WILDERNESS

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Fig. 1: Tararua Ranges east of Kapiti, at dusk.

ABSTRACT

What we perceive to be wilderness is in fact just a product: a physical manifestation of the force of wildness. Attempting to manufacture wilderness while bypassing this primary element (the force of wilderness) is why 'emulated wilds' often feel uncanny, fake. This thesis contrasts these forces, necessitating a new negotiation between people and the environment.

The Kapiti Coast has seen substantial growth in the last 50 years, resulting in sprawling suburban and commercial development across the region. While areas of landscape close to the historic ecologies of the region remain, much of it has been lost around the town centre, where development has focused in recent decades.

This thesis will explore historic representations of wilderness in picturesque and romanticist painting, drawing on both previous views of the wild, more modern interpretations as well as my own personal perceptions.

The aim of this design-led research is to understand how to bring a sense of wilderness back into developed areas of the Kapiti Coast. In order to do this, I will explore how designing using digital painting can create a stronger sensory understanding of wilderness. I will use this medium of digital painting to explore what the picturesque means within the discipline of modern landscape architecture. Within the specific Kapiti Coast context, I will identify the elements of suburbia that are underperforming in the context of the larger landscape setting and finally establish a scenario-based methodology to explore site-specific definitions of wilderness within Kapiti.

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Fig. 2: Aerial of the Kapiti region. Source: Google Earth.

An aerial photograph of a coastal town, likely in New Zealand, showing a dense residential area with a grid-like street pattern. The town is situated on a flat plain adjacent to a dark, sandy beach and the ocean. In the background, there are rolling green hills and large, rugged mountains with some snow-capped peaks. The word "INTRODUCTION" is overlaid in white, bold, sans-serif capital letters across the center of the image.

INTRODUCTION

PROBLEM STATEMENT

This thesis proposes an alternative way of designing to balance the existence of human development and natural wilderness. It establishes a design methodology that is flexible, adaptive and empathetic towards the wild. I have specifically examined the Kapiti region for its recent increase in infrastructural and residential developments, as well as its complex underlying natural systems. I have chosen to approach this challenge primarily through examining existing interpretations and perceptions of wilderness from New Zealand and internationally, adapting them to the modern practice of landscape architecture and to the specific Kapiti Coast context. Due to the subjective nature of defining wilderness, much of my personal experience and abilities come into this renewed approach to designing the wild.

Comparisons between the wild and the tamed have been made since the first human settlements emerged. Many attempts have been made to find the place of people within this dichotomy. Painters have depicted and poets written about the wild for centuries. Architects and urban planners have attempted to capture the essence of it in their urban parks for almost as long. Much of New Zealand's tourism industry is based on giving people the opportunity to escape to the wilderness.

Currently, Kapiti seems to be unable to reconcile the apparently competing forces of its environmental systems and infrastructural systems. This dualism means that balancing the two can be extremely difficult, and calls for a new strategy of integrating the two in a way that they can exist in a symbiotic rather than competitive relationship.

Discussion around the wilderness appears to have decreased slightly in the past century as the world's last remaining hinterlands and wild frontiers were explored, charted, analysed, and ultimately tamed. However, debate internationally around the progression of construction development and more locally around the commercialisation of New Zealand's wilderness by the tourism industry has made us realise that despite the land being mapped, cultivated, and built upon, wild spaces continue to emerge and grow everywhere. This thesis aims to modernise the debate around wilderness and explore how New Zealand's growing towns and cities can progress symbiotically with the environment through redefining the suburban and the wild, and how styles of landscape architectural representation that give precedence to a subjective experience of the world can reinforce these regional-scale issues.

WHAT DOES DESIGNED WILDERNESS
LOOK LIKE IN MODERN-DAY SUBURBIA?

AIM

The aim of this design-led research is to understand how to bring a sense of wilderness back into developed areas of the Kapiti Coast.

OBJECTIVES

- 1) Explore how designing using digital painting can create a stronger sensory understanding of wilderness.
- 2) Explore what the picturesque means within the discipline of modern landscape architecture.
- 3) Identify the elements of suburbia that are underperforming in the context of the larger landscape setting.
- 4) Establish a scenario-based methodology to explore site-specific definitions of wilderness within Kapiti.

METHODOLOGY AND SCOPE

Broadly, this thesis follows an iterative design research process moving between personal exploration through drawing, photography, painting, digital media, and site analysis, and comparing this to the existing work of landscape architectural theorists and practitioners, artists, and work done by public and private organisations in the area.

Personal design work was an integral part of developing a discussion around my research question. I found it useful to conduct a series of design experiments and later compare my own findings to that of practitioners, which would then influence future work that incorporated lessons from both. This iterative approach involved not only published works, but also discussion with supervisors, lecturers, reviewers, colleagues, and friends and family.

Digital painting allowed me to visualise and communicate my design exploration and concepts in a unique and effective way. While similarly abstract to traditional architectural representation, I believe it allows me to express much more subjective, experiential

information than other techniques which is integral to my process and method. These concepts are discussed in much greater detail in the Preliminary Design section, page 82.

The scope of this design research is limited to the specific context of my chosen site and the largely theoretical and representation-focused nature of the project. As mentioned above, my own subjective perceptions of and reflections upon the wild play a large part in this thesis. While it is of course important to consider the implications of large-scale design moves on the many people it will affect, I am qualified only to utilise my own personal experiences with my chosen method of design research.

THESIS STRUCTURE

Fig. 4: Where the Wild Things Are, Maurice Sendak. Max, sent to bed without supper for acting wild, watches as his room grows until "the walls became the world all around". Note the expanding walls of Max's bedroom, until the forest fills the frame in the final image.

Fig. 5: The Lincoln Memorial upon construction (bottom) and current day (top), Washington D.C.

HUNCH/INITIAL EXPLORATIONS

FINDING THE WILD

THE NEW ZEALAND WILDERNESS

The New Zealand wilderness has a clear national definition stemming from the European colonisation of the country. The National Parks Act 1980 and Conservation Act 1987 outline the country's seven "wilderness areas" within which human intervention is prohibited. Partly as a response to increased urbanisation in Europe following the Industrial Revolution, the wealthier population increasingly valued rural tranquility and scenic beauty. Seventeenth- and eighteenth-century landscape painters quickly developed a strong sense of what was considered an ideal scenic landscape (Nightingale & Dingwall). As colonists began to identify New Zealand's scenic locations, idyllic paintings of the untamed God's Own Country were exported back to Europe sparking the beginning of the nation's tourism industry.

"The time has arrived in the history of our colony when our scenery should be preserved, when the historic and beautiful places should be for all time conserved, and when we should do something to protect the thermal

springs, which are of so great value to the country, from being destroyed and from falling into the hands of private individuals."

- Richard John Seddon on introducing the Scenery Preservation Act

It is important to note that this national view of wilderness stems from the definitions discussed above. While there is a clear understanding both culturally and legally what constitutes the 'New Zealand wilderness', the areas designated as such have fallen under the above definitions since colonial times. As the picturesque aesthetic, and later romantic movement emerged in Europe, the recently explored and colonised New Zealand was portrayed in this way by many European artists (Nightingale & Dingwall). The country was compared to both the biblical Garden of Eden and the associated wilderness beyond its edges. The unique local flora and fauna, vastly removed from that seen in Britain and continental Europe, was completely unknown to early

settlers. There was little frame of reference for them to understand this new place and its dangers and opportunities.

Finally, the forces at play created new environments rarely seen in the rest of the world. New Zealand, created by aggressive tectonic movement between the Pacific and Australian plates and battered by the southern Pacific Ocean. Geothermal sites collided with the flora and fauna mentioned above, creating a diverse and engaging environment vastly different from Europe.

These factors, stemming from the definitions of wilderness discussed above, melded into what is our modern understanding of wilderness in New Zealand. While commonly seen as just 'the New Zealand bush', wilderness here is more than that. It is our cultural and historic understandings of the land beyond our reach, the dynamism and inconstancy of the forces at play, and the unknown places both in the mountains and at the end of the street.

Kapiti represents these definitions perfectly. Wedged between the water and the mountains on the dunes and cusped foreland created by Kapiti Island, it represents a growing battle between the dynamic forces of the environment and the increasing human population. On a geological scale, changes to the region's dune systems and wetlands are rapid. The battered coast is slowly worn away while tectonic shift gradually raises the mountains. Meanwhile, the quickly growing Wellington region is spreading north and many are choosing to take advantage of the more mild microclimate away from Cook Strait. As our technology develops, we are finding new ways of controlling the landscape and shaping it to our will. However, this often comes at great expense. It is time to examine new possibilities on the coast that shift away from 19th and 20th century approaches.

CURRENT PRACTICE AND DIGITAL PAINTING

This practice of creating emotionally-engaging landscapes has been lost in recent landscape architectural practice. An over-emphasis on synthesising the various landscape systems at play within a site has come at the expense of the individual connection to the landscape. Just as the Romanticism movement was in part a response to the industrialisation of Europe and the scientific rationalisation of nature, there must be a new emphasis on the human experience in one's environment in today's system-heavy approach to urban design (Czerniak).

The use of digital painting as a representational tool for architectural design, however, brings its own challenges. As a two-dimensional representation of a small portion of a three-dimensional space, it is limited by many of the same shortfalls as traditional painting or architectural visualisation. The 'window' that one sees the landscape through in a painting relies upon established conventions of pictorial aesthetics and composition, limiting the view to the single perspective that has been chosen for the composition.

A still image can create illusions of the passing of time, but not depict it directly. As will be discussed later, Simon de Vlieger's painting *Wooded Landscape with Sleeping Peasants* (page 34) shows a representation of the advance of deforestation with an image of fallen logs and encroaching pasture, but is unable to show the history of the place or expectations of the effects of this development.

A synthesis of media across a project can bring the best of both worlds into landscape architectural design. Abstraction of complex information and non-visual elements can be afforded by traditional architectural representation and diagramming, while the emotive and personal qualities of the picture can be brought out through perspective images.

Fig. 6: Testing different brushes.

Fig. 7: The pines east of Kapiti.

LITERATURE REVIEW

DEFINING WILDERNESS

THE EPIC OF GILGAMESH

Understanding historic definitions and explorations of the wilderness are extremely important to defining it in today's context - as landscape architecture is such a young profession, we must look outside our specific discipline to make use of knowledge from the past.

The Epic of Gilgamesh, although around 4500 years old, is still very relevant to today's discussion around the taming of the wilderness. In the story, the wild man Enkidu is created to provide an antithetical companion to the ruler of the city of Uruk, Gilgamesh. He is brought to Gilgamesh after a series of encounters with a fearful trapper, who sends a harlot from the city of Uruk to sleep with Enkidu. He is thereby contaminated by humanity, and his previous wild companions flee at the sight of him.

Enkidu had "grown weak, for wisdom was in him, and the thoughts of a man were in his heart."

On reaching Uruk, Enkidu is given clothing and taught to eat bread and drink wine, symbolising civilisation (clothing, bread, and wine all requiring skill and cultivated land to produce). Enkidu losing his wildness upon being presented with the products of civilisation is evidence that this view of nature and development as opposite has existed for thousands of years.

This story, although ancient, can still teach us lessons today. If the wildness is tamed, it loses what makes it unique. Current development is failing to retain a sense of the wild, and if this is deemed necessary by policy-makers, planners, and designers, a change is needed.

Fig. 8: Gilgamesh mourns Enkidu, Ludmilla Zeman.

BIBLICAL THEORIES ON THE WILD

Throughout the course of human written history, the wilderness has held a number of definitions, varying based on a myriad of factors including technology, resource availability, geographic location, and others. Many Western perspectives on the wild date back to the Biblical wilderness. Biblical stories can serve as valuable insight into the perspectives of people living thousands of years ago. It is seen as both a place of unknown dangers, chaos, and temptation, but also as a place for solitude, reflection, and possibility. Thomas Cole's 1828 oil painting *Expulsion from the Garden of Eden* (pictured below) is a fairly unsubtle representation of this. The painting shows Adam and Eve leaving the lush, bright, green Garden of Eden into a battered, dark, twisted wilderness. This biblical wilderness is viewed similarly to the wilderness from the perspective of Gilgamesh, discussed on the previous page. This place is a land requiring cultivation and development in order to progress civilisation.

Fig. 9: *Expulsion from the Garden of Eden*, Thomas Cole.

THE PICTURESQUE

Reading Romanticist authors and poets, as well as analysing the works of artists from the same period and the techniques that were used to invoke emotion and connection to the land were extremely useful in developing my own digital painting design technique and methodology.

The aesthetic ideal of the picturesque proposes a subjective perception of the environment. A typically 'picturesque' scene, as defined by the late 18th and early 19th centuries, combines both beauty and the sublime. Thomas Gray combined these two ideals in his description of the Scottish Highlands, writing "The mountains are ecstatic ... None but those monstrous creatures of God know how to join so much beauty with so much horror" (Bendixen & Hamera). As part of the early Romanticist movement, the picturesque placed heavy emphasis on personal aesthetic experience - that scenes or environments could evoke emotions like awe or terror based simply on their composition and structure. The picturesque was an appreciation of the temporal quality of the landscape. The regularity of an apparent 'natural order' would be contrasted with the chaotic sublime of a

jagged, scarred rock face. English artist and author William Gilpin wrote in *A Dialogue* that "Regularity and Exactness excite no manner of Pleasure in the Imagination, unless they are made to contrast with something of an opposite kind... The Fancy is struck by Nature alone" (Andrews). The picturesque was also used to describe that which was neither beautiful nor sublime, but rather somewhere in between. Things that were ordinary or undesirable, which could be the subject for admirable paintings or photographs simply because of their purely visual qualities, were picturesque.

These values, which promote an appreciation of every aspect of the environment from the spectacular, sublime parts of the country to its prosaic, indistinct beauty, seem to have been lost in much modern popular architecture and design. These qualities of the picturesque, which propose a perspective on the world distinct and complementary to a much more global, impersonal view have an important place not replacing, but in addition to contemporary design methodology.

Fig. 7: The pines east of Kapiti (image repeat).

Fig. 10: Wooded Landscape with Sleeping Peasants, Simon de Vlieger.

Dutch painter Simon de Vlieger's 17th-century work *Wooded Landscape with Sleeping Peasants* is a perfect example of this. In the painting, golden evening sun covers a carefully cultivated rural landscape. In the foreground, a number of small figures rest around an enormous tree trunk, presumably freshly felled. A darkened forest looms behind them, the twisting black trunks contrasting sharply with the bright sky above the fields. The scene creates a direct tension between the expansion of human influence into what appears to be old-growth forest, with the addition of the felled log showing the very active, dynamic timeframe that this takes place in.

Thomas Cole's *A View near Mount Holyoke* also shows this stark contrast, but with a reversal of the forces at play. The idyllic pastoral valley with its lazy winding oxbow river appears almost under threat from dark, looming cloud formations which appear to be coming directly out of the twisted, complex vegetation itself. Interestingly, these two clearly contrasting environments never actually meet in Cole's composition. This appears to suggest that Cole believed the two could not be reconciled in the same location and that the presence of developed land would destroy the wilderness, and vice versa.

Fig. 11: View from Mount Holyoke, Thomas Cole.

The aesthetic ideal of the picturesque, which combines both beauty and the sublime, has been translated into both paint and landscape architecture. As part of the early Romanticist movement, it gave emphasis on natural beauty and the dualism between the awe and terror the wilderness could simultaneously make one feel as it arose partly as a reaction to the industrial revolution, romantic art and literature moved away from the biblical definitions of the wild instead focusing on a new post-Enlightenment and rationalist understanding of the individual and nature. A perfect example of this is Thomas Cole's piece *A View near Tivoli*,

which depicts in the foreground the ruins of an ancient Roman aqueduct, overgrown with ferns, flowers, and grasses. In the midground is a sunny pastoral scene, with several small figures and animals, while at the back cloud rises from an imposing mountain range.

"While Gilpin allowed that nature was good at producing textures and colours, it was rarely capable of creating the perfect composition. Some extra help from the artist, perhaps in the form of a carefully placed tree, was usually required." (Andrews).

Fig. 12: A View Near Tivoli, Thomas Cole.

PERSPECTIVE

Another definition of wilderness is centred around the subjective perception of your environment. To put it simply, any environment which you are unfamiliar with can be wilderness. As one gains familiarity with these situations or settings, we contextualise it and are able to understand the environment in relation to past experience, thereby in our minds taming the wilderness. If we are presented with a complex situation or environment where we are unable to identify and understand, such as a bustling urban scene or a deep ocean, we perceive it as a singular, ambiguous wild. As we spend more time around this environment, this ambiguity is broken down and codified against past experiences of similar situations providing us with a logical understanding. An unexpected sudden movement on a dark may trigger

thoughts of threat, but as we experience them more and learn from this understanding, we rationalise that it is likely not a wolf, or a bear in the bushes. This can also be used to explain the imagination and superstition of children - without a wealth of experience to fall back upon, children are open to the wildest, most improbable explanations. A child's belief that their backyard garden is endless may come from a perspective where they believe anything is possible, not from one where they understand from experience that the majority of gardens do eventually end with a fence.

Fig. 13: A valley near my childhood home.

CONATUS/FORCE

The third definition of wilderness I will discuss (following the picturesque and subjective perception), is that of force. Dutch philosopher Benedict de Spinoza refers to this force as 'conatus', defining it as "each thing, as far as it lies in itself, strives to persevere in its being" (Spinoza). It is important to note that, as Spinoza states, each thing, animate or inanimate, exhibits this force; this will to survive. Oceans and rivers represent the manifest force of water; a forest is the product of the force of the trees. However, it is important to note that a forest is not made up solely of trees. It represents a diversity of species, from birds to insects, to understory plants.

These forces become apparent in leftover, unused spaces in cities and towns, where entire ecologies can appear in a disused parking lot. However, this is not to say that human development is somehow not included as a force in this definition. The suburb is to people in a similar way as the forest is to the trees. It is a construction designed to make the basic requirements of human life more simple: warmth, shelter, rest, safety, food, water, socialisation.

However, this combined with our technological ability has two major implications: that of balance and of the monument. We do not allow a natural balance between forces to occur, and the monuments we leave behind have a long-lasting impact. Our ability to shape our environment in relatively permanent ways (both on the short term, such as the construction of buildings and infrastructure, or the long term such as man-made climate change) means that at the end of our lives our actions carry far into the future. Suburbia does not die a natural death. When a tree reaches the end of its life, it falls

providing nutrients and allowing sunlight to reach the forest floor so that new organisms can thrive and evolve. In addition to this, our desire for homeostasis - for equilibrium and stability - appears at odds with a natural homeostasis, which relies upon a constant change to continue. Suburbia occurs at the expense of existing natural cycles, and the permanence of our structures leave behind monuments - monolithic, slow-decaying, objects that stand out harshly against the environment - that further break these loops.

Fig. 14: Forest in Central Park, Wellington.

Fig. 15: Hills above Paekakariki.

SITE ANALYSIS

An aerial photograph of a rugged coastline, likely in Norway, showing deep fjords, steep mountains, and a small town nestled in a valley. The image is used as a background for the text.

Suburbia was first used to describe the ancient Roman villas and estates built on the city's outskirts. As walled cities became more common throughout Europe, the definition of suburbs came to mean the smaller villages outside a major town's walls. Space within these walls was at a premium, and the poorer population could not afford the protection and convenience afforded by a house within the walls. Rural towns throughout much of Europe were established at very similar distance intervals from one another - the distance that one could reasonably walk to reach the fields they tended each day. Trips to larger towns would involve greater distances, but were much less frequent.

The modern definition of the suburb arose alongside increasing improvements in personal and public transportation, beginning with trains and eventually moving through to tramways and cars. The industrial revolution saw many of Europe's rural poor moving into the cities for work, while the wealthy and middle classes hoped to move out of the dirty, squalid cities of the into the cleaner countryside where they could easily commute from when necessary. Infrastructural improvements continued to effectively shorten the distances between a city's centre and its outskirts, encouraging more and more people to move out throughout the world.

The early 20th century saw the establishment of 'green belts' around many cities, designed to provide green space to urban dwellers and improve air quality. However, green belts created a greater density in urban areas and larger distances from suburban areas. It could be argued that these green belts became the new town walls of the 20th and 21st century, forcing those who could not live close to these protected green areas and the city centre to live outside, in satellite towns and 'bedroom communities'.

The Kapiti Coast District lies on the west coast of New Zealand's North Island, just above Wellington. Parts of the town are built on the cusped foreland created by Kapiti Island, much of which is a pest-free bird sanctuary. Due to its proximity to Wellington and slightly warmer climate than the capital, much of its workforce commutes from Kapiti to Wellington each day. The population of the district was just below 50,000 in 2013, rising 6.3% since the previous census in 2006. Many Wellingtonians also choose to move to the Kapiti Coast to retire, driven by the climate, amenities and flat topography. 23.3% of the region's population is over 65 - almost double the national average.

These trends of rapid population increase, aging demographics and the ecology of the site which stretches from the coast into the Tararua Ranges presents interesting design opportunities for the region.

10km Scale 1:500,000

Fig. 16: Aerial of the lower North Island. Source: linz.govt.nz

Fig. 17: Textural collage of the Waikanae River from estuary to mountains.

Fig. 18: Waikanae Estuary.

Kapiti's wetland areas are characterised by their horizontal openness. As water moves through the site, it erodes and levels the landscape, settling across horizontal planes. Vegetation rarely grows above 1-2m due to the unstable soil, creating stretching expanses of grasses, flax, and shrubs close to eye level.

This effect, which is only coincidentally relative to the average height of a human, creates interesting opportunities where vision is obscured or unimpeded while the landscape remains at a relatively flat level.

Fig. 19: Pastel sketch of structures and figures on the coast.

The few objects that do break the horizontal plane do so in random, jarring ways. Seed pods from flax pierce out of the grass at irregular intervals providing reference points in the expanse, while Norfolk Pines, *Coprosma* species and others begin to appear as the ground becomes drier inland. These objects can serve as points of reference when exploring the flat landscape, guiding the wanderer against their relative positions.

Fig. 20: Waikanae Estuary.

Fig. 21: Waikanae Estuary footbridge.

In contrast to the previous, man-made structures in these estuarine environments tend to be low and sprawling, appearing suddenly and disappearing again into the vegetation. Pedestrian footpaths, overbridges, houses and other objects lay flat on the land, adding to the sense of expansiveness. These low-impact structures typically fit well into the country's modern vernacular style, making good use of natural materials that do not contrast unpleasantly with the landscape. While the soil strength may dictate many of the structural decisions in these areas, the ultimate result is that the visual quality of the landscape is not only often preserved, but enhanced.

Fig. 22: Waikanae Estuary footbridge.

Fig. 23: Sketch of irregular concrete structures on the beach.

Fig. 24: Waikanae Estuary.

Fig. 25: Waikanae Estuary.

In Kapiti's wetland areas, there are very few defined transitions. Beyond the contrast between the sky and the land, one space blends slowly into another. The tidal nature of the estuarine environment means that even the lines between land and ocean are blurred - the estuary itself is literally the mixing place of fresh and salt water.

Fig. 26: Waikanae Estuary.

Existing development in Kapiti's current and former wetland and interdunal areas are characterised by curvilinear design, particularly in its pathways and roadways. Streams, footpaths, and roads all curve around bodies of water and between the dunes, maintaining their level amid the shifting elevation of the landscape. Roads and paths often have no clear end point, instead curving off into the distance. This creates an increased sense of distance, and often creates difficulty in navigating the network of twisting routes.

Fig. 27: Waikanae Estuary.

Fig. 28: Sketch of water moving around vegetation.

The sheer volume of vegetation and lack of many tall trees or structures in these areas means that while very few long or dark shadows are cast, the environment is rich with a range of textures. Grasses, flaxes and reeds each have distinct colours and patterns to them, creating a visually diverse but somewhat flat environment. The lack of shadows gives the landscape a somewhat two-dimensional, highly textured, almost Impressionistic quality.

Fig. 29: Waikanae Estuary.

Fig. 30: Treatment wetland opposite Coastlands.

Fig. 31: Trees along the Waikanae River.

Fig. 32: Enclosure in the forest.

The broadleaf forest areas along the Kapiti Coast, which begin past the dunes and up into the foothills of the Tararua Ranges. The dense, multi-trunking vegetation and thick leaves create shimmering patterns of light and shadow. Sunlight falling on just one or two trees can create an incredible amount of depth and contrast, giving a relatively short distance great visual interest. The cage-like qualities of many thin trunks enclose the viewer, but with the promise of much more currently just out of reach.

Fig. 33: Treehouse in pine near Otaihanga.

Complex texture is abundant in these areas, and plays a much bigger part in defining the landscape than Kapiti's other areas. Trees and vegetation create a highly layered effect at multiple scales. In contrast to the high texture of Kapiti's wetland area, its forested environments involve light and shadow as a major defining part of the texture created.

Fig. 34: Wooden structure near Otaihanga.

The light and shadow mentioned above create areas of depth receding into the distance. This effect can be created either when there is a dark foreground with strong lighting (usually the sun breaking through the trees) in the background, as seen on the opposite page, or strong lighting around a dark shaded area, as seen above.

Fig. 35: A dark place inviting exploration.

Fig. 36: The banks of the Waikanae River.

Fig. 37: Pine plantations encroach on Nikau Valley.

The light and shadow mentioned above create areas of depth receding into the distance. This effect can be created either when there is a dark foreground with strong lighting (usually the sun breaking through the trees) in the background, as seen on the opposite page, or strong lighting around a dark shaded area, as seen to the left. As opposed to wetland areas where there are very few stark contrasts and many more slow transitions between environments, stark boundaries are created where shadowy stands of trees suddenly stop, or dense bush becomes grazed pasture with simply a wire fence. These effects serve to clearly define and denominate areas into groups.

Fig. 38: Not too steep for sheep.

Natural materials are often employed in these areas, with minimal use of engineered materials such as concrete or steel. As is the case with structures in wetland areas discussed above, these often informal constructions fit well into the country's modern vernacular style.

Fig. 39: A white picket gate in the bush, Waikanae.

Fig. 40: Treehouse in pine near Otaihanga.

Fig. 41: Vegetated dunes in Queen Elizabeth Park.

Kapiti's dunes give the explorer a sense of undulating endlessness while exploring. The broad range of sizes to each dune mean that when the summit of one is reached (often by way of an indirect, winding sandy path) the wanderer is met with several more ahead of them. The dunes rise and fall, and one is met with the feeling that there will always be one more to climb.

The almost invisible nature of a single grain of sand means that without external context, it can be difficult to gauge the scale of the dunes. The millions of grains that make up a small dune on the beach take almost identical forms to the trillions of grains that make up the much larger dunes further inland. In the below image, the scale of the dune is only understood in relationship to the dozer beneath it.

Fig. 42: Sand quarrying, Otaihangā.

CONSTRUCTION SITE

DANGER

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Kapiti's dunescapes are also characterised by the informal structures that appear there. Loose sand where plants are less able to grow form pathways up dunes, which are further reinforced by the movement of people through those spaces. In areas where grasses and scrub has taken over, goat-tracks formed by walkers and explorers follow the path of least resistance as defined by the topography, vegetation, and existing pathways. On the beach, temporary shelters constructed by beachgoers appear, linger and decay back into the amorphous collections of driftwood along the shore.

Fig. 43: Coastal dunes in Queen Elizabeth Park.

Fig. 44: Trampled tracks over the dunes in Queen Elizabeth Park.

Fig. 45: Shifting dunes stretch into the distance.

The permanent structures that are present in this environment are often hidden away, either by design or having been slowly overwhelmed by the shifting sands and spreading vegetation.

Fig. 46: A house is obscured by flax near Queen Elizabeth Park.

Fig. 47: Rocky Mountains, "Lander's Peak", Albert Bierstadt.

A dramatic, dark landscape painting. The scene is dominated by a massive, craggy mountain peak in the center, its surface textured with shadows and highlights. The sky above is filled with heavy, swirling clouds in shades of grey, blue, and white, with a bright light source breaking through on the left. The foreground shows rugged, rocky terrain with steep slopes and smaller rock formations. The overall mood is somber and majestic.

CASE STUDIES

BUSH CITY, WELLINGTON

Wellington's Bush City portion of the Te Papa Tongarewa Museum of New Zealand is a good example of a 'designed wilderness' that manages to achieve a range of different environments despite the limitations of its size and location. The most successful parts of Bush City are the transitional spaces between the various ecologies. The site is an exhibition of New Zealand's diverse environments, geology, and ecologies in a small area between the museum building and the waterfront. Bush City's clever design and use of twisting pathways and selectively open or blocked lines of sight creates the feel of a space much bigger than it actually is. The tomo (caves) section uses aligned mirrors to create the appearance of deep passageways curving off underneath the rock, when in reality the space continues for just another metre or so. Dense vegetation against the boundary wall in the podocarp forest section with more open planting looking back across the site alludes to a much larger area of unknown than is actually present.

of these two aspects would further emphasise the role of New Zealand's environment in shaping its unique culture and history.

However, as mentioned above the transitional spaces are the park's most powerful. Despite the careful maintenance of the park along a specific vision and layout, the point where the podocarp-hardwood forest meets the volcanic pioneer planting implies a dynamic movement of the landscape. On the other side of the park, temperate forest transitions into wetland planting such as *Phormium tenax* (New Zealand flax) as water availability increases. These spaces, all of which can be experienced within ten to fifteen minutes, creates a diverse range of spaces implying a non-static environment to the visitor. While the human development that I mentioned earlier is somewhat missing from Bush City, this is included in the remainder of the museum. I believe that better integration

Fig. 48: Bush City. Source: Boffa Miskell Ltd.

Fig. 49: Bush City. Source: Boffa Miskell Ltd.

CENTRAL PARK AND PROSPECT PARK, NEW YORK

New York City's Central Park, designed by Frederick Law Olmsted and Calvert Vaux, is an excellent example of landscape architecture designed according to the picturesque and neoclassical values of the time. Olmsted and Vaux envisioned rustic scenery arranged in a series of pastoral spaces. Scattered throughout the park are Romanticist elements, carefully designed to appear as a much more rugged landscape one would find away from the city. Large boulders, waterfalls, ravines, and sharp grade separations define the park's northern end, with curvilinear pathways winding throughout.

It is clear that Central Park has been a huge success from its inception into the modern day, despite many challenges that it faced during its design and early years. Its style, a product of the era's aesthetics and politics, remain relatable today. However, as a designed wilderness, the park appears too manicured and idealised. The carefully maintained grottoes, planted areas and exposed rock faces lack the dynamism and imbalance of the wild.

Much of the park's allure comes from, in my opinion, the people who use it. Olmsted and Vaux's original vision for the park included enforced regulations on behaviour within the park, encouraging strolling and quiet appreciation of the park and even as a way to refine the allegedly coarse, impolite immigrants to the United States (Ranogajec). Olmsted himself wrote that many New Yorkers were "ignorant" of the social purpose of the park and needed "to be trained in the proper use of it." However, the park today serves as a common ground between all

people in the city - a place where they can exercise, relax, enjoy festivals and concerts, or assemble as they please - all activities prohibited under the regulations enforced to preserve Olmsted's carefully sculpted ambiance for the park.

These changing programmes are a reflection of the people of the city, and provide the constant shifting force necessary to create a wilderness. The varied arrangement of ambiguous spaces within the park creates the perfect canvas for people to interact and coexist.

Fig. 50: Frederick Law Olmsted, John Singer Sargent.

Fig. 51: Belvedere Castle, Stig Nygaard.

Fig. 52: Steps carved into schist in Central Park, New York. Smudge Studio.

CENTRAL PARK, WELLINGTON

Early in my thesis I spent a large amount of time exploring 'wild' areas within the city. One of these was Central Park, in the Wellington suburb of Brooklyn. The park, which combined a mixture of formal gardens and grassed spaces transitioning to natural bush deeper into the valley, is a unique urban park. While exploring local examples of wilderness, I found that Central Park was a wonderful place to both explore and relax. The apparently intermittent maintenance schedule deeper into the park created interesting moments where the dense vegetation was reclaiming pathways and breaching attempts to contain it. In other areas, tracks and other amenities were forced to conform to the geometry of the vegetation and topography.

Central Park was created in the early 20th Century in order to provide public park space close to the city centre, prevent overcrowding and re-beautify some of Wellington's barren, deforested hills (Ross). While popular at first, the park later became infamous as a place where lovers met, prostitutes worked, and later the homeless found shelter from the elements. Casual vandalism and keeping the park safe and tidy has also been an issue. However, the Friends of Central Park group have been assisting the Wellington City Council with maintenance and restoration since 2005, and in 2008 the Council completed significant upgrades to the park (Ross).

Central Park is also a valuable part of the central city for its daylighting of the Moturoa Stream, which runs down the centre of the valley before being piped to the harbour.

As a designed wilderness, Central Park is a success in two ways. As mentioned earlier, the lower historic maintenance in the park combined with an almost adversarial approach

to the dense bush creates the idea of a living, moving wild, while later trends of designing around the natural elements of the park gives presence and gravity to these forces. The newly-installed winding pathway (Fig. 53, opposite) follows the curves of the Moturoa Stream, while avoiding the trunks of the enormous pines that have been planted in the valley. The photo pictured opposite and below shows a large bridge over the stream, present since the very early days of the park, which appears to have become so overgrown as to be a part of the landscape. A small bench in front steadfastly ignores the vegetation looming behind.

Fig. 52: Sketch of a solitary piece of fencing, seen at the upper Southern end of Central Park.

Fig. 53: A winding path in Central Park, Wellington. 'Pseudopanax'.

Fig. 54: A bridge in Central Park, Wellington. 'jessicagoesminimalist'.

Fig. 55: Clay render demonstrating potential flooding in central Kapiti.

An aerial, high-angle view of a city model. The model is composed of numerous small, light-colored rectangular blocks representing buildings. A large, dark, irregularly shaped area in the upper left quadrant represents a body of water. A prominent, dark, straight line, possibly a road or a canal, runs diagonally from the top center towards the bottom right. The overall scene is rendered in a monochromatic, high-contrast style, with deep shadows and bright highlights. The text "PRELIMINARY DESIGN" is overlaid in the center in a white, sans-serif font.

PRELIMINARY DESIGN

PRELIMINARY DESIGN

Earlier discussion has largely focused on depicting existing areas perceived as wilderness throughout history. But can these spaces be designed? The view that the wilderness is a place of unknown, shifting forces in the environment, as I have suggested earlier, would seem to imply that by definition, wilderness cannot be designed. The very process of organising space into a coherent design tames that wildness and makes it easily understood by the viewer. This was a challenge that I encountered fairly on in my thesis experimentation. I had little trouble creating images of existing wildernesses or abstractions that did not directly translate to designed space. Once I began attempting to design 'wilderness' within Kapiti, my attempts felt simplistic and relying heavily on convention.

My early explorations were focused on establishing a robust personal definition of wilderness to frame my later designs. I created a series of images depicting various 'wild' scenes as I saw them. As I painted more, a number of common themes arose throughout.

Many of the landscape typologies within Kapiti share a common theme for interpreting the space: the unplanned use of light and shadow to define space. This has different effects in different places. A lack of tall vegetation or structures in Kapiti's wetland and grassland areas reflect not only removes points of reference to position oneself in relation to, but the lack of long shadows prevents one method of interpreting the depth of the scene, creating an unusual expanding environment. Conversely, forested or more

Fig. 56: Early design sketches.

heavily vegetated areas create depth through the casting of long shadows, making distances appear greater than they are.

My paintings would often involve gradients between areas of bright light and dark shadow. Often, lighting was a central focal element in the composition of the images. Scenes would be frequently lit from the back, with areas of shadow around the canvas borders. The clearest example of this is seen in Fig. 13 (page 86), overleaf. The painting illustrates a childhood memory of mine, where a (seemingly) enormous valley connected my house to a friend's. The greenish lighting filtering through the trees suggests a continuing depth to the forest, while the darker edges create a feeling of the unknown beyond what is visible.

Overpass is another that exemplifies this contrast between light and shadow. The painting is a stylised sketch painting of the pedestrian bridge within Coastlands, which crosses the Wharemakū stream. Again, this image is centrally lit with the viewer's focus drawn to the brightly illuminated passageway while we appear to be located in an area of darkness looking in.

The later stages of this preliminary design section explore how small interventions can be made in order to trigger the wilderness to create itself. The missing element from earlier work was the lack of the human hand in the process. Landscapes must be designed with the cooperation of the environment.

Fig. 14: Forest in Central Park, Wellington (image repeat).

Fig. 13: A valley near my childhood home (image repeat).

LIGHT AND SHADOW

My paintings would often involve gradients between areas of bright light and dark shadow. Often, lighting was a central focal element in the composition of the images. Scenes would be frequently lit from the back, with areas of shadow around the canvas borders. The clearest example of this is seen in Taylor Valley, above. The painting illustrates a childhood memory of mine, where a (seemingly) enormous valley connected my house to a friend's. The greenish lighting filtering through the trees suggests a continuing depth to the forest, while the darker edges create a feeling of the unknown beyond what is visible.

Fig. 57: Underneath the overpass at Coastlands.

Overpass (above) is another that exemplifies this contrast between light and shadow. The painting is a stylised sketch painting of the pedestrian bridge within Coastlands, which crosses the Wharemake stream. Again, this image is centrally lit with the viewer's focus drawn to the brightly illuminated passageway while we appear to be located in an area of darkness looking in.

Fig. 58. Waves hit Raumati Beach.

MOVEMENT

Movement in Wilderness is another important concept that arose within my work. I have depicted the wilderness in one of two ways in almost all my paintings: with an illusion of movement, change, and energy; or with a sense of stillness, tension, and uneasiness.

Within Kapiti, motion exists in areas that I consider still to be wild, while the more 'tamed' parts of the region appear static. The ocean, the dunes, the estuary, and the foothills are all in constant flux, while the suburbs and shopping malls appear unchanging and immobile.

Waves illustrates the feeling of movement in my work well. In the image, a series of waves break upon a shoreline in the foreground, while dark clouds build and are swept inland in the background. Wildflowers shows this sense of movement across a range of timelines. The shortest of these is the apparent movement of the flowers and the grass as the wind blows through. On a much longer timeline, the diversity of colour and texture in the vegetation suggests a number of shifting species within the small site, increasing and declining in response to one another.

Fig. 59: Wind blows through a flowering field.

Fig. 60: Cliffs tower menacingly over ordinary suburbia.

TENSION/STILLNESS

Cliff is a perfect example of the tension and uneasiness created by stillness. In the painting, a typical suburban scene is starkly contrasted with an enormous cliff stretching up behind. Despite this sublime monolith behind, the focus of the single-storey, double-garage houses remains firmly on the streetfront, appearing to ignore the landscape behind. The apparent proximity of these two forces (suburbia and the cliff) and the scale at which the scene is presented creates an uneasy, awkward relationship between the two. This tension between these forces, both seemingly immobile, creates an energy in the image.

Fig. 61: A simple box frames the landscape above a slow river.

TEXTURE

Frequently I found that I was depicting man-made structures as simplified geometric shapes, lacking in much materiality or texture. *Frame* and *Dunes*, two very early paintings in my initial explorations of wilderness as a contrast to human development (a definition which I later found to be slightly flawed as I was falling into the trap of a purely 'natural' wilderness), the structures are depicted as simple cubes. The white material suggests concrete, but even this is ambiguous and irrelevant given that the primary focus of these images was to initially draw the eye to these structures, but allow the viewer to move their gaze through the environment around these simple objects, exploring the

colour, texture and depth of the surrounding landscape. Through this, I hoped to draw attention to the complexity that the environment offers. The hollow rectangular structure in *Frame* was chosen to illustrate the point that the wilderness continues beyond the human frame created to view it, and even off the canvas it is limited to here. The suburban scene in *Cliff* (page 90-91) illustrates this further.

Fig. 62: A box structure rests lightly on an exposed sand dune.

ABSTRACTION

Abstracted paintings of the qualities that I identified within places that I felt were wild were also very useful in these initial stages, attempting to establish a personal visual definition of wild. Many of these paintings involved similar qualities to those mentioned above: light and shadow, movement, and texture.

Cascades was an image painted as an abstraction of the way that the relationships between various landscape systems and ecologies are constantly shifting. If a tree falls in the forest and begins to decompose, new plants will compete for the nutrients and sunlight provided by the fallen tree. Rivers carve out new pathways through the land, moving sediment to constantly eat away at or generate new riverbanks. Thomas Cole's

A View near Mount Holyoke (below) shows this in a more literal fashion - the impending thunderstorm is threatening to devastate the serene pastoral countryside.

As mentioned above, while useful for creating a visual language around the wild, it was difficult translating these findings into realised space within my site. Pulling elements of this language and attempting to create designs which reflected these did not produce satisfying results, and I found that simply using what were effectively the 'tools of wilderness' was ineffective.

Fig. 63: *A View near Mount Holyoke*, Thomas Cole.

Fig. 64: An abstraction of ecological dynamism.

DESIGNING WILDERNESS I: ELEMENTALLY

Initial attempts to design spaces that would evoke a sense of wilderness felt overly simplistic, lacking the complexity and depth seen in the areas that I had previously identified in my work. I found that once a space had been designed, by myself or others, it had a certain readability and logic to it that could be understood across people by unspoken rules of scale, composition, programme, and expectation. In the early stages of my design exploration, I created abstractions in order to represent the intangible qualities of wilderness that I had identified. However, once these elements were used to create three-dimensional space again within my site, they were missing a sublime quality present in the incidental wilderness.

The below series of sketches show how these attempts to create wilderness accidentally resulted in a detrimental readability. The first shows pockets of wild vegetation bursting from small areas bounded by wide pathways, which curved off into the distance in an attempt to disrupt a person's navigation.

Fig. 65: Sketch of a barely-contained wilderness.

The second group of drawings shows a series of geometric structures overgrown by vegetation. Again, it felt as though the wilderness had been reduced to simply irregular planting contrasted with the smooth surfaces of man-made structure. The structures themselves - even without people present in the image - have a clear sense of scale that is further emphasized by the perspective chosen. The wilderness is not created with Vitruvian ideals of human proportions in mind, and I found myself often forgetting this concept with my attempts to design within these places.

Fig. 66: Vegetation exploding from a series of structures.

DESIGNING WILDERNESS 2: NO BOUNDS

Another major factor in my earlier paintings which I found to be inhibiting my ability to establish a language for the 'designed wilderness' was oversimplifying and objectifying the wild. It could not be summarised into a coherent structure; it was boundaryless by definition. Romanticising and idealising the wild as an opposite force to human development compounded the problem, and went against the definitions I had established for myself earlier. It seemed as though the wilderness could not be designed, because the very act of designing had a taming effect and subsequent paintings felt overly conventionalised.

Treehouse is a painting of a hypothetical structure near Coastlands that exaggerates the childlike imagination of one's treehouse to a larger scale. The haphazard, loose construction made from a multitude of poles and branches reaches to the sky while dark windows and a rope ladder invite exploration. However, the structure has no effect on the landscape it occupies. Its presence is bound to the physical space it occupies and it does not interact with any of the forces nearby: the Coastlands mall, the swampy pasture it sits in, the nearby stream, the foothills and the dunes. Its irregularity and rough wooden materiality alone does not make it wild.

Fig. 67: Treehouse on the unused land opposite Coastlands.

Slide (opposite) is also representative of this oversimplification. In the painting, a slide swooping down from a large rocky outcrop evokes senses of danger, excitement, and exploration. As with *Treehouse*, the abstraction of the scene from its environment is its major problem. The slide sits in a void of white space, and the emotions that it attempts to draw out are tempered by this. More effective would have been siting the slide off one of Kapiti's steep coastal cliff faces (below). As with the picturesque combination of the beautiful and the sublime to create awe and terror, the contrast between the sheer, rugged cliffs and the crashing waves below would feel much more 'wild'.

Fig. 68: The coast towards Paekakariki as seen from Pukerua Bay.

Fig. 69: An exciting playground.

DYSTOPIAN SCENARIOS

I began to explore the idea of changing the environment in some small way, hypothesising the natural response to such a trigger, and then designing in a manner which responds in a way which preserves this new ecosystem while still allowing present society to function, albeit with some clear differences. In this way, with nature as the co-architect of our new urban structures, I could explore tangible design concepts without imposing on the wild aspects themselves. These scenarios would play out in a myriad of different ways in reality due to thousands of variables I am unable to account for, but exploring the effectiveness of this method of design is still an extremely valuable tool. The explorations are greatly exaggerated, unrealistic examples of what the future may look like, but serve to explore the methodologies of suggested design responses. Looking at a number of hypotheses which are outside the realm of reason allow us to focus on the approach rather than technical issues.

At the end of each scenario I have included a digital painting I created at the inception of each. These paintings capture the essence and feeling that, by making small interventions, I hoped to bring out of the latent wilderness.

Fig. 70: *The Epic of Gilgamesh*, Francis Mosley.

PINES

Pines explores a designed response to the sudden and rapid expansion of *Pinus radiata* forestry plantations in the foothills to the east of the town centre. I have speculated that a new development, either through the environment, generic modification, or some other change suddenly allows the trees to grow extremely rapidly, spreading into urban areas uncontrolled. The diagrams below show forest growth over a hypothetical five-year period using existing plantations and statistics on Kapiti's prevailing wind.

Building within this new environment would require completely rethinking our urban design and infrastructure strategies. While building materials would be abundant, existing foundations would be at risk from becoming uprooted and space for new construction would be severely limited. Within this new ecosystem, walking and cycling may become more common due to tree roots causing damage to roads. These modes of transport might be further popularised as buildings are constructed vertically, constrained by the limited space but able to use the large trees for support. New housing typologies and the social implications that go with them will develop

Fig. 71: Pine growth diagrams.

as construction shifts towards these 'wooden skyscrapers'.

There are potentially very wide-ranging effects from a simple change in the environment such as letting trees grow unchecked. The encroachment of trees upon areas that we have already developed, with the risk that conventional methods of management are ineffective on the spread, warrants a sharp change in our design practice through to our way of life.

Large forests do already exist. Existing suburban typologies do not mesh well with the 'typology' of a forest, however, and as

such land is cleared for more houses. A new approach to design that equalises the landscape into one coherent ecosystem would allow both to function and thrive.

Fig. 72: Section through potential village in the pines.

Fig. 73: Conceptual painting of pine settlement.

BIRDS

Birds hypothesises design responses assuming scientific advancements proceed to the point where we are able to reintroduce the extinct *Dinornis novaezealandiae* and *Harpagornis moorei*, or North Island giant moa and Haast's eagle respectively, as suggested by Labour Party MP Trevor Mallard in 2014 (Newshub Archive). The return of the giant birds could perhaps become part of New Zealand's 'wild' tourism industry - our own version of *Jurassic Park*.

Moa ranged from inland forests where they foraged to coastal dunes, where they commonly nested. Passageways would need to be provided between these important areas.

Shelters would also be provided in the event a hungry Haast's eagle was sighted. Shelters spaced with a radius of 200m would ensure the average pedestrian could reach one within two minutes walking, from any point in the urban limits of Kapiti. These shelters may create new focal points in the community, allowing new shops to develop around them similar old village shops or suburban grocers, albeit on a much more granular level with just 400m between centres - an easy five-minute walk. Large suspended nets could be erected to prevent unwanted giant birds from entering certain spaces - functioning as 'reverse aviaries'. The cost of such constructions would mean that only certain areas would be

protected, further intensifying development there while reducing it in other places. The condensing of urban areas away from moa habitats and into areas covered by shelters would have significant social effects in a similar way to that discussed above in *Pines*, although with drastically different actual results.

Fig. 75: Section through Coastlands.

Fig. 76: Conceptual painting of a moa passageway, with raised pedestrian walkway.

DEATH

In this experiment, perhaps the most implausible and absurd of this series, I explored the effects of a shift where the bodies of all those who died in the region had to be interred in place. This change may come around as the result of an unusual disease epidemic preventing their transport, or a sudden religious movement.

I explored statistics on population growth, age, and causes of death within the Kapiti region (Fig. 78, right) to create the diagrams below, which project mortality locations around central Kapiti for the next 30 years. The town's retirement villages and medical facilities would be forced to

either build upwards or begin to migrate horizontally, in both cases leaving behind morbid monuments. Major roadways would very gradually shift, meandering across the landscape like rivers as vehicle accidents create new obstacles along the existing route.

The *Death* scenario focuses on the adaptability of our current urban framework if we assume that some land cannot be re-used. This could be the product of industry or any other factor as much as it could be one of death. This exploration shows that current design is too inflexible to the changing environment.

Fig. 78: Statistics on the Kapiti District.

Fig. 79: Section through central Kapiti.

Fig. 80: Conceptual painting of a response to entombment in-situ.

WATER

Water explores possibly the most drastic shift to the existing Kapiti area by employing the simplest intervention. Currently, the catchment the town centre sits in drains primarily through the Wharemaku Stream, much of which is channelled to ensure rapid movement of water through the site to prevent flooding. The Wharemaku passes through a narrow point in the lowland dunes where the stream meets the new McKay's to Pekapeka Expressway. If this passage were to become blocked - either intentionally, with debris from a significant rainfall event, or the collapse of the expressway bridge in a big earthquake, the entire area around the Coastlands mall would be inundated.

A large flood event would return a large portion of this already swampy land back to permanent water coverage, as large parts of it may have been before the area was developed. Varying gradients of water depth would be created, shifting regularly due to the flat topography, rainfall, evaporation, and other factors.

This land has been proven to be valuable and is not likely to be given up, however. It is likely that more flexible settlements will be established that take advantage of the new waterways, with systems of pontoons between moveable, floating houses and water taxis able to ferry people around the entire basin. There

Fig. 81: Existing waterways and potential flooding.

will be portions of the landscape that remain too shallow to move across but too wet to build upon, creating informal, undesigned green space in irregular patterns throughout the settlement.

again, instead of creating an adaptable ecosystem that effectively work through and even welcome change.

Whether this is a permanent change or not, the region would be better served by incorporating adaptable resilience into its design. Our current response to resilience tends to be towards prevention and management - attempts to control the environment through floodbanks, seawalls, rapid drainage, etc. With this system we will remain one step behind, only able to prevent events that we have experienced and anticipate

Section D-DD: Adaptation to a long-term flooding event in Paraparaumu.

Fig. 82: Sections illustrating a potential response to significant flooding.

Fig. 83: Conceptual painting of Kapiti, flooded.

Fig. 84: Severe flooding of the Wharemakū Stream, with water reaching many houses and industry buildings.

Fig. 85: Many buildings around Coastlands completely submerged. Water covers the Metlifecare Retirement Village.

Fig. 86: Flooding around Coastlands mall and the surrounding houses, including Stage Highway 1. Kapiti Quarry visible in the background.

Fig. 87: Dune topography in Raumati Beach suburb creates a series of small lakes, eventually linking back to the basin banded by the Mackays to Pekaheka Expressway.

Fig. 88: Final design conceptual masterplan.

An aerial photograph of a suburban neighborhood. A major road runs diagonally from the bottom left towards the top right. It intersects with several other roads. To the left of the main road, there are several large commercial buildings with white roofs and parking lots. A small pond is visible near the center. To the right of the main road, there are more residential houses with various roof colors (red, grey, blue). A semi-transparent horizontal band across the middle of the image contains the text "FINAL DESIGN" in a large, black, sans-serif font.

FINAL DESIGN

Fig. 89: Final design plan, dunes area.

In this final design chapter, I have broken my site into three distinct areas defined by Kapiti's historic ecologies: the dunes, the wetlands, and the forest. As explored in my site analysis, each has unique effects and opportunities for design. The following takes those qualities and incorporates it into design, using these aspects of the wild to enhance our built environment in new ways.

The first of these is Dunes.

The existing suburban houses scattered across the region's dune system have been condensed into clusters, which both protect from flooding by rising above the flood level, and allowing the dunes to move around them. In this way, a similar number of houses has been preserved but with the addition of open space where the dune system is able to move naturally, instead of becoming frozen in place. This higher-density system also allows community amenities to be located very close to the home, which is important for Kapiti's aging population. Clusters would likely be located within easy walking distance from one another also.

In elevation, the new housing structure also maintains the profile of the dune landscape, one of the most defining features of this environment (see Fig. 91, page 126). Instead of sprawling suburbia throughout the region, the necessary development can be built in alignment with the aesthetics of the dunes.

This design would return some self-determination to the environment, while allowing human urban development to continue. With global environmental concerns increasing, a return to something similar pre-Industrial urban design combined with today's rapidly improving technology is a viable alternative to existing development trends.

Fig. 91: Dune housing design diagrams.

Houses raised above water level while site is still allowed to flood.

Structure of cluster matches that of the dunes nearby.

Views afforded to all residents.

'Village' effect created by small concentrations of houses.

Walkable mini-city created, while still being close to other groups of houses.

Fig. 92: Illustration of proposed dune housing.

Fig. 93: Concept painting of dune housing structures.

Fig. 94: Coastlands area conceptual masterplan.

The second part of my site is the area around Coastlands. In this exercise I have adopted elements from the *Water* scenario (page 116). Kapiti's interdunal wetland system has been restored simply by limiting the flow of the Wharemake Stream running through the site. Slowing the water down throughout the site allows it to be cleaned by wetland vegetation, and provides new habitats for birds and other wildlife.

The ambiguous space around Coastlands will be opened up as permanent and temporary market space, turning the area into an ever-changing, vibrant and walkable destination. The market space will blend seamlessly into the wetland, providing pedestrian pathways into Kapiti's residential areas for those who choose to walk, cycle or perhaps even kayak to the shops.

This continuous transformation is the key to creating wilderness in this space. Currently, Coastlands feels incredibly static despite the mall's popularity. An element of the unexpected and the exciting will go far in creating the effect I hope to achieve in this currently mundane suburban environment.

Fig. 95: Wetland area sketches.

Broad wetland provides new habitat for wildlife in and around the urban environment.

Low-lying structures reduce visual impact on the wetland environment.

New structure promotes walking and cycling throughout the site.

Boardwalks provide constant routes while the movement of sand creates temporary passageways through the land.

Rising and falling waters creates different spaces daily.

Fig. 96: Collage illustration of proposed wetland.

Fig. 97: Concept painting of wetland market at dusk, towards Kapiti Island.

Fig. 98: Conceptual masterplan of lowland forest area.

Finally, the area just south of Coastlands, around the Metlifecare Retirement Village, has had its historic lowland forest restored. These areas around the lower North Island are characterised by their *Cordyline australis* (cabbage tree), *Mycoprum laetum* (ngaio), *Peudopanax lessonii* (five-finger), and *Rhopalostylis sapida* (nikau), among many others.

As identified earlier in this thesis, some of the most striking features of New Zealand's lowland forests are their tactile and visual qualities. These qualities, when introduced into our current suburban areas, can create diverse and engaging environments for people to live in. The residential areas would be able to grow in an irregular pattern alongside the forest, creating innumerable distinct places throughout. These spaces, created by the blending of traditional architectural practice while working in tandem with the forest ecology, would allow interesting interactions between structures, residents, visitors, and the forest to occur.

The uniformity and reliance on impermeable surfaces and vehicular transportation are some of the major problems I have identified within Paraparaumu's suburban context. Incorporating the region's already-existing coastal lowland forest ecology into our design methodology will serve to create a much better sensory understanding of what the wilderness means within this site, especially when adopted in tandem with the other design proposals outlined above.

Fig. 99: Forest area sketches.

Forest allows for irregular structures to take advantage of the trees.

Shared public space provided on the forest floor.

Existing buildings will slowly adapt to the growing trees.

Abundance of irregular, textural surfaces provide engagement for the elderly.

Forest ecology provides natural water infiltration, shelter from wind and rain, and mitigates urban heat island effect.

Fig. 100: Collage illustration of proposed housing.

Fig. 101: Painting of forested area

Fig. 102: Where the Wild Things Are, Maurice Sendak. After years of adventure, Max returns to his room to find his supper still hot.

CRITICAL REFLECTION

This section contains critical reflection of this design research in relation to my scope and chosen methodology. I realised that the key to successfully designed wilderness was in the interplay between the various forces (i.e. wind, water, vegetation, geological processes, and human development) present in the landscape, and that the wild emerges in the unpredictability and unknowns that are subsequently generated. Wild places are a response to these uncertainties, a definition which fits both a frontier settlement in the hinterland as much as a densely urban environment.

In this frontier settlement, efforts of human development are in contention with the natural processes dating back millennia. Gilgamesh and Enkidu set out in *The Epic of Gilgamesh* to slay the monstrous guardian of the forest at Cedar Mountain, Humbaba, to clear land for the expansion of Uruk - the taming and developing of the wild frontier into useable land for the city.

In a more dense environment, it is the necessity to contend with navigation and survival in a constantly changing, unpredictable urban environment that creates wilderness. Few would argue that a chaotic intersection or bustling city market did not have a sense of the wild. The irregular but functional construction of medieval urban centres creates a wilderness of alleyways, passages, overhangs and grade shifts.

As pictured on page 90, *Cliff* displays this dialogue between forces to an extent. The tension and uneasiness in that painting is created by stillness, as discussed earlier, and this stillness comes from the lack of play between the unmoving cliff face and the apparent indifference of suburbia.

The painting *Coastlands* (opposite) perhaps shows the relationship between the forces of development and those of nature clearer. In the image, shoppers spill from the glowing entrance of the Coastlands mall in Kapiti. In an almost voyeuristic fashion, the viewer sees the no-mans-land in the midground from a shroud of dark bushes and fog, which feel to be encroaching towards the mall. Lighting is used to create contrast and to frame the image. The light emanating from the mall interior is unable to penetrate far into the dense vegetation and fog, drawing the viewer's eye into the image and into Coastlands.

I began to explore this concept of examining the landscape forces present in a site, making a minor shift in them to upset this balance, and designing a potential response to this new environment. This allowed the forces of wilderness to come through and manifest themselves in a non-designed way, creating space that was technically 'not designed' by way of several tactical interventions into the site that would serve as a catalyst for progression and change in the landscape. Additionally, much in the same way that the frontier town is as much a part of the wilderness as the forest, a designed response to continue habitation that has been negotiated with these forces becomes another element of the landscape in a complex assemblage of others.

Current prevailing design methodology is at a turning point. With ever-increasing populations and man-made climate change reaching a crisis point, it is time that we explore alternative methods of design. This thesis has combined subjective interpretation of alternatively-structured design methodology in order to create a sensory understanding of the wilderness; something that is yet to be deeply explored within the context of landscape architecture and urban design. In order to explore what wilderness

integrated into our modern suburbia may look like, I have combined this personal exploration with historic understandings of the picturesque. As the picturesque artistic movement was a direct response to the industrial age, it seems appropriate that these explorations are modernised in the information age. However, the very nature of wilderness has made it a great challenge to design.

My proposed methodology of prompting wilderness - which my design research has proven we are unable to control nor design - through small interventions is the beginning of a potentially valuable methodology, which combines the design abilities of people with the *conatus* of the wild as cooperative entities in the future.

Further research in this area would ideally undertake similar interventions as design projects, which has fallen outside of the scope of this research. These interactions between design and environment would be documented and explored, and hopefully expanded upon around the world.

Fig. 103: Coastlands as viewed through heavy vegetation.

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