

OUT OF PLACE

Rewriting a landscape signature

a thesis by

Alison Baker



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Rewriting a landscape signature

A 120 - point thesis

by Alison Leonora Baker

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For Mum & Dad

ABSTRACT

South Wairarapa, in New Zealand's lower North Island presents an interesting collision; the landscapes forms and features evidence distinct separation between traditional landscape values and recent European economic developments – a separation evident in most New Zealand regions. Combined with its low urban socio-economic outlook and the utilisation of unsustainable farming practices, the region is in decline both ecologically and socially. Near irreversible damage has been done to the landscape. Engineered floodplain manipulation, land clearing, and intensive individualistic farming has resulted in continuing land degradation, flooding, droughts, severe waterway contamination, pollution, and habitat destruction.

Utilising a design led approach in a three-scale investigation with focus assumed on the Ruamahanga River catchment, this thesis investigation explores how designed intervention with regards to the Wairarapa waterway systems can promote a re-emergence of place and placement in Wairarapa to reflect an integrated relationship with the processes of one's landscape. It discusses how this interaction could be landscape transformative, re-introduce the prosperities of historic Wairarapa, promote sustainable farming practices, and recover declining ecologies. The investigation also discusses the wider New Zealand issue of rural waterway acknowledgement, and its relationship to place, culture, and identity discourse.

This study has been ethically approved. *Approval number 22990.*

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My classmates, you're all nuts, please never change;

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Figure 1. Phormium tenax in flower; Wairarapa Moana Wetlands; 2016



Part One

INTRODUCTION



Figure 2. Ruamahanga River, Wairarapa; Charles Decimus Barraud; 1863 or 1865

PROBLEM STATEMENT

Water, through rivers and streams, and as a connector of places and of people, is the essential landscape signature, carved and written both onto and into the New Zealand landscape (New Zealand Conservation Authority 5; Parliamentary Commission for the Environment 9). Through thousands of years of evolution and change, water has transformed and linked the changing landscape we humans inhabit – a landscape now deteriorating (New Zealand Conservation Authority 8). The arrival of settlers, and the introduction and development of agricultural and pastoral landscapes for the purpose of economic expansion, has seen a prominent decline in appearance, number and quality of watercourses (New Zealand Conservation Authority 11; Proffitt; NZIER 3; Fig. 2). The little remaining open air waterways are irreparably deteriorating; the preference for intensive individualistic farming with minimal oversight has seen the establishment of unswimmable, polluted, and ecologically degraded waterways (New Zealand Conservation Authority 11). Fragile ecologies are being damaged as natural processes and fluctuations are becoming regulated and controlled;

their indigenous cultural connotations are seemingly ignored; the concept of ‘sustainable management’ has been abused and exploited.

New Zealand waterways, and the connotations and histories they embody, have been important to regional identity establishment, and the acknowledgement of people and places within time (Royal 6). The misplacement and ignoring of these systems within New Zealand’s rural regions could be catastrophic. District and Regional Councils prepare documents discussing the inherent cultural landscape values of their regions; they define the character values of their landscape and outline the importance of safe, clean water as a means to ensure prosperity, identity, and growth (Wairarapa Combined District Plan 12-1). *Iwi* (indigenous Māori tribes) and community groups continue to fight for their waterways to be recognised, acknowledged, and protected. Conversely, actual designed recognition of these waterscapes that authenticates these philosophies is ultimately non-existent.



Figure 3. Plain of the Ruamabanga, opening into Palliser Bay near Wellington, Wairarapa; Brees, Samuel Charles; 1843

WAIRARAPA + RUAMAHANGA

The Southern Wairarapa region at the base of New Zealand's lower North Island was once an alluvial plain of lush forest, flourishing wetlands, swamps, and pockets of beech forest, scrubs, and fertile grasslands (Hill 83, 84; Fig. 3). The constant fluctuation of Wairarapa's landscape followed the flood and movement habits of Lake Wairarapa, the Ruamahanga River, and its tributaries (Hill 83). This created an immense hospitable floodplain - a habitat for numerous native wildlife and an array of delicate water ecosystems (Gunn 132; McEwan 176). Dating back at least 800 years, migrating Māori assumed customary rights over this landscape through settlement of the Wairarapa coastline and along its waterways (Bagnall 1; Tribunal 3). Later generations and kin group migrations saw the development of two prosperous and thriving *iwi*, *Rangitāne o Wairarapa* and *Ngāti Kahungunu ki Wairarapa*, which retained separate identities but shared ancestral descent (Tribunal 3). Previously meeting Lake Wairarapa and continuing through to the Cook Strait, the Ruamahanga River and the ecosystems it supported formed the lifeline of the Wairarapa region (Royal 13). Original Māori used the river as a water source, a food source and

storage place, for transportation, blessing, and cultural ritual; it provided and enriched the people, and they thus ensured its protection and continuance (Royal 16). The *iwi* identity became ingrained in the earth; they guarded and protected the Wairarapa landscape, their blood and ancestry in the water and soil.

The arrival of European settlers in Wairarapa saw a stage of unprecedented and extraordinary development. Within a short period the previous landscape was transformed and shaped into a new type of environment with a new type of prosperity (Winter 62). A vast valley of agriculture and pastoral land began to take shape, along with the trappings of western innovation - population, roadways, railways, townships and mechanisation (Winter 86). In a phase of massive cultural and environmental change, Wairarapa's previously untouched landscape bore the brunt of this intrusion. In time, the waterways became controlled, realigned and regulated (GWRC); the water became ignored, pollution resulted, and the waterscape slowly and continuously depreciated.

RESEARCH QUESTIONS

How can rural land be river land?

How can a river be placed?

This has been further refined into two site-specific questions:

How can the development of the rural landscape arrangement promote waterway acknowledgement in Wairarapa?

How can this be implemented at various scales?

Through experience and interaction, the placing of waterways back into their regional contexts through landscape architectural thinking can rescue and revive these fading signatures. Their re-establishment as important cultural and ecological signatures with prosperous natural processes could revive cultural connections, link and bind people with the processes of their landscape, and institute new sustainable rural practices. The water, and the waterways, can be acknowledged and promoted.

AIMS + OBJECTIVES

The thesis investigation intends principally to:

Understand cultural and identity connotations as related to water and landscape attempting to design for their recognition and interaction;

Exhibit place as a designable construct at all scales and contribute to the landscape architectural discourse within this sphere;

Visualise immersion and sustainable usage in/of the rural landscape as a means to enhance environmental stewardship and promote the landscapes romantic splendour; and

Provide a large-scale scheme at the Wairarapa site that evidences connected landscape elements and their interaction with human and cultural factors.

This thesis does not intend to suggest that the current management processes and practises in Wairarapa are somehow inappropriate or unsuitable. It intends to focus thinking on how specifically Wairarapa waterways could formulate or create interactions (both within and external to the watercourses) to enhance Ruamahanga place acknowledgement and benefit the wider system, be it ecological, historical, cultural, or social.

THESIS STRUCTURE

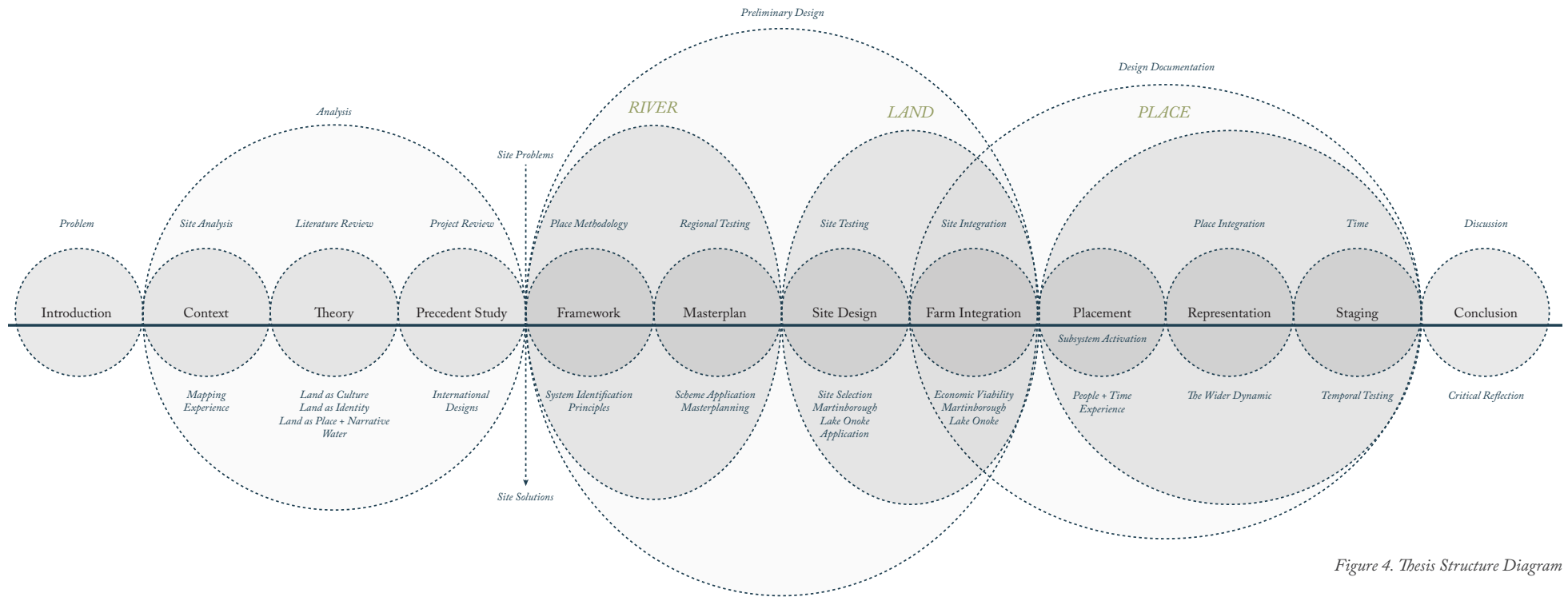


Figure 4. Thesis Structure Diagram

The process of inquiry within this thesis document is arranged into three scales of investigation – river (region: 1:175,000), land (site: 1:10,000), and place (1:1) (Fig. 4). The utilisation of these three scales intends to combat the thesis aims and objectives by depicting the whole context of the Ruamahanga system, and the causative relationship between actions and interactions at the large scale, and their consequences at the closer site and experience scales, and vice versa. The information gathered and inferred

through the analysis of theoretical and practical landscape frameworks through site analysis, literature review, and precedent study, informs this design method. The process of investigation is arranged to form a waterway acknowledgement design framework and methodology which can be used to create a masterplan, conceptualise the site, and establish the whole site experience.



Figure 5. Carex plant; Wairarapa Moana Wetlands; 2016

Part Two
THEORY

LITERATURE REVIEW

The fundamental issue addressed in this investigation is the designed acknowledgement of place and placement, a multifaceted and multidisciplinary dialogue which encompasses the discussion of identity and culture. The discourse surrounding these subjects is constantly evolving to encompass new ideas and theories which can make it difficult to contextualise it singularly within the discipline of Landscape Architecture. While attempting to understand these interdisciplinary theories within the confines of this chapter, particular emphasis will be given to the place-based context of the Wairarapa site with regard to rural culture and the relevant Wairarapa Māori indigenous philosophies regarding identity, place and water systems. These are noticeably consistent with the literature regarding wider human-landscape interactions at multiple scales. Discussion of previous discourse in this manner can inform design methodologies and ground the research intentions and opportunities within the context of the discipline and literature.

PLACE + IDENTITY

Primary discussion of this investigation concerns the presence and activation of place. Yi Fu Tuan, geographer and noted place theorist, describes place as being 'space endowed with meaning' through the steady accretion of non-abating sentiment (33). It's activation comprises physical, geographical, architectural, historical, social, cultural and psychological connotations, and is positioned at several levels of the spatial scale (Knez 208). In the case of Wairarapa, a now razed and changing rural landscape, place has embedded itself into individual, regional and cultural psyches in different ways; the initial 'untouched' Wairarapa of indigenous Māori connection still exists through memorial, physical, and ancestral attachments; sites of cultural importance like the Ruamahanga have obviously changed yet the 'place' has remained; it is embedded in the landscape, and has become synonymous

with the identity of its inhabitants – the land is Wairarapa, as are the people.

Discourse in Landscape Architecture has utilised the concept of place as an important and prominent design consideration – landscape architects attempt to design places, and for place, through the collection and reintroduction of narratives and the realisation of ecological processes (Relph 102). ‘Place-making,’ the physical and designable act of placing the urban sphere, is particularly prevalent in today’s Landscape Architectural discipline thanks to the likes of Jane Jacobs and William H. Whyte; Landscape Architectural practice from the 1960’s onwards has hinged on the concept. Suggested by Relph, this professional interest in place is a type of “rear-guard action against the increasing decay of personal and group identity that comes with the continual development of today’s world (102).” Designers improve and activate environments by reclaiming the identity and originality of lost or forgotten places so that they can be reclaimed as integral parts of the human environment (Relph 103). This aligns with the understanding that landscapes, landscape features, and the understanding of landscape processes are inherently significant in informing place attachments; they can be activated and acknowledged through design.



Figure 6. Identity and Landscape Diagram

In New Zealand, a traditional Māori *mihimihi*, or *pepeha* (vocal formal introduction), begins as a greeting, tribute and acknowledgement of place. One will reference their location and landscape features as a way to identify themselves, reference their ancestral relationship to a place, and find commonality with others. Rivers, mountains, lakes, *iwi*, and *whanau*

(family), are recognised as being placed components of an individual. The land is a central element to the expression of Wairarapa Māori identities, and further, to the expression of rural identity. People express their ideas and interactions onto the landscape through action; the inhabited landscape serves as an expression of ideas, identities, and actions in a place (Spirn, *The Language of Landscape* 130).

Given the rural nature of the site, there is also distinct need to be “mindful of the complex connections between farmers and the countryside and their relationships to the spaces in which they live and work (Holloway *in* Storey 12).” Most Wairarapa farmers and landowners seemingly have a deep understanding of, and feeling for, their land; the land and the surrounding environment are an integral part of their place understanding (Storey 13). The environment or landscape plays a major role in defining and enriching the identity of its inhabitants (Manzo 52); identity is nurtured through interaction with the world outside ourselves (Hernandez, Hidalgo and Salazar-Laplace 310). This occurs at both human and environment interfaces – places have identities just like humans. Their establishment, and the discussion of the ‘*placeness*’ of a place has been divided into four main interrelated principles of place association: place identity, place attachment, place memory, and sense of place. This thesis is concerned specifically with the recreation of place identity, and place attachments – these result in the establishment of ‘sense of place.’

Place Identity

As the name suggests, place identity, is *placed* identity; it is a process in which interaction with a place contributes to a person’s perception and definition of self, determining their belonging, or non-belonging (Hernandez et al 310); it is influenced by a wide range of personal and physical setting experiences and relationships; it influences the coherence an individual feels with their environment, or the coherence

an environment feels within the larger environmental sphere (Proshansky et al 61). In Wairarapa, the Ruamahanga has lost a strong sense of *placed* identity given it's process removal from the physical and visual conscious of residents, councils, and their activities; the design solution can engage with this in this sphere through the introduction of designed interactions.

Place Attachment

Place attachment is the affective bonds and links that people attach to, and develop with, places (Hidalgo et al 274); these attachments are formed and grown in the social dimension; people utilising space through action or interaction form and attachment dynamic to that place. Places nurture these attachments through physical features and social relationships (Brown and Perkins in Manzo 52-53). This thesis investigation could, in Wairarapa, engage with the sociality of the river system and implement design that enhances or creates social connection through forms and interactions.

Through the existence of placed identity and placed attachments, both of which are considered designable, physical connectedness or relatedness to a place through experience and interaction establishes; this encourages the creation of a 'sense of place', and therefore placing a site, location, or process within the social and physical sphere.

Michael Hough in *Principles for Regional Design* suggests that placed identity and attachments are highly connected with the peculiar characteristics and environmental nuances of a location; it exhibits the values of people and their collective reaction to their environment (Hough 209). The accumulation of historical layers creates narratives and stories, their recreation enhances them; places stimulate and remember these narratives (Pottiger and Purinton 136). The re-emergence of a flowing narrative or the creation of places that harbour and recognise sentiments could be a design potentiality

of the thesis investigation. Vast farmland Wairarapa has a new narrative of economy and production but the landscape was not always like this, it evolved from somewhere, and that somewhere still remains and exists within the people; it could, through design, exist again within the place.

The design of rural transitional landscapes like Wairarapa must attempt to understand and comprehend this true nature of the site, while aspiring to encourage the creation (or re-creation) of an identifying place that encourages practical ecological, cultural, economic and social connections (Meurk and Swafeld 135). The designed place must be accessible and immersive so that the identity of individuals can be enhanced and reassured in place; the design proposal must connect the sites' past identities and heritages with its current ones; placement of designed space occurs through immersion, usage, interaction, and respect; the thesis can engage with these interfaces.

CULTURE

Development of human cultures through landscape manipulations and interactions is obvious – cultures have developed and changed, as have the lands they inhabit, and the values they associate with their land. New Zealand, being one of the last areas on Earth to be colonised, and with its prominent indigenous cultural history, ignites a rich discussion intertwining landscape and culture. Societies, and their development and advancement, are inexplicitly linked to the physical environment through inhabitation, occupation, utilisation, and respect. In New Zealand, the Māori indigenous cultural philosophy and worldview places emphasis on ancestral respect, kinship and spiritual connection to the natural world (Taua 13); value lies in physical connections as well as in intangible and haptic components

(Menzies 141). Landscape was the original dwelling, the original text, and the originator of human culture (Spirn, *The Language of Landscape* 15); through it humans share experiences with ancestors and future generations, their values and beliefs are inscribed in the landscape they leave as legacy (Spirn, *Language of Landscape* 125). This understanding of landscape as a place activated by people extends into the dialogue of other place-based disciplines including geography, philosophy, and psychology. Humans developed inherent connections to landscape through time; this informed essential cultural perception and identification; values and cultures are externalised through interaction with that environment (Hull, Lam and Vigo 118). Culture expresses itself through landscape over time thus informs physical interactions and forms (Fig. 8); the landscape, in turn, informs cultural practices and worldview through its utilisation and limitations.



Figure 7. Culture and Landscape Diagram

Landscape Architecture and planning in New Zealand through policy and management presents a dichotomy between nature and this cultural relationship (Swaffield). New Zealand colonisation saw the elimination of Māori indigenous cultural philosophies with regards to land in favour of economic development through technological advancement, construction, and mechanisation (Meurk and Swaffield 133). Having established newer identities consistent with rural practices and philosophies of rural colonial England, the precursor to Pākehā (New Zealanders of European descent) culture, the New Zealand landscape seems predominantly aligned to

consumption, exploitation, and manipulation of the natural environment corresponding to political and economic sentiments. This remnant of European settlement and colonial culture has continued to permeate the development and layout of the Wairarapa site. Storey in *Land, Territory and Identity*, makes a point to address the nature of rural culture;

...while land can be viewed as an economic resource, this materialist perspective sometimes overshadows the sense that land can also be seen as a component in people's social or cultural make-up. While acknowledging functional and utilitarian interpretations, we also need to remember this more nebulous relationship... it may reflect feelings of power, ownership and control over the landscape [but manifests itself] in a sense of custodianship, caring for the land until it is passed onto a future generation... (12)

Custodianship and stewardship is exhibited through different cultural practices and is based on cultural values; Maori culture preferences kinship; Pākehā culture preferences operation; in both, the land is first and foremost a source – it supports and allows life. Consumption and manipulation has occurred in Wairarapa ever since it was first settled by humans, manifesting itself depending on the shared values and backgrounds of the physically dominant culture. *Tangata whenua* (people of the land) worked and understood the land as a resource and as a dynamic system that connected them to their ancestors, cultural history, *atua* (gods), and each other as equal custodians (Royal 13). The values of arriving Europeans preferred physical possession of land and resources; this then informed dynamic connections to what became their perceived landscape.

In a rural context, a consideration of links between people and land needs to consider the different experiences and perspectives of the lands' inhabitants (Storey 13). If we are to truly accept the accepted understanding that

landscape is a cultural schema - a matrix of process and inhabitation - then this investigation must accept that intervention on the landscape should align with the collected cultural perspectives of the people who possess or belong that land. Both Māori and Pākehā share the Wairarapa landscape as custodians; both are culturally connected to the Wairarapa site.

WATER

Most initial occupations all over the world were situated along or close to a prominent freshwater source such as a river, lake, or stream. Traditional Māori occupation was no different; the coast and Ruamahanga River was the initial occupied zone. The environment provided resources and means, location and direction, and thus became symbols synonymous with place, people and identity. The Ruamahanga River and its tributaries which flowed freely across the South Wairarapa plain represent Māori cultural value in four main dimensions - *wairua* (spiritual), *tinana* (physical body), *hinengaro* (mental well-being), and *whanau* (family, community). In addition, there are other values that recognise ecological importance, such as *ki uta ki tai* (mountains to the sea, connection of systems), and *mauri* (life essence) (Royal 6).

This philosophy is no more apparent than in the remarks of Whatahoro Jury, a writer and Ngāti Kahungunu scholar;

*‘Ko Waiohine ko Ruamahanga ē
nei, e wairua tipu mai i Tararua
maunga, e oranga e te iwi’*

‘These are Waiohine and Ruamahanga.

*They are like mothers milk
flowing out of the Tararua mountains
for the prosperity of the people.’*

This prose suggests that the significance of Wairarapa water to *tangata whenua* goes beyond simply being a feature of the Wairarapa plain; water intimately connects Wairarapa people to their landscape, and to each other; it connects, bonds and protects ways of life; the well-being of the waterways reflects the well-being of the land inhabitants. In *Language of Landscape*, Anne Wiston Spirn discusses the inherent quality of water in informing people, places, design, and spaces;

... Water is paradoxical; yielding yet powerful, transparent yet reflective, a leveller, eroding mountains into plains, cutting valleys, smoothing stones. Seeking level, it fills valleys, forms flat, reflective plains... a horizontal line that orients and anchors... It absorbs, carries, and releases other materials; it is a link among them – earth, air and living tissue... (100)

The attitude she exhibits exemplifies a similar philosophy of indigenous Māori. In the past, the Ruamahanga waterway and the ecosystems it supported formed the primary lifeline of the Wairarapa region – all streams and rivers flow into the river and onto the sea through this watercourse (Royal 12). This thesis investigation needs to understand these cultural connections to water and enhance them through designed intervention to contextualise and reveal them at all scales. The Ruamahanga is indeed a powerful piece of landscape process, and should be acknowledged and revealed within the study. Water places in New Zealand have physical, social, temporal, sensual and emotive connotations, connotations directly linked to the wider landscape and its features; the regional engagement with these can only be beneficial.



*Figure 8. The Wairarapa place before colonisation
Left: Edward Lyndon; Sheep near Lake Wairarapa; 1860s.
Right: Charles Decimus Barraud; Wairarapa Lake; 1877*

REFLECTION

The Ruamahanga River place and its numerous indigenous connotations and associations, is a prominent essential resource and identifying component of the Wairarapa landscape; it is both evidence to the misplacement and discarding of wider river systems within New Zealand's regions, and of the interrelating, but often conflicting, philosophies of Wairarapa people both Pākehā and Māori. The New Zealand rural dynamic of extensive individualistic fields and properties is failing in consideration for intangible heritage and cultural concepts. The study of existing theoretical constructs has revealed some design approaches that could combat aspects of the initial research question. The true design challenge here exists in balancing and understanding the needs of economy, the needs of environmental sustainability, and the values of stewardship and custodianship in order to increase the acknowledgement of social and physical landscape connections.

Humans are stewards of their land, and their activity and interaction with it should be reflected in all aspects of New Zealand landscape management and development; the land is a cultural and identifying schema as much as it is a manipulable resource. The literature review has established some opportunities for design as the appropriate way to approach the thesis investigation (Fig. 10).

Arising from the study, the design should:

- *Accentuate the narratives of the site, both Māori and Pākehā;*
- *Accept the site as a convergence of Māori and Pākehā philosophies;*
- *Find similarities of philosophies and acknowledge them within the design;*
- *Understand the cultural relationship to the Ruamahanga waterway; and,*
- *Begin design at places which provide opportunity for immersive experience and access to different farm typologies.*

Through immersion and acknowledgement with regards to both intrinsic and economic considerations, through the creation or recognition of Ruamahanga and Wairarapa narratives and places, and through recognition of cultural components and perspectives, we can enhance connections and influence activities, current and future, that reflect an inter-relatedness with to the natural systems and processes of one's landscape. The regional dynamic can shift and renew to evidence past and present cultural perspectives and heritages to encourage placement and acknowledgement of waterways and processes.



Figure 9. *Cortaderia toetoe*; P. Amalunga-Rosari, 2016

Part Three

CONTEXT

“an immense plain lay at our feet stretching to a distance of between thirty and forty miles from the head of the Lake”

Robert Stokes, 1841
Quoted in John Pascoe, *Exploration New Zealand*. Wellington: A. H. & A. W. Reed, 1971, p. 39.

“the whole area was a patchwork of grass, swamp, scrub and forest mingled in varying proportions... grassland covered about 200,000 acres, forest covered about 80,000 acres, while there were nearly 25,000 acres of fern and scrub and about 20,000 acres of swamp”

R.D. Hill, 1963
Quoted in *The Vegetation of the Wairarapa in Mid-Nineteenth Century*, p. 83-84.

“the soil... was composed of vegetable matter ... and the trees were of immense size”

Reverend William Colenso, considered the North Wairarapa forest the most primeval of any he had seen in New Zealand
Quoted in his private journal.

“these woods are alive with kakas and pigeons”

Frederick Weld, 1844
Quoted in in Lovat. *Life of Sir Frederick Weld*. John Murray and Co., London, 1914. p. 50



Figure 10. William Mein Smith; Ruamahanga from the east the range of mountains divides Wairarapa from the Pakarutahi and Hutt Valley 1849

“Wairarapa was... the area that first felt the impact of many thousands of livestock spread over several hundred thousand acres”

R.D. Hill, 1963

Quoted in The Vegetation of the Wairarapa in Mid-Nineteenth Century, p. 88.

The Ruamahanga River is the most significant system in the Wairarapa Valley and its ability to provide for the continued occupation of people regardless of creed or colour is of paramount importance. The relationship that Iwi Maori have with this area extends well over 700 years and the values held with this river system are still held today.

Quoted in Cultural Values for Wairarapa Waterways Report, 2011, p. 22

“...the Ruamahanga River, is far from pristine with sections of it being as heavily polluted as...the worst in the country”

Quoted in Wairarapa Times Age, 2008

The Ruamahanga is now so contaminated by farming runoff and sewerage discharge from towns it has been dubbed the “Sewer-mahanga”.

Quoted in The Dominion Post, 2016

It used to be pristine, you could drink straight out of it, it was full of life. Now it's dead...

Luke Tipoki, resident

Quoted in The Dominion Post, 2016



Figure 11. Ruamahanga River; February 2013

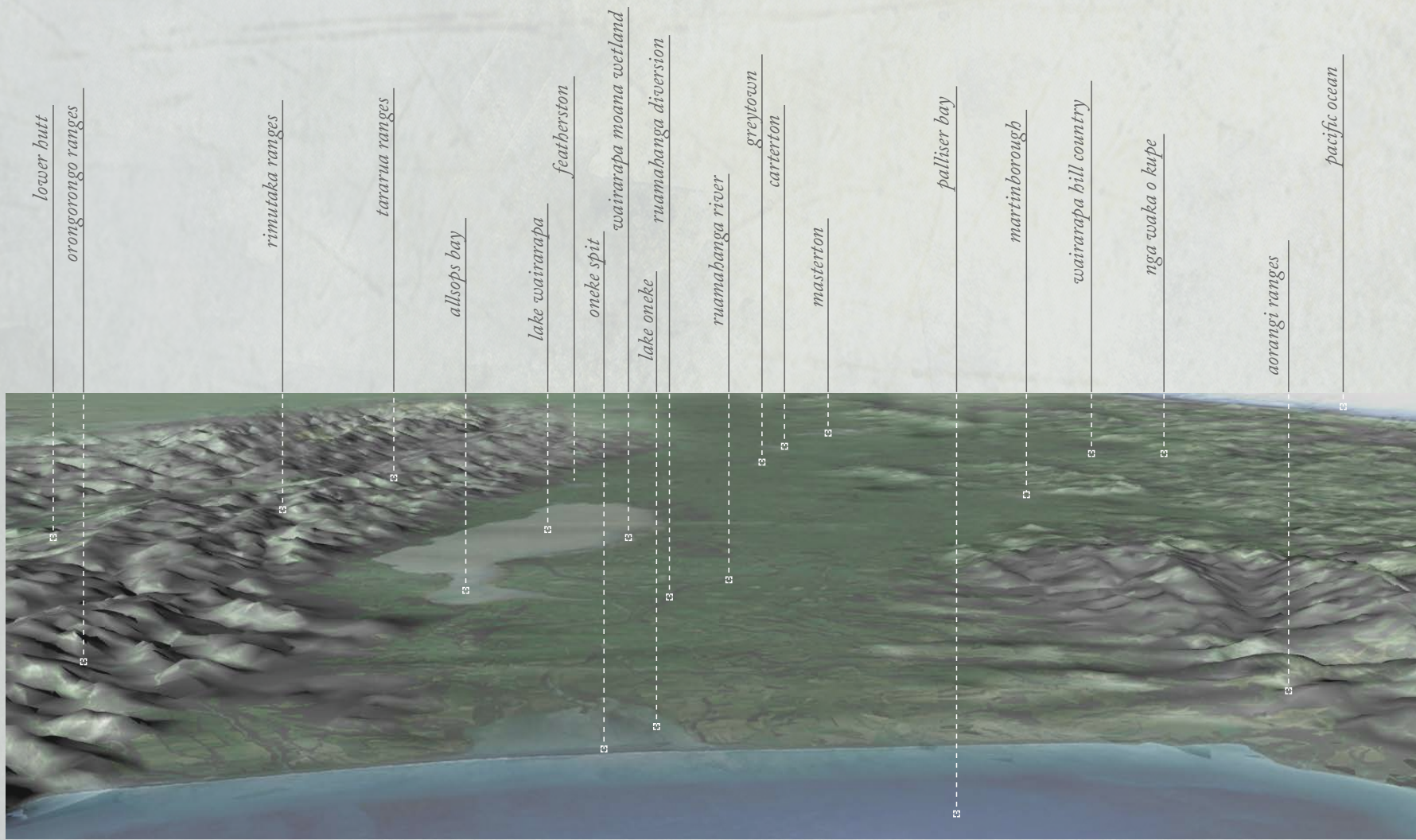


Figure 12. Landscape Features

SITE ANALYSIS



New Zealand



Lower North Island



Wairarapa

A signature bearing the imprints of the regions cultural legacy, the Ruamahanga waterscape can be considered as traversing all scales; the water through tributaries and springs spans the entire region (Fig. 12). Bearing the superfluities of New Zealand colonisation and rural mechanisation, Wairarapa waterways have changed considerably (Fig. 13); the Ruamahanga system has managed to evolve into its current assemblage through its correspondence with cultural interactions and development. After mid-1800s colonisation of the Wellington region by Edward Gibbon Wakefield's New Zealand Company, land at lakeside and at the edges of the Ruamahanga was settled (Winter 63). Reports of the fertile soil and wide valley suitable for pastureland brought adventurous Britons seeking to

replicate English rural society and over the next 100 years, the privatisation of adjacent land saw the Ruamahanga slowly become inaccessible (Winter 63). River systems were ignored and regulated as people migrated from indigenous riverside settlements to urban town centres; people become separated from the fluctuations and characteristics of the overall river system that had previously defined the region.

Beginning with a place-based thesis question, the appropriate analysis method for this investigation lays in the essentialities and properties of the Ruamahanga place as a whole. Analysing regionally through mass mapping to understand contextual implications, and studying the Ruamahanga waterscape through photography to understand specific site connections and components, we attempt to gain a suitable grounding in the placed design site. The following pages documents the analysis of the regional matrix as attributed to landscape elements and attempts to study and understand the nuances and identifying realities of the Wairarapa place with emphasis placed on the Ruamahanga waterscape. It establishes connections between regional activities and immersive qualities of the waterscape - the site experience at the human scale was greatly impacted by the appearance and accessibility of the river system, which was at consequence to the site history, and was as a result of activities occurring in space external to the immediate waterscape..

SITE MAPPING

The utilisation of large scale mapping analysis in this investigation reveals land and water layouts, and collates information to start appreciating the current waterway systems through their relationship to topography (Fig. 20), flooding (Fig. 14), and cultural connections; when collated, the sites of historic indigenous importance evidence a clear connection to waterways in the physical realm (Fig. 15). The distribution of vegetation revealed two major typologies – exotic grassland and native forest; this was designated predominantly by the topography (Fig. 16; Fig. 17). Flat land of the Wairarapa valley has been utilised for farmland since early colonisation; the environmental quality is largely determined by whether the land is used for primary productive purposes or for conservation purposes (Wairarapa Combined District Plan 4-1).

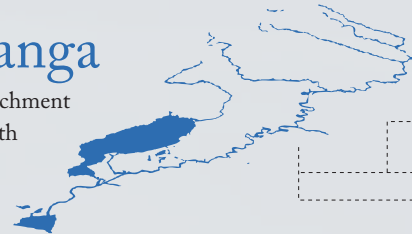
The collation of information from LAWA (Land, Air Water, Aotearoa) monitoring sites reveals the unfortunate reality of the waterway matrix as an ecological feature (Fig. 18), thus endorsing the Wairarapa site as

appropriate for design testing. Developing distinctly with regards to economic growth, bare land was utilised; new land was created; water was channelized. The Wairarapa landscape is engineered; remnant council land now serves as public reserve space or is inactive and fenced off (Fig. 19).

The introduction of a new settlement pattern following the arrival of Europeans in Wairarapa created a distinct change in regional layout. The development of a new mechanized transportation path (the rail and roadway) conquered the landscape, and the resulting land use pattern evolved over a developing and changing period of 150 years (Fig. 22). Consequently, as the Ruamahanga system flows downstream, the layout of the waterway undergoes distinct changes (Fig 18) - the vegetation decreases, along with the cavity space, and manoeuvrability of the water; this evidences prominent impact human activity has had on the progression of the watercourse.

Ruamahanga

1431.58 km² catchment
124 kilometres length



*Rangitāne o Wairarapa
Ngāti Kahungunu ki Wairarapa*

mauri

life force, or life blood

cultural usage

Tohi or birth rite,
Bathing after giving birth,
Removing of tapu after doing battle,
Removing tapu around death and burial,
Blessing and/or baptism.
Transportation,
Food gathering and storage.

FARMING

80% farmland

80%

*sheep
beef
dairy*

*prominent effluent and sediment
discharge into Ruamahanga waterway*

WATER

98 wetlands
*includes Lake Wairarapa
and Lake Oneke*

900ha
of wetlands

13% *remaining*
due to agricultural clearing and draining

VEGETATION

original

kahikatea
cabbage tree
totara
ribbonwood
kowhai
lacebark
black beech
titoki
karaka
manuka
kanuka

*acrycarpus dacrydioides
cordyline australis
podocarpus totara
plagianthus regius
sophora microphylla
boberia populnea
fuscospora solandri
alectryon excelsus
orynocarpus laevigatus
leptosparium scoparium
kunzea ericoides*

current

65.6%
pasture or cropland

26.5%
native forest *predominantly in ranges*

3.1%
wetland

*"terraces and rolling hills were dominated
by beech forest, swamp forest and wetland
plants in the wetter lake and riverside soils"*

Figure 13. Ruamahanga Catchment Infographic



Figure 14. Wairarapa Valley Flood Hazard Map. The dynamic landscape of Wairarapa was changed dramatically with the introduction of an ambitious flood protection project which started in 1963 and finished in 1983. The Ruamahanga diversion and channelisation project highly regulated the seasonal fluctuations of the lower Wairarapa valley.

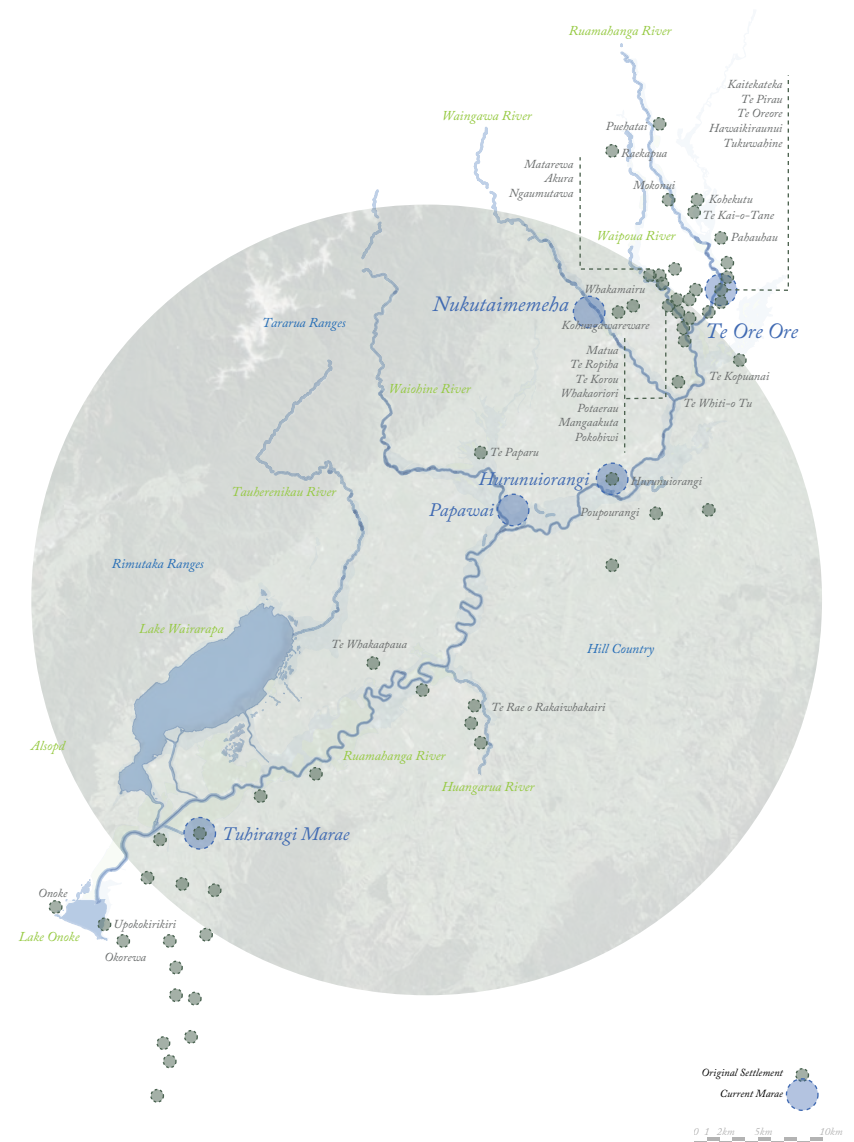


Figure 15. Original Wairarapa Maori Settlement Map. Initial settlement and cultural establishment occurred on the waterway edges and coast of the Wairarapa region. This exhibits the indigenous value of the waterways in providing for the continuation of the people; it's utilisation for food, transportation, and cultural practice, is evident.

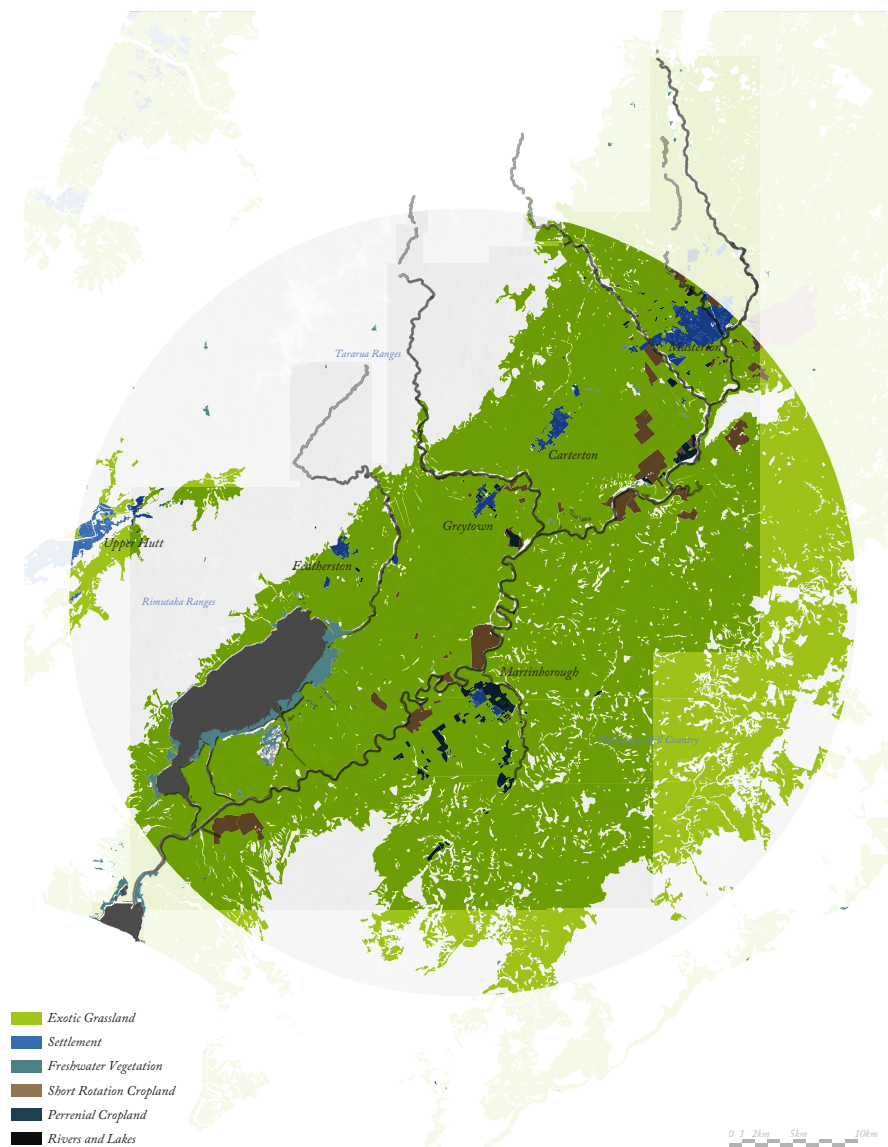


Figure 16. Wairarapa Valley and High Country Vegetation Map. *The Wairarapa valley comprises mostly exotic grassland for farmland and agricultural purposes. Native vegetation on the valley floor is noticeably absent with the exception of remnant wetland systems.*

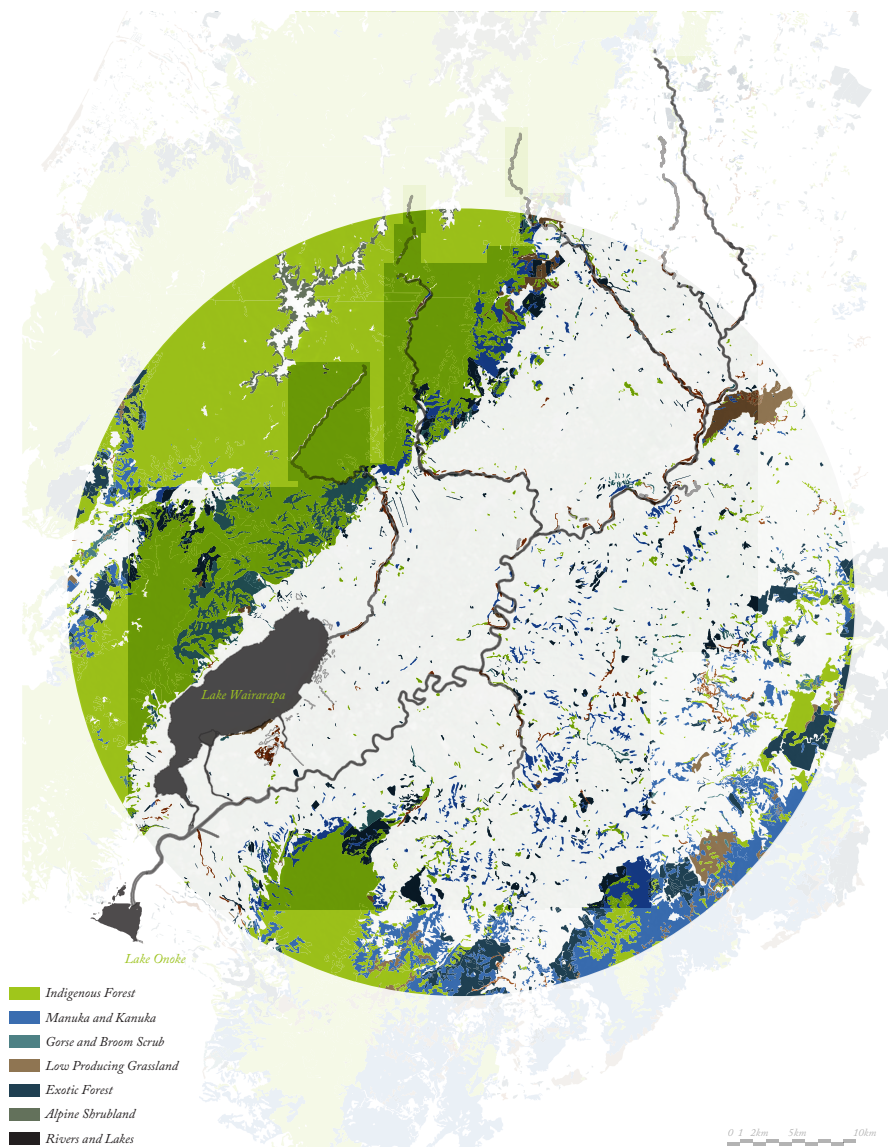


Figure 17. Wairarapa Mountainous and Hill Country Vegetation Map. *Native vegetation is restricted to the mountainous ranges, and some hill country valleys on the eastern edge of the catchment. The vegetation serves either conservation or stabilisation purposes..*

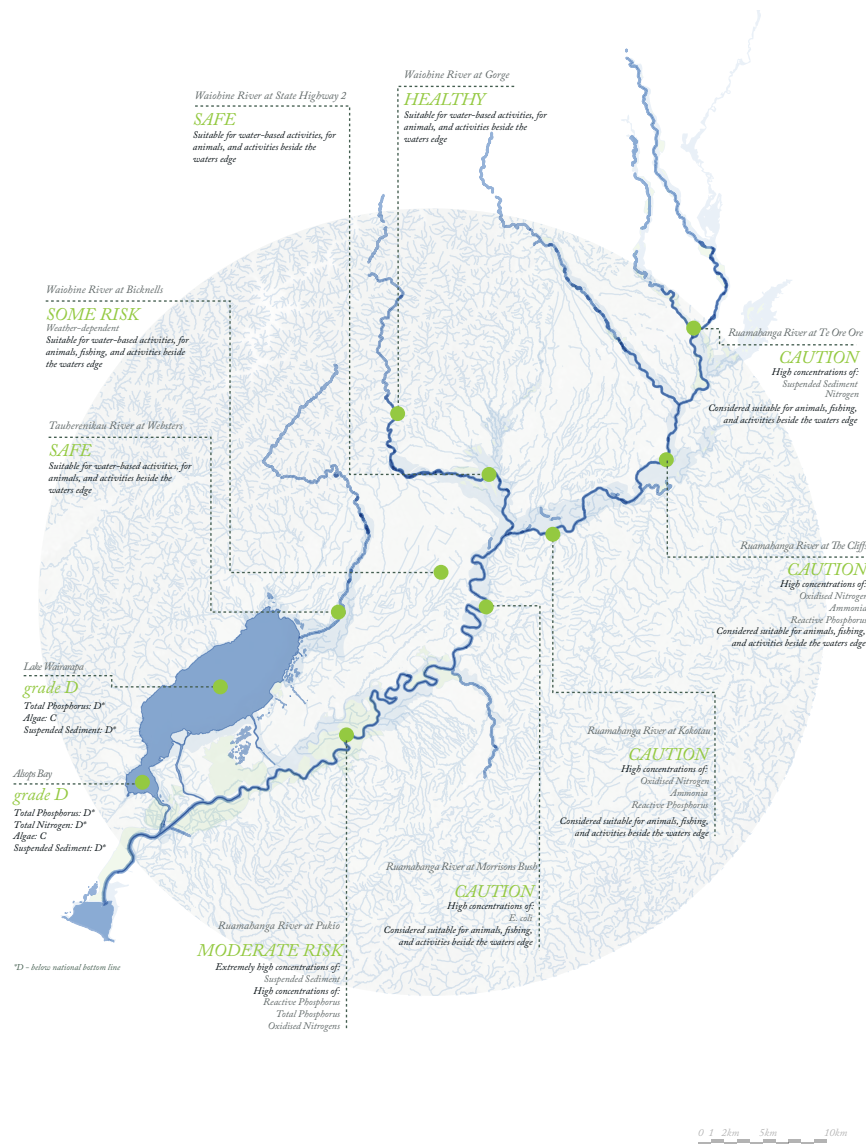


Figure 18. Wairarapa Water Quality Map. The water quality of the Ruamahanga and its major tributaries is abysmal. The lake quality is below the national health guidelines with the river quality and sediment content fluctuating depending on rainfall/drought.

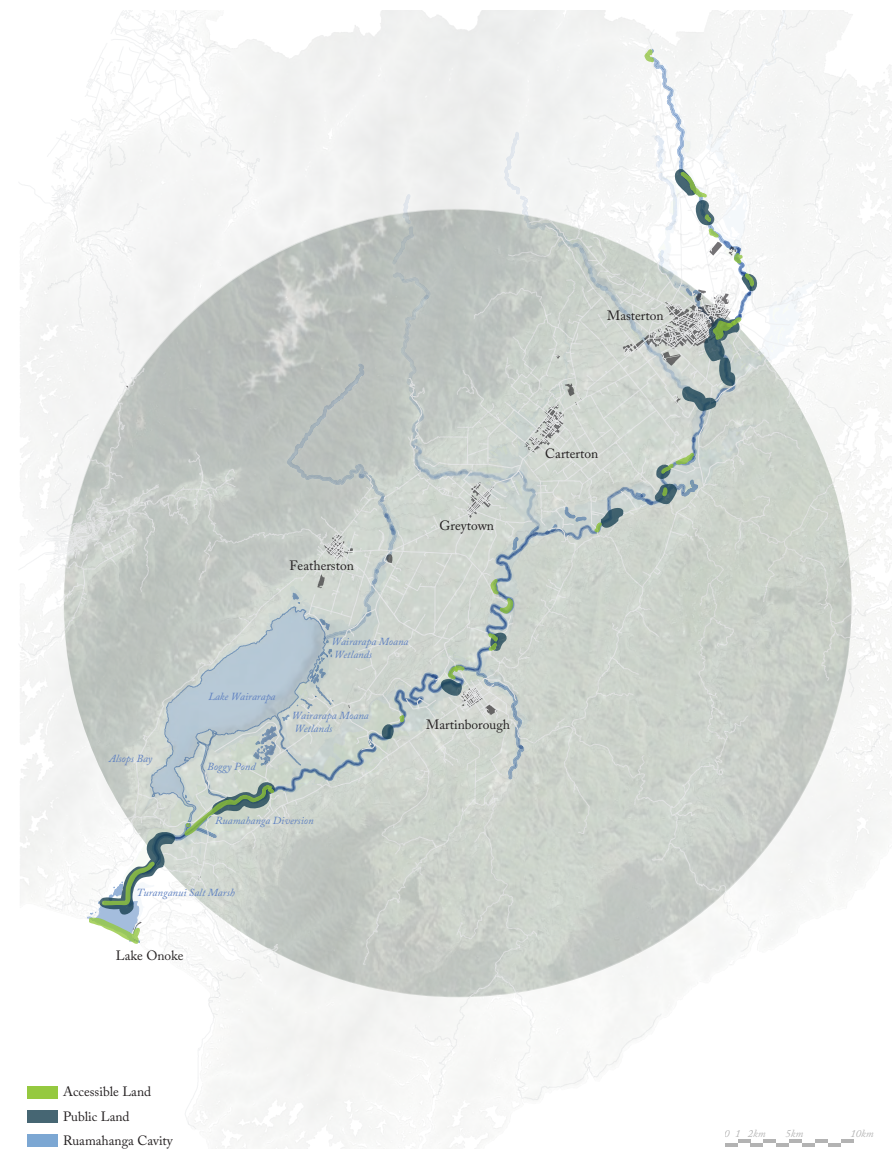


Figure 19. Ruamahanga Council Land and Preliminary Access Map. Council or public owned land makes up a small proportion of the river edges. This exhibits the mass farm privatisation of the Ruamahanga edges, and the limited access points to engage with the river space and cavity.

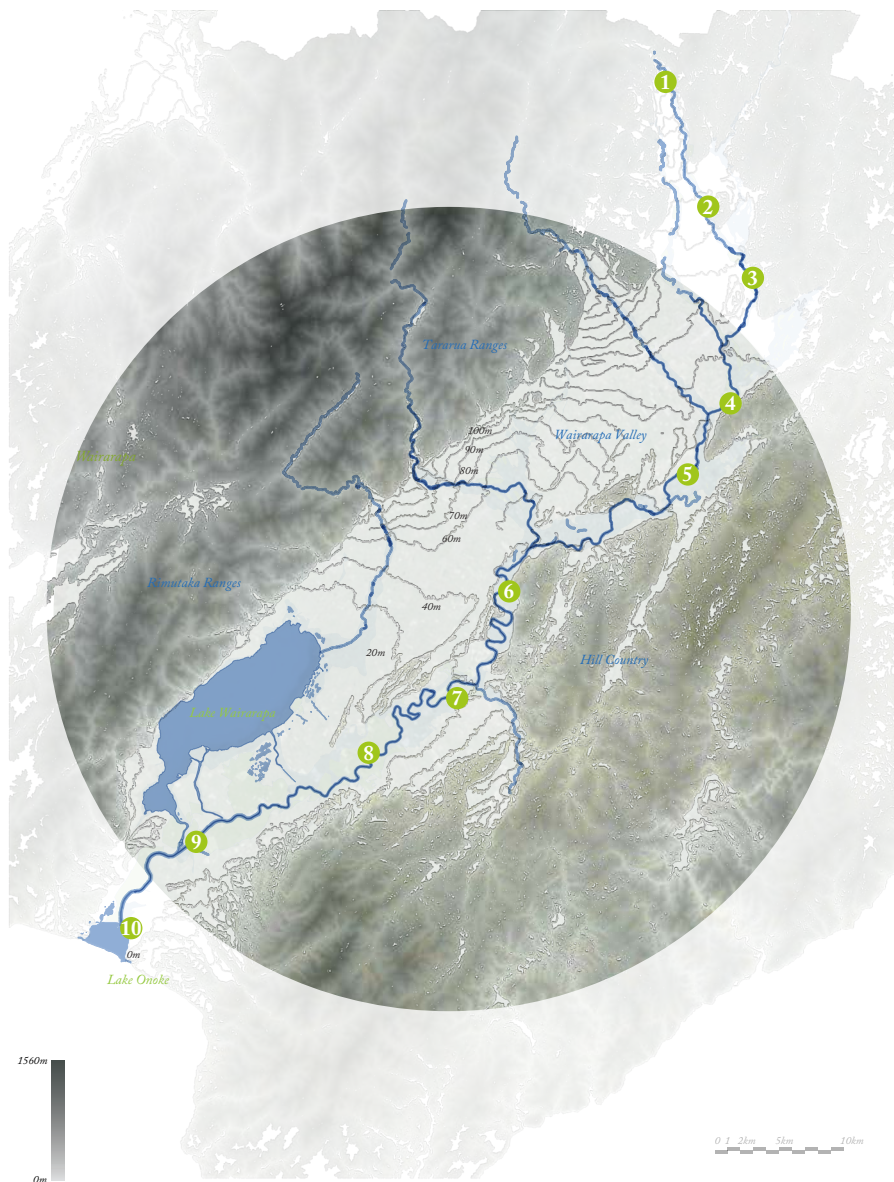


Figure 20. Topography Map. Three landscape types form the Wairarapa Valley: the western mountainous zone known as the Tararua and Remutaka Ranges, the central valley depression with an intensive water system, and the eastern uplands known as the Aorangi Ranges.

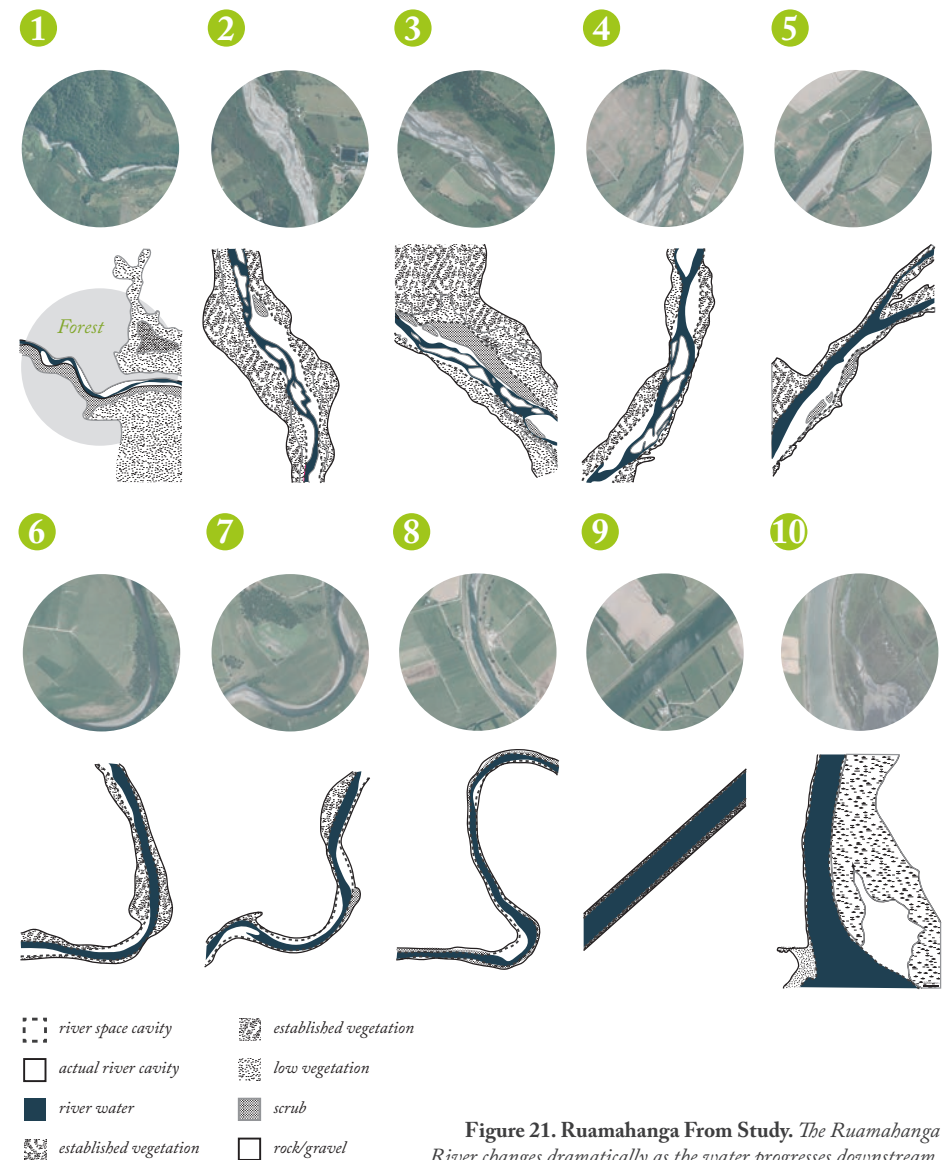


Figure 21. Ruamahanga From Study. The Ruamahanga River changes dramatically as the water progresses downstream. Channelisation saw the development of a constricted water cavity with minimal ecological buffer.

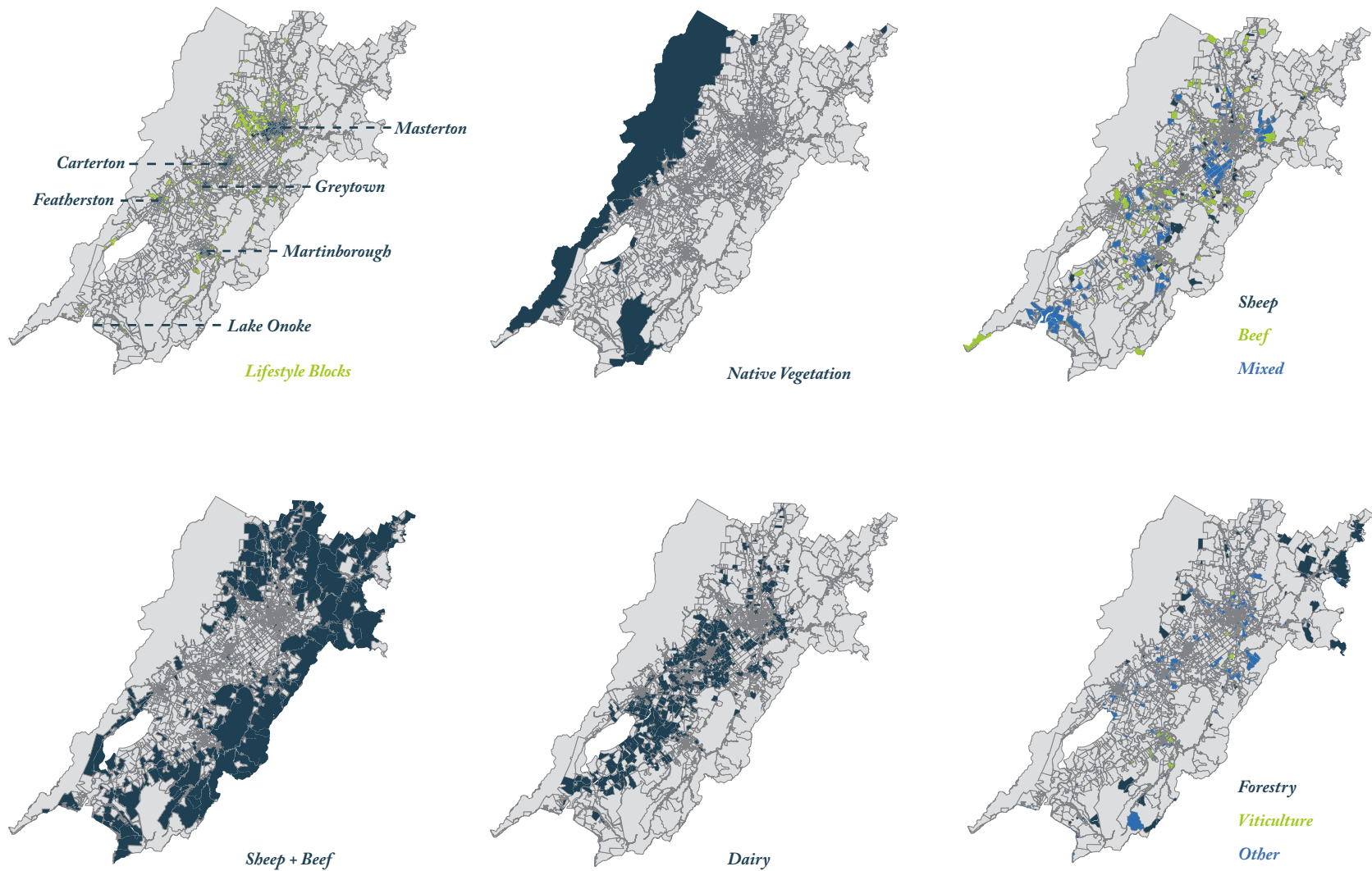


Figure 22. Ruamahanga Catchment Land Use Maps. Majority of the farmland in Wairarapa is for combined Sheep and Beef farms, followed by Dairy farms. The ecological damage caused by this type of invasive farming is internationally recognised.

SITE EXPERIENCE

The mapping analysis phase resulted in a large scale understanding of the larger landscape elements which can and do affect smaller landscape interfaces. The study validated the site selection, and further reinforced the complexity of river systems in Wairarapa we wish to engage with. The effects of human influence are made prominent through study and information collation at this level. However, analysis utilising data and representation in map form is flawed - it fails to comprehend some aspects of the site with regards to human experience. Although aerial study and digital mapping is appropriate within the field of Landscape Architecture as a means to contextualise and understand larger systems, it disregards some details and nuances of the human experience within the site dynamic. While providing a type of mass landscape study, analytical mapping evidences a type of sensory place removal; the place is understood as a series of interacting systems but the process cannot accurately represent the nature of human experience.

To alleviate this, another form of site study (which engages with the human experience) is appropriate. Through immersive documentation of the inhabitable realm of the Ruamahanga system, the potential designable opportunities can be exposed, and thus remove the sensory place removal experienced in large scaled analysis methods (Fig. 23-25). Through continual site visits with photographic and drawing studies, we document the inherent place qualities of the immediate river system and record spatial arrangements through the practical and analytical enjoyment of the landscape. The utilisation of experience as a means to understand space accepts information gathered in the literature review phase that place, as an observation and occurrence, is accrued through experience and active interaction; therefore, the Ruamahanga place was studied through interaction and usage. The study exposed the inherent beauty and delight of the Ruamahanga matrix and exposed aspects of the watercourse as yet underinvestigated in this analysis.

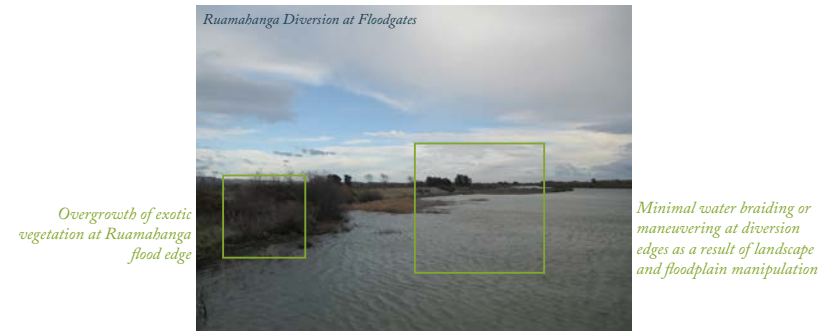


Figure 23. Ruamabanga Cavity Photography. Photographic studies explore the nature of the site with regards to the human experience; their utilisation in this investigation exposes the physical aspects of the waterway space which were revealed initially in the mass mapping phases.

Figure 24. Ruamabanga Waterway Photography. The diversity of waterspaces and their attributes is evidenced through the photographic process. It is difficult to give a full realisation of this waterspace array given the scale of the system requiring documentation and analysis.

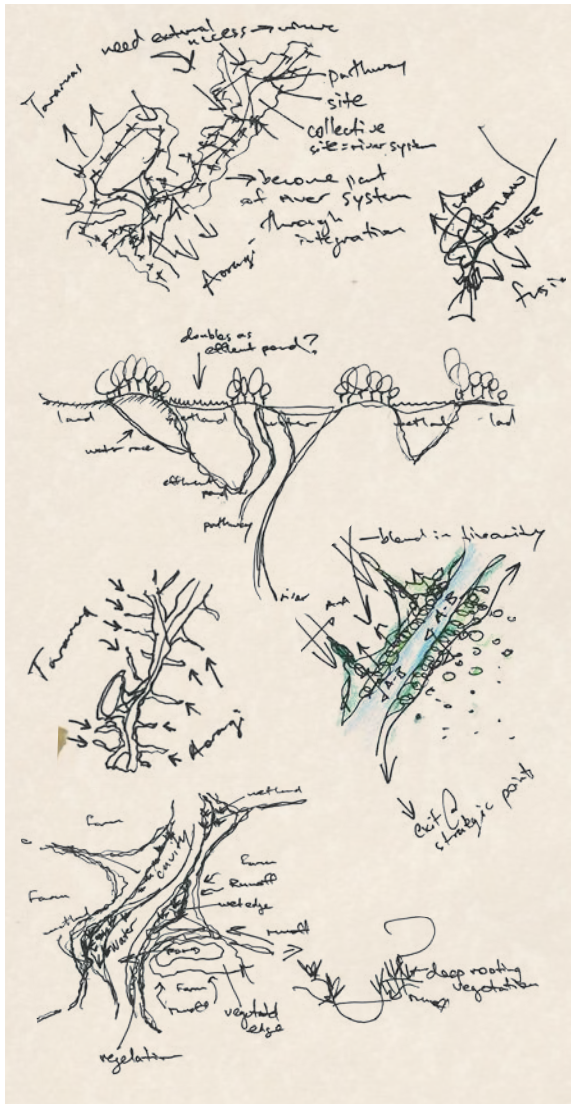


Figure 26. Site Drawing Studies. The utilisation of drawing allowed for on-site analysis of the extended site makeup. This process explored the layouts of the Ruamahanga with regards to the wider system and began an exploration of design opportunities.

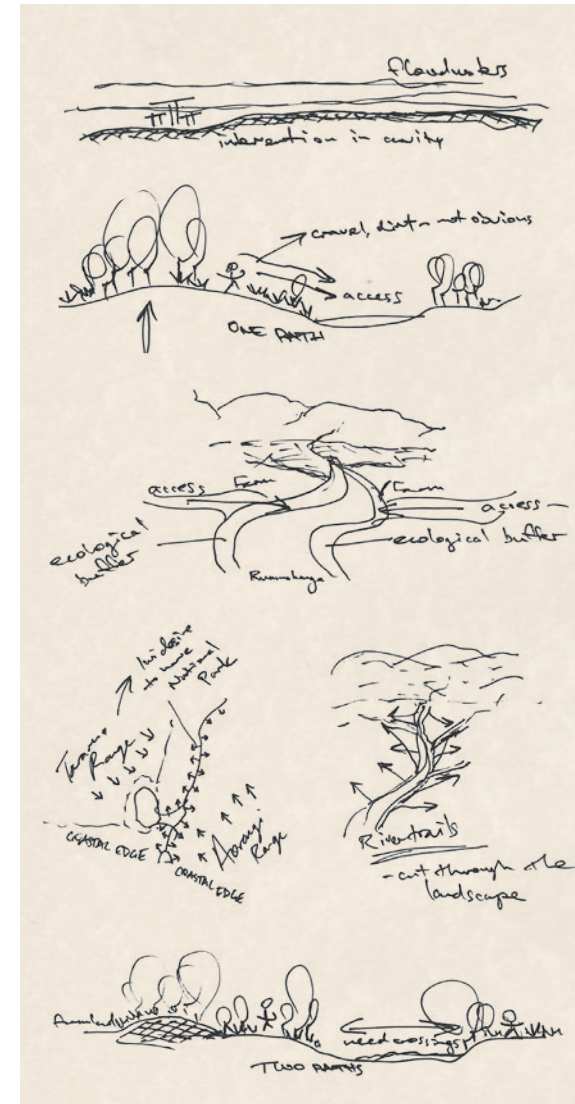


Figure 25. Site Drawing Studies. Through drawing, site specificities are made prevalent and documented. Although relevant in the analysis phase as a means to contextualise and understand, this type of drawing preferences the researcher more than external viewers.

REFLECTION

The process of mass mapping and photography is commonplace in the realm of Landscape Architecture. Landscape systems which influence space development are revealed, and focus can be made on the aspects of the site that can be engaged within the conceptualisation and preliminary design phases. These methods attempt to capture the physical nature of the place - mapping is 'macro,' photography is 'micro;' drawing is an investigative combination of the two. Due to the immensity of the Ruamahanga system, and the diversity of the waterway systems within, complete site analysis investigation is lengthy and difficult; analysis at this level could only reveal the nature of the physically accessible sites, and could only utilise publically available documentation in the mass mapping phase. The place of the Ruamahanga could not truly be studied in its entirety (and the study done justice) because of the scale and diversity of the river systems and its forms. The site analysis study has revealed potential components of the river system that the design study could engage with;

- *Waterway edges and flooding habits could somehow be utilised in place creation;*
- *Heritage sites could encourage tangible connections through traversal across the landscape;*
- *River systems could utilise native vegetation to activate water filtration practices and encourage the creation of new wetland systems that evidence the past landscape, and attempt to rectify human damage;*
- *Place activation through practice changes in the private landscape is presented as a tangible design opportunity given the effect action in the private landscape has on the waterscape.*

The process was useful in grounding and rationalising the design study with regards to the ecological and spatial realities of the interacting Wairarapa and Ruamahanga systems, and the nature of the Ruamahanga place.

Figure 27. Wairarapa Moana Wetlands; 2016



Part Four

PRECEDENT STUDY



Figure 28. Clockwise from top left: Turenscape's Minneapolis Waterfront Design; Hershberger Design's Laurance S. Rockefeller Preserve; Agence Territoires Wet Meadow; and Atelier Decombes Rampini's Renaturation de l'Aire

REVIEW OF PRECEDENTS

Practice in Landscape Architecture has defined the need to integrate vegetated waterscape public spaces into the human matrix as a method of exposing previously ignored natural landscape features. Development of waterfronts, lakesides and riverscapes within the urban realm has been an ever increasing domain in the landscape architectural profession. The projects are highly visible and gain attention for their capacity to establish a social, historical and ecological connection that for so long had been ignored within the city context. This type of close scale and interactive waterscape design seems fairly restricted to the urban realm; the same attitudes of landscape protection and rejuvenation are not prevalent in the design and preservation of rural waterscapes – ecological restoration and social rejuvenation of rural waterways seems highly restricted to

community groups, cultural groups, and land owners with high capital and an environmental consciousness. The purpose of these precedent studies is to display how places have been designed with similar constraints and design briefs to this thesis investigation. They represent approaches to site design that offer regeneration of river or water environments, introduce new ecologies, and understand contextual obligations whether rural or urban. All intend to present context-specific design solutions that mitigate between environmental processes, public usage and enjoyment, and economics. The study of precedents informs this research investigation through the acceptance, rejection or manipulation of methods already used in the profession of Landscape Architecture.

THE RESILIENT RIVER: THE MINNEAPOLIS WATERFRONT DESIGN

Turenscape 2010-2011



Figure 29. Resilient River, view from the south; Turenscape; 2010

The conceptual entry for the Minneapolis Waterfront by Turenscape redeveloped part of the Mississippi River to cultivate ecological renewal, a vibrant economy, and an authentic cultural identity based on the Mississippi's industrial and social past (Turenscape; Fig. 29). The design was not a singular climax landscape; the designers developed an evolving plan that would through time create the place that would combat identified problems and harbour place (Fig. 30). The strategies employed curated the vision to place through time the river back into social and spatial consciousness and ensure continuous growth and development on and beyond the waterfront site.



Figure 30. Curate through time, the vision; Turenscape; 2010

Being in an urban area, the design had an economy and population that could sustain major ecological changes and modifications. Through the acknowledgement of particular site-based challenges and the creation of strategies that would enable the growth of a resilient river, the design could combat these challenges in a temporal process; therefore, the landscape develops alongside the development and changing matrix of the city and its culture.



Figure 31. Wetland Eco Lab Park left; Turenscape; 2010

While bringing to light a designers need to understand the constraints and problems of an urban landscape, the project failed to combat a larger problem – the health of the Mississippi. The design is highly specific to the singular site and disregards the context of the entire river system in which the design is a singular part of. The scheme for Wairarapa as result of this investigation should allow for, and indeed invite, the manipulation of external spaces and matrices independent from the singular watercourse to correspond to the overall needs of the Ruamahanga River.



Figure 32. Wetland Eco Lab Park right; Turenscape; 2010

Wairarapa, with the Ruamahanga as activator, could evolve to absorb and ignite prominent landscape changes, both external to the watercourse and at the water's edge. This would evidence an understanding of the interconnected nature of human and ecological processes and acknowledge the larger impacts development has had on the complete watercourse.

LAURENCE S. ROCKEFELLER PRESERVE

Hershberger Design 2001 +



Figure 33. Preserve curved boardwalk deck; Hershberger Design; 2014

Employing its namesakes passion of environmental stewardship through immersion in the natural landscape, Hershberger Design employed a light touch when master-planning the Laurance S. Rockefeller Preserve (ASLA). Rockefeller believed the experience of natural land and personal experience in nature can transform and promote environmental responsibility (ASLA). Previously a family ranch and compound for the Rockefeller family, the design balanced the need for public enjoyment, usability, and appreciation of the natural landscape through the removal of unnecessary properties and infrastructure. The concept began to reverse the generational effect of human development and understand that strategic approaches could be landscape transformative.



Figure 34. Preserve Metal Boardwalk; Hersbberger Design; 2014

The introduction of strategic new trails expressed the essence of the land and followed two years of site study by the landscape architect (ASLA; Fig. 32; Fig. 33). With a very solid basis for development - to nurture environmental stewardship through immersion - the design employed a predictable approach - remove anything that did not fit with the vision of the client. As opposed to allowing the site to evolve organically and allow previous landscape developments (roadways and other infrastructures) to gradually become insignificant, the architect created the clients immediate vision through intensive infrastructural change made possible by obvious financial backing (Fig. 35).



Figure 35. Preserve Bioswale; Hersbberger Design; 2014

Unlike Turenscares' design, the Rockefeller Preserve appears more subtle. In a remote location, the design had to combat different conditions and purposes; Turenscares' project had to mitigate and prepare for eventual urban development whereas the design of the Rockefeller Preserve was purely for programmatic means - traversal, immersion, and enjoyment. The design is static; removing previous land uses and infrastructures immediately eradicates the existence or development of a conscious historical narrative; nods to past landscape identities are needed in large scale projects to show how the landscape was changed and why the landscape was changed. At such a large scale, the eventual scheme for Wairarapa should have and afford an element of landscape growth and change while allowing for the evolution of conscious historical narratives and land usages.

WET MEADOWS OF THE RIVER NORGES

Agence Territoires 2013



Figure 36. Wet Meadows Cross Walk; Territoires; 2014

The landscape richness of Norges-la-Ville near Dijon in France is bound to the natural fluctuations of the Norges river system (Territoires). Previously inaccessible land, thus depriving the local population the opportunity to enjoy and understand the natural landscape feature, the design by Agence Territoires opened access to the water and wet meadows system through the creation of a wooden boardwalk structure. This journey provided the opportunity to traverse the previously removed landscape and re-discover or replace the water fluctuations and realities back into the consciousness of residents. The elevated walkway respects the ecosystem, redirects intrusive wildlife species and is aesthetically discreet, thus understanding that the splendour of this previously remote landscape lies in its romantic and aesthetical value (Territoires).



Figure 37. Wet Meadows Bridge; Terriroires; 2014

The Wet Meadows intervention provides what is perhaps the traditional approach to intervention landscape architecture—put a boardwalk across a natural waterway space (Fig. 36; Fig. 37). As a permanent wooden structure, the design seemingly provides minimal opportunity for temporal development. Although appreciating the simplistic and gentle approach of the design and the humble method of integrating landscape into public consciousness, there is minimal water-human interface with the actual river; the experience is purely observational. This type of design is seen in wetlands and rivers internationally, and while providing a comforting experience, restricts the user matrix to the confines of the established predetermined path.



Figure 38. Wet Meadows Heritage Deck; Terriroires; 2014

The designer understood the inherent qualities of the context in which the site was embedded, and provides a genteel method of re-placing a razed landscape but allows for no opportunity beyond the confines of the path for investigation or personal inquiry. It traverses across the site in a defined path placed on the landscape (Fig. 39); the design has reached its pinnacle following its installation; usage is restricted to solely walking and observation.



Figure 39. Wet Meadows Riverine Boardwalk; Terriroires; 2014

The method of employing a gentle and subtle approach in which social regeneration and landscape consciousness could be developed to suit the Wairarapa site. The simple structural intervention blends almost seamlessly with the landscape, and so the design in Wairarapa could too merge with the existing infrastructures and environments in a similar subtlety. Large scale changes may need to occur in Wairarapa but the design of singular spaces could reflect the inherent landscape qualities and promote an interaction previously unknown. Like Rockefeller Preserve, the environment could be the driver for a new diversity of interactions, with interventions that allow both immersion and separation in suitable spaces.

RENATURATION DE L'AIRE

Atelier Descombes Rampini SA 2002-2015



Figure 40. River L'Aire; ADR; 2016

The River Aire in Switzerland flows through a valley with a distinct historical devotion to farming and agriculture. The river, due to the need for productive land, was canalised progressively in the late 19th century. ADR Architects created a vast divagation space for the river to move parallel to a 'rivergarden' in the canal space (Decombes, Decombes and Rampini; Fig. 40). This allowed the evolution of a temporal narrative and made apparent the before and after dynamics of the site.



Figure 41. River L'Aire Canal redesigned; ADR; 2016

The designers understood the importance of acknowledging the past landscape features in the creation of the 'rivergarden (Fig. 41);' the canal is an enclosed space that organises the view and builds a sense of calmness and interiority that parallels with the forms of the open and flowing reclaimed river next to it (Decombes, Decombes and Rampini). An opportunity missed in this design is the potential to clean and filter the water coming from the intensified farmland of the upper river plain.



Figure 42. River L'Aire Canal intervention; ADR; 2016

The design of waterways in the Rockerfeller Preserve and at the Mississippi waterfront included some water filtration process; the River Aire renaturation, while introducing a new dynamic to the riverscape by naturalising some of it, remains in effect a straight canal of water free-flowing in a slightly larger space; the water flows sinuously across the still linear form (Fig. 42; Fig. 43). The renaturation restricted its design to feature and emphasise the free flowing nature of water and not necessarily the components and negative aspects of the water itself, particularly its cleanliness and clarity.



Figure 43. River L'Aire Canal revisualised; ADR; 2016

The similarity between the River Aire canalisation and the Ruamahanga River diversion is obvious – both were done for the benefit of economics and an increase in productive farmland. By understanding the desires of water to be free to design itself, the Wairarapa site design could utilise water processes (flooding, flow, filtration etc) as a means to enhance place acknowledgement and the characteristics of the total river system.

REFLECTION

The investigation of precedents has revealed potential design approaches that could combat aspects of the initial research question. The study of these precedents highlights how intervention along a waterscape can be transformative; all precedents studied share a commonality – they were all as a result of a site with negative connotations and with minimal public access. The designed intervention at these sites introduced a new typology to the landscape, and a new experience to the people who inhabited it. The site was changed and context issues mitigated in different ways determined appropriate by the designers.

The study of precedents has highlighted and developed a series of design opportunities that could be incorporated into the design study. Arising from the precedent investigation, we find these practices worthy of further conceptual investigation:

- *Immerse users in the landscape as means to enhance environmental stewardship*
- *Provide numerous water interfaces and edge conditions e.g. observation, traversion, interaction*
- *Provide public enjoyment and access to previously barred sites*
- *Provide opportunity to clean and filter water through organic means*

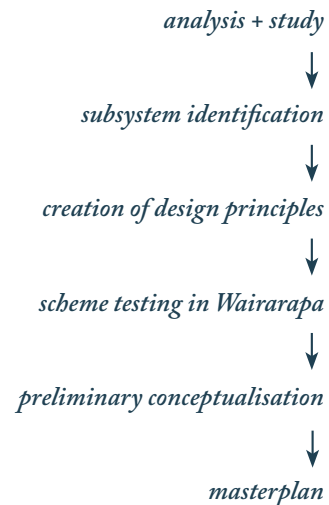
The final thesis outcome should understand contextual obligations to regenerate and place the Ruamahanga River into the Wairarapa region through ecological, social and hardscape intervention. The Ruamahanga riverscape can be designed as both a full Wairarapa regional scheme, as a series of publically accessible spaces, and as a collection of landscape interfaces and intervention typologies.

Figure 44. Diversion Edge; Ruamabanga River; 2016



Scale One
RIVER

THE RIVER SCALE



The first investigative scale of the design study is regional. Prevalent through previous inquiry is the need for the design solution to promote the site as an immersive experience through action in, and external to the watercourse confines. Through usage of, working in, learning about, living in, and being in space, can understanding and connections being to occur at the human level. Through ownership, responsibility, accountability, and reward, can types of environmental stewardship and acknowledgement develop. Site design opportunities and intentions begin to reveal themselves through the creation of a design framework that collates information gathered and refined in the analysis phases. The utilisation of this considered framework contributes to the recognition of the river systems inherent contribution to the creation and acknowledgement of place and place histories in Wairarapa.

The following chapter documents the process by which design at the 'River' scale was investigated and resolved. This scale unites the interests and findings of initial analysis through the identification of important river subsystems, the establishment of tangible designable principles for each, and the creation of a framework for design. The conceptualisation of new environments and interactions can begin at this stage of the design investigation, with the intentions of the design proposal being clearly established through subsystem identification and design principle creation. The chapter culminates by implementing these principles on the Wairarapa landscape to conceptualise a masterplan which encompasses action on and beyond the singular watercourse.

PLACE METHODOLOGY

The analysis of site, precedents and literature brings to light the context of Ruamahanga - the river is not a singular watercourse; it encompasses subsystems of numerous scales and with multiple interfaces. Based on the designable aspects of the Wairarapa landscape, and the integration of findings from the analysis phases, nine subsystems opportunities were identified (Fig. 45). Their development into a series of design principles recognises the consistency of primary design opportunities and allows the establishment of place aspirations which afford a placed Ruamahanga river through acknowledgement and design at these interfaces.

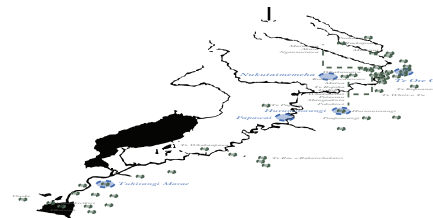
The creation of principles for each subsystem encourages design testing to occur; they act as a way to assess and theorise potential design concepts or ideas against a set of predetermined criteria. Through the integration of these principles, we act in effect as an intermediary between the interests of the economic landscape and the interests of the river system to develop an appropriate regional scheme that promotes waterway acknowledgement at recognised interfaces. Ruamahanga place and systems can be acknowledged and designed for through the combination of these design principles at the confines of the singular watercourse, and beyond. The subsystems and their principles are documented on the following pages.



edge



flood



heritage



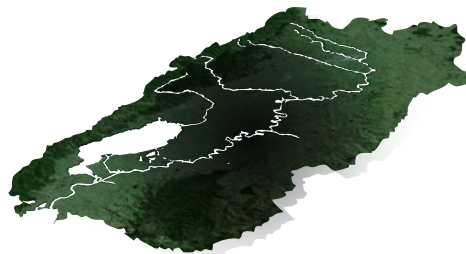
land



passage



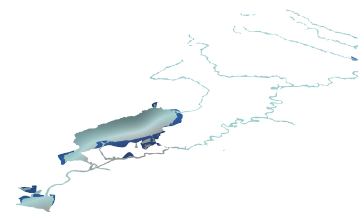
river



vegetation



water



wetland

Figure 45. Ruamahanga Sub-Systems Diagram

EDGE

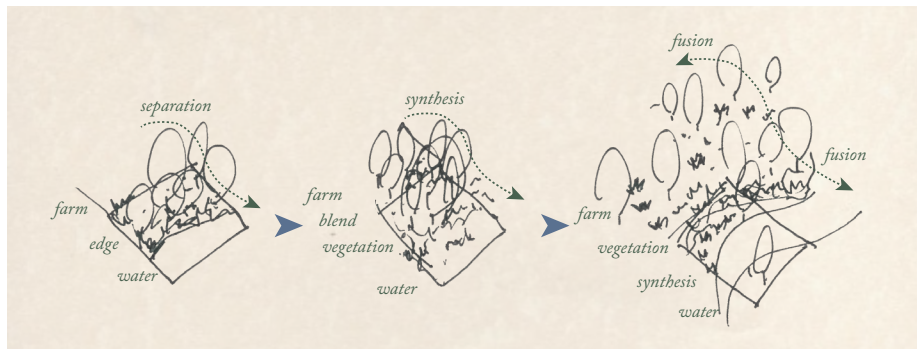


Figure 46. Edge Development Diagram

Design Principles

- Blend of vegetation (type, mosaic, etc.) to water's edge from adjacent properties, habitats, spaces
- Emphasis on natural materials and placements; original vegetation patterns emerge
- Minimal use of linear forms at edge interfaces
- Edges and water interfaces are accessible, unfenced where appropriate
- Edge conditions offer a variety of uses/interfaces/interactions/materials

FLOOD

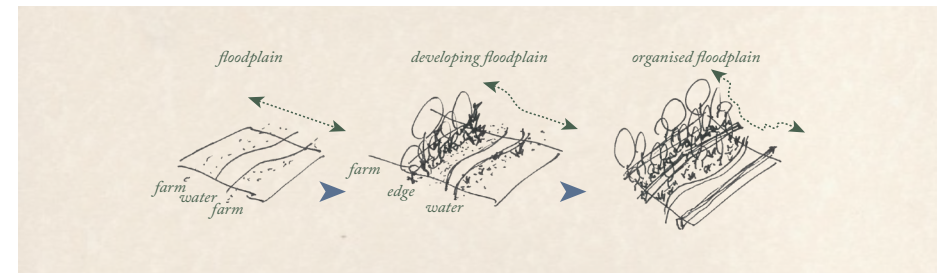


Figure 47. Flood Development Diagram

Design Principles

- Flood limit can withstand naturally occurring periodic flooding without major inconvenience to land users and property
- Flood limit area can be used as open space for recreation in some instances
- Flood limit harbours natural habitats for many riparian species
- Flood promotes and is recognised as a prosperous natural process
- Flood limit is organised, combining engineering and designed intervention

HERITAGE

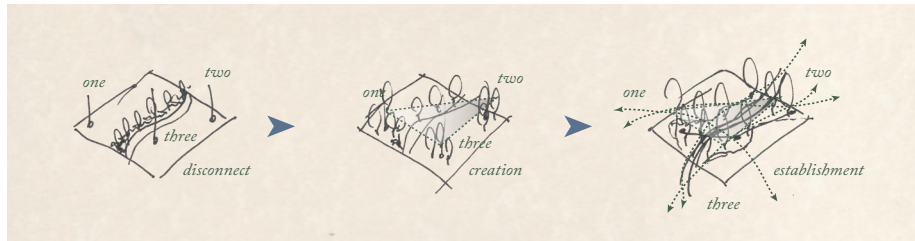


Figure 48. Heritage Development Diagram

Design Principles

- Locations determined are identified through some intervention
- Sites are accessible as components of the river system, as components of history
- Sites become accessible and linked to one another through intervention
- Opportunities for sites to expand, evolve and develop as a temporal structure
- River forms a rope of heritage through Wairarapa, is heritage of Wairarapa

LAND

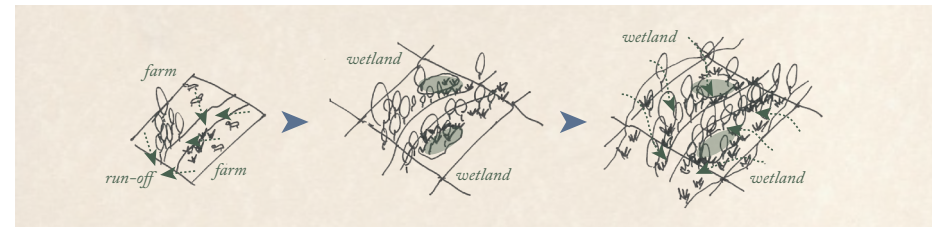


Figure 49. Land Development Diagram

Design Principles

- Land and river system landscape considered as symbiotic and necessary component of the evolving cultural landscape
- Adjacent land remains operative for economic, cultural purposes
- Land responds to the needs of the watercourse
- Land at water's edge becomes unowned, possession is public and regulated, public has a legal right to enjoy the landscape

PASSAGE

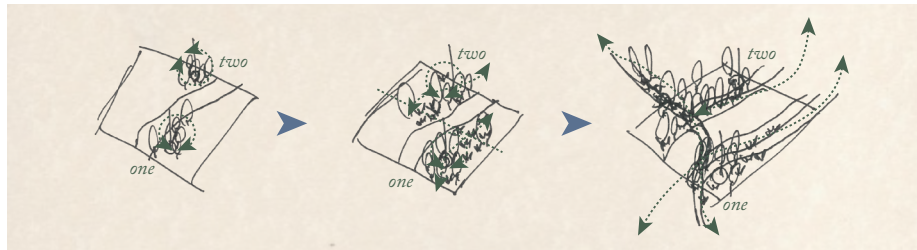


Figure 50. Passage Development Diagram

Design Principles

- Comfortable and engaging walkways between access points exist along riverscape, also across watercourse where appropriate
- Landscape becomes connected through traversal and passage
- Intervention creates public investment and usage of riverscape and in planting, ecological restoration practises
- Linkages created along areas of the watercourse, and through surrounding landscape/vegetation
- River becomes an alternate passage through the Wairarapa landscape, revealing new sites, ecologies and spaces

RIVER

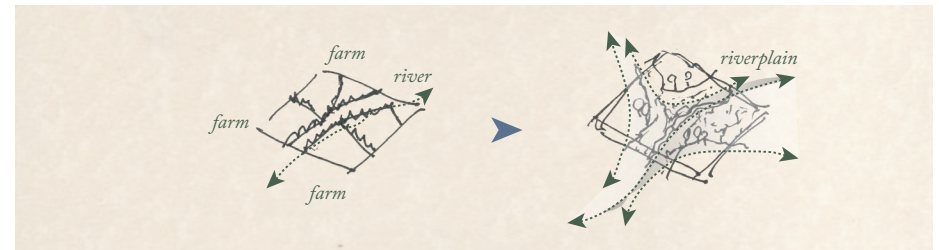


Figure 51. River Development Diagram

Design Principles

- River harbours natural habitats for many riparian species, and for vegetation of ecologically diverse historic Wairarapa
- Ruamahanga recognised as a prominent landscape feature and location, or series of locations, in its own right, and as the lifeblood of Wairarapa
- River is clean and usable for recreation, cultural interaction etc.
- River space/place extends beyond the confines of the singular watercourse
- River is public, where appropriate – activities are unrestricted

VEGETATION

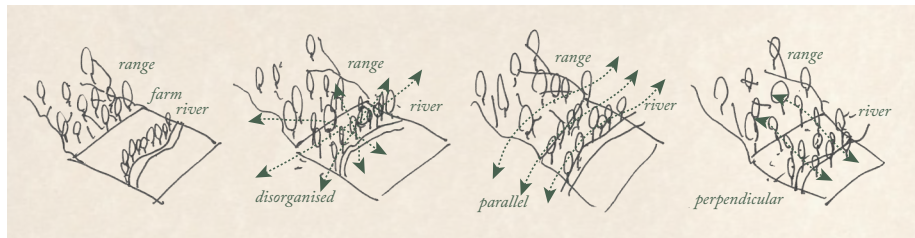


Figure 52. Vegetation Development Diagram

Design Principles

- River space is natural habitat for vegetation of ecologically diverse historic Wairarapa, and of riparian system
- Vegetation has connection to the surrounding ecologies, typologies
- Mosaic of vegetation exists along the watercourse
- Vegetation is identified for ecological and educational purposes
- Where appropriate, plants with cultural connection are favoured and usable for such purposes
- Public investment in planting, ecological restoration practises

WATER

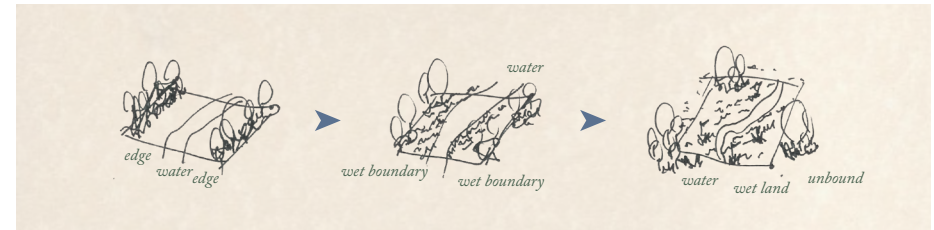


Figure 53. Water Principle Diagram

Design Principles

- Water is safe, clean and swimmable, usable for recreation, cultural interaction
- Flow and changes of watercourse along and beyond river corridor is prominent and necessary component of design
- River changes is recognised as a prosperous natural process
- Flow into the Ruamahanga is restricted where appropriate to maintain the clean river system
- Ruamahanga recognised as a prominent landscape feature and as the lifeblood of Wairarapa

WETLAND

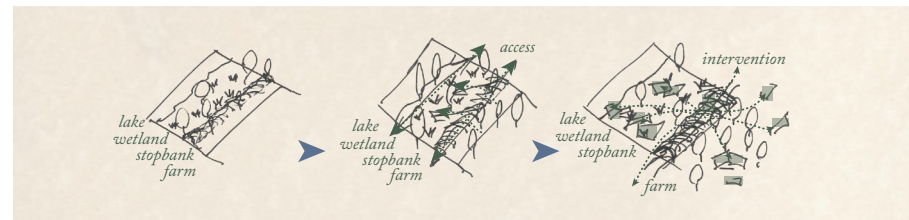


Figure 54. Wetland Development Diagram

Design Principles

- *Intervention provides obvious access and traversal of wetland environment for enjoyment, education and cultural interactions*
- *Releases segregation from lake, land, and river systems*
- *Creates a network of interaction between lake and river*
- *Blends vegetation (type, mosaic, etc.) to water's edge from adjacent properties, habitats, spaces*
- *Develops new connected wetland systems and redesign of stopbank environments to allow for ecological diversity and human/ water interaction*

REFLECTION

The creation of a principle based framework, although commonplace in the Architectural discipline, risks inadequate computation at the physical scales; site design intentions, although welcome and founded on positive objectives may be too broad or far-reaching to become fully realised at closer scales. Continual, closer scaled study may reveal some principles to be inappropriate or physically inapplicable. It is the intent of the three scale investigation in the following chapters to test and resolve these conflicts if they arise. This allows continual design framework evolution, and provides the opportunity for individual sites to reveal their own designable constraints with regards to the overall intentions of the place methodology. The methodology serves as a tool to establish the aims and objectives of the design solutions at closer sites within the designable site sphere as well as grounds the purposeful design of spaces and interactions within a larger regional framework.

Initially, ten subsystems were identified, with 'Wet Land' being removed, its principles being absorbed within the 'Wetland', 'Land,' and 'River' subsystems. The 'Wet Land' subsystem principles encompassed a dialogue regarding soil and land moisture retention, and the continual operative nature of farmland in this sphere; this is now considered a natural component of the designed outcome as a result of the integration of the nine other principles. The removal of the 'Wet Land' subsystem did not alter the investigation progression; it served to redefine the intentions of the research with regards to a more specified Ruamahanga context - the functions of the natural river land landscape are prevaletced over the functions of Wairarapa farmland. The utilisation of this place methodology permeates design conceptualisation at the closer scales from this stage onwards; first, through the creation of a masterplan.

SCHEME DESIGN TESTS

The follow pages document the process by which each subsystem principles were inputted onto the Wairarapa site through the implementation of strategies. This is to remove their theoretical nature and test their viability at a physical scale, on a physical site. Finding its niche in many landscape planning disciplines, guideline based design is not new. At the comparatively large 'River' scale, the framework established through principles is appropriate to contextualise initial design thinking and establish a formal design proposal which regards the wider physical systems.

This stage of the design process instigated a continual conversation regarding the potential for waterway management potentials to connect the surrounding natural ecologies through careful integration with farmland

and riverland economics and practise; similar thinking evolved from the context and precedent analysis phases. The place could be regenerated through recognised social interaction equal to that of hardscape intervention at and beyond what the watercourse confines.

The process of proposing each initial subsystem principle across the whole site was done through drawing tests (Fig. 55) and in plan on the following pages. It reveals strategy commonalities and introduces new approaches to waterway acknowledgement in Wairarapa. The Ruamahanga riverscape can be designed as a full Wairarapa regional scheme, as a series of public spaces, and as a collection of landscape interfaces and intervention typologies.

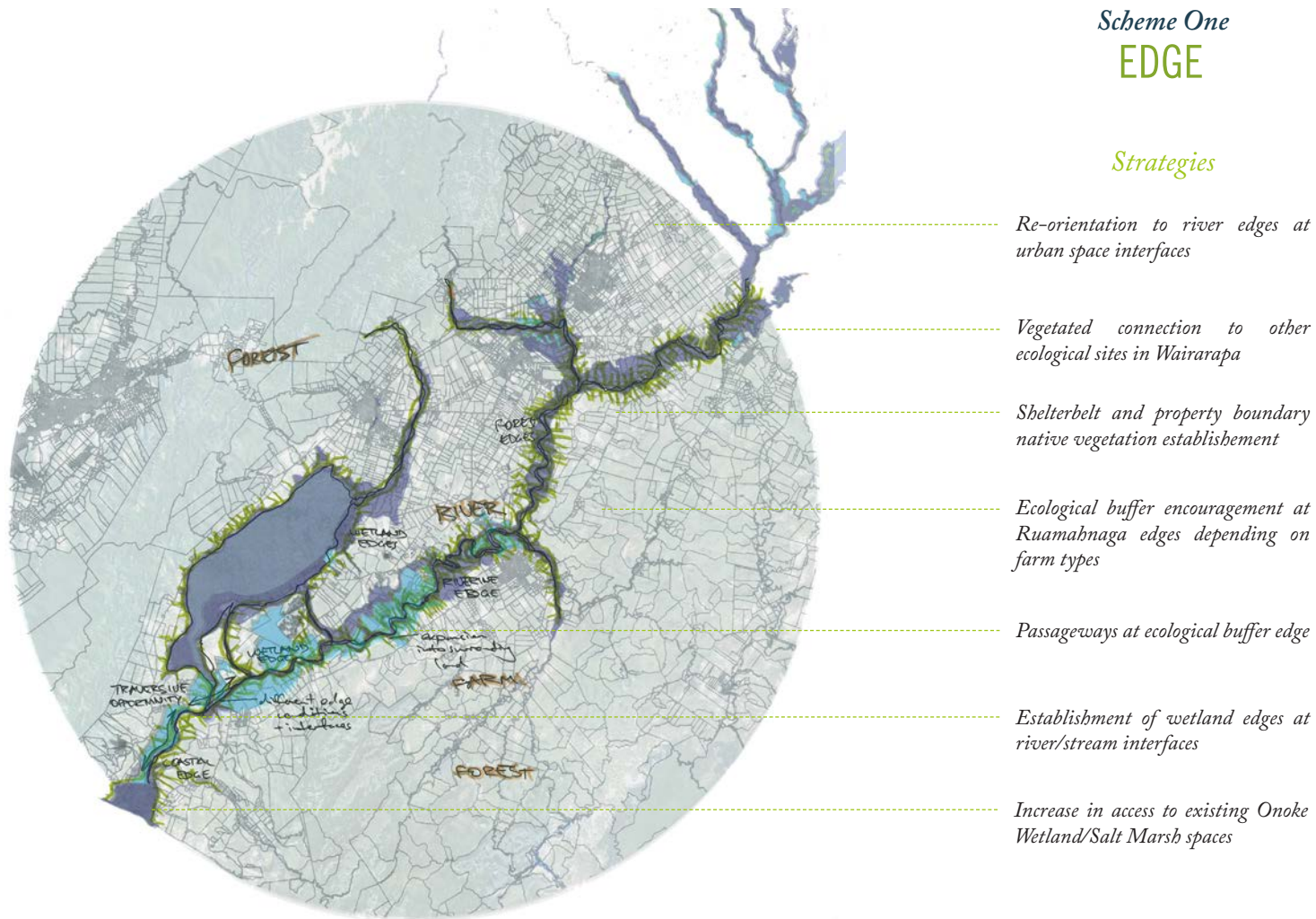


Figure 56. Scheme Edge Visualisation. This scheme establishes an ecological type buffer space along areas of the watercourse, and encourages this buffer to extend to the property boundaries and shelterbelts of immediate Ruamahanga and Lake Wairarapa properties. The edge buffers would correspond to the types of farming occurring at various stages along the watercourse, and would expand into the surrounding land where appropriate. An ecological buffer of this extent would take time to establish before it becomes operational as a means of water filtration and sediment retention. Given the scale, and the need to extend the design into the private property sphere, its establishment could be of considerable upheaval and dispute.

- *Exclusion and creation of public open spaces/pathways during flood season*

- Let the land flood - farm types correspond to potential flood impact

- *Flood creates renewal and vegetation opportunities*

- Creation of a 'double edged river' - inner and outer 'edges' identified and used as spatial markers

- *Stopbank passag*

- *Preference for naturalistic edge at water interface*

- *Water retention points (or paddocks) within farmland to minimise flood at river*

- Flood limit identified at property boundary - vegetation type/ techniques utilised correspond to flood nature and impact

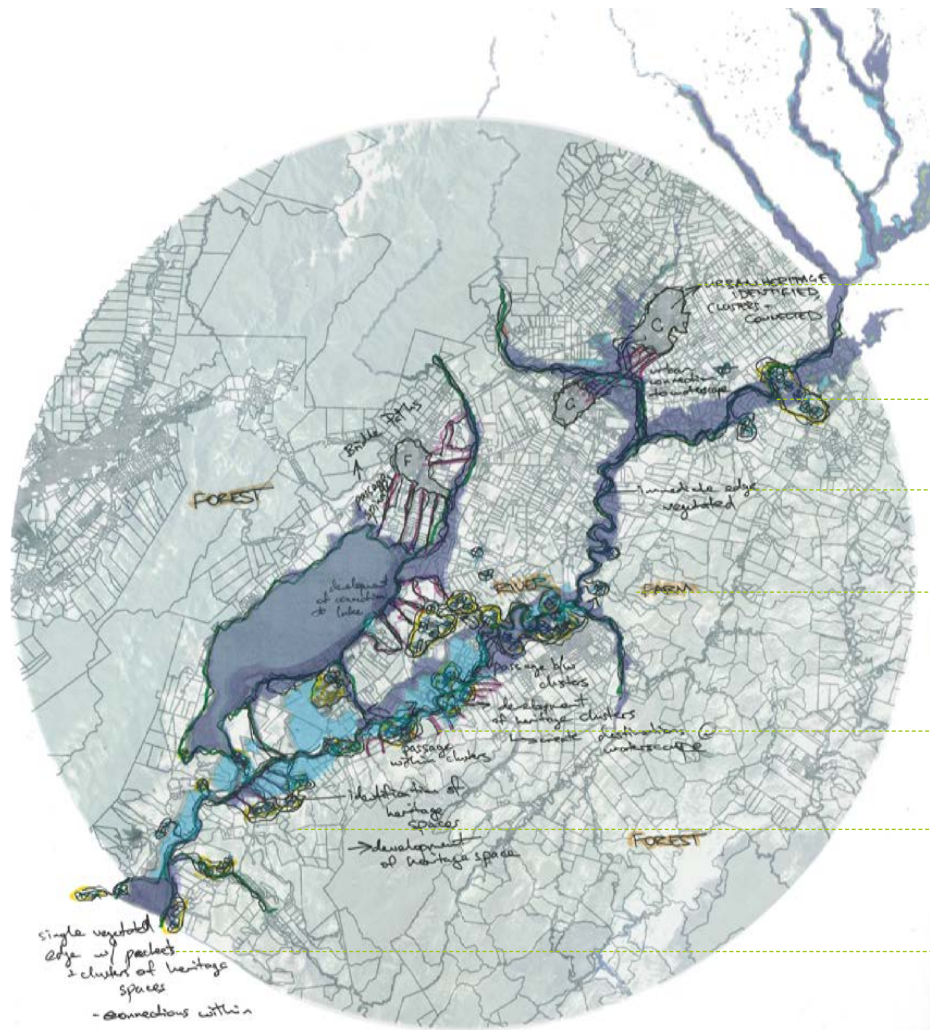
Continuation of current flood protection practices

bad Properties
- flood boundary
identified @
these property
boundaries

lookouts on
stopbanks/levees?
strategic

Scheme Three HERITAGE

Strategies



Establishment of passage connection to water spaces and with other heritage sites

Informal bridle paths and tracks/trails across the site

Immediate Ruamabanga edge vegetation encouraged

Passage spindles connecting heritage to each other, to waterspaces

Development of proximate heritage clusters

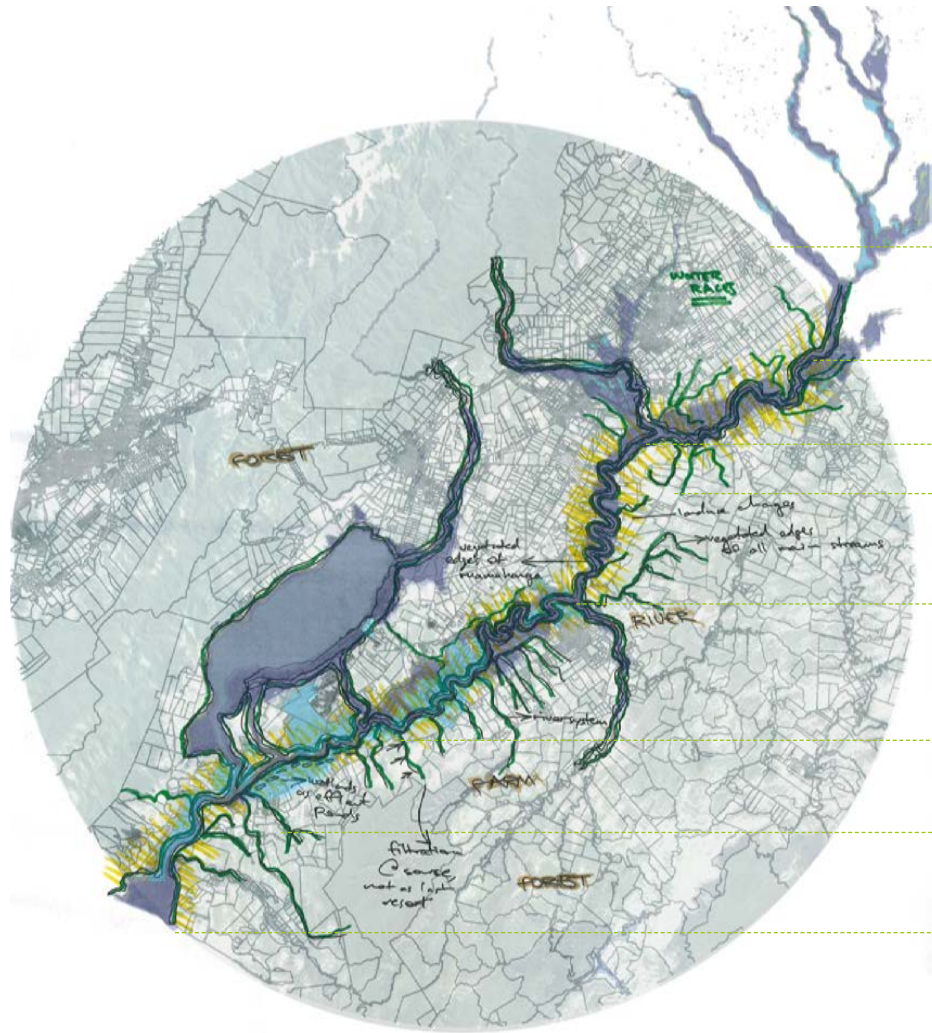
Identification of heritage spaces, creation of registry and interventions at spaces

Indigenous heritage identified, studied and documented; consistency of designed intervention encouraged

Figure 58. Heritage Scheme Visualisation. This scheme encourages the promotion and connection of heritage landscape sites and systems through passage, identification, and access. Their promotion can extend beyond the river system to create a network across the site that encompasses the heritages of both Maori and Pākehā. Separate settlements can connect to their adjacent river system through vegetation, heritage acknowledgement and experience. Heritage acknowledgement is prevalent in the Landscape Architectural discipline as a means to engage and provoke thought and narrative. The scheme does not account for the distance between, and relevance of, documented heritage sites, or their level of potential engagement.

Scheme Four LAND

Strategies



Water race revegetation and creation of retention ponds

Flood spaces encouraged to diversify farm typologies

Stream revegetation prevalence

Stopbank creation and vegetation at upper Ruamahanga edges

Vegetated edges of Ruamahanga - buffer size corresponding to farm type and usage

Filtration at source in farmland through wetland effluent treatment

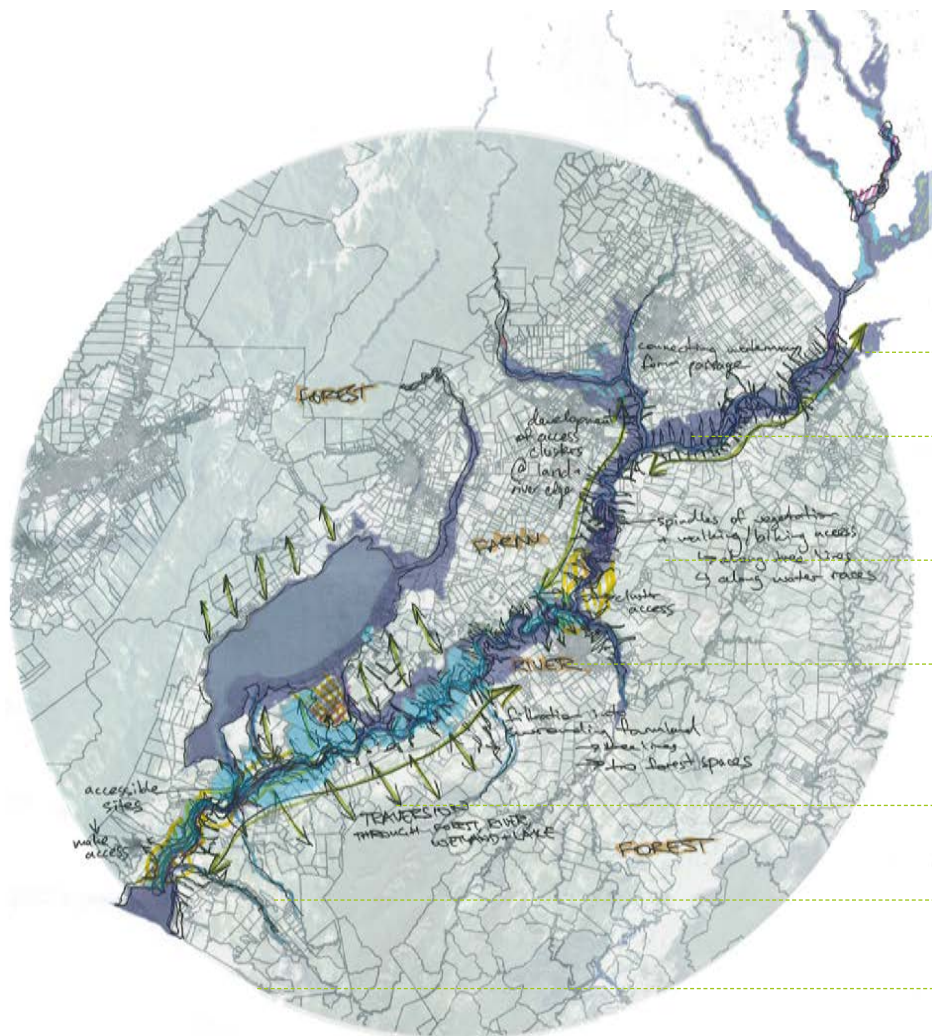
Land use changes at Ruamahanga edge and in stream connecting farmland

Encouragement of residential expansion at developed spaces

Figure 59. Land Scheme Visualisation. This scheme establishes changes at properties separate from the watercourse, encouraging some water filtration through farmland at the problem source. Land use changes and farm type changes encourages at the Ruamahanga interface could be continued along other major rivers (eg: Waiohine, Tauberanikau, and Waipoua Rivers) and at the Wairarapa lake edge. Water Races would be treated similar to farm streams and require vegetation and stock exclusion in some instances. This implemented would alter many cultural dynamics of the Wairarapa site; it does not adequately consider the types of farming at a closer scale, and cannot comprehend individual farmers attitudes held toward their landscape.

Scheme Five PASSAGE

Strategies



'Queens edge' established in some areas

Informal tracks/trail spaces across site, in shelterbelts, treelines, unused farmland, and open space;

Spindles of vegetation connecting roadways to riverways, visually and ecologically

Traversion connecting forest, river, wetland, and lake ecologies and experiences

Access made to waterways sites, and heritage sites; recognised paths established

Increased passage and access at Onoke wetland and saltmarsh

Access increased to coastline from river system

Figure 60. Passage Scheme Visualisation. The 'passage' scheme utilises property boundaries, council properties, riverside access, and stop banks previously inaccessible to further increase the opportunities for landscape traversion and immersion, thus adding a new spatial dimension to the process of establishing environmental stewardship. The utilisation of a 'queen's chain' type edge philosophy to access the river system encourages passage to connect lost or forgotten heritage landscapes, roadways, tourism opportunities, and other properties across the site. The New Zealand dynamic preferences the intense acknowledgement of private property possession and regulation; this is exemplified at the Wairarapa site. This scheme does not allow for these attitudes to be acknowledged.

Scheme Six RIVER

Strategies

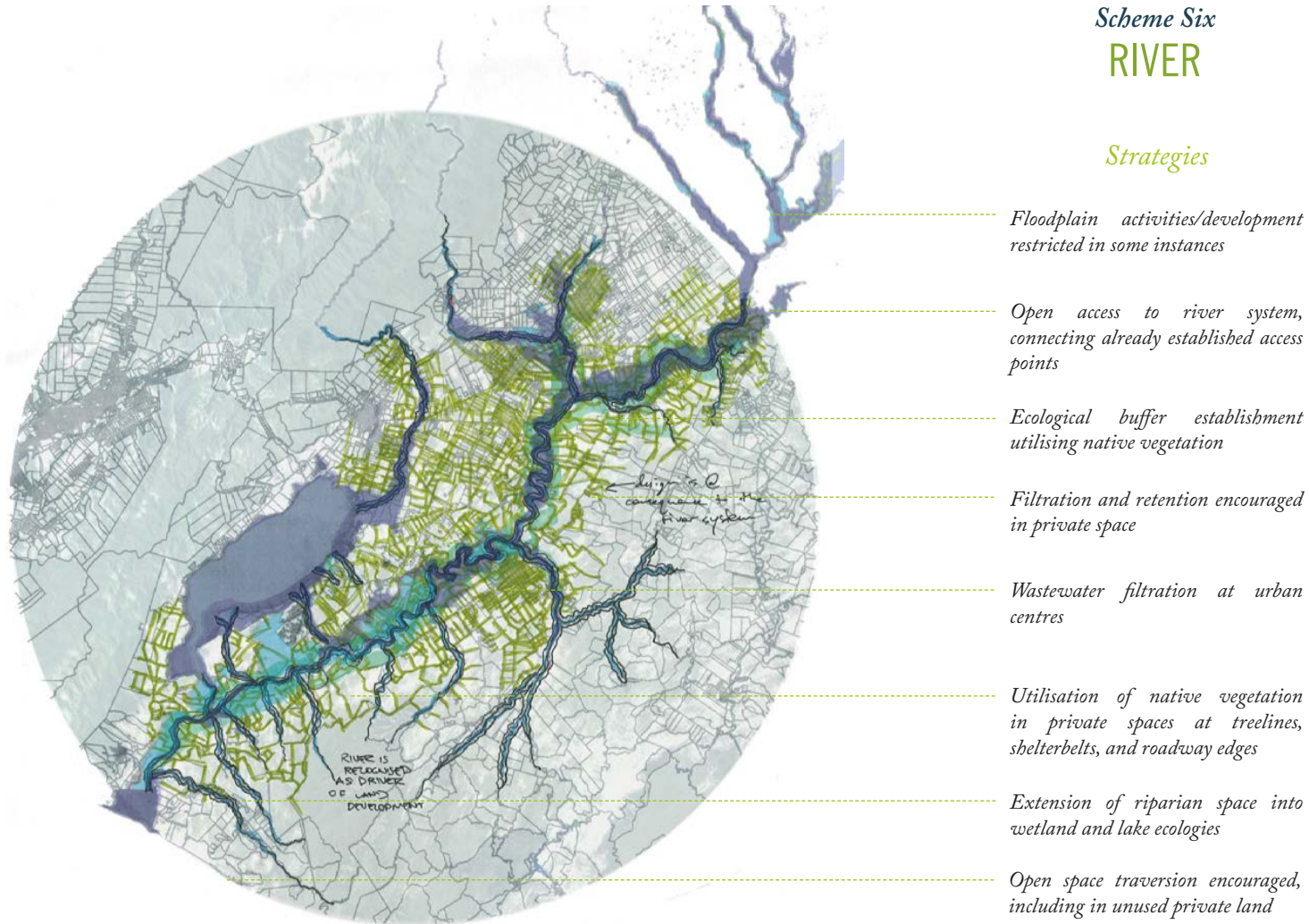
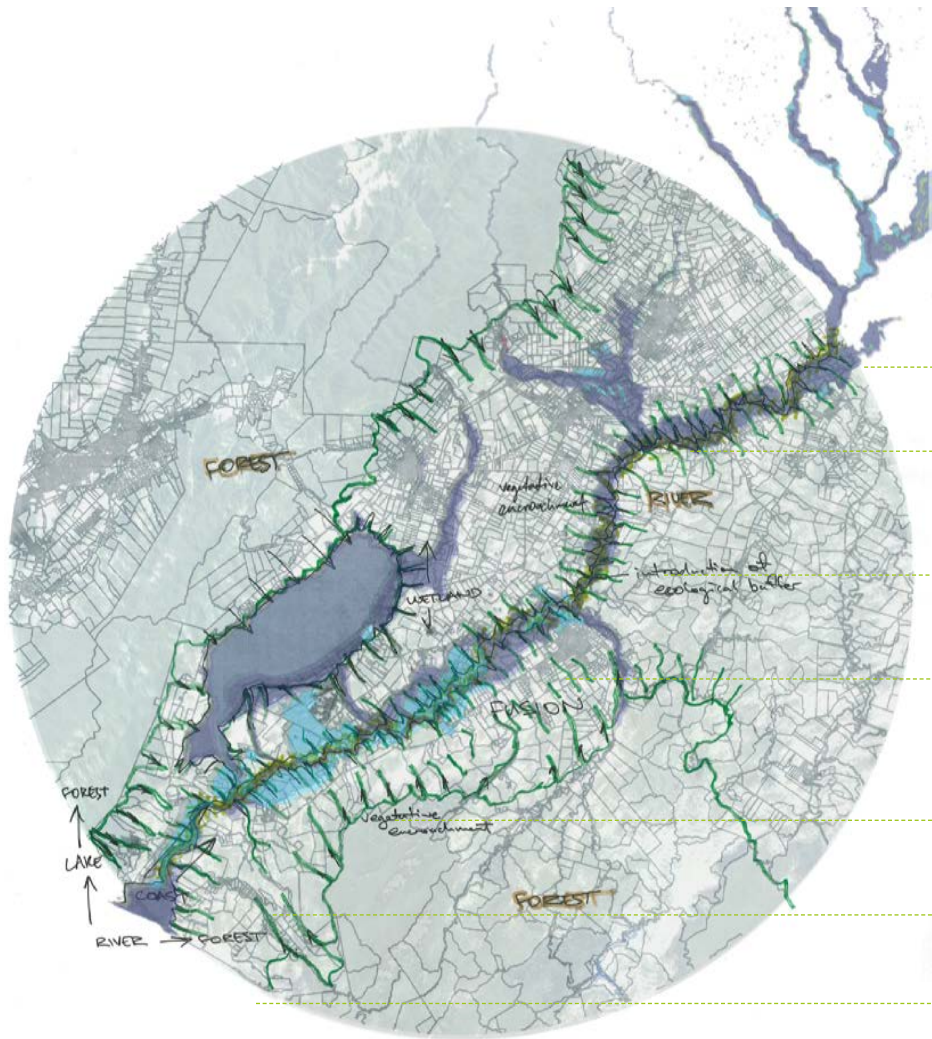


Figure 61. River Scheme Visualisation. The scheme developed for 'river' establishes the whole waterway system as a driver for land developments, making development consequential on the affects it would have on the wider waterway system. It encourages land use changes and farm type diversification to promote healthy waterways and healthy farming practices. This visualisation cannot accurately comprehend the true extent of the strategies and their required formalisation. The scheme envelops the whole Wairarapa valley; it is difficult to realise these strategies at this scale

Scheme Seven VEGETATION

Strategies



Ecological buffer introduction corresponding to farm types

Economically viable native planting; eg. manuka, kanuka, flax etc

Encouragement of native alternatives in shelterbelts; potential for iwi and school involvement throughout site

Fusion between lake, river, wetland, and forest ecologies through vegetation selection and passage

Diversion ecology encouraged to remove linearity of water cavity

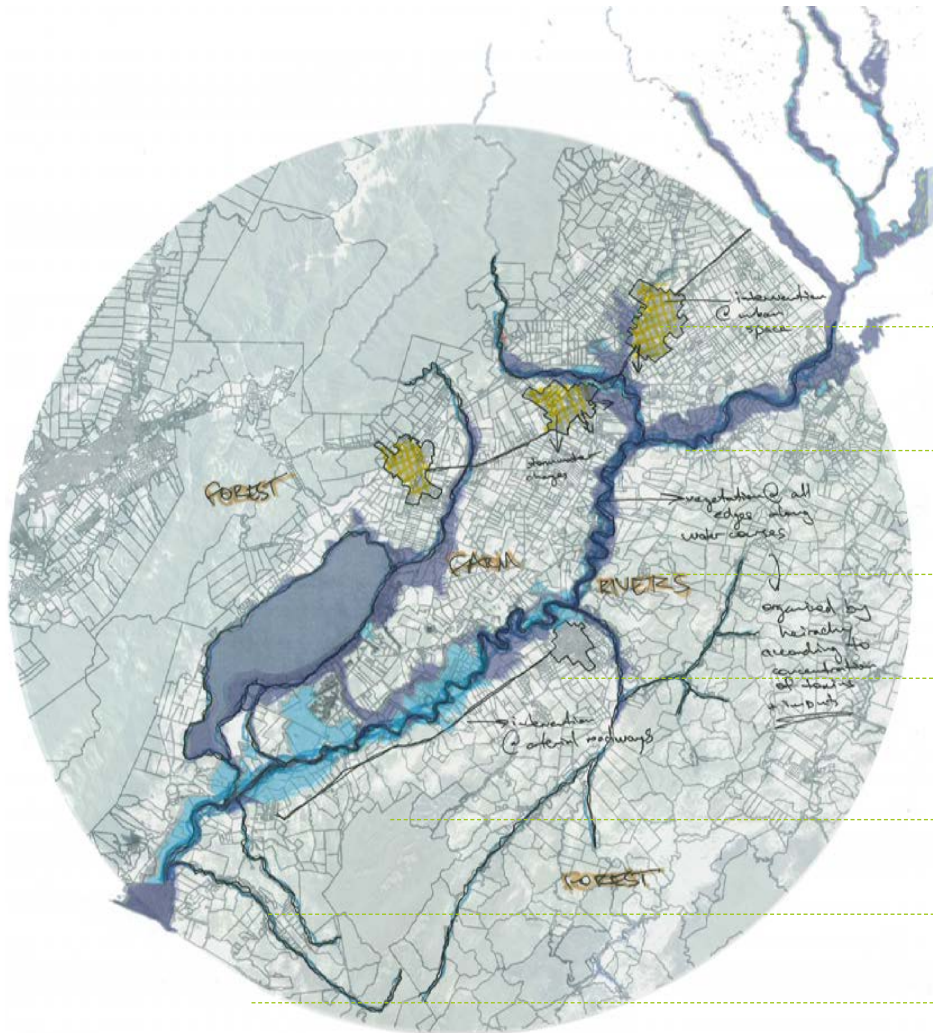
Vegetated encroachment encouraged through little-used spaces

Coastal ecologies reestablished

Figure 62. Vegetation Scheme Visualisation. This scheme favours the fusion of land with that of its NZ context, and its vegetated heritages. The introduction of the ecological buffer encourages biodiversity to establish connection to historic Wairarapa vegetation. Connection can be literal through shelterbelts, ecological zones, and roadways. The encouragement of blending between forest, coast, river, lake, and wetland ecologies promotes the diversity of sites and allows vegetated encroachment and renewal. Given the prevalence of exotic vegetation, this scheme would also require mass removal of the exotic ecology at the rivers edge; the design would need to be established over time without the immediate removal of the ecological services of the exotic vegetation.

Scheme Eight WATER

Strategies



Urban space development through rain gardens, wetland spaces at roadways, private residences

Water collection and recycling in private residences

Vegetated edges of waterways, including waterraces

Wastewater filtration through wetland creation at all treatment plants across site

Arterial roadway intervention to filter and collect water

Retention and recycling for irrigation, feeding, in farmland

Coastal ecology reestablishment

Figure 63. Water Scheme Visualisation. Currently sewerage is discharged into Wairarapa waterways with some restriction; this scheme encourages the use of vegetation and natural process to filter urban and rural runoff at the source before it is discharged into the Ruamahanga. Encouraging waterway health independent from the watercourse at urban centres, along with the establishment of retention areas in farmland to prevent flooding, encourage water recycling, and water filtration in private space is prevalent. The establishment of wetland spaces to filter wastewater and stormwater is utilised considerably in the Landscape Architectural discipline, thus rationalising the design strategies implementation within this sphere.

Waterlands

FOREST

WATER

PARK

FOREST

vegetation to forest edge

increased connectivity

increased "water" area

waterlands

development of connections blue spaces

wetland development

Section with + intervention water wetland

Forest

Revegetation of farm streams and water races

Creation of effluent treatment wetlands at farm scale

*River and wetland encroachment
within farmland*

Creation of wetland edges at stream convergence points

Vegetation extended through shelterbelts and streams to forest edges

*Wetland farms typologies beginjning
to occur at lake and river edges*

Passage connections between heritage wetland cluster spaces

Creation of saltmarsh-wetland path at Onoke

A circular map of the 'Waterlands' area in the Netherlands, showing a network of waterways and land parcels. Handwritten annotations in various colors (green, blue, orange, purple) identify different land uses and ecological features. Labels include 'FOREST' (in green and orange), 'WATER' (in blue), 'PARK' (in orange), and 'WATERLANDS' (in purple). Other notes include 'vegetation to forest edge', 'increased connectivity', 'increased "water" area', 'waterlands', 'development of connections blue spaces', 'wetland development', 'increased connectivity', 'vegetation to park edge', 'increased connectivity', 'Section 101 + intervention water wetland', and 'Forest'.

REFLECTION

At this scale, and through this process, the physical framework is establishing as practical and designable. The separate nature of this process utilising the nine subsystems is beneficial as a means to allow full realisation and criticism of design opportunities; their overlaps within the designable sphere is made apparent through the consistent recognition of same design opportunities and strategies implemented within each scheme. This allows a simpler transition from separate scheme investigative studies into a complete Wairarapa scheme and masterplan.

The scheme conceptualisation process shares some same weaknesses as the place methodology; the size and scope of the Ruamahanga system is as yet unrealised in designed space; this is perhaps due to the immensity of scale in which we are dealing. The utilisation of line work to depict boundaries

and design intervention does not provide appropriate visualisation, and instead only exists as a means to identify, code or zone. Prone to vagaries, this is perhaps a necessary component of design at this scale. Encompassing territory reserved for landscape planning, the creation of regional strategies in this manner envisions the future, and in this thesis, directs the design research, and the final thesis outcome.

Through showing opportunities for development in physical space, we begin the masterplanning process that resolves the research intent at this scale. The acknowledgement of consistencies in framework strategies developed through the scheme tests creates a masterplan for the whole site that combines and contextualises this phase of investigation into a complete Wairarapa landscape strategy.

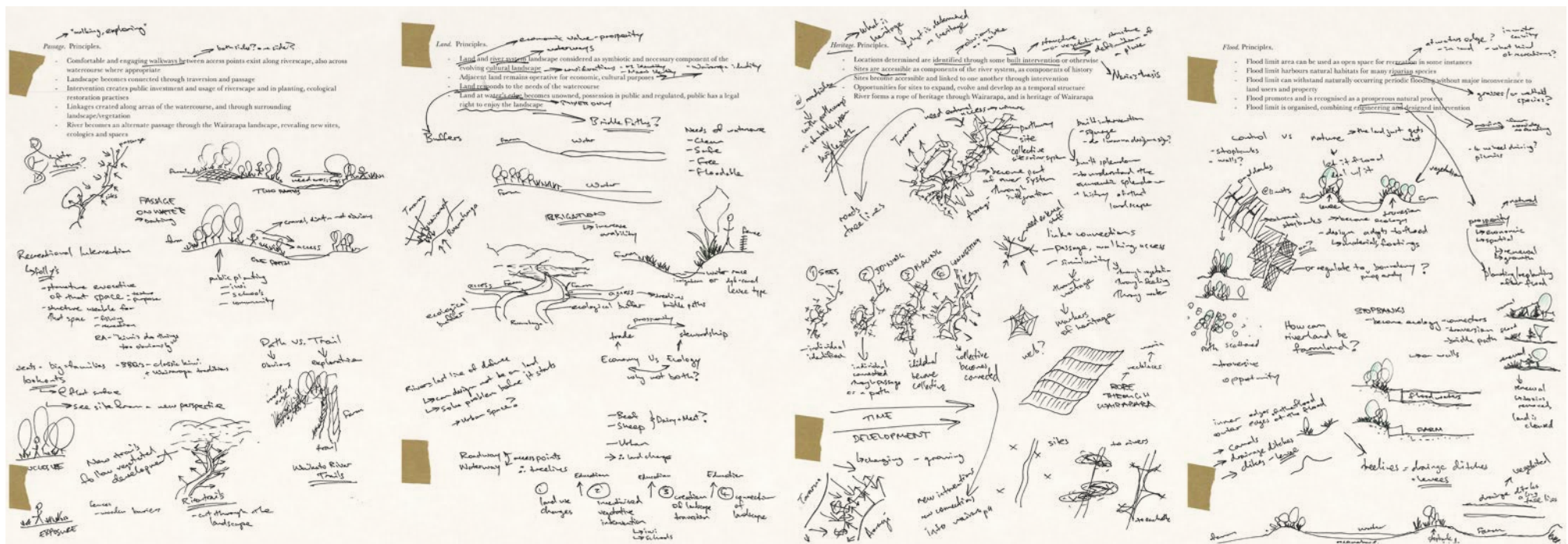
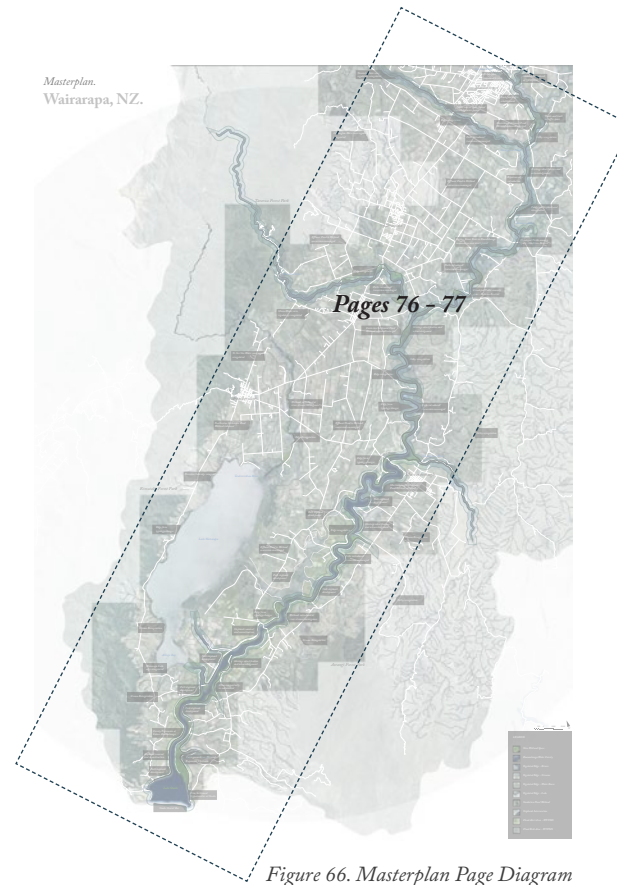


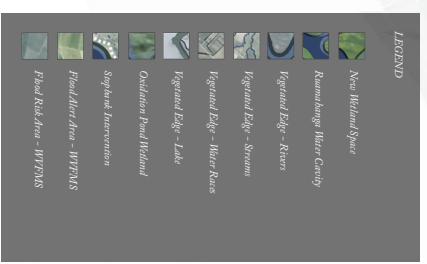
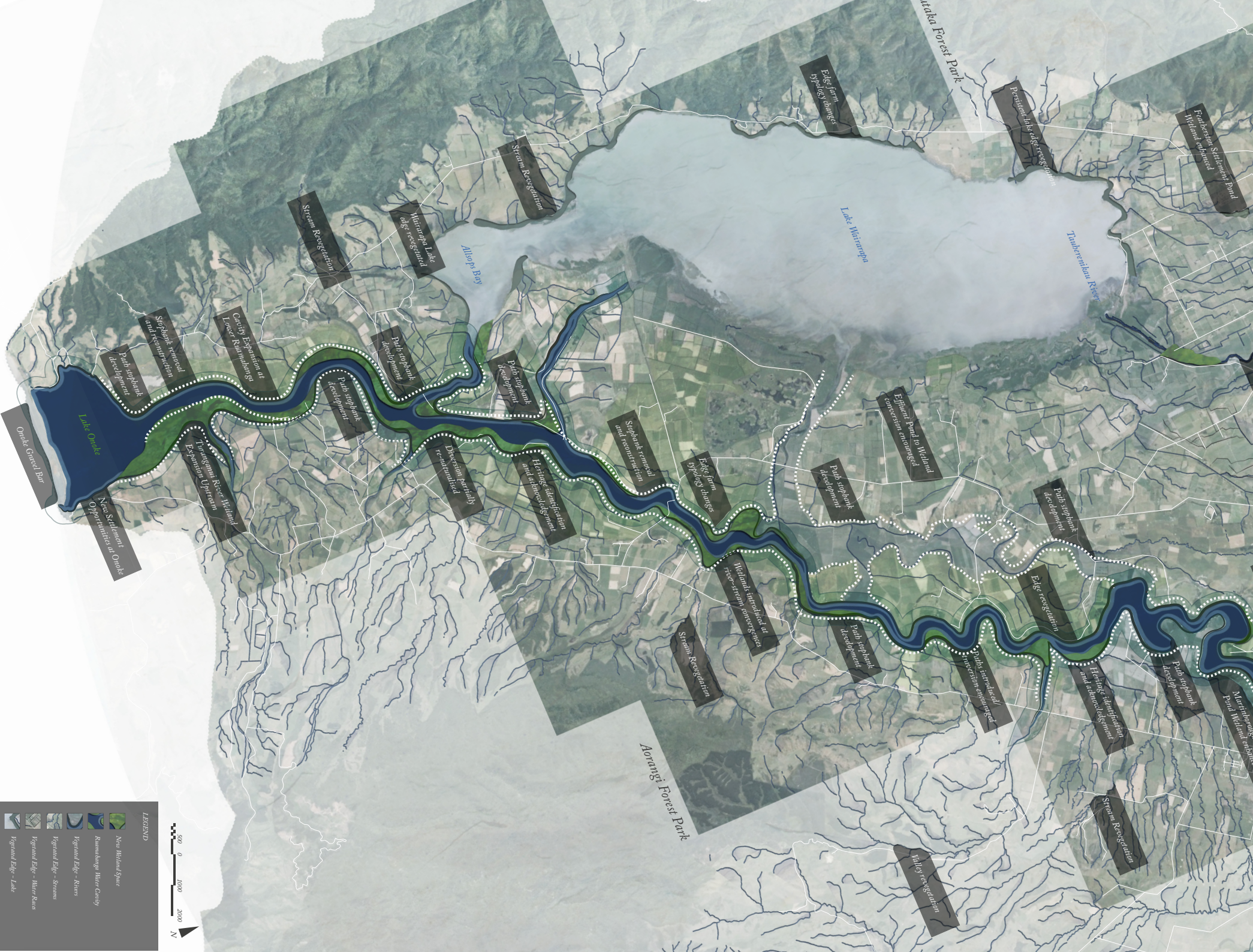
Figure 65. Sketchbook Pages - Design Tests

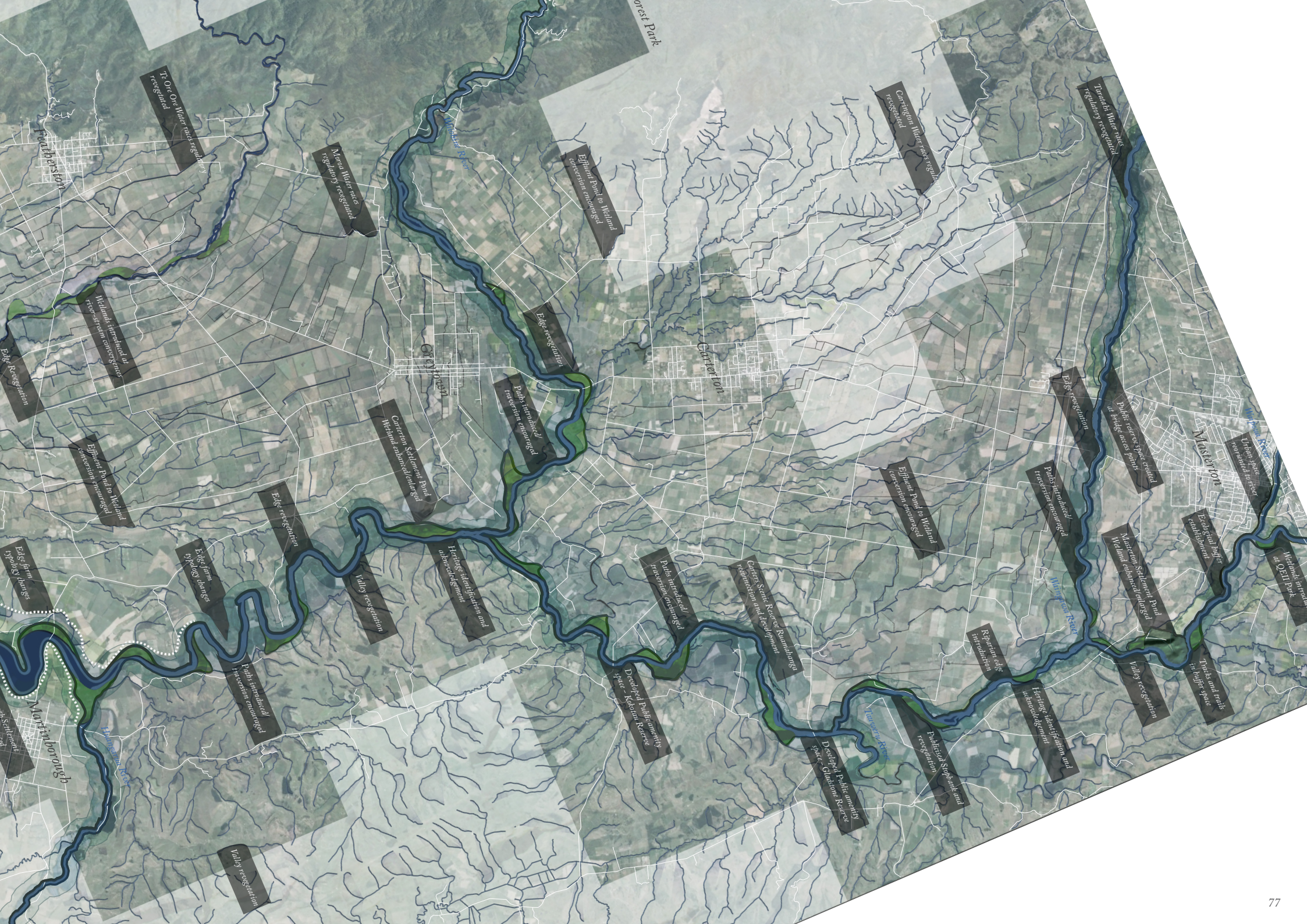
MASTERPLANNING

The masterplanning of Wairarapa through the manifestation of place principles, their theoretical and physical testing (Fig. 65), and their collation at mass scale, has resulted in a 'River' design solution which attempts to improve the Ruamahanga system matrix and increase waterway acknowledgement at various interfaces. The landscape of Wairarapa with the Ruamahanga River system as an acknowledged spatial activator becomes connected through the manipulation of old interactions, and the creation of new ones identified through the place methodology.

The creation of a masterplan with regards to this investigation visually collates into a singular graphic the information and strategies established on the ground plane through the place methodology process. The process allowed the removal of scheme overlaps and the clarification of some strategies as related to the requirements of the principles, and the situation the closer scaled sites. The following page displays the final Masterplan framework which corresponds to the culmination of study at this scale (Fig. 67).







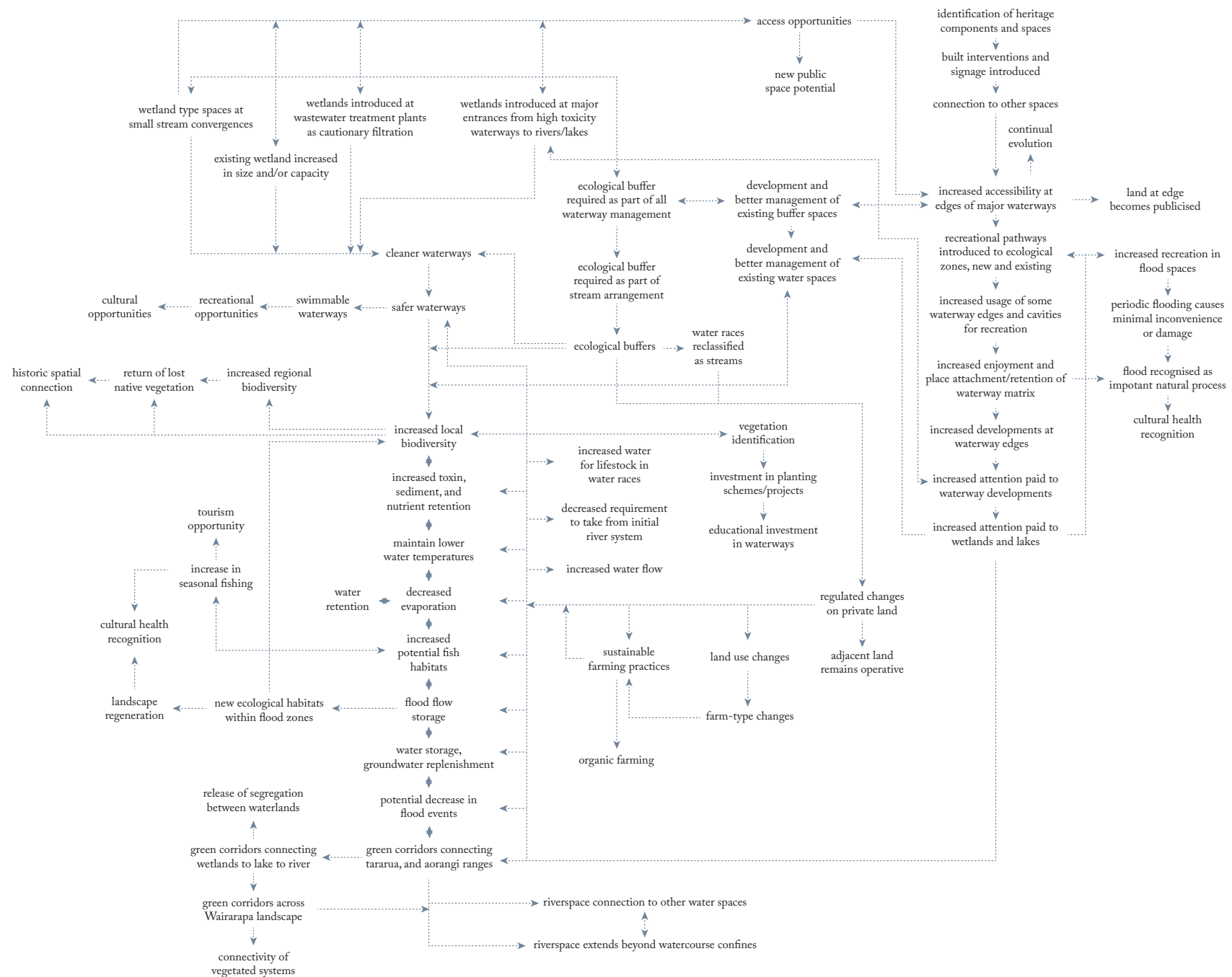


Figure 68. Masterplan Strategy Interaction Diagram

REFLECTION

The process engaged at this scale exhibited an understanding of the cultural and identity connotations as related to waterways and encouraged their acknowledgement through recognition and interaction. Place at this scale cannot be concretely designed, but design of it can be initiated at this point through the integration of landscape and cultural processes. The large-scale scheme for Wairarapa encourages immersion and usage of, and action in, the rural landscape as a means to encourage environmental stewardship and place acknowledgement; engagement being of particular prevalence when discussing the creation and manifestation of place and placement. The Ruamahanga subsystem processes are 'placed' at varying interfaces beginning at this scale (Fig. 68). The next scales of investigation exhibit its cohesion with regards to closer place dynamics.

The process and place methodology usage introduced particular challenges; it cannot adequately portray the closer scale nuances of the site, and presents potential conflicts with regard to traditional rural land processes. Design of private landscapes could be considered as intrusion by a pompous outsider who does not, and can not, understand the nature of farm land and the investment each individual farmer/landowner has in their owned

landscape. In any rural sphere, design of this purpose will be challenged, and extensively; it is a necessary component of rural space design intervention as the re-placement of natural process in a highly structured and economic forum is of contentious debate.

The 'river' investigation process and solution manifested itself out of a need to rationalise thinking and collate findings and conclusions from site analysis, stakeholder discussion, council documentation, and initial site aspirations. The magnitude of this scale proved complex. Design at such a scale can never fully comprehend the true complexities of the whole site, and can only serve as a way to organise intentions and formulate strategies. It is difficult to design and coordinate an entire river system; that is perhaps too complex a task for an investigation of this scope. This methodology and masterplan instead serves as a base framework for the thesis investigation to approach site development at different interfaces throughout the Wairarapa site. Utilising the place methodology, closer scaled site design can share a common theme or objective – the placement and acknowledgement of waterways – while integrating seamlessly with the larger framework resolved at this scale.

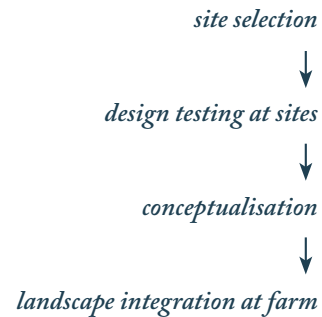
Figure 69. Wairarapa Moana Wetlands; 2016



Scale Two

LAND

THE LAND SCALE



The second, and closer scale, 'Land,' intends to test the applicability of the place methodology at the site specific interface. Whereas, the 'River' investigation created frameworks and strategies for the whole Ruamahanga site, this scale intends to exhibit how the manifestation of place can occur at two site interfaces along the Ruamahanga watercourse; this removes the limitations of the 'river' scale and tests the place methodology process's adequacy at responding to closer Ruamahanga site contexts. The resultant conceptual designs exhibit plausible design solutions based on the framework strategies, and attempt to accentuate the nuances and identities of the specific Ruamahanga sites, and their adjacent farmland types.

The following pages document the process by which design concepts originated at two Ruamahanga sites - Martinborough, and Lake Onoke - and discusses how the nine sub-system process can manifest a design solution at the site scale which encourages place and river acknowledgement at this interface. The latter half of this chapter discusses the necessity of the design solution to interact with rural process on land adjacent to the designed sites; it theorises how river placement could be achieved in private space without compromising the productivity and process of the economic landscape.

Strengths

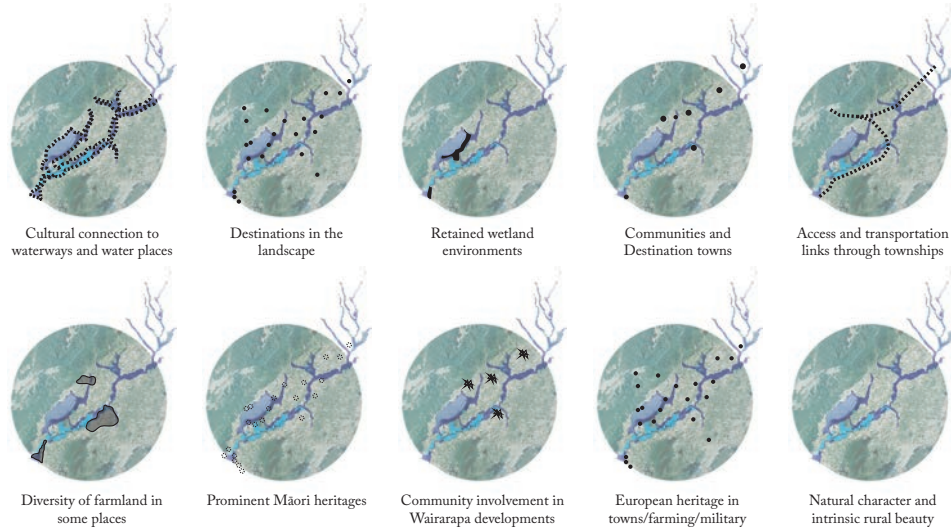


Figure 70. Strengths Analysis

Weaknesses

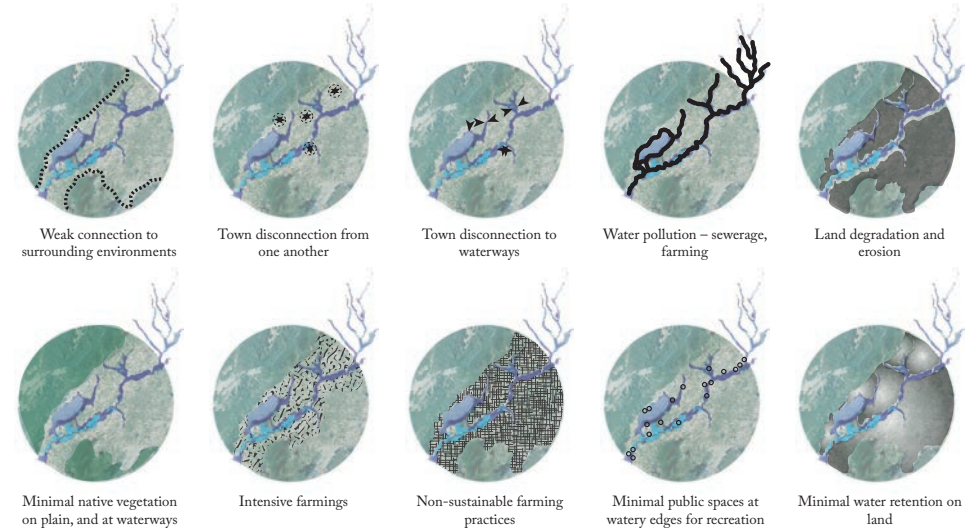


Figure 71. Weaknesses Analysis

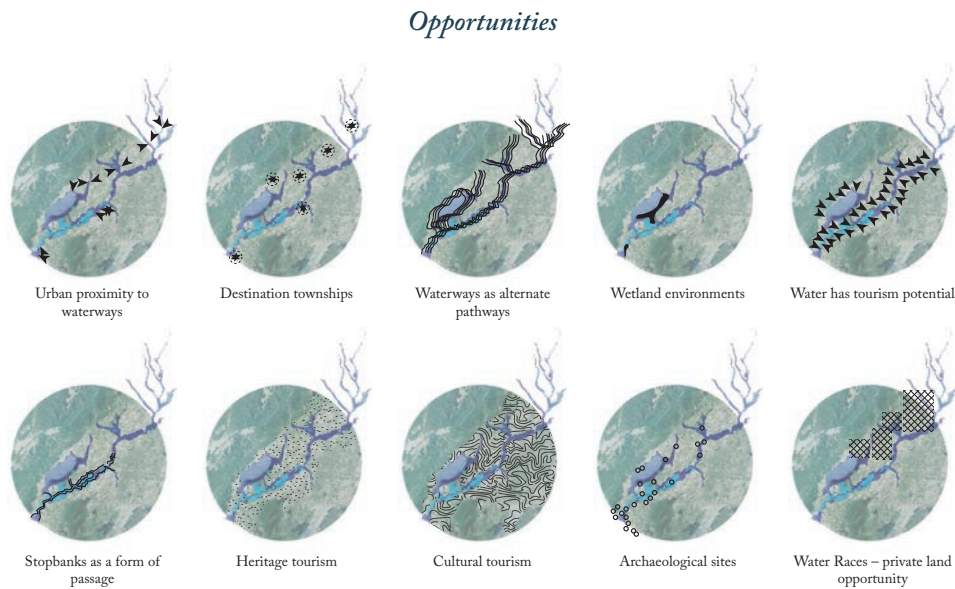


Figure 72. Opportunities Analysis

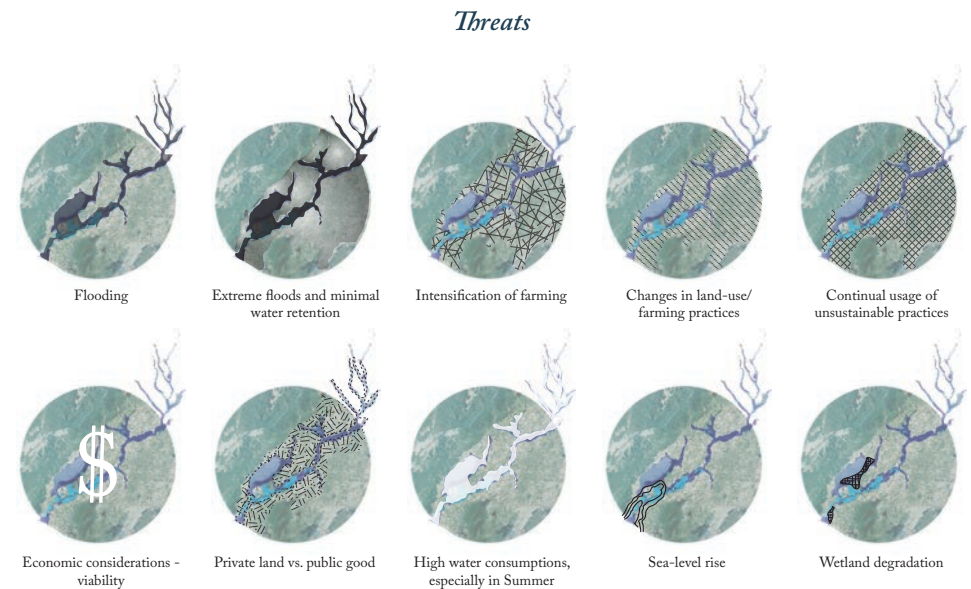


Figure 73. Threats Analysis

SITE SELECTION

Two sites were selected through a SWOT analysis of the Wairarapa site (Fig. 70-73). The selection of the Martinborough-Ruamahanga interface, and the Onoke-Ruamahanga interface, as test sites was due largely to aspects of proximity, population, access, and ecological diversity. The sites have a close proximate and accessible relationship to the Ruamahanga

waterway; the need for people to inhabit and utilise the watercourse and its surrounds was outlined in the literature and precedent review portion of the thesis investigation. The Onoke site also has a readily established wetland and saltmarsh system that could be utilised as a heritage design feature, thus allowing full investigation of the nine place principles at the two sites.

SITE ONE MARTINBOROUGH

Martinborough township in South Wairarapa, historically a rural service town in intensive sheep and dairy raising country, was founded by Sir John Martin in 1879 (Howland 228). Arable land surrounding the township similar to the soils of Burgundy in France, combined with a high water table, the site was a prime location for viticulture (Howland 228); in the 1970's, commercial vineyards were established on the town fringes (Howland 229). The selection of Martinborough as a test site served to utilise the diverse farm types at the Ruamahanga-Martinborough interface, and explore options relating to urban wastewater treatment and stream revegetation, as well as exploit its wine tourism industry in the process of place and river acknowledgement.



SITE TWO LAKE ONOKE

Lake Onoke (or Lake Ferry) is the conclusion of the Ruamahanga watercourse before it empties into Palliser Bay. The gravel bar beach when breached by floods serves as the only release point of the Ruamahanga watercourse and serves to drain nutrients and sediments periodically. Previously the conclusion to a vast wetland network in South Wairarapa, remnants of which remain at the Lake's northern edge, selection of this site allowed design investigation to focus on various water systems and engage particularly with Māori heritage.



MARTINBOROUGH SITE CONCEPTUALISATION



Wairarapa



Martinborough

The application of river processes as a driver for place creation and river acknowledgement at the Martinborough generated a site design concept that engaged with the water systems while also allowing continuation of existing site processes (farming, transport, manufacturing etc). The iterative process of designing within the boundaries set by the place methodology allowed the development of an altered place dynamic that acknowledged the complete components of the Ruamahanga River system, and created much needed public space.

Through the encouragement of natural water filtration in farmland adjacent, the creation of new river cavity spaces that allowed for both active and passive human engagement along the watercourse, and infrastructural activation, the conceptual design solution demonstrates how a new Martinborough-Ruamahanga interface might be created which would allow Ruamahanga place and process to be acknowledged and expressed in the landscape.

Land

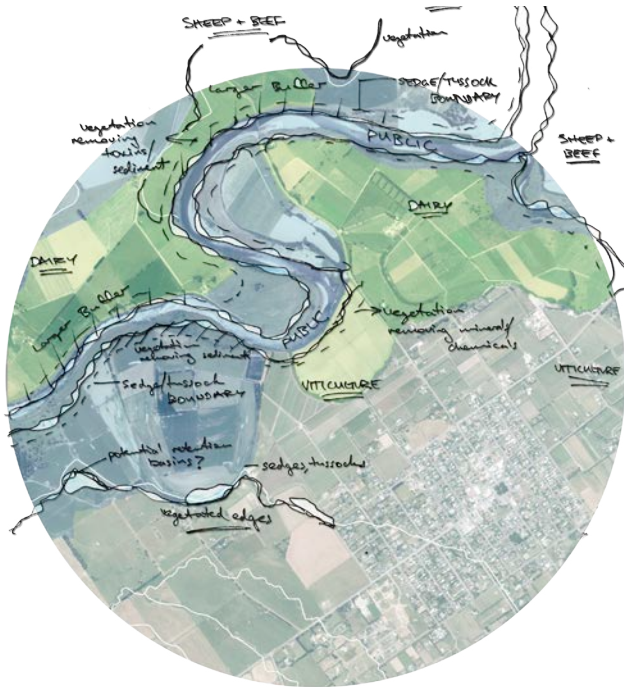


Figure 78. Martinborough Site Land Exploration

Passage

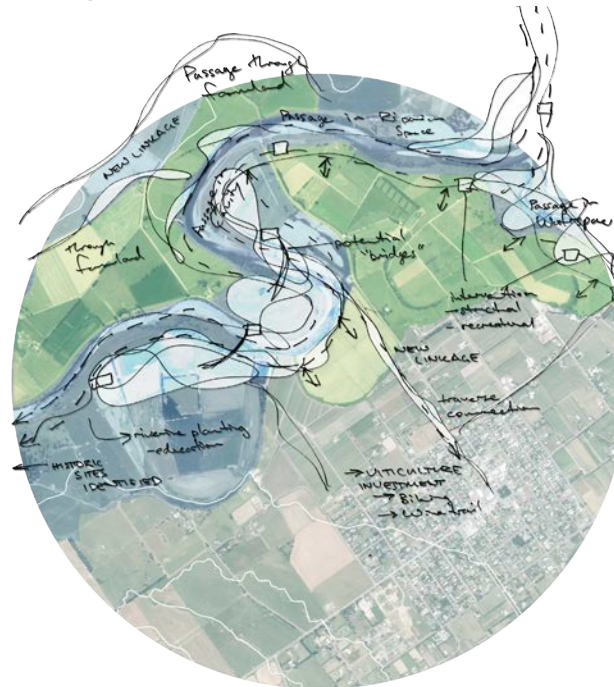


Figure 77. Martinborough Site Passage Exploration

River



Figure 79. Martinborough Site River Exploration

Vegetation

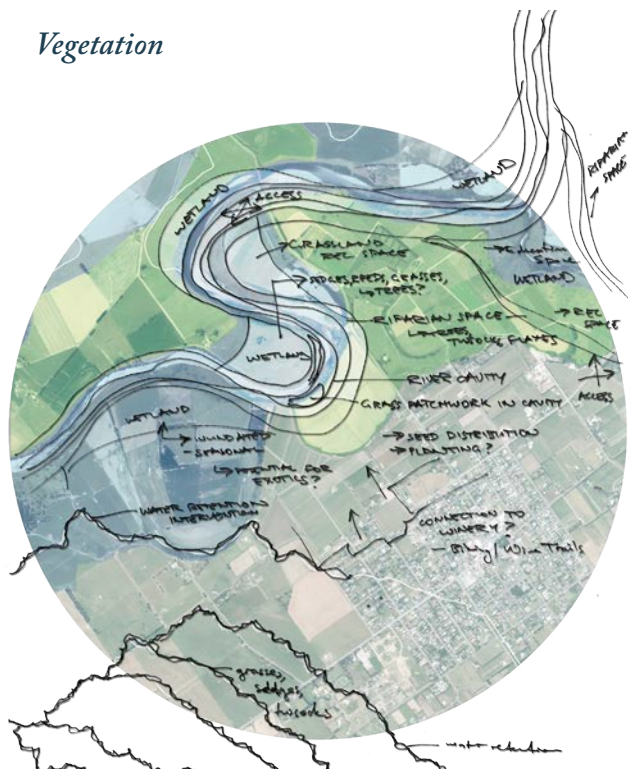


Figure 80. Martinborough Site Vegetation Exploration

Water



Figure 81. Martinborough Site Water Exploration

Wetland



Figure 82. Martinborough Site Wetland Exploration



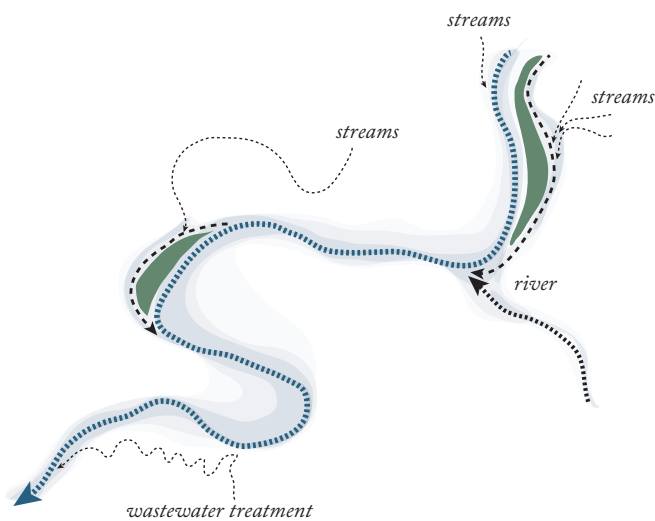


Figure 84. Martinborough Water Flow Diagram

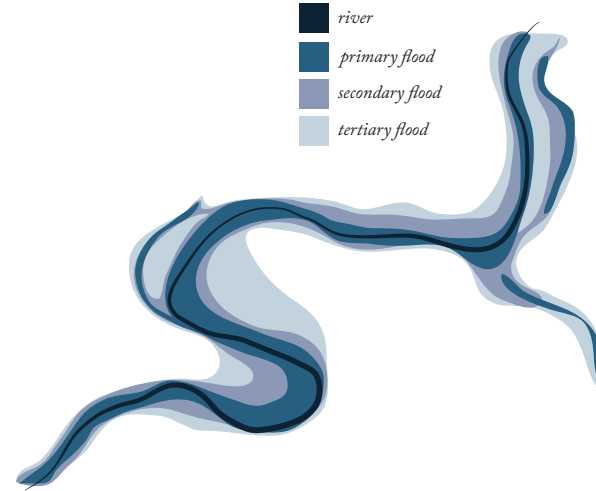


Figure 85. Martinborough Flooding Diagram

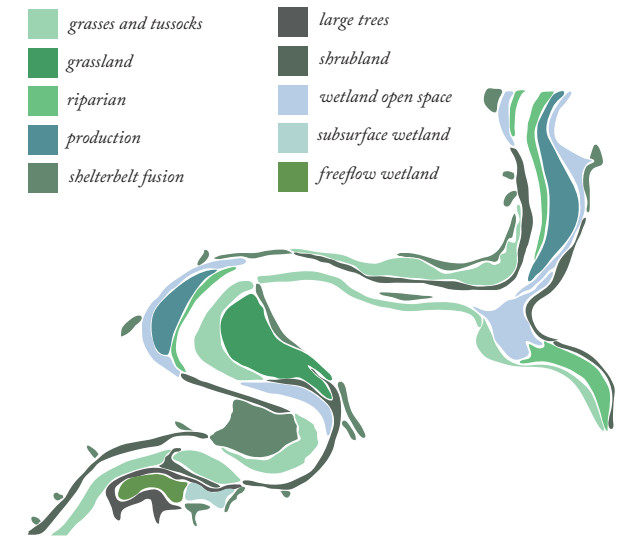


Figure 86. Martinborough Vegetation Diagram

The design response of the Martinborough site preferences the creation of new spaces with new programmes and engagement opportunities. The creation of access and wetland edge space, and the arboretum and nursery, combats the principles associated with the water, vegetation, passage, and edge subsystems. The creation of diverse edge space encompassing wetland treatment, wetland production, and riparian and stopbank interfaces allows integration with the passage, flood, heritage, river, and wetland subsystems. The place serves as a filtration space, and public space thus allowing the sociality of the river space to be encouraged, and therefore encouraging place to flourish as humans interact with the river. The conceptual design of the Martinborough site exposes the potential of the design methodology to encourage landscape transformation, and the manifestation of designed

place and river acknowledgment. Designed interventions that combat the most principles of the site strategy, say the developemnt of wastewater filtration space, the creation of a riparian walk, and the establishment of stream revegetation and water retention in private land, can be achieved initially, thus allowing continual waterway placement through time. The design need not encompass all design ideas suggested in this iterative phase or final solution; the process could instead lead to partial fulfilment of the design strategies and allowing for organic development as regulations change, or economy permits. One design strategy could initially be implemented, catalysing other interactions, and thus encouraging the site dynamic to continually change with the contexts and perspectives of the Martinborough site and it's stakeholders.

LAKE ONOKE

SITE CONCEPTUALISATION



Wairarapa



Lake Onoke

Design investigation at the Lake Onoke site exhibited the versatility of the framework to operate at different water-water interfaces. At Onoke, the space encompasses lakeside, riverside, and saltmarsh/wetland water spaces, creating an exciting diversity of interactive opportunities and ecologies. The Onoke saltmarsh and wetland space is considered a historically relevant freshwater site exhibiting “high historical, archaeological and traditional significance (Council 347).”

Selection of the Lake Onoke site allowed engagement with settlement and challenged the heritage principles applicability with regards to a non-structural entity. Iterative investigation at this site through the nine principle subsystems exhibited overlaps of initial design inquiry; the restrictions of the site and its location and character allowed only some plausible design solutions to be actualised.



Figure 96. Lake Onoke Programme Diagram

The preliminary design solution for the Onoke site is difficult to represent on a traditional plan. The opportunity to explore, learn, and engage with the site through passive exploration guided the design; this resulted in the establishment of pathways and connections along the site through the diverse vegetation and heritage environment. In representing aerially, it disregards this nature of this site experience as the design driver; more

experience visualisation of the Onoke site is documented in the place scale chapter. The overall Onoke design solution attempts to engage with the reality of its exposed location, large scale engineering, and heritage components; these proved crucial to the Onoke place experience and are utilised in the design solution as a means to encourage place creation and water acknowledgement at the human interface.

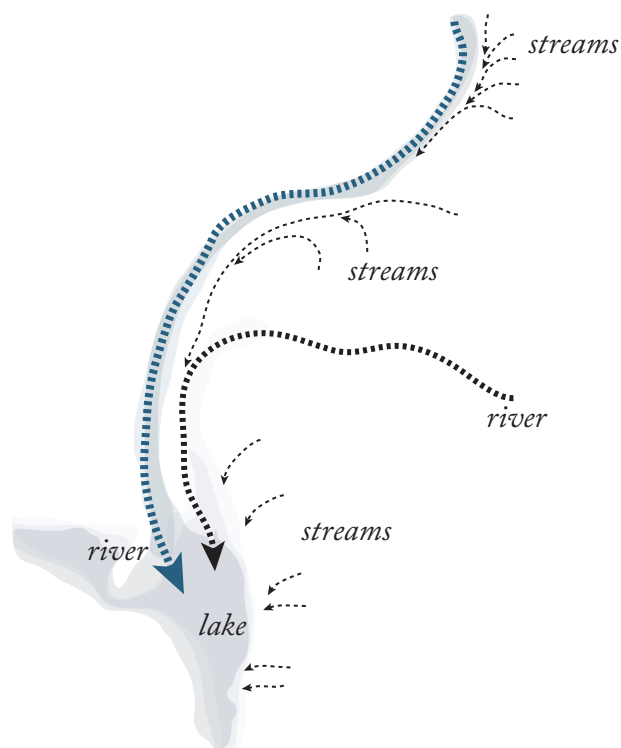


Figure 97. Lake Onoke Water Flow Diagram

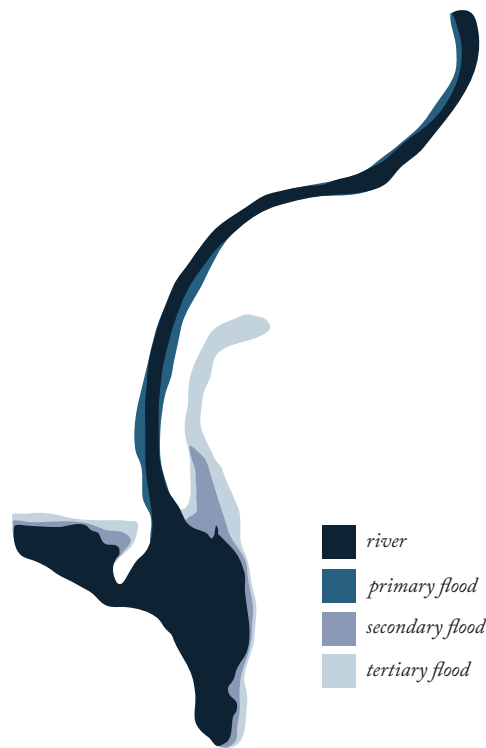


Figure 98. Lake Onoke Flooding Diagram

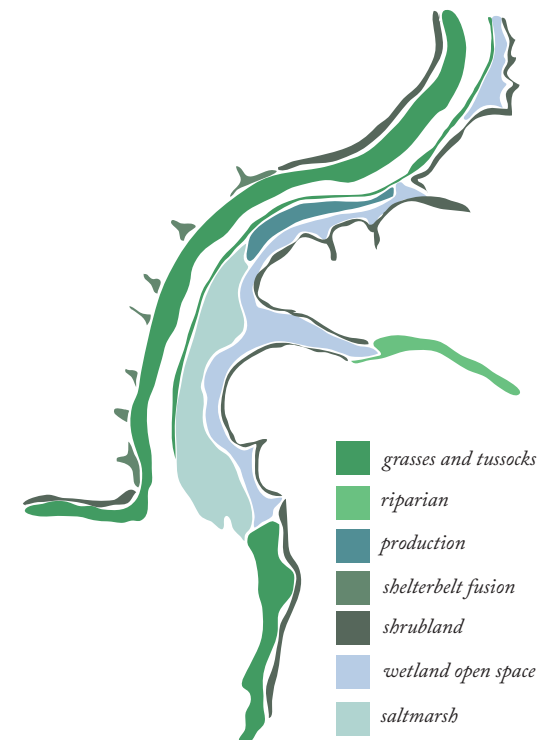


Figure 99. Lake Onoke Vegetation Diagram

The iterative investigation of the site exhibited the design limitations at Onoke. The proximate mixed-use farmland and at times harsh climate conditions proved challenging; the stopbanks which separated the saltmarsh and riverine space could not reasonably be utilised, thus making a large component of the site untouchable. The passage principles proved most appropriate at this site as a means to design for visceral engagement with the vegetation, water, and climate. The site could become connected

to the larger Ruamahanga system through traversal as well engaging with the touristic and residential component of the Lake Onoke settlement just south of the site. The design could establish newer settlement patterns at the Onoke edge that visually and architecturally engage with the waterway system; this would encourage a residential interaction as yet unrealised in this investigation.

THE FARM SCALE

The design manifestation at the Martinborough and Onoke sites proves the applicability of the place methodology at the Ruamahanga site scale, and evidences its flexibility with regards to different site dynamics and conditions. At this scale, indigenous cultural connections can be better acknowledged and appropriately designed, and place-making activation can be encouraged through immersion and utilisation of the natural environment and its site based characteristics. This method of design investigation is unsuccessful, however, in acknowledging the characteristic of the farmland adjacent to the sites and the potential it has to create new types of water acknowledgement interactions within the private sphere. Given that most normal activity of Wairarapa will occur in private space away from the watercourse, this farm scale investigation serves to expose the potential for spatial diversification and new practice encouragement in Wairarapa farmland. Utilising Martinborough and Onoke as test sites, the investigation exhibits how the land adjacent could diversify and encourage new processes, or farm diversification, as a result of immediate watercourse

design. This can then be assumed to capably exist at other areas along the watercourse, and beyond, wherein the farm conditions are same or similar.

This part of the design study came about following an informal critique with a visiting architect; the discussion focused on how exactly interactions beyond the watercourse in the surrounding land could encourage wider waterway health and recognition and extend into the whole Wairarapa scheme. This Ruamahanga 'placement' investigation could extend beyond the watercourse confines through the diversification of current farming practices, the encouragement of new social interactions, and the introduction of water filtration mechanisms in private space. A study was undertaken to determine what economically viable farm diversification opportunities could be encouraged within Wairarapa; these are documented on the following pages. Their application at the Martinborough and Onoke sites exhibits on which property types, and in what conditions, these opportunities could be viable.

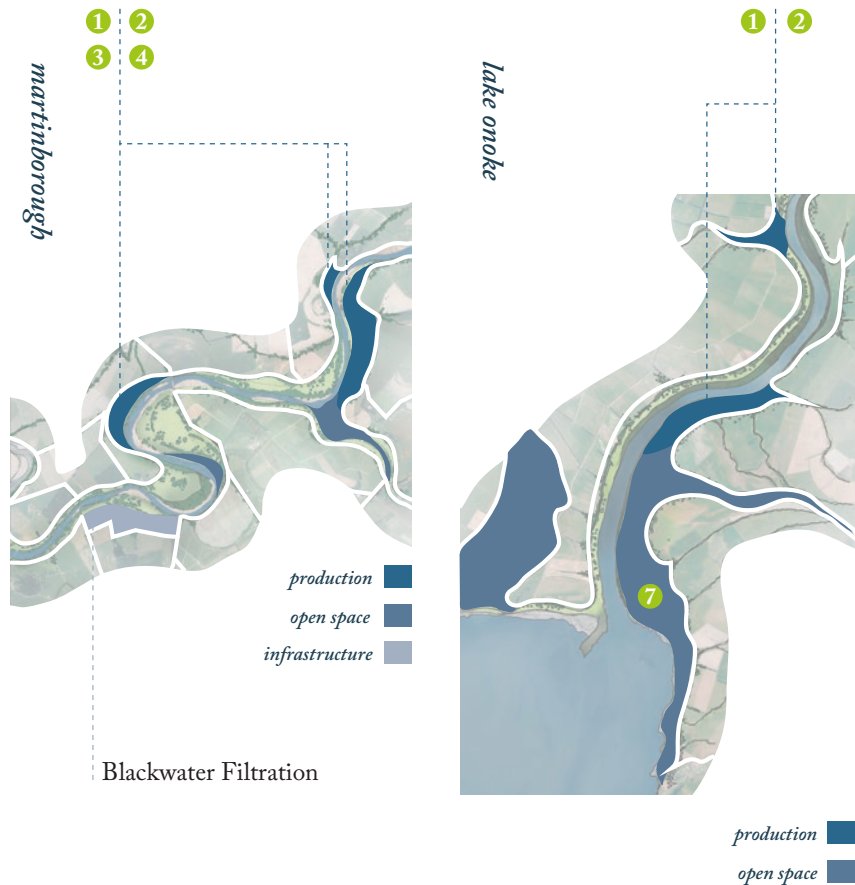


Figure 100. Martinborough and Lake Onoke Water Space. At wet spaces in the watercourse confines, at its flood prone edges, and in flood capable land, diversification and filtration could be viable, as well as providing for new types of economically beneficial cultivation. Blackwater filtration could be encouraged at the infrastructural sewerage works adjacent to the watercourse; this would tangibly encourage better waterway health and acknowledgement of the Ruamabanga cultural importance by Wairarapa institutions.



Figure 101. Flax Vignette

- 1** Flax (*Phormium*) Material - Fibres
Cultural Health
Earth Stabilisation
Sediment + Toxin Filtration



Figure 102. Hemp Vignette

- 2** Hemp (*Cannabis sativa*) Oils
Material - Fibres
Medicinal



Figure 103. Cannabis Vignette

- 3** Marijuana (*Cannabis*) Oils
Material - Fibres
Medicinal (pending decriminalisation)



Figure 104. Bamboo Vignette

- 4** Bamboo (*Bambusa*) Seasonal
Material - Fibres
Nitrogen Uptake



Figure 105. Cover Crop Vignette

- 5** Legumes, Lucerne, and Clovers
Nitrate Fixing
Stock Feed
Sediment + Toxin Filtration



Figure 106. Fodder Vignette

- 6** Livestock Fodder Stock Feed
Sediment + Toxin
Filtration



7 Open Space Recreation
Cultural Health
Conservation/Education

Figure 107. Wairarapa Moana Wetlands + Salt Marsh Walkway Experience



8 Seasonal Stock Rotation

9 Waterway Revegetation

10 Fencing

Figure 108. Farm Stream Revegetation

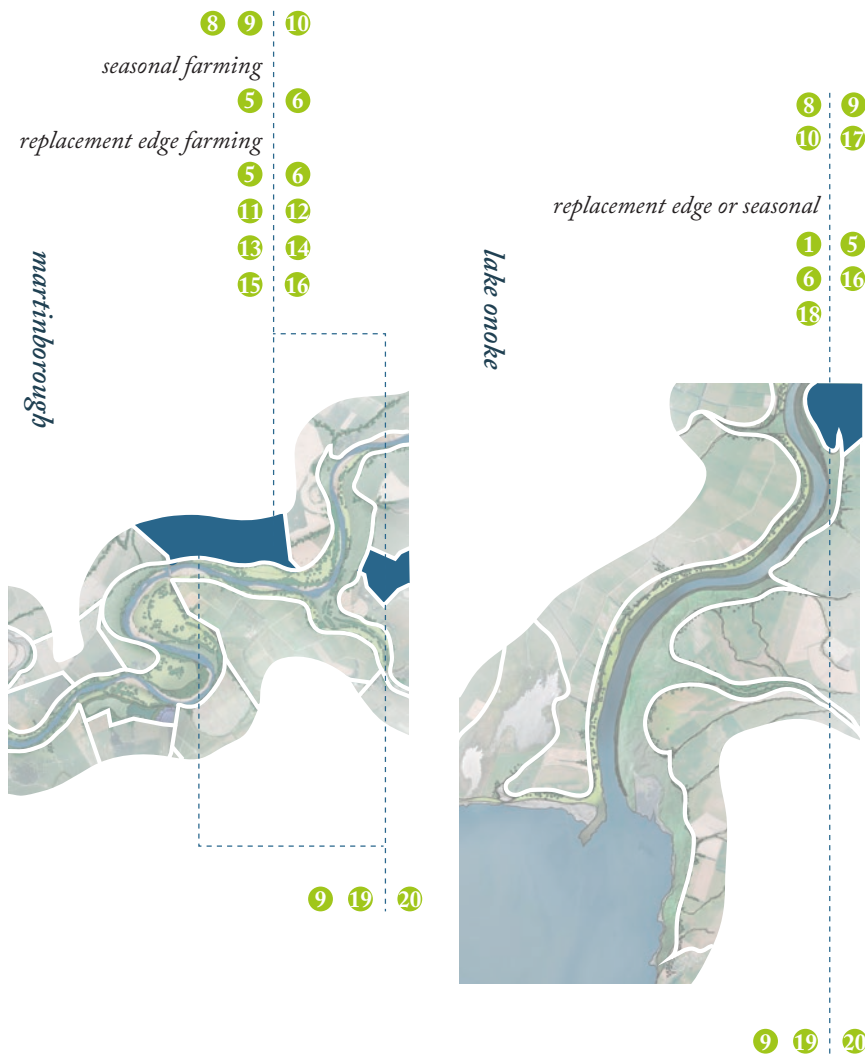


Figure 111. Martinborough and Lake Onoke Sheep + Beef Space. The utilisation of stream revegetation, fencing, stock exclusion and seasonal rotation at intensive farm interfaces encourages better environmental practices through a type of formalised landscape stewardship. The reinforcement of these practices at a district level through planning and incentivisation, as well as the encouragement of seasonal paddock changes or complete type replacement/diversification farming would allow for the farmland to respond to the ecological needs of the watercourse and further encourage acknowledgement of Ruamahanga processes. Similar processes are suggested by the NZ Federated Farmers organisation to those who elect to subscribe.



Figure 109. Kanuka Vignette

11 Kanuka/Manuka



Figure 110. Manuka Vignette

Honey Export
Leaves - Tea
Medicinal



Figure 112. Forestry Vignette

12 Forestry - Hardwood Material - Wood
Sediment + Toxin
Filtration



Figure 115. Wine Vignette

13 Viticulture
Wine
Juice



Figure 113. Olive Vignette

14 Olives
Oils
Fruit



Figure 114. Harvest Vignette

15 Selective
Harvest
Seasonal
Material - Fibres
Nitrogen Uptake

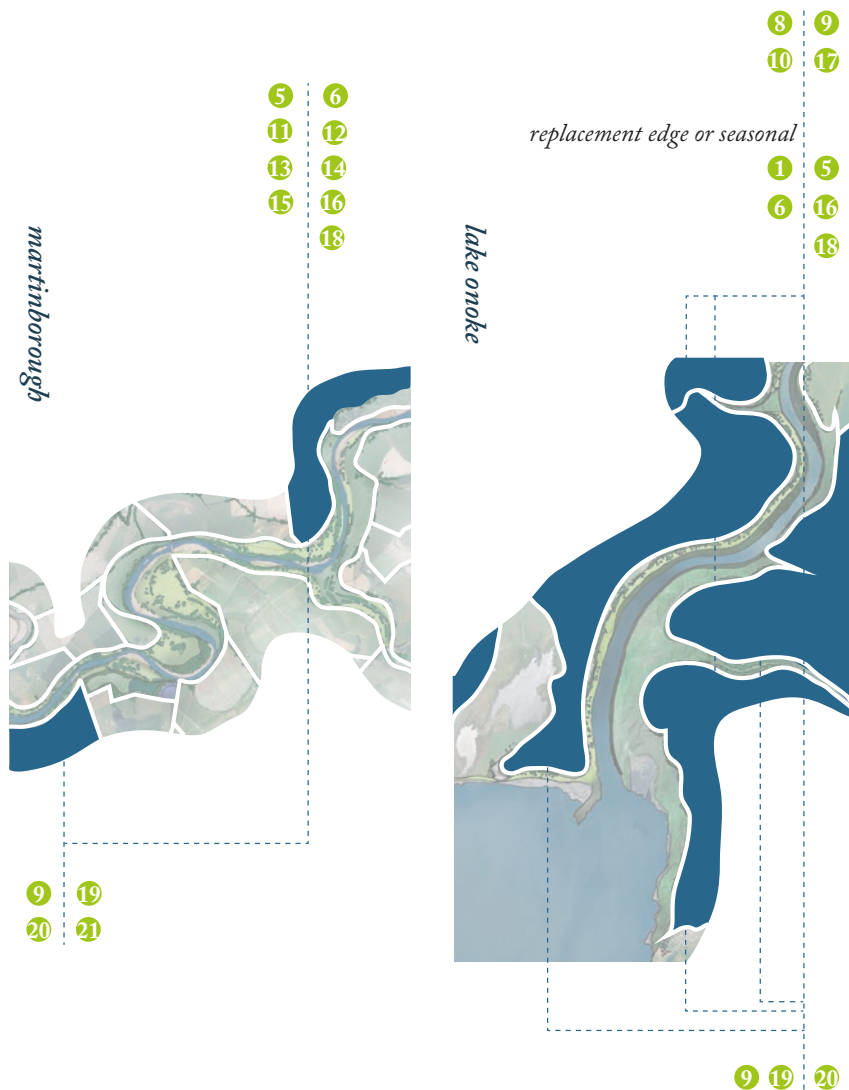


Figure 116. Martinborough and Lake Onoke Mixed Use Space. Mixed use land at the immediate Ruamabanga interface could be a catalyst for diversification and serve as an activator for other farm changes at external farms in Wairarapa. The preference for less environmentally invasive farming, or seasonal farm changes, would be encouraged through council incentivisation. More exposed areas closer to the coast would need different practices due to their climate and diversification plausibility.



Figure 117. Fescue Vignette

16 Tall Fescue - Seasonal Hay
Sediment + Toxin
Filtration



Figure 120. Exclusion Vignette

17 Stock Exclusion Practice Initiative
Sediment + Toxin
Filtration



Figure 118. Sheep Vignette

18 Sheep Preference Practice Initiative
Sediment + Toxin
Filtration



Figure 119. Effluent Treatment Vignette

19 Wetlands - Effluent Filtration
Practice Initiative
Sediment + Toxin
Filtration
Flood + Water
Management
Biodiversity



Figure 121. Retention Ponds - Watering

20 Retention Ponds - Watering
Sediment + Toxin
Filtration
Practice Initiative
Flood + Water
Management



Figure 122. Aquaponics Vignette

21 Aquaponics
Produce
Fish
Nitrogen Intake

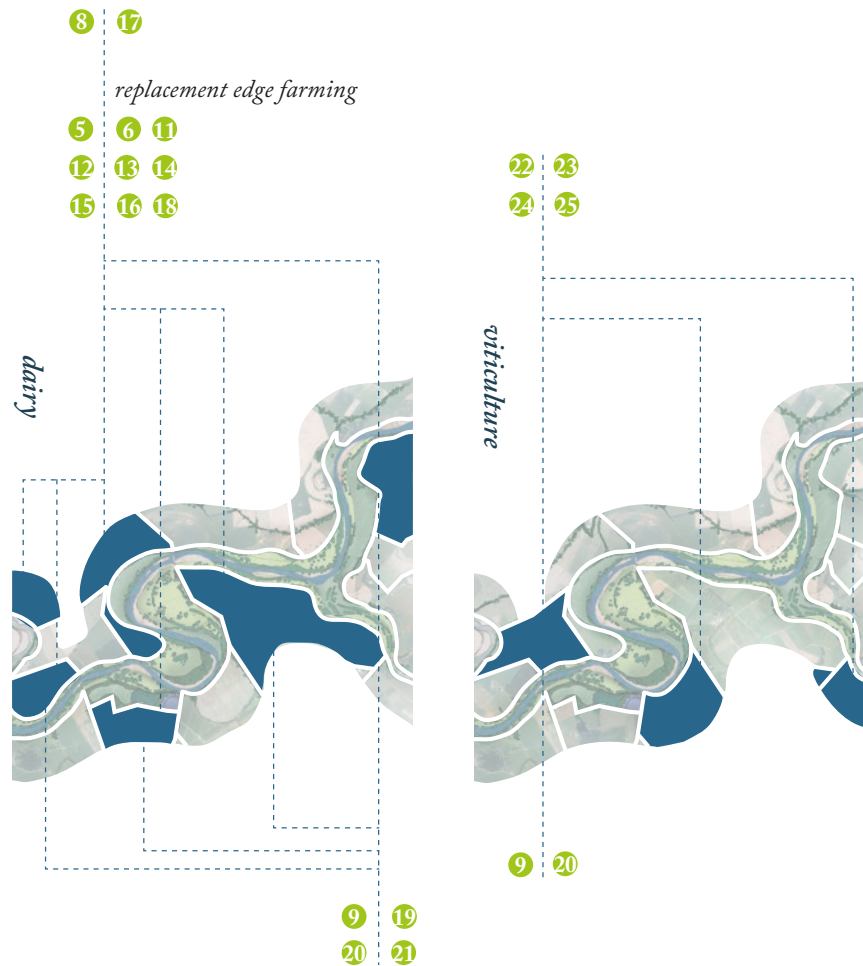


Figure 123. Martinborough 'Other' Space. *At the Martinborough site, the opportunity for to engage with other economic ventures, like tourism, is prevalent. The opportunities for farm tourism combined with viticulture and environmental tourism could encourage interaction with the Ruamahanga River systems, and encourage traversal and connection of the immediate farmland spaces. The sites can allow for free movement of people through and along the watercourse, thus encouraging interactions of a social and physical nature.*



Figure 124. Wine Tourism Vignette

- 22 Wine Tourism
- Biking
 - Education
 - Recreation



Figure 125. Environmental Tourism Vignette

- 23 Environmental Tourism
- Education
 - Recreation
 - Cultural Health



Figure 126. Farm Tourism Vignette

- 24 Farm Tourism
- Education
 - Recreation



Figure 127. Medicinal Plants Vignette

- 25 Medicinal Plants
- Teas, Solutions
 - Cultural Health
 - Education



5 Open Space

17 Stock Exclusion

Figure 128. Open Farm Space Experience

REFLECTION

The 'Land' study scale has investigated the applicability of the place principles and designed framework at the closer Ruamahanga site and private land sphere. The selection of two sites to conceptualise and study has allowed the investigation to exhibit the place methodology applicability at a closer scale of interaction both adjacent and peripheral to the Ruamahanga watercourse. The investigation at this scale is but one interpretation of the place principle process acting as the creative driver of a designable site; the nature of this investigation is perhaps limiting as it does not allow for fully conceptualised site testing of the framework through a rigorous process from a variety of study backgrounds (eg: planning, engineering etc). For full realisation to be quantified and viable, a study which utilised different disciplinary fields and objectives would be appropriate; the thesis research format provides restriction.

The farm scale investigation served to exhibit the different opportunities that arise from framework integration within the private sphere. The development of the private Wairarapa landscape can be encouraged through the integration of strategies investigated and discussed in this phase. The progress of this interaction will be slow, with the site evolving and changing

based on levels of incentivisation, cultural changes, economic viability, and social obligations. Engagement with landowners is necessary as a way to fully experiment with, and activate waterway acknowledgement, in private space. Development, change, and compromise, is a necessary component of place actualisation at this interface; the place principles acting in the private sphere serve as a way to rationalise or restrict some changes or activities that are inappropriate given the framework intentions.

Although adequate at conceptualising layouts, typologies, and site potentials, this scale of investigation fails to deliver satisfactory exhibition of human experience at the Martinborough and Onoke design proposals, and at areas along the wider watercourse. Given that stewardship and waterway acknowledgement requires immersive experience and human-landscape interactions to occur organically, the experiential sphere needs further investigation. This would demonstrate the place methodology's ability to integrate with the physical space of the Ruamahanga watercourse to create an experience that realises the intentions and strategies of the framework through visceral human-landscape experience; this would conclude the thesis questions realised in real inhabitable space.



Figure 129. Gravel Bar; Lake Onoke; Palliser Bay; 2016

Scale Three
PLACE

THE PLACE SCALE

the subsystem activation through time



placing ruamahanga



representation of places

Concluding the three-scale investigation, the place scale investigation actualises the experience of Ruamahanga through the utilisation of the place methodology principles within the realm of the human-landscape interface. The methodology has proved capable of acting as a design driver in the masterplanning and conceptualisation, site design, and detail design of the Wairarapa waterways in the 'River' and 'Land' scales. Place actualisation was exhibited through the framework implementation but failed to adequately comprehend the site experience each subsystem could afford if the principles were fully enacted on the landscape. By providing potential typologies, design opportunities, or layouts at this scale as a means to exhibit the possibilities of the full site experience, the Wairarapa and Ruamahanga place is revealed as an interface between humans, the river, and the land. Rural land is activated through the human presence in an otherwise separated landscape, and the river is placed and acknowledged through design at the nine subsystem interfaces.

True and accurate visualisation of total place acknowledgement in Wairarapa is difficult; the graphical representation in this chapter can serve only as a theoretical depiction of the lived experience of Ruamahanga when the place methodology is enacted in a space. The investigation envisioned transformative landscape intervention which promoted the Ruamahanga signature and systems as regional and social assets igniting new processes of interaction.

Permission

district plan and council changes

Intervention

*introduction of new forms/
interactions*

Establishment

*usage and manipulation of new
forms/interactions*

Creation

*introduction of new sites and
forms*

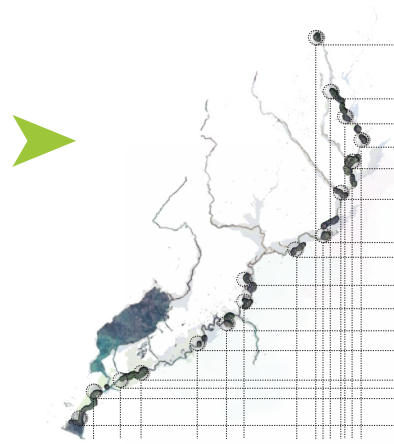


Figure 130. Temporal Intervention

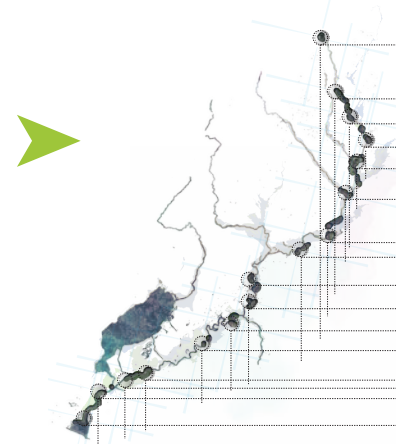


Figure 131. Temporal Establishment

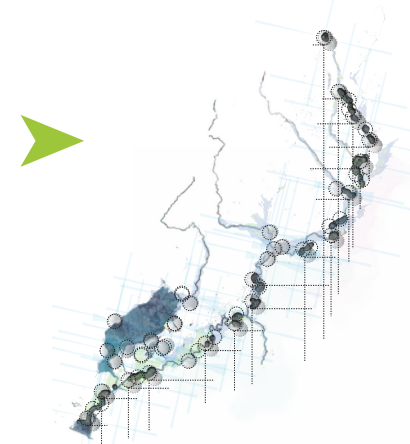


Figure 132. Temporal Creation

The establishment of place, and the creation of waterway acknowledgement at designable scales takes time. To enact, changes at the district and council levels would need to be combatted initially before the whole Wairarapa site underwent an evolution beginning at the Ruamahanga: this would then envelop the whole Wairarapa site as time progresses. The temporal solution

for the whole Ruamahanga site identifies designable sites at the immediate Ruamahanga and strategises their establishment as temporal activators; their development as spatial and literal connectors of the identified river systems places the design in the context of extended Wairarapa (Fig. 130-136).

Relationship

development of linkages between like forms

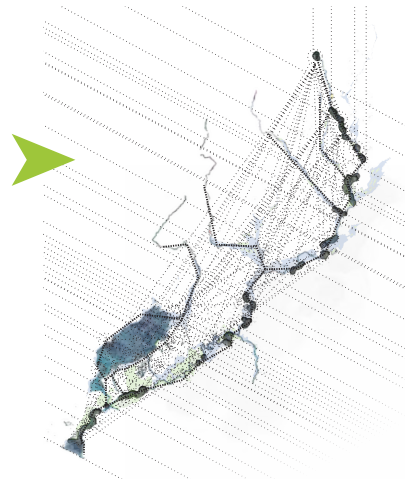


Figure 133. Temporal Relationship

Connection

association between like forms through pathways

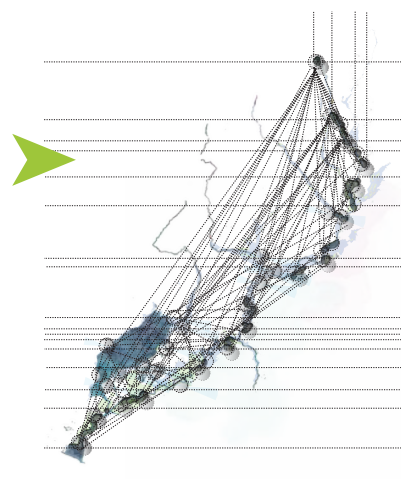


Figure 134. Temporal Connection

Evolution

formalisation and establishment over/through time

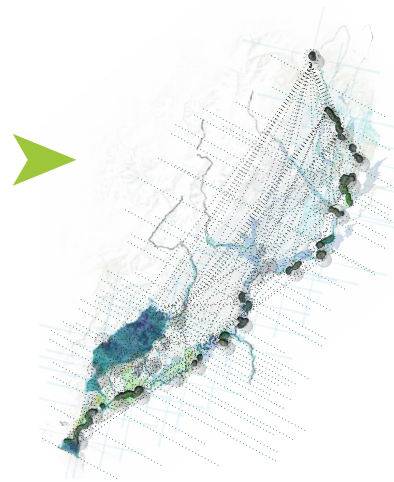


Figure 135. Temporal Evolution

Placement

of Ruamahanga into Wairarapa of River into Ruamahanga

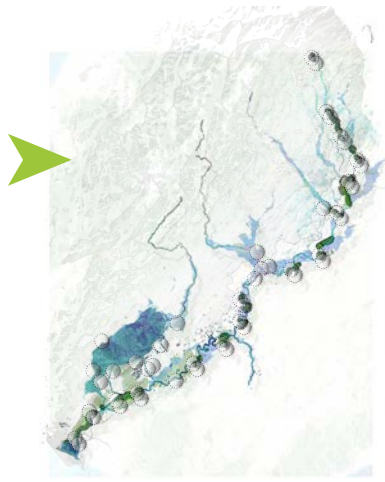


Figure 136. Temporal Placement

Given the magnitude of the Wairarapa site, any development will be slow and require consideration of stakeholders, and deliberation of affects, effects, and contextual obligations. The complexity of this cannot be overlooked. The theoretical evolution and placement of the Ruamahanga is just that - theoretical. It serves as a means to understand the river acknowledgement process if the framework and place methodology was implemented to its

designable extreme. The actual process of total place acknowledgement would be far more intricate; to implement this design proposal with rigour and comprehension would require the discussion with, consent, and agreement of residents, iwi, councils, academics, engineers, planners, designers, and government - too large a task for an investigation of this scope to accurately scrutinise and depict.

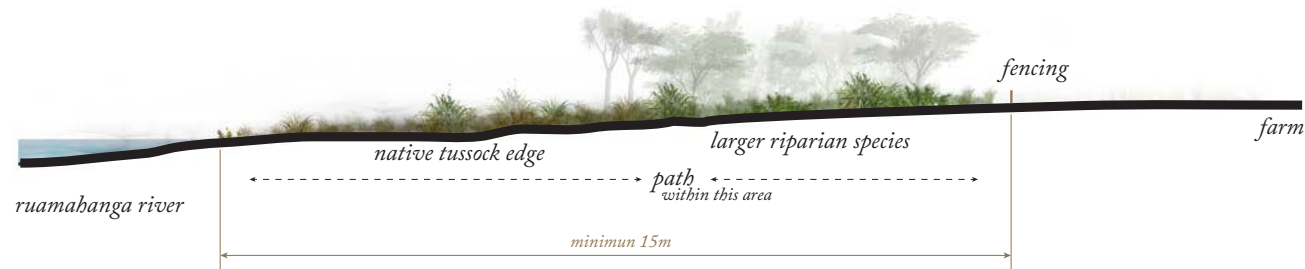


Figure 137. River Edge without stopbank

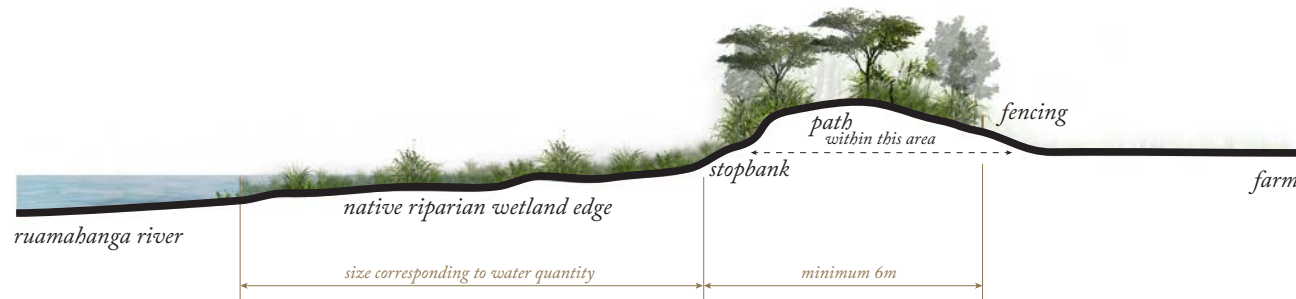


Figure 138. River Wetland Edge with Stopbank

EDGE.

The ‘edge’, an in-between space of earth and water, has of late seen intensive development given the Landscape Architectural disciplines’ prevalence for water restoration in the field of urban design. Cities and designers promote these edge spaces as escapism opportunities, as ecological havens, and as places of human recreation that encourage new water interactions. Over-explored in the urban and suburban sphere, this has rarely been considered in rural space. Ownership, economics, and responsibility play major roles in the discourse of rural water quality and volume; landowners are blamed for the actions of their predecessors as councils are dis-incentivised to make major planning modifications for fear of economic and public backlash. The ‘edge’ is provocative and problematic; it embodies not just the single water/earth interface but historical actions and interactions of Wairarapa people with their landscape.

Placed.

The framework engages with this contentious relationship—it promotes these edge spaces as social and ecological activators—allowing for cooperation with landowners to enhance the river at its edge interface. The creation of newer edge environments which encourage ecological and passage diversity, while still allowing for the operation and existence of stopbanks and flood mitigation, places the river system within its environmental context (Fig. 137; Fig. 138). The development and establishment of diverse edge forms exemplifies rural land and riverland typologies existing in tandem, and complimenting one another to place the river system.

Figure 139. Martinborough Huangarua River Edge Experience. *The Ruamahanga is placed through the establishment of the 'edge' principles at the interface between land and water. The edge condition harbours ecology, promotes traversal, and both passive and active recreation to link the Ruamahanga River with its environment through diversity of water spaces and human experiences. Diverse edge places and interactions promotes the waterways as regional signatures, while their design and evolution in place promotes the changing dialogues of the region.*



1

Blend of vegetation (type, mosaic, etc.) to water's edge from adjacent properties, habitats, spaces

2

Emphasis on natural materials and placements; original vegetation patterns emerge

3

Minimal use of linear forms at edge interfaces

4

Edges and water interfaces are accessible, unfenced where appropriate

5

Edge conditions offer a variety of uses/interfaces/interactions/materials

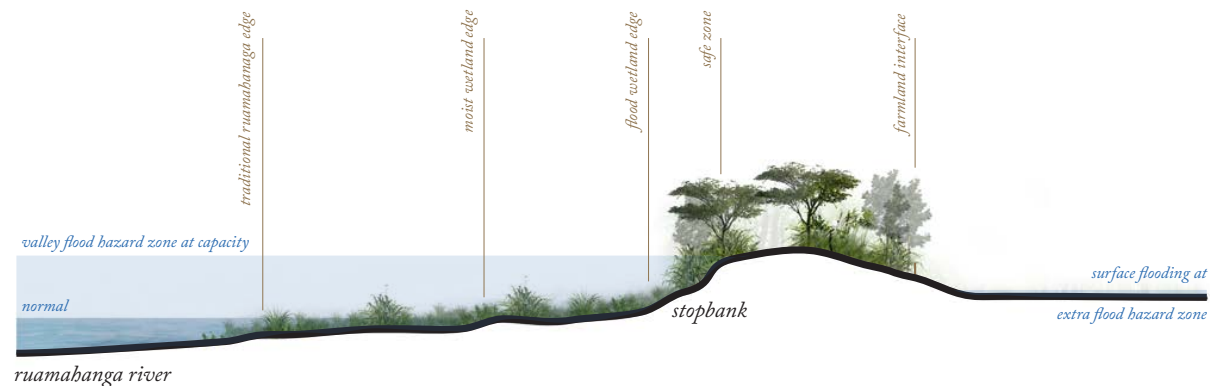


Figure 140. Ruamahanga in Flood Event

FLOOD.

Seasonal telluric fluctuations have been both beneficial and disadvantageous regarding the development of waterways internationally. The Landscape Architectural field has seen an increase in fluctuating space design – floodable parks, roads and other open spaces have been designed to cope with inundations and climate changes; the process is celebrated; it evidences the need for resilient spaces and versatile design philosophies. In Wairarapa, these fluctuations are of historical and indigenous significance. The organisation and channelisation of the Ruamahanga, and the creation of the diversion removed most fluctuating waterbodies, destroyed ecosystems, and prevented lake oscillations. The engineering of flooding is already resolved in Wairarapa; design of the flood experience however remains unconsidered – stopbanks outline the edge of the river system yet provide no public space engagement opportunities due to their inaccessibility and exotic overgrowth.

Placed.

The fulfilment of the flood place principles relies on inundations and changing water levels at the Ruamahanga edges. In flood events, the water is retained in the larger river cavity (with surface flooding in the defined extra hazard zones). The edge ecology and buffer space in the cavity, on the stopbank, and in adjacent farmland, fluctuates according to inundation – in normal periods, the river cavity is utilised for recreation and is designed to manage the Ruamahanga's seasonal flux (Fig. 140). Actions on rural land must change with regard to river fluxions; the river is placed through engagement with flood dynamics in space.

Figure 141. Lake Onoke Edge Experience *The Ruamahanga is placed through the utilisation of stopbanks to form barriers in space which restrict the effects of surface flooding in economic land, and also allow for the creation of transitional ecological environments. The new stopbank typology prefers the creation of diverse ecological open space (grassland, wetland, etc) before the levee, thus expanding the river cavity and creating a fused distinction between riverland and rural land.*



1

Flood limit can withstand naturally occurring periodic flooding without major inconvenience to land users and property

2

Flood limit area can be used as open space for recreation in some instances

3

Flood limit harbours natural habitats for many riparian species

4

Flood promotes and is recognised as a prosperous natural process

5

Flood limit is organised, combining engineering and designed intervention

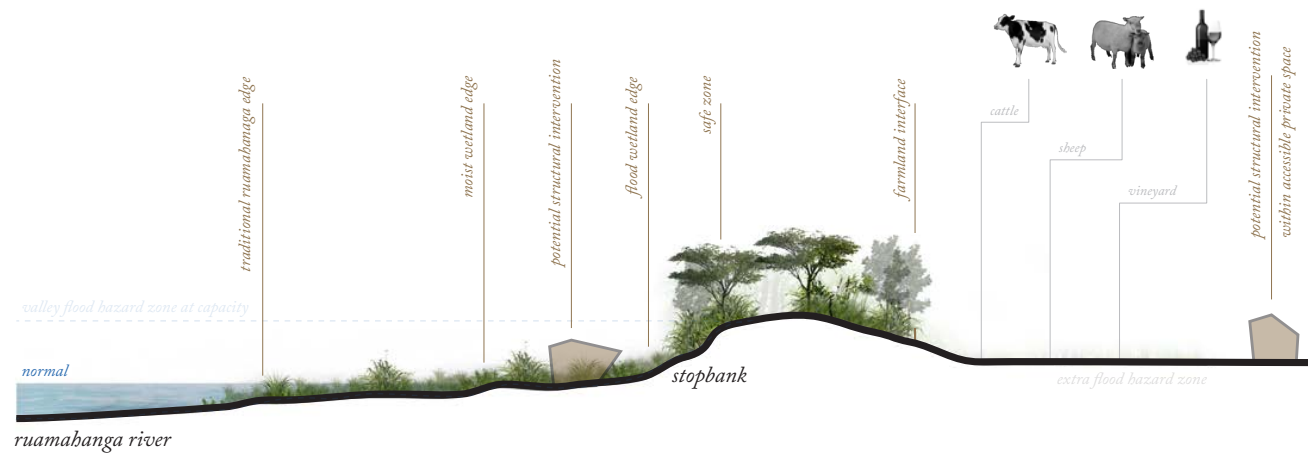


Figure 142. Ruamahanga heritage identified at edge

HERITAGE.

The recognition and appreciation of heritage spaces exposes a sites cultural and physical past, thus connecting people with the actions and interactions of their ancestors. Heritage design, through forms and structures, is utilised in most architectural disciplines as a means to engage with site histories of contention, intrigue, beauty, loss, or trauma. Having experienced a resurgence of late, the activation of heritage landscapes unites us with our indigenous and traditional past, a topic of particular contention in some parts of New Zealand given the, to say the least, unpleasant history of colonisation. Unfortunately, even though a recognised site of Māori significance, Ruamahanga engagement and design at this interface has been absent.

Placed.

The framework encourages the activation of recognised heritage landscapes through structural intervention, and connection (Fig. 142). The acknowledgement of of both Maori and Pakeha heritage landscapes can continue into the wider Wairarapa region at areas external to the Ruamahanga watercourse, thus allowing historical acknowledgments to be made across the site. Rural land becomes river land through recognition and design of historically significant spaces; heritage landscapes proximate to the river are placed and established through structural similarity, thus placing the river simultaneously.

Figure 143. Wairarapa Moana Wetland Intervention Experience. *Wairarapa heritage is placed through location acknowledgement and structural designed intervention; the spaces at the Ruamabanga edge become larger components of the river system, thus connecting people to past landscape interactions, be it physical, mythical, or historical. The river becomes symbiotic with history, allowing full recognition of the Ruamabanga historical system to be acknowledged through this process, and thus placing the river within its landscape and historical contexts.*



1

Locations determined are identified through some intervention

2

Sites are accessible as components of the river system, as components of history

3

Sites become accessible and linked to one another through intervention

4

Opportunities for sites to expand, evolve and develop as a temporal structure

5

River forms a rope of heritage through Wairarapa, is heritage of Wairarapa

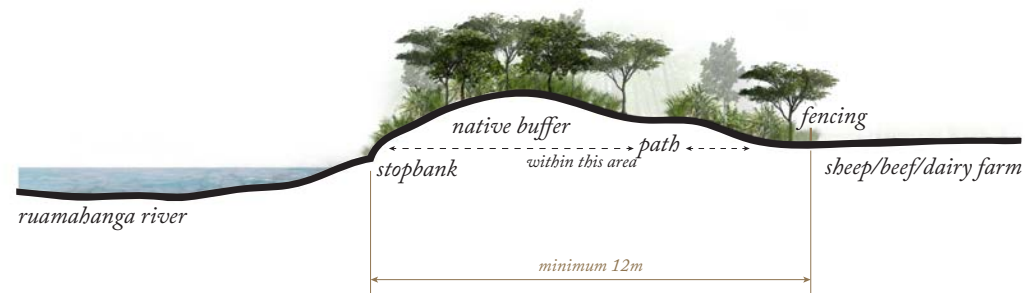


Figure 144. Traditional River Edge with Stopbank

LAND.

The Wairarapa landscape evokes traditional rural identities, and thus embodies traditional rural realities – land degradation, low water quality and flows, and exotic vegetation en masse. This rural character is highly celebrated in most parts of New Zealand; the Wairarapa Combined District Plan supports the existence and permanence of this rural character. The continued success and prosperity of the Wairarapa economy is dependent on the use of rural resources and primary production adapting to economic change (Wairarapa Combined District Plan 4-1). The landscape serves a functional purpose – a purpose which identifies Wairarapa.

Placed.

Continuing to allow for the existence of these normal rural functions, the framework intends to promote an equilibrium between the operative landscape and the ecological and social needs of the watercourse system – a system which too connects the entire region (Fig. 145-148). The character of rural land is made more accessible through the enactment of the land place principles on the rural landscape with regard to river process; rural land becomes aligned with the river process and thus places the river while continuing normal rural functions.



Figure 145. Ruamahanga Sheep Farm Interface



Figure 146. Ruamahanga Manuka Interface



Figure 147. Ruamahanga Vineyard Interface



Figure 148. Ruamahanga Hemp Farm Interface

Figure 150. Farmland Traversal Experience. *The utilisation of the land principles at the water's edge and perhaps into the wider region encourages the acknowledgement and placement of the river system through policy and practice changes so positive landscape changes can occur without being detrimental to aesthetic rural character. The encouragement of these principles promotes the Wairarapa landscape as an interface between the environment system and its people, thus placing it through action and experience.*



1

Land and river system landscape considered as symbiotic and necessary component of the evolving cultural landscape

2

Adjacent land remains operative for economic, cultural purposes

3

Land responds to the needs of the watercourse

4

Land at water's edge becomes unowned, possession is public and regulated, public has a legal right to enjoy the landscape



Figure 151. Passage Experiences across Wairarapa

PASSAGE.

Design of human experience combats the greater aspects of place regarding joy, excitement, and sentiment establishment. Places are established through their basic usage and interaction; the diversity in levels of immersion enhances place attachments. In its current state, regard for the Ruamahanga place cannot be fully realised due to the absence of traversive or immersive opportunity along the watercourse, or within/between its other landscape systems. Basic interaction preserves places; its inaction results in decay and degradation like that seen not only in Wairarapa, but at other watercourses internationally.

Placed.

A diversity of paths compliments the diversity of spaces within the site; purposeful trails, specific path experiences, and vaguely marked tracks through space offer numerous interaction opportunities and connect previously separate spaces (Fig. 151). The rural landscape is promoted as it is exposed through opportunistic traversal and visceral land engagement. Intervention within the existing site dynamic promotes new site experiences, and allows new economies to evolve (eg: adventure and farm tourism, fruit picking etc) thus placing the river system within both economic and social matrices. The Ruamahanga is socialised through interaction as the river land and rural land typologies become blurred, thus placing it in people's sentiment, memory and e-xperience.

Figure 152. Ruamahanga Edge Experience *The design proposal for the Wairarapa site attempts to transcend singular physical attributes and encompass some intangible aspects through the utilisation of 'passage' principles as a means to place the river within the social interactive sphere. The encouragement of evolving basic interaction, first at the Ruamahanga edges, then through connective pathways across site, promotes the diversity of Wairarapa and encourages acceptance of the landscapes romantic splendour.*



1

Comfortable and engaging walkways between access points exist along riverscape, also across watercourse where appropriate

2

Landscape becomes connected through traversal and passage

3

Intervention creates public investment and usage of riverscape and in planting, ecological restoration practises

4

Linkages created along areas of the watercourse, and through surrounding landscape/vegetation

5

River becomes an alternate passage through the Wairarapa landscape, revealing new sites, ecologies and spaces

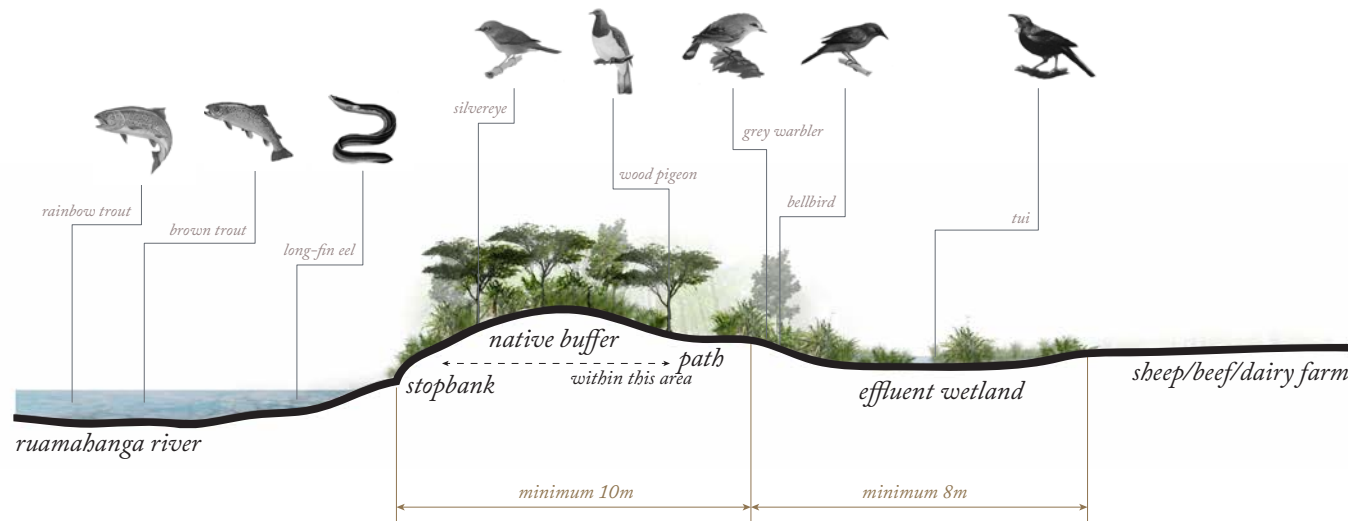


Figure 153. River Edge with Treatment Wetland

RIVER.

The river-space of Ruamahanga and its tributaries represents the history and indigenous culture of Wairarapa; it is very much a symbol of pride and ancestry. The constricted linear path of the waterway (which once stretched generously across the Wairarapa valley) combined with the disregard of ecological process and relevant intervention at a district council level promotes a farming culture based on economics and disregard. This is seen nationally; the New Zealand approach to rural freshwater protection has laxed; it has become about the preservation of a rural dynamic that is economically relevant but ecologically damaging.

Placed.

The place principles imputed at the 'river' subsystem intends to allow the processes of the river to be acknowledged and seen, and extends wider still to allow recognition of the Ruamahanga health and environment at a district level. Recognition can be in the form of usage (for enjoyment, cultural practices, or recreation) and through action (through water retention/recycling, filtration, and vegetation in private land). The system can evolve to encourage waterway health across the Wairarapa plain extending to not only its final movements through the Ruamahanga watercourse, but also into private land stream tributaries. The establishment of ecological habitats and interactive activities within the newly established river cavity space encourages river placement as the rural and river land typologies overlap (Fig. 154).

Figure 154. Productive Edge and Walkway Experience . *The Ruamahanga river system design proposal supports the recognition of place through interaction, extension, and ecological establishment; the proposal encourages the accessibility of the river as a means to construct a social agenda. Through the diversity of experience, and the extension of river ecosystems into the surrounding land, farmland can continue to be economic, but can become an extension of the river system through sociality and interaction.*



1

River harbours natural habitats for many riparian species, and for vegetation of ecologically diverse historic Wairarapa

2

Ruamahanga recognised as a prominent landscape feature and location, or series of locations, in its own right, and as the lifeblood of Wairarapa

3

River is clean and usable for recreation, cultural interaction etc.

4

River space/place extends beyond the confines of the singular watercourse

5

River is public, where appropriate – activities are unrestricted

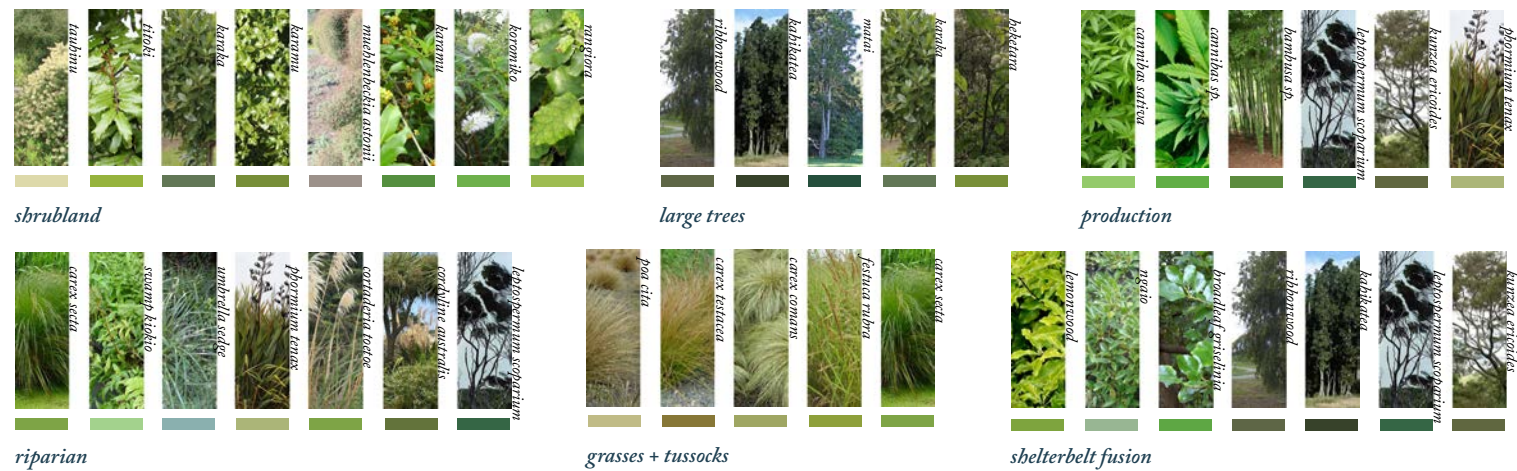


Figure 155. Re-established ecologies and vegetation

VEGETATION.

With the increasing scientific understanding of the detrimental effects human influence has had on our landscapes ecologies and systems, we as designers in the 21st century are faced with significant challenges as a result of the landscape interactions of our cultural past. The native ecologies of New Zealand have experienced a massive decrease in the last 100 years due to the need for viable land for expansion and growth. Native vegetation firmly finds itself within ecologically protected areas, in personal gardens, or in purposefully designed spaces. At Ruamahanga the preference for exotics is obvious; the utilisation of natives is not as prevalent; this provides an opportunity for change.

Placed.

The design proposal finds the establishment of vegetation (and the re-establishment of ecologies) to be an important tool in Ruamahanga recognition and acknowledgement (Fig. 155). In new wetland filtration areas, both private and public, the vegetation would act as a toxin removal system; nutrients and sediments being removed at the source before their accumulation becomes regionally problematic, thus acknowledging the connected Ruamahanga system the landscape comprises. Water retained could be recycled for irrigation or stock feeding and thus encourage new ecologically beneficial practices within the farmland sphere and contributing to actualised Ruamahanga placement through action. Rural activity manipulation through the strategic introduction of native vegetation at appropriate interfaces places the riverland ecosystem, by extension places the river.

Figure 156. Lake Onoke Walkway Experience . *The diversity of the ecological spaces of historic Wairarapa is documented with remnant landscapes being protected at the council and regional level. The vegetated establishment within private and public land interfaces in Wairarapa, and along its watercourses, would establish a structural link to the past landscape and promote the creation of ecological sanctuaries for marine, bird, and human life.*



1
River space is natural habitat for vegetation of ecologically diverse historic Wairarapa, and of riparian system

2
Vegetation has connection to the surrounding ecologies, typologies

3
Mosaic of vegetation exists along the watercourse

4
Vegetation is identified for ecological and educational purposes

5
Where appropriate, plants with cultural connection are favoured and usable for such purposes

6
Public investment in planting, ecological restoration practises

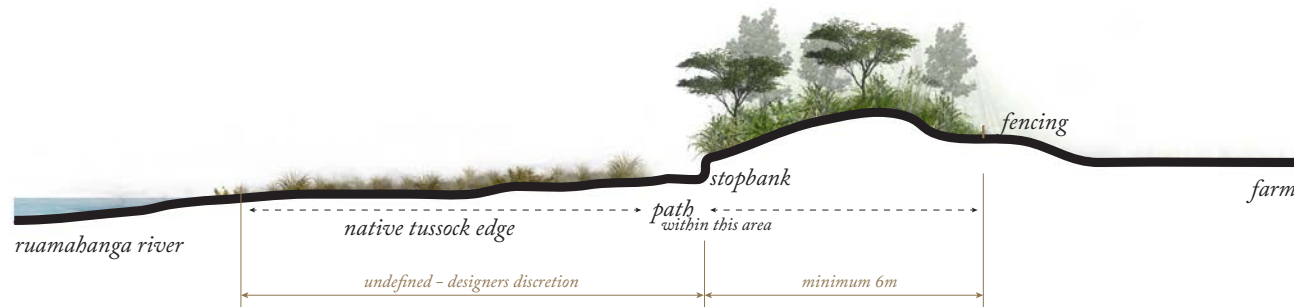


Figure 157. River Edge with Open Space and Residence

WATER.

The advertisement of New Zealand as a ‘clean, green’ tourist paradise corresponds to the investment New Zealand has in its landscape as an asset, and as a resource. As the real viable damage we are causing our landscape and waterways is being exposed, this sustainable paradise exhibited to our international friends is being challenged. The recognition of waterspaces as assets in need of formalised protection exhibits the endurance of the landscape as a creator of place, and as a system of immense scope and capacity. The placement of water spaces and processes encompasses the same political, social, cultural, ecological, and economic dimensions that cause contention. Their engagement allows for this ‘clean, green’ image to be again realised, fully maintained and encouraged at most scales.

Placed.

The design solution encouraged the placement of Ruamahanga water through the regulation of water flows and the retention, and re-cycling, of water in private space before it becomes a problematic component. Rural space engages with the river land through the settlement of river edges and council mandated regulation in the private farming sphere (Fig. 157). The placement of the river as an ecological feature in need of governing protection drives this process.

Figure 158. Lake Onoke Residential Matrix Diagram. *The Ruamahanga place can be recognised through the acknowledgement of water and water health as a driver for design in most aspects of rural development. Rural land can develop and evolve to engrain the river as a means of place creation, thus allowing rural land to be river land, and vice-versa.*



1
Water is safe, clean and swimmable, usable for recreation, cultural interaction

2
Flow and changes of watercourse along and beyond river corridor is prominent and necessary component of design

3
River changes is recognised as a prosperous natural process

4
Flow into the Ruamahanga is restricted where appropriate to maintain the clean river system

5
Ruamahanga recognised as a prominent landscape feature and as the lifeblood of Wairarapa

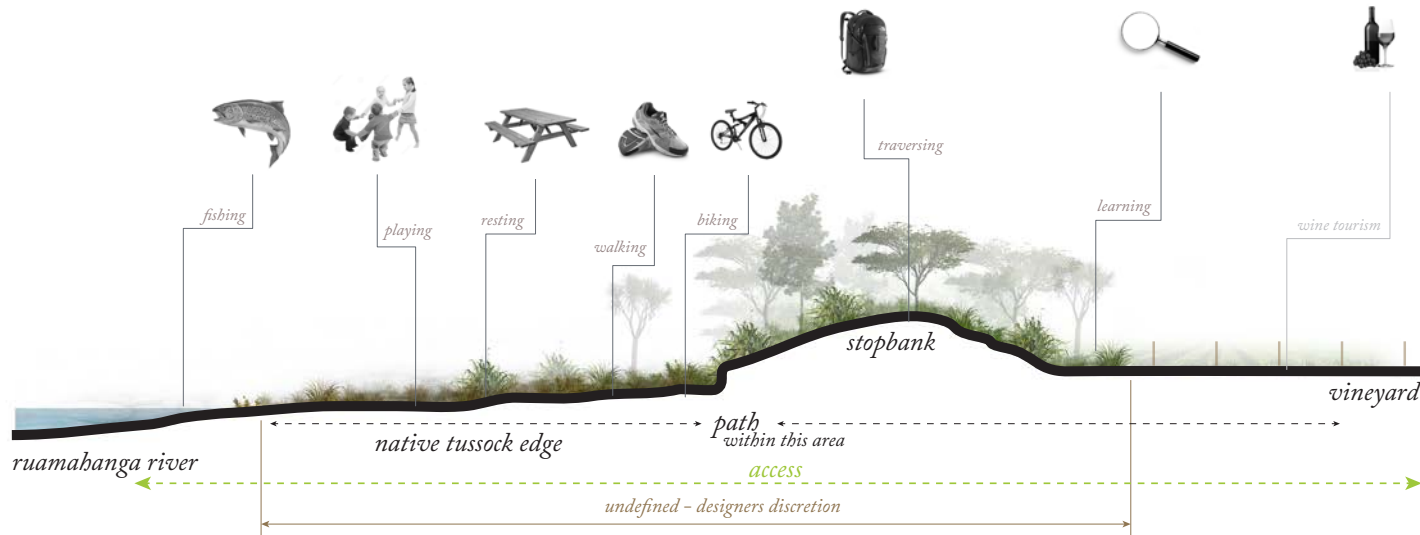


Figure 159. Tussock or Wetland activation at the Ruamahanga edge

WETLAND.

The historical fluctuations of the Wairarapa site resulted in a vast array of waterspaces including wetlands and saltmarshes that contributed to the ecology of, and cultural interaction with, the Wairarapa environment. The removal of these sites, and therefore the removal of natural water filtration in Wairarapa, has allowed for economically viable land but has damaged the functionality of water ecosystems and environments. Water is not retained, slowed, or cleaned adequately in Wairarapa, thus resulting in sedimentation, lake and river shrinkage, flooding, and a degraded waterway matrix in which this thesis is attempting to engage with, and remedy.

Placed.

The creation of wetland (or other type filtration space) forms an important component of the Wairarapa framework as a means to connect with heritages, vegetation, and landscape processes. These waterspaces evoke lost landscapes and thus connect people with their location, connect farmers with the active consequences of their actions, connect councils with their obligations as crown entities, and exhibit sustainable stewardship as a process of landscape activation and stimulation (Fig. 159). Rural land, through the creation of new wetland ecologies that rectify consequences of rural and urban process (for instance wastewater), compliments the river land typology by establishing a means of assimilation with the requirements of the whole river system and its health. River placement occurs as consequence.

Figure 160. Sewerage Treatment Wetland Experience. *The wetland system is placed both in private and public interfaces. In private space, stream revegetation, water retention, effluent filtration, and water re-use is encouraged; in public space, access to these new filtration spaces is promoted as a means to expose the fluctuating landscape processes and the connection of the waterway systems and human practices.*



1

Intervention provides obvious access and traversal of wetland environment for enjoyment, education and cultural interactions

2

Releases segregation from lake, land, and river systems

3

Creates a network of interaction between lake and river

4

Blends vegetation (type, mosaic, etc.) to water's edge from adjacent properties, habitats, spaces

5

Develops new connected wetland systems and redesign of stopbank environments to allow for ecological diversity and human/water interaction

REFLECTION

Given the scope of intervention at the Wairarapa site, the process of implementation needs to be considered. The place scale visualises glimpses of a climax landscape following total implementation of the place methodology. Although graphically relevant for the purposes of this investigation, the creation of this rural river land landscape will take considerable negotiation, which this imagery fails to realise. As a continual evolution process of policy changes, designed intervention, infrastructural development, and incentivisation initiatives, it is unfortunate that a document of this nature cannot fully comprehend the extent of river placement in the rural realm. A partial attempt has been made in the Appendix of this document (Section 10.3) to record the process by which river activation would occur with regards to the nine subsystems; this is by no means comprehensive and exists, like the place scale, to give a glimpse into the possibilities and potentials of the design solution if actualised in real space and time.

The thesis investigation design process has made prevalent the true scope place acknowledgement activation requires in inhabited space. The place methodology created at the beginning of the design investigation has evidenced itself capable of encouraging place acknowledgement through the three-scale investigation which culminated in both written and visual documentation which responds to the initial thesis question with definitive resolutions. The expression of the design proposal's new Ruamahanga exhibits the establishment of place and waterway acknowledgment in Wairarapa as a result of the implementation, and criticism, of the initial place methodology.

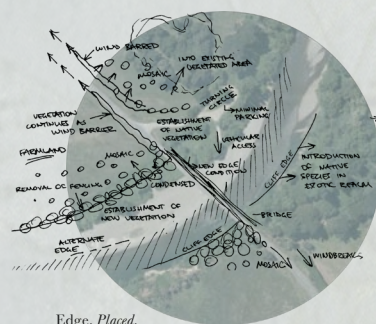
Rural land can become riverland; the Ruamahanga River and the wider water processes of Wairarapa can be placed and acknowledged once again. This concludes the thesis question resolved.

Figure 161. *Isolepis*; Lake Onokē Edge; 2017

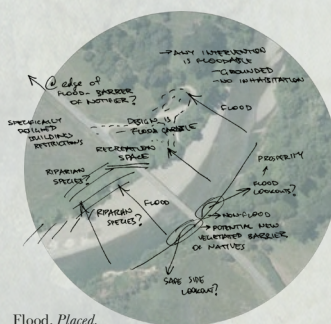


Part Eight

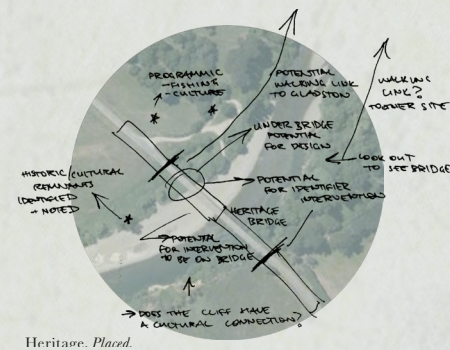
DISCUSSION



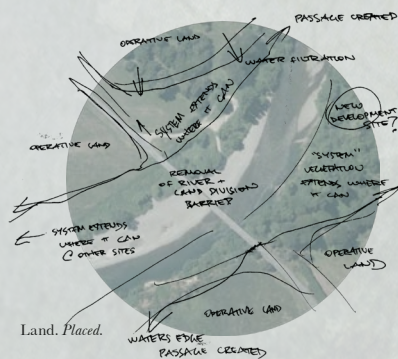
Edge. Placed.



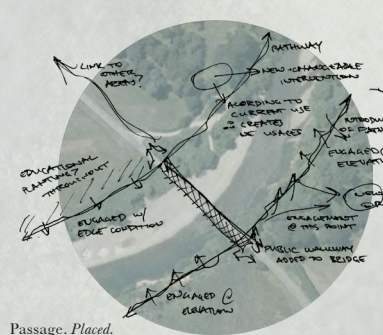
Flood. Placed.



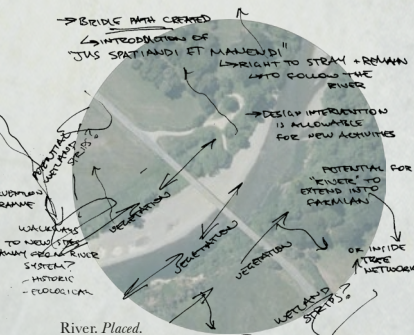
Heritage. Placed.



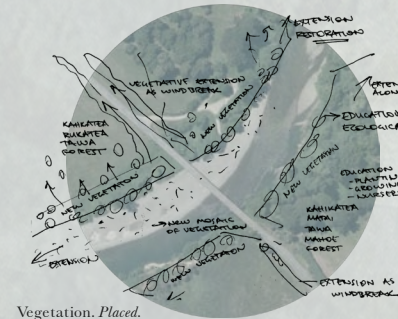
Land. Placed.



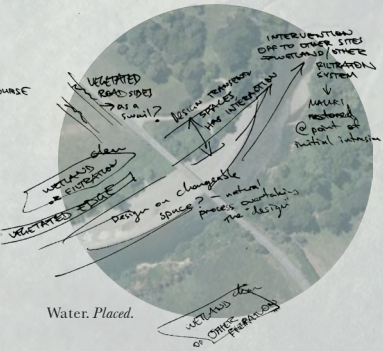
Passage. Placed.



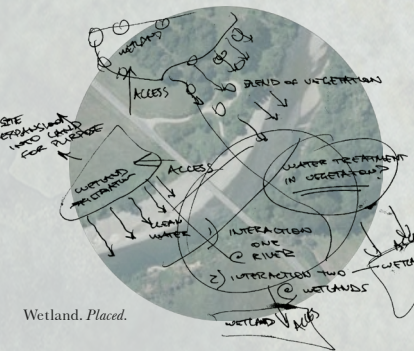
River. Placed.



Vegetation. Placed.



Water. Placed.



Wetland. Placed.

Figure 162. Site Design Testing at a third site - Kokotau

The manifestation of place and place acknowledgement within outdoor space is perhaps, at its essential core, a defining purpose of the Landscape Architectural discipline. This creation of new interactions that recognise space context, space history, and human influences and interactions within our outdoor environment constitutes recognition of our collective cultural past, and an understanding of the external systems which can and do influence it. Beginning as a noble question bred out of a personal frustration at the intense disregard of rural New Zealand waterways, the study evolved into an investigation of immense scope and capacity – the place methodology established out of the analysis phases has proved capable of acting as a design driver in the masterplanning and conceptualisation, site design, detail design, and experience design of the Wairarapa waterways.

The initial research question asking if, in today's mechanised and commercialised world, rural land could be river land, was comprehensive, and encompassed a discussion of political, ecological, social, and economic dimensions. Initially suggesting a contentious separation between values and connotations of each typology, the existence of the rural landscape, and by extension rural land, is intimately bound with river process at the

Wairarapa site; current pastoral or agrarian land was selected initially by settlers as appropriate because the historical river landscape provided for its establishment. The rural landscape bore itself out of the river landscape; in a way, the rural land of Wairarapa is already river land; the attitudes of the initial Maori culture who are its ancestors and custodians still exist; the landscape is still at the mercy of river processes and systems. The secondary question of how to appropriately place a river proved, again, to be complicated. The discussion of placement with regards to identity and culture in outdoor space complimented and contextualised the investigation with regards to the discipline – placement occurs through interaction, usage, respect, understanding, and vest. The large scope of place dialogue encompasses disciplines outside the realms of Landscape Architecture (such as geography and the social sciences); place being a method, an observation, an action, and a goal. The utilisation of the two research questions – one open, one closed – grounded the overall aims and objectives of the final design solution, and allowed comprehensive and critical design testing.

With the intention of exhibiting how design of the Wairarapa rural landscape could promote and acknowledge its river land heritage and process, the design investigation utilised a comprehensive methodology which aligned the connected systems of Wairarapa waterways and theorised their maximum designable potential. The creation of the place principle methodology at the beginning of the design investigation formulated a design technique that focused design testing purposefully. Noting that the creation of organised frameworks to test design concepts is partially flawed – purposeful testing may hinder or restrict creativity and originality – the final design process is but one interpretation of how to best achieve rural waterway acknowledgement at the Wairarapa and Ruamahanga sites. The

investigation explored how the creation of place acknowledgment can be ignited through a diversity of experience and interaction in both private and public space through the implementation of this framework; This utilisation of both the private and public sphere recognises the relationship between external actions and their effects on the confined Ruamahanga watercourse; it evidences an understanding of the actual factors which have influenced the current landscape arrangement. Other designers and disciplines will most certainly have different views and methods; this very instance exhibits the multi-faceted and multi-disciplinary nature of the design study, and the diversity of its interested stakeholders.

The design study utilised three scales of design to investigate and convey how landscape architectural intervention could cultivate the rural landscape and promote wider waterway acknowledgement. Similar to the place methodology, this process is inherently flawed – depending on circumstance, acknowledgement could perhaps be better promoted if the process was inverted ('micro to macro' as opposed to 'macro to micro') and placement was created first at the human experience scale; it also does not comprehend the scales of design investigation which falls outside the regional, place, and experience levels. If investigated again, it would be appropriate to compare and critique these two different methods of design appropriateness at the Ruamahanga site; this would consider alternative methods of design manifestation and challenge the researcher to think outside of their comfort zone.

A concluded design process, the finalised solution, although still largely theoretical, adequately realises the nuances of the Wairarapa site, and the total systems of the river and their corresponding design opportunities.

Can rural land be riverland? Yes, through total acknowledgement of river processes and the rectification of negative human effects. How can a river be placed? Through comprehensive and purposeful design which engages with the water system at various scales and interactive points.

Given the larger than predicted scope of study that evolved, the study is but a small proportion of the discussion required within New Zealand and the world regarding what we as a people value about our natural environment; how those values could translate into organised action again requires considerable negotiation. Within this design research format it is unfortunate that we cannot accurately convey the political, social, cultural, ecological, and economic dimensions of current New Zealand waterway discourse. This thesis can only present a potential stratagem that aids and refines the already alight discussion with regards to the designable sphere; it presents a solution, based on study, but cannot adequately portray the complexity and contention of the rural water debate. The conceptualisation of a solution is confined considerably by the thesis format and the restraints of the final thesis document. Given the opportunity, it would be appropriate to test the place methodology at another watercourse in another region to test its applicability at the national (or even international) scale; this was barred given the strict limitations of the design research format.

The theoretical investigation of the development of Wairarapa through Ruamahanga system acknowledgement has served as a case study in which the promotion of Māori perspectives such as stewardship and interconnectedness in designed space can be regionally transformative. Cultural and identity connotations as related to place permeate the design solution, attempting to construct a network of recognition and interaction

through people, time, vegetation, passage, action, and history. The site is placed at these interfaces to connect obvious landscape elements within the physical sphere. This type of investigation, and by extension some components of the design solution, could be promoted and utilised in other regions in New Zealand where same landscape conflicts exist - the place principle methodology process could be reformatted to align with the systems of the regions or waterways in which it is enacted; place and waterway acknowledgement could be established nationally, thus allowing exhibition of the values New Zealand collectively attributes to their landscape.

If we are to accept wholly that landscape is a cultural schema, a matrix of ecological process and inhabitation, then the alignment of interventions onto or into a landscape with the collected cultural perspectives of that land is paramount; their design for recognition and establishment in place formulises the creation of placed identity. Through the identification and design of waterway systems in the rural sphere, and through the integration of a stewardship approach, the design investigation advocated new landscape interactions which evidenced cultural pedigree and value, and promised a sustainable and allied future. Current rural practices and traditions can develop and new plans can be created to generate environmental and landscape stewardship through understanding and interaction with prominent landscape features such as waterways; the prosperity and well-being of the people can be reflected in the prosperity and well-being of the landscape.

Being broad and comprehensive, the discipline of Landscape Architecture encourages the expression and acknowledgement of the natural

environment and ecological process as a way to establish connections, and promote identifying places and experiences in the outside world. The acknowledgement of our ecological and social histories and failures promotes an understanding of their relevance in establishing place identity; their rectification accepts these histories and failures and promotes new interactions that can be landscape transformative. In Wairarapa, this thesis investigation has demonstrated that waterway activation can create interactions—both within and external to the watercourses—that enhance and acknowledge the river's existence and prevalence in the wider rural system. Protection and acknowledgement of water is protection and acknowledgement of land; protection and acknowledgement of land is protection and acknowledgment of people; they exist in a continual interconnected system. The Landscape Architectural discipline engages with the outside world as advocates and intermediaries; this thesis is but one expression of what that engagement and promotion could stimulate in the under explored, yet ever-developing, rural domain.



Figure 163. Pingao; Lake Onoko; 2016

Part Nine

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Figure 3. Brees, Samuel Charles 1810-1865 :Plain of the Ruamahanga, opening into Palliser Bay near Wellington. This view represents about sixty miles of the length of the plain from North to South / Drawn by S. C. Brees, esq.r, Chief Surveyor to the New Zealand Company [1843]. Day & Haghe. London, Smith, Elder [1845] [Centre section]. Wakefield, Edward Jerningham 1820-1879 :Illustrations to "Adventure in New Zealand". Lithographed from original drawings taken on the spot by Mrs Wicksteed, Miss King, Mrs Fox, Mr John Saxton, Mr Charles Heaphy, Mr S. C. Brees and Captain W. Mein Smith. London, Smith Elder & Co, 1845.. Ref: PUBL-0011-08-2. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/22343256>

Fig 8. *Left:* Lyndon, Edward, fl 1860s-1890s. [Lyndon, Edward], fl 1860-1890s :[Sheep near Lake Wairarapa. 1860s].. Ref: A-354-023. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/23083321>

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Figure 10. Turnbull, Alexander Horsburgh, 1868-1918. [Smith, William Mein] 1799-1869 :Ruamahanga from the east ; the range of mountains divides Wairarapa from the Pakarutahi and Hutt V[alley] [1849]. Ref: C-011-010. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/23035537>

Figure 11. Ruamahanga River February 2014. <https://images.bookabach.co.nz/property-images/18863/listing/257656XXL.jpg>

Figure 29. Resilient River, view from the south; Turenscape; 2010. <http://turenscape.com/en/project/detail/453.html>

Figure 30. Curate through time, the vision; Turenscape; 2010. <http://turenscape.com/en/project/detail/453.html>

Figure 31. Wetland Eco Lab Park left; Turenscape; 2010. <http://turenscape.com/en/project/detail/453.html>

Figure 32. Wetland Eco Lab Park right; Turenscape; 2010. <http://turenscape.com/en/project/detail/453.html>

Figure 33. Preserve curved boardwalk deck; Hershberger Design; 2014. <https://www.asla.org/2014awards/417.html>

Figure 34. Preserve Metal Boardwalk; Hershberger Design; 2014. <https://www.asla.org/2014awards/417.html>

Figure 35. Preserve Bioswale; Hershberger Design; 2014. <https://www.asla.org/2014awards/417.html>

Figure 36. Wet Meadows Cross Walk; Terriroires; 2014. <http://www.landezine.com/index.php/2014/10/wet-meadow-and-source-of-the-river-norges-by-territoires/wet-meadow-source-river-norges-territoires-04/>

Figure 37. Wet Meadows Bridge; Terriroires; 2014. <http://www.landezine.com/index.php/2014/10/wet-meadow-and-source-of-the-river-norges-by-territoires/wet-meadow-source-river-norges-territoires-06/>

Figure 38. Wet Meadows Heritage Deck; Terriroires; 2014. <http://www.landezine.com/index.php/2014/10/wet-meadow-and-source-of-the-river-norges-by-territoires/wet-meadow-source-river-norges-territoires-02/>

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Figure 40. River L'Aire; ADR; 2016. https://www.arquitectes.cat/iframes/paisatge/cat/mostrar_projecte.php?id_projecte=9875&lan=cat

Figure 41. River L'Aire Canal redesigned; ADR; 2016. https://www.arquitectes.cat/iframes/paisatge/cat/mostrar_projecte.php?id_projecte=9875&lan=cat

Figure 42. River L'Aire Canal intervention; ADR; 2016. https://www.arquitectes.cat/iframes/paisatge/cat/mostrar_projecte.php?id_projecte=9875&lan=cat

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Figure 164. Spearlily; Wairarapa Moana, 2016

Part Ten

APPENDIX

10.1 Ethics Approval

10.2 Word Extension

10.3 Place Manifestation Diagrams

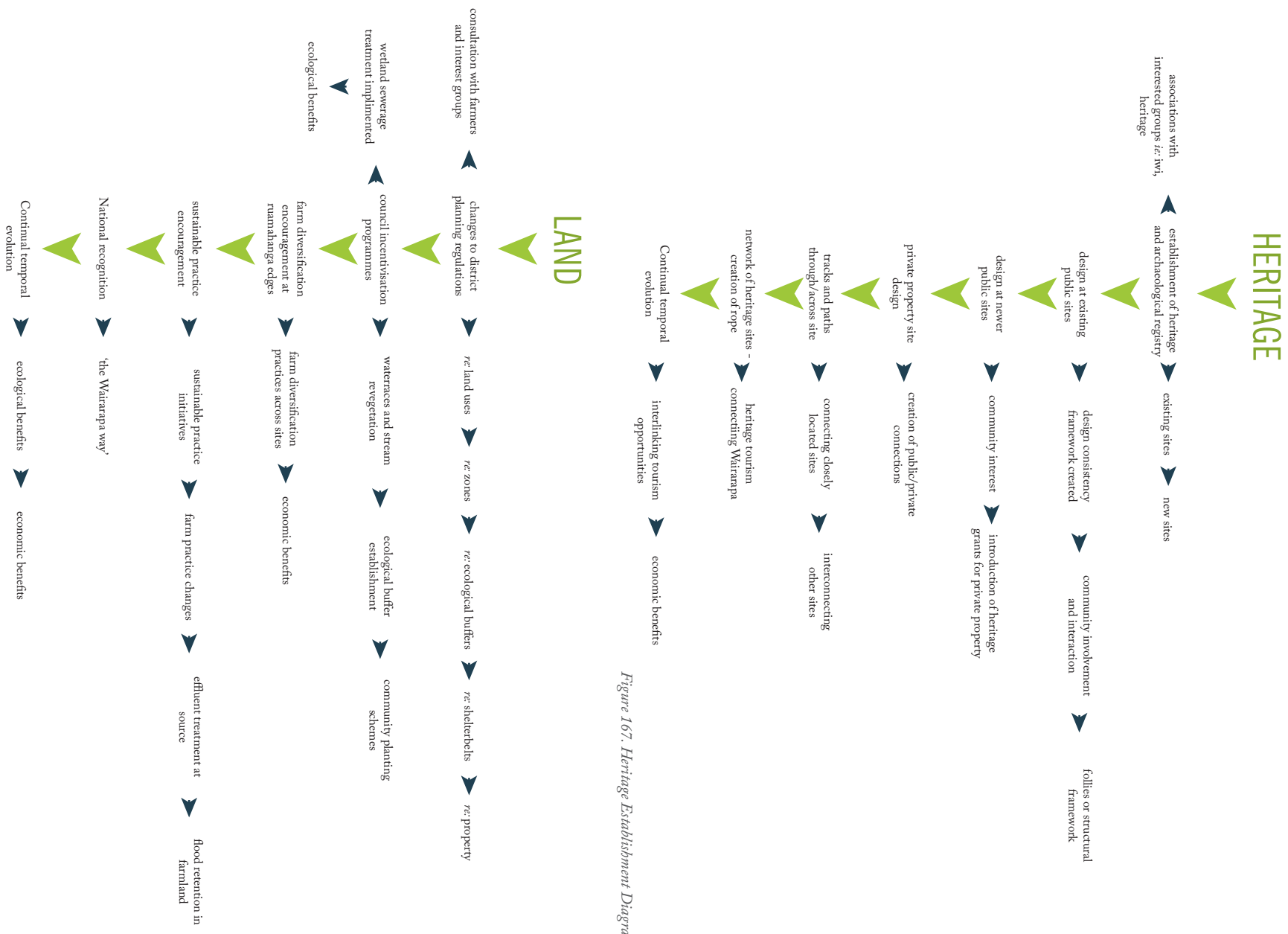


Figure 167. Heritage Establishment Diagram

Figure 168. Land Establishment Diagram



Figure 165. Edge Establishment Diagram

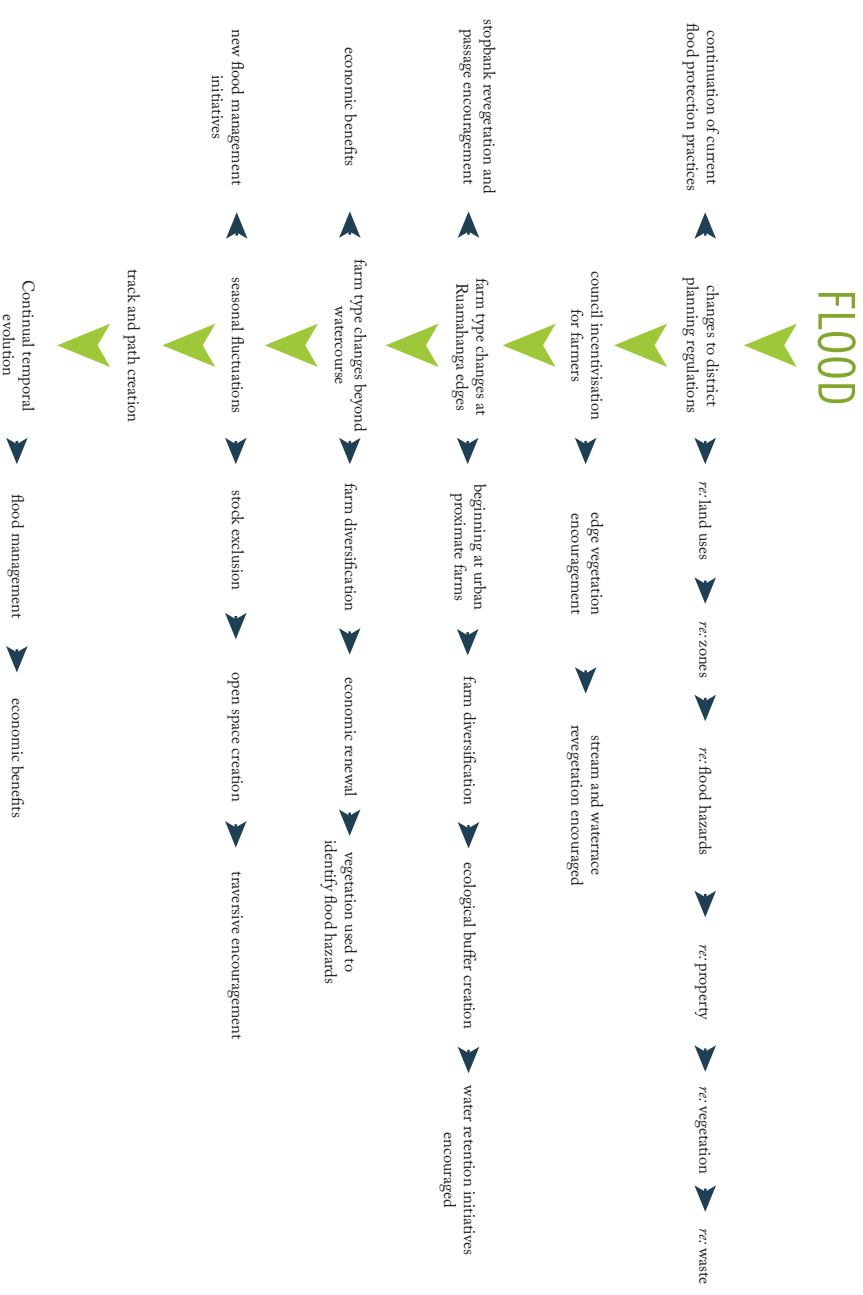


Figure 166. Flood Establishment Diagram

10.3 Place Manifestation Diagrams



Figure 171. River Establishment Diagram



Figure172. Water Establishment Diagram

10.3 Place Manifestation Diagrams



Figure 167. Passage Establishment Diagram

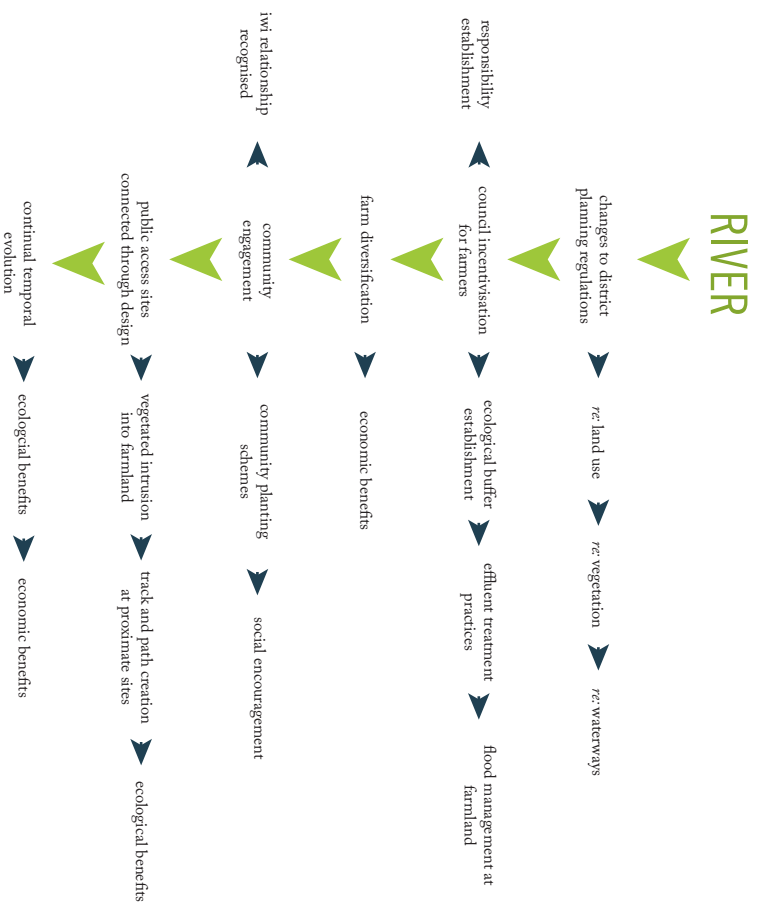


Figure 170. River Establishment Diagram

10.3 Place Manifestation Diagrams



Figure 173. Wetland Establishment Diagram