance and size of the auditorium. They create different opportunities for intimacy between audience and actor, as well as acoustics, lighting and stage design.

2.2.1 Amphitheatre

The Greek amphitheatre is the oldest theatre type; it wraps the audience around a central stage, with the degree of encirclement extended to 220 degrees. These spaces are carved into the landscape and open to the sky. The seating block is geometrically focused on the semi-circular “orchestra”; the action takes place on the proscenium, a linear strip running across the back of the circle. A multi-storey architectural stone façade creates a permanent backdrop. By increasing the width of the seating plan and pushing the stage forward into the seating area can increase the sense of visual immediacy but does so at the potential expense of creating large scenic backdrops because of the side seating and their sightlines. The most successful modern examples of this type of format tend to be small in scale – up to 600 seats. Also for smaller theatres steeply raked seating towards the back allows for a more intimate setting between actor and audience.

Ibid., 69-70.
2.2.2 In-the-round

This format places the performance in the centre of the room with the audience encircling the action. There is no scenic backdrop and sets and props have to be minimal to ensure the actors remain in view from any angle. Performers enter through the body of the audience often sharing entry routes. Historical precedents for the format can be found in spaces where the audience sat around a room or a court such as a circus or a sports arena. As a smaller scale the spaces can be intimate and demand for both actors and audience as the relationship is so strong. It provides a strong sense of focus on the performance by the audience.

Precedent Example

Elbe Philharmonic Hall

Location: Hamburg, Germany
Architect: Jacques Herzog and Pierre de Meuron
Date: Construction started 2008, expected finish in 2014

The Elbe Philharmonic is the Hamburg Philharmonic Concert Hall. This project is an example of how a theatre can revitalise an area of the city that has become run down, by providing a focal point for Hamburg’s cultural life. It is also an example of how giant industrial buildings of the nineteenth and twentieth centuries are turning into models of sustainability, as they re-use most of the past building. The enormous crystalline glass structure stands nearly complete, raised slightly above a historic warehouse on the edge of the River Elbe. Still under construction after many delays due to budget and lawsuits against the contractor have extended the completion date to 2014. Similar to the Casino of that was completed in 2008 (which uses steel), it uses glass which is undulating in its design and different treatments to identify different parts of the interior spaces. There are hatches to represent fish-gills which identify the hotel and foyer, while on the Western side of the building a raster has been located so ships can locate the building. The building is attempting to inject the surrounding neighborhood with energy by also providing a hotel, restaurants, a gym, a conference centre and apartments.

There are two plazas in the building. There is the ground floor plaza, which takes people up 37 meters along an escalator, and the upper plaza, which is sandwiched between the warehouse and glass box providing views over the harbour and city. The main hall itself is even further up at 50m above ground. Herzog and de Meuron have chosen a theatre-in-the-round typology to give a more intimate setting between the 2200 audience members and the performer. They have twisted the axis of the circle and placed the stage off centre to create a dominant side for the performer to perform too.

The Elbe Philharmonic is an impressive piece of architectural and engineering achievement. The gap between the old and new building doesn’t just provide a viewing platform, from the outside it shows the difference between the old and the new. The footprint of the new building is exactly the same as the existing building and in the architect’s words this extrusion is, “an iridescent multifaceted crystal placed flush on top of the brick Kaispecher” (existing building). According to the architects, the bold structure, “will inject the surrounding neighbourhood with energy and dynamism. Similar cultural ‘implants’ in other cities provide impressive proof of the way in which such projects contribute substantially to urban renewal, enhancing the attractiveness of urban districts and, indeed, functioning as agents of change.”

The Elbe Philharmonic is an example of the power that theatres have in revitalising under used buildings and the impact that this has on the surrounding area.

20 Ibid., 210-211.
2.2.3 Proscenium Theatre

In the proscenium theatre model, the stage and audience are separated by separate but interlinked volumes. The scenery and performers are contained on a raised stage and the audience views the performance through the proscenium opening. In this format, the audience has to be placed end-on to maximise their view through the proscenium opening into the stage beyond. The proscenium theatre is the best format for large scale and scenic effects as all of the audience is viewing the stage from closely the same angle. The auditorium itself is often described as a ‘shoebox’ shape. Modern proscenium theatre design tends to play down the proscenium opening, therefore blurring the boundary between the two spaces to reduce the sense of separation. 

2.2.4 Conclusion of Theatre Precedents

There are advantages and disadvantages to each format, and in the case of this project it has been decided to use an amphitheatre model. The intimacy of small theatres is a major advantage over large theatres. Amphitheatres also have the advantage of a back drop wall to place scenery and props can be transported on and off the stage easily. Amphitheatres may not have the intimacy of a theatre-in-the-round, or the end on sightlines of a proscenium theatre, but they are a good compromise between the two.
As discussed in the introduction, Christchurch has lost many of the buildings that helped generate and shape its architectural identity. This loss of heritage is almost impossible to reproduce, so an analysis needs to be undertaken on the importance of identity, place and experience in architecture, and what this now means for Christchurch. Early Christchurch was characterised by its English heritage, its Anglican Cathedral, and its Gothic revival architecture. Early Christchurch architects copied revival styles from Europe with very little adaptation to the local context. During the Modernist movement, some Christchurch architects again looked to Europe for inspiration and tried to emulate the flat roofs, light planter finishes and glass roofs of the International style. The physical landscape and climate is not the same in Christchurch as it is in European cities. The earthquake has further escalated the loss of character and identity by removing most of the buildings associated with its early heritage. Although these buildings were an imitation of buildings in Europe, these buildings were the buildings that made up Christchurch. The city risks a further homogenising process that will leave the remaining pieces of architecture in the city forward into the future with designs that foresee the homogenising of the buildings in Christchurch. There will also always be architecture that tries to look backward into the past and others that try to project forward into the future. It is this balance that is most important in the creation of architecture with the character of a region and hence to express the local context and working in a pragmatic sense with a more connected world. This can be explained best by Peter Zumthor in his book titled, ‘Thinking Architecture’. Every new work of architecture intervenes in a specific historical situation. It is essential to the quality of the intervention that the new building should embrace qualities which can enter into a meaningful dialogue with the existing situation. It is this balance that is most important in the creation architecture within a landscape. It needs a mixture between the traditions of its place and the influences from the outside world to function successfully. It needs a mixture between buildings that are rooted to its context that help create a ‘city’ identity, and a mix of buildings that are neutral and homogeneous in their aesthetics. Leaving the remaining pieces of architecture in the city gives place and landmarks that remind residents of what once made up the majority of the city. It also creates layers of architectural styles, providing a balance between old and new. Buildings as well also need to strike this balance between capturing the essence of a buildings context, and working in a pragmatic sense with a more connected world. This can be explained best by Peter Zumthor in his book titled, ‘Thinking Architecture’. It is this balance that is most important in the creation architecture with the character of a region and hence to express the local context.

2.3 Identity, Place and Experience

As discussed in the introduction, Christchurch has lost many of the buildings that helped generate and shape its architectural identity. This loss of heritage is almost impossible to reproduce, so an analysis needs to be undertaken on the importance of identity, place and experience in architecture, and what this now means for Christchurch. Early Christchurch was characterised by its English heritage, its Anglican Cathedral, and its Gothic revival architecture. Early Christchurch architects copied revival styles from Europe with very little adaptation to the local context. During the Modernist movement, some Christchurch architects again looked to Europe for inspiration and tried to emulate the flat roofs, light planter finishes and glass roofs of the International style. The physical landscape and climate is not the same in Christchurch as it is in European cities. The earthquake has further escalated the loss of character and identity by removing most of the buildings associated with its early heritage. Although these buildings were an imitation of buildings in Europe, these buildings were the buildings that made up Christchurch. The city risks a further homogenising process that will leave the remaining pieces of architecture in the city forward into the future with designs that foresee the homogenising of the buildings in Christchurch. There will also always be architecture that tries to look backward into the past and others that try to project forward into the future. It is this balance that is most important in the creation architecture with the character of a region and hence to express the local context. During the Modernist movement, some Christchurch architects again looked to Europe for inspiration and tried to emulate the flat roofs, light planter finishes and glass roofs of the International style.

2.4 Critical Regionalism

Kenneth Frampton discusses one solution to this homogenising process. This solution is critically analysing the unique qualities of a particular region, in a form coined as Critical Regionalism. “The fundamental strategy of Critical Regionalism is to mediate the impact of universal civilization with elements derived indirectly from the peculiarities of a particular place.”

Critical Regionalism is different from regionalism which tries to achieve vernacular architecture in a sub consciousness way. Frampton sees vernacular as approaching ‘populism’ which is a communicative or instrumental sign that creates a preconceived level of gratification to what the sign symbolises. “These signs are loved because they ‘imply a sort of authenticity to a place; that we build. Critical Regionalism seeks architectural traditions that are more than just scenography and viewing architecture as scenographic is over simplifying it. Frampton sees that modernism favours the tabula rasa approach to the site. This system works to a similar degree in the case of an existing urban fabric, and in the case of Christchurch a severely damaged fabric. Frampton expresses the importance of an architectural experience and how it engages with our sensual properties. The material, climate, topography, and light are all elements that change depending on a particular place. These elements help form our sensual experience to a space.”

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Ibid., 9.

2.3 Identity, Place and Experience

Ibid., 21.

Ibid., 26-27.

Ibid., 26-28.

Ibid., 26-27.

Ibid., 26-27.

Ibid., 26-27.
2.4.1 Example of Critical Regionalism

Bagsvaerd Church

Location: Copenhagen, Denmark

Architect: Jorn Utzon

Date Completed: 1976

To understand how the practical applications of Critical Regionalism can be applied to new architecture, the best way to understand the literature is to look at how Frampton applies his theories against a finished piece of architecture. Kenneth Frampton uses Bagnsværd Church as an example of the synthesis between universal and world culture in architecture.

“The building is organized around a grid, and is comprised of repetitive, in-fill modules — we may justly regard as the outcome of universal civilization.” This type of construction can be seen all over the world and is not unique to Copenhagen or Denmark. Frampton sees that the universality of this construction method is mediated when “one passes from the optimal skin of the exterior, to the far less optimal reinforced concrete shell vault spanning the nave.”

“The reinforced concrete shell vault has long since held an established place within the received tectonic canon of Western modern architecture, the highly configured sections adopted in this instance is hardly familiar, and the only precedent for such a form in sacred context, is Eastern rather Western — namely, the Chinese pagoda roof cited by Utzon in his seminal essay of 1963, ‘Platforms and Plateaus’. Frampton sees how the vault is both a religious gesture and something that defines the sacred space. He continues by stating how Utzon has designed the vault in a way that is neither Western nor Eastern in appearance. Frampton sees Utzon is trying to desecularize the sacred form by avoiding any connotations that are usually associated with religious forms, and finishes by stating that this is arguably a more appropriate way of rendering a church in a highly secular age, where “symbolism leads to it feeling kitsch.”

He sees that this desacralization of Bagsvaerd subtly affirms “a new basis for the collective spirituality of religion,” because it avoids the regional pieces that we associate with religious buildings. This analysis of Kenneth Framptons is hard to comprehend what actually constitutes Critical Regionalist architecture. In this example it appears as if he is actually fighting regionalism in such a way that it becomes unclear where the Danish region influence the design.
2.4.2 Critical Regionalism in New Zealand

When reviewing Kenneth Frampton’s, Towards a Critical Regionalism: Six Points for an Architecture of Resistance, Paul Walker describes the fiction of place that generates the regional aspects within architecture. Frampton rejects much of postmodern practice as purely scenographic, as relevant to architecture in different regions throughout the world. Walker understands the importance of regional architecture and avoiding placelessness – historiographical or critical of place in New Zealand architecture. It is important to have a brief understanding of our architectural heritage, and where this heritage is located. Reviewing Mike Austin’s essay, Kiwi Architecture: Modernism and a renewed interest in the history of the discipline. As referential to overseas influences as it was at the beginning of the twentieth century.”

As Vernor Brown said; “There is today the greatly overturned area of glass over which the house-breaker simply pulls the blinds; the influence of the imported architectural magazine”. These magazines, which are widely available to architects and the public, showcase what people want to imagine their lives like, as Douglas Lloyd Jenkins claimed in his publication People in Glass Houses – an international lifestyle just like in the magazines free of architectural heritage is located.

When looking at New Zealand architecture we have always been influenced from overseas. Peter Shaw claims in his book titled A History of Special Interest Areas; “At the beginning of the twenty-first century the best of New Zealand architecture is an artefact of overseas influence as it was at the beginning of the twentieth century.” However as David Mitchell complained “The history they are quoting is often other peoples”.

As David Mitchell and Gillian Chaplin claimed in their book titled Modernism Slowly Evolved into Postmodernism we became aware of the repressions and exclusions of Modernism and a renewed interest in the history of the discipline. As referential to overseas influences as it was at the beginning of the twentieth century.” As Robertson and Jenks pointed out in their work “Innovations, Influence and Knowledge”, there is always going to be a lag between the original and the copy, and not to mention it often lacks the innovation of the original. This creates a struggle for architects to see where our architectural heritage is located.
2.4.3 The Architecture of Christchurch

When looking at Christchurch architecture we can see the influences from Europe present throughout much of the city. The early gothic buildings were often designed in England and often the local architect was only seen in a project architect type of role.1 Miles Warren, foreword, 16.

The Christchurch Town Hall is a prime example of the influence of the London City Council. It was only seen in a project architect type of role.

Miles Warren, foreword, 16.

It can be seen in the design and the structure of the building. The materials used are similar to those used in the London City Council buildings.

Ibid., 16.

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Ibid., 16.

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Ibid., 16.
The following precedents have been chosen as they deal with significant sites, physical destruction and loss of community; they try to connect people to the site with the use of materials and forms. Also these precedents are all buildings designed by architects that have been described as critical regionalist architects, something that some of the architects take exception to. All of the architects follow some of the points identified by Frampton, but differ in their opinions on where the balance lies between tradition and universalization. Analysing the precedents and architects will help inform an architectural dialogue with the heritage of Christchurch in a post-earthquake context.

### 2.5.1 Kolumba Museum

**Location:** Cologne, Germany  
**Architect:** Peter Zumthor  
**Date Completed:** 2007

Peter Zumthor is a Swiss architect who has been classified as an architect who researches and analyses a site and its context thoroughly to capture the unique characteristics of each site. Zumthor examines the textures, the materials and grittiness of the site, until he sees something that he can build out of. He views architecture as concrete art, it is real and it is something that we inhabit and visit. This leads to Zumthor being primarily concerned with materials and how these materials form structure and space, how light is reflected, and how smell and air is experienced in the space he designs. Zumthor views a successful building as one that is designed to fit together as a whole. New additions grow out of old buildings. Radical extensions and transformation that have no reference to the neighbouring buildings are out of place. Zumthor enforces this idea by stating that architecture is always rooted to its place and context as it is always built or placed on a site.

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76 Ibid., 11.
77 Ibid., 17-18.
78 Ibid., 17-18.
Kolumba Museum builds on the original church on the site. The original St Columba Church was heavily bombed during World War II, and left a ruin until 2007. This building is located within the urban setting of Cologne, a departure from Zumthor’s home in the Swiss Alps.

Zumthor thoroughly researches the context and the history of the site of the Kolumba Museum before he started designing. The museum permits visitors to experience traces of history in the ground, recall the dimensions of the lost church hall, and visit the vast collection of religious and contemporary art. The form of the building is very strong and sits heavily on the site but still allows the visitors inside to partially experience the street noise, the external temperature, and daylight from outside by perforated bricks. The bricks are all handmade and textured to create a slightly rough finish that contrasts with the old stonework from the church. The bricks are then tied into the existing brickwork with no spacing. They are thin and narrow to create a more layered finish and the colour is similar to the existing stone church. Zumthor is trying to bring the building together as a whole, and not treat each part as a separate piece. The Kolumba Museum offers viewers a palimpsest of layers of history and allows them to inscribe themselves into the narrative to become part of the story. The perforated bricks also allow light to penetrate through tiny pinholes that are randomly assorted. The atmosphere is still very dark in the interior and the light is diffused similarly to the original church. Zumthor has also left the ruins of the original church and built a bridge that winds its way through the space and leads to the museum spaces. Destruction and construction become inseparably intertwined; the act of covering and discovery blurred.

While travelling through the building there is no place to experience the building as a whole, it is part of a puzzle that cannot be just put together. This allows the old church to become part of the exhibition; there is little distinction between the content of the museum from its context. Exhibition spaces in the higher spaces do follow the contemporary trend of placing artworks in white rooms with minimal sunlight and artificial light. Only in some rooms are large windows placed in places that allow glimpses of outside, again giving glimpses of the city outside. Zumthor does not try to replicate or imitate the past, but he is always conscious of it. He carefully preserves the past, but still designs buildings that are reflective of today.
2.5.2 Ningbo Museum

Location: Ningbo, China
Architect: Wang Shu
Date Completed: 2008

Wang Shu is a Chinese architect who has embraced critical regionalism, as well as developing his own design process that is distinct to the Chinese region. China is one of the fastest developing countries in the world, with over 1.3 billion people. At the moment, "elitist" architecture by Rem Koolhaas, Zaha Hadid or Steven Holl is present as much as quick imitations of some indistinct "international style" or the so called "Disneyland syndrome" buildings recurrent in satellite towns with distinctly German, Italian or Tudor architectural styles. Many Chinese architects are lost translating Western aesthetic forms for a Chinese public, with a few experimental skyscrapers that are more concerned with creating a monument of power, than a building for the people. Wang Shu is one of the most experimental Chinese architects currently practicing in China. Wang does not want his architecture to be significant in any political sense, but rather establishes it in terms of place and local history. Wang has also developed the "free design process", a process that enables a design to adapt itself constantly in response to the conditions and the environment as they appear during the building phase. In principle, "free design" is the method for creating a Chinese garden, according to Wang, for the simple fact that a Chinese garden cannot be really designed. A Chinese garden is the result of a construction process. I would like to make this a principle of modern architecture. When I build something I am always free to change certain things, incidentally this is also optimal for the Chinese situation, lots of unforeseeable things happen all the time and you have to improvise. It is useless to make a precise plan but it is better to solve problems at the moment they arise.

The Ningbo Contemporary Art museum is located in the Ningbo Port Area and is an example of Wang paying scrupulous attention to place. Most parts of the historic port buildings had to be destroyed for security reasons. Still, Wang attempted to rebuild a "Chinese ceremonial space" by dividing the building perpendicularly into upper and lower parts, which corresponds not only to Chinese tradition but also responds to contemporary economic needs. The lower part of the museum is reserved for commercial exhibitions while the upper part holds art exhibitions. The grey bricks that are used for the foundations of the building are bricks originally salvaged from the original site. Ningbo Museum does not echo any distinct formal attributes of the country's rich architectural past, but evokes atmospheres and moods that make

81 Ibid., 3.
82 Ibid., 2.
83 Ibid., 3.
84 Ibid., 3.
one feel a depth of time and groundedness in history. The façade is assembled using a technique known as **wa pan**, a method developed by the region's farmers to cope with the destruction caused by typhoons. Wang utilized his “free design” philosophy when placing the bricks, making decisions on site that responded to the type of material that he had. When using found materials there can be differences between what is designed and what is built. This ‘free design’ allows for participation by the craftsmen in the design of the building. The transition between the grey bricks and the concrete is successful in creating a whole piece of architecture. The colour is similar and the bamboo texture ties in well with the textured bricks. It breaks up the size of the building, but still allows the building to appear as one. The interior is a radical change from the exterior. It uses steel and timber elements that suggest an affinity with ships and harbour buildings. The form is derived from the local mountains that surround China. The form is abstracted enough that it does not appear to be imitating the mountains, but is rather referencing them. The narrow shapes, random application, and alternating directions of the windows follow the random pattern of the bricks. The materials are what make this project so successful. They tie back into the past and the site, and the design allows for the materials to speak for themselves. The form is strong and if we imagine it was made from white plastic it would look like a giant blob in the landscape. But making the blob from the brick and stone gives the building meaning.

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88 Ibid.,
2.5.3 Christchurch Town Hall

Location: Christchurch, New Zealand
Architect: Miles Warren and Maurice Mahoney
Date Completed: 1966

The Christchurch Town Hall is one of the most iconic buildings in Christchurch. This building is an example of the influence of the New Brutalism style brought back from Warren’s time in London working at the LLC. The difference between Warren’s work and Alison and Peter Smithson at LLC, is Warren incorporated his knowledge of the construction systems developed by the timber buildings developed in New Zealand, and in particular the structural systems developed by The Group.

The Town Hall is Warren and Mahoney’s first building where the form is not dominated by the structure. The form in this case tries to express the function of the building behind it. The floor plan was developed first. It was decided that an oval drum would work best for the main auditorium and a fan shape for the neighbouring James Hay Theatre. The height of the auditorium and its roof form were developed after the sound reverberation time was developed in a partnership with Harold Marshall. The walls are heavy thick walls that are required for the sound isolation and performer areas, something different from the usual structural frames with infill panels used by Warren and Mahoney. Concrete is the main material used on the exterior of the building. This concrete comes from the aggregates in the alluvial river beds that make up the Canterbury plains. This ready supply of stones, pebbles and sand in the river beds is part of the unique landscape that Christchurch sits on. Advancements in concrete technology allowed Warren and Mahoney to create different finishes in the concrete as well, something they took advantage of in the Town Hall. The main panels have been applied with a rough textured finish to break up the monotony of the large expanse of walls that are needed to contain the auditorium spaces from the influences of the outside climate. Keeping the outside out of the buildings was important during the 60’s not just for sound and view isolation but also for keeping the sun out, as the spaces were not air conditioned.

Warren and Mahoney have developed a style which incorporates both heavy concrete constructions with light weight timber. Large concrete columns and beams are exposed along the edge of the atrium spaces to create the framing elements for the circulation between the entrance and auditorium spaces. Warren creates a series of layers when developing the connection between two different elements. He avoids two pieces directly joining, and instead allows the two pieces to overlap. This gives him the opportunity to then extend the column and ceiling levels to create a continuous element.

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to express this in the building. It is not just the way that Warren and Mahoney express the construction in architecture that creates the space. The same attention to detail is applied to the rest of the building. From the angles of the perfectly positioned sound panels, the angle of seating to create good sightlines, to the development of the plan itself, are all examples of a piece of architecture where the form of the building is developed from the function of what takes place in the interior.

This expression of what constituted the structure of the building comes from Miles interest in the craft of architecture. Warren and Mahoney practiced their craft and skill in drawing buildings that expressed their architecture to both clients and builders the process of the construction of the building. Both Warren and Mahoney understood the construction of their building which allowed them the confidence

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94 Ibid., 81.
96 Ibid., 120-121
97 Ibid., 118-119.
When analysing Critical Regionalism it was discovered that Frampton struggled to pinpoint what Regionalism consists of. As Paul Walker stated in “Fiction of Place” he sees this as the only place that architecture can occur. “Towards a Critical Regionalism” Frampton also sees the importance of the tectonic detail, but in a way that a four by two partition never could. Peter Beaven retains what was even important was the sense of solid walls containing spaces in the way they thought. Now cheap timber is not available, but we’re still interested in the joints and how things are knitted together, in contrast to what you might call the Mediterranean solidity of the continuous wall. When you say I brought back brutalism from England, what was even important was the sense of solid walls containing spaces in a way that a four by two partition never could. Peter Beaven retains that – his sense of contrast between solid and void. Now we tend to be trying to recreate the past is not the best solution. This creates false signs and doesn’t actually answer the question. It does not make a dialogue, as it is merely recreating the past.

The importance of ‘building the site’. This means not treating the building as a standalone object in the landscape, but rather seeing it as one that is integrated with the landscape and architecture around. This also helps to not just activate the building, but the surrounding area.

When analysing the literature, precedents, and the development of architecture in Christchurch we can start to draw conclusions on how we can construct a new building that creates an architectural dialogue with the historical remains of the past Christchurch.

• Trying to recreate the past is not the best solution. This creates false signs and doesn’t actually answer the question. It does not make a dialogue, as it is merely recreating the past.
• The importance of ‘building the site’. This means not treating the building as a standalone object in the landscape, but rather seeing it as one that is integrated with the landscape and architecture around. This also helps to not just activate the building, but the surrounding area.
• Materials are important. Each precedent looks at the connection between the materials and the place that they come from. Warren used heavy materials such as concrete which come from the alluvial soil surrounding Canterbury and expressed concrete for what it is. Timber is also used extensively throughout Miles Warren’s architecture. New Zealand has a long association with timber, and this is still present in Warren’s architecture.
• The way that these materials are connected together. This doesn’t mean that the joint needs to be excessively exposed, or try to form the whole experience of the architecture, but they need to be developed in a similar style to the local construction methods. In this case the same method that Warren helped to develop in Christchurch.
• The importance of solid and void in Christchurch architecture. This isn’t just seen in the architecture itself but also the compressing and opening in spaces throughout the urban spaces in the city.
3.0 Project Development

3.1 Site Analysis

An analysis of Christchurch suggests an appropriate site for a theatre/music hall within the city would be:

- An area of the city with significant remaining heritage buildings
- A part of plans that have emerged after the earthquake. River of Arts plan.
- Part of the new city Blueprint
- Close to public transport and areas with high foot traffic
- Respective of existing civic buildings, e.g., Town Hall, and Arts Centre

By looking at the past, new, and future points of activity will help form an idea of where the city will grow out of. Cities often grow out of single points of activity known as nodes. There is no definite science to locating these nodes and producing these nodes, but looking at current trends in the city can help identify where these nodes are and possibly how they are going to grow. Examining a site’s context will help develop paths through the city that will cross over each other to become nodal points for new developments. Cities can take on several patterns and still operate with success.

Christchurch was a planned city from the start with straight roads, a central square with a cathedral, and a large green space to the west. Four roads then circled the entire city making it into a perfect square shape. Roads then radiated out to connect to the other settlements in the region. After the initial planning the city then grew out in a more organic pattern, and the buildings within the four avenues were slowly extended upon to make room for the demands of businesses. The suburbs have grown out from the centre, resulting in urban sprawl in all directions. Christchurch also has its own natural features that don’t allow for growth in most parts in the city. The airport to the north west, marshlands to the north east, water to the east, and mountains to the south have not left many options for the city to grow other than taking a chance on the marshland areas or building in the south west. This outwards growth, meant people started to build on the Marshlands, which during the earthquake led to liquefaction, destroying their homes.

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- An area of the city with significant remaining heritage buildings
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- Part of the new city Blueprint
- Close to existing entertainment areas and places that people gathered at
- Close to public transport and areas with high foot traffic

3.1.1 Analysis of Christchurch at an Urban Scale

Figure 3.01 Arts buildings in central Christchurch. The Blueprint proposes the Performing Arts Centre next to the Town Hall.
3.1.2 Existing Arts Buildings in Christchurch

The arts in Christchurch are scattered across the CBD. This creates many nodal points for the arts but no large centre of activity. The Arts Centre is the largest nodal point for creative and performing arts. Home to the Court Theatre which is Christchurch’s only private theatre company, it also hosted ballet, and the Dux de Lux which hosted gigs, music shows, and a variety of art shows. The art gallery and museum were located either side of the Arts Centre making it the cultural hub in Christchurch. The Gothic Revival architecture also played its part in cementing it as the centre for artists in Christchurch. There is also a smaller art community in the southern part of the CBD around High Street and Tuam Street. As the name suggests High Street was originally the main street in Christchurch. As the city expanded the retail area slowly transitioned towards Cashel Mall and the square which is more centrally located. The cheaper rent on High Street encouraged artists, small theatre companies, and manufacturing factories to the area. During the last 20 years the street has become fashionable again. The close proximity to the central city has encouraged small offices, design studios and high end boutique stores. Due to its low level of development during the early 1900s the area maintained most of its original brick and stone buildings. Developers developed projects that enhanced the bohemian feel of the area and created popular night spots and cafes. Studios and offices had been slowly coming back to the area, but the earthquake destroyed most of the buildings that were there including the Odeon Theatre, and The Bedford music venue.

Figure 3.02 Benjamin Mountfort, Christchurch Arts Centre, 1877 - 1923

Figure 3.03 Proposed River of Arts Plan. The Blue trail is an analysis taken from Figure 3.1
This part of the city was also popular for its lane networks which were originally service lanes to the factories and warehouses built in the late 19th-early 20th century. After manufacturing became uneconomically viable in New Zealand these warehouses were slowly closed down. During the last 30 years these lanes and warehouses have been converted to bars, clubs, and offices in a similar fashion to the laneways in Melbourne. The most successful project was SOL Square which was opened in 2006. SOL Square was entered from either Lichfield Street or Manchester Street through a series of dark alleyways that don’t give any hints to what lays inside. The alley then opened itself up to SOL Square, giving the visitor a feeling of discovery of the space. It has been argued by PM Hill that these lanes create a “pattern in the urban and architecturally spaces that give it a unique character.” It can also be seen in the urban scale in the relationship of Cathedral Square to the narrow pedestrian lanes that connect with it, and at an architectural scale in the arcades of the Arts Centre. Warren and Mahoney have managed to capture this same pattern in the Dorset Street flats and new shopping centres.

All of the bars opened out to SOL square with terraces at different levels and facing a large projector that showed sports events, creating a tight, vibrant, intimate space of people enjoying themselves away from the rest of the city. SOL Square was a popular nightspot, but was always quiet during the daytime as it lacked any office buildings that provide people to activate the space. SOL Square is due to reopen after the earthquake and has largely remained intact. SOL Square is important to look at as it is one of the few remaining areas that provided entertainment that has survived, and is going to retain most of its original character. Other lane areas such as Poplar Lane have been destroyed when the buildings surrounding it came down, and is now designated part of the Innovation precinct.

Figure 3.04 Poplar Lane before the earthquake

Figure 3.05 Poplar Lane before the earthquake

Figure 3.06 SOL Square at night
demolished to make way for the Te Puna Ahurea Cultural Centre on the current site of Victoria Square and the old demolished courthouse. The council is committed to saving the current Town Hall, and if this does eventuate than there will be no need for a new 1500 seat auditorium building in the new performing arts centre. There is still a gap left in the city even if the Town Hall is saved because many music halls and smaller theatres were damaged and later demolished. These include the Repertory Theatre on Kilmore Street, the Odeon Theatre on Tuam Street, The Bedford on Bedford Lane and many smaller gig venues that were scattered throughout the city. The new proposed stadium also has an opportunity to be used as a large entertainment centre that can be used for a variety of sports, as well as concerts and events.

3.1.3 The City Blueprint

The city Blueprint looks to solve the larger urban problems with the city. The Blueprint is seen to be the future of the city. The plan is concerned with creating large projects that will generate infrastructure for private developers to build beside. The challenges that the urban planners face in that there is too much space to create a dense central business district. Christchurch, like many cities in New Zealand suffers from urban sprawl, which puts pressure on infrastructure such as traffic congestion and long drives to services. By creating a smaller, denser city, it makes the entire central city walkable and only requires one public transport hub which should encourage residents to travel by public transport. To create this dense city an urban park surrounds the central city and joins Hagley Park to form a loop. Called ‘The Green Frame’, it condenses the central city, while providing green open space and reinforce Christchurch’s identity as the ‘Garden City’. For the city to move forward it does need a strong vision to be followed. Anchor projects can only do so much for the city, what is needed is private investment to start developments that will bring businesses and people back to the city.

Within the Blueprint a proposed Performing Arts precinct is planned on the block east of the current Town Hall. This centre is proposed to align with the Isaac Theatre Royal which is currently undergoing restoration. This precinct is dependent on the current Town Hall being demolished to make way for the Te Puna Ahurea Cultural Centre on the current site of Victoria Square and the old demolished courthouse. The council is committed to saving the current Town Hall, and if this does eventuate than there will be no need for a new 1500 seat auditorium building in the new performing arts centre. There is still a gap left in the city even if the Town Hall is saved because many music halls and smaller theatres were damaged and later demolished. These include the Repertory Theatre on Kilmore Street, the Odeon Theatre on Tuam Street, The Bedford on Bedford Lane and many smaller gig venues that were scattered throughout the city. The new proposed stadium also has an opportunity to be used as a large entertainment centre that can be used for a variety of sports, as well as concerts and events.
3.1.4 The Green Frame

The Green Frame is the biggest move in the city Blueprint. It is a large urban park that goes around the perimeter of the central business district connecting to Hagley Park to the west and the Avon River to the north. The East Green Frame is larger and is to incorporate townhouses along its western edge. The Southern Green Frame is smaller and is to incorporate low-rise offices that sit within the landscape. It has been described to have a ‘campus’ like feel. Currently, there are surviving buildings that sit within the Green Frame. These businesses are slowly being purchased by CERA and will eventually be demolished to make way for the Green Frame. A few of the remaining buildings are planned to be incorporated into the Green Frame. These images are developed during an earlier project undertaken over the summer of 2012/2013 that explored how we can incorporate the surviving heritage buildings in the development of the Green Frame. This shows us an example of what the Green Frame could potentially look like.

Figure 3.10 Example of a café in the Green Frame

Figure 3.11 Example of markets in the Green Frame

Figure 3.12 Example of how the Green Frame can incorporate the surviving buildings into the Green Frame. This project was developed as part of a Summer Studio elective at CPIT, 2012 - 2013
3.1.5 The Innovation Precinct

At the knuckle between the two pieces of the Green Frame is the Innovation precinct.

This precinct tries to facilitate the establishment of a technology-based industry and research precinct within the central city, attracting new business and employment opportunities in high-value industry sectors. The precinct is proposed to be adjacent to the Christchurch Polytechnic Institute of Technology due to the synergies that exist and the leverage that can be obtained by linking up activities.\(^\text{106}\)

At this stage the EPIC Building has been developed to help attract businesses to the precinct. EPIC is based on the Silicon Valley model – where a building structure and use promote innovation. The building is home to 17 small start-ups and hopes to stimulate growth in Christchurch. The precinct looks to attract private businesses to the area, and hopes that by having these businesses grouped together will allow for more collaboration between each other.\(^\text{107}\)

The Innovation precinct is also located on one of the largest areas of surviving heritage buildings in the central city. The Blueprint document does state that it will try to incorporate the remaining heritage features of the area into the new buildings.\(^\text{108}\)

\(^\text{106}\) http://www.ccdu.govt.nz
\(^\text{107}\) http://www.epicinnovation.co.nz
\(^\text{108}\) http://www.ccdu.govt.nz

What the Blueprint doesn’t mention is the impact that the creative industries that inhabited the area before the earthquake made on the area.
The site sits within an area defined as the Innovation precinct in Christchurch. By placing a theatre within the Innovation precinct, it is hoped that by creating a more mixed use approach to urban design that these businesses can collaborate with the artists and performers in the area. By placing a venue that entertains people through creativity and art it is hoped that this encourages more creativity and innovation in the businesses in the precinct. These businesses are also hoped to activate some of the facilities, such as the cafes and restaurants during the daytime.

Neighbouring the site is the Music and Audio Institute of New Zealand. By placing the theatre next to the school it is hoped to create an opportunity for the facilities within each building to be shared. Within the school there are recording studios, as well as practice spaces, classrooms, and rehearsal spaces. A theatre could help give these students a stage to perform on to the public, and help create a relationship between the public and the students, as well as students and established touring groups.

The site is also located between the city and the stadium and is beside the successful 155,000 square development which is due to reopen sometime later in 2013. A restaurant is also on the site, although is closed while the façade of the building beside it is being repaired. On the site are two surviving pieces of heritage architecture in Christchurch.

Excelsior façade (Manchester Street)
One façade was the former Excelsior Hotel. It is one of the few remaining pieces of early Christchurch architecture surviving after the earthquake. The Excelsior Hotel has a category 1 rating on the Historic Places Trust Register. Designed between 1863 and 1878 by W.B. Armson in the style of an Italian palazzo, the features of this style can be seen in the block like plan, the rusticated lower storey constructed in larger blocks, differing window treatments on the upper three floors, and the elaborate cornice. The façade is constructed by clay bricks that have been coated in a stucco finish which hides the bricks underneath. During the earthquake these bricks are now exposed on the interior walls for the public to see.

Victoria Black façade (High Street)
The remaining façade on High Street is not located on the Historic Places Trust Register. The clay bricks have been incorporated into the Venetian Gothic style popular in Christchurch. The façade uses pilasters that are located at regular intervals along the façade. The lintel of the panels consists of mainly glass at the lower level, and arched windows and elaborate cornices in the upper level.
Figure 3.18 Drawing of what the Excelsior Hotel facade looks like behind the containers.

Figure 3.19 Materials of the Excelsior facade.

Figure 3.20 Two Fat Indians Restaurant.

Figure 3.21 The rear of the Victoria Black facade.

Figure 3.22 Looking east/centre view from High Street.
3.3.1 Brief
The theatre is to be a multipurpose space that allows for a variety of performances.

- A theatre with traditional seating that creates an intimate setting for a range of performances including comedy shows, plays, and dance recitals.
- A place for music concerts that allows for dancing, as well as places to sit and enjoy the music.

The project is a civic building so needs to create successful public spaces. It also needs to address how connections are made between architecture and public space. The foyer is the key connection between the public space and the auditorium space. It needs to be open to visitors to encourage people to visit, but also maintain a feeling of exclusivity and create a feeling that it is a space for special occasions. The main space is the auditorium space and stage. The space needs to be centred on the stage, and the seating must allow for clear sight lines of the stage, as well as create an intimate setting to allow for audience – performer relationships. Removable seating is needed for concerts and performances that allow the audience to move. There also needs to be places for people to sit and watch these musical performances at a further distance if they want to. Exhibition spaces are needed to encourage artists to activate and create a building used by the multi-disciplines of the artistic community. This will allow artists and performers to collaborate together in performances and activities such as stage design.

3.3.2 Spatial Requirements

_Extensive Spaces_
- Outside amphitheatre with stage and seating
- Dining area that can be shared by neighbouring restaurants and cafes, as well as the main foyer
- Tram Station

_Foyer_
- Bar area
- Ticket office/reception
- Kitchen facilities
- Seating area
- Lounging area
- Gathering space
- Toilets
- Coat room
- Exhibition spaces

_Auditorium_
- Stage that can move depending on the type of performance playing
- Scene dock with access to stage
- Seating that can be removed if necessary
- Directors box/ sound and lighting control room
- Large circulation network to carry the audience between the foyer and the auditorium
- Lighting, sound controls and services that can be controlled manually or electronically.
- Lift in the floor of the stage to allow performers or props to appear out of

_Backstage_
- Separate access points to the stage for performers
- Directors office
- Changing rooms/make-up rooms
- Bathrooms
- Kitchen/lounge space/green room
- Practice space
- Prop storage with lift into auditorium
- General storage areas
- Private lockers
- Access for trucks to drop off large props
- Laundry
4.1 Phase 1: Application of the Concluding Statements of Existing Knowledge

4.1.1 Materials

The design process has started by analysing the materials that make up Christchurch. The reason being is that the materials can influence the light, texture and feeling of the building. The materials are the pieces of the project which is unique to Christchurch and what connects it to the region of Canterbury. It looks to build up a language that can be applied throughout the building.

Early buildings in Christchurch were built out of wood – specifically rimu, matai and kauri which was sourced from nearby Riccarton and Papanui (now suburbs of Christchurch). Buildings were plain with little decoration and Gothic in form (gable ends, steep-pitched roofs and dormer windows). By about 1870 it was common for wooden shops to have ‘false’ Italianate facades with the wood fashioned to mimic stone.

Wood was always seen by the founders as being temporary and envisaged a city of substantial buildings built out of permanent materials. Brickworks were established along the foot of the Port Hills where there were deposits of suitable clay. Stone was quarried from Halswell quarry and is distinct in its dark grey colour. During the 1860/70s stone buildings slowly replaced some of the earlier timber buildings. Public buildings were built of Halswell Stone in a Gothic style and became ‘signature’ buildings of the city.

Commercial buildings were typically built from brick and often surfaced with a cement render. Other materials included basalt from Port Levy and Glentunnel, and Chateris Bay sandstone. These buildings were built from a variety of European styles, with a predominance of Venetian Gothic, which was fashionable in English architecture at the time.

During 1914 – 1960 there was very little development within central Christchurch, (years of depression, war and post-war recovery). New modern high-rise office blocks and hotels were built, usually replacing the city’s older commercial buildings and were driven by economic demands on the city. These new buildings introduced the glass curtain wall to Christchurch, as well as concrete as the main building material.

In style the high rise buildings generally avoided the ‘glass skin’ and many commercial buildings have a distinctive relationship between window and wall surfaces. There has been criticism of the new large buildings and a register was put in place to save significant buildings of architectural merit in Christchurch. The Easlekar Hotel is an example of a building that was saved in the face of development taking place in the city.

The earthquake has presented a unique opportunity to recycle the material from the demolition and use building materials that have not been available for the last 50 years. Halswell stone and native timbers have not been available for years in new buildings as the local supply had been exhausted years ago. The red clay bricks which made up much of the older commercial buildings in Christchurch are currently being dumped into the Lyttelton Harbour as there is nowhere else to dump them, while the native timbers are being dumped into the Burwood landfill where it is planned to be de-nailed and sold at a later date. Using material that is sourced from the local landscape, gives the building a character that is unique to its specific site.
4.1.2 Tectonics

A structural system needs to be developed that not only holds the surviving facades upright, but also needs to tie the façade with the new building. There is a constant balancing act of giving the existing façades space and allowing them to be admired for their heritage value and integrating them with the rest of the building to read as an important part of the building. In the case of the structural system it has been chosen to try to tie the two together by analysing the heritage past of Christchurch and try to emulate what Kenneth Frampton discussed in Critical Regionalism. By constructing a detail that is an abstraction of the ideas of Christchurch’s leading architect Miles Warren it is hoped the structural system will process some of the qualities of his joints without falling into the scenography of copying. These sketches look to abstract some of Warren and Mahoney’s work to construct a detail that is both distinctly Christchurch and applicable to the job that it has to perform.

The first detail examines how a fan type system could be developed. When looking at the detail 65 Cambridge Terrace it was discovered that the fastening system between the column and beams was a simple bolt joint that was exposed either side of the joint. This was then explored in figure 4.03 by seeing what could happen if more timber beams and columns were applied with this construction method. When developed in the model it was discovered that the negative detail was too large, and was starting to become its own space. Figure 4.05 looks to strip the structure back and explore the way that Sir Miles often extended the beams and columns to generate the aesthetics of the architecture. The negative detail in this case gives a glimpse of what lies beyond, but doesn’t start to build into the void space. The model shows how we can place screens on top of the beams that extended past the columns. Looking at the model there are too many beams on the lower level and that there is no need to include the supports that sit behind the screen. This will create more of a void space beyond.

4.02 Analysis of 65 Cambridge Terrace by Miles Warren

4.03 Exploring pin (bolt) joints

Figure 4.05 Exploring the negative detail between column and beam

4.04 Analysis of the exposed structure in the Canterbury Students Union building

4.06 Exploring pin (bolt) joints
When applying the recycled materials from section 4.1.1, a variety of different options is explored on how they could join. When analysing Miles Warren’s Town Hall it was discovered that the layering of materials was an important element within the joint. This allowed them to be connected easier than trying to make them merge, but also allowed for more expression for the joint to influence the rest of the building.

Figure 4.11 and Figure 4.12 is an example of the brick placed in a pattern similar to paving on the ground. This pattern comes from offsetting a grid. It layers the bricks, but does require all of the pieces to be the same length to work.

Figure 4.07 - Figure 4.10 explores how the bricks/stone could be each offset slightly to create curved, vault like spaces. The layering in this instance of the joint is now starting to influence the form of the space around it.

Figure 4.11 explores placing the bricks at 90 degrees to each other throughout the building. This modular system allows for new walls to be added at 90 degree angles at modular intervals. This cross threading of the bricks was used throughout the facade of both of the remaining facades on site. Figure 4.15 is an example of how a wall could fit within the modular system. In this example the bricks placed at 90 degrees to the main wall have been removed to allow light into the building.
4.1.3 Building the Site

The site is completely flat with no changes in height or any significant landforms. Christchurch is predominantly built on a collection of alluvial gravel which is harder, and a mixture of sand, silt, clay and peat which is softer. Different suburbs of Christchurch are built on different soil types. The top 20 metres of the earth's surface is the most important for foundations of multi-storey buildings and liquefaction evaluation.

Originally Christchurch was a swamp lying behind beach dune sand; estuaries, lagoons, gravel, sand and silt of river channel and flood deposits of the coastal Waimakariri River floodplain. The Waimakariri River regularly flooded Christchurch prior to stop bank construction and river realignment. Since European settlement, extensive drainage and infilling of swamps has been undertaken.

The site is located on the softer soil in Christchurch and is seen to be prone to liquefaction and in the past would have been affected by flooding. The site is currently in debate if it is to be zoned TC2 or TC3 land. Following the earthquake geotechnical engineers have been zoning the entire city in zones that classify the soil underneath them.

TC1 – Safe soil, any type of foundation system can be used. Low – risk

TC2 – Rib-raft systems or similar are needed. Medium – risk

TC3 – Specifically Engineered foundations. High – risk

Red Zone – No buildings to be placed on this type of land. Extreme – risk

The site also has views towards the south of the port hills. To experience this view, the viewpoint needs to be raised above the neighbouring buildings especially the C2 building which obstructs most of the view.

The building will need foundations for the soft soil. This can be either expressed or hidden, but will have an impact on the building and its design. Because the building is using recycled brick and stone, a base isolator system is the clear solution to allow for the people to move less during an earthquake.

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NOTE. This resource is to be updated frequently and is subject to change.

Figure 4.16 Ariel of different land zones in Christchurch. The worst affected areas are by the Avon River.
there looks to be an add-on to allow the building to sit directly next to the neighbouring buildings. This abnormality in the façade can be exploited as the entry point for a laneway between Manchester and High Street.

4.2.1 Site Constraints

Due to the severe devastation the earthquake had on Christchurch and the demolition of so many buildings, the building has the opportunity to meander over many different sites. This is as much of a challenge as an opportunity; too large of a building, the site will lose its intimacy and will not give other buildings the opportunity to grow around it. While too small and the building could look lost in the blank city. The two facades sit at 45 degree angles to each other, one located parallel to High Street, and the other parallel to Manchester Street. This angle is unique in Christchurch, as most sites have the buildings placed at 90 degree angles to each other and following a defined grid of roads. The front door of the Excelsior façade sits directly opposite the entry/exit of Struthers Lane on Manchester Street.

This drawing explores the concept of laneways that provide pedestrian access between the bus exchange/ SOL Square and the stadium, and the two parts of the Green Frame. The concept is derived from the nearby Struthers Lane and Poplar Lane, and helps to create an internal courtyard similar to SOL Square. A laneway that opens to a square has been chosen to extend the same laneway used in SOL Square across Manchester Street and onto the site. Before the earthquake this area was a service square but the lanes did not connect to both Manchester Street and High Street but instead could only be accessed from Tuam Street to the south. Analysis of the Excelsior Hotel façade (figure 3.18) shows that the façade is not strictly symmetrical and that to the right...
4.2.2 The theatre – form follows function

An amphitheatre style seating arrangement has been chosen as the best theatre type for a theatre of 350 – 400 people. This type provided a good balance between a high level of intimacy, as well as providing good sightlines for the audience, and providing a back wall for scenery and the performer's backs.

The initial design concept of the theatre is a circular shape enclosing around a small central circle which contains the stage. The stage is the heart of the theatre, it is the one thing that all theatres have in common, without a stage there can be no performance. The circle is split in sections to create an amphitheatre style seating arrangement. One half of the circle is auditorium seating and the other half is the back stage areas. Circulation is located on the perimeter of the auditorium, providing a transitional space between the auditorium and foyer. The edges of the building need to act as a threshold between the auditorium and the city.
4.2.3 Critique 1

The auditorium is raised above the ground level, and is climate rejecting. There is no direct connection between it and the city. The edge along Manchester Street and the corner is activated by a café during the daytime and a bar at night time. This space also acts as the foyer when shows are taking place. The auditorium space itself radiates around the central stage. The seating takes up a third of the space on the second floor. A quarter of the space is reserved as an open space that can be used for dancing at music concerts or seating during comedy shows. The remaining space, including under the seats is reserved for the backstage area.

This plan tends to provide different functions on the edges of the building. It creates laneways between the theatre and neighbouring buildings; but fails to activate these laneways with any conviction. The spaces created will be very dark, and will not encourage people to sit in. The theatre space is also too small to be of any real use to anyone. The scale of the auditorium needs to be increased and because the site is already so tight, the offices and retail are the most obvious spaces to drop from the design. Although these spaces did attempt to create a variety of uses on the site, the tight confines meant that they need to be dropped if the theatre is to function properly.
4.3 Phase 3: Connecting to the city

4.3.1 The Courtyard

There are two possibilities for the placement of the external square (courtyard).

1) The corner of High Street and Manchester Street (the earthquake courtyard)

- Advantages: Highly visible from the corner when approaching from Cathedral Square. It also activates the corner like it did in the past.

- Disadvantages: Focus is on traffic. It is exposed from sun, noise and vehicles.

2) Behind the remaining façade on High Street

- Advantages: Quiet and secluded from vehicles, with buildings defining the edges of the square, which can be activated to bring life into the square. It connects Strathmore Lane and Ash Street. It is also part of the connection between the East and South Green frame. Will be part of the foot traffic between the stadium and SOL Square/bus exchange.

- Disadvantages: Is located on the south side of the theatre.

As we can see there are more advantages to placing the courtyard behind the existing façade on High Street. This square helps connect Manchester Street and High Street and could introduce an exterior theatre to encourage walkers to stop and experience impromptu performances. The next section focuses on the layout of the courtyard, and what functions the courtyard needs to achieve. Each concept is judged against certain criteria to help with the analysis of the space.

Analysis Criteria:

- Connection between Manchester and High Street - This is very important as there needs to be a clear direct link through the site between the bus exchange and stadium to encourage people to travel through the site. This needs to be wide enough to carry a crowd of people.

- Amphitheatre - To encourage people to detour from the path through the site, this amphitheatre needs to activate the space and encourage people to sit and watch performances comfortably.

- Entrance - The entrance needs to be located off the amphitheatre, and be a clear extension of the courtyard.

**An Amphitheatre for Performances**

The main concept of the courtyard is to allow direct access between Manchester Street and High Street through a laneway beside the Excelsior façade. By watching the show, you are also rewarded for your participation by now being able to view the main entrance to the theatre. The courtyard is seen as only one of a series of layers that are slowly revealed to you as travel through the building. These layers again are derived from the narrowing and compression of the laneways and squares.

Connection through the site - Is very clear and direct with a slight bend to signify the courtyard and amphitheatre.

Amphitheatre - Seating is raised to try to incorporate the existing façade on High Street and is open towards the existing façade on High Street. This works, the raising of the seats does provide a blank wall between High Street and the courtyard that could separate the space from the city too much, as well as hide the historic façade behind seating.

Entrance - Is as open as possible. There is no foyer and only a direct connection between the courtyard and main auditorium. Seating looks to connect the interior and exterior, however there are problems with a lack of a foyer as it loses the layers talked about in the previous paragraph.
Raising the Courtyard

Looking at figure 4.23 we can see that the foyer was missing from the layout. By raising and lowering the courtyard in places allows the foyer to be located under it. By using the amphitheatre as not just a place for seating and watching performances, but also using the change in levels between the stage and seating as part of the circulation allows the entrance to be located next to it.

Connection through site – The same as before

Amphitheatre – Is bowled in places to form part of the steps that take people on the journey between the main circulation path through the site and the foyer. Only by watching a performance in the amphitheatre, will the entrance to the foyer be revealed to you.

Entrance – The entrance is slightly lower than the amphitheatre. The entrance is only visible when in the amphitheatre. The way that the entrance comes off the amphitheatre at this stage only activates part of the amphitheatre. The rest is still seating that can only be accessed by travelling along rows of seating. This concentration of people in one area is made worse by the sudden change in direction to access the entrance under the courtyard. The entrance is also now totally invisible to traffic travelling through the courtyard. Although the entrance doesn’t need to be directly visible from the thoroughfare, there does need to be clues on where the entrance is located.

The exterior stage draws people to this part of the courtyard. This curiosity now leads them to discover the entrance to the foyer. This problem is that this idea is not obvious when entering the site. The connection between courtyard and foyer is too sharp and not a smooth transition between each. It also makes the stage into a bottleneck of traffic with people trying to enter the theatre at the same place people are trying to watch the performance.
Developing the Bowl
This sketch explores creating a bowl shape that runs between the outdoor theatre and foyer.

Connection through the site – There is a ramp from High Street to a raised courtyard, where the bowl goes under the courtyard, now turning this connection into a bridge.

Amphitheatre – a bowl space that drops down below the street level and under the bridge connecting High Street and Manchester Street. The natural curve and bowl shape do naturally lead you to the entrance of the theatre. The problem with this shape is that in parts you still need to double round for the gradient of the bowl to work as a walking space. It also puts the stage in a wide open space that slopes down towards the theatre. The seating also needs to be divided by the main walking route, because at the moment the space doesn’t encourage people to sit.

Entrance – Is located at the end of the bowl, under the bridge. There are wide opening double doors which flow out well to the amphitheatre.

The cross between the two circles and the outside and inside is where the foyer space needs to be placed. Explorations of an under the theatre foyer provides a very large foyer and a connection to the corner of High Street and Manchester Street. Although this space is very large, it does feel like a basement bar, with no connection to the street. A smaller foyer has been developed to try to resolve the problems of scale with the first foyer. Now the blue bar and bench and ticket area is seen as a continuation of the outdoor courtyard. Again it fails to create a single linear journey as it is symmetrical to the entrance. It needs to be placed either side of the entrance.
The Mobius strip

These sketches are exploring the continuous connection between the outside and inside. It looks to develop a Mobius strip around the exterior of the auditorium and exterior stage, breaking the symmetry of the bowl shape. Circulation now encompasses both spaces, acting as the divider between the outside and internal world of the theatre. The ground conditions will still need to be raised and lowered to allow the Mobius strip to pass over/under itself.

The building now takes the audience on a journey. Entering the courtyard from Manchester Street the audience is led down a laneway which opens to a dining area for the neighbouring restaurant. Carrying on the journey towards High Street, they are led towards the stadium by travelling down steps below one of the arches of the existing façade. By following the ramp to the right instead of the steps, you are led past the exterior theatre. The bowl shape of the courtyard is shaped to encourage sitting on and made from a selection of recycled red clay bricks which are part of the Christchurch landscape. This sloping is seen in the Campo Siena and is used to encourage people to sit down on the ground in a place that they would not normally do otherwise. Further along the ramp is the entrance to the foyer space.
4.3.2 Resolution of Courtyard

This is the first plan that incorporates the courtyard with the building developed from the first critique. This plan tries to incorporate the courtyard, foyer and auditorium together within the confines of the site. It has fully developed the Mobius strip now to incorporate not just the courtyard but the theatre itself. The courtyard and foyer are now tying the two remains of the historic facades located on the site through a central circulation method. This circulation still doesn’t affect the direct connection between High Street and Manchester Street for crowds travelling between the bus exchange and stadium.

At this stage the main entrance of the building is the cross of the Mobius strip where the exterior meets the interior. Although this is the only entrance discussed, the obvious entrance to the building is in fact from the corner of High Street and Manchester Street. This raises the question on how porous the building is going to be. Having multiple entrances into the building is fine, but there needs to be an entrance that dominates the others. When visiting a theatre, often groups met outside before entering. There needs to be a significant landmark for this meeting place to be to avoid confusion. The corner is the most obvious place for this to occur as the geometries of the two streets both led to the one point. This plan also looks at how this entrance could maybe start to take place between the Excelsior façade and theatre through a laneway which also separates the façade from the theatre itself.

4.4 Phase 4 – Developing the Building

4.4.1 Critique 2

The Plan

This concept continues the straight edge along High Street to the corner of High Street and Manchester Street. The building is pulled back from the corner similar to the original Excelsior Hotel, opening this space up for an entrance from Manchester Street at the end of the lane behind the existing Excelsior façade. The foyer now sits behind the Excelsior façade generating a laneway between the Excelsior façade and theatre. This narrow lane can be used for dining and other activities. Using a column and beam structure to hold the old façade up also allows people in the foyer to view across to the old façade.
Adapting the Existing to the New

This drawing looks at the old façade on High Street and how this sits within the outdoor courtyard. The building looks to continue the same spacing of the columns down the side of high street and carry on the horizontal elements of the old façade onto the new building. The ramps slip between the spacing between the old façade and the auditorium space. There are steps leading off High Street and up onto a platform which contains the outdoor theatre. The steps create a distinction between the open street and the more closed courtyard, while at the same time allowing people to experience the old façade. The high street façade is to be treated the same as the Excelsior façade (Manchester Street) by being physically separated from the new building, but instead of having an interior theatre behind it, an outdoor theatre is behind. It also explores the textures of the materials and they bring a sense of roughness that is similar to the old façade. Timber columns and beams are used as a structural system to hold the building up. This system would require base isolation system similar to that used on Parliament house in Wellington as the bricks and stone don’t allow for any movement in compression and tension, and crack easily when large forces are applied to them.

Freesing the Facade

This sketch explores what the interior of the foyer would appear like looking towards the Excelsior façade. Solid columns and beams are placed in front of the façade. These columns are what separate the laneway and the foyer space. Steps up from the laneway into the foyer are also used to further create this feeling of a laneway. A wall would separate the spaces too much, and create a series of small isolated spaces instead of one large space with quiet spaces scattered through it. The beams connecting the frame and Excelsior façade are timber laminated timbers that sit in the same location as the old timber beams that tied the façade to the floors.

Figure 4.37 High Street Elevation

Figure 4.38 Model showing the courtyard behind the façade on High Street

Figure 4.39 Section showing the light qualities in the foyer

Figure 4.40 Perspective showing light qualities in the foyer
Compression vs. Open Space through the Circulation

This section looks at how the courtyard sits next to the different levels of ramps that circulate around the theatre. These ramps create a continuous free flowing journey through the building starting at the courtyard, and ramping with no steps until they get to the rooftop garden. It looks at how these ramps can be placed off the main structure of the theatre to try to get light into the courtyard below. It also looks at how openings can be used at certain locations to get light into the buildings, as well as framing views of significant features along the ramp.

Creating the Essence of Christchurch

This section is more interested in trying to capture the interior quality created in the auditorium. Stone is recycled from the damaged heritage buildings throughout Christchurch, and re-used to create the auditorium space. These materials look to capture the heart of what constructed the early heritage of Christchurch, and transferring this message into the heart of the theatre itself. The width of this wall also helps to create the feeling that the threshold between the ramps that circulate the building and auditorium space is a significant threshold between the public and private world of the theatre.
Developing the Roof

The roof is a significant feature in the drum shape of the theatre. The form provides an opportunity to develop either a dome or cone shape for the roof. Analysis of other domed structures - such as the Pantheon, struck as a precedent which does not just use the dome as a shelter element, but has an oculus which allows light into the space, dramatically changing the feel of the space. In the context of this project this oculus will need to be controlled during day time performances to not interfere with the show. During night shows this provides an opportunity to allow the audience to view out into the night sky and view the stars above the stage. There are 3 different roof types that can be adapted to fit on the drum;

**Dome** - The advantages of this roof are that it creates a perfect circle for the theatre to fit within. This translates the plan into the section and creates a sphere. This roof sounds good in concept but does struggle to fit in with the rest of the building. It also creates a very steep seating arrangement and creates a very tall auditorium space. A nice idea in concept, in reality the dome becomes far too dominant to the rest of the building.

**Flat roof** - The simplest form, it fits with the rest of the building easily and does not dominate the building. The problem with the flat roof is that it restricts the interior space with a low roof height. It also feels a lost opportunity to develop something that ties in with the raised seating.

**Cone** - A middle ground between a dome and flat roof. The cone does allow more room in the theatre and does follow the curve created by the seating. Less dominant than a dome, the cone fits within the drum shape. The problem with this shape is the top point does feel odd, when looking at the walls that it sits on.

The cone shape has been chosen at this stage to be developed as the primary shape for the roof of the auditorium. Slicing the top off the oculus creates a flat piece that sits above the stage, creating a more symmetrically pleasing space in the auditorium.

The model shows the remodelled roof with the ramps circulating up to the roof. This space could be used as a smoker’s lounge or a rooftop garden. The space between the theatre and façade is to be clad with glass to create a clear distinction between the new building and old façade. This glass needs to be made smaller to allow more space for the roof top garden, but still needs to allow the spacing between the old façade and new theatre. The screen to the left of the façade tries to make the building more symmetrical by extending the façade, so that the dome now sits in the middle of it. This wall struggles to sit comfortably next to the old façade, as it sits too close to it, and does not allow people to get close to the edge of the old façade. It struggles because the rest of the building is separated from the old façade, but this wall sits directly next to it.
4.4.2 Critique 3

Adapting the Existing to the New

This concept looks at further enhancing the straight edge of the facades to create a solid mass on the site and corner. It is hoped by creating a continuous edge along High Street and Manchester Street the building will fit seamlessly into the city. The building sits heavily on the site and appears to take up the entire site that is available to it. This in turn shows how the old facades can be integrated into the streetcape with no distinction between old and new. There is now an entrance between the Excelsior façade and corner pavilion which takes people through a laneway, that is also used as a café to try to activate the space. This pavilion is lower than the neighbouring Excelsior façade and theatre and appears as its own separate identity that is joined to the Excelsior façade, similar to the Excelsior and the neighbouring Two Fat Indians Restaurant façade. At the corner there is a tower to mark the change between the grid structure of the roads in Christchurch and the 45 degree angle of High Street.

Figure 4.47 Elevation of High Street showing column layout
Figure 4.48 Perspective of Manchester Street showing corner treatment
Integrating the Two Pavilions

The façade on Manchester Street is an abstraction of the Excelsior façade, while the façade on High Street is an abstraction of the façade on High Street. Tall narrow windows and deep recessed windows are used on the Manchester Street façade, while curved tops and windows that fit within the grid structure that is carried along High Street from the old High Street façade is what determined the finished façade treatment.

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A place to be seen

A lounge has also been added to the ramp that provides views down High Street. This lounge helps to break up the monotony of the ramps by providing spaces for theatre goers to sit and wait for performances. It also provides a place to be seen – an important aspect when going to a theatre.

Developing the Roof

The roof now tries to hide the dome/cone by using a square floor plate that a triangular roof sits on top of. This avoids any awkward connections between triangular roofs and cones/domes which use a lot of curves. The triangular roof comes from looking to abstract some of the principles of critical regionalism and the steep triangular roofs that made up the gothic revival architecture which is prevalent in early Christchurch architecture.
Analysis of Integration

This design appears to be copying too much from the past Christchurch. The façade treatment of the corner in particular used forms that were not abstracted enough to fit within Critical Regionalism. It seeks too much in the scenography of the past and does not take advantage of the technologies that we have now. The building also now appears to be square instead of the circular form it once was. This loses the strengths of the initial concept, which was a stage with seating that encompassed the performer, and circulation which encompassed the auditorium. Although the design fits nearly along the edges of the street, it sits within the context too nicely for a civic building that wants to encourage people to use it. The ramps which have also been a major idea that has been running through the project as the circulation path, now feel more like a tack on to the building and not integrated as they are the only curves present in the building. The lounge crossing High street is the same. There is no connection between the lounge and the theatre but instead is connected to the curved ramps, which as mentioned before do not sit comfortably with the square ness of the building. The roof, although a reference to the Gothic architecture of Christchurch, does not integrate well with the Italian palazzo style of the Excelsior Hotel.

The idea of the straight-line that runs down High street and lines up with the existing façade is restricting the project too much. The spaces cannot get any smaller as they are already tight in the plan. The building needs to break free of the confines of the site and start to encompass more of High Street. This edge can also possibly move because of the very low car traffic on High Street. High Street is planned to be narrowed after the earthquake and speed limit lowered to 30kmh in the city Blueprint to encourage less car traffic and more foot traffic.

Screens vs. Walls

The old facades are now to be thought of as screens instead of as walls. This also encourages the corner pavilion to be treated as two screens braced by a structural system similar to the old facades. This will tie them together but also show the differences between the old facades and new screens. The lounge is now an extension of the ramp, curving out above High Street. This now creates a more natural journey to the lounge and also points towards the Port Hills, which is the most significant view on the site. The blue lines are the modern screens, which will be mostly large panes of glass and thin steel. The brown is the recycled stone and brick that make up the drum of the building. This is the spiritual heart of the theatre as it includes the auditorium, so the materials that once made up Christchurch have been chosen to sit around it.

4.5 Phase 5 - Development of Concepts

Figure 4.51 Diagram sketch exploring the different material properties of the walls
4.5.1 How the circulation works

The ramps are still the main circulation system taking people from the very bottom of the courtyard up to the roof top compressing and opening at different stages along the journey through the building. Ramps are used instead of stairs to make the spaces appear to flow together with minimal interruption between each space, this encourages people to travel through the ramps and make the spaces feel more connected to each other. The twisting of the ramps does not allow the occupant to see each space until they enter it. This gives the occupant a sense of discovery as they are never aware of the spaces that lay around the corner. In places glass is placed to view significant views of the Port Hills and exterior courtyard. The ramps narrow further at the location where the public is cut off from theatre ticket holders. This compression not just allows for the theatre company to control who enters the auditorium, but also provides a sense of drama after travelling through the doors and having the space open up again.

The planning tries to make the building as porous as possible, allowing people to enter the building through as many places as possible while still taking them on a controlled linear journey up into the auditorium. The lower levels have been returned to the public as much as possible, they feature a restaurant bar that sits behind the Excelsior façade, and it has outdoor seating leading to the corner of High Street/Manchester Street in the opposite direction of the main courtyard. The foyer is placed on the second floor to give the restaurant over to the public, this allows them to travel up into the second level where there is a bar that cantilevers over High Street providing views to the Port Hills. Having the building as porous as possible with many different entrances does open the building up to the public, but does create problems in locating what is public, semi-public, and what is private. The building looks to combat this by having the foyer located on the second level. The building is now split into 3 distinct areas.
Private – Interior of the drum. The basement level and street level are strictly for performers and the backstage rooms. Above this is the stage and auditorium which is only open to ticket holders. The connection between the bar and auditorium is open during music gigs, as the bar acts as a withdrawal space from performances and in particular musical performances. Half of the seating also drops into the floor to make the space into a music hall for musical performances. This encourages people to stand and dance and get close to the performers, but with the strong connection to the bar people can withdraw from dancing and sit at the bar and still listen to the performance.

Public - The ground floor is open except for the area inside the drum. It features the exterior courtyard and restaurant. These spaces are still open during performances in the theatre, the primary function is to encourage the public into the theatre. These spaces also act as part of the pre-show entertainment before entering the theatre. It allows for the public to watch a pre-show in the courtyard while having a drink and meeting friends, before having a meal at the restaurant, and then travelling through into the main foyer/lounge area.

The foyer and lounge on the second floor is also open to the public and features a bar as well as the ticket office. This space is primarily for people to meet friends, buy tickets and have a drink before entering the auditorium. The building can be accessed from either the ramp that comes from the restaurant on the ground floor, or through the main entrance on the corner of High Street and Manchester Street. For this building to work more successfully the bars and lounges need to be accessible at all times and the lounges can be accessed by the public at any time. There are doors that close and open during shows and take people to the upper theatre bar and auditorium. There is still a corner bar that sits above the café. The void continues from the laneway that runs behind the Excelsior façade. A steel frame is used in the corner to distinguish the new part of the building from the old part. The building sits heavy on the corner and looks to disperse traffic either along High Street or Manchester St. The glass façade on the corner is an abstraction of the bricks that make up the Excelsior façade. These panes of glass penetrate in a pattern along the building to break up the size of the screen; while at the same time is an abstraction of the local bricks which once made up a significant portion of the buildings in Christchurch.
Along the ramp in this area are three different entrances to the auditorium, allowing people to access the theatre closer to their assigned seat. This also provides more seating opportunities for wheelchair users as they are located at different levels of the theatre. At the end of the ramp the space again opens up for the last time to the outdoor garden. This space is the most private space that can be accessed by the public as it is the end of the ramp. This space is also a place for smoking and talking in a quieter environment.

Semi Public – Upper bar, roof garden and auditorium. Along the ramp leading up from the foyer and the upper bar is the ticket gate. This area tightens to signify the change between public and ticket holder, while still maintaining the same clean lines of the ramp on the exterior. The upper bar is used during music gigs and during the interval of theatre shows. There are large sliding doors located between the bar and auditorium, signifying the point where the edge of the public world and the performers space. These doors can be opened to allow sound to travel into the bar during musical performances, so that guests can still experience the sound of music even when they have withdrawn to the bar. During theatrical events where there needs to be no outside influence on the show these doors are slid across to cut the space off from the bar.
This drawing investigates how the main entry could be positioned on the corner of Manchester Street and High Street. The café has now been removed from the corner and replaced by stairs that led directly up into the foyer/lounge of the theatre. The problem with the café on the corner is that it split foot traffic to either side of the building as they travelled from Cathedral Square. The lower stairs can form part of a platform which the building sits on, similar to the Sydney Opera House and the Barcelona Pavilion. This raising of the corner is the same as the raising of the outdoor courtyard on High Street. This raising separates the heavy mass of the building from the ground on which it sits on, while providing a place for people to sit and enjoy lounging by the corner in the sun.

When viewing the physical model and computer model the laneway behind the Excelsior Hotel still feels like the most obvious place to enter. To combat the gap between the Excelsior façade and theatre appearing as the main entrance, a screen utilising the same design as the glass façade on the café have been used. This blocks off the visual connection between the laneway behind the Excelsior façade and the corner. The screens look to visually guide people up the stairs into the main foyer/lounge of the theatre.

Figure 4.61 Perspective of the Entrance
Figure 4.62 Perspective of the Entrance with a screen used to emphasise the entrance
5.0 Conclusion

How might a theatre proposal instigate an architectural dialogue with/ or about the heritage of Christchurch in a post-earthquake context?

The project originally started by trying to tie the pieces of the remaining parts to the heritage buildings of Christchurch, by analysing the past and trying to integrate these buildings into the new city Blueprint. Initially this was to design architecture that was reflective of the past Christchurch, and try to capture the past memories and experiences that these buildings brought. This would have been a lost opportunity to design a new building that is more reflective of the future vision of Christchurch while still incorporating the parts that were successful. It was decided early on that the theatre was to be placed away from the current Town Hall to not compete with it and let it command the site in its entirety. This also gave an opportunity to develop a building that sits within a more active part of the city that has a long association with the arts and culture in Christchurch. It also allowed the building to sit close to Christchurch’s nightlife and transport hubs.

My research looks at the urban issues of Christchurch as much as it looks at the architectural problems faced in the city. This is because although there is a city Blueprint, much of the Blueprint is unresolved; it still needs further development to work on a smaller scale. This building looks to incorporate the Blueprint without changing it, but indeed shows an example of a city block that incorporates all of the remaining buildings and parts to show that demolition is not necessary. They can actually be incorporated into the Blueprint and the city will be much richer for it, as there will be different layers of history adding vibrancy into the city. The architecture itself looked to develop this sense between the old and new, and how these connections can be made. To begin with it was seen to try and develop a building that physically relates to the heritage buildings, and to develop a piece of architecture where old and new stand in harmony together. The design was losing its vibrancy and did not show the different layers of history that made up the project, as well as reducing the importance of what the heritage façade represented to Christchurch. The next approach was to physically separate the heritage façades, and use the new theatre as a support system to hold up the new. The design of the theatre itself looked closely at trying to recapture some of the fundamental elements that made Christchurch architecture unique. It incorporated them with some of the new technologies that are being explored following the earthquake. The new joints of the building looked to extract the tectonics of the past and apply them to a building that appears contemporary, but is still referencing many of the elements that have made up Christchurch. Those include the choice of recycled brick and Halswell stone which comes from many of the damaged buildings in Christchurch, making up the heart of the building as it did pre-earthquake. The heaviness of these materials and the fragility that they represent, needs to be counterbalanced by a base isolator foundation system that assures people the building is safe from future earthquakes. Lighter elements are cantilevered from the heavy stone and represent the new laminate wood technologies. They are placed on the outside to show that even though they are an integral part of forming the new city, the old city has not been forgotten and is still relevant in the rebuilding of Christchurch.

Does a theatre instigate an architectural dialogue with/ or about the heritage of Christchurch in a post-earthquake context? No, not necessarily, the function of the building in this case does not matter, what is fundamental is the relationship between the remaining heritage buildings in Christchurch, and the new buildings constructed post-earthquake. A theatre can instigate an architectural dialogue with/ or about the heritage of Christchurch, just like a building with any other function, but what a theatre does achieve, is bringing entertainment back to the people of Christchurch. It brings people back into the city, encouraging them to sing, dance, and socialise. It brings some normality back to their lives. Christchurch is placed in a precarious position; if it does not act fast enough, the city will be rebuilt somewhere else with little input from architects and planners. If it acts too fast the level of development will be of poor quality. One thing that is clear is Christchurch needs to incorporate the few remaining pieces of its historical past into the future.
6.0 Bibliography

Books


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Websites


7.1.1 Caxaforum
Location_ Madrid, Spain
Architect_ Herzog and de Meuron
Date Completed_ 2008
The Caxiaforum is a completed project that is the catalyst to many of the ideas seen in the Elbe Philharmonic in Hamburg. The project raised a historic power station above the ground to create a plaza on the ground level for pedestrians to travel through the site. This makes the building appear as if it floats above the site with no support holding it up. Above the existing power station a steel block has been placed directly on top of the perimeter walls. The rusticated steel and laser cut panels are textured in a similar fashion to the rough texture of the bricks in the power station. Because the building is a museum, most of the windows have been filled with new brickwork, but the lintels and perforations have been left in place to reference the past use of the building. The exterior of the building and plaza have been totally retro fitted in a style that is as opposite to heritage architecture as possible. Clean, sharp, steel has been designed in fluid triangular forms to contradict the heritage features of the building. This building, as well as the Elbe Philharmonic are both extreme cases of how to approach retrofitting buildings. They both develop bold new forms out of materials not associated with heritage architecture, but both sit on the footprint of the original building. They both have public place, in the case of Caxiaforum on the ground floor, and the Elbe Philharmonic between the heritage building and new addition.

7.1.2 Federation Square
Location_ Melbourne, Australia
Architect_ Lab Architecture Studio, Bates Smart
Date Completed_ 2002
The outside courtyard was analysed to discover what made the square work so successfully. The undulations in the floor levels, as well as the textured brick create spaces for people to not just walk on, but also sit down on. The change in colour between the bricks, also help break up the vast space to make it appear as if it actually a series of smaller spaces that are designed more at a human scale. The apparent randomness of the neighbouring buildings also breaks the space down, by creating small alcoves and pockets scattered around the square. It also softens the edge between building and public space with the buildings all activating the edge of the space. Steps, seating, platforms and landscaping is all implemented at significant level changes due to the topography of the site, and help to hint at what activities could occur in the space. By hinting at what could occur in the space, it still allows for the space to function as a multi-purpose space, but stops it from becoming a loose space with no apparent function.
Although Alvaro Siza is often labelled a Critical Regionalist architect, it is a label that he rejects. According to Frampton the centralizing effects of mass culture and industrialised technology tend to produce a world of banal images, devoid of any authentic relationship to their location. Modern buildings are now so universally conditioned by optimized technology that the possibility of creating significant urban form has become extremely limited. Siza rejects Frampton’s negative views on universal civilization. Contemporary developments are in the direction of separation mentioned. I do not think this is inevitable. I have worked in different developed countries with industrialised building methods and in Portugal where pre-industrialized conditions exist. An enormous range of building processes exists around the world, and I believe that this allows for Alvaro Siza to undertake a project on the other side of the Atlantic. Siza’s biggest challenge was with the topography of the land. He designed the exhibition spaces on three floors around a tall auditorium and then connected the spaces through a series of ramps. A pragmatic modernist, Siza creates memorable buildings by finding vitality in their contexts. While responding to topography as well as using local materials and building culture.

The Ibere Camargo Museum is a series of carefully choreographed series of unexpected moments for people to experience. Starting with the entry plaza, the ramps create an ambiguous sense of where it is indoor and outdoor space and what is internal space. Siza implements what Frank Lloyd Wright tried to achieve with the Guggenheim Museum and takes visitors to the top of the building before they are lowered down through the building through a series of ramps. Siza separates the exhibition spaces from circulation to create a double tempo: slower for the nine galleries on three floors, and faster for the movement along the ramps. Using a version of Adolf Loos’s raumplan, he varies the height of gallery floors, and then negotiated these differences with the ramps. Cinematic in nature, the building takes visitors on a journey of grand spaces to tight spaces.

7.2 Foundation, Acoustics, and Ventilation

The nature of the Christchurch earthquake has meant that residents are a lot more nervous of brick and masonry buildings following their poor structural performance during the earthquake. Unreinforced masonry buildings remain New Zealand’s most earthquake prone class of building. It is because concrete and brick perform badly during compression and tension and don't allow for any movement. Because the materials don't move it has been decided to introduce a floating system that doesn't allow the building to move even when the ground is shaking. This diagram shows us how the base isolator system works. The entire building is removed from the ground and is only supported by the isolators that work similar to springs on a car. When the ground moves during an earthquake the damper keeps the building in one location with no movement. A seismic gap cover is placed over the gap between the building and the ground. Base Isolators are very costly due to the fact they require two floor slabs to be constructed instead of one. Because the building is a civic building, it has been decided that in this case, the safety of the occupants is paramount, and the base isolator system is fully justified.

![Figure 7.04 Diagram of how the foundation system in the building may work](image-url)
7.2.3 Ventilation and Air Handling

Mechanical ventilation is necessary in the auditorium as there can be no outside influences to the performance taking place in the auditorium. The large volumes of people within a small space warm the space significantly during a show. Large volumes of air need to pass slowly near the ceiling to maintain a quiet space which is not affected by the noise of the air conditioning units. In the case of this theatre it has been chosen to use a heat pump system as they are relatively small and efficient for a space this size. Air passes through the acoustic panels and slowly filters down to the audience below.

The panels do create a more intimate seating for the audience as they create a more cave like environment. They also can hide the gantries, air conditioning units, services and back stage areas. The section shows the different sound qualities and noise level within the auditorium. The seating below the balcony is compromised in terms of sound quality. The reason for this balcony seating arrangement is it creates different layers of seating for the audience to choose from. For some audience members they may prefer to have a less intimate experience than others. During music events the lower seating is also pulled back to sit under this withdrawal space. This provides seating for those that don’t want such an intimate experience. It is not just further away from the performance but it is also quieter.

7.2.2 Acoustic Panels

Theatres need to produce clear acoustics for the audience to engage in the performance in a more intimate setting. The relatively small scale of the theatre means that the volume is smaller and that direct sound will be stronger than reflected sound. The back row is 13 metres away from the centre of the stage, but this does extend to 18 metres if the performer is placed at the furthest most point of the side stage. Theatres up to 1000 seats in general work fine without the need for acoustic panels, as the direct sound is the most prominent.

The acoustic panels in this case are not necessary for clarity of sound as they are not necessary due to the small scale of the auditorium. The panels do create a more intimate seating for the audience as they create a more cave like environment. They also can hide the gantries, air conditioning units, services and back stage areas. The section shows the different sound qualities and noise level within the auditorium. The seating below the balcony is compromised in terms of sound quality. The reason for this balcony seating arrangement is it creates different layers of seating for the audience to choose from. For some audience members they may prefer to have a less intimate experience than others. During music events the lower seating is also pulled back to sit under this withdrawal space. This provides seating for those that don’t want such an intimate experience. It is not just further away from the performance but it is also quieter.

Figure 7.08 Section of Acoustic panels. The darker areas have poorer sound quality

Figure 7.09 Diagram of how the air is cooled in the auditorium
7.2 Final Presentation
Drawings
Acknowledgements

I would like to thank my primary supervisor, Jeanette Budgett, whose encouragement, guidance, and support from the start to the conclusion, gave me feedback from everything to my ideas to the final design process. I would also like to show my gratitude to David Chaplin, and my fellow students for the constant encouragement and guidance throughout this project.

I finally would like to acknowledge my parents for all they have done, not just over this project but the last five years. It is very much appreciated everything that you have done for me.