Breathing Life Back Into the Mundane: The Adaptive Reuse of Dunedin’s Industrial Heritage

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"...it is again no question of expediency or feeling whether we shall preserve the buildings of past times or not. We have no right whatever to touch them. They are not ours. They belong partly to those who built them, and partly to all the generations of mankind who are to follow us.” – John Ruskin

New Zealand’s heritage buildings are at risk as changes to the building code come into force, requiring seismic upgrading of those built before 1976. Unfortunately, many building owners will not see the value in carrying out this necessary work, inevitably opting for demolition or leaving them to decompose among the streetscape. This project seeks to establish the heritage-value of such buildings, those which might be otherwise considered mundane, and will propose an architectural approach to intervene in these situations.

The Warehouse Precinct in Dunedin is currently the focus of a revitalisation scheme, but there are many buildings still sitting underutilised and forgotten. Following analysis of the current site context and the proposed development of the area, the design solution aimed to find ways to retain the character of the area and contribute to further revitalisation, now and in the future.

Architectural conservation approaches and precedents were explored throughout the course of the research and an appropriate intervention, or series of interventions, was proposed for the site. This accommodated the adaptation of the selected building to suit a new programme, restoring the building’s usefulness to its community.

Several design approaches were explored, but the programme developed is a mixed-use creative hub, aimed at encouraging interaction between students and the permanent local population in a creative environment. This was done in line with the city council’s strategy for the area, and expected to further promote the use of other heritage buildings for varied and innovative uses.

This project demonstrated ways in which value may be found in underutilised or dilapidated buildings and how these can then be rejuvenated through innovative architectural intervention, reintegrating them into our cities’ built fabric for years to come. It is our responsibility to maintain our heritage buildings and ensure that they remain functioning elements of our streetscapes.
1.0 Introduction

The Christchurch earthquakes of 2011 have prompted an alarming follow-on effect which now threatens the future of all pre-1976 buildings in New Zealand. Our building codes are frantically being re-evaluated and regulations tightened to ensure their compliance with modern codes. Some buildings that fit into this ‘at risk’ category will be upgraded and restored without any undue consideration. However, many others will be assessed, only for it to be determined that it is neither feasible nor practical to retain them. This category of buildings is wide ranging – from small-town churches to larger municipal buildings and factories in our cities.

The very features that make these buildings interesting and valuable to our society are the reasons that they are so expensive to upgrade. The ornate stone corbels and towering brick parapets have become a ‘falling hazard’ and seismically restraining or strengthening such elements takes skill, time and money. The new legislation also insists that these upgrades are completed within a given timeframe – in some cases 30 years. Unfortunately, in many situations, this will still not be a realistic option and demolition will be inevitable for many – some becoming victims of ‘demolition by neglect’ before their time.

This project focuses on Dunedin as the context for consideration - a prosperous city which thrived with the 19th century arrival of Sealers and Whalers through to the age of the Central Otago Goldrushes, but which has since experienced significant economic downturn, to the point that it is now more profitable for building owners to turn their buildings into car-parks than it is to retain them. The city’s architecture now sits as a symbol of its one-time wealth and rapid growth; however, it is the architecture of the city that remains one of its key attractions and some streetscapes of the city remain frozen in time, untouched by the modern age. The building stock at risk of demolition makes up a large proportion of Dunedin’s built fabric. There are some buildings that will unquestionably be upgraded at any cost; namely iconic attractions such as the Railway Station and First Church. But the question remains, what will become of the rest?

This project seeks to identify ways in which the ‘everyday’ buildings, those which might otherwise seem mundane, can be used in new ways, thus enabling them to be seen as useful once more, particularly those which have existed as part of the streetscape, merely as ‘infill’ with their original purposes long
forgotten. Many such buildings have been adapted for different uses throughout the years, often filled haphazardly with offices and retail spaces or utilised by businesses requiring larger spaces. Some have been gradually modified to suit new purposes but many have been left tired and dishevelled and now require more work than we care to give them, as a result appearing to have finally come to the end of their ‘usefulness’. Often however, it is this evidence of age which gives buildings their richness of character, or enhances identifiable heritage-value within their community – the scars which reflect the many years that the building has survived as the city has changed around it.

In Dunedin, some of the many heritage factories and warehouse buildings which now serve as a stark reminder of the city’s affluence and status in early New Zealand were home to the beginnings of some of our most iconic companies including Shacklock (Fisher & Paykel), Hallenstein’s and Whitcoull’s, although many moved north to expand their business in the mid-20th century. Areas with concentrated numbers of these buildings now appear run-down, with many being earmarked for demolition or subsequent ‘modern development’, or simply left alone to decay further – a harsh reminder of the rise and fall of Dunedin’s economy.

Only when modern alternatives to these buildings are being considered do many people recognise the architectural and aesthetic value of existing heritage buildings compared to that of a new ‘big red shed’ corrugated iron warehouse. To this end, adaptive reuse is an increasingly popular way of enhancing the value of individual buildings and reviving these ‘dead areas’ of our cities. Many buildings are currently stuck in a ‘time warp’, deteriorating further as they wait for someone to recognise their potential. They have more to offer than just large open spaces to fill with smaller modules; such ‘adaptive reuse’ approaches ignore the architecture of the building that they inhabit and create a sanitised, modern infill which is totally devoid of character.

By identifying the heritage-value of these buildings, architects can work to acknowledge a building’s past while ‘translating’ it into the present - and even into the future - which is essential to the survival of our industrial architectural heritage. By utilising our old buildings for new purposes, the built fabric of our cities can retain architectural richness and continuity for future generations;

In the words of William Morris:

“These old buildings do not belong to us only, they belong to our forefathers and they will belong to our descendants unless we play them false. They are not in any sense our own property to do with as we like with them. We are only trustees for those that come after us.”

2. Research Question

How can an architectural approach be developed and applied to reactivate underutilised buildings in our cities, using exploration of their heritage-value and contributing to further revitalisation of the area?

3. Project Outline

This research seeks to unravel the heritage-value of an existing building in its given context, examining how this has changed over time and resulted in declining interest in the building.

The notion of a building as an evolving entity, changing and adapting to suit its environment, is an interesting concept which will be explored. Buildings that have been built for a particular purpose can be modified to suit a new function, successfully responding to changes without compromising their integrity. In fact, this ‘evolution’ can further reinforce a building’s significance within a community as more people are able to continue to actively use it. A building which may no longer satisfy the requirements of its environment need not be demolished but instead adapted through careful architectural intervention, or series of interventions. The idea of heritage-value will be explored to determine the most appropriate conservation approach and degree of intervention for the selected site.

Existing literature on conservation theories will be considered as part of the design process, including analysis of ideas from influential authors who have contributed to the development of modern conservation theory and most recently, the popular idea of adaptive reuse.

The chosen sites for this project, His Majesty’s Theatre and its adjoining halls, have each been significantly modified throughout the last century. The nature of work already undertaken opens the project to a wider range of design opportunities as well as revealing further constraints. The nature of industrial-type buildings means that a greater freedom of creativity is often enjoyed but it is often these buildings which require more effort in the first place to reveal
their heritage-value and convince us of their worthiness.

3.1. Project Aims and Objectives

The nature of adaptive re-use, and the widely varying buildings to which it is applied, means that there is no standard approach by which an architect can carry out the transformation of an existing building. This research aims to evaluate how a conservation approach for a building can be developed with consideration of the unique conditions presented by a building’s current form, inclusive of any modifications which have already been made, and establish its intrinsic heritage-value. This will affirm the building’s ‘meaningfulness’ to society, through the physical and/or non-physical qualities of architecture, while acting in both the present and the future to further contribute to that meaning.

Techniques will be uncovered which can be used when adapting buildings for a new programme, beginning with a review of existing theoretical positions and their specific application to industrial-type buildings. Precedents will be selected with a view to sourcing influences and unravelling some of the architectural approaches currently being explored in practice, both locally and internationally. This will go on to look at the effects created by these architectural interventions and their respective success. The project aims to explore those approaches which would work to prevent future careless responses from happening.

The design aspect of the project aims to evaluate the application of a selected new programme to a building as a method of retaining its heritage-value and promoting its significance to society. The intention is to devise an intervention which creates a composite architectural solution which is coherent with both Dunedin’s built fabric and the existing building in which it lies. This will ensure the continuation of the building’s lifecycle rather than its inevitable degradation.

The current development proposal for Dunedin’s Warehouse Precinct will be considered throughout the design process, evaluating the implications of a building’s continually changing context on the design approach. By creat-
ing an adaptable solution for the transformation of the chosen building, the her-
itage elements of the building can be integrated into a new design proposal and
subsequently help to contribute to the rejuvenation of the area and the building’s
surrounding streetscape.

3.2. Project Scope

This project addresses existing theories related to conservation and will
seek to form a practical application of these appropriate to the chosen buildings.
The outcome of initial design and theoretical explorations will help to determine
the exact nature of the proposed intervention to ensure the heritage integrity of
the building is retained as part of Dunedin’s rich built fabric, hopefully contrib-
uting to further development of similar buildings.

This research involves a thorough analysis of the site with respect to
evaluating its heritage-value and context, as well as documenting any physical
changes over time to assess how these factors may have changed. An initial
understanding of these aspects will be crucial to the formulation of a new pro-
gramme and design intervention appropriate to the building.

Potential opportunities and limitations will be revealed and assessed
throughout the process, moulding the formation of the final design and working
to ensure that the new components are combined with the heritage elements
through the application of both sensitive and interesting techniques.
4. Conservation Theory and Adaptive Re-use

4.1. Introduction

Adaptive reuse has experienced widespread popularity in the treatment of heritage buildings as it provides a sustainable, feasible and interesting approach to building conservation while facilitating the continuation of a building’s lifecycle. A range of different theories has been examined throughout this research, but adaptive re-use has nonetheless emerged as the most effective method of architectural conservation when seeking to rejuvenate buildings which are falling into disrepair or coming to the end of their ‘useful’ life.

4.2. Conservation Approaches

The range of architectural intervention with heritage buildings has been classified formally in guidelines such as the ICOMOS (International Council on Monuments and Sites) NZ charter which drives many government policies. The definitions used in the document form the basis for most conservation practice in New Zealand and, according to the ICOMOS NZ Charter, intervention is divided into the following categories:

1) **Preservation**: preserving a building exactly as it stands; maintenance and repairs as required, ensuring the strength of the building and retention of cultural heritage value.

2) **Restoration**: removal of anything not original which may detract from the heritage value; may include re-establishment of elements and removal of any unoriginal parts if thought to recover heritage value.

3) **Reconstruction**: the rebuilding of elements of a building following damage or removal, using either new or original materials. Generally requires study of the building methods to determine the exact construction of the building, ensuring that new elements are as true to the original as possible, preserving heritage value of the building. Representations are not encouraged and any reconstructions should be kept to a minimum. This is considered appropriate if a building is ‘essential to the function, integrity, intangible value or understanding of a place’.

4) **Adaptation**: alterations to an existing building are generally required for the application of a new programme. The degree is to be kept to a minimum and be reversible, any changes not detracting from the heritage value; any ‘new work should complement the original form and fabric’

The above are ordered from the least to most invasive of approaches. The ICOMOS NZ charter expects that the minimum level of intervention will be applied in any situation. However, it is imperative that conservation is considered on a case-by-case basis as there are many scenarios where it is not feasible to adhere completely to these guidelines, nor is it suitable to select only one approach for an entire building. Guidelines such as the ICOMOS Charter are strongly in favour of a preservation approach and consequently, many heritage buildings are at risk of degradation or demolition if some flexibility is not permitted.

Each of these conservation approaches has its advantages and disadvantages, and there are further degrees of intervention within each category itself. A combination of the above approaches may be applied to a single building at any time, perhaps in series over a period of time, so that a form eventuates as the building occupants change. Sadly for much of the early 20th Century when New Zealand was undergoing its most significant social and cultural changes, ‘modernisation’ generally involved the removal of all ornamental and classical features which had fallen out of favour. A prime example of this is the Standard Building in Dunedin. The building has been painstakingly restored to its former glory, is much more suited to the surrounding streetscape and has become a valued part of the streetscape once again.

4.3. Existing Theories of Architectural Conservation

4.3.1. Introduction

Several theorists have influenced the changing attitudes towards architectural conservation and their work is still considered the basis of any conservation debate today. Most theories are based around the dichotomy that exists between retaining an existing building exactly as it stands – the ‘Anti-Restoration Movement’ – or approaches which seek to add, replace or create elements, some
of which may not have existed in the original building at all.

4.3.2. Restoration

The theoretical analysis of conservation became popular from the early 19th century when Eugene-Emmanuel Viollet-le-Duc first began commenting on the medieval buildings restoration around the 1830s, gaining notoriety for his own work which combined historical fact alongside artistic modifications seeking to restore each building to a 'perfect state'.1 His theories were based around finding the ideal forms for particular building materials and deriving forms from these ensuring that authentic expression of building materials was reflected in the construction methods.

Consequently, Viollet-le-Duc is often thought to be the first theorist of modern architecture. His original objectives sought to refurbish buildings in the exact style of the original. However, he developed a later interest in adding entirely new or 'fake' elements to buildings, often drawing criticism for these idealistic restorations, felt by many to have been unflattering and destructive to the original form. As both a theorist and restorer, Viollet-le-Duc was responsible for promoting the use of new materials in restoration work – substituting original materials for their more modern or stronger counterparts. He supported this with the argument that architecture was built and designed in a particular way due to the limitations of construction methods and materials at that given time.

4.3.3. The 'Anti-Restoration'

In opposition to this theory was John Ruskin, a believer that the current state of a building was how it should be maintained – weathering and damage included. William Morris, a man renowned for his affiliation with the Arts and Crafts Movement, held a similar view to Ruskin, the two often cited together in discussions of architectural conservation and remaining the most significant influences on conservation 'thought' well into the 21st century.

Rather than a set framework to be applied to heritage architecture, these theories should be considered malleable components within the overall design process, each contemplated as the overall design philosophy is developed. Variations and combinations of these theories will be explored through sketching and modelling as part of the design process as an initial concept is developed. It is still important that consideration is given to the different branches of conservation theory on a case-by-case basis; components from each branch can be combined to form an overall conservation plan. It is worth noting that elements which hold heritage-value cannot be recreated, only falsified, and so care must be taken to establish the heritage-value before anything is removed or an intervention is proposed. Adding new elements to a building, either in line with the original design, or as part of a modern 'interpretation', may affect the appeal of the building and its on-going usefulness to society; therefore care must be taken to envisage the final and desired effect.

The concept of restoration is not to preserve buildings faithfully, but rather to create a situation in which the architect's timeless intent is reproduced – without any regard for evolutionary changes, weathering or any age value of the given building in its current state.2 Restoration is defined as: "the act or process of returning something to its original condition by repairing it, cleaning it, etc.: the act of bringing back something that existed before: the act of returning something that was stolen or taken."3 By very definition, restoration is to bring something back to a past condition or state by modifying or altering it.

This approach to heritage conservation results in memorials to a particular era, and often involves interior refurbishment and decoration appropriate to a building's age, with a high level of painstaking detail. The end result is generally reminiscent of a museum, unable to be adapted or modified to fit another modern use, and does not necessarily aid in restoring any of the 'usefulness' that a building may have lost. This approach also often involves the recreation of elements which may have been demolished or degraded, resulting in an end product which critics imply shows an unrealistic and inauthentic model of the 'complete' building, honouring the perceived intent of the architect.4 Furthermore, imitation or substitution of past construction methods or materials may also be required to generate this idealistic version of the building. This, combined with inevitable interpretations of the architect's original intent, makes it

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difficult and time-consuming to realise the 'finished' form of a building. This approach is becoming obsolete as we begin to recognise that adaptability and change are necessary to ensure continued appreciation of older buildings, and that retaining heritage-value is essential to a building’s value in its wider context.

“In the end, the character of a civilization is encased in its structures.”
-Frank Gehry

4.3.4. The Modern Application

New Zealanders are beginning to appreciate that heritage buildings offer a character and age value that cannot be recreated using modern materials, also possessing an industrial aesthetic which is growing in popularity. There is now an increasing drive to preserve the heritage buildings that remain in our cities, driven in part by this current fashion, but nonetheless vital to the preservation of our city streetscapes.

Restoration theory disregards the role of evolution in architecture, although particular modifications may have been central to a building’s survival and continued usefulness to the community. With reference to the intent of the architect as a guiding principal, Viollet-le-Duc considers alterations to the original form to compromise a building’s integrity and detract from the original harmony of the architecture, unless the particular features were deemed completely essential. However, he asserts that where the alterations offered some fundamental value then adopting these purist principles would be inappropriate anyway.

Ruskin and Morris both opposed the fundamentals of Viollet-le-Duc’s theory as they felt that there was more to be considered than merely form when determining a building’s significance. Morris summarises this in his Manifesto.

style, or other interest in a building, makes it worth protecting, we answer, anything which can be looked on as artistic, picturesque, historical, antique, or substantial: any work, in short, over which educated, artistic people would think it worthwhile to argue at all'.

In ‘The Seven Lamps of Architecture’, Ruskin discusses the notion that this ‘restoration and replication’ is unauthentic and false, doing more harm than good to a building – the imitation of ‘past styles is an insult rather than a compliment’. He believes that it is the memories and meaning behind the building in its current state and throughout its lifecycle which give it value:

“Better the rudest work that tells a story or records a fact, than the richest without meaning.”

Any additions or modifications are not representative of reality or representative of the true story of things that may have happened to or around the building. All buildings hold their history in their materials or within the building itself – as memories. The sentiment of this is summarised in Ruskin’s Seven Lamps: “When we build, let us think that we build for ever”. Buildings are made up of a collection of parts and layers which reveal memories, however subtle these may be – hence even the most subtle changes to a building may be seen by purists to affect the authenticity and inherent memory of a building. Various memories and meanings can be read and understood through observing the weathering of materials, modifications, previous repairs or damage evident on the building. These collective memories give the building its presence and ever-changing role in society where it holds, and will hold, different meanings to different individuals over time. These features are representative of the lifecycle and evolution of the building – revealing its lifespan and existence across multiple generations.

“It is impossible, as impossible as to raise the dead, to restore anything that has ever been great or beautiful in architecture... Do not let us talk then of restoration. The thing is a Lie from beginning to end... Take proper care of your monuments, and you will not need to restore them”.5

To this end, the Anti-Restoration theorists felt that there was minimal scope for altering and adding to existing buildings and that all work done to the building should only be necessary maintenance of the existing, not with a view to modifying it.6 Any work that is not original should be discernible in both style and form - a representation of the age in which the modification was carried out and built for the requirements of the time.7

The general understanding of conservation commonly involves the removal of age-value from buildings, including dirt and plant growth, in order to restore the building to a ‘pure’ form. This often involves the cleaning of surfaces to appear like new, erasing all character and marks of age to relocate them back to the time of construction.

In a similar manner, additions or modified parts of buildings are also often removed in the restoration process in an attempt to ‘clean up’ the building and its immediate surroundings - most commonly elements such as sheds, lean-tos and outhouses. Additions to buildings which were constructed later or in a different style often fall victim to this although it can be said that these parts also hold some value in helping to understand the context of the building. These different elements show something of a building’s evolving use through the modifications which were deemed necessary at various points in time.

Conservation remains an on-going debate over value and the perception of what this is – values may change over time but nonetheless will strongly contribute to the richness of a building’s history. While many industrial buildings are not yet appreciated for their heritage value, they will increasingly become valued as time progresses as a lasting symbol of New Zealand’s history and development, creating a sense of place, but only if they are allowed to remain part of our built fabric. While the focus remains on retaining elements which hold value, we must not forget the potential to further add value through innovative architectural intervention.8

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1 Ibid. Accessed April 2014
5 Ibid. p.184-186.
Writer Stewart Brand suggests that people have respect for buildings according to their age, regardless of style. "Buildings older than 100 years will be considered beautiful, no matter what. Having outlived its period of being out of fashion, plus several passing fashions since that, it is beyond fashion." However, he acknowledges that it is style that determines which buildings people care for at an earlier stage in their lifecycle. The extent to which this idea applies to industrial buildings or those which have already undergone significant modification is the crux of this research.

Even in New Zealand’s short history, many original buildings were short-lived in their original capacities as the programmes have long since outgrown the building, become obsolete or required an upgrade as technology has advanced. Factory buildings in particular have quite different requirements in the modern age and, in the case of Dunedin, many manufacturers have moved out of town to larger centres, leaving entire neighbourhoods of warehouses and factory buildings empty and seeking a new use. Those which haven’t yet undergone any form of adaptation will be likely to remain abandoned or underutilised, only suited to their original, long-gone purpose. The vast scale of many of these buildings means that they are well suited to adaptation and offer numerous options for introducing a programme within their sturdy shells.

4.4. Adaptive Reuse – A New Theory

As appreciation for working with existing buildings has grown, modern theorists such as Fred Scott have expressed how ‘adaptation of architecture’ has become a specialist language in itself. He believed that further classification of this area was needed because adaptation has its own set of issues and methodologies. Scott questioned the connection between the ‘host building’ and new insertions, in particular how a complete appreciation for the context was essential to forming a comprehensive understanding between the original and the new, not merely maintaining them as distinctly separate - ‘the work of an alteration can be thought of as translating a building from the past into the future’. Scott declares that adaptation is generally not a one-off event and we must consider that it will be likely to have followed on from some previous adaptation, and will be followed by further work in the future. In this way, architectural intervention becomes somewhat of a ‘dialogue across time between successive generations of designers…work in progress’.

Scott’s belief was that buildings experienced a change in standing within society due to changes to the context - but taking a preservation approach only results in memorials. Cities inevitably change and their buildings must adapt to suit this in some way in order to remain useful. Adaptation is an intermediate approach which acts to prevent demolition and degradation without relying on the limitations presented by complete preservation. Scott’s attitude requires the separation of the idea of ‘architect’s intent’ from the necessary evolution of a building. This returns us to the issue of first needing to identify the heritage or age value – this will become the driver in forming an appropriate design approach.

4.4.1. Shearing Layers

The notion of building evolution has been further explored by Brand through ‘shearing layers’, elaborating on the earlier ideas of Frank Duffy “…A building properly conceived is several layers of built components”.


3 Ibid., p.8

“Thinking about buildings in this time-laden way is very practical. As a designer you avoid such classic mistakes as solving a five-minute problem with a fifty-year solution, or vice versa. It legitimizes the existence of different design skills – architects, service engineers, space planners, interior designers – all with their different agendas defined by this time scale. It means you invent building forms which are very adaptive.” - Frank Duffy

These layers have become an interesting foundation for adaptive reuse as architects contemplate the level of intervention required for any given project - adaptability has become an essential part of any good design. This notion considers that all buildings are made up of different layers which evolve in different timescales.

1) **Site** – geographical setting, urban location, boundaries and context outlast the ephemeral building

2) **Structure** – foundations and load-bearing elements; structural life ranges from 30 to 300 years and may change for a number of reasons

3) **Skin** – exterior surfaces of the building; generally change due to fashion, technology or as part of repairs

4) **Services** – the working elements of the building; wear out or are replaced as technology advances in a time range of 7-15 years.

5) **Space plan** – interior layout including walls, floors, doors

6) **Stuff/Set** – furniture and fittings which change regularly or often – depending on use of building (commercial may be more regular then residential for example)

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Brand developed this idea as he noticed the ability of some buildings to absorb change while others could not. Traditional buildings were often able to evolve over time as their inhabitants changed because they allowed ‘slippage’ - layers which changed faster were not hindered by the ‘slower’ layers. This has resulted in the coining of the principle ‘pace-layering’ which, when deliberately applied as part of the design process, allows for maximum adaptability and therefore future-proofing of buildings.

“The fast parts learn, propose, and absorb shocks; the slow parts remember, integrate, and constrain. The fast parts get all the attention. The slow parts have all the power”.

By designing with these layers in mind, the lifespan of a building can be extended as it can change to suit different uses at different times making it therefore more successful architecturally. Where layers have been incorporated into each other, trouble may arise if one or the other needs to be modified. For example, integrating services into the structural system of a building can seem like a good space-saving or economical idea, but if the services require an upgrade (likely within a decade) then the structure will be affected by this.

Allowing for change in initial design ensures that buildings are dynamic and respond to change with little effort, something that is desirable and appropriate in the rapidly advancing age where technology evolves so rapidly. It is likely that this is why industrial architecture is now proving to be the most popular focus of adaptive reuse as the shearing layers are often in the best possible arrangement to accommodate adaptations.

These buildings were often designed with large volumes and simple circulation and service arrangements. New uses can be fitted within the walls of the shell while the structure and skin remain unchanged, retaining the heritage presence on the streetscape and often allowing for the exposure of original elements on the interior as well.

4.4.2. Conclusion

Adapting a building, rather than simply conserving or restoring it, allows us to continue its life along with its history and materials. The evidence of the past is not removed to make way for a perfect representation of an original building but rather the heritage elements are included and embraced as part of the new phase of the building's life. Historian Kenneth Frampton suggests that the life of a building is displayed in its materials just as the age of a human is shown on our skin. In this way, he considers it important that buildings are designed with some acknowledgement and understanding that they will have different uses in their lifetime – some kind of evolution is inevitable and we must consider this in our design process.

By considering buildings as being made up of different layers, each can be modified individually to create a rich composite architecture made to suit the building's individual context rather than the one-size-fits-all approach which was considered appropriate in the past.
5. Conservation in Today's Architecture

Governing bodies such as New Zealand Historic Places Trust (NZHPT) work to identify and protect buildings which have heritage-value, alongside government and local authorities. These often consist of inflexible regulations which are a well-meaning but broad approach to the conservation of heritage architecture – buildings which are listed in the NZHPT are strictly controlled and generally only restoration and maintenance work is acceptable. In some instances, these regulations have been found to decrease the value of buildings as owners/designers are forced to work with the existing building as it stands, unable to modify them in any way and the requirements for maintenance mean that on-going costs are relatively high.

Current practice sees many examples of heritage building interventions which are clearly distinguishable from the original elements – successful examples are representative of the current age, while still retaining a sensitivity and respect for the building’s history and context. By constructing new elements in a way that ensures they are distinguishable from the original – through the use of materials, form, style, scale or a combination thereof - the intervention shows an appreciation for the necessity of evolution without detracting from the form of the original or masquerading as part of it, resulting in an incoherent mixture of elements.

Industrial or commercial buildings, like those which this thesis will focus on, are often more likely to find creative adaptations than other building typologies and the public are more likely to be accepting of such developments. Such buildings generally feature vast spaces, solid construction methods and have often been relegated to uninteresting purposes such as storage facilities - meaning that there is ample potential to liven them up.

Heritage-led regeneration has occurred in many cities throughout the world and, in the case of Dunedin, the recently identified “Warehouse Precinct” has been a focus as the council works to retain an area which has remained largely neglected for decades. Several blocks of old industrial and commercial buildings have been earmarked for upgrade and development alongside council-driven urban interventions.

As the first buildings are being completed, new businesses are moving into the area initiating the desired follow-on effect, although some fear gentrification of the area. Throughout the course of this research, the Warehouse Precinct project has gained momentum more rapidly than was expected and so the focus of this research will henceforth be directed towards identifying buildings which are currently sitting beyond the scope of development and are still at risk of further deterioration, perhaps due to previous loss of heritage value.

6. Design Approach

Stewart Brand states that all existing buildings already have a story; “all you have to do is add the interesting next chapter”.

Within the domain of adaptive reuse, there are a number of approaches to be explored. Brooker and Stone’s: Re-readings: Interior Architecture and the design principles of remodelling existing buildings, was used to establish the following definitions, as illustrated in Figure 11:

i) **Intervention**: fully integrates new architecture with the existing, utilising the building’s qualities and translating them into a new design – intimately connected.

ii) **Insertion**: a new form put in, on or around, an existing building – covers a number of different possibilities such as additions, extensions and new skins; characteristics and qualities of the existing are taken into consideration; planning of a clear element is inserted into an existing space, very close to one another.

iii) **Installation**: less invasive approach, new element is easily removed without damage to the existing; installation and existing are separate; the existing influences but does not change the new element.

These definitions may be interpreted slightly differently with varying degrees of invasiveness possible within each category. Each of these approaches can be applied to the different layers of a building to create varied effects and by utilising a mixture of these design approaches, a more complex and exciting intervention can be generated for use within an otherwise mundane building.

6.1. Conclusion

Consideration of these various adaptive reuse approaches, compared with other more traditional conservation theories, reinforces my belief that adaptive reuse is the most appropriate method for saving New Zealand’s heritage building stock, especially those with uncertain heritage-value. The reason that so many of these buildings have fallen into disrepair is because they are no longer deemed to be useful to society. By restoring buildings faithfully to their original condition, they retain some of the qualities which saw them become un-useful in the first place. On the other hand, to retain the heritage value in different and innovative ways, working with and acknowledging the weathered materials and the miscellaneous parts which have been added over the years will result in a rich composite architectural solution, able to be further adapted in the future as the need arises. This will be further developed as the basis of the conservation approach throughout the design process. This ensures the development of a more authentic and heritage-rich Warehouse Precinct, rather than a sanitised and idyllic version, forever fixed in a particular time.

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3 Ibid. p. 102-103.
7. Precedent Studies

7.1. Individual Precedents

7.1.1. Bookstore Selexyz Dominicaner: Maastricht, Holland:

The conversion of this existing 13th Century Dominican church into a bookstore involved installing a multi-level steel bookcase along the left-hand side of the church as well as café and reading facilities. This allows the rest of the church volume to remain open and does not compromise the sense of scale, nor the traditional elements of the church. 1200sqm of shop area is fitted into a 750sqm area utilising the height to accommodate additional space for shelving. This approach also offers customers a unique vantage point from which to view the impressive ceilings and ornamental features. By installing the shelving units along only one side and using perforated metal, the space retains a sense of openness and the bookshelves do not completely overwhelm the area.

This shows how the original purpose of the building can be entirely discarded but a new use applied which is still sensitive to the original purpose. The building had previously been used as an archive, warehouse and bicycle parking lot, falling into disrepair as there were thought to be better preserved buildings in the city.

The new elements do not dominate the interior and fit within the original building as a modern insertion, recognising the significance of the spaces and church structure. These features, along with the impressive windows retained in the building, are not disrupted by the intervention but rather the architects have worked to fit the new structure gently into the church.¹

7.1.2. Mill City Museum, Minneapolis, USA:

The original building was largely destroyed by fire in 1991 and the current adaptation has risen amidst the ruins. The original building was constructed in 1880 and was the largest and most technologically advanced flour mill in the world, eventually closing in 1965. The ruins were fortified in the 1990s and the Museum was constructed amidst the ruins in 2003.1

This example of adaptive reuse is interesting in that the damaged remains of a building might otherwise be considered useless, having lost much of their architectural value in the fire. Instead, beauty was found in the history and location of the ruins, resulting in a monument to the history of the area and an appreciation of the original building. The history of the building is represented through the careful intervention which sits among the fire damaged ruins and twisted beams which are still evident as visitors move through the Ruin Courtyard. In this space, three of the walls are ruins and the fourth is a modern glass insertion, etched with images of the original machinery.

The new glass and black steel insertion gives a sense of modernity, the lightness of these materials not dominating the space and clearly reading as a new insertion among the fragile but rugged remains. The original building elements are still covered in rust and broken concrete and steel columns give an impression of the walls and spaces which once stood within the courtyard space. The architects have woven the old elements and the new together, creating a richly contrasting aesthetic which cleverly combines the beauty of the ruined shell as part of the new museum. Although it offers little in the way of a traditional ‘host’ building, it now serves as a meaningful boundary and powerful representation of the site’s history.

7.2. Precinct Precedents

7.2.1. North Loop - Minneapolis USA:

The North Loop is a rejuvenated industrial area in Minneapolis consisting of a range of warehouses and factories. The whole precinct is registered because it comprises ‘a cohesive district of buildings with a common physical appearance as well as a common age and original use’. Following the Depression of the late 19th Century, Minnesota became a wholesale hub for distribution and prominent architects of the time were called to design spaces to house the rapidly growing business sector.

Few industrial tenants remain in the area but it has experienced resurgence as both a commercial precinct and residential area in recent years. Interestingly, many new buildings in the area have also been constructed in various styles to imitate the old warehouses in an effort to maintain a uniform streetscape. The area has experienced significant gentrification as more buildings have been upgraded, increasing in popularity in the 21st Century. It has become a very popular area of the city with more high-end retailers and tenants moving into the area and is continuing to experience significant growth.

The transformation of many of the original warehouses and factories has led to a boom in new residential construction to keep up with demand. The Colonial warehouse above, built in 1885, was originally the headquarters of the horse-drawn trolley system but is now home to art galleries, an antique market, cafes and a theatre. This mixed-use approach has resulted in a vibrant and lively precinct with significant appeal.

While the development of the buildings themselves has remained very active, there has been little urban design consideration and the city council are now working to encourage more green spaces to improve the streets and pedestrian experience of the area. Green spaces have been introduced through the creation of larger parks in vacant lots and smaller ‘parklets’ as part of a modern urban design movement to revitalise the streets, adding interest and humanising the previously industrial feel of the area. Pedestrian-scale lighting, porous paving and garden areas along with more shelters and gathering areas are being proposed to encourage pedestrian use of the area. The urban planning schemes are now looking to borrow from car parks and footpaths where they plan to improve the urban environment with various cleverly designed green areas.

As the area continues to grow, confidence is growing and more ambitious plans are being developed such as Target Field which will include a large public plaza and amphitheatre along with more retail spaces and a new rail hub.¹

Fig 19. North Loop Streetscape

Fig 20. North Loop Warehouse Adaptive Reuse

Fig 21. North Loop Warehouse Streetscape Vision
7.2.2. Imperial Lane: Auckland

Imperial Lane consists of a group of buildings which have been adapted to create links between Auckland’s Queen Street and Fort Lane, and revitalise the immediate area.

The architects, Fearon Hay, were faced with the problem of creating a second façade for the building using the existing rear elevation, and also with providing circulation which would work with the newly upgraded Fort Lane – a pedestrian and vehicle link through the inner city. The existing buildings had previously contained two neglected picture theatres, built between 1886 and 1911 which were part of a 5000m² area of commercial space hidden deep within the city. The only active part of the building remained the Queen St retail spaces, while the rear was frequented only by delivery vehicles. The buildings were connected through a convoluted series of passages and floors, extending across 5 storeys.

The architect’s intervention has reactivated the depths of the building and successfully created an entirely new connection through the spaces thus utilising the previously confusing levels and other features which existed deep within the block. The use of an inclined lane as the new entry at the rear of the building encourages movement into and through the building, creating a lively social area, drawing members of the public into the intriguing spaces within.

Some notable features include the use of steel and translucent material light shafts which draw borrowed light through the levels and into the lane, as well as illuminating the rugged brickwork and original structure. The architects have avoided detracting from the industrial character of the original features by utilising complementary and appropriate materials in the new elements. A spiral staircase links the new lane through to the interior courtyard, utilising an old service-well from which people can appreciate the multiple levels of the buildings and original circulation routes. Light, movement and air have been
reintroduced into the core of the building while exposing the multiple layers of its evolution along the journey. The architects have taken care to retain evidence of decay and weathering, along with exposing some original features such as red brick previously hidden behind plastered walls; they took as much care with the elements they removed as with those they added.\textsuperscript{1}

The development of Fort Lane has been a major success resulting in a 50% increase in foot traffic, a 25% reduction in vehicle speeds and a 400% increase in hospitality spending in the area.\textsuperscript{2} The resulting composite fabric of the area combines new and old elements successfully to create a rich aesthetic which has been exceedingly popular with both the public and businesses.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig22.png}
\caption{Imperial Lane Interior Laneway}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig23.png}
\caption{Imperial Lane Street Elevation}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig24.png}
\caption{Imperial Lane Street Spiral Stair}
\end{figure}


8. Site

The selected building for this research and design project is the Agricultural Hall/ His Majesty's Theatre Complex which is located on dual frontages along Vogel and Crawford Streets in Dunedin city. The complex is made up of the original hall/theatre building and the adjacent buildings which were used as a utilities building and hall space for the theatre. The original agricultural hall building was converted into a theatre very soon after its construction, the first of many adaptations.

The aim of this project is to find a new use for the theatre building and its neighbouring hall, the rejuvenation of which would provide invaluable exposure for other heritage buildings in this part of Dunedin, promoting and emphasising the wide ranging potential for a variety of buildings – even those which have already undergone significant modifications.

8.1. Site History

The area in which the theatre building lies has recently been renamed the 'Warehouse Precinct', and is home to many buildings of similar scale to His Majesty's Theatre and Agricultural Hall. Many of the area's buildings remain largely in their original form, and sadly, many have been poorly maintained resulting in an appearance which reflects their vast age and neglect following the city’s economic decline in the 20th Century. This area of the city has become synonymous with Dunedin’s architecture as it is one of the few places where development hasn’t quite caught up with the 21st century, and fortunately many original buildings have survived the brutal 20th century demolitions, sitting quietly in backstreets away from the public eye, forgotten due to their unkempt appearance. Such buildings sit firmly as a reminder of the city’s history and form part of the collective Dunedin identity – only now experiencing an enthusiastic resurgence in popularity from the community. The diverse range of building uses that this area has seen over time is impressive and wide-ranging, many of which are apparent from the modifications and additions to the buildings while others are long forgotten.

The Warehouse Precinct is representative of New Zealand's national heritage – the buildings provide a 'sense of where we came from and how we worked when we got here'. The land upon which the warehouse precinct sits is reclaimed, and the surrounding streets reflect this with names such as Jetty and Water Streets.

At one point in these early days of reclamation, the precinct was home to 188 warehouses, each employing up to 30 workers. Further reclamation from the 1870s on saw the formation of both Vogel and Crawford Streets, the site of the Agricultural buildings as the shoreline advanced (Fig 27). The progress was impressive and the development of this area of the city rapid (Fig 28). It was

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1 Alexander Trapeznik, Dunedin’s Warehouse Precinct (Dunedin: Genre Books, 2014), p. 15.
2 Ibid. p17.
Fig 24 Pictor's Map of Early Dunedin c.1880 - as viewed from across the harbour
commented: “...at Dunedin, where former swamps and tidal flats threw wide a challenge to man’s enterprise, the facts themselves speak eloquently. For a city has emerged from harbour spoil, and streets and factories and wharves have taken shape as the waters have receded.”

The city largely struggled financially until the age of the gold rush, when it became the wealthiest province in the country and set in motion a period of huge nationwide industrial growth lasting until the 1880s. This resulted in the foundation of many large and successful companies, many based in this area of the city for its ease of access to the harbour and rail. Wool and grain soon took over as the major exports from the area, and many building names and signs still reflect this change.

The Warehouse Precinct largely reflects the rapid growth of the farming industry and the businesses which developed to support this industry – for storage, sale and shipping of the produce from the region. The extent of the harbour-side infrastructure that makes up the Warehouse Precinct is added testament to the large export industry that blossomed in early Dunedin.

1 Alexander Trapeznik, *Dunedin’s Warehouse Precinct* (Dunedin: Genre Books, 2014), p. 21
8.2. Site Analysis

The Warehouse Precinct’s resurgence of popularity is bringing an increased diversity of businesses and visitors to the area, to the recently renovated buildings. The nature of these former factories and warehouses means that some degree of adaptive reuse or conversion has already been applied to many buildings as a method of facilitating their continued use, though most have retained their original form and bulk, ensuring a continuity of the streetscape.

To highlight the diversity of the precinct: the area immediately around the site is home to an indoor sports stadium, computer software company, decorating company, photography studio and a joiner, with smaller offices slotted into the remaining spaces of the buildings. However, there is little street activity in the area as the surrounding streets and public realm have not been designed for pedestrian or cycle use, the wide grid-like streets alienating people at this level.

State Highway 1 passes through the city directly in front of the site with 4 lanes of north-bound traffic, used heavily by large trucks. Many vehicles move through the area towards the waterfront using the Jetty St bypass, leading over a bridge towards the harbour and beach suburbs and drawing traffic around the site from all directions. This may be considered an advantage in terms of exposure and circulation potential due to the high traffic volume running directly in front of the site, but for many this represents a potential hazard. A portion of the street frontage of the theatre has already been removed to create a parking and access bay, possibly suggesting scope to improve the public space in this area, enhancing pedestrian interaction with the site at this point.

Conversely, Vogel Street at the rear is a quiet street used mostly by service vehicles and for parking by local workers. On numerous site visits to the precinct, minimal pedestrian and cycle activity were observed, perhaps due
to the poor links to the rest of the city and the intensity of the one-way system surrounding it.

The ample parking on both sides of the streets creates a physical barrier between the street and buildings, serving as a further deterrent for pedestrian usage. The council’s development proposal involves modification of Vogel Street to become a shared pedestrian/vehicle route using planting and urban design insertions.

The Warehouse Precinct seems isolated from the rest of the city although in reality it is only 800m from the busy Octagon.

The street frontages of the buildings were built with identical setbacks, leaving little room for introduction of public spaces or enhanced street-level interaction without modifications to the buildings themselves. The large looming faces of the buildings have closed off street presences in the form of small openings, typical of the era and building typologies, and the uses within the buildings are largely hidden from the outside. The development of the precinct includes plans to modify this street environment to improve the experience as well as safety for both cyclists and pedestrians.

The Warehouse Precinct is relatively flat, although there is a change in level across the theatre site of about 3 metres, a result of the road system being introduced. The site is bordered by two busy one-way routes and the railway further separates the area from the harbour-side, although the wharf area is only 400m away. Being set back from the waterfront and bound by buildings of 2-3 storeys in height, the precinct is relatively sheltered. The topography of the city provides potential for some buildings to ‘steal’ views across the harbour or city at upper levels. The site’s capacity for harnessing these views will be explored in the design process and through further site analysis.

There is plenty of potential for development of these expansive warehouse buildings for residential, commercial and retail uses, especially if connections to the rest of the city are improved, including links with the tourist precinct and University campus, and if the areas around the precinct are successfully enhanced through the proposed urban design insertions. This project seeks to highlight the importance of reactivating the buildings at street level and how the insertion of a new programme can contribute to creating a lively hub for the area. Encouraging mixed-use development of this site will ensure appeal to a range of people and further encourage visitors to the wider precinct.

Fig 30 Sketch Plan of Current Building Layout and Site
Fig 31 Figure-Ground Illustration: showing the location of Agricultural Hall buildings relative to the harbourside and comparative scale to surrounding building footprints.
Site Photos

Fig 31 Current Theatre Front Elevation - “Sammy’s”

Fig 32 Current Annex and Brydone Hall Front Elevations

Fig 33 Current Brydone Hall Front Detail

Fig 34 Looking South on Crawford St
Fig 35 Brydone Hall - Rear Elevation

Fig 36 Annex - Rear Elevation

Fig 37 Panoramic Streetscape - Looking South on Vogel Street
Fig 41 Current Street Level Window Detail - Brydone

Fig 42 Current Rear Elevation of Flytower

Fig 43 Current Internal Laneway into Brydone
Fig 44 Jetty St Bypass to Waterfront

Fig 45 View North on Crawford St

Fig 46 Neighbouring AH Reid Building - Renovations Underway
9. Building History

The chosen site is made up of three separate buildings which were all, at one time, considered part of the Agricultural Hall complex, home to Agricultural displays and shows for the Otago Region – at a time when ‘the country came to town’. These buildings were joined through interior access points and each was a development of the neighbouring building as the Agricultural and Pastoral (A+P) Society grew and required more space for its meetings, shows and displays. These three buildings are His Majesty’s Theatre, The Agricultural Hall (Annexe) and Brydone Hall.

His Majesty’s Theatre

His Majesty’s Theatre has a complicated history of adaptive reuse from an early age. The original ‘Agricultural Hall’ was designed by Scottish architect James Hislop and completed in 1896. The hall was designed as a centre for Otago Agricultural and Pastoral shows, to house displays of livestock and products brought in from rural areas throughout the South Island. The hall was an impressive addition to the outskirts of the city, where people congregated for large events, meetings, and entertainment. This use was short-lived however, and the building was purchased by Fullers Theatre Company and renamed His Majesty’s Theatre in 1903, becoming better known for its stage space.

The original interiors were described as creating ‘surprise and delight’ by those who experienced the inside of the original Renaissance-style building.

“The height from the floor of the stage to the underside of the proscenium is 20ft, and to the top of the cornice 25ft. The stage has been built in the composite style of architecture, having fluted panel pilasters with composite capitals surmounted by a moulded and detailed cornice and freise [sic], which is finished above, in the centre of the building, with emblems of agriculture. The wings are panelled round, and are painted with a fireproof solution. The height of the roof is such that there will be no difficulty in arranging for drop scenes on the stage, behind which, also, there is ample room for provision for dressing and retiring accommodation, while other conveniences are supplied such as exist in none of the other places of entertainment in the city.  

The original hall was fitted out with the latest systems including gas and electricity, to supplement the plentiful natural night entering the building from the skylights, and had a ‘water service’ throughout the levels for fire-fighting. Plumbing was also advanced and the central hall space featured an interior fountain. A smaller hall was provided at the upper level, as well as a large ‘implement hall’, a caretaker’s premises and office spaces. Interestingly, the local paper identified at the time that the construction of this grand new building had

‘materially enhanced the value of property in the vicinity’. At the time, there was seen to be a dire need for a larger hall of this scale to accommodate numerous events although it was only a mere 6 years later that its use was first changed. Acting Premier John MacKenzie noted at the time that almost all materials used in its construction were ‘produced in the colony’ except for the iron girders. The building today is known as ‘Sammy’s Nightclub’, and has been so since the 1970s; it is still owned by the same man, Mr Sammy Chin and functions as an entertainment venue.

Agricultural Hall – The Annex

The building which now bears the name ‘Agricultural Hall’ (hereafter ‘The Annexe’) appears to have been modified to its current form sometime in the 1960s. However, the interior remains largely original and can be identified on entering the building as WE Reynold’s Wool, Skin and Grain Store (Note: shown in early map Fig 48 - indicated crossed out). This new building opened in 1902 and included offices for use by the Otago A+P Society, serving as ancillary spaces to the original Agricultural Hall and theatre although it is the only part which appears to have retained evidence of the original purpose. The building has been used most recently as a ski shop, art centre and motorcycle shop, but was previously an indoor skating rink.

Brydone Hall

The Brydone Hall was constructed in 1905 alongside the other two A+P buildings, although the current one was partially rebuilt after a major fire in 1910, the extent of which is unknown. Its exact history is relatively unclear but these buildings appear to have been known as the A+P Buildings according to 1927 Fire Department Records. The neighbouring annex had been found to be too small to hold show displays by around 1905 so the expansion was complet-

1 Alexander Trapeznik, Dunedin’s Warehouse Precinct (Dunedin: Genre Books, 2014), p.88
2 Ibid p.89
ed at this time, although the name ‘Brydone Hall’ is inscribed on the pediment alongside the date of completion in memorial of Thomas Brydone1.

The original building was designed to match the Theatre and Annexe buildings with the façade, roofline and mouldings continuous along the Crawford St elevation. The ground floor arches and windows of the theatre were also emulated in the newer building. The rear of the building retains its original warehouse quality today, and is devoid of any ornament, indicating that Vogel St was clearly the less important elevation, though it was this area behind Brydone Hall which was closed off for the A+P Shows to house the fairground attractions such as Ferris Wheels. Today, the Brydone Hall houses the Metro Indoor Sports Centre and several smaller offices including a dentist, Mr Rental retail as well as car-parking and storage facilities at the ground floor level.

Fig 50 Brydone Hall Construction Alteration Plans c.1903

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9.1. Building Analysis

9.1.1. Current Form

After its abandonment in the 1970’s, the theatre building was modified extensively due to loss of structural integrity, making way for access and parking space off Crawford Street. This involved the demolition of the front section of the theatre including the lobby spaces and entrance, as well as some of the mezzanine floor. The front elevation now consists of a full-height solid brick face, painted a bold green, with steel girders supporting its height and with a covered canopy leading to the entrance.

This current form means that there is a great volume within the theatre space but relatively small useable floor area remaining. This consists of the original floor which has been levelled off, and the mezzanine floor 'dress-circle' which has been rebuilt at a reduced size and simplified form. The 'back-of-house' areas remain as a series of small spaces with access to the stage and the original orchestra pit below the stage. There are also large access openings to accommodate stage and musical equipment. The fly-tower remains intact, but most mechanical elements were removed in 1973 and relocated to the larger Regent Theatre – the lighting gantry and support structures for stage equipment remain in current use.

The current Annexe form has a mostly open lower level, currently operating as a motorbike retailer and workshop with smaller offices towards the front. The upper floor of the hall has an open-plan mezzanine floor towards the front with the larger vaulted space at the rear, functioning as artist studios – this large volume is naturally lit by means of the original skylights and is further enhanced by extensive glazing introduced across the facade. The original caretaker’s facilities remain at the rear of the building, functioning as small utilities.

1 Modified in 1935 by Miller and White – prominent Otago architects of the time
spaces for the art centre.

Original links exist between the buildings, closed over to accommodate various uses over time but records show the construction of arched partitions between the buildings in the 1920’s. At ground floor level, the Annexe was used as a scene dock and storage for the Theatre, and as additional hall space at the upper level. There were other small openings linking the two buildings across both levels and a ‘vestibule’ at the front, although its purpose is unclear. These openings still exist within the structure, and it would be interesting to explore the idea of recreating some of the original interaction between the buildings, reconsidering the location of their boundaries.

The Brydone Hall building remains the most intact of the three buildings and the large open spaces of the top floor now house sports facilities. These new uses have been installed around the existing truss system in the roof space which is well-lit by the original skylights. The main modifications to this building have been done in an attempt to modernise the façade, with the removal of the decorative parapet and ornament around 1935. The roof form is now obvious along the Crawford St elevation and appears as a very barn-like and functional roof-form, once concealed behind the parapet. The lower level currently functions as an extension of the Annexe building, with the motorcycle centre occupying much of the lower level. The structure of the building features a rigid grid of timber columns at 4.5m spacings along both axes. The insertions in the building have been installed around these grids at ground floor level although they have been removed in some areas to accommodate the sports facilities in the top floor. The facilities on the top floor include bar and café areas as well as utilities to service the players.
Fig 55 Current Interior of Brydone Hall - Top Floor

Fig 56 Current Interior of Brydone Hall - Top Floor
9.1.2. Design Opportunities and Constraints

- The adjoining buildings are of a similar scale and bulk which restricts any development at the sides of the buildings; similarly, the streets running parallel at the front and rear confine development along this axis. The language of the warehouse precinct also calls for the building setbacks to remain relatively uniform, which forces most of the design intervention to be carried out within the bounds of the buildings.

- New access points and circulation will be considered as part of the development of the overall site and buildings as a group, including scope to re-evaluate the orientation and axes of the buildings either together or individually to suit the new programme and generate a design approach.

- As the precinct is currently under development, it is difficult to predict the exact effect of any changes. Therefore, some extrapolation of current ideas will need to be carried out to establish a possible understanding of the future context - a drive towards a more flexible intervention approach which could accommodate further changes.

- The dual street frontages and changing face of Vogel Street present an opportunity to re-evaluate the axes of the buildings as well as the existing thresholds and access points, many of which have changed significantly over time. This will aid in the reactivation of the street level and contribute to the creation of a more lively area within the Warehouse Precinct.

The vast height of the theatre presents an interesting opportunity to work within the space and create interesting insertions which would utilise...
this unusual volume, reaching heights of almost 15 metres. This height may also present the opportunity for views across the city and towards the harbour. The presence of skylights in the Annex and Brydone buildings presents further opportunity for developing openings and light shafts, harnessing the natural day-lighting of the top floors.

One of the main constraints in working within the existing building envelopes and modifying their orientation is the challenge of utilising the existing openings in an attempt to retain the aesthetic of the rear elevation. The window openings along Vogel Street are few and generally small and plain, meaning that additional intervention may be required to re activates this elevation. The doors are large cart-ways and garage-door style openings. These may not be appropriate to the new programme but will likely affect the placement of internal insertions and influence the location of new entry points or activity nodes.

The circulation within the theatre is limited due to the nature of its programme which had one main entrance point, the rear only allowing for 'back-of-house' access. There is also a fire-escape right-of-way at the side of the building to be explored for further potential. The circulation within the other buildings is extensive but will dictate the placement and layout of any insertions, working to retain the original stairwell cores as a feature. Although the stairwells are wide enough to function as fire egress routes, lifts will need to be considered at appropriate points for disabled access.

9.1.3. Facade Development and Comparison

The three buildings began with a unified façade (Fig 60) and have each been modified in a different way to produce the current confused streetscape along Crawford St.

Facades are often modified to accommodate changing requirements in day-lighting, ventilation and acoustic or thermal properties according to a
programmatic change – not only related to the style of the building – and in this case, the different facades reflect different uses applied to each building over time. Each façade now stands as an example of adaptation approaches from a different time, ‘appropriate’ to different eras.

A further interesting point is that the rear elevations of the buildings have all remained largely untouched and maintain a relatively unified aesthetic – reminiscent of a Victorian industrial streetscape. They all feature small windows and vehicular access openings, some of which have been blocked over and closed up as uses have changed. The geometries are varied in form and scale but this adds some interest to the rear elevation and its heritage-value to the area.

9.1.3.1. His Majesty’s Theatre

The current facade follows the shape of the original roofline which was previously concealed by a separate front roof section and decorative parapet. The nightclub added a split-block entrance porch to the club space alongside car-parks which service the building. The neon “Sammy’s” sign at the front has become iconic in its own right as part of Dunedin’s cultural heritage, although many people consider it to be an eyesore and inappropriate to the heritage area.
The rear elevation is a large plain brick face, punctuated by semi-embedded brick columns supporting the face and a bricked arch across width. This appears to offer support to the large face of bricks which make up the fly-tower above. This façade reads as a vast expanse of brick, largely in good condition as it has been sheltered from the elements. The face is strapped with steel bands horizontally, which run between the vertical strengthening columns and around the edge of the roofline. The openings are the only other features on this façade, all of which have been modified in some way over time, now a mixture of concrete lintels, block and assorted door panels. A fire exit is located at the upper level to service the fly-tower. The rear façade of the building is very closed up and plain, showing years of modifications and adaptations to suit the changing use of the spaces.

9.1.3.2. The Annexe

The current façade of the annexe, marked ‘Agricultural Hall’, is of a 1960’s style with large grid-pattern windows on the top floor and a similar glass frontage across ground level, producing the effect of very light interior spaces. The entrances are maintained in the positions of the original cart-way openings from the original façade, upholding the original circulation of the building. The façade has been reduced in scale so that the curved roof is now visible behind, adding a confusing mixture of geometry to the streetscape. Sections of original parapet remain to indicate the original height of the roof, once continuous with the theatre and Brydone Hall façades. The vaulted roof form is exposed on the interior with large steel trusses spanning across the space. These are now rusted and aged but have been left as a feature with the expansive ceiling space extending throughout an open-plan space.

The rear elevation of the Annexe reads as smaller than the adjacent buildings, although its vaulted ceiling and brick façade loom above the caretaker’s residence. Small service windows are spaced across the façade and an original large opening sits in its original location. A second single-door entrance has been added at the rear for practical purposes. Although this elevation has been well protected from the sun and the bricks have retained most of their original condition, there is some evidence of weathering, rust and moss growth, suggestive of the lack of care towards the ‘back side’ of the buildings.

9.1.3.3. Brydone Hall

This building remains largely intact although ornamental elements of the façade were removed in the 1930s. The proportions and openings remain original, maintaining the circulation and axes within. The openings were originally designed to accommodate cart access to the buildings and some of these have been modified to become entry lobbies while others serve as access to the parking spaces. Following the removal of the parapet, the roof form is now the dominant form along this elevation.

The rear of the Brydone Hall is very symmetrical, with small arched windows in rows interrupted only by the large cart entrances to the building, revealing laneways extending through the buildings. With the changing level of Vogel St, the windows which were once high are now closer to footpath level, affecting the proportions of the rear elevation, which now appear much smaller than the front. This somewhat detracts from the symmetry which would have been present originally, though the building maintains a uniform materiality with the original brick. This is contrasted by painted white borders around openings and along the parapet, resulting in a tidier appearance than adjacent buildings.
9.2. Facade Analysis

The different treatment of each of the buildings' facades means that each now represents something completely different to the next, each telling its own story of adaptive re-use - although they were originally designed to appear unified along Crawford St.

The design approach to these varying facades will attempt to reinvestigate the visual ties that existed between the buildings as well as the physical links between them which have changed over time. At one time, care was taken to recreate the proportions and details of each building as they gradually expanded along the street. The facades now read as a confusing mixture of geometries, but I believe that this adds a different element of interest to the site. With this in mind, it is appropriate to retain the history of each of these facades and the changes that they have already experienced as part of their on-going evolution. This must be acknowledged and added to in some way by the new intervention.

Although there is possibly more scope for creative adaptation at the front of the buildings, especially in terms of public acceptance, reactivating the rear façade is necessary through creation of a more permeable surface to encourage flow into and out of the buildings. Tactically reintroducing some openings to the rear elevations to suit both the programme and the surrounding area will restore the rear elevation as an active and interesting part of the streetscape, livening up the quiet section of Vogel St and inviting people to move through the buildings as well as along revitalised circulation routes. This reconsideration of the rear streetscape is preferable as part of the overall scheme for the Warehouse Precinct and to avoid competing with the presence of heavy traffic along the front of the buildings.

Fig 61: Rear protrusion: sketch exploration of forms for library window.
Fig 62: Facade Activation Exploration - Front and Rear Elevations
Sketch exploration of existing and new openings
Fig 63 and Fig 64: Streetscape reactivation sketches - an exploration of Vogel St potential as main focus
10. Design Response

10.1. Response to Site Opportunities

The interesting internal volumes and structures within each of the buildings are crucial features to retain and work with as part of the fundamental heritage-value of the buildings. The original structure has been left exposed and largely untouched in all three buildings and this design proposal seeks to emphasise and form appreciation for these features. The existing insertions in the buildings have been created without great consideration for the original built fabric, resulting in weak interaction between old and new. This has resulted in some spaces feeling confined, somewhat temporary or having minimal connection to the original building surrounding them. Consequently, these will be removed to accommodate the new programme through the application of a more considered architectural approach.

In line with the Dunedin City Council’s vision for increasing pedestrian and cycle safety and promoting visitor use of the area, an initial idea was to explore ways of encouraging activity at street level, moving some of the focus from the front elevations back to focus on the overlooked heritage-value of the rear elevations. The current council proposal for Vogel Street’s urban revitalisation is to be applied to the area and developed further throughout the design process. As part of this, existing doorways can be retained as ‘access nodes’ along the rear elevations, creating multiple activity points and increasing permeability at street level without causing unwarranted disruption to the original facade. This would also draw pedestrians along to the far end of the block as they move to investigate these activity points. The front elevations are still orientated to a more northerly aspect which, particularly in Dunedin’s climate, is important to acknowledge for relevance to light and thermal properties.

To remedy the lack of threshold at the front and lack of public space on Crawford St, the void outside the theatre will be explored as a location for a plaza, also used add interest to the wider streetscape and more social space for the area.
10.2. **Initial Programme Explorations**

Several programmes have been explored as part of this research and discarded throughout the process. Initially, it was decided that it was appropriate to reinstate the theatre building as a theatre, returning the Annex to its original utility functions, and possibly leaving the Brydone Hall building in its current capacity. This would be sensitive to the building’s original purpose but would involve significant restoration and recreation of elements which have been already been removed. There is some drive from local groups for this to happen as they believe that Dunedin is in need of a new medium-sized theatre seating around 800 people.

Unfortunately, further investigation revealed that the building is no longer suitable for this purpose as modern requirements dictate more specific technical design and spatial arrangement. Consultation with the Unitec Theatre Department exposed multiple issues which would be extremely difficult to overcome, rendering the application of a complete theatre programme unfeasible. The other limiting factor in reinstating the theatre was that the use of a theatre space is likely to be limited to evenings, weekends and generally only on an irregular basis. This would not necessarily contribute to the revitalisation of the area or any increased use of the building beyond its current use as a live music venue.

Another programme which was explored was a satellite campus for the University of Otago, aimed at creating a new hub for post-graduate and mature students away from the chaotic campus at the North end of the city. However, as the University is well-established in the existing area, it proved difficult to feasibly apply this programme to an entirely new location whilst still maintaining all necessary links with the main campus. There is some scope to accommodate students in the new area, but by creating a new centre aimed solely at students, there were many limitations to the development. There would be reluctance to move away from the base University facilities, as well as an issue with creating more links through the city between the new hub and existing campus, developing into a master-planning matter. The issue of proximity to available accommodation would remain a concern as the Warehouse Precinct would have to assume significant development of surrounding buildings to facilitate students moving closer to the area, producing a residentially-focused area rather than the creative, mixed-use precinct which is desired.

Consistent occupancy would remain a concern as the students would only be utilising the spaces during semesters, leaving significant periods of vacancy and reducing the impact of bringing life back to the area – an issue which is obvious when visiting the University Precinct at any stage during University holidays.

After further investigation, it was decided that a programme which was aimed solely at students was unwise in relation to the on-going revitalisation plan for the area. It was also decided that it would be desirable to include more local residents in the formation of a proposed programme, as it is the permanent residents who will benefit most from the successful rejuvenation of old city blocks and be able to enjoy a vibrant new city area long-term. Furthermore, generating a programme which catered for local residents of various backgrounds would guarantee that interest in the area would be wide-ranging and ensure more consistent use of the spaces. A multi-faceted programme would also allow for some future-proofing of the spaces as development of the Warehouse Precinct continues to gain momentum.
11. Programme

The proposed programme will fill a void in Dunedin and also help to draw a wider range of people to the burgeoning Warehouse Precinct. By applying a mixed-use programme to the existing buildings, a creative hub is proposed for the area which will be used by students, residents and workers, in line with the long-term vision for the Warehouse Precinct in becoming a creative quarter of the city.

The vision statement prepared by Dunedin City Council for the redevelopment of the Warehouse Precinct:

**Vogel and Bond Street**
- Improve the appearance of Bond Street and Vogel Street
- Improve pedestrian safety and convenience
- Encourage further residential and office development
- Encourage creative industries
- Enhance opportunities for business
- Define an individual character for Bond Street and Vogel Street
- Improve cycle safety and convenience to provide for the inclusion of Vogel Street into the Strategic Cycle Network

**‘Two-waying’ of Crawford and Cumberland Streets**
- Better link parts of the central city
- Increase integration between the central city and Steamer Basin
- Improve pedestrian and cycling safety and convenience
- Improve amenity in the Warehouse Precinct and Queens Gardens areas
o Reduce traffic congestion around Jetty Street

o Increase pedestrian space and turn the area into a vibrant, people-friendly place

o Encourage location of creative industries in the area and provide a basis for business growth

o Investigate alternative options for future management of the roads, e.g. reconfiguration of existing layout, shifting State Highway One (both directions) to Cumberland Street

Dunedin’s population is currently divided into students and residents. University students seem to be the dominant element of the community with numbers making up 1/5 or more of the total city population, with many students making sure that their presence is felt throughout the city. Furthermore, there exists a tension between the two groups as the University of Otago remains the primary developer in the city, resulting in student facilities outweighing public facilities, often in terms of quality, scale and quantity. There are numerous facilities owned by the University which the public are welcome to use but generally do not. These are often state-of-the-art facilities and this leads to a sense of segregation between the groups, especially since the University has a large budget and an ever-extending master-plan for its development in the city.

The proposed programme will take into account this situation and develop a solution to accommodate a wider range of Dunedin’s residents, looking to diffuse some underlying tension between the temporary student population and the permanent local population. The inclusion of facilities for postgraduate or mature students within the proposed programme would encourage more interaction between the public and students as well, creating stronger links between the education and work sectors as students look for permanent employment options around the city. There is little or no interaction between the student population and the local population currently so looking at ways to encourage this in a neutral territory could be beneficial to the city, especially as new businesses look at setting up or moving to Dunedin and its Warehouse Precinct.

Creating a place where the boundaries between the education sector and the community are blurred may incite students to interact with different businesses or industries, forming relationships which wouldn’t otherwise exist and possibly encouraging them to remain in the city following their studies. By creating a place for more multi-faceted interaction to occur, there is more opportunity for the integration of students into the community and for local people to further interact with each other in a creative environment, contributing to the increasing vitality of the Warehouse Precinct.

11.0.1. Programme Requirements

The following elements have been identified as part of the complete programme to be applied to the buildings. This multi-use approach seeks to respond to the changing environment of the Warehouse Precinct while encouraging wider use of the buildings and the possibility of adding further value to the otherwise underutilised spaces. The focus will be on links between the various areas of the buildings and creating dynamic spaces, not to be restricted to one purpose and limiting future development of the buildings.

- Multi-purpose theatre/auditorium space
- Community library and reading lounge
- Dynamic multi-purpose meeting spaces and social areas
- Yoga studio and function space
- Art studio and exhibition hall

- Childcare facilities
- Café and wine-bar
- Health centre
- Food and coffee kiosks (in laneways and plaza)
- Accommodation (long/short term or mixture)
- On-site office facilities for manager
- Public and social gathering spaces – possible covered lane and urban plaza around theatre building.

11.0.2. Design Response

By ascertaining which particular features held heritage-value, the conservation approach was developed and worked with from the outset. The facades, although modified significantly at the front and remaining largely original at the back, would be retained for their various contribution to the heritage value of the overall area and their contribution to the on-going survival and development of the buildings. The rear elevations are representative of the original environment of the Warehouse Precinct – a snapshot of how the street would have originally looked. In line with the Brand’s notion of ‘shearing layers’, the site and structure will be mostly retained in their current form and worked within as a kind of ‘skeleton’. The skin is altered as required to fit the programme and to improve the permeability of the façade. The space plan will be greatly modified to suit the new programme, and the set modified according to individual use of the spaces. The modifications to the skin are cosmetic, mostly involving additions extending out from beyond the building envelope to create and reinforce links between the buildings and the street.

The use of lighter, modern materials such as steel and glass increase permeability of the surfaces and achieve improved transparency of the building, also offering a distinction between the new and old. The insertion of the new elements will not detract from the original buildings as part of the heritage streetscape, nor will these new parts appear as false extensions replicating elements of the original buildings. The weathering and age-value of the original buildings will be retained where possible to further highlight the buildings’ longstanding presence in the precinct.

The retention of most of the original building envelope and structure means that architectural interventions can be applied around this ‘skeleton’ in such a way that seismic upgrades can easily be integrated into the design proposal, necessary for extending the building’s lifespan. By strengthening the skeleton of the building using modern Engineering principles, and then inserting the new programme into this strengthened shell, the heritage value of the buildings can be preserved in the least invasive manner. This approach allows expression of the existing structure as a feature and reduces negative impact on the streetscape, the new structural elements concealed within. By allowing the existing structure to be expressed, the original building becomes more than just a left-over shell or a shelter for new structures – the industrial aesthetic can be articulated and appreciated alongside the modern elements.

The initial design explorations began with analysis of the existing facades, namely of the entry points and openings of the buildings. The lack of permeability at the back and varied treatment of the front generated initial consideration of ways to improve links between the buildings and the streets, both in terms of visual connections and physical circulation links.

Analysis of front and rear elevations revealed potential for different approaches to the reactivation of each elevation. Increasing the transparency but not the scale of openings along the rear would make the façade more inviting
while remaining appropriate to the heritage streetscape.

Some investigation of the existing openings was carried out to reveal any patterns and likely locations for reinstating connections with the street (Fig 62).

Initial exploration of sectional cuts of each of the individual buildings was carried out to investigate their variation in structure and form. The existing section of each building was considered for potential exploration of its volumes and to look at any limitations of the existing structural systems. It was determined that the structure would be left exposed in each building as much as possible and ways in which this could be done were explored through sectional massing sketches. The structural elements are all original so it was determined that these elements held a great deal of heritage value within each building.

The layout of the theatre is somewhat limiting compared to the other buildings as the large vertical volumes offered the most scope for development but the mezzanine floor and location of the stage/proscenium arch determine the only possible layout of this building if these features are to be retained in some capacity, reflecting the historical layout of the building. The sectional explorations of this building involved the use of the vertical volumes while retaining the general stage and theatre layout, allowing for the retention of the plaster ceiling and proscenium which are the only remaining ornamental features.

The cross section through the three buildings shows their relationship to each other although the original connections have been lost over time. Some investigation into these original connections and the current links between the buildings was examined with a view to reinstating them as a whole functioning unit, and fitting with the new programme within them. Except for the theatre mezzanine, the floor levels are uniform across the buildings which enables some connection between the buildings. However, the vast height in each of the buildings calls for exploration of the heights and the use of additional floors or mezzanines to accommodate the new programme and increase usable floor areas. The relationship between the buildings, although reading as separate from the exterior, can be blurred on the interior through the use of new visual and physical connections. These links may not be in their original locations but would be suggestive of the links which once existed, creating more interactive spaces between the different functions as people move through, between and within the buildings.

There was some exploration of reinstating the original unified front façade, underlining the relationship which originally existed between the three buildings. With the demolition of this façade, the buildings have no clear association and very few people are aware of the longstanding links between them. However, this approach was discarded as research into conservation theory was carried out and a more appropriate conservation approach was developed which accounted for their evolution. The idea of restoration and falsifying original elements did not appeal within such a rich heritage area, and it was decided that a more relevant approach was to embrace the evolution of each building and find new ways to reinstate connections between them. The modified individual facades had achieved some heritage and age value of their own over the years and these are utilised as part of the new design.

11.1. Programme Development

The implementation of a flexible and mixed-use programme required the various functions to be complementary to each other - the on-going aim to promote a wider use of the area by different people. To allow for future-proofing of the spaces, the proposed programme will be able to be adapted in some way as the precinct around it develops and changes. Because the Warehouse Precinct is currently under development and still changing significantly, it is hard to ascertain exactly what the area will be like in 10 or 20 years’ time and so consideration must be given to the idea of adaptability of the proposed design.
By focusing on more creative groups, the buildings’ tenants will complement each other as well as the surrounding businesses, which have been identified as having a creative focus by the Dunedin City Council. The surrounding tenants include several large computer programming companies and web design businesses and fashion designers and boutiques. Introducing a programme which would harmonise with a range of artistic types would be ideal, further promoting the growth of the creative quarter.

11.1.1. Design Response to Programme and Context Requirements

As a creative hub for the area, there are multiple functions which will be included to promote consistent use of the spaces, generating renewed interest in the buildings.

By retaining a theatre or more flexible ‘performative’ space in the theatre building, the original purpose of the building is acknowledged. The only remaining features, the proscenium and ornate plaster ceilings, can be restored and emphasised as part of the new design. A more informal theatre arrangement accommodates performances of a varied nature while utilising the stage arrangement and ‘back-of-house’ spaces which currently exist. The retention of this layout could be used for a range of different performances and the hosting of smaller events, including small-scale school productions and children’s theatre. These would call for retractable seating to be installed or the use of informal seating arrangement such as a beanbag theatre or floor mats. Similarly, its current function as a live music venue could be continued. There is scope for storage of seating in the former orchestra pit which still exists below the stage, or a purpose-built storage pit could be introduced to the floor space. A stage in this traditional proscenium arrangement can be used for a number of musical performances as well as for speeches or presentations. The current floor arrangement also lends itself to theatre-sports or drama classes which would appreciate a more flexible arrangement while also utilising the stage area and ‘back-of-
house’ space. This flexibility could accommodate individual seating, benches or even table arrangements. The mezzanine floor is also to be retained in its original ‘dress-circle’ capacity for larger crowds to occupy as required.

The idea of a library conjures an instant sense of community, a social space for use by a variety of groups. A library has been described in The Press as 'the anti-shopping mall', a fitting metaphor for the intended environment of the heritage precinct. The notion of a modern library includes not only books, but spaces for meetings, audio-visual suites, computer gaming and internet access as well as programming in spaces for clubs and group activities - the concept of the modern library is far-reaching and flexibility is a key consideration in library design. CERA referred to the library as a “community hub of knowledge, research and heritage” – particularly relevant considering the context of the chosen site.

With this idea of the ‘modern library’ in mind, I believe it is an essential element to include in this new creative hub along with spaces surrounding it to both contrast and complement its use. One of the precedent studies, the Maastricht Bookstore in Holland, was a particular driver for the idea of a more creative library arrangement. The bookstore features shelving areas spread over several levels, maximising the floor area while utilising the vertical space of the church. As shown in Fig 70, the theatre's volume is one of its finest features so by filling some of this height with multiple levels of library spaces, library visitors would be able to experience the full volume of the space, observe the activity throughout the theatre and also view the prosenecium and ceilings from a new perspective. This could be likened to the original view from the dress-circle, looking down at the activity in the stalls below and towards the stage. It is also a fun notion, the experience of a building within a building and the drama of moving through the space at a higher level with views throughout the rest of

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2 “Canterbury Earthquake Recovery Association”
the building. The height of this would also allow for possible views to the harbour which would previously not have been accessible. The fly-tower part of the theatre is one of the tallest points in the Warehouse Precinct so it would be an interesting experience to have a viewport out across the precinct. This would make the journey to the top level of the library more intriguing and worthwhile for visitors, allowing them to make the transition from Crawford to Vogel Street inside the building at a previously unfamiliar plane.

The arrangement of the shelving along the length of the building would create pathways for people to interact and move from one side of the building to the other, observing different views of the streets and spaces below, distorting the inside and outside boundaries. Interspersing the bookshelves with reading areas, tables and couches would encourage people to spend time in the area, creating more chance encounters for social interaction as people move along the narrow spaces through the aisles.

Beyond the bookshelves of the library, a reading lounge would be included on the existing mezzanine floor. This could be a less formal part of the library for social gatherings with space for group meetings and get-togethers. Already accessible from the ground floor of the theatre, the mezzanine would also form part of the link to the Annex, with openings through to the top floor where more community spaces would be located. By creating new ways to move through and between the buildings, people are encouraged to explore the spaces and the different parts of the building and move between the buildings in ways they otherwise wouldn’t have. A mixture of social spaces plus public and private areas would generate interest and ensure that there was always a range of people using the spaces for different activities.

At ground level, an interior lane will draw people in to the theatre building and the Annex from Vogel Street, encouraging movement into the building for people to discover the different functions and links within. The lane would include small kiosks for coffee and information offices, also acting as a functional lobby space for the theatre space when events are on. The fire escape lane at the side of the building will also be reintroduced as a covered lane. This functions as an outdoor extension of the lower level, allowing for people to use the area during intermission or for outdoor breaks. Monitored entry points will be installed at each of the stairwells and lift exits for security purposes.

The function of the Annex building will remain mixed-use, holding a range of different spaces and acting as a link between the Brydone Hall building and the theatre. The central building will feature a café and wine-bar at the rear, in the existing caretaker’s residence, livening up the rear of the building. Selectively cutting out sections of the rear façade to create an enclosed courtyard would allow for more people on Vogel Street to see the activity inside the building. The arrangement within the building will also allow people to glance the different activities going on around them. The café/wine-bar will also feature cut-outs at the top and bottom level to increase visual connections with the interior lane, creating a sense of activity along this axis. The lower level of the annex was originally the scene-dock for the theatre, so this connection will be reintroduced in the form of links from the lane into the café area and moving through to the theatre.

To complement the social nature of the hub the concept of ‘cerebral learning spaces’ will be explored in the form of functions, that complement the library and theatre space. The rear of the building includes a yoga studio for both private practice and lessons. One larger studio would be located at the rear of the building and adjacent smaller rooms will be multi-purpose meeting spaces and social areas, according to demand. These supplementary spaces would use the ample natural light of the top level to create a relaxing environment for meditation and prayer as well, accommodating a wide range of community groups who would be encouraged to use the facilities for gathering.
At ground level, spaces for art classes and studios would be retained along with provision of exhibition spaces in the halls for display of work. The generous circulation areas of the building could be used for exhibition events and gatherings as well, in a more informal capacity. The current use of the entire top floor as an expansive community art studio would be retained in this smaller role, continuing as a community facility but also usable by other groups to ensure consistent occupation.

A childcare facility is an important function to consider as more businesses move to the area. The industrial area previously had minimal need for a childcare facility, but it grows, the convenience of having a resource of this nature on site would be welcomed. People working in the area, as well as those who pass through from outer suburbs into the city could utilise this facility for its proximity to arterial routes. The childcare facility would be located on the top floor of the Annex so that natural light and ventilation could be maximised. Practically, this also offers more security from the busy street level below.

As a supplementary function, a small health club would be introduced at the lower level with gym facilities and a lap pool for use by residents and the public.

As shown in Fig 73, the Brydone Hall building, with its expansive scale is an ideal location for accommodation, generating base residents for the area or allowing temporary visitors to experience the surrounding heritage environment. The types of accommodation that will be further investigated are both long and short-term accommodation, with a view to attracting tourists, students or locals looking for apartment-style living. As part of an increasingly popular part of the city, there is call for both types of accommodation. This will be explored further through the detailed planning stages of the programme.

The structural elements of the Brydone Hall as well as the stair circu-
lation are some of the main features which will be worked with in establishing a new layout. The structural column grid of the building has large dimensions of 4.5m along one axes and 5.6m along the other so is big enough to be worked around at a domestic scale. The trusses and the roof form are one of the most interesting features of this building and the insertion will allow for the residents to view and experience these elements, living among the structure at different levels. The central height of the roof ridge is 9m from the floor level so there is scope for multiple levels to be comfortably inserted into this volume, possibly retaining a parking facility at ground floor. The idea of mezzanines and partial floors will be explored to make the most of the height and interesting spaces created in the roof. There are also extensive skylights already in the double hip roof which means the top floor is light and feels spacious. The circulation core above the stairwell will be retained as a central light-well and allow light through into the lower level. This will also emphasise the original stairwell which is an original feature of the building. Exploration of various modified roof forms and the potential for an addition in the central roof section has been considered briefly, generating the form of a central atrium space which does not restrict the height between the two roof ridges, as shown in Figures 71 and 74.

11.1.1.1. Façade Adaptation

The front facades, although varied, will not be drastically altered outwardly by this design intervention. The most significant alteration will be introduction of a public plaza at the front of the theatre building to reanimate the existing void, and the addition of the library tower extending beyond the front wall of the building. This will suggest the activity that is going on behind the large brick face and encourage people to venture inside the building.

Fig 73: Initial Scale Exploration of Layout for Apartments with possible atrium roof opening/light well in centre (NB: gridlines indicated are as existing including structural columns.)
Exploration of further methods of introducing light to the ground floor is central to making the accommodation function successfully, as well as retaining circulation routes within the building and links to the adjacent buildings.
11.1.2. **A Note on the Structural Approach to Seismic Strengthening**

In order to retain flexibility of the interior spaces for the insertion of the new programme, a method was devised which would allow for the original structure to remain in its current form while creating a strengthened shell to comply with seismic upgrade requirements.

As illustrated in the sketch details of Fig 75, the concept around the seismic strengthening involves the insertion of a steel frame through the full height of the building and the installation of new concrete floors over the existing floors to tie this frame together at each level. The steel frame will be tied to each of the floor levels using steel angles and threaded rods cemented into the concrete floor, keyed into the existing exterior shell. This ties the floors to the external shell at each level and creates a rigid frame to support the interior of the building. New footings would be poured around the perimeter of the building to ensure adequate strength and anchoring at the base of the building, allowing for the new load lines of the steel frame. At roof level, additional brackets will be used to fix the existing trusses to this new steel frame.

The concrete floors poured over the existing base would also improve the fire rating for the new multi-use programmes between floors and also offer improved acoustic properties. This system will also allow for greater floor loading capacity on the existing structure, consequently future-proofing the building for further adaptations.

Fig 75: Sketch Details of Proposed Structural Approach - Existing/New Structural Connections

Note: These details illustrate the technical details which could be applied to aid in seismically strengthen the existing structure. The roof connection detail shows how the trusses might be tied to the existing masonry structural shell; the floor-wall connection is a possible strengthening mechanism to be applied at each floor level, tying the new concrete floor to the existing floor and wall structure. The parapet reinforcing is necessary around the top of the Annex and Brydone Hall buildings as these each have parapets which, although they have been reduced in size, may remain a falling hazard in a seismic event.
12. Summary and Design Appraisal

The original intention of this project was to determine how the application of an architectural intervention can be used to contribute to the revitalisation of an underutilised building and its surrounding area. The revitalisation of these three buildings involved the application of a range of adaptive reuse techniques to apply a new mixed-use programme to the existing spaces. Juxtaposition of new and old materials ensures that the new intervention remains distinct from the original as part of the buildings’ continuing and necessary evolutionary development, ensuring their enduring usefulness to the surrounding environment.

After some initial investigation, it was determined that it was not appropriate to reinstate the buildings to their original function as there were multiple limitations when considering the modern requirements for a theatre. The development of a mixed-use programme featuring complementary functions spread across all three buildings was proposed in the form of a new creative hub. This solved one of the problems of achieving varied and continued occupancy of the buildings while revitalising the surrounding area of the Warehouse Precinct.

The retention of the structure and skin of the buildings as a basis for this adaptation allowed for flexibility within the buildings, the skeleton concept facilitating continued adaptability in the future without compromising the remaining heritage value which was selectively retained. Previous modifications had resulted in a varied range of architectural interventions being applied in the past, but by accepting these changes and working with the current form as part of the continued evolutionary process, the existing heritage and cultural values of each building are preserved and further increased through the application of new additions and insertions. Some consideration was given to traditional conservation and restoration approaches, especially of the impressive original front façade, but a more modern approach was eventually adapted as it was realised that recreating a lost element would involve further destruction of heritage and cultural value held by the buildings in their current form.

The existing structural elements were engaged by the modern architectural insertions, the two languages working to complement one another and explore the understanding of heritage-value in a previously adapted space. By allowing the existing structure to be expressed, the original buildings have become more than just a leftover shell or a shelter for new structures – the industrial aesthetic is intentionally retained and expressed alongside the modern elements. The previous insertions and adaptations of the building had largely been placed in the building in such a way that the existing building was serving only as a kind of man-made landscape in which to insert new elements, the large volumes only retained as spaces to fill up, closing the inhabitants off from the heritage value of the original. The research and ensuing design process acknowledged the need to create more interaction between the new architectural interventions and existing buildings.

Integral to the design development was the reinstatement of connections through and between the buildings and with the surrounding streets. The Warehouse Precinct is a developing area but this site sits between the busy one-way system and with its back turned to the heritage precinct. By re-evaluating the orientation and axes of the buildings, and reinstating selected connections through and between them, a sense of interest and activity was created at both street level and throughout the buildings, bringing back some of the vibrancy which was once seen in the area.

Nodes of activity throughout the buildings along circulation routes and as destinations within the buildings would create opportunity for the buildings’ varied inhabitants to interact and socialise with each other in a variety of different ways. Some of these opportunities were presented in the circulation links through the buildings and others in strategically placed spaces, avoiding situations where people would move from place to place without any interpersonal
contact. Ultimately, the combination of mixed functions within the buildings seeks to promote interaction between the different groups and reduce some of the segregation which exists between the student population and the permanent residents of the city. Links are formed in the way of cut outs and visual connections between the buildings, streets and spaces within them. Some of the permeability which is being introduced at street level will also be used within the building to avoid closing off the buildings functions from each other.

While previously closed off from the street at the rear, the design proposal creates a more permeable surface along Vogel Street, ensuring greater appeal to visitors and residents alike, and also serving to improve the dark environment within the existing buildings. Accepting the varied facades at the front of the buildings and promoting some well-considered public space to add interest along this busy street, people would be drawn to engage with the buildings, recognising the links that existed between the three buildings, evidence of which had been destroyed through ill-considered adaptations.
13. Conclusion

After a long period of dormancy, Dunedin city is finally experiencing some promising development in forgotten pockets of the city. Fortunately, the lack of 20\textsuperscript{th} Century development has meant that much of the city’s original built fabric has survived although many building now require serious intervention before they fall victim to demolition or further degradation.

As the city council promotes the development of a new heritage area, the Warehouse Precinct, an opportunity was presented to promote the wider revitalisation of heritage buildings which may not otherwise be considered worthy of saving. This includes some with varied and often questionable heritage, age or cultural value, establishing how and why these values are significant.

Thorough contextual and building analysis uncovered the diverse values of each building, acknowledging each as having a different history and evolutionary phase. By working to retain the current eclectic appeal of all three, the richness of the existing streetscape was added to and improved by the proposed design intervention, reaffirming the buildings role in their community. Precedents were considered which revealed a range of alternative approaches, helping to drive the design away from the preservation-driven approach that often dominates current practice.

Throughout the course of this research, a design approach was formulated based on the consideration of well-established theories of architectural conservation. With the consideration of these ideas, a hybrid design philosophy was generated for each of the different buildings on the site, the architectural challenge: to merge a contemporary intervention with the assorted heritage elements of the group of buildings, retaining some heritage-value and adding value to the streetscape of the surrounding area. Opportunities and constraints were established across the overall site context and within each individual building, forming the guiding design parameters and establishing unique considerations for each part of the site.

This design approach was motivated by the need to promote a more widespread understanding of the heritage-value of buildings, regardless of their current form and condition, increasing appreciation of the mundane and maintaining the integrity of our built fabric before the wrecking balls move in. This research has identified that a single approach is not always appropriate for a selected intervention but a combination of theories can be applied to create a rich composite architecture, reinstating a neglected building as a living, evolving piece of architecture and contributing to the revitalisation of its immediate context.

As our population grows, promoting the sustainable practice of adaptive reuse will ensure that some continuity is retained in our built fabric and the identity of our cities is maintained while still facilitating the development and revitalisation of individual buildings. By overlooking the heritage-value of buildings, we ignore the potential for continuing the history of buildings and the potential they offer for creating lively new character areas within our cities, unrestricted in the potential for innovative development.

“Memory is reality. It is better to recycle what exists, to avoid mortgaging a workable past to a non-existent future, and to think small. In the life of cities, only conservation is sanity.”

14. Bibliography


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15. Appendix

Early Programmatic Exploration and Sketches:
Reinstatement of His Majesty's Theatre
Interior Perspectives of Initial Theatre Concept

Atrium at front of theatre building

Annex Rehearsal Space Concept

Ground floor atrium and circulation view
Sectional exploration of theatre concept and initial modelling

Plan and massing sketches of theatre concept: Top Floor (above) and Ground Floor (Below)
Fig 76: Original Plans of His Majesty's Theatre 1902 - Hocken Library Archive Collection
List and References of Figures:

Fig 1. The Union Steamship Building in the early 20th Century
Fig 2. The Union Steamship Building in 2013
Fig 3. The National Mortgage Agency building prior restoration c.2012
Fig 4. The National Mortgage Agency building prior restoration c.2012
Fig 5. The Donald Reid Store c.2012
Fig 6. The Donald Reid Store in 2014 following restoration
Fig 7. The Standard Building, Princes St in 2011
Fig 8. The Standard Building, Princes St in 2014
Fig 9. Graphical Representation of Shearing Layers
Fig 10. Graphical Representation of Pace-Layering
Fig 11. Intervention Types
Fig 12. The Upper Level of the Bookstore
Fig 13. The Shelving Arrangement Inside The Church
Fig 14. The Church Interior
Fig 15. The Donald Reid Store
Fig 16. The National Mortgage Agency
Fig 17. Ruin Courtyard
Fig 18. Contrast of Old and New in the Ruin Courtyard
Fig 19. North Loop Streetscape
Fig 20. North Loop Warehouse Adaptive Reuse
Fig 21. North Loop Warehouse Streetscape Vision
Fig 22. Imperial Lane Interior Laneway
Fig 23. Imperial Lane Street Elevation
Fig 24. Imperial Lane Street Spiral Stair
Fig 25. Imperial Lane Street Cross Section
Fig 26. Imperial Lane Street Cross Section
Fig 27. Early Photo of Dunedin (1870s)
Fig 28. Early Photo of Dunedin (1890s)
Fig 29. Current Dunedin Location Plan
Fig 30. Sketch Plan of Current Building Layout and Site
Fig 31. Figure Ground Plan Showing Dunedin Warehouse Precinct and Surrounding Areas
Fig 32. Current Theatre Front Elevation - "Sammy's Nightclub"
Fig 33. Current Annex and Brydone Hall Front Elevations
Fig 34. Looking South on Crawford St
Fig 35. Brydone Hall - Rear Elevation
Fig 36. Annex - Rear Elevation
Fig 37. Panoramic Streetscape - Looking South on Vogel Street
Fig 38. Fire Escape Lane from Theatre
Fig 39. Current Street Level Elevation of Theatre
Fig 40. Current Street Level Window Detail - Annex
Fig 41. Current Street Level Window Detail - Brydone
Fig 42. Current Rear Elevation of Flytower
Fig 43. Current Internal Laneway into Brydone
Fig 44. Jetty St Bypass to Waterfront
Fig 45. View North on Crawford St

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7. Ibid.
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21. Ibid.
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Fig 46 Neighbouring AH Reid Building - Renovations Underway
Fig 47 Original Facade of all three buildings - c.1900
Fig 48 1927 Fireplan showing relationship between buildings
Fig 49 Crowds gathering for an event in front of the A+P Buildings, 1904
Fig 50 Brydone Hall Construction Plans c.1903
Fig 51 Remaining Plaster Ceiling and Mezzanine Floor of Theatre
Fig 52 Remaining Proscenium Arch of Theatre
Fig 53 Current Interior of Annex - Top Floor
Fig 54 Current Interior of Brydone Hall - Ground Floor
Fig 55 Current Interior of Brydone Hall - Top Floor
Fig 56 Current Interior of Brydone Hall - Top Floor
Fig 57 Original Interior Layout and connections of Theatre and Annex
Fig 58 Section through street block
Fig 59 Preliminary Overlay of Original Facade over Existing Form
Fig 60 Original Unified Facade of the three buildings, 1910
Fig 61: Rear protrusion sketch exploration
Fig 62: Facade Activation Exploration - Front and Rear Elevations
Fig 63 and Fig 64: Street reactivation - Exploration of potential on Vogel Street
Fig 65: Current boundary of Warehouse Precinct and proposed improvements; shows limitations of traffic flow through site
Fig 66: Site improvement proposed layout
Fig 67: Previous exploration of theatre programme and facade restoration approach
Fig 68: Dunedin Council Proposal for Crawford St Improvements
Fig 69: Sketch concept of internal environments - LEFT: library insertion
RIGHT: Brydone Hall Apartment Layouts
Fig 70: Exploration of Volume in Theatre
Fig 71: Exploration of Volume in Brydone Hall
Fig 72: Initial Exploration of Layout for Theatre and Annex Spaces
Fig 73: Initial Exploration of Layout for Apartments - Possible Atrium in Centre

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Design Proposal
“breathing life back into the mundane”

ADAPTIVE RE-USE IN DUNEDIN CITY

LAURA HUGHES
C-C  his majesty’s theatre section