THE RIVER ARCHIVE

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“Explanatory Document”

Dr. Christoph Schnoor & Chris Murphy
Acknowledgements

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Abstract

The concept of memory within architecture can be traced back to ancient Greece and Rome. The focus of this topic is on the six principles and processes of memory described in Frances Yates' book 'The Art of Memory'. These qualities - visual/spatial orientation, limited sets, association, emotional affects and repetition - can be translated and reinterpreted through architecture, helping create experiences in construction that preserve and encourage memory.

The focus of this design-led research is to design an archive and exhibition center at the submerged old hydro-dam township of Horahora. This archive is intended to be a setting for the safeguarding of decaying, abandoned and gibed artefacts; providing opportunities for education, reflection and discovery through reconciliation of relationships between historical fragments, the river and its visitors.

The research will start with an investigation into how the topic of memorialisation and memory in architecture has developed in a New Zealand context. We can apply the idea of memory from notable international architects such as Aldo Rossi who, through elements from varying epochs, creates a collective memory - a unique relation between place, building and activities that occupy it. His architectural works such as the Modena Cemetery and his Monument to the Resistance in Genoa, Italy reflect these ideas.

Analytical drawings, collage and modelling techniques are used to explore, test and recontextualise theories and the conceptual strategies of the selected precedents. I have applied these tenets to the overall design development of the river archive based at the site of the submerged industrial township of Horahora.

Fig. 1: ANZAC Day leftovers 2017, Wellington CBD.
State of Knowledge:

There is a vast field of ideas surrounding memory and architecture. Our built environment may not intentionally engage with memory, yet it always records and transmits history. Memories and history are always embedded in physical form waiting to be unearthed, read, and decoded.

Here the focus is on the relationship between personal and collective memory within architecture. This topic is based on the six most important principles and processes of memory described in Frances Yates’ *The Art of Memory*. She writes that the subject of memory and architecture possesses dimensions and scales that can hardly be covered by a single volume, much like the layers of an onion - many layers pulled away toward finding its core. Architecture and landscape architecture can act as grand mnemonic devices that can record and communicate key aspects of particular cultures and history. Memories and monuments are sculptural typologies that pursue meaning as part of their making, in a purposeful manner. The function of the memorial is to tell us and remind us of histories that we have not originally witnessed. Monumentation in New Zealand and our local histories have recently attained a resurgence of interest, with notable relevant recent having been released in the last few years (*To the Memory* by Jack Philpott, *A Great War for New Zealand* by Vincent O’Malley).

Memorial and monument architecture in New Zealand, and then evaluate them according to Alois Riegl’s core values outlined in *The Modern Cult of Monuments and its Origins*. This book (translated in an abridged version as a journal entry) analyses the positive and negative outcomes that arise when referencing historical artefacts (Intentional, Unintentional and Age-values) and their relationships they have with present-day values (Use-value, Newness-value and Relative Art-Value). The second section of this research dealt with the architectural interpretation of formal relationships and associated meaning of memorials, historical artefacts and memory in Architecture. These analyses are based on the conceptual strategies from the works of Oswald Mathias Ungers and his taxonomy of architectural elements, abstractions in Peter Märkli’s work and Aldo Rossi’s *Architecture of the City*. All precedents reference historical and metaphorical principles that inform the designing of urban form and architectural space. Ungers’ process of categorizing form is used as a lens to derive memorial and monumental formal elements, creating a taxonomy of my own. Peter Märkli and Aldo Rossi’s principles of historical pasts holding value to inform design serves as an essential investigation tool to derive key fragments and architectural elements from the site. All precedents applied their process and principles to a range of architectural scales. However, they mainly focused on larger scales, i.e. master plans of urban cities. This project will attempt to prove that the underlying principles can be translated to more rural situations as well.
The Typologies:
The Archive serves as a creative laboratory and can take many forms. An Archive is a collection of records that gives us an insight into the history and nature of its contents (contents can range from paper documents to a collection of materials or objects). The role of the Archive is to relate the past, present & future. The interaction between the internal and external environment will be important. The design concept is looking for a transition from external to internal, void to solid, fragment to a whole. Each view will provide a unique perspective showcasing and interpreting the history and memory unique to Horahora.

Central Archive and Exhibition Space:
The focus of the building is to store archival material but to also provide public exhibition areas - to put permanent archive material and artistic installations on display as well as hosting visiting exhibitions. Additional educational spaces will be provided to allow access for students and researchers.

Some artefacts to be acknowledged/displayed/exhibited take an architectural form. The presence of the forgotten Horahora power station and its village will be appropriately recognised and not lost to the landscape.

Memory Depository:
One of the roles of the River Archive is to preserve, store and exhibit some of the everyday memories and objects of people with connections to this place, or witness their experience at the archive. The programme is driven by the idea of discovery and the provision of a journey, giving the visitor a real insight into the past. Those who leave behind personal effects and letters for their archives can help the archive develop an understanding of personal connections and identities to place. The Memory Depository pushes instead visitor participation is encouraged; the archive is providing a range of sources involved with the history of the place.

Site Background:
By the end of the 19th century, the Waikato River had become heavily industrialised. The biggest impact derived from the construction of the Hydro-dams based between Karapiro and Taupo. These Hydro stations provided new jobs and towns to the Waikato region but simultaneously altered the landscape by flooding and submerging significant histories along the river. Today eight of these dams are currently in use along the Waikato River. Arapuni Dam has been classified as Historic Places Category One, recognising the particular character these structures hold - yet public access to them is still extremely limited.

New Zealand's abandoned or forgotten rural landscapes hold many unacknowledged histories. Often small industrial settlements of the early 1900s were abandoned due to changes in environmental conditions, and their increasing obsolescence in the expansion of New Zealand industry.12 The township and its history was submerged under water existing as a strange simultaneous presence and absence in the landscape.

The project investigates the importance of memorialising the histories that were abandoned in these rural New Zealand landscapes as an architectural narrative. The site of the River Archive is proposed for the site of the old hydro-station township of Horahora, 20km south of Cambridge. Horahora was once a small town providing the Waikato River its very first hydro-dams. Created in 1911, a diversion at the Arapuni rapids was constructed to create the Horahora Power Station which supplied power to the Waihi gold mining operation further north.13 Due to growing electricity demands Horahora became outdated, despite being in near perfect working order and was flooded in 1940s to create Lake Karapiro.14 The township and its history was submerged under water's existing as a strange simultaneous presence and absence in the landscape.
rapids, Aniwaniwa (also lost among the submersion of Horahora), will be another element used as design influence. “Aniwaniwa has many meanings and references; it can evoke the blackness of deep water, storm clouds, a state of bewilderment and a sense of disorientation as one is thrown beneath the waters, it can also be a reference to a rainbow, a symbol of hope.”

The interventions intend to apply an integrated, evolving visual vocabulary - using analytical drawing, collage and modelling techniques based on the conceptual strategies of Aldo Rossi, Oswald Mathias Ungers and Peter Märkli. The idea/ideal is to create a framework for the narrative that promotes an understanding of the histories of our landscape.

The design-led research evolved to promote connection and forge relationships between historical fragments, the river and the visitor’s perception of past/present/future events - ultimately expressing the characteristics of place through architectural form. Elements of machinery, Aniwaniwa, and other images of disorientation became a focus, as was using the notion of ‘submersion’ as a metaphor for the loss of history, place and its memories. These ideas are emphasising the importance of preservation and remembrance.

The research project also seeks to reinterpret the way in which New Zealand histories are currently being memorialised or recognised through built structures. By providing opportunities for education and reflection, and drawing new visitors to these forgotten sites, the histories are no longer lost to their landscapes existing only in memory but are acknowledged, and a new awareness is created.

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How can lost and forgotten histories be captured and revived by a built moment(s)?

1.4 Objectives:

1. Investigate previous ways in which memorialisation has taken form in Architecture.

2. Absent and lost fragments of the Horhura hydro-station and history will be identified and reinvented to construct a design response specific to place.

3. Propose an integrated programme - site and histories are no longer lost or absent to their landscape but are acknowledged through the exploration of the site and architecture.

4. To curate and preserve unique source material documenting the experiences, histories and memories of the site - this includes all backgrounds; giving life to stories and their rightful place in New Zealand history.

1.5 Methods:

Methods:

Research through Literature: The literature review is split into two main areas of theoretical research and architectural precedence.

- The first area examines the act of heritage as outlined by Alois Riegler in "Modern Cult of Monuments and its Origins", and their links to our memorial and monument culture in New Zealand.

- The second area is an exploration of the existing architectural strategies of Aldo Rossi, and Oswald Mathias Ungers employed to give the design process guidance.

Research through Site Context: An exploration of the past and present site will inform the design outcome and future of the site based on the design strategies of Aldo Rossi and Oswald Mathias Ungers. The present state will be dissected to expose the cultural and historical significance of Horhura.

Research through Programme/Typology: The architectural response employs an in-depth understanding of the past and present site to propose a function that will help generate an appreciation of the history and further thought and ideas for the future.

Research through Design: The research project will examine and explore possibilities of a design outcome through a creative interpretation of past elements associated with the site.
The aim of this research project was to investigate how architecture can store, evoke and recall memories and histories within its structure.

Frances Yates and Alois Riegl set the foundations for the understanding of the key psychological reasons behind how and why we remember, and what makes architecture stand the tests of time. From Yates the ideas of limited sets, repetitions/rhythms, visual sense and spatial interplay, association and affects were placed into architectural means to create better connections to history. Riegl’s values: Intentional, Unintentional and Age-values, Use-value, Neutrality-value and Relative Art-Value; serve as an important guide to why previous memorials and monuments failed to connect to the individual or collective memory.

Both literature reviews concerning memory were used as a lens to analyse the current memorial and monument culture in New Zealand, and ‘Anti-memorials’ seen internationally. The conclusions drawn were used to form a memorial taxonomy of key design decision making in an attempt to understand the fundamentals in intentional monument markers.

This taxonomy was then reviewed further in the analysis of the works of Aldo Rossi and O.M.Ungers. Both produce monumental architecture using fragments arranged across the site. Key aspects of each precedent have been modelled and reinterpreted - the results directing important design decisions for this project.

The resulting design explores the possibilities of referencing and interacting with history. It attempts to create spaces that encourage memory collection/recollection and memory making. Each space is planned as layers of dimension, scale and volume, all fragmented together until you reach the core.

1.6 Results of research:
The neurobiological processes of the brain concerning memory and information gathering create pathways that house a particular memory – if these paths are maintained (through contextual repetition) the longevity of the memory is increased. There are six primary principles to the Art of Memory outlined by Yates:

1. **Visual sense and spatial orientation:** What we hear should be attached to a visual image to help further recall of the memory we hear.

2. **Order:** Yates emphasises the importance of order in memory - by creating an order of YLUWXDOLPDJHVRQHFDQQRZDVVRFLDWHDQGÀOHVLPLODUFRPSRQHQWVLQWRWKHVHRUGHUV or a ‘storehouse’ of the mind.18

3. **Limited Sets:** The Art of Memory emphasises the importance of breaking up the information into a series of more controllable sets for easier recollection in the future.

4. **An importance of image and place:** the recall of memory was easier when a temporary mental image was projected onto a permanent mental image.

A “method of loci” presented an individual who mentally connected ideas, words, or speech with building fragments and the objects contained within it by imagining moving through the building seeing, picking up the objects, etc. You then remind yourself of their associated properties.17

The ‘Method of Loci’ emphasises a need for a place as a vital impetus to memory recall. Memory can be broken into fragments of images that are projected onto a place or loci to be remembered with more intensity. Use of imagination facilitates the temporary memory in a permanent place, allowing memories to be rebuilt and recalled to the present.

The ancient Greeks and Romans stressed the importance of the process of recalling text through the use of memory. “The Greeks, who invented many arts, invented an art of memory (...) this art seeks to memorise through a technique of impressing ‘places’ and ‘images’ on memory.”15 Two types of memory were distinguished: the “natural” memory and the “artificial” memory. The prior is inherent and used unconsciously. The latter should be trained in mnemonic techniques used to improve our minds consciously.16

They realised that memories were made up of mental images, these images would require a technique that would improve their abilities to recall and visualise individual memories. The mnemonic relationship developed for the improvement of memory was used mainly to exercise the Rhetoric, but also to better the intellect and imagination of the individual. This method of memory improvement emossed an importance of image and place – the recall of memory was easier when a temporary mental image was projected onto a permanent mental image.

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3. **Limited Sets:** The Art of Memory emphasises the importance of breaking up the information into a series of more controllable sets for easier recollection in the future.
Attempting to cling on to every part of the past reduces the chance of that memory being remembered clearly. An overwhelming amount of information results in vague recollections. Reducing the information that is to be remembered into limited sets. Important and key memorial moments are identified. These will become more detailed and given move to grow in the mind. The living memory provides ‘flashes of inspiration’. Focused fragments from the landscape can be recalled with more detail later, at different times.

Association: Yates offers a reference from Aristotle to outline the underlying meaning of association in regards to memory. She mentions the importance of a starting point in a chain reaction to stimulate a memory recollection and storage. “For this reason, some use places to recollect. The reason for this is that men pass rapidly from one step to the next; for instance from milk to white, from white to air, from air to damp; after which one recollects autumn, supposing that one is trying to recollect the seasons.”

Affect: ‘Affects’ concerns itself with the role of emotion in the art of memory. Emotion has two ways to contribute to the art of remembrance. The first being that a strong emotional association can help aid storage of a memory, the second is that recollection of an image can evoke an emotional response.

Repetition: Repetition assists a conventional memory. For example, repetition is often used to maintain speech in mind by repeating what you hear.

20 Ibid., 48.
21 Ibid., 10.

20 Ibid., 48.
21 Ibid., 10.
2.2 The Modern Cult of the Monument: Its Character and Its Origin

In 1903, Austrian art-historian and philosopher Alois Riegl (1858-1905) published *The Modern Cult of the Monument: Its Character and Its Origin* which was only translated into English in 1982. In this seminal article, Riegl defined the core values that arise when approaching referencing/conservation/preservation of historical artefacts. Riegl sought to discover the nature of monuments and to define their evolving role in culture.

In their most simple form, markers and monuments have only one purpose: to commemorate a particular person or event but Riegl’s work goes further to explore the ideas and the importance of monuments in art and architecture.

The Cult of Monuments

According to Riegl, three kinds of monuments can exist—either separately or contained within another:

Intentional monuments—"Intentional monuments aim to preserve a historical moment in the consciousness of later generations"—monuments which recall a particular event in time or a series of events from the past to preserve them for future generations. This is the most common kind of monument.

Unintentional monuments—"The historical value of a monument arises from the particular, individual stage it represents in the development of human activity in a certain field". This includes works that reference a particular moment of time or significant period of time. These developments are often subjective, what may not seem valuable to a collective or individual history now could evolve into one later.

For New Zealand, it was not until the mid-20th century when the appreciation for the unintentional monument (historical value) developed. Along with this new found appreciation for our small history, people also sought to give it legal protection.

Age-value monuments—"Age-value in a memorial or monument betrays itself in the monument's dated appearance. Age-value makes clear a sense of the life cycle of the artefact, and of culture as a whole". All artefacts have the opportunity to develop age-value.

Use-value—Buildings that start to lose its modern relevance in use, it starts to lose value. To remain valuable, the architecture needs to maintain their use.

Newness-value—Humans historically value youth over age—often things considered beautiful are associated with newness, while the faded and old are considered outdated and ugly. Newness-value in art has usually connected with the opinion of the general population. Relative art value has often only be appreciated by "the aesthetically educated modern person."

Relative Art-value—Opposing the idea of Art Value is Riegl’s concept of Relative Art Value.

Use-value = Buildings that start to lose its modern relevance in use, it starts to lose value. To remain valuable, the architecture needs to maintain their use. According to Riegl, this is as important as the counter-claim of monuments that respect age-value (when the monument is abandoned and left to form a natural state)."
“Kunstwollen” translated most often as the “will-to-art”
overshadows the influence of Relative Art-Value to the societal beliefs connected to the production of the arts and culture. No perfect concept of artistic value is independent of the ever-shifting societal beliefs or ideas of what should be considered a monument or worthless.

Relative Art-Value can have both negative and positive effects for the life-cycle of a monument. For New Zealand, Relative Art-Value has been the biggest issue in its preservation of history. For Relative Art-Value to be positive, this requires "the preservation of the monument in its present state, and sometimes even 'restoration in integrum'" meaning the monument or memorial can function as a reminder of history if it can establish itself with the key present-day values outlined by Reigl. When the relative art-value fails to connect with its audience of that time and context it often results to neglect and destruction of historical monuments.

The judgment of historical worth is continually prioritising values such as newness and restoration, as opposed to age-value which prioritises the acceptance and respect of age and decay in monuments.

Reigl did more than setting up these neat categories - he shows that our views on history are forever shifting, always filtered through “Kunstwollen” and our ever-changing cultural belief system.

How this classification of values applies to the idea of a "whole" or "fragment" is of interest. To have historical value the (unintentional) monument needs to maintain its absolute condition or be a complete, near-perfect restoration yet the age-value celebrates the marks of time and the natural effects of decay.

27 Riegl, "The Modern Cult Of Monuments", 47.
28 Riegl, "The Modern Cult Of The Monument".
30 Riegl, "The Modern Cult Of The Monument".
31 Ibid.
Markers of history decide how to express complex ideas in a visual form. Shape, mass, materiality, imagery, location and typography all contribute towards the message and meaning. What happens in the past is reconstructed in the context of the present. All of us encounter certain “markers” that help us remember particular histories or evoke certain memories. Cemeteries, monuments, memorials, and churches are examples of such “markers”.

There is a debate on whether monuments have an adverse impact on memory. Critic James Young has said of memorials, “It’s a big rock telling people what to think; it’s a big form that pretends to have a meaning, that sustains itself for viewers to become more passive and forgetful because they “do our memory work for us.”

3.1 Memorial and Monument culture in New Zealand

This section begins with an analysis of the most common ways of marking sites or histories of significance. The principal objective of this section is to gain an understanding of the positive and negative elements in attempting to memorialise history.

A Monument is a structure, statue or building that honours a particular person or individuals, or a significant event. A monument can also be unintentional but considered a monument due to its historical impact on local identity. “Monuments allowed for “collective remembering” in sites that acted as a place of common memory.

A memorial is built to acknowledge or remember those who have died. According to The New Oxford Dictionary of English, a memorial is “something, especially a structure, established to remind people of a person or event”.

Both memorials and monuments raise complex questions as to which histories should be acknowledged and how much of the history or memory should be preserved but also, more philosophically, why we should remember?

Fig. 7: New Zealand timeline map of memorials to the New Zealand Land Wars.

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3.2 New Zealand Land Wars - 19th Century

Barbarians’ were the up-river Hauhau who came down the Whanganui River intending to drive off the European settlers in the Whanganui township. The North Island saw witness to numerous battles with casualties on both sides.

Today there are just over 60 memorials in New Zealand commemorating the dead of the New Zealand Land Wars. Initially, in most cases, these memorials took the form of wooden headboards that was now rotting away. A few reasons are attributed to this paucity of memorialisation - the idea of commemorating those particulars who died in the NZ war was not given high priority in New Zealand. Alongside this lack of recognition was a growing sense of shame; the now established Pākehā community did not want to remember a conflict with significant casualties on both sides; people wanted to forget this painful and embarrassing part of New Zealand’s history. For the 30 years immediately following the conflict acknowledgement of the New Zealand Land Wars was muted and forgetting was the preferred opinion.

Between 1905 and 1920, however, more than 20 memorials were built to acknowledge the New Zealand land Wars. A large proportion of this renewed interest arose indirectly from the popularity of commemorating those who fought in the South African Wars and First World War. Still mainly remembering those fighting for the crown, the Pākehā community wanted to recall their past in a physical form. The construction of memorials and monuments should be concerned with concepts that are designed to change over time, to create a further awareness of something that is missing, or even disappointing: providing viewers to question, think, and connect with the history more actively and consciously. We have to remember what audiences we are trying to reach with this marker. What view or ideas will it encourage? Is it passive? Are these markers passageways to history?

New Zealand Land Wars - 19th Century

The earliest existence of typical memorials in New Zealand dates back to our civil wars, the New Zealand Wars (1864-1872). The first monument built was the personification of grief. A weeping woman erected in Whanganui, 1866. The inscription reads ‘to the memory of those brave men who fell at Moutoa 14 May 1864 in defence of law and order against fanaticism and barbarism’. The inscription reads ‘to the memory of those brave men who fell at Moutoa 14 May 1864 in defence of law and order against fanaticism and barbarism’.33 The ‘fanatic’ barbarians’ were the up-river Hauhau who came down the Whanganui River intending to drive off the European settlers in the Whanganui township.

Most official memorials or monuments to the wars were created almost a century later, often only to replace the wooden headboard that was now rotting away. A few reasons are attributed to this paucity of memorialisation - the idea of commemorating those particulars who died in the NZ war was not given high priority in New Zealand. Alongside this lack of recognition was a growing sense of shame; the now established Pākehā community did not want to remember a conflict with significant casualties on both sides; people wanted to forget this painful and embarrassing part of New Zealand’s history. For the 30 years immediately following the conflict acknowledgement of the New Zealand Land Wars was muted and forgetting was the preferred opinion.

Just a few of the original headboards were replaced during this time, as basic maintenance. Between 1905 and 1920, however, more than 20 memorials were built to acknowledge the New Zealand land Wars. A large proportion of this renewed interest arose indirectly from the popularity of commemorating those who fought in the South African Wars and First World War. Still mainly remembering those fighting for the crown, the Pākehā community wanted to recall their past in a physical form. The construction of memorials and monuments should be concerned with concepts that are designed to change over time, to create a further awareness of something that is missing, or even disappointing: providing viewers to question, think, and connect with the history more actively and consciously. We have to remember what audiences we are trying to reach with this marker. What view or ideas will it encourage? Is it passive? Are these markers passageways to history?

32 33


35 Ibid.
popular interest waned but continued into the 1920s. The publication of Rewi’s Last Stand also prompted interest.

In 1954 New Zealand established the “Historic Places Trust”, a body that raised and protested issues where they perceived New Zealand’s history was being carelessly demolished or ignored.

Efforts made by the Historic Places Trust to mark the anniversaries of civil war battles across New Zealand meant new markers and monuments to the wars were placed across New Zealand.

The turbulent nature of this history of memorials to the New Zealand Land Wars means they were never just monuments to the dead or the events that were being commemorated; they exist as physical manifestations of the changing politics, culture and identity New Zealand’s short history has experienced.  

Fig. 9: New Zealand Land War memorials (read left to right, displayed in chronological order; 1864 - 2001.)
The traditional memorial or monument seen during the 19th century typically depicted a personification of emotion or a soldier - expressing power and strength. Often placed on top of a plinth, looking past the passing public these statues are in some way valorised, with the history out of reach for those who did not participate. We look up at these static memorial types as they look past us, implying a meaning so much larger than us. This meaning may be true of the impact of war, and of historical events on a massive scale. However, this disparity discourages any attempt by the public to engage with these histories and markers. The 20th century began to ignore the authoritarian body in favour of creating a more public inclusive structure; international examples created memorials that drew the people closer to the event.

Our answer, the “Living Memorial”, moved toward a more utilitarian function. There are over 300 war memorial community halls across New Zealand, built in honour of those who died in the First and Second World Wars. These social spaces host a range of community facilities; embedded into people’s everyday living in small towns New Zealand. The majority of these memorial halls were designed, sourced and built solely by local people for local people. The National Archives手 Wellington houses over 700 files relating to each Memorial subsidy application; within some of these files are drawings that sketch out a community’s vision for the hall.

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Fiona Jack and Bill McKay, Living Halls, 65.
Ibid., 66.

Fiona Jack - An insight to the Living Halls

In Fiona Jack’s research exploration into the Living Halls, she analyses and displays the range of Halls proposed - some are go-getting, some are a roughly drawn square on a piece of paper, but of all the Memorial Halls that were built almost all represent what was submitted to the council. Jack’s display of these halls honours the vision and endeavour of the people that spent many years fundraising, designing, building and maintaining their halls for their communities.

Bill McKay starts by asking the question of how we as a country moved from grief to community centre? For those families who suffered losses in the wars, there is little comfort or compensation in a visit to a statue once a year. Another failing of the singular memorial was the way the forms sanitise the situation into a more heroic idealised event rather than, as Bill McKay describes, a slaughterhouse.

After the Great War, it seemed a shift in Memorial form was appropriate. Moving...
away from the sculptural monument and toward a more utilitarian way – public places such as parks, libraries, halls etc. Initially, the government rejected this idea. It was the end of the Second World War that sparked an interest in the creation of "Living Memorials", possibly an influence from the modernist design movement that promoted efficiency, progress and functionalism. The Memorial Hall or community centre layout usually consisted of one central hall space to hold gatherings and various events, a staging area visible from the main hall, male and female cloakrooms, and kitchen/serving areas. This simplicity of interior form and layout was typically due to the skill level of the New Zealand small-town locals. The roof structure was usually gabled with a squared façade. The front door faced the street inviting people to enter. Volunteer labour built the majority of these halls. Signs and bold lettering, typically on the exterior of the hall, label the building as a memorial hall with honour rolls tucked safely inside on display.

In Bill McKay’s essay, he proposes the question: “does our everyday use of these buildings prompt thoughts of those who served and died to save our way of life? Have they succeeded as living memorials?” There is no clear answer for this judgement. Often the argument is that the function of the “Living Halls” is diluting the meaning/history of what they were designed to commemorate. But you can argue that by inviting people inside you make them feel like they participate, rather than being isolated outside. Observing in the words of Fiona Jack “a post-World War Two moment of public aspiration, when communities engaged in the visionary process of describing what they wanted to become.”
In a discussion between Fiona Jack, Tom Nicholson and Sam Durant they all agree that the concept of a “living memorial” emphasises usefulness. Living memorials contribute, aiming to improve the community and they serve a purpose as social space where people’s voices can be heard and views shared and discussed.

However, a significant number of New Zealand’s “Living Memorials” have now fallen into disrepair due to fire, development and disaster—ultimately their “use-value” has been lost. If a memorial’s purpose is to stop memories disappearing the question arises as to how successful the “living hall” is if the concept is so vulnerable to the ravages of time.

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3.4 Parks and Parades - 21st Century

Parks and Parades - 21st Century

Today our methods of memorisation largely lie within public parks and memorial day parades.

The annual ANZAC parade is the most well-known of these events. Obviously, as time passes soldiers also pass but their descendants can march on their behalf carrying the family medals. Parade attendees can place flowers, wreaths and handwritten notes at the memorial site at the parade’s end point.

The parades usually last a few hours only, with crowds completely dispersed by the early afternoon but a wide range of ages attend ensuring the memories are passed on through generations.

Today possibly the most significant memorial development in New Zealand was the creation of Pukeahu in 2014 - a new memorial park situated in front of the National War Memorial in Wellington. The parks intention is to memorialise all New Zealanders who have died in our participation in foreign wars.\[44\]

The combination of the Art Deco shapes from the carillon, the black marble tomb of the unknown warrior and the rough red stone of the Australian soldier memorial mens reas to, as Jock Philips describes, “develop its memorial language”.\[45\]

Beyond memorials, these built structures or markers serve as mnemonic devices by projecting a point in time. These markers also attempt to solidify memories of those who have past and finally they stimulate us to remember and to imagine.

In “Monument for the Flooding of Royal Park”, Nicholson creates an idea using a range of archival material to create a proposition for an imaginary monument.
He states that he has a particular anxiety about working with the ideas of the archive in that it risks becoming focused on past ideas, retreating from the present and addressing future perceptions. To create a hybrid between the concepts of a living memorial, and function of an archive is perhaps a kind of potential toward the future.

Anti-monuments were a reaction against the traditional memorial and monument (those seen in the 19th century). The idea of designing a memorial or monument seemed daunting with few ideas left to tell new stories or ask new questions as to how we design memorials and monuments today.

But the memorial landscape is now full with anti-memorials aiming to provide witness to world-changing events, reaching out to a wider audience.

A well-known example is that of the memorialisation of the Jewish lives lost in World War II by Libeskind.

Daniel Libeskind designed the Jewish Museum in 2001 in Berlin. Following from the discussion of “Living Halls” by Bill McKay and Fiona Jack, Libeskind’s museum function is a powerful statement in memorialisation. Although a powerful and emotional experience, the Jewish Museum is active in projecting and controlling the emotions it would like visitors to have.

Shelley Hornstein describes the power and controversy around the effects of Libeskind’s museum:

“...controversy arose concerning whether or not to keep the museum empty or to fill it; the empty museum had taken on a life of its own and began to stand as a memorial to and symbol for the annihilated Jewish community.”

Also in Berlin, Eisenmann’s Memorial to the Murdered Jews (built in 2003) creates an entirely different effect of memorialisation. Instead of dictating how the visitor must feel, it allows both collective and individual reflection inside the grid of concrete columns, where no symbols define which leaves room for interpretation.

As a visitor to the Memorial to the Murdered Jews, there is a vast range of emotions to observe. Children are laughing, jumping from one pillar to the next. An individual is quietly reflecting, hugging amongst the pillars. A group of people...
standing, leaning against the pillars, talking. Here the memorial allows for a range of engagement and emotions.

How each memorial attempts to inform their visitors about history is varied.

Within the permanent exhibition of the Jewish Museum, Libeskind presents typical museum display. The history displayed often leads to predictable trains of thought as you pass between each element that is presented. The information that is present in this way rarely leaves the sphere of the static display.

What seems more powerful in presenting history is Libeskind’s void spaces. The Holocaust tower provides no historical stimulation like presented in the permanent exhibition but produces an effect that is more likely to stay with the visitor as an experience. Although its experience is still confined to the parameters of the space.

The memory void takes qualities from the examples previous. This void space can work with some mental stimulation and allows the viewer’s train of thought to expand beyond the physical space. Space creates an atmosphere of contemplation and stimulation. There is a primary focus of one aspect of that history with allows for a focus and easier memory stimulation.

The underground information center as part of Eisenmann’s Memorial to the Murdered Jews creates a space with limited sets, separate and unordered. These stimulations produce varied and many trains of thought that intersect and interrelate enabling visitors to make their connections and thoughts.

Space needs to encourage contemplation and further thought for a lasting memory.
Fig. 17: Interior of void space in Libeskinds Jewish Museum.

Opposite Page: Fig.18: Core of Eisenmann’s Memorial to the Murdered Jews.
3.6 Memorial Archetypes

To further my understanding of the memorial culture, I began to look at ways to break down the way in which memorials happened. Based on the way Oswald Mathias Ungers' categories form, certain qualities started to be evident. Ways of communication used in monument forms overlapped over time in both international and national memorial and monument projects.

My focus was the 20th-century movement of memorials and monuments. During this period memorials and monuments started to move away from static forms that distance themselves from the public toward a lesser authoritarian format - in favour of engaging the public with emotional concepts or fulfilling community needs. These were later referred to as “Anti-monuments” or in New Zealand as “Living Halls”.

In breaking down memorials and monuments to their fundamental components and cataloging them, the aim was to reveal ways in which memorials and monuments were constructed - through trial and error this section sought to create the most simplified inventory to arrive at a series of archetypes to better understand design decisions.

The Postmodernism contextual position can be traced back to Robert Venturi’s

<table>
<thead>
<tr>
<th>Orientation</th>
<th>The orientation establishes where the memorial or monument directs visitors.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Analysis of the decision-making done during the memorial design/making</td>
</tr>
<tr>
<td>Interaction</td>
<td>Interaction is the engagement with the senses. Visitors feel more a part of a particular history or feel closer to an event when they are fully engaged, and the memorial/monument reciprocates.</td>
</tr>
<tr>
<td>Ornament</td>
<td>These are the elements incorporated into the design, the inscribed names or symbols.</td>
</tr>
</tbody>
</table>

Fig. 19: Orientation of Memorial Archetypes

- **Radial**
  A composition of forms that arise from a central form.

- **Directional**
  A group of forms arranged to direct visitors. Usually arises proximity of each other and visually connected.

- **Grid Form**
  A set of modular forms related by a cartesian plane of X, Y and Z.

- **Vertical**
  Also could be centralised. One dominant form that points upward or downward. Often disconnects with viewer.

52 53
Fig. 20: Reduced Dimes of Memorial Archetypes.
Fig. 21: Sensory Interaction of Memorial Archetypes.

Fig. 22 A-D: Ornamentation of Memorial Archetypes.
4.1 Aldo Rossi and Memory in Architecture

**Complexity and Contradiction in Architecture.** Written in 1966, Venturi’s title foreshadowed the chaotic discourse that would soon follow.

Venturi argued that buildings were objects of place-making that “should embody local conditions of neighborhoods and the local public behavior—embracing aspects of architectural history, decoration and diversity.”

One of the most notable architects of this period was Aldo Rossi, publishing his arguments for the future of architecture in 1966; the same year as Venturi’s Complexity and Contradiction. After establishing a distinguished career as a modernist architect, Rossi adopted a style that historically referenced local conditions, enlivened by symbolic forms and used working memory as a valuable starting point in creating an architecture with the ability to promote thinking, reading, responding and engagement between architecture, history and user.

Rossi reinvents the concept of the *locus* during the writing of his treatise: “The *locus* is a relationship between a specific location and the buildings that are in it. It is at once singular and universal.”

The *locus* is, as explained by Frances Yates in The Art Of Memory, how memory attaches itself to spatial structures. For Rossi, the *locus* is a central characteristic of the city toward a collective memory. Rossi writes: “Thus we consider the *locus* the characteristic principle of urban artefacts; the concepts of *locus*, architecture, permanence, and history together help us to understand the complexity of urban artefacts. The collective memory participates in the actual transformation of space in the works of the collective, a conversion that is always conditioned by whatever material realities oppose it. Understood in this way memory becomes the guiding thread of the entire complex urban structure and in this respect, the architecture of urban artefacts is distinguished from art, since the latter is an element that exists for itself alone, while the greatest monuments of architecture are of necessity linked intimately to the city.”

---


61 Ibid.


Rossi created a series of simple forms throughout the site forming the Modena Cemetery:

- **Cube:** The cube is the only element to be completed in its entirety. Through the shortest section of Rossi's scheme (north to south) is arranged by a cube sitting at the south end, below which lies a common grave for the poorest of Modena. This monument represents the relationship between the living and the dead. The access is through the centre of the cube, with a ramp circulating the centre. There is no roof and it is open to the sky and its surroundings. Its geometric form evokes a sense of solidity and permanence in the landscape.

- **Rectangle:** An embracing two-story U-shaped building, encloses the space.

- **Triangle:** A series of "rib-like" ossuary that taper triangle, and a shortened chimney-like form at the north.

- **Cone:** The cone, another communal grave, could be mistaken for a smokestack. Here the cone is connected to the series of triangular ribs.

Today, the "U" has been rendered an "L," and neither the rib-like ossuary nor the monumental cone has been constructed in reality. The reading of the project as "incomplete" still conforms to Rossi's notions of the essence of a cemetery existing a priori site or form: in our minds, his construction becomes a piece, which would have served not only as an amphitheater but also as a formal counterpoint to the burial functions and square windows of the columbarium.

Fig. 26: Aldo Rossi elements of Modena Cemetery

**Fig. 24:** Aldo Rossi elements of Modena Cemetery

---

**Note:**

For Rossi this duality was surely a reflection of the relationship of the individual to the collective as a social commentary on hierarchy as Johnson writes, “the cube and the cone deliberately rival for attention to underscore the fact that there are two separate monuments”. The plan can no longer be read as a physiological analogy, but the sombreness and intensity of the forms have still persevered independent of the missing composition fragments.

Rossi creates a poignant city of the dead; it embodies the notion of collective memory. As cemetery typology, the Modena Cemetery is transformed by the living and the dead occupiers of space. Rossi creates a dialogue between the user and built form allowing the building to be saturated with specific meaning; creating a compelling personal experience rather than a purely historical one. An object, place or architecture can become a richer experience for all who actively participate in it.

The unbuilt Monument to the Resistance in Cuneo, designed by Rossi in 1962, proposes a semi-circle of seating focused around a masonry cube creating a theatrical-like setting within the monument. The cube entry is via a tapering staircase leading into an interior platform. A thin angled slit penetrates the wall focusing on viewing to the top of a ridge top (where members of the resistance fought the Germans). The angle of the slit also allows focused historical views to those sitting inside the monument. The tapering stairs create a space for an audience to contemplate their surroundings and to become more than just a pure sculptural form.

Aldo Rossi’s aims are not to imitate but to create an order of things that allows us to experience a suspended moment in the present between the past and the future. Rossi develops an architecture which embodies a history that is easily read and engaged with rather than just observed.

In 1988 Rossi was able to employ this idea of a viewport to important histories within the landscape in his monument to Sandro Pertini. This particular monument allows visitors to sit on the stage-like seating and, like with the design of the Monument to the Resistance in Cuneo, Rossi allows a thin view shaft, but this time it just views out towards its surrounding and has no particular reference. The material choice reflects historical association to the nearby Milan cathedral creating harmony between the new presence and the old.

4.3 Monument to the Resistance in Cuneo:

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A response to the perspective ideas displayed in Aldo Rossi’s Monument to the Resistance in Cuneo.

Fig. 31: Viewshafts of the modena.

Fig. 32: Film overlay to suggest forgotten fragments.

Fig. 33: Simplify to suggest forgotten fragments.
The relationship between architectural typologies and morphological fragments is undeniably clear in the work of Oswald Mathias Ungers. Ungers’ love for architectural typologies and fragments is present in the proposal for student housing in Eindhoven (1964). He later claimed that this project aimed to catalogue an ‘encyclopedia of forms’.37

In 1982 Oswald Mathias Ungers dedicated an entire piece of work to the discussion of metaphors in architecture and the urban form - titled ‘Morphologie City Metaphors’. It is a small book, in English and German, which begins with a philosophical dissertation in which Ungers explains different ways of thinking, the role of analogy and metaphor and visual thinking as inspiration to architectural design. The dissertation is followed by a series of double pages: on one side depicting fragments of site maps, cartographic images and urban planning designs and showing the other photographs and drawings functioning as visual metaphors. These visually similar pictures demonstrate different ways of thinking about the construction, operation and essence of the city. It is constructed as a catalogue for us to examine, instead of exhausting possibilities they seem to multiply and be endless. The metaphors are not closed, and the city reverberates between the pages.

4.4 Oswald Mathias Ungers Taxonomy of Forms.

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4.4 Oswald Mathias Ungers Taxonomy of Forms.
Major influences on Märkli’s designs can be seen in the theories of Rudolf Olgiati and sculptor Hans Josephson, whose works inspired the La Congiunta museum in Giornico, Italy.

Architect Rudolf Olgiati taught Märkli an elementary language of architecture. He explained to Märkli the meanings associated with single elements such as a wall, door, threshold etc. and in understanding these elements, Märkli was able to go further and create his modern interpretation of these languages.

Märkli looks back toward Greek temples, a Roman church, and Le Corbusier’s Ronchamp, which he all calls classical buildings.60 The universal character found in these meanings influenced Märkli heavily to base his ideas on a classical language. Often in interviews, he notes his love for classical ideals - the golden section, classical orders etc. and this love is evident in many of his works.59

However Märkli goes further and starts to abstract this language - he creates an illusion of a square, but the sides are drawn with its angles slightly wrong, he acknowledges it is not perfect, but it is enough to create an ‘idea’ about the square. To the untrained eye, it takes a few seconds to recognize the uneven sides. Here he creates an abstraction of the square, an “approximation”.

Many of Märkli’s works hold a sense of timelessness, tranquility and permanence. He is perhaps most famous for La Congiunta, the small gallery that houses the sculptures of Hans Josephson. “Some buildings are built for people” Märkli says, describing this concrete geometric forms, marked with the imprints of construction, “This is built for sculptures. There is just concrete, no electricity, no insulation, just space.”62 The gallery evokes qualities of forgotten Greek ruins or monuments. Märkli’s interest in ancient history has never been more apparent.

Abstraction of form in Märkli’s work, together with the elements found in Aldo Rossi’s works, help to form a basis for the development of form for the archival interventions. The abstractions of past elements and classical theories inform a future intervention condition by creating new possibilities out of new and existing elements and histories of Horizon.
**Interaction:** Interactive moments should occur within the structure itself to create better memory experiences for archive and visitor.

**Visual connections:** Visual connections will be used as a tool to connect the various volumes and space (internally and externally). These connections will be in the form of voids, which become a powerful tool for defining spaces, framing key moments in the landscape and enables visitors to engage with the voids of the building.

**Physical connections:** Physical connections will create links and access between each intervention. This physical connection will direct each visitor drawing them to the key interventions across the site.

**Grid/linear progressions:** Grid linear progressions form a contrast against the rural organic landscape.

**Natural Effects:** Incorporating the landscape as exhibit and artefact.

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**4.6 Derived design elements:**

The design approach builds upon the pieces that resulted from the analysis or memorial architecture and the principles and aesthetics explored in the work of O.M. Ungers, Aldo Rossi and Peter Märkl. All three architects apply their own architectural language to the rethinking of history.

The following are the derived elements that will be used to formulate the archive typologies in the submerged township of Horahora.

**Cube:** A prismatic solid bound by six equal sides. Due to its equal sides this form tends to become static and lacks movement or direction. However it evokes a sense of solidity and permanent in the landscape.

**Subtractive – Abstraction:** Having the cube as an easily recognisable geometric form, they can adapt readily to subtractive treatment. If solids are partially hidden our mind automatically completes its entire form. If fragments are missing in the primary form their identity therefore becomes incomplete. This element will be utilised on the interior of the space - keeping the exterior as an almost pure form.
5.0 Physical Context
5.1 Site Location:

Opposite Page: Fig. 38: Map location of site and Karapiro

Fig. 39: Map of New Zealand

Horahora site location

Knock-on flooding from the 1988 Karapiro dam construction

Karapiro Dam

Henderson city location
5.2 Site History:

During the 1900s the River became heavily industrialised becoming (and continuing to be) a primary resource for generating hydro-electricity.

In 1911, at the Aniwaniwa rapids, the Waikato River was diverted to create the Horahora Power Station. The very first hydro-electric power station was built in Horahora a small township 20km south of Cambridge. The station was constructed in 1913 by the Waihi Gold Mining Company, and its power was delivered to the Wahi mines on 8 April 1914 employing an 80 km Horahora to Wahi transmission line (the longest transmission line in New Zealand at the time). Local Maori of Ngati Koroki Kahukura and European settlers were employed here. In April 1947 the Karapiro Power Station was built due to growing electricity demands.\(^5\) The Horahora power station had become insufficient to meet these demands - the result was the construction of the Karapiro dam. The resulting Karapiro lake submerged the township of Horahora and its power plant, changing the shape of the river's edge, expunging the natural Aniwaniwa rapids and erasing its former existence. Over time the existence of Horahora faded from public memory.

The Horahora Power Station kept generating power until the last possible moment. All its turbines and generator units were left in place. The station was to remain active to supply power to the national grid until the dam had been under complete submersion. Witnesses to the submersion say the plant's generators continued to rotate and thrash at the rising waters, even until the point of submersion.\(^5\)

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\(^{53}\) Joyce Neil, ‘Life at the hydro-electric power project at Horahora’. \(^{54}\) Ibid.
5.3 Current site condition:

Fig. 41: Construction complete at Horahora

Fig. 42: Construction complete at Horahora

Fig. 43: Map of Horahora

Horahora Power Station
Horahora Spillway
Horahora Spillway
Current lake shoreline
Waikato River before the flooding
Islands before the flooding
North

Fig. 44: Horahora
In the 1970s some of the generator equipment was salvaged, but it is either lost or, if kept, currently not on display to the public. Today the only remnants of the former site are the old powerhouse steps which now step into the waters of the Waikato River. Rusted fragments of the transmission line from Horahora to Waihi can also be found.

The Waikato river was once rich in an abundance of native food sources and had clean, drinkable waters. The industrialisation of the river has led to the decline of these natural resources. The Karapiro dam, along with the seven other hydro-stations, resulted in the flooding of some of the Waikato river’s important historical sites. Many of these sites belonging to the Ngati Koroki and Ngaruawahia were lost at the time of the flooding.

The following are international projects that have dealt with abandoned or largely forgotten areas of industrial history. Both examples show how small interventions can help transform places and better connect them to their previous histories:

65 John E. Martin, People, politics and power stations: electric power generation in New Zealand.
66 Joyce Neil, Life on the borders: sharing power at Horahora.
67 Brett Graham and Rachel Rakena, “SITHWABEC”. 

Fig. 44: Horahora Rapids - Sir George Grey Special Collections.
Fig. 45: Construction at Horahora - Sir George Grey Special Collections.
Fig. 46: Horahora Powerstation is flooded - water intake building material - Sir George Grey Special Collections.
Peter Zumthor's Allmannajuvet Zinc Mine Museum:

The Allmannajuvet Zinc Mine Museum consists of three interventions nestled in the abandoned zinc mines from the 1800s. The Allmannajuvet mine began operations in 1881, closing after only 18 years due to the ore's changing prices and high extraction cost. The mine initially provided jobs for 160 employees. The site up until 2002 had been abandoned and forgotten. The project was commissioned by the state to encourage and increase tourism for that area. Zumthor breaks up the essential functions (canteen, museum, gallery, offices, toilets, services etc.) and spreads them across the site followed by a trail for visitors to be guided to each intervention.

The interventions are modern, built in an industrial construction style; these responses tell the history and allow the power of the mining landscape be a focal point. The industrial aesthetics bring the history of the Allmannajuvet zinc mine to the forefront of memory, creating key viewing moments in the landscape.

Fig. 47: Miners Museum - Path perspective  
Fig. 48: Peter Zumthor’s Miners Museum  
Fig. 49: Miners Museum - Museum  
Fig. 50: Miners Museum - Cafe  
Fig. 51: Peter Zumthor’s Miners Museum

Kalø Castle in Denmark

Built during the 14th Century, the Kalø Castle is situated on the Jutland peninsula in Denmark. It is an iconic landmark for this area, but the central medieval tower was inaccessible due to the lack of internal structure or safe access paths. Copenhagen-based MAP Architects and Mast Studio successfully designed a maze-like staircase structure inside the monument, acting as an accessible route through the ruins. Completed in 2016 the intervention was commissioned by the Danish Ministry of the Environment. The staircase allowed visitors to enter and climb the tower. Walking further up the stairs, visitors can access openings in the facade and balconies, allowing for access to the views of the surrounding landscape.


Fig. 52: MAP Architects and Mast Studio perspective image

Fig. 53: Kalø Tower Visitor Lookout
Photo by MAP Architects + Mast Studio
6.1 Initial site explorations:

The initial concept for the site plan of the interventions was a response to the works of O.M. Ungers and his proposal for student housing in Enschede (1964).

This initial exploration tried to explore the landscape with various interconnecting fragments that mimicked abstracted versions of the Horahora power station. The many attempts to place the various fragments across the site became frustrating and they seemed to compete/clash with the landscape (ultimately failing every time against the power of the Waikato River).

This became an immediate design issue. It became apparent that, in order to successfully monumentalise the site, the interventions needed to be simpler—posing in stark contrast to the landscape.

The simple form of the Modena Cemetery cube analysed by Rossi seemed to be the most satisfactory option. Connected by thinner bridge connections, the cube in its pure form could be its own entity rather than competing with its surroundings.
6.2 Site plan distribution:

1. **Central and Radial distribution**: The main typologies of the site will be distributed evenly around one central point in the landscape (the focus point being the Waikato River). Visitors can feel a sense of boundary without a physical barrier being necessarily present.

2. **The Cartesian frame of reference**: Keeping to a network system of linear motion creates clear, distinct routes of access and direction.

3. **Directional/Clustered**: More compact and less distributed across the site. The main typologies will be kept gathered together, only visually orientating themselves toward key points in the landscape. The cluster will be near the main access routes and paths.

The series of architectural interventions act as the memory depository, archive, exhibition and cafe with smaller fragmented inventions throughout the existing infrastructure and site of Horahora.

The location of Horahora is situated a few kilometres south of Karapiro. Due to the power of the Waikato River, there is the inevitable question as to how to respond to such an organic, rural landscape. It would seem arbitrary to mark the spaces “randomly” across the site.

The four main typologies will be placed across the site leading in a grid distribution - keeping to a network system of linear motion creates a clear, distinct routes of access, direction and connection between them. By keeping to a stricter grid layout, the buildings then act as a frame for the site. Public entry points are accessible through all four main interventions, allowing visitors to transition between each marker once inside. Each main marker caters for a range of transportation arrivals - by foot, bike, boat, an existing car park is available for those traveling by car.

The advantages of Cartesian frame: It is visible, readable and an easy transition between each marker and narrative can be experienced.
Disadvantages: The path seems almost too direct and perhaps does not frame as much of the site as first hoped. But if a wider distribution is created then it starts to lose its readability.

Resolution: Change in the distribution could be created by a shift of the markers rather than keeping each one 90 degrees from each other, forming a square. This shift in grid distribution helps frame more of the landscape while it still can be read as a cohesive project.

The smaller interventions will focus on particular aspects of Horahora’s history. Placing these interventions in a similar Cartesian frame makes little sense due to their site-specific nature not does it make sense for options One or Three to be used. Instead, they will act as a disruption to the formal grid set out by the main markers. Instead of being placed where appropriate for visitors to “stumble” across while visiting the site and further encouraging visitors to explore.

Transportation

There are three primary means of transportation for Horahora.

Car: Horahora road runs parallel to the Waikato River. A small car parking area is available for drivers to rest.

Cycle or by foot: From 2018 the Waikato River trails will run past the Horahora area – encouraging cyclists and walkers to pass through the area.

Boat: This area is very popular for recreational water sports. Rowing boats and small speedboats often pass this area.
6.3 Connections

Connections will be made to the four potential intervention points via foot and cycle bridges.

The original spillway showed a thin steel framed walkway connecting from one concrete mass to another, allowing the workers to pause over the rushing water as they moved between the areas.

The River Archive aims to evoke a similar experience by connecting each intervention with steel bridges. The new connections will allow visitors to be aware of their surroundings as they move from one intervention to the next; decontextualizing and recontextualizing the visitor’s environment. The bridge element, through its continuity and regularity, serves as the interlink between each intervention.

Concept sketches for the substructure and balustrade of the bridges are intended to be an abstraction of the old spillways iron bridge connections. The thinness of the bridges serve as a contrast to the bulk of the interventions.

The Waikato river is no stranger to bridges spanning across it, but most of these bridges have almost exclusively been for the use of cars. Access for cyclists and pedestrians will be a feature of this project, allowing for new perspectives on the environment.
Fig. 64: Transport routes and stops highlighted in red

Fig. 65: Connection route highlighted in red
6.4 Natural Effect: Water and Memory

Links between water and memory are many. The Grecian goddess of memory, Mnemosyne, existed on the banks of the river Lethe, the river of forgetting. When we recall past events, they are often referred to as “water under the bridge” in Te Reo, those who are forgotten “float similarly on the tide of one’s memories – ‘tou i lani te tai o maumahara’.

The architectural interventions will be linked by a narrative based on the flooding and submersion of the Horobora township. Each intervention will allow the visitor to experience different levels of submersion as they move from one architectural expression to another.

The Horobora lake level is a controlled fluctuation linked to the releasing of water at the Karapiro dam. According to the Mercury energy website, the levels for this area fluctuate no more than 3.5m during the month.

Some of the functional requirements of each intervention will dictate at what level of submersion they will be placed. For example, the Archives have been placed in the intervention with the least amount of submersion due to the strict requirements of keeping a controlled environment for the documents.
6.5 The Archives

1. a place in which public records or historical materials (such as documents) are preserved as archive of historical manuscripts: an archive; also: the material protected — often used in plural reading through the archives

2. a repository or collection especially of information

The function of an Archive can take many forms; we are reminded that the archive itself is shifting, an evolving abstraction. How Archives are shaped is up to us — archives are acts of memory making and tools of making a memory. Archives can range from paper documents, a collection of materials or objects. An archive can also be a set of records that gives us an insight into the history and nature of its contents.

So why archive or preserve histories that have for the most part been forgotten or have become disregarded projects and objects?

The River Archive conceives a series of architectural interventions that re-generates the site through a new use of the landscape as an accumulative collector of the objects, artefacts and histories of place. The visitor to the archive is encouraged to explore this evolving topography, being encouraged to encounter, inspire and innovate. The architectural form reflects investigations into context, culture and materials of the old township.

Documents and objects from our past can give us unique insight into what once was. By looking through sketches, models, and drafts, artefacts and architecture we can see the challenges and failures of previous generations - giving us a better grasp on how histories and perceptions of history have developed over time and how they fit into a broader cultural history.
Archival requirements:

As the project is a centre for archive/storage typologies, it seems appropriate that the process of conservation and a consideration of environmental factors are given due consideration.

Preservation of the artefacts is one of the essential functions of an archive, along with security and education. Thinking about this particular site and location, the “living archive” means an active role is necessary to ensure preservation, integration and formation of new relationships between nature and architecture.

Environmental factors to consider:

A combination of artificial and natural light will be used to balance the requirements of the visitors and preservation of the artefacts.

An active system usually controls pollution monitoring in larger archive centres, but due to the smaller typologies for this project, effects of pollution will be controlled manually through efficient maintenance, cleaning and appropriate storage.

Potentially the most substantial impact on archive documents lies in an incorrect balance of humidity and temperature. PD 5454:2012 Guide for the storage and exhibition of archival materials recommends for the storage of archive collections, 13°C to 20°C and 35% RH to 60% RH. These ranges of temperature and humidity ensure more sensitive archive materials are preserved. For boxed paper records the range of temperature and humidity can increase slightly to 5°C to 25°C and 25% RH to 60% RH respectively.

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71 Merriam-Webster, Definition: Archive.
Main Archive

Similar to the function of Peter Zumthor’s miner’s museum, one of the interventions will be dedicated to the display of old industrial artefacts. Here the archive displays items of the old township, giving a glimpse into the time context, culture and materials. The displays will be an integrated part of the structure, much like the graves of Aldo Rossi’s Modena, emphasising a permanence to the space.

The surface and depth of the structure will alter and interchange to contain and frame subject, object and key landscape views.

Cafe

The cafe provides a more general function to the site. Those visitors who happen upon the site by chance have an opportunity to stop, rest, refuel and are then encouraged to further explore the site. The cafe is at the beginning of the submersion narrative with opportunities for visitors to eat their lunch by the river’s edge. Placing an intervention with pure use-value encourages people travelling by various means of transport to stop, rest and explore.

The cafe will also provide other amenities such as toilets, along with an information centre and gallery.
Reflection Room

This intervention will be placed at the highest point of submersion. Voids will reuse the old hydro power station architecture as an archival material, these will enclose view shafts under the surface of the Waikato River, allowing visitors the opportunity to peer through the murky waters to make out fragments of the old power station. Smaller spaces will serve as individual reading/reflection areas, with larger spaces allowing for more collective discussion and thought.

This particular intervention’s intention was to directly connect the viewer with the surface of the Waikato River, as well as exhibiting the objects underneath the surface. Initially ideas of direct physical connection were considered, such as a jump platform and observation tower, but the research felt a visual connection would be more powerful allowing the environment to be observed without distraction. Here the view shafts direct to the water act as ever changing exhibitions.
Memory Depository

Visitors are encouraged to bring personal effects and letters for the memory depository with the aim being to help the archive develop an understanding of personal connections and identities to place. The idea behind the memory depository is that each person will be provided with a small box in which they can deposit personal memories of Horahora; items can relate to the place or event or even just record their experience of that day. The initial space of this particular archive will be open and flexible, the areas eventually defined by the boxes. Visitors will be able to add to their archive deposits and reminisce with friends as a continual process; this develops the space into a personal volume of space that becomes a social product.

Once the memory box becomes ownerless, it will remain at the archive and becomes an integral part of the structure. The memory depository aims to provide a range of sources of inspiration and places of reflection - allowing the visitors to feel more involved with the history of place.

Fig. 76: Girl in the process of creating and archiving her memories.

Fig. 77: Personal Memory Depository Box.

1. Horahora site plans and sketches
2. Element model
3. Sketch / notebook
4. Horahora site model
5. Fragments from memorial investigation
6. Fragments from memorial investigation
7.0 Conclusion

Early on in this project, I decided to analyse why memorials and monuments were created and how memories have been expressed and reinterpreted in architecture. New Zealand’s rich history emerged as a secondary focus; a lot of local history is unacknowledged or forgotten.

The proposed archive design seeks to honour and acknowledge the significant heritage inherent in this seemingly vacant site. The primary emphasis throughout this project was to study the approaches to memorialisation or historical reference in the architecture of Aldo Rossi and O.M. Ungers, and the potential of their work to inform architectural decisions. The research literature provided a framework for the analysis of the relationship between memory, memorialisation and architecture. This framework was applied throughout the design process - guiding all decisions.

Through its design, the project aims to promote the discovery of an area of New Zealand’s lost heritage. It reveals the submerged, absent industrial township of Horahora, a significant yet forgotten piece of New Zealand’s industrial heritage that has previously been impossible to access and largely forgotten. The site is a testing ground to explore ideas of memory and architecture, and to question the current static memorialisation culture in New Zealand.

The design explorations, as documented, are showing the direction that the final design outcome will involve. This document also illustrates the direction architecture can take to act as a catalyst for regenerating memory and for exploring absent history.

The weight of Horahora’s history outweighs its present absent condition. Architecture cannot completely prevent the loss of history and memory within a place, but it can work alongside the past to elevate the environment; reviving the forgotten heritage to set the scene for new perspectives. The proposed interventions serve as monument and spatial experience for showcasing and interpreting certain parts and histories of Horahora - offering spaces for exhibition, research and reflection – encoding personal and collective memory.


Martin, John E. “People, politics and power stations: electric power generation in New Zealand 1880-1998.” Electricity Corp. of New Zealand and Historical Branch, Dept. of Internal Affairs, 1999.


8.0 B I BLIOGRAPHY
Fig. 1: Author's Own - ANZAC Day Jeffersons, Wellington CBD

Fig. 2: The Roofing of Horahora Power Station
(Horahora Power station, Horahora, 1947, Wakaaro, Sir George Grey Special Collections, Maker Unknown. Auckland Libraries (AWNS-19130403-9-1))

Fig. 3: The Mechanization of Memory
The Cover of Frances Vaux "The Art of Memory"

Fig. 4: Author's Own - memory processes

Fig. 5: Author's Own - memory processes

Fig. 6: Author's Own - Cult of Monuments vs. Present day values.

Fig. 7: Author's Own - New Zealand timeline map of memorials to the New Zealand Land Wars.

Fig. 8: Author's Own - Traditional Memorial form and in (lack of) engagement

Fig. 9: Author's Own - New Zealand Land War memorials (road left to right) displayed in chronological order. From 1864 - 2001.

Fig. 10: Te Teko Council submission for the Te Teko Memorial Hall. Reproduced from: Fiona Jack, http://

Fig. 11: Te Teko Memorial Hall realized. Reproduced from: Fiona Jack, http://

Fig. 12: Author's Own - Timeline of ANZAC Parade 2017

Fig. 13: Author's Own - Bicbic father and grandfather place flowers at the Devonport ANZAC parade 2017

Fig. 14: Site plan of Eisenmann's Memorial to the Murdered Jews. Reproduced from: https://makeshiftmemorials.wordpress.com/2017/01/23/precedent-memorial-to-the-murdered-jews-of-europe-holocaust-memorial/

Fig. 15: Floor Plan of Libeskind's Jewish Museum. Reproduced from: http://arch1101-2014jp.blogspot.co.nz/2014/05/jewish-museum-berlin-by-daniel-libeskind.html

Fig. 16: Author's Own - A-C: Jewish Museum exhibition display analysis

Fig. 17: Author's Own - Memorial to the Murdered Jews exhibition display analysis

Fig. 18: Author's Own - Core of Eisenmann's Memorial to the Murdered Jews.

Fig. 19: Author's Own - Ornament of Memorial Archetypes

Fig. 20: Author's Own - Reduced Forms of Memorial Archetypes

Fig. 21: Author's Own - Sensory Interaction of Memorial Archetypes.

Fig. 22: Ornamentation of Memorial Archetypes. Reproduced from

Fig. 23: Author's Own - Aldo Rossi collage of built works and their historical / morphological influences

Fig. 24: Author's Own - Aldo Rossi elements of Moderna Cemetery

Fig. 25: Aldo Rossi, Moderna Cemetery, 1971. Sourced from Aldo Rossi, Moderna Cemetery,"Wax of the Sky" submission, 1971.

Fig. 26: Aldo Rossi, Moderna Cemetery interior walls. Photo by Evan Chakroff.

Fig. 27: Author's Own - Aldo Rossi Monument to the Resistance in Canes viewing diagram.

Fig. 28: Aldo Rossi Monument to Sandro Pertini. Reproduced: http://2.bp.blogspot.com/4DG8LZg9ipk/VPK_TRkIrBQ/AAAAAAAAHCU/ dC8OXC2Uz0Mi/s1600/IMG_5554small.jpg

Fig. 29: Author's Own - Magnificient certain aspects of the landscape and blues everything else.

Fig. 30: Author's Own - Viewesfrom walls are angeld to suggest ed specific points in the landscape.
Perspective view across the Horahora dam site.

Cross section through the Horahora dam site.
Motosa Gardens memorial 1864 Weeping woman and child statue
George Nays Memorial c.1865 Obelisk (Detailed)
Te Arawa Regiment Memorial 1865 Obelisk
Te Araroa Regiment Memorial 1866 Obelisk / Plinth
Te Wairoa Regiment Memorial 1867 Obelisk
Arthur Waitefield / Waiau incident 1869 Cross/Pyramid
Pakehaheke NZ Memorial c.1870 Obelisk
Horiana Te Pukha Memorial 1872 Headstone
Matuaheko Memorial 1872 Obelisk
Ohaaweke Memorial c.1872 Cross
Waio Nene Nui Memorial 1873 Obelisk / Cross
Wairarapa Pukaha Memorial 1874 Headstone (Large, Decorative)
Massa Memorial 1886 Obelisk
St John's Church (Te Arawatu) Memorial site 1888 Cross (Large)
Okahuau Memorial Burial Ground 1891 Cross
Nukumarua NZ War Memorial 1893 Headstone
Queens Park Memorial (Windgar) 1893 Tomb / Lion Statue
Rangitiki NZ Memorial cemetery 1896 Obelisk
Holy Trinity Memorial Park 1894 Peake
Gate Pa Memorial Church and Memorial Reserve 1900 Church and graves
Pokeno NZ Memorial 1912 Canopy (Pyramid)
Ohawe NZ Memorial 1907 Canopy
Taumarunui Lk Waitakere Mituto 1909 Pillar
Manawatu Hill Memorial 1909 Soldier Statue - partially destroyed (soldier missing) in 1991
Onoue NZ Memorial c.1911 Obelisk
Kopa Te Rangihiwinui/Memorial 1912 Filler / Soldier Statue
Normandy NZ Wars 1912 Pforst and Obelisk
Smydl Strand NZ Memorial 1912 Obelisk
Walk NZ Memorial 1912 Canopy / Cross
Ngarumashe Memorial 1913 Obelisk
Rarwi Pukaha NZ Memorial 1914 Pillar
St John's Church Maori NZ War Memorial 1914 Obelisk
Old Taupiri Road Memorial c.1914 Headstone
Alexandra Redcliff Tkuaka Memorial 1915 Obelisk
Heke Kinoenga Memorial 1915 Headstone (Large)
Palmerston North Memorial 1915 Obelisk
Waikato Cemetery Veterans 1915 Semi-circular reinforced concrete wall - designed Norman Wade
Oamaruna NZ Memorial 1916 Obelisk (Damaged 1990)
Petone NZ Memorial 1916 Obelisk (Damaged 1990)
Turanganui Volunteers Memorial 1916 Headstone (Large)
Te Aokaiti NZ Memorial 1917 Obelisk (Damaged)
Hai Ngata Memorial 1920 Pillar
Howick NZ Land Wars Memorial 1920 Honors Board
Peterang NZ Memorial 1921 Obelisk
Te Rone NZ Memorial 1921 Obelisk
Boulcott Farm Memorial 1923 Stone Marker / Plaque
Kahika Cemetery (Now Historic Reserve) c.1923 Headstones
Whitiere Memorial Pukaha 1923 Boulder
Renate Kawepo Memorial 1926 Headstone (Rough Finish)
Battle Hill Memorial 1927 Tomb
Havelock College Memorial 1927 Headstone
Leamington Cemetery Memorial Grounds 1927 Headstone (Rough Finish)
Makatu NZ Memorial 1927 Headstone (Rough Finish)
Ngarumarua Pioneer Tuan Memorial 1927 Tuan
Rangitiki Memorial Gateway 1927 Archway
Pukekohe NZ Memorial 1929 Stone Marker / Plaque
Mahorahi Memorial Graves 1929 Peake
Turangaterekira NZ Memorial 1929 Pillar (uneven materialization)
Howick Memorial 1930 Lychee
Tukutuku Maori Reserve 1934 Obelisk
Huia Memorial 1940 Cross
Pukatea Feat Memorial 1945 Cross
Mahorahi Memorial 1945 Cross (Replacement of wooden cross 1911 cross)
Whitiere Maori Memorial 1950 Lychee
Oamaruna/Te War Memorial Hall 1961 Hall
Rangitika NZ War Memorial 1963-2004 Obelisk
Tauranga Naval Memorial 1964 Obelisk
Te Rone NZ Memorial 1964 Headstone
Jean Guerin Memorial 1965 Circular Stone Sculpture
Titi Hill FZW Memorial 1965 Obelisk (short/squat)
95th Regiment War Memorial 1966 Peake
Rakiwiti NZ Memorial 1986 Canopy
Moteura Memorial 1993 InformationSign
Tauranga Marae Memorial 1997 Obelisk (Modern adaptation)
Ranginui NZ War Memorial 1999 Headstone (Replacing 1896 Obelisk)
Kekaitara Mass Burial Memorial 2002 Filler and plaque (New memorial to be created with input from Maori and Crown)
Charles Broughston Memorial Unknown Obelisk (Small)
Kororrere Residents Memorial Unknown Plaque (Small)
Te Ngutu o te Mara Memorial Unknown Cross (architect likely to be W.J.Helener)
Waerenga-a-Hitu Memorial Unknown Obelisk / Cross icon.
Declaration

Name of candidate: Alice Matilda Couchman

This Thesis/Dissertation/Research Project entitled: The River Archive

is submitted in partial fulfillment for the requirements for the Unitec degree of Master of Architecture (Professional)

Principal Supervisor: Christoph Schnoor

Associate Supervisor/s: Chris Murphy

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