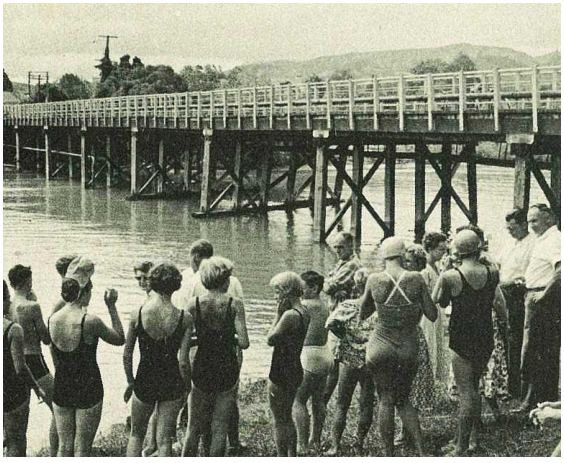

A place belonging to the heart:

Spatially and temporally changing social connections to the Waimatā River and its tributaries

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Report No. 4

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Cover page photos:

A. One of Gisborne's most gorgeous private gardens in 1954 was Mr and Mrs Emms property at 59 Clifford Street which bordered the Waimatā River (Gisborne Photo News, 25th November 1954).

B. Gisborne Club swimmers grouped together under the William Pettie Bridge in 1961 in anticipation of their 183 metre race which finished at the Gladstone Road Bridge (Gisborne Photo News, 23rd March 1961).

C. In August 2010, rescue teams scoured the Waimatā River for missing four-year-old Lucas Ward (Sharpe and Joyce, 20th August 2010).

D. Teenagers make their own fun in 2014, on a waterslide erected on the river bank close to the intersection of Whitaker Street and Stafford Street (Gisborne Herald, 28th November 2014).

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INTRODUCTION

Dirlik (2001) noted that "place is the location...where the social and the natural meet" (p. 18). Indeed, people attach complex meanings to places so that the environment is more than just a place to live, it is part of one's identity (Wester-Herber, 2004). The connections that people have with places such as rivers are intricate, diverse, overlapping, and contested and they change over time and space (Farminer, 2013). Rivers have always been important to people as they provide food, materials, navigation routes, and freshwater for drinking, irrigation, and drainage (Buttimer, 1985; Postel and Richter, 2003). People and rivers have therefore been intertwined throughout history and jointly contribute to global ecosystems (Buttimer, 1985; Postel and Richter, 2003). As society has advanced, however, the relationship between people and their rivers has changed. During floods and catastrophes the river dominates, but as technology and economies have grown, people have dominated rivers through channel diversion, dam construction, water extraction, and pollution (Collier *et al.*, 1996; Postel and Richter, 2003). Linkages between people and their rivers also go beyond this 'business-like' attitude, and cultural, recreational, and spiritual linkages have been acknowledged through historical records, cultural and religious views, and delight in amenity values. Life adjustments and changes to people's interests also mean that recreational time has escalated and there has been considerable tourism growth (Farminer, 2013; Postel and Richter, 2003; Prideaux and Cooper, 2009; Stokowski, 2008). Rivers are truly places that hold multiple meanings and values for many individuals, whether it be events or encounters, homes, livelihoods, or people (Davenport and Anderson, 2005; McCool *et al.*, 2008, Stokowski, 2008).

It is inevitable then that people view, treat, and care for their rivers in diverse ways, and have different ideas and goals for future river management (Hillman *et al.*, 2008). Only when all the different viewpoints and social linkages are understood can community and institutional values be effectively integrated into successful river management (Harris, 2006). This is vitally important for enhancing community engagement in management schemes as it encourages commitment and care for rivers by hitting people in the heart, but also creates social capital and acknowledges the considerable role of local knowledge (Hillman *et al.*, 2003; Thompson and Pepperdine, 2003). One way of doing this is to consider what people believe represents a 'healthy river' and this is crucial as healthy rivers are created from, and support, healthy communities (Hillman *et al.*, 2008). Present-day perceptions of river health are also based on historical and contemporary connections between people and their rivers. These are place specific; at certain times and locations it is natural for environments, or people and their rivers, to be disconnected, while in other places this reflects top-down institutional or political fragmentation (Hillman *et al.*, 2008).

The connections that people feel with their rivers are not to be taken lightly. If individuals and communities are socially connected with their rivers, then it is likely that they will take care of them and prosper. Rivers have been called the 'lifeblood' of a region as they convey materials, sediment, and waste, but also provide a familiar reference point and linkage for people (Hillman *et al.*, 2008). This connection was evident in the Hunter Valley (Australia) where a person remarked "I've been associated with the river ever since I was a kid, this is the lifeblood of the area, if the river dies, everything else dies with it" (Ashley-Brown, 2003). If, however, rivers and people are socially disconnected, for instance through river deterioration, then they may suffer a loss of place and identity (Higgs, 2003; Michaelidou *et al.*, 2002; Parkes and Panelli, 2001; Wester-Herber, 2004). This solastalgia is caused by the anguish of having a person's home and place destroyed and triggers psychological or physical pain (Albrecht, 2005; Connor *et al.*, 2004).

The Waimatā River, located north-east of Gisborne City, is a great place to explore these complex social connections to waterways. In the case of this river, most human engagement with and activity on the river

is centred at the river mouth. Instead of exploring relationships in the typical way, from the headwaters to the sea, it makes sense for place-specific research here to begin at the sea and finish at the mountains. The waters of the Waimatā River enter Poverty Bay where New Zealand's shortest river, the Tūranganui River, is situated. Gisborne's harbour and port are located here and many fishers, kayakers, rowers, and waka ama paddlers use this stretch of river (Longbush Reserve, 2013b). Only 1.2 km upstream, the Tūranganui River divides into the Taruheru and Waimatā rivers and this division into so many rivers has resulted in Gisborne being called the 'City of Rivers' or 'City of Bridges' (LAWA, 2015; Soutar, 2012a). This view of dividing the waterways is socially constructed and does not make sense for the tuna, inanga, or eels which frequently pass through these boundaries. On the lower reaches of the Waimatā River urban and commercial land use is abundant, while forestry and farming activities dominate the mid to steep reaches, and cyclists, walkers, and runners are more important (Longbush Reserve, 2013a; 2013b).

The river and its tributaries mean a great deal to many different individuals. To some, the Waimatā River is significant because of the history it holds and the stories it shares. At the Tūranganui River mouth, a sacred rock (Te Toka-ā-Taiau) historically marked the anchorage site of the waka *Horouta* and *Tākitimu* (Longbush Reserve, 2013a; Spedding, 2006). This rock was also a key meeting site for Māori and Pākehā during the arrival of Captain James Cook and his *Endeavour* crew in October 1769. These were the first Europeans to set foot in New Zealand and Cook and an unnamed man exchanged a hongi (pressing noses) on Te Toka-ā-Taiau, mingling their breath together (Longbush Reserve, 2013a; Spedding, 2006). Other people relate to the river because of its cultural and spiritual links such as kaitiakitanga and whakapapa, and others again because the river is a site of enjoyment for aesthetic and recreational pleasures, or a source of water or transport for utilitarian needs. As the Gisborne District has grown and the economic base has changed over time, links between people and their river have altered and conflicts have arisen because of differing interests. People have sometimes cared for and been directly connected with their river, while at other times, people have been socially disconnected. Nevertheless, the Waimatā River has continued to be a very special place, for both Māori and Pākehā, with the waters of the river flowing past the very spot where this history became intertwined (Longbush Reserve, 2013a). Management attempts need to think of this river as a woven fabric or jigsaw puzzle which is made of many different components and perspectives, all of which need to be considered to produce a final product (Figure 1).

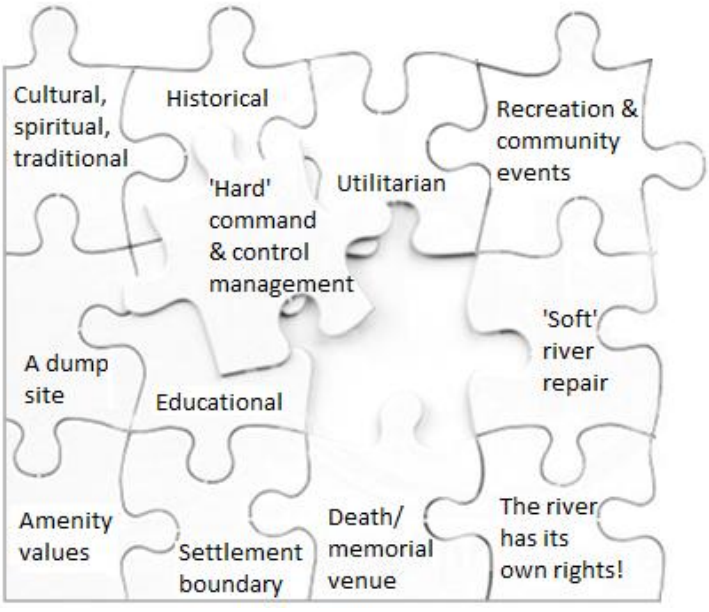


Figure 1. Social connections to the Waimatā River fit together like a woven fabric or a jigsaw puzzle (Author's own creation, 2015).

Every person has knowledge to impart and stories to share and this report has aimed to document just some of those memories and perspectives about the Waimatā River which are so special. Since this report has been based chiefly on council reports and social media, with only short excerpts from a Gisborne Hui attended in late January 2015, this report is inevitably subjective, reflecting a particular perspective to be related to local knowledge.

HISTORICAL SYNOPSIS BY TIME

Two Māori waka canoes, *Horouta* and *Tākitimu*, arrived from Hawaiki in the 1300's and made landfall on the Tūranganui River (Soutar, 2012a; Spedding, 2006). *Horouta* introduced kūmara tubers to the area and was captained by Pāoa and Kiwa who named the area Tūranganui-ā-Kiwa ("the stopping place of Kiwa") (Gisborne City, 2015; Soutar, 2012d). Voyagers onboard these vessels set up camp in the region as the extensive native forest was rich in resources and the ocean and rivers provided plentiful food and water supplies (Nga Iwi o Tūranga, 2014; Spedding, 2006). The Māori tribes who settled in the region included Ngāi Tāmanuhiri, Ngāti Porou, Ngāti Rakai, Rongowhakaata, Te Aitanga-ā-Māhaki, and Tūranganui-ā-Kiwa, and some of these tribes descended from Pāoa and Kiwa (Gisborne District Council, N.Aa; Spedding, 2006). These tribes naturally divided their boundaries by the Taruheru, Tūranganui, and Waimatā rivers and also by Te Toka-ā-Taiau, a sacred rock which was located on the Tūranganui River (Gisborne District Council, N.Aa; Spedding, 2006). Fishing villages were created near to the coast, pā were constructed on nearby hilltops (including the Rarohou Pā situated 3.2 km upriver from the Waimatā mouth), and Māori dwellings were built in the surrounding area, including the Waimatā Catchment (Spedding, 2006; Tairāwhiti Tours, 2015; Tombleson, 1997; 2002). During this time, the only way to travel long distances was by waka and so rivers were used extensively as transport routes during peace time, and as escape routes during the bitter inter-iwi wars which raged from 1700 to 1800 (Clapham, N.A). Some bush was felled for construction materials or to clear land for kūmara fields, but the damage to rivers was minimal as rivers are taonga to Māori (Nga Iwi o Tūranga, 2014).

The first Europeans to set foot in New Zealand were Captain James Cook and his crew onboard the *Endeavour* who landed at Te Toka-ā-Taiau on 8th October 1769 (Longbush Reserve, 2013a; Spedding, 2006). This was not a pleasant visit as misunderstandings were rampant between local Māori, and Captain Cook and his crew. Despite brief peaceful interludes, nine Māori were wounded or died during this visit, including Te Maro who was of the Ngāti Rakai tribe and came from the Rarohou Pā (Spedding, 2006). After only 36 hours the European visitors left the area, renaming Tūranganui-ā-Kiwa as Poverty Bay because it afforded Captain Cook and his crew "no one thing we wanted" (Soutar, 2012b; Spedding, 2006). Since it is New Zealand's first European landing site and because of the relationships between Māori and Pākehā, this site is believed to be the most significant in New Zealand's history (Spedding, 2006).

For the next 115 years, traders, whalers, and missionaries arrived in Poverty Bay and many European trading and whaling stations were constructed (Soutar, 2012a; 2012b; Spedding, 2006). These were concentrated on the Tūranganui River where a port was built, and stations enabled settlers to trade resources with the local Māori, and also to make a living in this strange new country (Spedding, 2006). At these stations, blankets, flax, firearms, and tobacco and other products were traded (Soutar, 2012b). The first station was set up by Captain John Harris (the "founder" of Poverty Bay) in late 1831 (Tairāwhiti Tours, 2015; Whyte, 2012). Earlier that same year, John Harris had made the first European land purchase in Poverty Bay of an acre of land which he bought from the Māori chiefs for gunpowder, axes, pipes, and tobacco (Spedding, 2006; Whyte, 2012). By 1851 a bustling trading initiative had been established, with eight trading stations present in Poverty Bay (Spedding, 2006). Vessels travelled up the rivers, including the

Waimatā River, to sell or purchase goods (Rongowhakaata Iwi, N.Ab). Trading stations continued to be established in subsequent years and in 1852 Captain George Edward Read (the "founder" of Tūranga) arrived in the fledgling settlement and built a trading station, jetty, and house on the Kaiti side of the Tūranganui River, the opposite side of the river from John Harris (Soutar, 2012a; Tairāwhiti Tours, 2015).

Conflict arose in Poverty Bay during the East Coast War and Te Kooti rebellion of 1865-1866 (Soutar, 2012a; Tairāwhiti Tours, 2015). During this time, the government became aware that the Tūranga settlement was in an ideal location and in 1868, 300 hectares of land was purchased on which to build a town (Soutar, 2012a). In 1870 the town lay out was designed and the name of the settlement was changed from Tūranga (often confused with Tauranga) to Gisborne after the Honourable William Gisborne, who was the Colonial Secretary in Britain at the time (Gisborne City, 2015; Soutar, 2012a). The government also bought and started to sell off land, creating Gisborne's suburbs, including the more accessible reaches of the Waimatā Catchment (Gundry, 2015). This was driven by the migration of European settlers to the district and the need for suitable land for housing and to create an income, important as many trading resources had been depleted. Land acquisition in the Waimatā Catchment continued until 1890, although most of the land was purchased in the 1880's (Gundry, 2015). Upon purchase, many early settlers built Māori style whare (dwellings) on their properties overlooking the Waimatā and Taruheru Rivers, as temporary shelter while they found the means to build larger European style homes (Tombleson, 1997). After wooden houses were built, most whare were torn down to keep land clear for gardens, trees, and agriculture (Tombleson, 1997).

In 1870 Gisborne became a borough, and by the mid 1870's the scene was rapidly changing (Mackay, 1949). Increased development brought the need for better roads and pavements to replace the dusty dirt trails on which horses were used, after their introduction by the missionary Samuel Marsden in 1814 (Mackay, 1949; Meyer, 2015). Punts were constructed and towed up to The Island on the Waimatā River where they were loaded with papa rock. This was later brought back to Gisborne and used to pave a section of Gladstone Road, from the Post Office to Grey Street (Mackay, 1949). Roads continued to be paved from this point onward, and construction materials were sourced from rivers including the Waimatā, where hard rock was blasted using gelignite or crushed into metal with knapping hammers (Tombleson, 1997). In order to increase the port's productivity, the Marine Department also organised for rocks at the harbour entrance (including Te Toka-ā-Taiau) to be blown up in 1877. This was completed by the Gisborne Harbour Board at a cost of £200 so that trade ships had easy, unobstructed access into Gisborne Port (Spedding, 2006). This likely left the local Māori inhabitants shocked and dismayed at the insensitivity of the new Pākehā settlers who had ignored the tapu significance of Te Toka-ā-Taiau as a site for the mauri (life source), for the fisheries in Poverty Bay, and as a major boundary marker between different kin groups (Spedding, 2006).

After the settlement of the Waimatā Catchment in the 1880's, large scale clearance of native forest made way for agriculture from which a substantial income could be generated (Gundry, 2015). The meat and wool boom began in 1890 and high external stock prices combined with fertile alluvial soils in the Waimatā Catchment made agriculture an easy choice of income (Gundry, 2015; Tairāwhiti Tours, 2015). It is likely that during the felling of the bush, the Waimatā River was used as a conveyor belt to transport logs downstream to the port. As pasture was established after deforestation, stock were purchased and numbers rapidly increased each year, on some properties by 3.5-12 times from 1884 to 1890 (Tombleson, 1997). Woolsheds were also built on flat land close to waterways in the Waimatā Catchment and swim dips and killing houses were built on stringers over waterways so that waste could be quickly disposed of when stock management began (Tombleson, 1997). In addition, excess sheep dip was released into the Waimatā River because this provided a safe means of disposal due to dilution (Gundy, 2015). The Waimatā River was

also a source of water (for crops, stock, and homes), pumped by hand or lifted by hydraulic rams, and was still the best way to transport goods and move between locations as boats shipped wool from upriver farms to the port downstream (Poverty Bay Herald, 25th January 1913; Tombleson, 1997). Gisborne port soon became a hive of activity (Tairāwhiti Tours, 2015). Several freezing works were built to support this rapidly growing industry (Nelson Brother's at Taruheru in 1888 and Kaiti Freezing Works in 1896), and in consequence, farmers intensified stock numbers so that they could reap even greater economic benefits (Soutar, 2012e; Tombleson, 1997). In 1914, Gisborne had the best export values per capita in New Zealand and these exports were the primary means by which Gisborne developed as a city (Spedding, 2006; Tairāwhiti Tours, 2015). When the meat and wool boom ceased in 1920, agriculture continued (Tairāwhiti Tours, 2015).

The removal of native forest also brought about a spate of problems, the greatest of which was increased sediment flows into the river and harbour. Removal of trees meant that hillslope erosion was widespread and more sediment entered the Waimatā River (Gundry, 2015). Since there were (and still are) few places for sediment to be stored on the sides of the river, sediment accumulated on the bed of the river, causing aggradation and decreasing the depth of river channels (Cullum, 2015; Gundry, 2015). This meant that the Waimatā River became unnavigable by vessels past the Waimatā/Taruheru confluence and vessels had to be packed and unpacked out in Poverty Bay with goods and passengers transported to and from these ships (Tombleson, 1997; 2002). It is difficult to know when this occurred, but it could have been in the late 1930's when the neighbouring Taruheru River became unnavigable for the same reason (Tombleson, 2002). Because it has relatively few 'pinch points' which constrict its channel, the river also acted as a sediment chute and sediment ended up in the port and on the floor of the harbour where dredging was carried out in 1916, in 1925/1926, and has continued thereafter to this day (Cullum, 2015; Gundry, 2015).

Furthermore, after the establishment of the town, Gisborne's population grew significantly, and after only a short period the town and its suburbs were pressured by increasing water and drainage needs. As early as 1882, investigations were made into the viability of using the Waimatā River as a large scale domestic water source. The construction of a weir 1.2 km upstream of the Waimatā/Taruheru confluence was proposed, but this was soon dismissed because of concerns over siltation and saltwater intrusions (Poverty Bay Herald, 25th May 1882). However, the population of Gisborne continued to grow and by 1901 had reached 2,737 people (Soutar, 2012a). There was subdivision of land blocks near the city but the population also spread out from its centre at the mouth of the Tūranganui River and more people resided in the suburbs (Poverty Bay Herald, 30th May 1903; Tombleson, 1997). It was almost inevitable then that in 1902-03 further investigations would take place into the viability of a water supply from the Waimatā River. A sub-committee was appointed by the Whataupoko Road Board and they were charged with determining the best method of providing water to mothers, children, and residents in the suburbs of Whataupoko, where there were particular concerns (Poverty Bay Herald, 30th May 1903). This time the suggested plan consisted of pumping water above the Hole-in-the-wall where there were no saltwater intrusions, but again the scheme did not go ahead (Poverty Bay Herald, 30th May 1903).

People did not stop playing with the Waimatā River, however, and in 1920 it was proposed that the Waimatā River be diverted at the Hole-in-the-wall, and made to travel along the old riverbed which was through Mr McLean's land. The river would then flow through a short tunnel or would cut through the neighbouring Kaiti catchment, and flow out to the sea via the Hamanatua Stream at Okitu (Gundry, 2015). While this did not go ahead, in 1931, the harbour and river were separated with a diversion cut (Gundry, 2015). Despite the burgeoning population growth of Gisborne (to 15,000 people in 1926 and 20,000 in

1955), the Waimatā River was not investigated again as a water source until the late 1970's and early 1980's but schemes did not go ahead (Gundry, 2015; Soutar, 2012a).

In the 1960's Gisborne was deemed one of New Zealand's most affluent cities and as of 1967, international ships could tie up at Gisborne's port (Soutar, 2012c). The 1960's and 1970's also brought a wave of change for the city as the population reached 30,000 people and the agricultural economy struggled to stay afloat (Soutar, 2012a; 2012c). This occurred because "the weather pattern changed. Instead of summer showers and good growth there were severe droughts which meant cattle had to be grazed away. Wool weights decreased, lambs were hard to fatten and prices were low" (Tombleson, 1997, p. 56). This was also the time that people really started to take notice of the impacts that their deforestation and agricultural activities had had on river systems, and pastoral land was left to revert to native scrub or planted in exotic forest (Gundry, 2015). In 1981, local company Fletcher Challenge Forests was formed and soon after forests at Waimatā and up the North Island's East Coast were purchased and the logging industry began (The Fletcher Trust, 2015; The New Zealand Herald, 5th July 2002). This was intensified with the construction of a Japanese owned wood mill in Gisborne in February 1994 and the sale of exotic forests to Malaysian owned Hikurangi Forest Farms for $210 million in December 1996 (Soutar, 2012c; The New Zealand Herald, 5th July 2002). Due to this forestry activity, the Kaiti Freezing Works closed its doors in 1994 (Soutar, 2012c).

However, while forestry may have saved the dying Gisborne economy, it also proved to be detrimental to the natural environment. Forest debris was washed downstream where it accumulated behind city bridges (Gladstone, William Pettie) and was deposited on popular Gisborne beaches (Midway, Waikanae) (Gundry, 2015). Siltation issues also increased further, turning the river into "pea soup" in high flow stages. Furthermore, tracks scarred the ridges and many hillslopes collapsed with rainfall and the hauling of logs upslope to pads which caused further erosion (Mike Marden, pers. comm., 2014). This cascading damage required the Gisborne District Council to invest significant amounts in remedial work and resulted in management attempts such as the construction of a timber revetment wall along the Esplanade on the Waimatā and Tūranganui rivers in the mid 1970's (Gisborne District Council, 11th February 2010; 10th March 2014). This was built to contain the river and protect recreational activities in riverside parks (Gisborne District Council, 11th February 2010; 10th March 2014). Other management attempts included planting of willows, poplars, and later natives along the river banks, as well as channel maintenance and the construction of debris traps (Cullum, 2015; Gisborne District Council, 2012; Gundry, 2015).

As the population grew and expanded further, concerns seemed to change from sourcing water to the disposal of waste, and the river and the surrounding land were perceived to be ideal disposal sites for human sewage, wastewater and rubbish. By July 1990 there was already one overflow on the Waimatā River where human sewage and wastewater was disposed and in 2001 Gisborne District Council proposed a landfill site off Mander Road, close to the Waimatā River (Coombes, 2000; Shaw and Kusabs, 2000). Conditional approval was granted in 2003 but because of the controversial nature of the landfill, construction never began and in 2007 the council permanently reversed its position (Gundry, 2012).

Although it has spread outwards, the population of Gisborne has remained relatively stable since the 1970's, with only 33,510 people in 2006 (Soutar, 2012a). The number of people of Māori descent has increased, however, from <2% in the city in 1926, to 12% in 1961, and 50% in 2006 (Soutar, 2012a). Several other changes have taken place, perhaps the greatest of which is that many international buyers now require products to be sustainably produced and to meet rigid environmental standards. The Chairman of Beef and Lamb NZ strongly encouraged waterways to be fenced off on all farms (Longbush Reserve, 2013a).

Hikurangi Forest Farms also bowed to pressure and was certified by the Forest Stewardship Council in 2005 (Hikurangi Forest Farms, 2015). Many of Gisborne's hopes are placed in forestry which has become the East Coast's greatest industry, and investments were made for the future with the construction of the new tug boat *Waimatā* which arrived in Gisborne in 2014 (Scoop News, 5th October 2014; Weir, 11th October 2013). In 2011, exports at Eastland Port (Gisborne's Port) exceeded 1.5 million tonnes. Most of this was timber, and this was at least four times greater than export volumes in 2005 (Soutar, 2012c). It is hoped that by 2016 a sustainable target of 3.1 million m^3 will be reached (Gisborne City, 2015).

Perhaps it is because of the economic benefits forestry can bring, and the financial burdens Gisborne is facing, that the restrictions on forestry are not as strict as those for other industries (Gundry, 2015). Forestry is the only industry which is not legally required to pay taxes, and the company has also breached consents since it went sustainable (Anne Salmond, pers. comm., 2015). Only once has Hikurangi Forest Farms been reprimanded, however, when they were forced to pay $70,000 because of consent breaches at Waimanu Forest in August 2012 (Gisborne District Council, 31st August 2012; 22nd April 2014). Batter slopes were steeper and forestry roads wider than guidelines stated, and earthworks directly discharged sediment and forest slash into the Pouawa River (Gisborne District Council, 31st August 2012). It seems credible that Hikurangi Forest Farms has cleaned up its act since this incident as forestry slash in the Waimatā has decreased recently. This is thought to be due to slash catchers which have been installed below plantations and between The Island and Goodwins Bridge, but also because forestry personnel clear debris from the river as soon as they become aware of such incursions (Carola Cullum, pers. comm., 2015; Gundry, 2015).

Today, although the backbone of Gisborne's economy is forestry, money is also obtained from agriculture, horticulture, viticulture, and other minor industries (City of Gisborne, 2015). When agriculture slowed, the region diversified and kiwifruit and grapevines were planted on the banks of the river, and companies such as Waimatā Cheese were created (Soutar, 2012c; The Gisborne Herald, 2005). The biggest concern today is population growth as it appears that Gisborne's population has decreased in the last five years or so. This presents problems for the already cash-strapped council, the business sector, and the wider community (Gisborne Herald, 16th October 2013). Gisborne's ideal population size would be 50,000 people as the city's infrastructure can support this, but the lack of jobs in the region (as forestry jobs are going to external interests) means that people in the region are not supported (Anne Salmond, pers. comm., 2015; Gisborne Herald, 16th October 2013). This is making the Gisborne District Council even more cash-strapped, and is not contributing to good decisions about environmental futures (Amber Dunn, pers. comm., 2015). Large sums of money are spent investigating controversial schemes which are never likely to be completed such as the Taruheru River weir, or schemes that have been planned for but have not gone ahead such as the Mander Road landfill or the Wainui/Okitu wastewater project (Gisborne Herald, 4th November 2014; Gisborne District Council, 2008). As a result of this activity the council does not have enough money for pressing infrastructure needs such as broken pipelines. If pipelines were fixed, there would be no need for sewage overflow points at the Waimatā River mouth (Amber Dunn, pers. comm., 2015; Gundry, 2015).

SOCIAL PERSPECTIVES BY ATTITUDE

1. SETTLEMENT BOUNDARY

People relate to the Waimatā River in part as a settlement boundary. A line which follows the Waimatā and Tūranganui rivers is a natural border which separates Ngāti Porou to the east from the Tūranganui-ā-Kiwa tribes to the south-west, although intermarriage across this boundary was common (Gisborne District Council, N.Aa; Spedding, 2006). A large sacred rock called Te Toka-ā-Taiau (Appendix A) was also historically situated at the Tūranganui River mouth and was a marker by which to divide these Iwi boundaries, as well as boundaries between the Rongowhakaata and Ngāti Oneone tribes (Spedding, 2006). As well as dividing Iwi boundaries, this rock was also a noted anchor site for waka which had made landfall here previously, and was also the first formal meeting site of Māori and Pākehā on Captain Cook's arrival in 1769. Here, Captain Cook, with his marines and Tupaia, the high priest navigator from Ra'iatea who had joined the *Endeavour* in Tahiti, met with different local groups around the banks of the Tūranganui (Spedding, 2006). In 1877, the Marine Department arranged for this rock to be blown up by the Gisborne Harbour Board at a cost of £200 so that trade ships had easy access into Gisborne port (Spedding, 2006).

Between 1865 and 1890, the crown sold large areas of land in the Waimatā Catchment (particularly in the lower, more accessible reaches) in allotments to settlers (Figure 2). This was driven by the growing numbers of European settlers in the district and the need for suitable land for housing and to make a living (Gundry, 2014). During this time, the Waimatā River and its tributaries were important for two reasons. Firstly, the river provided a useful natural boundary around which the crown could divide some of the land into settlement blocks (Gundry, 2014). For example, the initial 30,000 acre Whataupoko Block (Figure 3) was bordered to the east by the Waimatā River, to the south by the Taruheru River, and then to the west and north by a line which extended from the Taruheru northwards and from Gray's Bush eastwards to where the Waimatā River bends (Tombleson, 2002). Secondly, settlement blocks were named by the landforms that surrounded or ran through them, such as watercourses or hills of particular interest. The Waimatā Block, for instance, was named by the Waimatā River and the Otonga Block for Otonga Hill (see page 14 for this location) (Tombleson, 2002). This trend has continued over time with subdivision; smaller, subdivided blocks of land have been renamed after features within the newly divided sections (Tombleson, 1997). For instance, when the Te Pahi block was subdivided, part of it retained its name, while the rest was renamed Tunaiti (Tombleson, 1997). Subdivision has always occurred around the Waimatā River and its tributaries, as some people believe that the river is a natural entity which does not belong to anyone. This is the current position of the New Zealand government, with the Prime Minister John Key stating in September 2012 that "the government has a very clear position; it believes no one owns water, [although] it does believe that on a case by case basis certain Māori may have rights and interests" (Watkins, 14th September 2012).

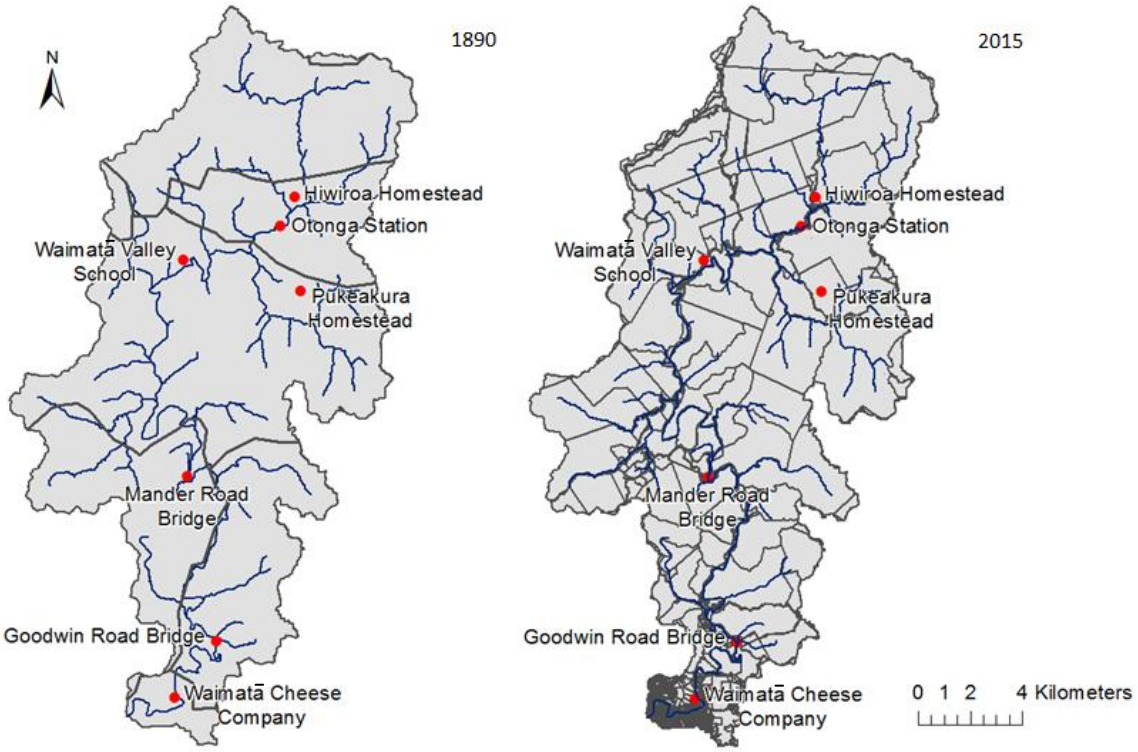


Figure 2. Residence boundaries in the Waimatā Catchment in 1890 and 2015 (Author's own creation, 2015). Data for 1890 was obtained from Figure 4 in Daly (1997) while information for 2015 was acquired from Gisborne District Council's Property Search database (Tairāwhiti Maps).

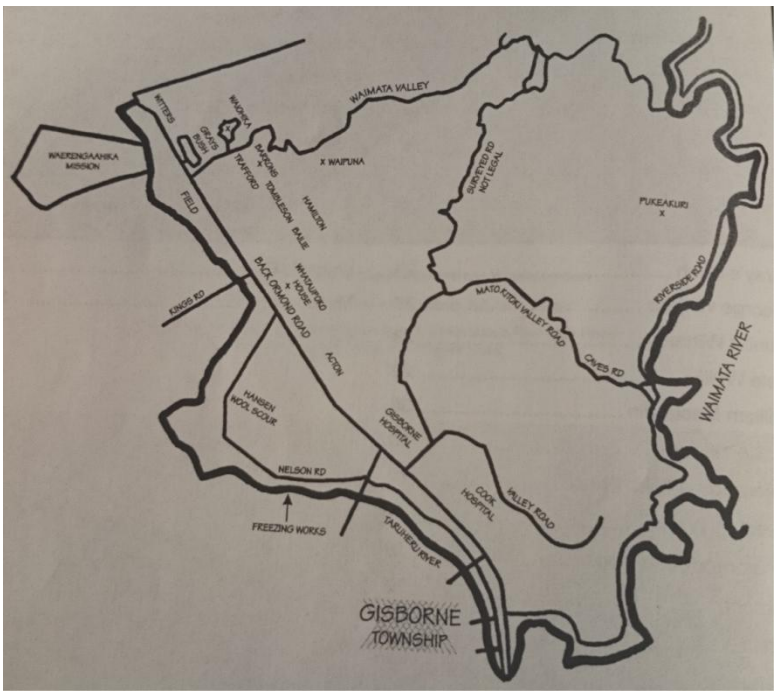


Figure 3. Whataupoko Block is bounded by Gisborne's waterways (Tombleson, 2002).

2. WAI MĀORI: MĀORI CULTURAL, SPIRITUAL, AND TRADITIONAL VALUES

The Waimatā River is special to local Māori as it is an entity to be valued, treasured, and respected, and is inseparable from themselves and their ancestors (Nga Iwi o Tūranga, 2014). This makes the river part of the identity of Māori who have lived near the Waimatā River and the phrase "ko au te awa, ko te awa te au" (I am the river and the river is me) is very applicable (Gisborne District Council, N.Aa). This includes the Ngāti Porou, Rongowhakaata, Te Aitanga-ā-Māhaki and Te Aitanga-ā-Hauiti tribes who have occupied and utilised the land on the banks of the Waimatā River for many generations (Gisborne District Council, N.Aa; Spedding, 2006). For Rongowhakaata, the Waimatā River is significant because it represents the relationship between gods and present generations, it strengthens identity, and whakapapa, waiata, korero, and mahi toi can be upheld. The mauri, mana (custodian or kaitiakitanga responsibilities), and tapu (sacredness of the relationship between people and water) of the Waimatā River signify the spirit which connects the physical and spiritual elements of all things and produces and sustains all life forms. Every natural entity also has its own life force and all life forms are interrelated (Rongowhakaata Iwi, N.Aa).

The Waimatā River was named so because its waters were obsidian in colour and dark in character and mood (Rongowhakaata Iwi, N.Aa). People from the Rongowhakaata tipuna tribe had (and still have) an immense understanding of traditional tracks, good sites for collecting kai, rongoa māori, and other taonga, ways of using goods from the river, the association between people and the land and their reliance on it, and Tikanga for the most appropriate and sustainable use of goods (Rongowhakaata, Iwi, N.Aa). Growing up, the river was also a playground for children who would run away from their families and spend the day hiding in the bush which together with the river provided a self-sustaining source of water and food, including fish (mullet), tuna (eels), inanga (whitebait), freshwater shellfish, birds and berries (Gisborne Hui, pers. comm., 2015; Gundry, 2015). It was so enjoyable that children would submit to the consequences when they returned home (Gisborne Hui, pers. comm., 2015). Since then, land and waterways have degraded relatively quickly and settlement patterns have changed to the detriment of Māori households. Māori are connected to this river and their health is dependent on the health of their environment. This is significant even though few Māori families today live on the banks of the river as they instead live on the banks of the Taruheru (Anne Salmond, pers. comm., 2015; Nga Iwi o Tūranga, 2014). Māori are in a sense disconnected from the Waimatā River as they are no longer able to collect kai and good quality water is scarce (Nga Iwi o Tūranga, 2014). Generations of Māori are therefore changing; people cannot manaaki and tiaki their taonga and only memories and stories can be passed onto children as they cannot experience for themselves the restoration of kai beds, the collection of kai, or learn their whakapapa, karakia, histories, and waiata (Nga Iwi o Tūranga, 2014).

At a Hui held in Gisborne in 2014, Māori were encouraged to speak up and share their perspectives on the health of all the rivers in the Gisborne District. A thread that arose was that Māori wanted to be able to access drinking water (of both good quality and of abundant volumes) as a historical right, but that this was not possible as this resource no longer exists. It was argued that this is particularly evident on the Poverty Bay flats where cropping, irrigation, and developments have drained the aquifers due to no limits on allowable take or considerations given to long-term sustainability. As a result, the resource has suffered and is no longer magnificent but instead negatively affects the surrounding land and severs the linkages or connections or enjoyment that people have with their waterways. This is disappointing for Māori who consider wai māori to be blue gold and a taonga, and for Māori themselves to be carers of this resource. Because of this, it was incredible when it was remarked that the state of rivers is indicative of the connection people have with them: broken, suffering, and a poor rendition of what it once was. For the

people at the Hui there was a clear answer to this: “if we take care of the awa, the awa will take care of us” (Nga Iwi o Tūranga, 2014).

Another thread that arose at a Hui was that people were concerned for their health and wellbeing when in or on the rivers, and the ability of the rivers to support shellfish and eel populations. It was noted that people used to enjoy swimming in the rivers, but today shallow channel depths means that only wading is possible. The fact that rivers are also being knowingly polluted is also disappointing for people as habitats are degraded and although calls are being made for pollution to stop, individuals feel that their views are not being heeded (Nga Iwi o Tūranga, 2014). Therefore, there is a real disconnect in relationships between Māori stakeholders in the Waimatā and other rivers in Poverty Bay. Views are strongly felt despite few Māori households living on the banks of the Waimatā River, inhabited by the exuberant costs of riverside properties, especially near the city centre (Anne Salmond, pers. comm., 2015). In 2014, these properties had an average capital value of $248,400, while the Waimatā suburbs of Inner Kaiti, Outer Kaiti, and Whataupoko reached $250,100, $162,700, and $309,300 respectively (Gisborne District Council, 2014b).

The Waimatā River is also rich in historical heritage for Māori. The Rongowhakaata whanui tribe record that Rukupo (a descendant of Te Kaapa of Ngāi Tawhiri and Whānau a Iwi) was killed by raiders seeking the Bay of Plenty’s prized obsidian and in the aftermath, the Nga Waiweherua tribe escaped up the Waimatā River to Motukeo in search of safety (Rongowhakaata Iwi, N.Aa). This tribe also records that heads were threateningly suspended over the confluence of the Tūranganui, Taruheru, and Waimatā rivers at Whataupoko, before they were taken down and buried in caves elsewhere (Rongowhakaata Iwi, N.Aa). In addition, Tūranganui-ā-Kiwa tribes trace their descent from Maui-tikitiki-a-Taranga, the ancestor Toi, and from three Hawaiki migrant groups (Salmond, 1991). Tradition states that Maui-tikitiki-a-Taranga fished up New Zealand’s North Island and during this event his waka *Nukutaimemeha* was stranded on the peak of Mount Hikurangi, where it remains until this day (Buck, 1950). Descendants of Maui then settled in the North Island, particularly around the Raukumara Ranges on the East Coast. The ancestor Toi is sometimes mentioned as the earliest individual here before the arrival of migrants from Hawaiki, or as a direct descendant of Maui (Spedding, 2006).

When Captain Cook arrived in 1769, Te Maro of the Ngāti Rakai tribe (the present-day Ngāti Oneone tribe) was shot and killed by one of Captain Cook’s men. Te Maro was from the Rarohou Pā, which at that time was situated on the land surrounding the Waimatā River, approximately 3 km upstream and close to the present-day Hole-in-the-wall (Figure 4) (Smiler, as cited in Spedding, 2006). For many others, the Waimatā River also holds historical connections through the heritage structures which were present on the land surrounding the river. On the 17th of February 1882 an old Māori hut was noticed by a journalist on the flat near a river crossing where the Veitch’s lived. It had been built three metres above the ground because of flooding. An adze, ‘digout’, and some trenches were also present which was special as these were rare indicators of past Māori history (Tombleson, 2002). In addition, a small unfortified village can be found within the Longbush Reserve, on Pā Hill. The location of this village appears to have been well placed as there are views up and down the Waimatā Catchment. At the summit and in one of the terraced spurs kūmara or potato pits are inset into the ground (Longbush Reserve, 2013a).

3. HISTORICAL

Upon European settlement, it was the land blocks in the lower reaches of the Waimata River which were the first to be sold presumable because they were easier to access, had a good water supply, and had fertile soils (Gundry, 2015). Settlers constructed Māori whares (made of nikau fronds, mud, and timber) on many newly acquired properties and these provided reasonably quick shelter (Figure 4). In many cases these were pulled down when grander European style houses were built, to keep land clear for gardens, trees, or agriculture, but they told a story of settlers who came to live in and love this region (Tombleson, 1997). On the Te Pahi block in 1881 the Kenway brothers built a whare, and there was a whare on the Monowai block which the Savages owned and where their worker, Ken Wood, kept all his personal effects. He re-built the whare after it was destroyed by fire and it was still in use by 1997 (Tombleson, 1997). Other examples of whare included Otonga which was built by John Tombleson, Makiri which was built by C Field (Appendix A), and Glenroy which was built by Walter and Richard Barker (Tombleson, 1997; 2002).

For European settlers, the Waimatā River also holds many historical stories. In an 1894 storm the owners of a Māori whare below Linburn took refuge in an old shed after their whare was carried away by floodwaters, and in 1902 William Young and his new wife were nearly carried away by rapidly rising waters but escaped from their buggy just in time (Gundry, 2015). In the 1927 flood, the residents of a small whare near Thomas Holden's property also escaped just before water tore down the roof edge (Gundry, 2015). Furthermore, Jack and Myra Stevens, who lived at McDonald's crossing, were awakened one night in 1930 by their dogs barking. Stepping out of bed, Jack found the house flooded and so the family took shelter on a neighbour's property. Returning the next day they found the bridge washed out, the dog kennels missing, and the house the wrong way round (Tombleson, 1997). Gundry (2015) richly documents other such incidents which tell a story of early hardships and how settlers had to learn to live with the river and its actions.

Today, many European houses or buildings along the Waimatā River are considered to be historically significant. These are all located in the lower portion of the Waimatā and are historically significant because of their age or the activities that have taken place (Figure 4). In 2006, Gisborne District Council named many Waimatā houses as residential protection zone sites. In fact, out of 23 Gisborne sites registered by the Historic Places Trust, 13 were in the Waimatā (25B Fitzherbert Street, 36 Haronga Road, 78, 227, 233, and 234 Harris Street, 25 Hinaki Street (the Ulverstone reception rooms), 9 Magnolia Street (Heatherlea), 7 (the Crippled Children's Society Building) and 11 Ormond Road, 16 and 72 Russell Street, and 32 Score Road). Fifteen homes in the Waimatā were also noted as being sites of local significance because of amenity, historical, and architectural reasons (Gisborne District Council, 2006).

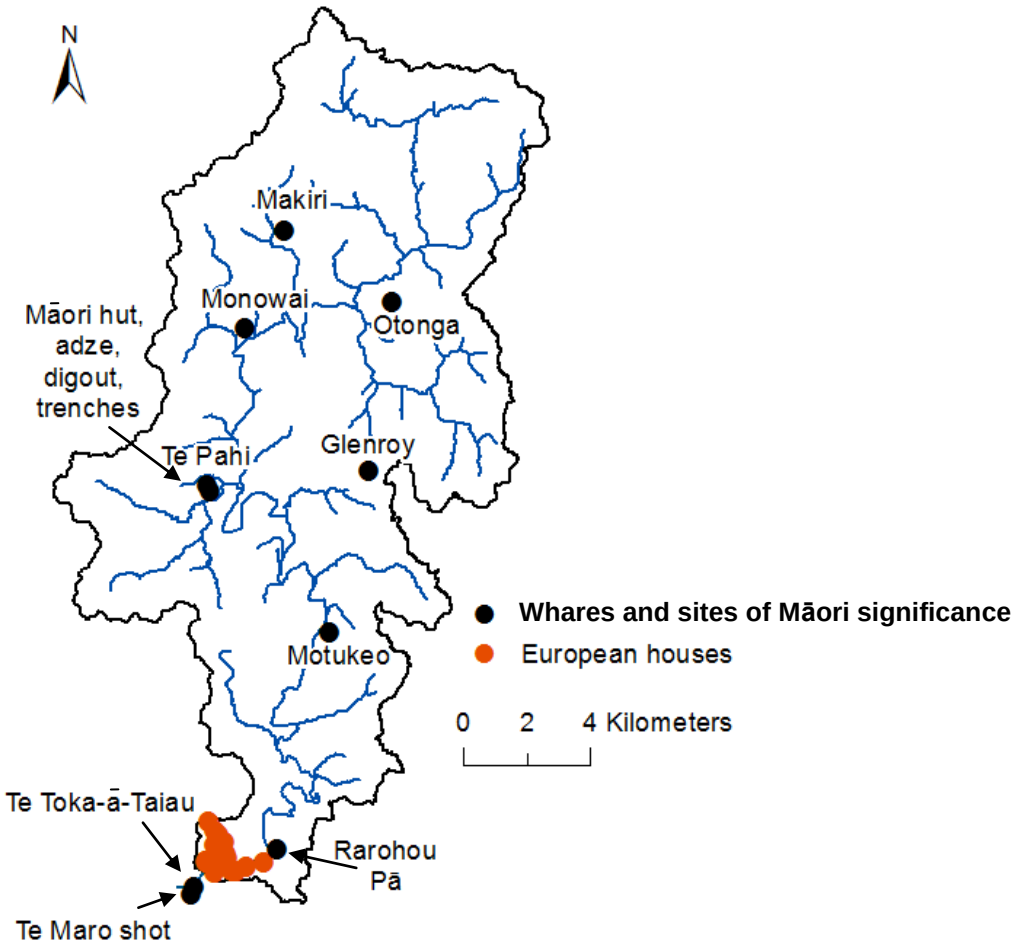


Figure 4. Places in the Waimatā which are significant to both Māori and Pākehā. Locations of sites obtained from Gisborne District Council (2006), Spedding (2006), and Tombleson (1997).

4. UTILITARIAN USES

Rivers are typically exploited and taken for granted by multiple stakeholders and interests as they are treated as machines there to serve or as functional resources. This philosophy aligns with the concept of ecosystem services where the river is thought to provide provisioning services (e.g. food, water, and energy) solely for the purpose of benefiting people and communities and yielding welfare and economic benefits to society (Daily, 1997; Millennium Ecosystem Assessment, 2005). This way of viewing a river is contested; Streenstra (2010, p. 4) argued that "the application of monetary reductionism to cultural and non-monetary aspects of water is arbitrary and the emphasis of economics on markets and prices is naive and simplistic". Despite this, the concept of ecosystem services has been around for many decades and echoes an infamous statement made in 1929 by Joseph Stalin who stated that "water which is allowed to enter the sea is wasted" (Pearce, 1992). Thankfully, today it is increasingly recognised that an economic or utilitarian view of the river is just one part of the puzzle, and needs to be considered alongside other attitudes and uses of the river. In relation to the Whanganui River, Šunde (2008, p. 353) stated that "resource management and utilitarian views of water in New Zealand (and other countries) have been dominated by the reductionist approach. However, from an ecological perspective, reductionist explanations are inadequate because the Whanganui River is not simply a collection of parts...but is a complex system, and indeed, a living whole" (Šunde, 2008, p. 353).

Just like global river systems, the Waimatā River and its tributaries have always been used for practical purposes, although the manner in which and by whom has changed with time. In the early days people had

little choice and the river was used out of necessity as a relatively safe and fast mode of transport. The waka *Horouta* and *Tākitimu* arrived in Gisborne from Hawaiki c. 1300 AD (Spedding, 2006; Tairāwhiti Tours, 2015). From this time until the 1800's, the Waimatā River was used by Tangata Whenua as a way to travel to many places along the river banks and along and into the fertile soils of Tūranganui-ā-Kiwa (Rongowhakaata, Iwi, N.Ab). The river was used as there were no proper roads and waka passage was one of the only modes of transport within the catchment (Tombleson, 1997). The early Māori also journeyed frequently from Whangara to Gisborne and Ormond, and used a trail that went north to Tolaga Bay and then through Panikau, Waimatā, and Riverside Road (Tombleson, 1997). During inter-tribal fighting from 1700 to 1800, according to some sources, warriors from the Te Aitanga-ā-Māhaki tribe attempted to take control of the coastal Ngāti Rakai stronghold (Clapham, N.A). They travelled via a backdoor route from Whatatutu, journeyed down the Waimatā River, and then crossed the coastal foothills to Okitu by traversing through the Te Rimu and Hamanatua streams (Clapham, N.A).

By late 1831, many European settlers had arrived in the Gisborne region and Rongowhakaata had given permission for European trading and whaling stations to be established on the Tūranganui River (Rongowhakaata Iwi, N.Ab). John Harris set up the first trading station in 1831 on the western side of the Tūranganui River (near Waikanae Creek), and in 1837, he built a whaling station on the eastern side of the Tūranganui River (Gisborne District Council, N.Aa; Spedding, 2006). By 1851 there were eight traders in Poverty Bay, but trading stations continued to be established, with one built by George Edward Read in 1952 on the Kaiti side of the Tūranganui River, near the confluence of the Waimatā and Taruheru rivers (Spedding, 2006). Although the Tūranganui River was the base for this bustling trading initiative, sailing vessels travelled from the Tūranganui River mouth through Nga Wai Wehe Rua land and up the Waimatā and Taruheru rivers where goods were sold or purchased (Rongowhakaata Iwi, N.Ab; Spedding, 2006).

Furthermore, up until 1870, the dust in Gisborne was unbearable and made it almost impossible to travel in a northwester. After the formation of the Borough Council in 1870, a decision was made to reduce the dust. Punts were constructed and towed up to The Island on the Waimatā River where they were loaded up with papa rock. This was later brought back to Gisborne and used to pave a section of Gladstone Road, from the Post Office to Grey Street (Mackay, 1949). The river proved to be a plentiful source of construction materials in later days where harder rock was blasted using gelignite which was activated by a detonator and safety fuse, or was sourced by hand, carried out in wagons, and crushed into metal with a knapping hammer (Tombleson, 1997). Individual rocks were also found and taken back to residences as keepsakes. This occurred at Otonga where Val Byrne proudly displayed a large boulder 1.5 m in diameter and a small rock which looked like a small terrier dog (Tombleson, 1997).

From 1890 to 1920 the meat and wool boom hit and there was tremendous pressure for the growth of more economically viable agriculture in the Waimatā Catchment (Gundry, 2015; Tairāwhiti Tours, 2015). Native forest and scrub was rapidly felled, first with slash techniques and then with forest fires which provided high fertility to soils through ash (Gundry, 2015). Although it is not recorded, it is likely that the river was used as a conveyor belt to transport trees from the cleared headwaters to Gisborne downstream. Pastoral land grew quickly due to favourable growing conditions and stock was purchased (Appendix A) (Gundry, 2015). Several freezing works were built in response to the considerable volumes of meat that was being produced on local farms; in 1888 Nelson Brother's Works at Taruheru was constructed and eight years later the Kaiti Freezing works was opened (Soutar, 2012e). This placed more pressure on agriculture in the Waimatā Catchment and stock numbers were intensified on many farms so that property owners could reap greater economic benefits (Table 1). Gisborne port was soon a hive of activity and in 1914 the

town had the best export values per capita in New Zealand (Spedding, 2006). These exports helped to develop the town of Gisborne (Tairāwhiti Tours, 2015).

Table 1. Stock numbers on Waimatā Valley Blocks from 1884 to 1890 (Tombleson, 1997).

PROPERTY BLOCK	PROPERTY OWNER	YEAR				
		1884	**1887**	**1888**	**1889**	**1890**
Glenora	La Delli	509	700	1153	1500	1800
Te Pahi	Kenway Bros	216	1,630	1730	2035	2625
Waimiro	McNair	400	1300	1400	1600	1900
Horoeka	Grayson T H		248	255	356	375
Kahui	Partridge		870	1000	1150	1400
	Richardson WT & Son		153	250	395	547
Linburn	Dods		1720	2100	2060	406
	Noperakiri			300	389	
Otonga	Tombleson			150	587	1370
	Snow				184	
Te Matai	Field & Akroyd					900
	Richardson PJ					228
	Richardson William					57

During this time, the Waimatā River was still perceived to be the most convenient transport route by which to carry goods and move between locations, as roads were few and Poverty Bay was difficult of access (Gundry, 2015). Before there were roads, resident Charles De Thierry used a large boat to ship wool from the Waimatā and Pouawa districts to the downstream wharf until his death in 1913 (Poverty Bay Herald, 25th January 1913). Stock were also transported across the river at multiple locations where there were no bridges present or where it proved to be too arduous a task to persuade stock to cross at bridges. This earlier case was evident at the Maka-weka block, north of the Waimatā River, where there was no woolshed and so sheep were shorn on Mander's property across the river (Tombleson, 1997). The latter case occurred at the cab stand where a wooden bridge was present. Despite the considerable depth of the ford near the bridge after rain, stock still crossed the river via the ford. They could not be convinced to use the bridge due to the hollow sound it made, creating the impression of dangerous ground (Tombleson, 1997). As agriculture established in the Waimatā Catchment, it is also likely that the river became a free water supply for crops and a watering hole for sheep and cattle as few fences separated stock from this permanent water source. This is evident by the Chairman of Sheep and Beef NZ only recently urging people to fence their waterways (Longbush Reserve, 2013a). During the agricultural boom it appears that the attitude towards rivers was skewed towards economic prosperity as few concerns were recorded about the backlash this deforestation and agricultural activity would have on river health or morphology.

Agriculture continued even after the meat and wool boom ceased. In 1923 Henry Hegarty and son William bought Waikereru because the large quantity of water attracted the family who had previously worked on a farm in Western Australia (Tombleson, 1997). At Makiri in the 1920's or 1930's water from a tributary of the Waimatā River was raised 60 metres by a hydraulic ram and then channelled to the homestead by gravity (Tombleson, 1997). Furthermore, at the Strathendrick property (Appendix A), water was also hand-pumped from a nearby tributary, and at Te Pahi after 1880 the Kenway brothers used a windmill to pump water (Tombleson, 1997).

Just before the meat and wool boom began, investigations were also made into the possibility of using the Waimatā River as a large-scale domestic water supply (Poverty Bay Herald, 25th May 1882). Sourcing water from the Waimatā River has always been controversial and in January 1879 engineer Mr Black stated that "I am of [the] opinion...that it is not practical to obtain a good supply from the Waimatā River" (Poverty Bay Herald, 26th October 1907). Several times in subsequent years this was proved to be true. Investigations began in February 1879 when, despite his earlier statement, Mr Black acknowledged that there were two locations on the Waimatā River from which water could be pumped. The preferred site was 0.8 km upstream of The Island and pumping water here was estimated at £12,739. Another site was also mentioned which was 2.4 km from Gisborne town and would cost £15,395 (Poverty Bay Herald, 26th October 1907).

In 1882, more serious investigations began and it was proposed that a weir could be constructed 1.2 km above the confluence of the Taruheru and Waimatā rivers. As part of the scheme it was proposed that a water storage reservoir spanning 30.5 m x 30.5 m x 6.1 m would also be built on the northern bank of the river. This would hold 4,921 m^3 of water which could supply 2,000 people for 20 days with an allocation of 0.1 m^3 per day/person (Poverty Bay Herald, 25th May 1882). A windmill, overshot, or turbine wheel (the favoured method) would power the reservoir. The whole scheme was estimated to cost £13,490 (Poverty Bay Herald, 25th May 1882). The scheme was dismissed for two reasons: 1) it was thought that a dam or weir would cause siltation and therefore scouring of the river due to the tidal build up behind the structure, and 2) separating freshwater from saltwater would be difficult (Poverty Bay Herald, 25th May 1882).

In 1902 and 1903, it became clear that the rapidly growing Gisborne town, the suburbs of Whataupoko and Kaiti, and the freezing works were in need of better water and drainage systems. Those in particular need were the residents in the suburbs of Whataupoko who required more water than the town since mothers and children spent most of their day here and many people resided in these areas (Poverty Bay Herald, 30th May 1903). A sub-committee appointed by the Whataupoko Road Board was charged with determining the best water source, and for two years they considered the possibility of obtaining water from the Waimatā River, at a cost of £15,077 (Poverty Bay Herald, 30th May 1903; 26th October 1907). It was proposed that water would be pumped from above the Hole-in-the-wall where the river was not influenced by salt water intrusions (Poverty Bay Herald, 30th May 1903). At the time, the sub-committee were "satisfied that there is water in abundance to be obtained at all seasons of the year from the Waimatā River, both for domestic as well as for power purposes, sufficient to supply, not only the suburbs, but also the town of Gisborne for all times" (Poverty Bay Herald, 30th May 1903). The sub-committee also felt that there was no need to fear the water quality as impurities could be removed through filtration. To alleviate the effects of mud contamination water could also be pumped from a well beside the river in normal conditions and from a storage reservoir (previously filled with water pumped from the well) in flood events. This reservoir could be located on the hill near the top of Fox Street or on the hill behind Mr Simson's property where there was a trig station (Poverty Bay Herald, 30th May 1903). Others questioned the water quality, remarking that the land surrounding the Waimatā River was becoming densely populated with people and stock and pollution was inevitable. In addition, arguments were made about the high silt load and susceptibility to flooding (Poverty Bay Herald, 14th January 1902).

It was not until 65 odd years later that the Waimatā was again investigated, this time as a full water source for the suburbs of Wainui and Okitu and as a complementary source for Gisborne city (Gundry, 2015). Final investigations to date appear to have occurred in 1982 when the East Cape Catchment Board explored the use of Waimatā water for Wainui Beach and for Gisborne's urban centre (Turnpenny, 1982).

By the mid 1950's some parts of the Waimatā Catchment were still difficult to access. This was true for the Kowhai block where there were three river crossings in the last 1.5 km from which silt had to be removed after every fresh (Tombleson, 1997). Totara station was also still difficult to access and was located where the Waimatā River, Pakarae River, and Waiomoko Stream joined. Up until a road was built in 1926, travel into this property was by 23 creek crossings (Tombleson, 1997).

Today, this utilitarian attitude is still in play. Water is seen as a "free for all" resource which is used for irrigating agricultural and horticultural crops and is drawn from bores and aquifers for commercial and residential needs (Figure 5). Concerns in regards to ownership of the water have been apparent since settlement began, but have become particularly important in recent years as the Gisborne District Council is unable to divide up water between stakeholders (Amber Dunn, pers. comm., 2015). Despite this, people can still apply to Gisborne District Council requesting resource consents to be granted for water extraction. In August 2013, Mr and Mrs Griffen, who own the 17.8 hectare property at 74 Goodwin Road, were granted a water permit enabling extraction of up to 750 m^3 of water/day at a maximum rate of 18 L/s for irrigation purposes (Gisborne District Council, 2013). Likewise, industry users Cedenco and Leaderbrand have consents to use water in the Poverty Bay aquifers at the base of the Waimatā Catchment, but their take is not monitored. This has caused controversy as water in these aquifers has declined due to excessive use (Nga Iwi o Tūranga, 2014). In January 2014, emotions also erupted when the general public were begged to conserve as much water as possible after a landside at Waingake severed Gisborne city's main water pipe (The New Zealand Herald, 13th January 2014). Billboards lined the streets with messages such as "Conserve water. Cedenco needs it!" (Brad Coombes, pers. comm., 2015), and people were required to use 33% less water than usual. Lifestyles had to be modified for five days, with fewer toilet flushes and less regular use of washing machines and dishwashers (The New Zealand Herald, 14th January 2014).

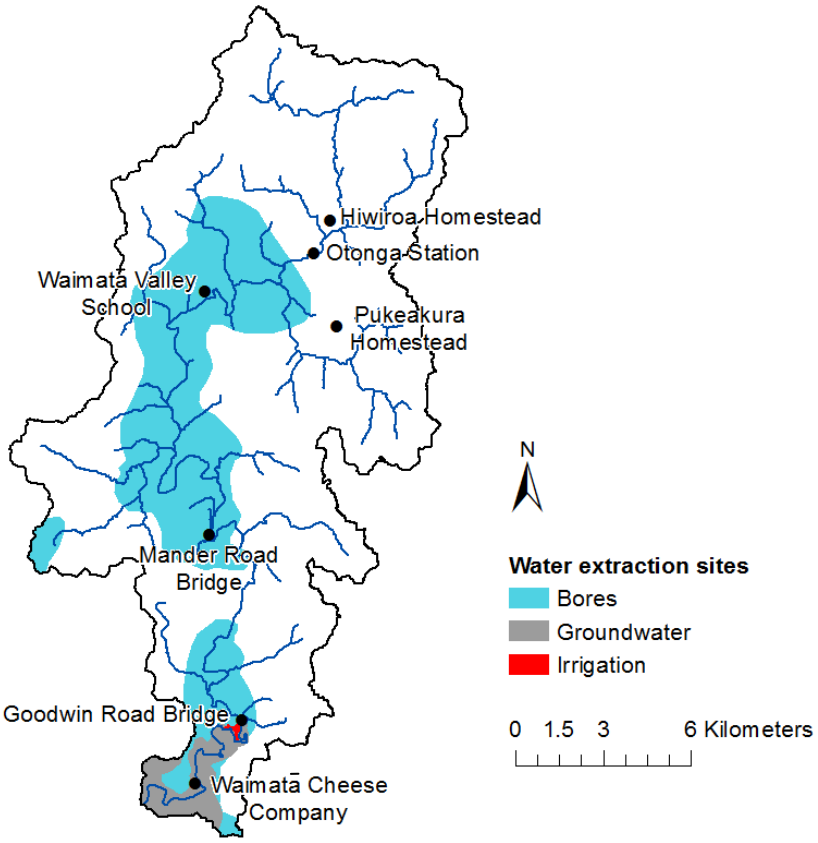


Figure 5. Water extraction sites in the Waimatā Catchment. Data sourced from Gisborne District Council's online GIS layers.

However, in contrast to its historical uses, the Waimatā River is no longer able to be used extensively as a transport route. Sedimentation issues post-deforestation have resulted in aggradation and siltation, and have modified the bank morphology, reducing the depth and width of the channel. Increased tree debris has also provided people with dangerous obstacles to negotiate (Cullum, 2015; Gundry, 2015). The navigable channel has been severely reduced and large craft cannot travel upriver as far as was historically possible. It is not known how far this was but it is likely that vessels could travel most of the distance along the Waimatā River. This is because this was true of the neighbouring Taruheru River and because goods were shipped downriver from farms in the headwaters (Tombleson, 2002). The rate of aggradation is also not known but the Taruheru River became unnavigable in the late 1930's and navigation today is restricted to the wider channel at the mouth of the Tūranganui River, as far as the confluence of the Waimatā and Taruheru rivers (Tombleson, 2002). Vessels now have to be packed and unpacked out in Poverty Bay with goods and passengers transported to and from these ships (Tombleson, 1997).

Furthermore, since the Waimatā River is heavily utilised, frustrations abound when the river is no longer able to be used. In the early days before roads were built, storm damage and flooding blocked the Waimatā River and made it dangerous to navigate river crossings, if not impassable. This isolated groups of people for several days to weeks (Gundry, 2015). Today, frustrations chiefly originate from increasing recognition that water supplies are not endless and water quality is declining. Solutions to issues are not always the best, with many short-term fixes put in place to enable people to continue using "their" river in the same way they always have (Nga Iwi o Tūranga, 2014).

5. A DUMP SITE

Some people also believe that the river is a dumpsite or a waste disposal unit. Evidently attitudes need to change, and we need to treat our rivers as taonga, not toilets (The New Zealand Herald, 21st January 2014).

Landfill

In 2001, Gisborne District Council investigated potential locations for a new landfill and they thought that a site off Mander Road, close to the Waimatā River, was ideal (Figure 6). This was because the site was of minimal ecological importance as it comprised former agricultural land which had been planted with exotic forest when the agricultural economy took a downturn. It also had poor soil drainage, polluted waterways, and six artificial farm ponds and it was argued that the proposed landfill would be over 200 metres away from the nearest point of the river (Shaw and Kusabs, 2000). This thinking was ill-considered, echoing attitudes towards the river at that time that placed little emphasis on river health. For the landfill to happen, a large lake (Figure 6) would have had to be drained which contained a large population of shortfinned eel, as well as feeding many water birds (Shaw and Kusabs, 2000). River diversion and channel works would also be necessary, which would likely further reduce the quality and quality of fisheries habitat in two tributaries of the Waimatā. Sediment-laden runoff would also be present during construction, and despite the landfill being closed in, a small amount of leachate was also expected which would add about 5 m^3 to the 65 m^3 of groundwater which flowed through the 500 m crest length of the western ridge (Shaw and Kusabs, 2000). As mitigation, a lake of the same size, or many of a smaller size, would have to be constructed within the catchment. Shortfinned eels caught before the start of construction would be rehabitated here and stream rehabilitation in the form of stock exclusion by fences and planting of native species on streambanks would be carried out. This proposed landfill was not received with open arms and emotions ran high (Shaw and Kusabs, 2000).

It was apparent that the Gisborne District Council was placing community issues before the health of the river and that it was a win/lose situation for people and their awa. Residents in Mander Road did not want to live next door, non-residents were not keen on a landfill in their backyard, and environmental engineering expert Tony Kortegast thought that the location was too risky considering its geotechnical conditions (Gundry, 2012). Even after conditional permission was granted in February 2003 (if construction had begun by the end of 2007) it still remained an uphill battle. In the September 2003 vote six councillors voted against buying the landfill site and the process still dragged on until in 2007 the council suddenly reversed its position (Gundry, 2012). This was thought to be partly due to a recyclable roadside collection which was introduced in Gisborne and heavily reduced the amount of waste (Gundry, 2012).

Sewage

Untreated human sewage and wastewater are also released into the Waimatā River or onto land and this has been occurring for decades, arousing considerable controversy. In July 1990 there were at least 13 sewage overflows into the Waimatā River, and four overflows onto land (Figure 6). One of these overflows was particularly disgusting; an overflow discharged sewage into the open Kaiti drain in Seymour Road (situated beside the Te Wharau Primary School) which flowed into the Waimatā River. This drain was visibly polluted in 1983 and tested shockingly high for faecal contamination soon after (Table 2) (Coombes, 2000). In 1987, pumping stations in the Gisborne region failed because of power cuts, and more than two million litres of sewage was released into waterways. The city engineer at the time was asked to comment on the situation but he replied "it is not worth visiting the Waimatā Road overflow counter… [K]eeping it in repair and recording the data… is a time and money wasting exercise. In our opinion it is an unnecessary drain on public funds with no commensurate benefit to public health or good government" (Coombes, 2000). This attitude was met with disgust as it was stated that "overflows contribute to gross visible pollution of watercourses and rivers [and] faecal matter is a common sight in rivers" (Coombes, 2000). Concerns have been raised about whether authorities should have ever given permission for these sewage overflows, but no-one ever saw the consents being abused as they have been. Before the mid-1980's it was accepted that sewage overflows would only be granted consent if they did not occur more than once a year on average. However, a Waiteatea Stream overflow proves otherwise: 1974, 43 discharges; 1975, 26; 1976, 18; 1977, 14; 1979, 0; 1980 and 1981, 49 (Coombes, 2000).

Table 2. Bacteriological monitoring results from the Kaiti Drain in the 1980's (Coombes, 2000).

SITE	TOTAL COLIFORMS/100 ML		FAECAL COLIFORMS/100 ML	
	MAXIMUM	MEDIAN	MAXIMUM	MEDIAN
Seymour Road footbridge	20,000	7,764	20,000	3,850
Seymour Road culvert	20,000	10,728	10,100	2,661
Marian Drive	20,000	4,672	20,000	2,205

Today, sewage is still being released in at least eight overflows at the mouth of the Waimatā River (Gundry, 2015). These are located over only 3.2 kilometres of the channel, from just below the Waimatā/Taruheru confluence, to just below The Island (Gundry, 2015) (Figure 6). Gisborne District Council argues that it is a last-option decision that occurs because of pipe problems (e.g. broken pipes, blockages) within the wastewater pipeline. The council also insists that it is safe to release sewage as the heavy flow of water down the Waimatā River means that contaminants are diluted (Gisborne Herald, 1st May 2014; 4th August 2014b). However, warnings against swimming and shellfish collection at rivers and beaches are issued after sewage discharges, warning people to stay out of the water for a period. This is because of excessive bacteria levels and high chance of illness. Sewage discharge also appears to be taking place more often

today than in the 1980's, with incidences evident during low flow events. It is possible, however, that discharge occurrences are just being better recorded (Gisborne Herald, 1st May 2014; 4th August 2014b).

Forestry

The Waimatā River has also been treated as a dump site by forestry personnel who have either neglected to acknowledge the presence of the river, or have ignored the regulations set out by the Forest Stewardship Council (FSC). In the 1960's there was recognition about the impacts of deforestation and agriculture, and pasture was left to revert to native scrub and bush, or was planted in exotic forest (Gundry, 2015). This decreased hillslope erosion by stabilising land through extensive root systems, but did nothing for the elevated silt levels which were already in the river system (Gundry, 2015). After the local forestry company Fletcher Challenge Forests was formed in 1981, it bought exotic forests on the North Island's East Coast and the forestry industry began at Waimatā (The Fletcher Trust, 2015; The New Zealand Herald, 5th July 2002). In May 1997, forests were sold to Malaysian owned Hikurangi Forest Farms (HFF) for $210 million (The New Zealand Herald, 5th July 2002). Today, HFF owns 17 forests throughout New Zealand, including four plantations in the Waimatā Catchment (Table 3; Figure 6) (Hikurangi Forest Farms, 2014).

Table 3. Exotic plantations with sections in the Waimatā Catchment (Note: other species include the Eucalyptus species, *Eucalyptus regnans,* and *Eucalyptus saligna* and the Cypress species, *Cupressus lusitanica* and *Cupressus macrocarpa*) (Hikurangi Forest Farms, 2014).

Forest	Tenure	Radiata Pine (ha)	Other Species (ha)	Total Resource Area (ha)
Okiwa	Freehold	2,400.64	17.95	2,418.59
Mangarara	Freehold	1,550.28	14.78	1,565.06
Waimanu	Freehold	1,677.99	9.03	1,687.02
Wakaroa	Freehold	1,307.02	8.75	1,315.77
Total		**6,935.93**	**50.51**	**6,986.44**

While the nature of impacts on the physical environment have changed over time, the magnitude has only increased as forestry has become one of the East Coast's greatest industries (Weir, 11th October 2013). Phil Creswell, a resident near Anzac Park for the last 25 years, believes that forest debris is more abundant in the Waimatā as a result of logging activities, and there is more destruction and greater siltation (Gundry, 2015). The Waimatā River also has a very high sediment load ("pea soup") after high flow stages. This sediment increased with clear felling in the Waimatā Catchment a few years ago, and has not yet improved. Tracks scar the ridges and many hillslopes have collapsed with road building (Appendix A). Logs are also hauled upslope to a pad; this leaves debris and often the fill collapses over time (Mike Marden, pers. comm., 2014). The issue of slash in the Waimatā River and its tributaries may be decreasing in recent years as little slash is evident and slash catchers have been installed high in the catchment. Forestry people also seem to clear debris fast if full location details are provided (Carola Cullum, pers. comm., 2015).

Mr Creswell also firmly believes that while logging is economically beneficial, the restrictions put in place for logging are much more lenient than agriculture, and this has played its part in magnifying impacts (Gundry, 2015). This is a political issue as forestry is the only industry that is not required to pay taxes. In addition, since HFF began operations in the district, it has breached Resource Management Act consents (Anne Salmond, pers. comm., 2015). This is despite certification by FSC in August 2005 which requires HFF to produce sustainable timber exports (Hikurangi Forest Farms, 2015). On only one occasion HFF has been required to pay, and this was regarding a breach at the Waimanu plantation in August 2012. Here,

harvesting activities, waste disposal, and road construction were incorrectly carried out. Batter slopes were steeper and forestry roads wider than guidelines stated and earthworks directly discharged sediment and forest slash into the Pouawa River (Gisborne District Council, 31st August 2012). This latter issue is likely due to the required 10% pest and weed controlled native bush and 10 metre riparian buffers not being recognised, as stated in the consent process (Salmond, 2012). Pouawa River's water quality was degraded, particularly in subsequent storm events and HFF was order to pay $70,000 to Gisborne District Council in 2014, for the purpose of enhancing water quality and riparian buffers around the Pouawa River (Gisborne District Council, 31st August 2012; 22nd April 2014). Although some of the destruction was irreversible, the fee was not more since Gisborne District Council recognised that HFF had exhaustedly attempted to remedy the damage. Between 2012 and 2014, Hikurangi Forest Farms had also put in place several new measures to prevent the same damage from occurring again (Gisborne District Council, 22nd April 2014).

Although accidental, mitigation of forestry impacts has also meant that the Waimatā has been used as a dump site by well-meaning citizens and council personnel. Residents have seen the opportunity to help reduce erosion and have planted individual trees along the banks of the Waimatā River. Other trees have self-seeded or been planted in tree programs by Gisborne District Council (Gisborne District Council, N.Ab) (Appendix A). Results have been damaging as exotic species such as willows and poplars, or native species such as manuka, are unable to grow large enough before they overload unstable banks and fall into the river. This is especially evident along Cave and Goodwin roads (Gundry, 2015). As a result, logs and large sections of trees are washed down the river and deposited behind bridges (e.g. Gladstone, William Pettie) or on Gisborne beaches (Waikanae, Midway), particularly during storm events (Gundry, 2015). This has cost the Gisborne District Council significant expenditure to fix (Gisborne District Council, N.Ab). Evidently, the only way to reduce forestry impacts is to tighten regulations at the source, rather than to mitigate the impacts. This is vital as it is likely that the logging industry is only expected to grow with the arrival of the new tug boat *Waimatā* in Gisborne in October 2014 (Scoop News, 5th October 2014).

Farming

Farmers also viewed the Waimatā River in much the same way as Gisborne District Council does today, as a dump site which allows the dilution of contaminants. When agriculture began in the Waimatā Catchment in 1880, woolsheds were built on flat land close to the river and its tributaries (Tombleson, 1997). At Makiri, a woolshed was built after 1928 which catered for large herds of sheep. Next to this was an 18 m swim dip and a killing house which was constructed on stringers over a tributary of the Waimatā River, so that waste was rapidly removed (Tombleson, 1997) (Figure x). Sheep dip was also directly released into the Waimatā River and proved harmful to the aquatic wildlife since dead whitebait were once seen floating on the surface of the river (Gundry, 2015). Sheep dip was discontinued in the late 1900's (Gundry, 2015). Today, external pressures are changing; global agricultural markets demand that goods are sustainably produced and conform to high environmental standards. The Chairman of Beef and Lamb NZ, for instance, strongly encouraged waterways to be fenced off on farms (Longbush Reserve, 2013a).

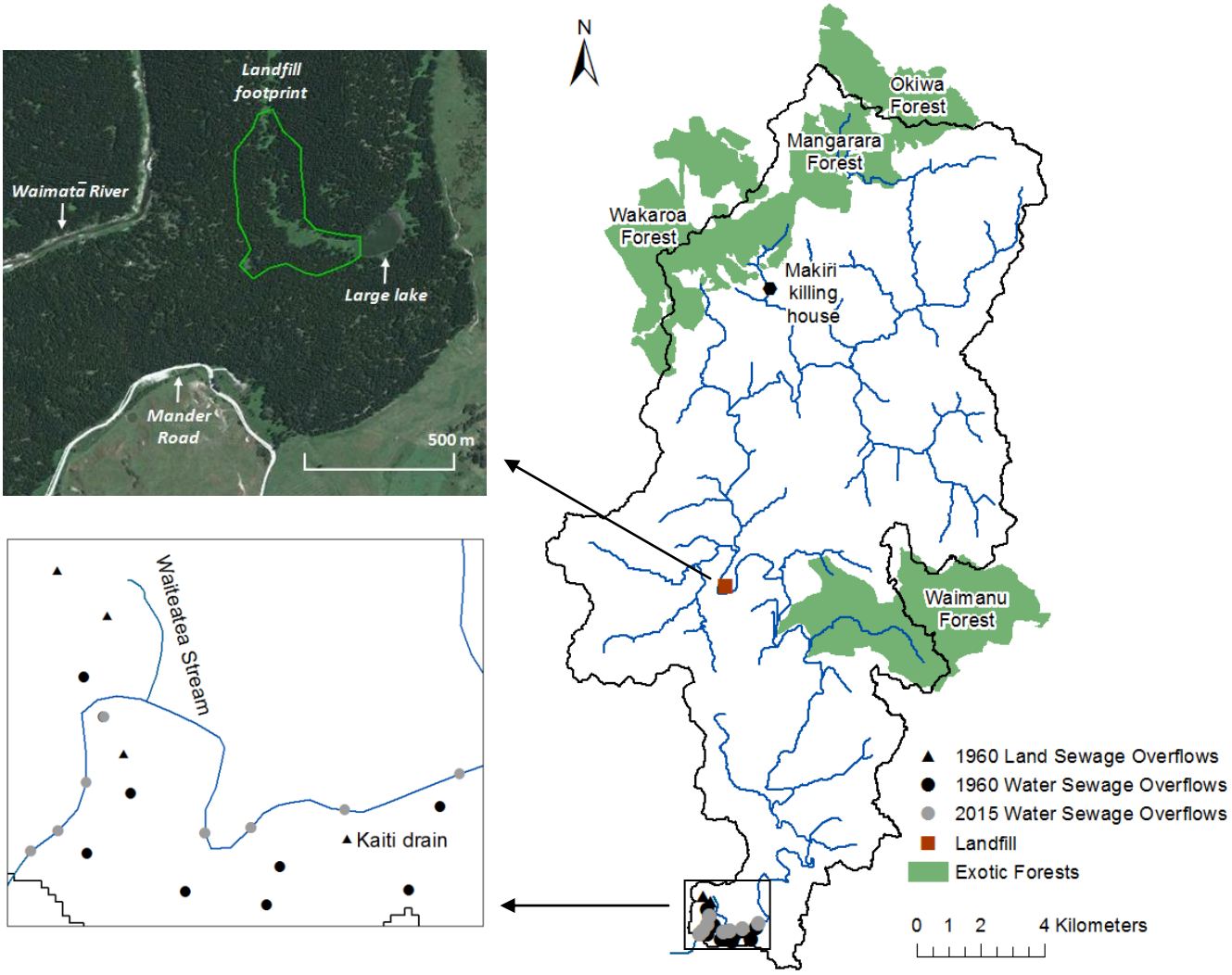


Figure 6. Forestry plantations, sewage overflows, and the designated landfill site in the Waimatā Catchment. Data was sourced from Coombes (2000), Pattle (2001), Gundry (2015), and an exotic forestry GIS layer from the Ministry of Primary Industries.

6. AMENITY VALUES

Beautiful aesthetic values are very important to people as they contribute to a person's identity and health, as well as allowing people to appreciate nature and enjoy being beside the river (Hillman *et al.*, 2008). In the Waimatā Catchment, the government divided large blocks of land into smaller 1,000 acre blocks after 1890, each with large portions of river frontage (Gundry, 2015). This was likely completed because it was thought that properties with stunning scenic views would reach higher prices and be purchased more rapidly, as well as provide people with enjoyment of their surroundings. Many properties were purchased and whares, houses, and woolsheds built on flatter land near to and with good views of the river (Tombleson, 1997). On the land block aptly named "waterfall", a house was constructed close to the Waimatā River so that the owners had a gorgeous view of the waterfall (see page 35). This was particularly spectacular after intense rainfall and flowed over papa, small rocks of limestone, and many iron pyrites or "fools' gold". A 15 acre forest of kahikatea, matai, pines, rimu, tawa, and totara made the area beside the waterfall particularly beautiful (Tombleson, 1997).

This attitude of enjoyment has continued throughout time. On 31st March 1955, Gisborne Photo News stated that

> *Rural charm... is not to be found in close proximity to every town. Gisborne is fortunate in the wealth of scenery with which the visitor's eye can be bewitched, often only a mile or two from the heart of the borough. These views, taken only a chain apart on Darwin Road, a short distance from the end of De Lautour Road, show the Waimatā River, looking down towards Gisborne. In the right photo, a sheltered farm house enjoys this panorama* (Gisborne Photo News, 31st March 1955) (Appendix A).

The Morris Convalescent Home was also opened in May 1960 on a site off Cheeseman Road, on the eastern bank of the Waimatā River. This location was chosen for its stunning scenic views along the river, as it was thought that the pleasant and peaceful environment would enhance the recovery of patients who had spent extended periods in hospital (Gisborne Photo News, 25th June 1959; 16th June 1960) (Appendix A). In 2015, many orchards, residential homes, recreational buildings, and accommodation places line the banks of the beautiful Waimatā River, to make the most of the spectacular views (Appendix A).

However, while some parts of the Waimatā River are indeed beautiful and idyllic, the overall amenity values provided by the river have decreased since settlement began. This occurred as early as the 1880's and 1890's, where buyers of properties with stunning aesthetic views were faced with great responsibility and disappointment because of erosion of the river frontage. In 1892, the river scoured a large section of river frontage, from Mr Akroyd's house at the bridge on Riverside Road to Mr Brown's property (Tombleson, 2002). Furthermore in the 1990's, when sections in northern Gisborne were purchased, three properties with river frontages were bought by Mr Osborne. Bluegum and willow trees were planted on the banks but these trees disappeared once they had developed good root systems. This was discovered to be because when the river is in flood it comes straight onto the bank and carries the soil downstream or deposits it on the other side of the river. On all of the three sections, a depth of 4.6 metres and for a height of 0.6-1.8 metres of soil was removed by 1997 (Tombleson, 2002).

During a storm on the 18th and 19th June 1894, the region suffered the worst destruction during an event so far (Gundry, 2015). It was the damage from this event which made people aware of the powerful force of nature and the impact that historical actions have had on the river. During this storm and subsequent storm events, houses flooded, road access and river approaches were blocked by slips, driftwood and logs piled up, and swing bridges were swept away (Gundry, 2015). As damage took place issues began to be frequently documented; these included slumped riverbanks, heavy run-off, siltation of the river and harbour, yellow discolouration of the river, flooding and aggradation (which caused the failure of 90% of bridges), and a marked increase in the volume and size of driftwood coming down the Waimatā River (Gundry, 2015) (Appendix A). As seen in Figure 7, Monowai Bridge and Gisborne's city centre tend to be particular chokepoints for this storm damage.

During and post-deforestation these landscape values rapidly declined as forest was stripped away and the Waimatā River was made more vulnerable, particularly in subsequent storm events. Heavy rain causes a wave of destruction in the catchment and large quantities of sediment are transported down the Waimatā River and scour and slumps line the banks. Forest debris is also caught under bridges and flooding occurs in close proximity to houses (Gundry, 2015). After these events, the Waimatā River undergoes a period of recovery and the muddy brown waters and high flow mean that the river is more aptly described as a raging torrent or a silty mess (Longbush Reserve 2013a; Salmond, 2012). This has likely created social

disconnection as some people believe that the river is unhealthy and polluted and is no longer swimmable or able to be enjoyed recreationally (Nga Iwi o Tūranga, 2014).

Today, real estate agents have embraced some of these changes and still use the somewhat reduced amenity values of the Waimatā River as a selling point for river properties. In a current property ad for 673 Riverside Road, LJ Hooker describes the property as "a bargain" and "simply stunning". The river, with its landslides and slumps into the river, is also described as "add[ing] that little bit of [e]xtra character" to the property (LJ Hooker, 2015) (Appendix A). Other real estate ads, such as that describing 77 Goodwin Road, have chosen to ignore the slumps on riverbanks and have described the property as simply having "a stunning view of the river" (Bronwyn Kay, 2015) (Appendix A).

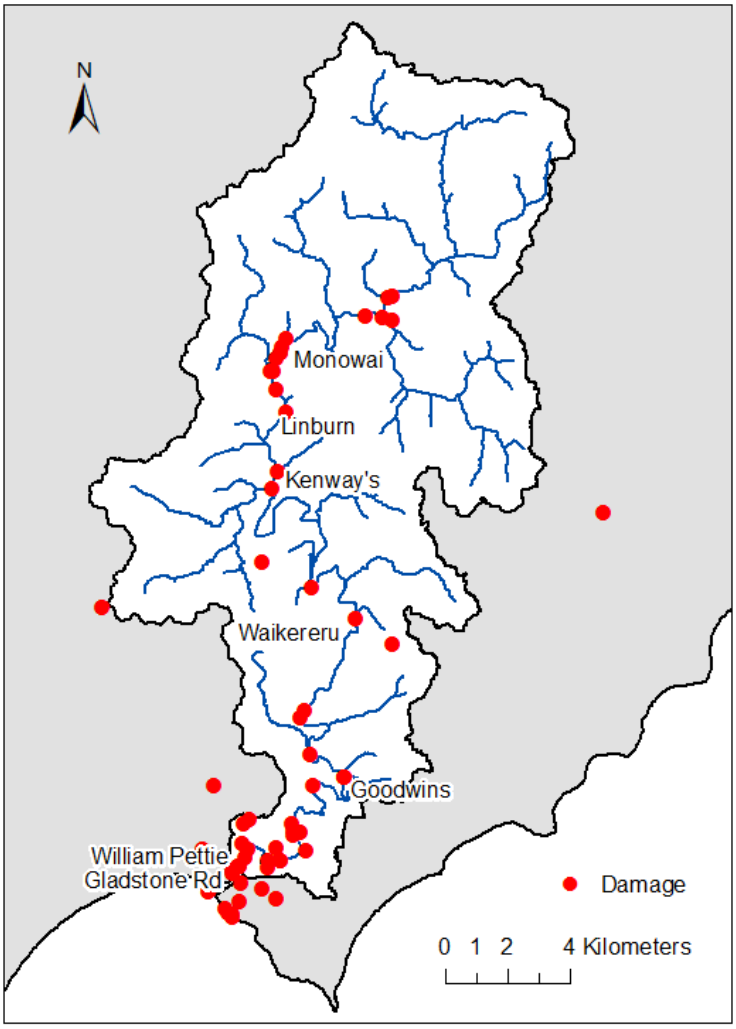


Figure 7. Storm destruction in the Waimatā Catchment recorded between 1880 and 2015. Main bridges are shown (Author's own creation, 2015).

7. RECREATION AND COMMUNITY EVENTS

Throughout time, the Waimatā River has always held a special place in people's hearts. Foremost, the river is a way of uniting and connecting (but sometimes disconnecting) people who meet together on the river. Individual and collective activities along the river are very important, and shared experiences and memories have brought the tight-knit community together. The Waimatā River is part of people, and is used by many different individuals, families, and clubs for both one-off and annual recreational activities and events (Figures 8 and 9). Fun events bring about community engagement and enjoyment, and enable people to connect positively to the river. Comradeship and friendly competition is also evoked in contestants through a variety of races.

The Waimatā River Sports Club was established in 1928 at 77 Goodwin Road, and at the freshwater community workshops held in Gisborne in late 2013 it was clear that people longed for water sports and activities to be promoted more on the Waimatā River (Bronwyn Kay, 2015; Gisborne District Council, 24th February 2014). This is because the whole Gisborne District is very actively water sport orientated and community involvement and membership to clubs is substantial (Poverty Bay Kayak Club, 2015). Two areas of the Waimatā River are particularly enjoyed for swimming and recreation and were named as significant in Gisborne Region's 2014 Draft Freshwater Plan. This was the river reach between The Island and the Waimatā/Taruheru confluence, and the area surrounding the Tainui Sea Scout Camp, located in Anzac Park (Gisborne District Council, 2014a). The whole of the Waimatā River has high recreational values, however, as the lower Waimatā River is heavily utilised by fishers, kayakers, rowers, and waka ama paddlers, and upper Riverside Road is used by cyclists, runners, and walkers (Longbush Reserve, 2013b). Many people are also competing for space on the river; traditional fishing or swimming users are now competing for space with people who have more technologically advanced interests such as users of jet boats. This tests and refashions the community's traditional connections to the Waimatā River (Hillman *et al.*, 2008).

The Hole-in-the-wall and The Island are recreational spots along the Waimatā River that have been enjoyed over many generations. As soon as the Hole-in-the-wall was naturally created by erosion in a Gowerville cliff, people have been taken with the picturesque rock formation which was created in an upstream riverbank. This popular picnic and swimming spot was historically reached by boat or by Darwin Road, on the right bank of the Waimatā River (Gundry, 2015). Photos from as early as 1882, 1888, and 1906 show groups of people sitting on the riverside or in row boats who have stopped in quiet appreciation and awe of the remarkable formation (Appendix A).

In the early days, the Waimatā River and surrounding Poverty Bay District were also perfect sites for sportsmen who enjoyed hunting. This had dual benefits; people got enjoyment out of hunting but it also put food on the table. Up until 1880, duck and pig shooting was particularly enjoyed. From the Waimatā River headwaters down to Harris Bend ducks were numerous and many were collected from Glenroy Station (Mackay, 1949). These ducks and pigs thrived in the dense forest which stretched back from Longbush and many people came here to shoot. When land was converted from forest to pasture between 1880 and 1920 the native game lost their feeding grounds and diminished in number, taking away the relaxation and food source which hunting provided (Gundry, 2015; Mackay, 1949).

Fishing is also a great recreational activity in the Waimatā River which enables relaxation or triggers rivalry between fishers. Fishing meant more to people prior to and during early settlement, as the Waimatā River contained more fish and many were caught. In 1884, the Poverty Bay Herald took great fascination in documenting a cone-shaped basket that had been placed in the river at the Hole-in-the-wall (and also

further upstream), and with whose help a moderate to large quantity of fish were captured (Gundry, 2015). As time progressed, people were still keen on their fishing and in September 1960, well renowned authority Mr Con Voss from Rotorua spent a day teaching anglers how to accurately complete fish tackle and casting on the banks of the Waimatā River (Appendix A). After a graceful and precise fly-casting demonstration, he gave guidance to individual anglers on their equipment and skill. Many people gathered together for this activity, loving the opportunity to learn from the best (Gisborne Photo News, 6th October 1960). The Waimatā is still an attractive fishing spot today, with the Gisborne Harbour and Waimatā River named New Zealand's 67th best fishing spot in 1998 (and later revised in 2013). The area around the Esplanade is particularly lovely as there are available fish and there is fun to be had by the whole family (The Fishing Website, 2015).

Swimming and wading have also always been a cherished activity in the Waimatā River, and perhaps one of the most meaningful to people as time has progressed since no equipment is needed to have glorious fun and make splendid memories. Numerous young children and families enjoy a relaxing swim in the river, and many people today dreamily reminisce about the swimming holes on the Waimatā River (Anzac Park, Hole-in-the-wall, Longbush, Apple Tree Bend) where many an enjoyable hour was spent, splashing their companions and relishing in their surroundings (Appendix A). Various swimming competitions have also been held on the river throughout history. In 1889, Gisborne's first annual swimming gala was held on the Waimatā River at Harris' Bend. Participation increased in each subsequent year, showing the "increased interest taken there in this beautiful sport" (New Zealand Illustrated Magazine, 1st February 1900).

Over time, the nature of swimming races changed; in early 1961 a new swimming event was introduced and many Gisborne Club swimmers competed in a short 183 m race along the Waimatā, Taruheru, and Tūranganui rivers which began at the William Pettie Bridge and finished at the Gladstone Road Bridge (Gisborne Photo News, 23rd March 1961) (Appendix A). Later, in January 1967, the Lions Club supported the River Swim which was also a new event and was created to replace the annual Bay Swim. Over 4 km, the course ran from The Island down to the cut. Thirty Gisborne Club swimmers entered, but only 27 swimmers (5 girls) finished the race (Gisborne Photo News, 25th January 1967). In subsequent years the course of this race changed and from 1970 it was held on the Taruheru River. Enthusiastic competitors began at the Roebuck Road Bridge, swam down the Taruheru River, and finished at the Taruheru/Waimatā junction, with the winner taking home the Stoneham Cup (Gisborne Photo News, 25th March 1970; 22nd March 1972). Participation in this event was not as great due to the longer distance, but bridges were lined with enthusiastic spectators supporting the event (Gisborne Photo News, 22nd March 1972).

Cubs, Keas, and Scouts also all work out of the Gisborne District Sea Scouts Association facilities on the Waimatā River and these facilities are used at least 3-4 days per week. Groups use the boat ramp and nearby steps from Anzac Park to reach the river and launch their boats, and there is close collaboration between these groups and the rowing club and general public as they all use the same access point (Gisborne District Council, 2007). Sea Scouts are aged 10-14 and they complete badges for typical scout activities, as well as rowing, sailing, seamanship skills, and swimming (Scouts Waiapu Zone, 2013). They are not a new collaboration and have been around since the 1880's. Thomas Holden who owned the Rimuroa block at this time took unprecedented delight in supporting Gisborne youth activities and he set aside some of his land next to the river for use by Boys and Girls Brigades, Guides, and Scouts for activities and camps; this was very popular (Tombleson, 1997). The Waimatā River itself was and still is truly momentous as it is used for weekly meetings, camps, and exploration activities. Inter- and intra-group camps are particularly enjoyable and are held on a semi-regular basis (Gisborne Photo News, 24th February 1955; 22nd April 1970).

In January 1955 one such camp was held, with more than 500 Sea Scouts from neighbouring troops enjoying a week long biennial national camp at Anzac Park. Different Sea Scout groups competed against each other in rowing, yachting, and other races along the river (Gisborne Photo News, 24th February 1955) (Appendix A). In 1970, the boys from the Wai Te Ata Scout Troop also had a very fun Easter camp and enjoyed using the Waimatā River as their playground, taking great delight in jumping off the flying fox into the cool Waimatā River (Gisborne Photo News, 22nd April 1970). In addition, on a Saturday in July 1958, members of the *Tākitimu* Sea Scout Troop explored the headwaters of the Waimatā River, and in May 1962, the Tainui Sea Scouts held a ceremony at their facilities on the Waimatā River where they launched their newly acquired boat (Gisborne Photo News, 24th July 1958; 17th May 1962). The scouts had managed to convince the Mayor and Mayoress to have the first ride in the boat, and laughter soon followed as the Mayor was persuaded to work for his ride, and join in with the rowing of the boat (Gisborne Photo News, 17th May 1962) (Appendix A).

Boating activities are also abundant, and several wharves or boat ramps along the river provide entry points to the water. As well as the Anzac Park boat ramp, there is the single lane Waimatā boat ramp (located off State Highway 35 near Ormond Road and Vogel Street) and the dual lane Esplanade boat ramp which is located off State Highway 35, at the Tatapouri Sports Fishing Club (Fishing Outdoors, 2015). Recently, calls were made for another boat ramp to be constructed in front of the buildings at Anzac Park to support the increased use of boat and craft (Gisborne District Council, 2007). It was from one of these boat ramps that a mischievous Santa made his way up the Waimatā River on a speedboat in December 1958, to his destination at Mr and Mrs John Hawksworth's home in Harris Street where he took part in a party for crippled children (Gisborne Photo News, 11th December 1958) (Appendix A). This thread took place for many years; in April 1964 and November 1973, Gisborne Rotary Club treated intellectually-handicapped, crippled, and under-privileged children to boat rides on the river (Appendix A). On the latter occasion, it was reported that "a beautifully fine day made the outing very enjoyable" (Gisborne Photo News, 31st January 1973). These events on the Waimatā River were lasting memories for the children, who might never have had the chance to enjoy being on the Waimatā River in this way without the help of the Gisborne Rotary Club (Gisborne Photo News, 23rd April 1964; 31st January 1973).

The Waimatā River is also readily used for rowing, canoeing, and kayaking, three of Gisborne's most competitive water sports. The Gisborne Girls Rowing Club was established in August 1874 and since then members have trained several days a week on the river from the Anzac Park clubrooms up to The Island. This 2 km distance has prepared rowers for races such as the New Zealand Rowing Nationals and National School Regattas (Gisborne Rowing Club, 2015). Many canoe races have also taken place throughout time. In single and double inter-club canoe races hosted by the Gisborne Canoe and Tramping Club in August 1959, 1961, 1963, and 1965, "thrills and spills were all part of the game" (Gisborne Photo News, 20th August 1959). The 12.9 km races began at Holden's Hill and contestants had to navigate many tricky rapids before they approached the quieter lower reaches of the Waimatā and completed the race at the War Memorial. Winners took home the inter-club trophy, the Bill O'Connell Cup (Gisborne Photo News, 20th August 1959; 7th September 1961; 3rd October 1963; 19th May 1965) (Appendix A).

The Poverty Bay Kayak Club was established in 1978 with just single kayaks on offer. Since then, kayaking has developed into an adventure sport and recreational activity and regular kayak training has taken place on the Waimatā River. Membership is currently around 70, of which 50 actively participate, and training occurs almost all year round (Poverty Bay Kayak Club, 2015). Training conditions, however, do prove challenging and relatively inefficient compared to other rivers as the river is tidal, windy, and movement is

stop-start and involves turning several corners as kayakers can only paddle in a straight direction for 400 metres and in one direction for 3 km before turning around (Whanganui Chronicle, 24th November 2004). This sport is, however, one that installs great pride in the Gisborne District as kayakers have trained and competed in races for the club, and then later left to compete in and win World Championship and Olympic events. Athletes on the Olympian honours roll include coach John Grant (1980), Alan Thompson (1980, 1984, and 1988), Robert Jenkinson (1984), Liz Thompson (1984), coach Brian Wilson (1984), Grant Bramwell (1984, and 1988), coach Benny Hutchings (1984 and 1988), and Darryl Fitzgerald (2012). World Championship Finalists have also included Peter Duncan (1981-1983), Alan Thompson (1981-1987), Grant Bramwell (1983-1987), Paul Green (1998), and Gavin Elmiger (1998) (Poverty Bay Kayak Club, 2015).

A sport which only came to Gisborne in the mid 1980's is waka ama. The voyage of the waka *Hawaikinui* from Tahiti to New Zealand in 1985 brought about a wave of increased interest in this sport (Barclay-Kerr, 2013). That same year one of the builders of *Hawaikinui*, Matahi Whakataka-Brightwell, created a waka ama club in his home town of Gisborne (Sport Waikato, 2013). This club, the Mareikura Canoe Club, was created at Anzac Park on the banks of the Waimatā River. Since 1985, three more waka ama clubs have been created in Gisborne: Te Uranga O Te Ra, Tūranga Waka Ama, and *Horouta* Waka Hoe which is located near the Esplanade and operates from Marina Park, at the Waimatā/Taruheru confluence (Sportsground, 2015; Waka Ama NZ, 2015). Waka ama is hugely significant, and is more than just a recreational activity. Waka is of importance to the people of Tūranganui-ā-Kiwi as it reflects their cultural and historical heritage, with their first people arriving in New Zealand on the waka *Horouta* and *Tākitimu* (Spedding, 2006). In 2009, as part of the Waiapu Catchment's 150th celebrations, 200 young people were gathered from throughout the Waiapu Anglican Diocese for a weekend of fun, comradeship, races, and competitions. For the first time, the Top Parish competed in waka ama races on the Waimatā River. This was thoroughly enjoyed and it was remarked that it was "an amazing experience for our young people to paddle on the Waimatā River and again have a chance to reflect on the lives of the early missionaries" (Waiapu News, 2009). Being on and around the Waimatā River therefore gave people a chance to connect with the history and lives of people who went before (Appendix A).

Rafting is also highly enjoyed on the Waimatā River. In June 1964, the Great Raft Race was held as part of the Gisborne Industries Fair. 52 groups entered into this amusing event and an hour of charming chaos and laughter was had for both contestants and spectators alike, the latter of whom 8,000 set up shop on bridges and riverbanks where they had a good view of "this epic effort of nautical nonsense" (Gisborne Photo News, 18th June 1964). The race began at the Botanical Gardens Bridge on the Taruheru River and finished 2.4 km later at Anzac Park on the Waimatā River. Creative did not even begin to describe the unorthodox rafts which had been constructed from anything floatable including oil drums, rubber tubes, water tanks, crayfish floats, and bathtubs (Appendix A). The rafts also varied considerably in size, from small two people boats to craft manned by 20 people. This was also no ordinary competitive race; rafts were stocked with weapons such as water-pumps, catapults, skyrockets, and flour-bombs (Gisborne Photo News, 18th June 1964). At the starting line before the race was even underway there was utter mayhem. Contestants battled for starting positions and 'attacked' other competitors with their weapons as a method of obtaining better positions. When the race was finally started, almost all of the contestants were absolutely soaked and this was further confounded by the confounded by a mud balls dispatched from overlying bridges and a jet of water continuously supplied by the Fire Brigade (Gisborne Photo News, 18th June 1964). Lots of fun was also had in another rafting event, the annual Youth for Christ Campus Life raft race, which began in the 1970's. Many rafts, again with quite variable designs, launched from the designated starting point on the Taruheru River, opposite Lowe Street, and finished at Anzac Park

(Appendix A). As with The Great Raft Race, hundreds of spectators were supplied with much entertainment and comedy (Gisborne Photo News, 5th December 1973).

Other uses of the river include yachting (of which yachts raced in the 1960's as part of the annual picnic held by the Gisborne Yachting and Powerboat Club), small motorised craft (in 1955, jet boating was introduced to the Waimatā River and today YouTube videos show the most ideal spot seems to found by Goodwin Road) and picnicking (Gisborne Photo News, 18th October 1956; 22nd March 1962) (Appendix A). The Waimatā River is the idyllic sport for a quiet, riverside picnic, particularly in the proximity of Longbush, Anzac Park, or the Hole-in-the-wall (Gundry, 2015). In the early 1900's, Apple Tree Bend was also a popular picnicking spot (Appendix A). Anzac Park provides a natural playground for children who can play on the accessible banks of the river, and enjoy using the rope swing from Anzac Park into the Waimatā River (Gisborne District Council, 2007; Gisborne Photo News, 22nd April 1970). Aesthetic values also mean that the Waimatā River forms part of a formal walking track, Walk Gisborne. This 2-3 day walking track begins by following the Whainukota Stream and Waimatā River, and then trails over open the farmland of Makorori Station and Karakaroa Farm, through delightful pockets of Puriri forest, Kanuka, and Toitoi, before ending at the famous white sand Makorori Beach (Organic Explorer, 2013; QE11, 2015). Walking, horse-riding, jogging, and mountain biking are also enjoyed in the Wakaroa and Waimanu forests which are owned by Hikurangi Forest Farms and run alongside the Waimatā River. From the tops of forest ridges it is possible to see lovely scenic views which stretch from as close as waterways in the Waimatā Catchment, and as far away as the Mahia Peninsula and Mount Hikurangi. Entry into these forests is prohibited without Hikurangi Forest Farms access grants as forestry activities mean that the forests are closed to the public during certain times of the year, and recreational activities are restricted (Hikurangi Forest Farms, 2007).

As landslip hazards have become more abundant, new recreational opportunities for using the river have opened up. In November 2014, five teenagers were pictured thoroughly enjoying sliding off a waterslide into the Waimatā River (Appendix A). The waterslide has been erected on a steep bank near the junction of Whitaker Street and Stafford Street, and is the site of amusement for many youngsters. To enhance enjoyment, some teenagers added dishwashing liquid to black plastic to increase speed (Gisborne Herald, 28th November 2014). The article, pictured in the Gisborne Herald, drew several comments from members of the public. D W Fouhy remarked that it looked like "great fun. Good to see kids making their own fun. I used to swim in that river myself when I was a kid...wish I was still a kid!". Christine Braybrook from Whakatane also remarked that "it is the closest slide to Rere Falls, but would be more fun. Great to see kids having their kind of special fun. Waimatā River is a good place for families during the summer with picnics, swimming, and waka ama" (Gisborne Herald, 28th November 2014).

Furthermore, the Waimatā River is part of a multisport event. In August each year, the Waimatā Multisport Traverse is held in the Waimatā Catchment. This event began in 2000 and includes road and mountain biking (18-25 km), running (8 km), and kayaking (8 km) (Gisborne Cycling, 2004; Gisborne Herald, 2014d; Sport Gisborne Tairāwhiti, 2012; 2014).Running and biking is completed along Gray's Hill and Cave Road although the exact route varies slightly between years depending on the timing of forestry activities in Waimanu Forest, which forms part of the route. The kayaking stint is completed on the Tūranganui, Taruheru, and Waimatā rivers (Gisborne Cycling, 2004; Sport Gisborne Tairāwhiti, 2012; 2014). In 2014 entrants began at The Island on the Waimatā River and headed downstream to the railway bridge on the Tūranganui River. Contestants turned around the bridge, kayaked back up the Tūranganui River, and took the channel into the Taruheru River, where they turned at the buoy and headed back down to the finish line at the main launching ramp (Sport Gisborne Tairāwhiti, 2014).

People can choose to compete individually or as a team, with friends and family taking part together in this special race. In 2014, sisters Alicia and Courtney Hoskin raced together, as did Roger Davies with his two children, Olivia and Alex. Another family, the Hughes crew, are also renowned as the most remarkable family team as they have raced together twice as a group spanning four generations (with just three in 2014) (Gisborne Herald, 4th August 2014a). While fun, this is also a popular event for the sporty and adventurous in Gisborne District, who use the race as a stepping board for harder events. This event provides contestants with the chance to train against others and see how they compare with other competitors. Participants such as 58-year-old Veteran Gisborne athlete Pete Lamont used the Waimatā Traverse as training for the two day Speight's Coast to Coast race in the South Island (Gisborne Herald, 12th February 2014).

In some events money is raised to support the community. In one such event held in autumn each year, plastic '$5 Buck a Duck' ducks are raced along the river. It is not clear when this event began but it was created by a partnership between the general public, Rotary Club of Gisborne West (founded in 1968), and the Life Education Trust (founded in 1988). A considerable amount of money is generated each year ($6,300 in 2010) which is contributed to the Life Education Trust for their continued work with children in the Gisborne District (Life Education Trust, 2010).

Furthermore, in an unplanned event, a seal (named Sammy) arrived at the Waimatā River in June 1957. Dozens of people - adults and children alike - craned over bridge railings, and prodded around under the Gladstone Road Bridge in their attempts to spot or find Sammy (Appendix A). This event brought together community spirit, and provided a place where people with differing perspectives and attitudes could come together in their excitement to "catch a glimpse" of Sammy the seal (Gisborne Photo News, 27th June 1957).

The Waimatā River is also used as a backdrop for some other events. At Mr and Mrs Graham's home in Haronga Road a fashion show and garden party was held in December 1964 (Appendix A). The Anglican Women's Association organised the event and it was reported that "bright sunshine and a high tide added the finishing touches to the enjoyable afternoon spent by the 200 guests" (Gisborne Photo News, 3rd December 1964). In a less sporty event, the Waimatā River was also used as the end site for the "4 Corners, 3 Bridges March" in 2007 (Appendix A). More than 1,000 people took part in this event which occurred on White Ribbon Day and was organised by the Tairāwhiti Men Against Violence club (formed in 2006) to increase awareness about the issue of domestic violence (Tairāwhiti Men Against Violence, 2008).

The Waimatā River was also a huge source of entertainment for the students who attended Waimatā School and who frequented the river in their lunch breaks. This river provided a scene of interest as it flowed over rocks and through culverts, and provided a free source of sticks from which boats could be made and raced down the river (Tombleson, 2002). The school was opened in 1915, closed in 1940 because of the war, re-opened in 1946 and stayed open until a lack of children caused the school to finally close in 1975 by which time 315 children had attended (Tombleson, 2002). In 1939, a particular occurrence was recorded on a tributary of the Waimatā River which involved some mischievous students of this school. After the students had speedily eaten their lunch, they went down to the stream to utilise their free half an hour. It is unknown whose idea it was to dam the culvert but it was an exciting suggestion and was met with interest and glee. The culvert was blocked and provided an increasing source of laughter and excitement as the water spouted out, growing in strength and quantity the longer the block of wood was kept in the culvert (Tombleson, 2002). When playtime was up, however, the block of wood was not able to

be removed due to the intense weight of water in the dam. Then mayhem struck; intense rainfall occurred later that afternoon and water ran straight off hillslopes and into the stream. Water could not flow under the road and so it went over and down the street, creating a large lake and scouring the road. When the closest neighbour returned home for lunch he had difficulty entering his field because of the water which was accumulating quickly. After examining the culvert he went straight to the school and being unable to speak he seized the unsuspecting teacher by their arm and directed attention to his poor flooded fields (Tombleson, 2002).

Children also created their own entertainment by playing on the bridges built over the Waimatā River. In 1952, at the Motukeo block, a swing bridge was the only way to cross the river. The Cresswell children who lived here were a mischievous and adventurous bunch and one day they discovered the fun one could have with the bridge. They could swing it from side to side and jolt it if they all cooperated and ran between the two ends of the bridge and all jumped at once. This was a huge joke! The Cresswell children also climbed to the top of the swing cables and sat on the pillars which were 6 metres above the bridge itself. Perhaps surprisingly, no one was ever hurt (Tombleson, 1997).

Whilst the Waimatā River is a remarkable place and people spend many enjoyable hours on or around the river, it is sometimes dangerous to use. People jump from the bridges, and this is bound to cause a horrific accident in the not too distant future (Gisborne Herald, 15th December 2014). The river is also virtually unusable after heavy rain which carries pollutants into the river and when large stretches of its banks collapse into the river, carrying considerable quantities of silt into the harbour (Gisborne Herald, 15th December 2014; Gundry, 2015; Salmond, 2012). This causes social disconnection as people cannot take pleasure in the degraded condition of the river.

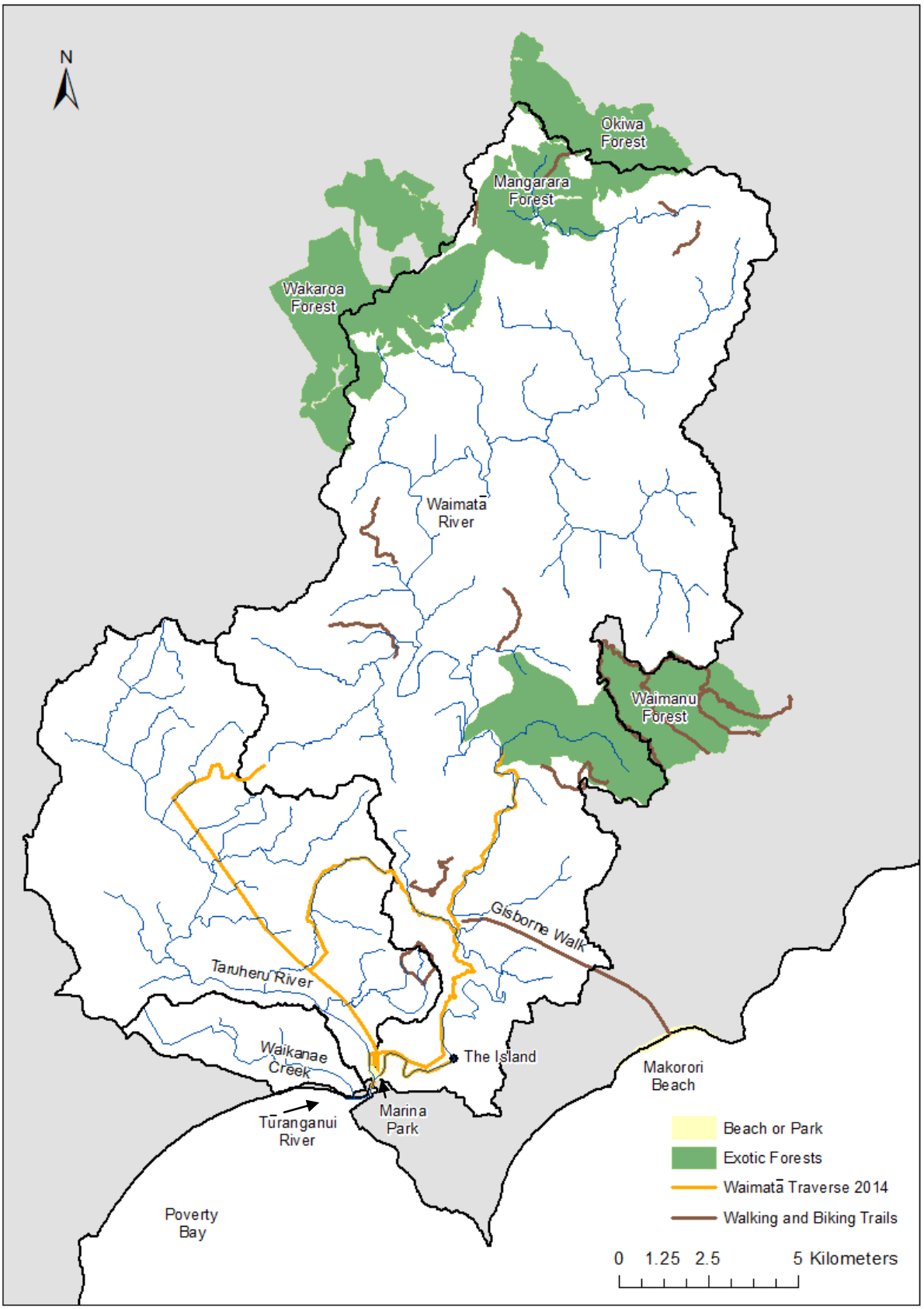


Figure 8. Recreational trails in the Waimatā Catchment.

Figure 9. Locations of recreational activities in the Waimatā Catchment.

8. EDUCATION

The Waimatā River is also the ideal place to educate youngsters about water safety since it provides an open environment to do so and is the place where many children swim or play with their families and friends. In December 2013, Tairāwhiti Water Survival instructor Rama Robertson and several Midway Surf Lifesaving Club lifeguards led at least 60 nine and ten-year-old Te Wharau Primary School students in a two day water safety program on the river aimed at teaching river survival practices (Gisborne Herald, 12th December 2013). This provided children with skills to protect them when they are found out of their depth in the water, and was particularly favourable with families of the young ones. The students learnt a lot and it was remarked by teacher Kim Perano that "it has been great, making it safer for the kids to do the things they are going to do anyway, like swim in the rivers and at the beach" (Gisborne Herald, 12th December 2013). Student Michael Huhu said that "it's exciting" and his father remarked that "it's awesome, can't be beat" (Gisborne Herald, 12th December 2013). Mr Robertson also teaches swimming lessons at Gisborne's swimming pool during winter. "Koha Sundays" were introduced to teach swimming to children who could not usually afford to so. A dollar is paid to enter the pool and a koha (a gift) is given to Mr Robertson. In 2013, 60 children attended and the numbers have increased since (Gisborne Herald, 6th June 2013).

9. MEMORIAL VENUE

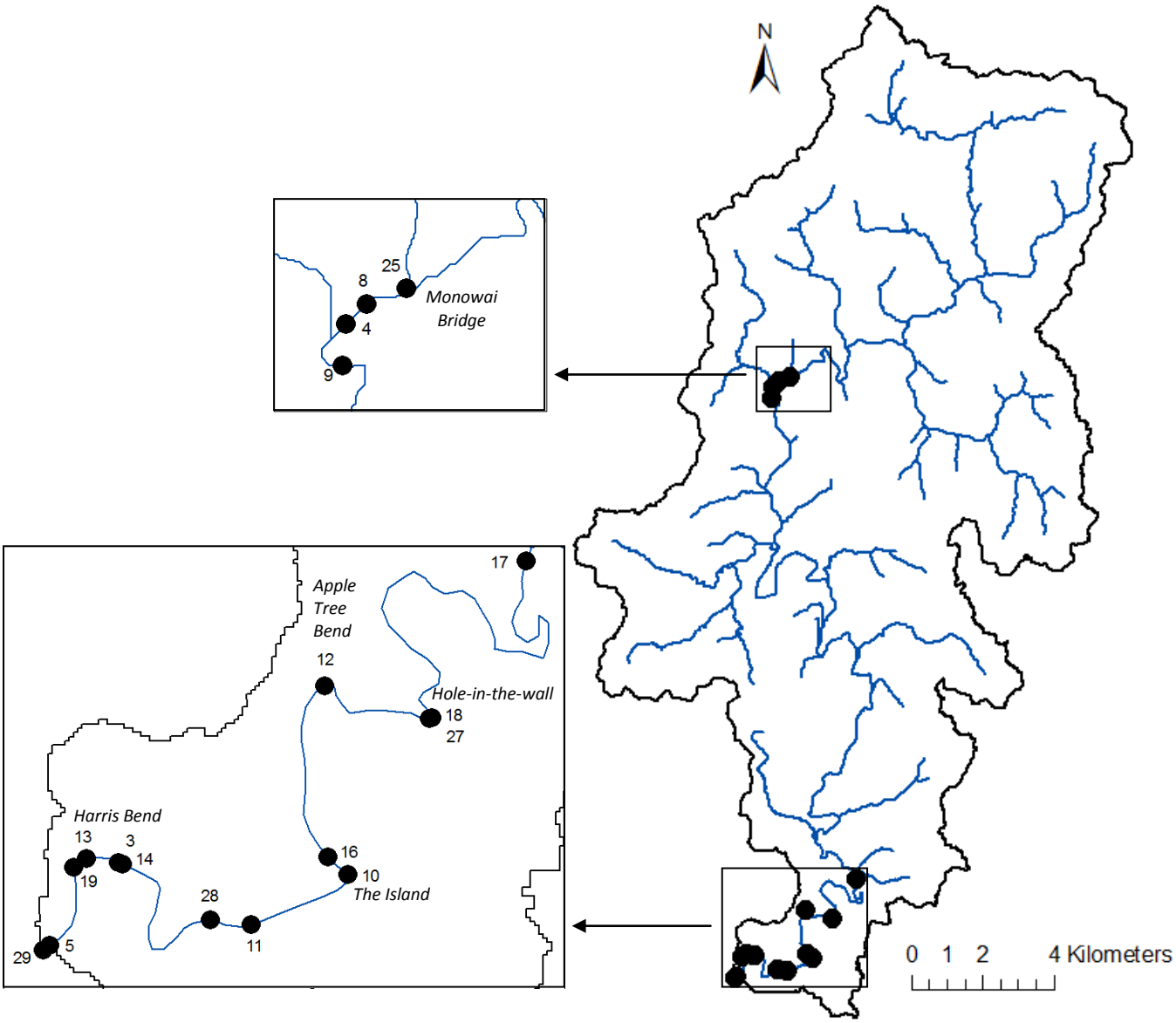
In the same way that people celebrate life on the Waimatā River through recreational activities and events, people also relate to the river through deaths by drowning. Since settlement began, the Waimatā River has been the site of 29 deliberate and accidental deaths, in just 127 years (Figure 10). The latter has occurred as children and adults alike have misjudged the power of the river, their strength, and/or their swimming abilities. Those who have lost loved ones may consider the river to be murderous or destructive because it has taken away someone they love or who is a valued person in the community, cutting their beautiful lives short too soon. These deaths are considerably emotional and unforgettable events for those left behind, particularly perhaps for one family who have lost three children to the Waimatā River. In this family two young girls, Dulcie Currie (aged 11) and Vernon Currie (aged 15), were accidentally drowned at The Island in February 1906, and only 12 months later the girls' cousin Graham Higgins (aged 9) drowned 800 metres downstream (Poverty Bay Herald, 28th February 1906; 16th January 1907). However their despair is equal to that felt by other families; on seven-year-old Charles Wood's death on 9th November 1891 it was reported that "Mr and Mrs Wood were deeply distressed on receipt of the news, and the shock has been a severe one to them" (Poverty Bay Herald, 10th November 1891). Furthermore, on 19th February 1911, Mr and Mrs John Christie's three-year-old son drowned in the Waimatā River while bathing with his brother (Poverty Bay Herald, 20th February 1911). Only six months later Mrs Christie died in hospital after consuming a bottle of Lysol at her brother's house where she was living. It was noted that she had been feeling somewhat melancholy since her son's death (Colonist, 16th August 1911). In addition, the family of 13-year-old Harold Gibbins published memorial articles in the Poverty Bay Herald for four years (Appendix B).

Deaths are also extremely traumatic for those who are in close proximity or who happen to see the incidents occur but were unable to prevent them. This is true for Gladys Brown (aged 5) who went down to the water's edge by herself while her mother and four siblings picnicked nearby at Apple Tree Bend, and Edward Trumper (aged 11) who drowned while swimming across the river in full view of his two younger brothers (Poverty Bay Herald, 14th January 1908a; 14th January 1908b; 15th April 1911). In some cases, bravery has either numbed or exemplified the loss as siblings or companions have attempted to save their relatives or friends. In the case of the Currie girls, Vernon had seen her younger sister get into trouble in the water and had made an impressive effort to help her by placing her on her back and endeavouring to swim towards shallower water near the river bank (Colonist, 1st March 1906). Furthermore, while very

unfortunate, these deaths can unite people in the district. In one of the first recorded deaths on the river on 14th December 1884, "a very sad feeling was caused throughout the town… when it became known that Mr John Sinclair had been drowned while bathing in the Waimatā" (Poverty Bay Herald, 15th December 1884). In addition, on Lucas Ward's death on 16th August 2010 the community banded together for nine days in search of the little boy (Appendix A). At the funeral Lucas's dad Damon Ward remarked that although a tragedy his death had been unifying: "Lucas will be remembered probably for what he's done for the whānau, to bring us together and to make us realise what's important is love" (ONE News, 31st August 2010). Much, much later people may cease viewing the river as murderous and the river may instead become a site of remembrance where people can connect to and reminisce about their loved ones.

The river has also been utilised as a memorial venue in the days following deaths, as the aesthetics and pleasant environment provide the ideal setting. Just recently, on the 8th of January 2015, a commemoration service was held on the Waimatā River for ex-Gisborne man Ben Sargent who tragically died on New Year's Eve when he unsuccessfully attempted to jump off a ten metre high pole into a Gisborne swimming pool (Gisborne Herald, 3rd January 2015; The Gisborne Herald, 8th January 2015). Although Ben did not die on the river itself, the Waimatā River was seen as the best location to bring the community together in memory of him. In August 2010, schoolboys also assembled on the banks of the Waimatā River to perform an emotive haka in remembrance of Lucas Ward. This was appreciated by Lucas's family and his great-uncle Brian Hunt remarked that "it was magnificent" (Otago Daily Times, 27th August 2010).

Near to the river, there are also cemeteries which hold loved ones who have died in the Waimatā Catchment, although not necessarily in the river. The Otonga cemetery, for instance, holds Kenneth Tombleson who died in 1912, John Tombleson who passed away in 1938, Margaret Tombleson who died in 1940 when a falling elm tree branch killed her, her son who died a few days after he was born, Ted Tombleson who died in 1941 and his wife Nora, Mr and Mrs Jack Tombleson's daughter who died in the 1955 polio epidemic, and Elizabeth Tombleson who passed away in 1960 (Tombleson, 1997).



1. Dec 1884: John Sinclair
2. Nov 1891: Samuel Goodall
3. **Nov 1891: Charles Wood (aged 7)**
4. **July 1893: Mr Jopp (aged 21)**
5. **Feb 1897: Alfred Weston (aged 56)**
6. April 1897: Charlie Collins
7. Late 1800's: Mr Todd's wife from Strathendrick Station
8. **Early 1900's: Monowai Station shepherd**
9. **Early 1900's: Mr Perry's wife from Waimiro Station**
10. **Feb 1906: Dulcie Currie (aged 11)**
    Vernon Currie (aged 15)
11. **Jan 1907: Graham Higgins (aged 9)**
12. **Jan 1908: Gladys Brown (aged 5)**
13. **Mar 1908: Henry Tobee (aged 18)**
14. **Feb 1910: Harold Gibbins (aged 13)**
15. Feb 1911: Mr and Mrs Christie's son (aged 3)
16. **April 1911: Edward Trumper (aged 11)**
17. **April 1916: Karl Gustafsen (aged 25)**
18. **Jan 1917: Bertram Watkins (aged 23)**
19. **Aug 1920: Arthur Gunn (aged 46)**
20. Nov 1921: Samuel McCormick
21. Feb 1922: Vera Brown (aged 22)
22. May 1924: Arthur Malcon (aged 10)
23. Feb 1927: George Spill
24. Nov 1927: Thomas Hanna (aged 25)
25. **Dec 1927: John Keane (aged 51)**
26. Dec 1931: Douglas Marsh (aged 21)
27. **Dec 1939: Douglas Brown (aged 8)**
28. **Aug 2010: Lucas Ward (aged 4)**
29. **Feb 2011: Jonathan Hunter (aged 26)**

Figure 10. Recorded deaths along the Waimatā River (Author's own creation, 2015). Data sourced from Gundry (2015).

10. 'HARD' COMMAND AND CONTROL MANAGEMENT

In attempts to reduce the impacts of past mistakes, several engineering approaches have taken place in the Waimatā Catchment. These are recorded in Table 4 but have included the construction of revetment walls and debris racks, the separation of the Waimatā River from the harbour through a cut and channel diversion, and dredging of the harbour to remove silt (Gisborne District Council, 10th March 2014; Gundry, 2015). Command and control management treats the river as if it were a wild entity that needs to be tamed through infrastructure, and targets the end result of human impacts rather than the source of increased silt and debris. This approach is also continuous; structures such as debris racks and revetment walls have limited lifespans and only work for short periods before they have to be replaced. Dredging also occurs frequently as the harbour refills with sediment. In addition, structures have 'blotted' the landscape and have likely had the undesired effect of disconnecting people from their waterways through decreased lateral and longitudinal connectivity and reduced amenity values.

Furthermore, the construction of structures such as revetment walls and debris racks aligns with the philosophy of rivers as geomorphic machines. This is because it is a process-based view of the river, and treats rivers as if their primary purpose is to redistribute the excess water which falls on land and flows downstream (Phillips, 2009). Any geomorphic and geological work that occurs, such as sediment erosion, is only a by-product of these hydrological processes (Phillips, 2009). Essentially, this view treats rivers as conveyor belts which operate to transport sediment and to drive landform sculpting through formation and denudation, and by which operation can be stopped through obstructions along the river such as forest slash. This conveyor belt concept is not new; Salisbury (1919, p. 104) stated that "rivers are constantly shifting solid matter from land to sea. This is, indeed, their great work....Every drop of water which falls on the land has for its mission the getting of the land into the sea" and Leopold (1964, p. 97) remarked that rivers are "the gutters, down which flow the ruins of continents".

11. ERA OF 'SOFTER' RIVER REPAIR

Softer river management approaches were considered upon the failure of engineering structures and the increasing exasperation of spending incessant amounts of expenditure on dredging. This era of softer river repair was primarily driven by the desire to correct past mistakes and to protect the future of waterways as it sees river systems as entities to nurture and protect (Cullum, 2015). Under this framework, people must 'work with nature' to carry out management efforts which are both effective and sustainable. This involves moving beyond the symptoms of environmental degradation to address the actual causes, and Waimatā examples of this are documented in Table 4 (Cullum, 2015). One way of achieving such a task is to identify small "hotspots" along the river where small, but targeted and proactive, actions can have considerable cascading effects and enhance recovery of reaches. It is thought that this would have a considerable, positive impact on connecting people with their rivers if they see evident improvements to bank stability, water flow, water quality, and connectivity (Cullum, 2015).

Management initiatives can also be implemented where nature is already showing signs of recovery to augment the work that nature is completing. For instance, trees can be planted along a reach where trees have already established and are stabilising the bank and trapping sediment (Cullum, 2015). This could have considerable positive benefits since the Waimatā River acts as a sediment conveyor belt and there is little opportunity along the river for sediment to be stored, with space only in small in-channel bars or floodplain pockets. The high terraces and large floodplains provide little ability to modify this storage capacity but targeted afforestation techniques to reduce sediment input from landslides and slumps, and tree planting at particular floodplain pockets (Figure 11) could be a soft approach to help this issue (Cullum, 2015).

Table 4. 'Hard' and 'soft' management approaches carried out along the Waimatā River.

	MANAGEMENT APPROACH	DETAILS
ENGINEERING APPROACHES	Revetment wall	A timber wall was built in the mid-1970's along The Esplanade on the Waimatā River and into the Tūranganui River. This was constructed to protect the riverbank and to halt erosion which was placing the adjacent road at risk (Appendix A). It was also built to contain the river as it was thought this would protect Anzac Park and enable continued recreational use. Approximately 200 metres of this wall was upgraded by Lloyd Contractors Ltd in early 2014 over 10-12 weeks as the wall had expired and was breaking up (Gisborne District Council, 11th February 2010; 10th March 2014). This cost $108,952.84 (Gisborne District Council, 11th February 2010).
	Debris racks	Built in moderate to steep reaches (e.g. between The Island and Goodwins Bridge, and below forestry land) to prevent debris from stacking behind bridges and ending up on beaches. These racks have to be cleared of willows, poplars, and pine slash, before and after flood events, which occur relatively often (Cullum, 2015; Gundry, 2015).
	Cut and channel diversion	In 1920, it was proposed that the Waimatā River should be diverted at the Hole-in-the-wall and made to travel along the old riverbed which was through Mr McLean's land. The river would then flow through a short tunnel or would cut through the Kaiti catchment, and flow out to the sea via the Hamanatua Stream at Okitu (Gundry, 2015). The estimated excavation volume was 1,605,565 m^3 (at 6d per 0.8 m^3 and with a cost of £22,000 for machinery). This scheme was deemed to be impracticable as the flood level had to be raised by 4.1 m, so as to force the water through the narrow channel with a 15.5 m bottom. Also, a dam would have had to be built to prevent water overflow between the old and new channels and there was the potential for greater hillslope erosion (Poverty Bay Herald, 28th November 1918). Although this did not go ahead, in 1931, the harbour and river were separated with a diversion cut (Gundry, 2015).
	Dredging	The harbour is dredged frequently as the river is a sediment chute (Cullum, 2015; Gundry, 2015). The port was closed for the first time in 1916 and for an extended period of time two dredges removed many tonnes of sediment from the harbour. However, in the next flood the harbour re-filled with sediment. Dredging occurred again in 1925-1926, and has continued since (Gundry, 2015).
	Earth dam	In 2010, consent was conditionally granted by Gisborne District Council enabling a large earth dam to be built in the Waimatā Catchment, despite substantial earthworks, vegetation clearance, and land disturbance. The proposed dam was 260 m in length, 12 m high, and would develop a lake 650 m long. Its purpose was to create a suitable stretch of river which could be used for water activities such as skiing. It is unlikely that this ever was constructed (Gisborne District Council, 8th December 2010).
RIVER REPAIR APPROACHES	Tree planting	Open planting of poplars, pines (*Pinus radiata*), and willows, especially on hills and down by the Waimatā River and its tributaries. This is a quick remedy for bank stabilisation as trees grow quickly, have moderate root systems, and planting is relatively inexpensive ($1,500-1,600/ha). Planting of native trees such as Manuka has dual benefits (e.g. honey and bank stability) and is more effective but is also more costly ($20,000/ha) and trees take longer to establish. Ongoing weed and pest control is also needed for both techniques (Cullum, 2015; Mike Marden, pers. comm., 2014).
	Spraying	Spraying of willows occurred in 1994/1995 because there were issues with raised flood levels, damaged road communications, and restricted channels (Gundry, 2015).
	Fencing	Fencing off rivers from stock, particularly in line with new regulatory standards (Longbush Reserve, 2013a).
	Reversion	Pasture was left to revert to bush in the 1960's and 1970's when agriculture was less profitable and it was increasingly recognised that land was degraded by intensive farming (Gundry, 2015).
	Channel maintenance	Began in 2012/2013 and is funded by rate payers in Gisborne District. This maintains flow in the river by removing obstacles which promote targeted bank erosion, harming agricultural land and road infrastructure (Gisborne District Council, 2012).

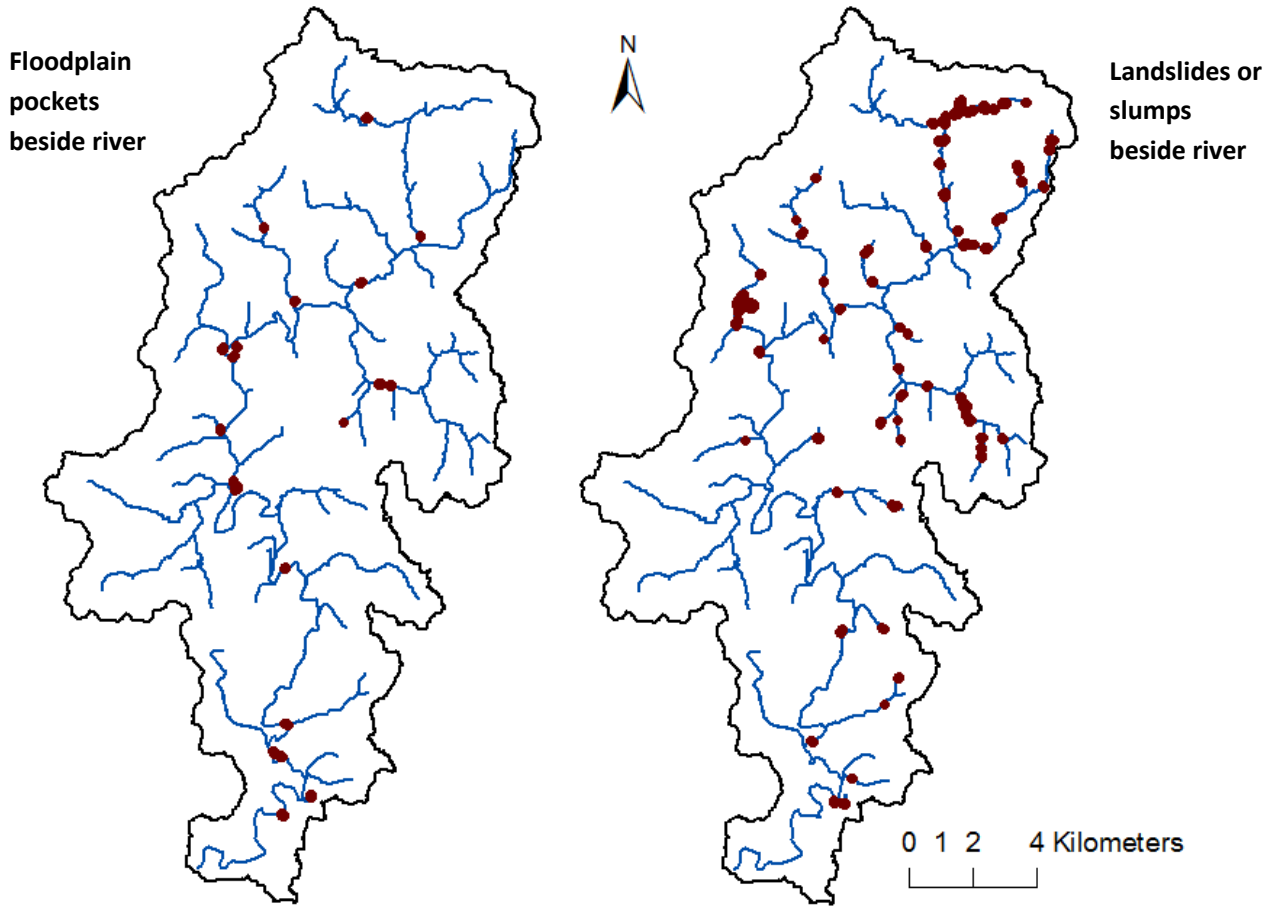


Figure 11. Sediment storage and erosion sites along the Waimatā River (Author's own creation, 2015).

12. THE RIVER HAS ITS OWN RIGHTS

Recently there has been an international move to give rivers their own voice as most rivers worldwide do not have any legal rights and as a result their health is failing (Postel, 4th September 2012). In 2013 Cormac Cullinan observed that it was ironic that rivers are not allowed to solely exist or flow "when even the most fundamental human right, the right to live, is wholly dependent on...the availability of water, and we can't have water unless we protect the right of the whole hydrological cycle to exist" (Cullinan, 2013 as cited in Barraclough, 2013). However, in Ecuador in 2008 a new law was passed which granted rights to rivers, forests, and land to ensure protection against harmful practices (Postel, 4th September 2012; The New Zealand Herald, 30th August 2012). In 2011, this law was tested for the first time when the Loja Provincial Government was sued because of its activity in Ecuador's Vilcabama River. The government had permitted the widening of a road that ran alongside the river but construction of this road forced debris and rocks into the river and increased the risk of flooding, impacting communities that resided on the banks of the river. Due to the law passed in 2008, the judge ruled in favour of the river and the road widening project was stopped immediately and the area was rehabilitated (Huffington Post, 18th September 2012).

The passing of the law in Ecuador echoed earlier statements; in 1972 scholar Christopher Stone argued that rivers, trees, and other voiceless entities actually have their own rights and should be protected by guardians with legal standing, in much the same way as children's rights are protected by their legal guardians (Stone, 1972; as cited in Postel, 4th September 2012). Later in 1972, Justice William Douglas also remarked that the river "is the living symbol of all life it sustains or nourishes – the fish, aquatic insects, water ouzels, otter, fisher, deer, elk, bear, and all other animals, including man, who are dependent on it or

who enjoy it for its sight, sound, or its life. The river as plaintiff speaks for the ecological unit of life that is part of it" (Douglas, 1972; as cited in Postel, 4th September 2012).

Ecuador's law was an inspiration to governments, communities, and individuals elsewhere who also strive to preserve their local resources (Huffington Post, 18th September 2012). In 2012, the New Zealand government granted the Whanganui River a legal voice and personhood "in the same way a company is, which will give it rights and interests". This was completed under the framework of Te Awa Tupua which recognises that the Whanganui River is an integrated and living whole and has two protective guardians: the Whanganui Iwi and the government (The New Zealand Herald, 30th August 2012). This law was approved after a long legal battle, and was passed to ensure the river's future was protected since the river holds multiple values for people who should be actively engaged in ensuring the river's wellbeing and future (Postel, 4th September 2012; The New Zealand Herald, 30th August 2012). As the late Māori elder, Niko Tangaroa, remarked "Whanganui Iwi have an interdependent relationship with the river. The river and the land and its people are inseparable. And so if one is affected the other is affected also. The river is the heartbeat, the pulse of our people.... If the river dies, we die as a people. Ka mate te Awa, ka mate tatou te Iwi" (Kennedy, 2012). For both New Zealand and the greater world, the acknowledgment of the Whanganui River as a legal entity was a milestone as it recognises that "nature cannot be seen solely as a resource to be owned, exploited and profited from; it is a living and sustaining force that needs to be honoured, respected, and protected by all of us" (Huffington Post, 18th September 2012).

Treating rivers as entities with rights is similar in practice to treating rivers as living and complex systems. Within this latter framework, rivers are seen as dynamic and powerful entities which are fully interdependent with their surrounding landscapes (Newson, 1994). Rivers are essentially "artful masters of their own existence" and "carpenters of their own edifice" (Leopold, 1994; Zucker *et al.*, 2002). If they are given a moderate degree of freedom and left to their own devices (no human intervention), rivers are able to carry out functions and adjust and evolve to balance water and sediment inputs to carry out work with minimal energy (Palmer, 1976; Zucker *et al.*, 2002). This creates a high quality environment for both people and biota (Palmer, 1976).

While the Whanganui River is the only New Zealand river to receive legislative rights, the tide is turning and it is likely that it will not be the last (Messenger, 6th September 2012). As more rivers dry out, habitats are degraded, and species are lost, it is becoming more and more important to have this conversation as current laws are doing little to protect the environment (Postel, 4th September 2012). "Temperatures are rising, fisheries are disappearing, and forests are being cut down. We need to move to a different kind of environmental protection. Our current environmental laws are all about how much we can use or exploit nature" (Huffington Post, 18th September 2012). People increasingly want more superior ethical considerations under which nature moves from being treated as property which is only valued because it can satisfy human needs (Barraclough, 2013). While rivers having a legal voice may be an excessive measure or an odd extension of rights, it is argued that there is little that is more severe than rivers having no more water (Messenger, 6th September 2012; Postel, 4th September 2012). People also recognize that this thinking just goes back in time – to when people were intertwined with their lakes, streams, and rivers and these entities sustained us, and when conscious decisions to protect nature did not need to be ordained by legal legislation (Messenger, 6th September 2012). Indeed, just like the Whanganui, one day the Waimatā River may be given legal rights to flow and exist in peace.

If the Waimatā had legislative rights this would have implications on society since less infrastructural controls could be put in place to manage the climate and flooding. The catchment has the tendency to incur intense localised frontal storms where strong gale force winds accompany torrential rainfall. At Monowai Bridge, for instance, nine out of the 219,169 hours recorded during the 1989-2015 period had torrential rainfall (>25 mm/hour) and Goodwins Bridge recorded two out of 220,369 hours as torrential (Appendix C). Treating the Waimatā as a legal entity means that it is entitled to flow, exist, and flood the surrounding land which affects the usability of this land and may result in damage to properties, bridges, farmland, and infrastructure. The Waimatā Valley experiences moderately intense flooding with a return period of between 1 in 20 years to 1 in 60 years (Figure 12). However, flooding is concentrated around channels and bridges which means that past floods have been remembered vividly and have made movement difficult up and down the valley because people lived close to the river (Gundry, 2015). Perhaps then it would be positive if the Waimatā obtained rights; in 2005 John Clarke, Gisborne's flood recovery manager, urged growers to accept "the risk when planting or leasing areas of relatively high flood hazard...with climate change expected to put the district at greater risk for intense rainfall events, increasing the risk for erosion and floods, it is time people took responsibility for living in or cropping and farming on flood-prone areas" (Gundry, 2012).

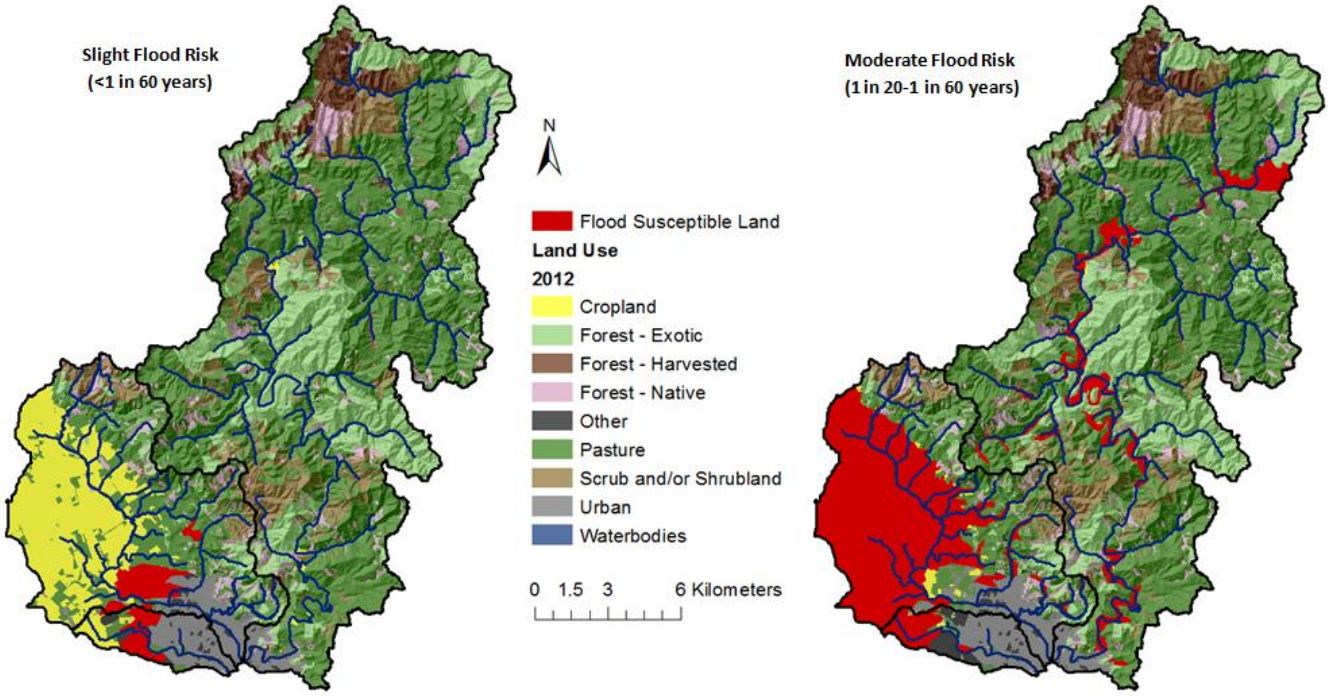


Figure 12. Flood risk land in the Waimatā, Taruheru, and Waikanae catchments (Author's own creation, 2015). Data sourced from a 2010 Landcare Research FSL Flood Return GIS layer.

In 1993, Gisborne District Council unconsciously allowed the Waimatā River to have its own rights when they identified a 285 m hazardous zone along the left back of the lower Waimatā River, between Hinaki Street and Tukura Road (Figure 13) (Gisborne District Council, 1993a; 1993b). This stretch of bank, which was 10-12 metres high and had a slope of 0.33-0.67 m/m, had slumped since 1978-1981 because material was weak and incohesive (Gisborne District Council, 1993a; 1993b). The site was deemed hazardous because it was close to Gisborne City and to the nearby Hinaki Street and Tukura Road residential area where slumps had caused structural cracks in houses (Gisborne District Council, 1993a; 1993b). From 1900-1947 the bank had shifted towards the residential area by four metres. Due to Cyclone Bola in 1988, the

bank moved towards the river between 1947 and 1988. Material was deposited in the river and carried away later by small floods, before the bank again began to erode towards residential properties. In 1993 the council estimated that an average of four metres of degradation would occur from 1993-2043, with an average of eight metres by 2093 (Gisborne District Council, 1993a; 1993b). As way of mitigation, an immediate hazard zone and a 15 metre fringe zone were created and a suite of other restrictions were suggested, as reported in Table 5 (Gisborne District Council, 1993a; 1993b). These restrictions were put in place for people who had to change their attitudes in order to allow the river to behave as it wished.

Figure 13. Hazard and fringe zones proposed by the Gisborne District Council in 1993 (Gisborne District Council, 1993a).

Table 5. Suggested methods to improve the slumping and erosion issue (Gisborne District Council, 1993a).

ISSUE	**PROPOSED RESTRICTION(S)**
Release of stormwater onto the unstable bank	• Re-design stormwater discharge. There is the potential to divert roof water away from the bank or into small 10 cm diameter pipes which flow directly into the river.
Land instability	• Plant trees to stabilise the bank through extensive root systems. Disallow removal of vegetation which is >2 metres high and which occurs at a rate higher than 10 m^2/12 months. • Place constraints on work around the river: 1) any work that leads to bank steepening or bank overloading should not be allowed without bank stabilisation measures, and 2) disturbance will be capped at 1 m^3 of land disturbed in 3 months, except for activities concerning building foundations.
River erosion	• Complete maintenance on the river frequently, to remove any items which obstruct the river flow and increase erosion on the concave bank. • Disallow any work which would result in flow abnormalities during storms or instigate undesirable impacts upstream or downstream of the impacted reach.
Damage to people, property, and infrastructure	• Prevent construction of new houses in the immediate hazard and fringe zone. • Restrict development to minor extensions to existing properties, and encourage construction of relocatable houses in the nearby area. • Allow construction of ancillary infrastructure if development meets consent requirements.

SUMMARY

The Waimatā River means a great deal to many different individuals who relate to the river in many complex and intricate ways. Management should account for all these different threads as a woven fabric:

Settlement boundary

- Iwi boundaries are divided by the Tūranganui, Taruheru, and Waimatā rivers and the sacred rock Te Toka-ā-Taiau.
- Te Toka-ā-Taiau was also a noted anchor site for waka and the formal meeting site of Māori and Pākehā on Captain Cook's arrival in October 1769. It was blown up in 1877 to increase access to Gisborne's port.
- Between 1865 and 1890 the government divided land into blocks around the Waimatā River and its tributaries. These were sold to European settlers and named by surrounding landforms.
- Land subdivision occurs around the Waimatā River as it is believed that "no one owns water".

Wai Māori: Māori cultural, spiritual, and traditional values

- The Waimatā River is valued, treasured, respected, and part of the very identity of Māori.
- Māori have a considerable knowledge of trails around the river, ways to collect kai, ways to treat resources, and the association between people and their land.
- Histories record that Rukupo was killed by raiders and Nga Waiweherua fled up the river to Motukeo in search of safety.
- Human heads were suspended above the confluence of the Tūranganui, Taruheru, and Waimatā rivers before they were removed to burial caves.
- Te Maro of the Ngāti Rakai tribe and from the Rarohou Pā was killed by Captain Cook's men.
- Many huts, whares, adzes, digouts, and trenches were built on the land surrounding the river.
- Degradation of the river has particularly affected Māori households.
- Māori want to be able to access water as a matter of right, want pollution to cease, and for their opinions to be heard and taken onboard.

Historical

- Settlers built Māori style whares before grander European style houses.
- 13 European houses are registered by the Historic Places Trust and 15 are locally significant.

Utilitarian uses

- Transport route by Māori during times of peace and war.
- Trade and whaling stations set up on the Tūranganui River by European settlers who travelled by the Waimatā to sell and purchase goods.
- Rock obtained from the river for road construction and for keepsakes.
- Potential conveyor belt to transport trees downstream during extensive deforestation.
- Wool was shipped downstream on boats and stock crossed the river.
- Small scale domestic water supply and supply for agricultural crops and stock.
- Location of at least five investigations for a larger scale domestic water source from 1879 to 1982.
- Water in the Poverty Bay aquifers at the base of the Waimatā is used by industry and commercial users.
- Relates to the theory of ecosystem services.

A dump site

- Proposed landfill site off Mander Road in the Waimatā in 2001; discontinued in 2007.

- Wastewater and sewage released at eight overflows at the mouth of the Waimatā River.
- Forestry personnel neglect to acknowledge the presence of the river or ignore regulations set out by the Forest Stewardship Council. Pea soup, hillslope erosion, and slash have resulted.
- Sheep dip and waste released into river, now restricted by tighter sustainability regulations.

Amenity values

- Beautiful aesthetics contribute to a person's health and allow nature to be enjoyed.
- Whares, woolsheds, and houses, convalescent homes, orchards, recreational buildings, and accommodation places built on flat land near to and with good views of the river.
- Decline in amenity values since settlement began, especially in storm events where there is large scale destruction: floods, slumps, siltation, and driftwood.

Recreation and community events

- The river has held a special place in people's hearts and is a way of uniting people and bringing about comradeship, competition, fun, and laughter.
- The Hole-in-the-wall, The Island, hunting, fishing, swimming and wading, scout groups, boating, rowing, canoeing, kayaking, waka ama paddling, rafting, yachting, jet boating, picnicking, watersliding, walking, cycling, and other events.
- The river is dangerous to use after storms (suspect water quality) and because of bridge jumpers.

Education

- Ideal place to educate youngsters about water safety and river survival skills to equip children with skills to protect them when they are found out of their depth in water.

Memorial venue

- At least 29 deaths (both deliberate and accidental) have occurred on the river in just 127 years.
- These are emotional and long-lasting events for those left behind, and people may consider the river to be murderous or destructive at first and a site of remembrance at a later date.
- The river has also been utilised as a memorial venue in the days following deaths.

'Hard' command and control management

- Engineering approaches and developments were completed to mitigate past damage.
- Debris racks, revetment walls, cut and channel diversion, earth dam, and dredging.
- Relates to the philosophy of rivers as machines.

Era of 'softer' river repair

- Approaches that 'work with nature' were driven by a desire to both correct past mistakes and protect the future of waterways.
- Tree planting, spraying, fencing, reversion, and channel maintenance.

The river has its own rights

- International move to give rivers their own voice, rights, personhood, and interests.
- The Whanganui River is the only New Zealand river to receive its own rights, but the tide is turning, and it is possible that the Waimatā River may have its own rights in the future.
- Relates to the philosophy of rivers as complex and living systems, where rivers are "artful masters of their own existence".

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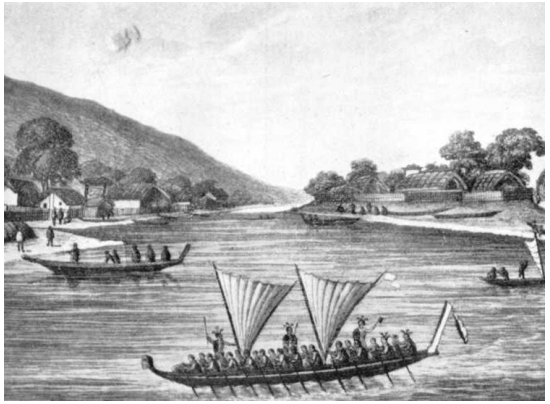
APPENDICES

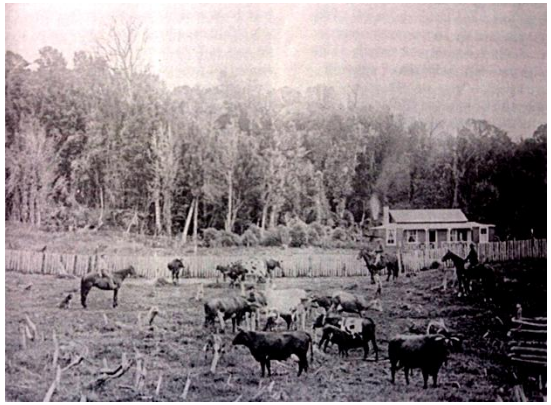
APPENDIX A: WAIMATĀ RIVER PHOTOGRAPHIC MONTAGE

Te Toka-ā-Taiau before it was blown up in 1877 (Te Runanga o Tūranganui-ā-Kiwa, 2015).

Whare at Makiri in 1890 (Tombleson, 1997).



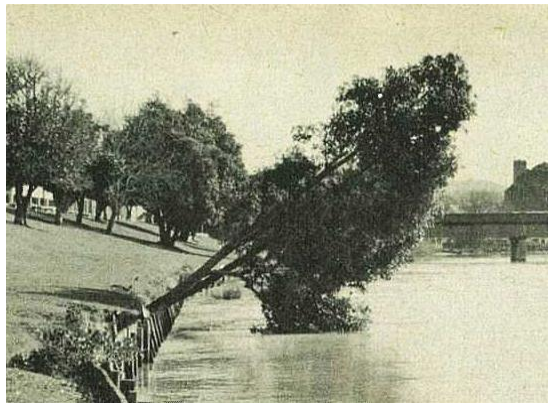
Trade ships on the Tūranganui River in 1835 (Mackay, 1949).



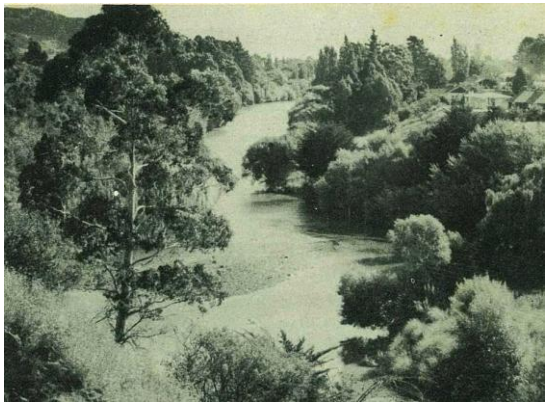
Early pioneer farming in the late 1800's at Waimatā (Tombleson, 1997).

Strathendrick at the Waimatā River/Hinakiwaiwai Stream confluence in the late 1800's/early 1900's. Sheep yards and a swim dip were 1.6 km upstream (Tombleson, 1997).

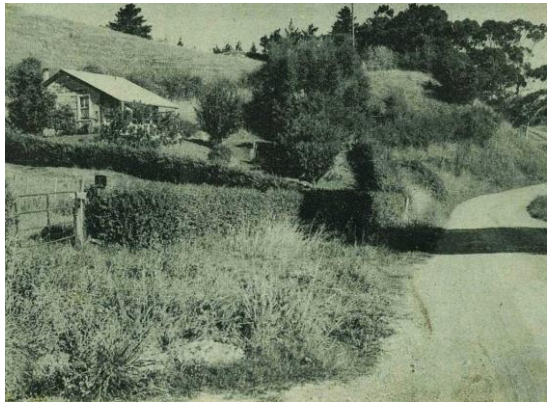
Road construction at Mangarara Forest, Waimatā Valley in the early 2000's (Hikurangi Forest Farms, 2009).



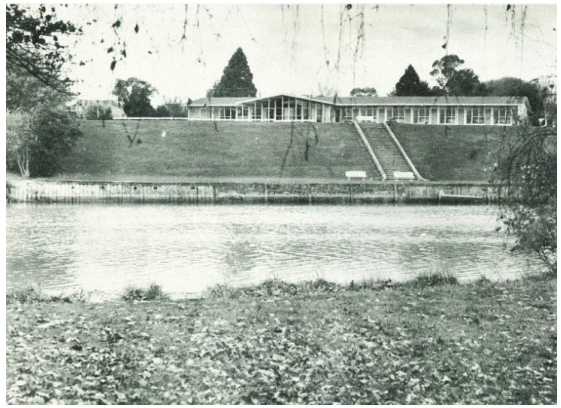
Below the Peel Street Bridge, a tree at Read's Quay comes close to falling into the Tūranganui River in 1960 (Gisborne Photo News, 11th August 1960).



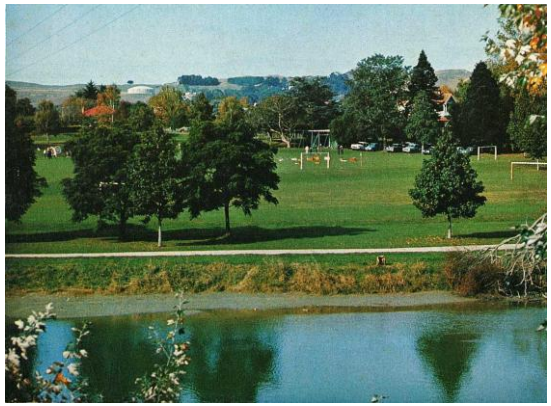
Pleasant aesthetic views of the Waimatā River in 1955 (Gisborne Photo News, 31st March 1955).



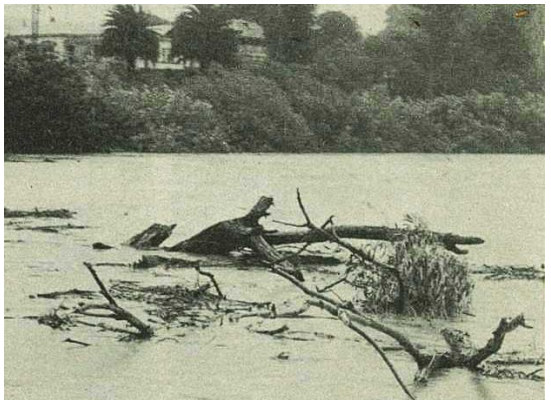
A sheltered farmhouse enjoys pleasant views of the Waimatā River in 1955 (Gisborne Photo News, 31st March 1955).



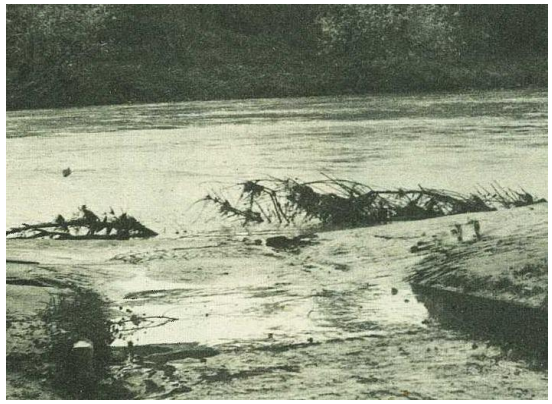
The view across the Waimatā River to the Cheeseman Road convalescent Home in 1973 (Gisborne Photo News, 23rd May 1973).



Stunning aesthetic views looking across the Waimatā River to Anzac Park in 1967 (Gisborne Photo News, 6th September 1967).



Logs and forest debris are transported down the Waimatā River to Gisborne city during a storm event in 1960 (Gisborne Photo News, 8th December 1960).



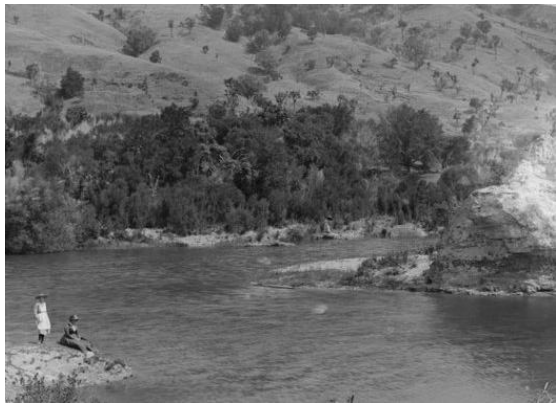
The Anzac Park boat ramp was choked up with mud and forest debris during a storm event in 1971 (Gisborne Photo News, 19th May 1971).

The Waimatā River is a muddy mess after a storm in March 2012 (Longbush Reserve, 2013b).

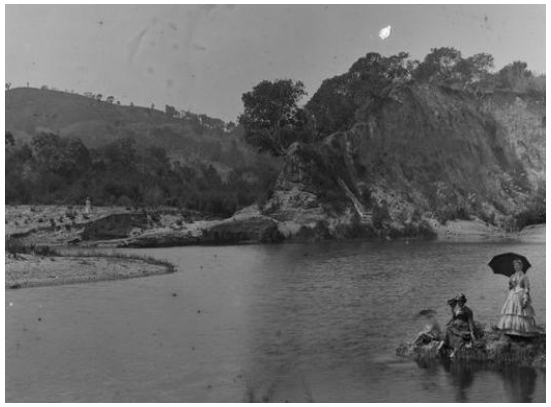
In a 2015 property ad for 673 Riverside Road, LJ Hooker portrays these slips as adding some extra character to the property (LJ Hooker, 2015).

In a 2015 property ad for 673 Riverside Road, LJ Hooker portrays these slumps as adding some extra character to the property (LJ Hooker, 2015).

Real estate agency Bronwyn Kay ignored these slumping banks at 77 Goodwin Road, and described the river as stunning in 2015 (Bronwyn Kay, 2015).



In 1882 two individuals stop in wonderment of the Hole-in-the-wall rock formation on the Waimatā River (Beere, 1882).



In 1888 three women stop to enjoy the Hole-in-the-wall rock formation (Beere, 1888).

Rowers stop to admire the picturesque Hole-in-the-wall formation in 1906 (Auckland Libraries, 1906).

Mr Con Voss from Rotorua shares his wisdom with keen anglers in 1960 (Gisborne Photo News, 6th October 1960).

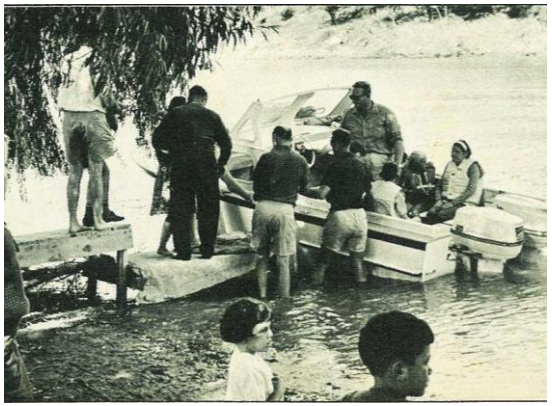
A swimming hole on the Waimatā River, date and location unknown. Sourced from Carola Cullum in 2015.

Swimmers wait in anticipation of their 183 m race down the Tūranganui, Taruheru, and Waimatā rivers in 1961 (Gisborne Photo News, 23rd March 1961).

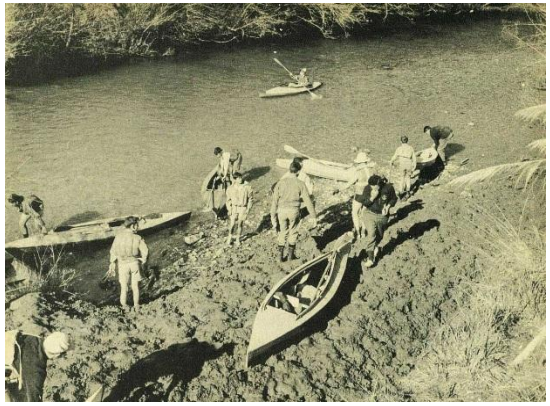
Sea Scouts compete in a rowing competition in 1955 to the backdrop of many keen spectators (Gisborne Photo News, 24th February 1955).

When the Tainui Sea Scouts launched their new boat in 1962, laughter was had as the Mayor was expected to take part (Gisborne Photo News, 17th May 1962).

A mischievous Santa made his way up the Waimatā River in a somewhat unusual fashion in December 1958 (Gisborne Photo News, 11th December 1958).



Crippled, handicapped, and under-privileged children were treated to boat rides on the Waimatā River in 1964 (Gisborne Photo News, 23rd April 1964).



Fun and competition was had when the Gisborne Canoeing and Tramping Club held canoe races on the Waimatā River in 1959 (Gisborne Photo News, 20th August 1959).

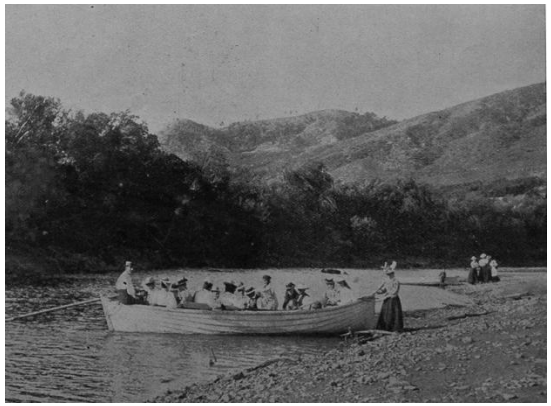
Strong connections were felt with history when waka ama races took place on the Waimatā River during Waiapu's 150th celebrations in 2009 (Waiapu News, 2009).

Rafts at the starting line of The Great Raft Race in 1964 (Gisborne Photo News, 18th June 1964).

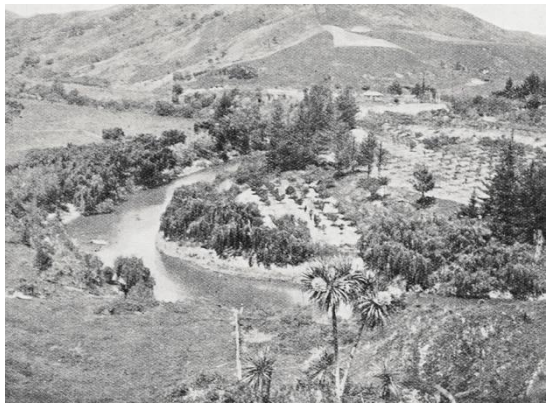
Ten rafts took part in the annual Youth for Christ Raft race in 1974 (Gisborne Photo News, 4th December 1974).

Yachts raced along the Waimatā River in 1962 (Gisborne Photo News, 22nd March 1962).

A month after the jet age hit Gisborne in 1956, the speedboat Aurora is pictured being put through its paces on the Waimatā River (Gisborne Photo News, 18th October 1956).



A popular picnicking spot on the Waimatā River in 1899, location unknown (Auckland Libraries, 1899).

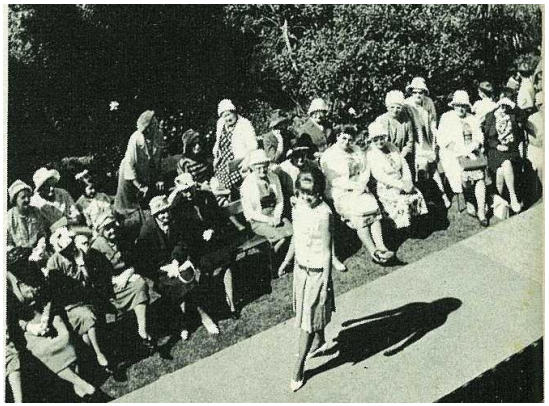


Apple Tree Bend, a popular picnicking spot on the Waimatā River, in 1905 (Auckland Libraries, 1905).

In 2014, teenagers make their own fun on a waterslide off the Waimatā River (Gisborne Herald, 28th November 2014).

In 1957, adults and children alike crane over bridges in order to catch a glimpse of Sammy the seal (Gisborne Photo News, 27th June 1957).

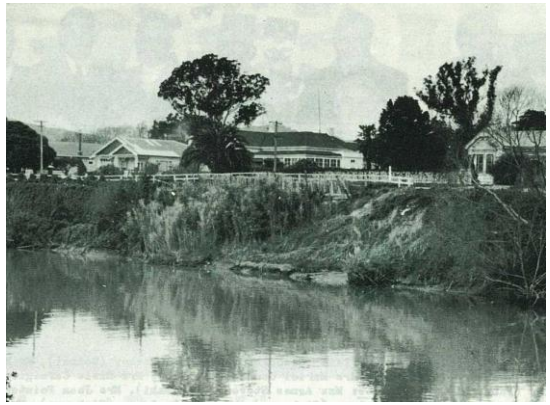
People bond in their endeavour to see Sammy in 1957 (Gisborne Photo News, 27th June 1957).



The Waimatā River was used as a backdrop for a fashion show held at Mr and Mrs Graham's place in Haronga Road in 1964 (Gisborne Photo News, 25th November 1964).

The Waimatā River was used as the triumphant end point for the 4 Corners, 3 Bridges March" in 2007 (Tairāwhiti Men Against Violence, 2007).

Rescue teams scour the Waimatā River for missing four year old Lucas Ward in August 2010 (Sharpe and Joyce, 20th August 2010).



Off the Esplanade, erosion caused by the river meant that the surrounding road was under threat of collapse in 1958 (Gisborne Photo News, 29th May 1958).

APPENDIX B: MEMORIAL ARTICLES

1911

In loving memory of our dear brother, Harold Septimus, who was accidentally drowned in the Waimatā River, February 10th, 1910.

Inserted by his brothers, George and Tom, and sister-in-law, Ethel.

In loving memory of Harold Septimus Gibbins, accidentally drowned in Waimatā River, on February 10th, 1910.

Forget him, no, we never will,
We loved him in life, we love him still;
His loving smile is as fresh today
As it was in the hour he was taken away.

Inserted by his loving Aunt Leah, and cousins (Poverty Bay Herald, 10th February 1911).

1912

In loving memory of our dear brother, Harold Septimus, who was accidentally drowned in the Waimatā River, February 10th, 1910.

He has gone like a flower cut down in his bloom
From the sunshine of life to the shade of the tomb;
But death cannot sever the chain of our love,
Nor steal the fond hope, we shall meet him above.

Inserted by his loving brothers, George, Charles, and Tom, and his sister-in-law, Ethel (Poverty Bay Herald, 10th February 1912).

In loving memory of Harold Septimus Gibbins, accidentally drowned in Waimatā River on February 10th, 1910.

We saw him last in health and strength,
No thought that death was near;
Death gave him no time to say goodbye
To those he loved so dear.
Dear is the grave where he is laid.
Sweet is the memory that will never fade.
Flowers may wither, leaves fade and die.
If others forget him, never will I.

Inserted by his loving Aunt Leah and Cousin Henry, and Mrs Lamont (Poverty Bay Herald, 12th February 1912).

1913

In loving memory of our dear brother, Harold Septimus, who was accidentally drowned in the Waimatā River, February 10th, 1910.

Someday, some time, our eyes shall see
That face we keep in memory;
Someday our hands shall clasp his hand
Just over in the Better Land;
Someday, some time, but, ah! not yet,
But we will wait, and ne'er forget.

Inserted by his loving brothers, sister, and sister-in-law, Ethel (Poverty Bay Herald, 10th February 1913).

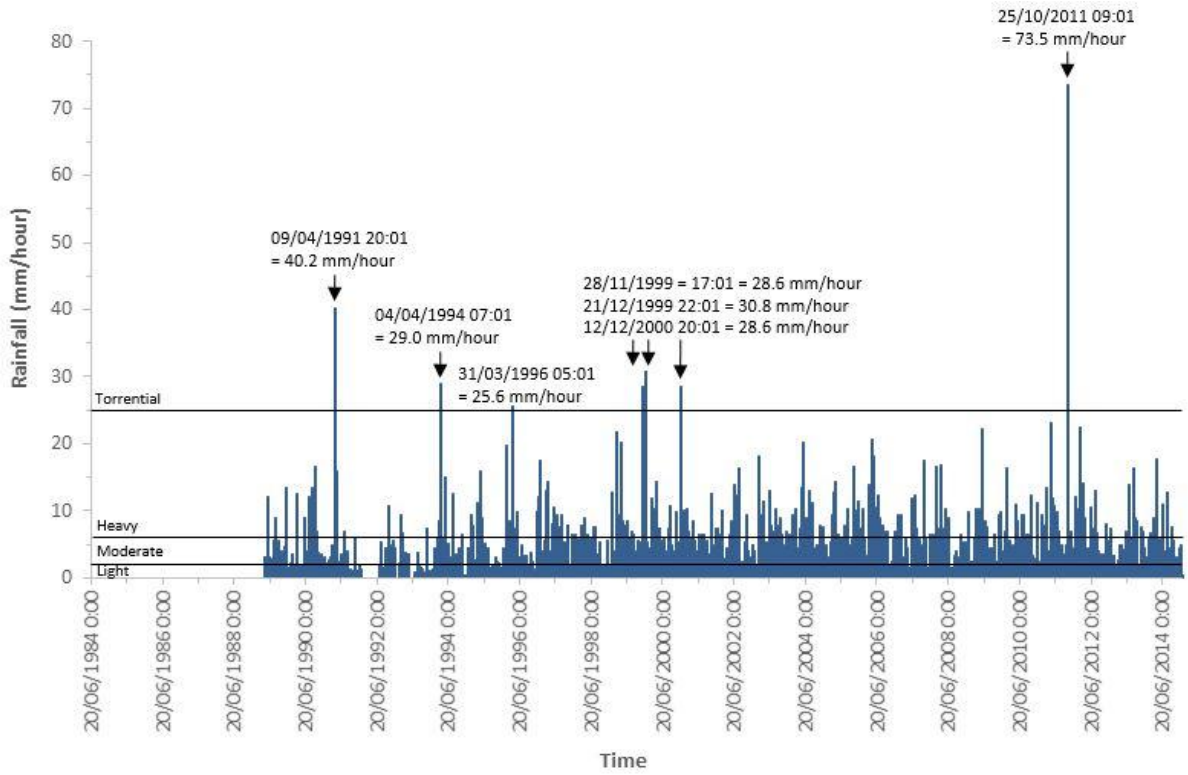
1914

In loving memory of our dear Brother, Harold Septimus, who was accidentally drowned in the Waimatā River, February 10th, 1910.

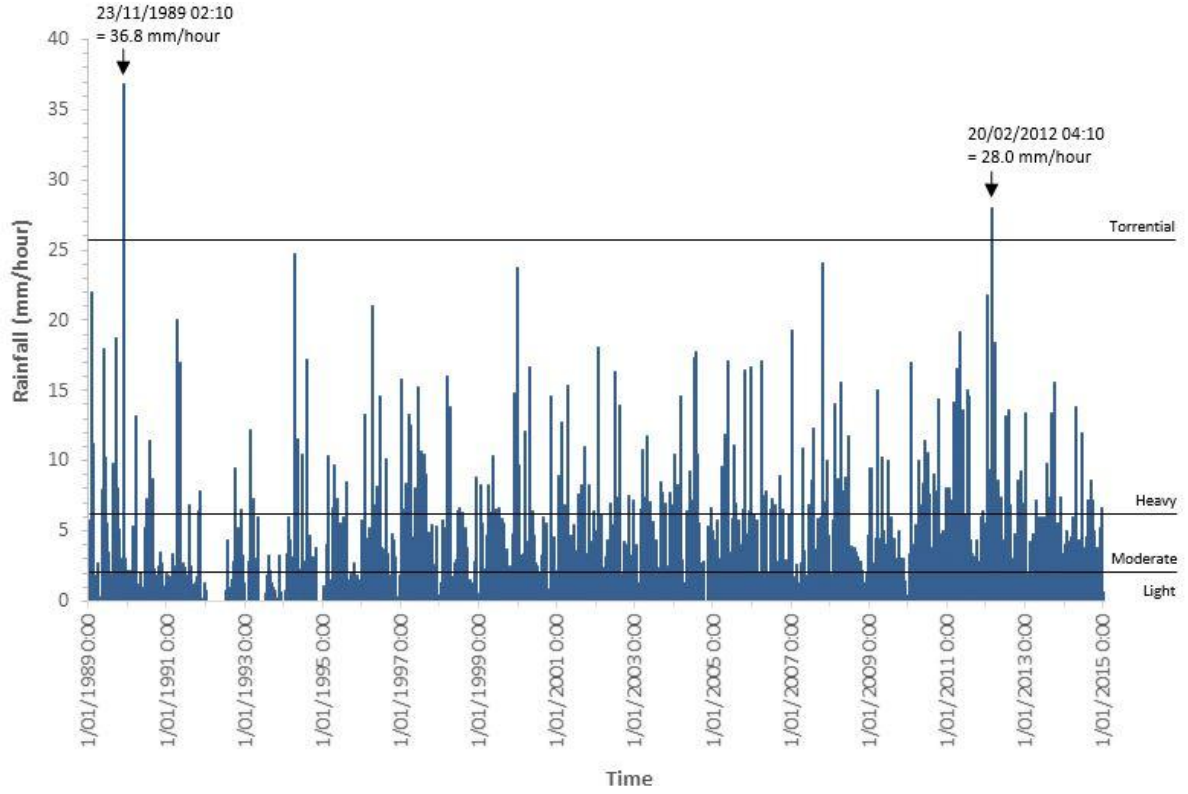
We think of him in silence,
No eye can see us weep;
But treasured in our inmost heart
His memory still we keep.

Inserted by his loving brothers, sister, and sister-in-law Ethel (Poverty Bay Herald, 10th February 1914).

APPENDIX C: RAINFALL RECORDS



Rainfall (mm/hour) recorded at Monowai Bridge from 1989 to 2015. Data obtained from Greg Hall at Gisborne District Council.



Rainfall (mm/hour) recorded at Goodwins Bridge from 1989 to 2015. Data obtained from Greg Hall at Gisborne District Council.