



*Wish you were here:  
Quantifying the Benefits  
of Mangawhai Harbour  
and Coast*

- Sustainable Mangawhai Project
- Research Note 3



### **Protecting our Environment, Sustaining our Community**

The Sustainable Mangawhai Project aims to assess the physical risks to the integrity of the harbour and distal spit and the consequences for the environment and community of any damage to them. The objective is to provide a comprehensive information base so that the agencies responsible can cooperate in the preparation and implementation of harbour management guidelines.

The harbour and its protective spit support biodiversity, recreation, economic activity, and cultural, community, and personal well-being. When considering how we might best manage the harbour, all the services it provides need to be considered.

This Research Note discusses and seeks to quantify the value Mangawhai offers to visitors.

*Wish you were here: quantifying the benefits of Mangawhai Harbour and Coast*  
Research Note 2, Sustainable Mangawhai Project  
Mangawhai Matters Inc.  
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For further information, visit [www.mangawhaimatters.com/sustainabilityproject](http://www.mangawhaimatters.com/sustainabilityproject)

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## SUMMARY

This note seeks to quantify the benefit people get from visiting and living Mangawhai. It uses four years of data from Mangawhai Heads Holiday Park (MHHP) and BachStay, supplemented by a 2023 visitor survey. It also addresses the value to residential property bach owners using valuation data.

### Visitor Trends

Numbers have been volatile. Strong visitor growth in the year ending March 2020 was followed by a fall in 2021 under the impact of Covid. A bounce back in 2022 was followed by a further fall in 2023. Overall revenues held, however, as the higher tariff bach sector increased its occupancy rates. While the traditional summer peak has fallen, 44% of accommodation revenue still accrues between December and February.

### Visitor Numbers

Knowledge of total camper numbers and the distribution of visitors by accommodation type from the 2023 visitor survey (Research Note 2) enables us to estimate as many as 52,000 average annual visits from 2021 to 2023. Second homes were estimated to cater for 29% of those visits through rentals and for 33% by owners. 30% of visitors stayed with friends and relatives, with just 9% at the MHHP.

### Visitor Benefits

Research Note 2 demonstrated just how important the natural resources of harbour, coast, and bush are. This note broadly quantifies the benefits to holidaymakers from accessing them by assuming the costs they incur to get to and stay at Mangawhai indicate the minimum value they place on visiting.

Transport costs based on the distances visitors travel and their accommodation costs are estimated to have averaged around \$57m annually over the three years 2021 to 2023

### Residential Values

Recent rapid growth reflects the value attached to Mangawhai as a lifestyle residential destination. While we have not calculated a general property premium to reflect this attraction, the premium accruing to Mangawhai properties favoured by proximity to the waterfront is estimated at \$64m, while the value of second homes is estimated at \$914m. Jointly these figures indicate investment approaching \$1bn based on the recreational services the harbour and coast provide.

### A Community and cultural taonga

The different figures – which are generally conservative - estimated indicate the value people receive from visiting and living at Mangawhai, and what could be lost if the quality of its recreational resources is diminished or destroyed.

They are only part of the story, however. Perhaps more significant, they do not include the more abstract but nevertheless important option and existence values. Option value, it can be argued, will be substantial given proximity to the Auckland urban area. Existence value is also substantial, given the long-standing relationship of iwi the harbour, the spit, the coast, and the catchment. The current community reveals its respect for the heritage value of Mangawhai harbour in its substantial commitment of funds and time to preserving, maintaining, and restoring elements of its heritage.

## 1 Introduction and Outline

*The Research Note seeks to quantify the benefits people enjoy in Mangawhai. It deals primarily with holidaymakers. Their presence reflects the significance of the recreational services provided by the harbour and coast. These are also reflected in residential values. While it is difficult, and perhaps not appropriate, to put a dollar value on culture, the Mangawhai environment embodies a strong and long-standing association for tangata whenua, while the value attached to its heritage is reflected in the commitment made to the preservation and restoration of symbols of its past by the community today*

This note is one of four aimed at identifying how the community might be impacted if the quality of the harbour and environs were to degrade and lose appeal as a recreational and cultural resource.

Research Note 2 in this series reported on a survey of what visitors do in Mangawhai and what they and residents consider important about the destination. It largely confirmed what we already knew: people come to Mangawhai to enjoy a range of recreational opportunities in an attractive natural setting. Swimming in the sea and the harbour are major pastimes enjoyed by the majority. Walking the coast and bush tracks are also highly popular activities among visitors and residents.

### **Recreational Ecosystem Services**

Recreation is one of the numerous benefits that individuals and societies gain from landscapes and natural environments. Whether it is the ability to hike through an alpine meadow, the joy of bicycling in an agricultural landscape, or the relaxation of taking a walk through an urban green space, nature provides an array of diverse recreational possibilities. Identified in the Common International Classification of Ecosystem Services ... as an important class of cultural ecosystem services (CES), recreational ecosystem services (RES) benefit people through improved physical health (e.g., exercise), and psychological and emotional well-being. ... Recreational opportunities also often provide an economic basis for communities and related businesses.

- Hermes et.al. (2018) "Assessment and valuation of recreational ecosystem services of landscapes" Editorial, *Ecosystem Services*, 31: 289–295,

When we think about the value of holiday making and tourism generally, there are two components, the benefits to the visitors and the benefits to the destination. The latter reflects the spending visitors bring to the community, and the local incomes and jobs that result from it. This is termed an economic impact and was analysed in Research Note 1. It is summarised in Section 2, below.

The focus of this note shifts to the benefits that people gain from visiting or living in Mangawhai. Section 3 describes background on visitor accommodation bookings over the past four years, when they come, the size of individual groups of visitors. It estimates total visitor numbers and what they pay to get to and stay at Mangawhai as a conservative measure of the value they place on the benefits it offers.

Section 4 considers how these benefits might be reflected in the values of properties. Section 5 discusses the notion of cultural value, seeing it reflected today in the level of community commitment to activities associated with Mangawhai's past, among other things.

While the estimates of value differ among these different elements of the Mangawhai community - visitors on holiday, owners of dwellings, whether primary or secondary noes, and the commitment of volunteers - jointly and individually they give some idea of the value Mangawhai harbour and coast provide today.

## 2 Visitor Spending in Mangawhai

It is important to distinguish between how much people spend to get to and stay in Mangawhai (which can be used as a proxy measure of the benefit that they derive from visiting), and how much they spend while there (which is a measure of their economic impact on the local community).

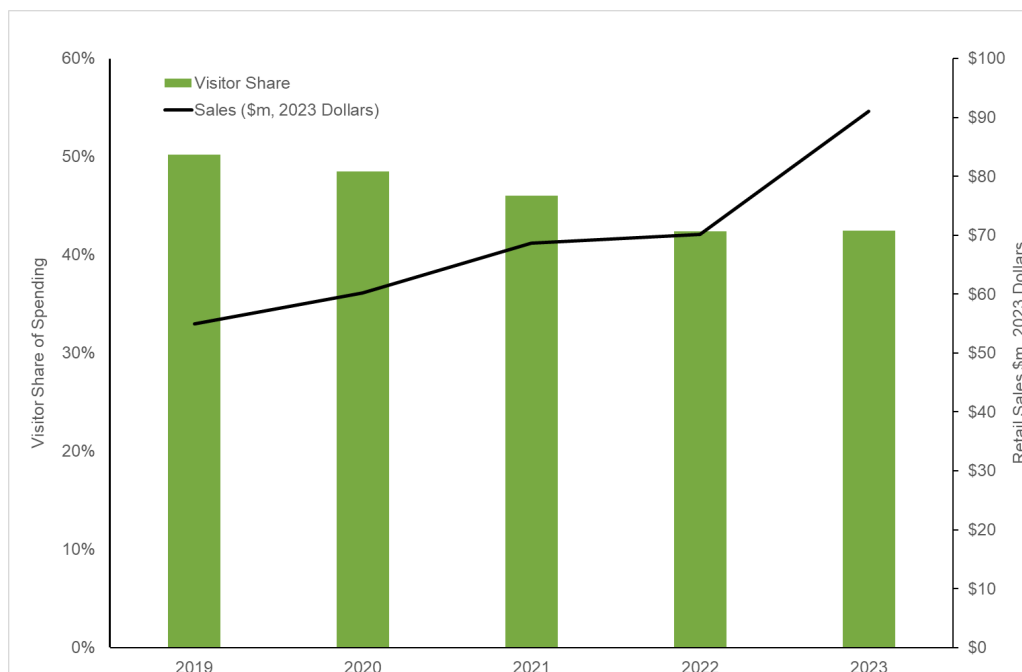
The latter is a transfer of spending from their home locality. While not creating value nationally, it is nevertheless important for its contribution to the local economy. This transfer is the subject of Research Note 1. Some of the results are summarised here.

Visitors spend money on local goods and services. The former covers retail outlets, the latter services such as the doctor, car and boat repairs, entertainment, and commercial recreational activities, like golf, fishing charters, or entry charges to the museum. Over the five years to March 2023 visitors accounted for 45% of store-based spending in Mangawhai, the highest share being in the hospitality sector (cafes, bars, and restaurants at 60%) and the lowest in the grocery sector (39%).

Dependence on visitor spending has been changing, though. The impacts of Covid lockdowns in 2020 and 2021 and a wet 2023 La Nina summer reduced the number of visitors and the time they spend in Mangawhai. At the same time, growth in spending by residents has been little short of spectacular and, if anything, was boosted by Covid, growing by 90% over five years.

Visitor spending as a share of the total consequently fell (Figure 1). While 50% of Mangawhai sales were to visitors in the year ending March 2019, four years later the share was 42%. However, the amount spent increased in real terms (2023 dollars) from \$28m in 2019 to \$39m in 2023.

**Figure 1 The Visitor Share of Total Retail Sales in Mangawhai 2019-2023 (March Years, 2023 Dollars)**



### 3 The Holiday Sector

*This explore the other side of the equation – what is the value to people of visiting Mangawhai. benefits. It aims to quantify the benefits visitors get from visiting Mangawhai using visitor records provided by Mangawhai Heads Holiday Park (MHHP) for the five years to March 2023 and similar records for four years to 2023 provided by private bach operators, BachStay<sup>1</sup>. These sources are complemented with results from the 2023 visitor survey.*

By way of background, it first describes visits (bookings), nights booked, visitor numbers, and revenue (adjusted to March 2023 dollars) for these two operators. It then uses this information and the results of the visitor survey to estimate total annual visitor numbers.

#### **Who are the visitors?**

Overnight visitors to Mangawhai are assumed to be holidaymakers. They may stay at a public camping ground (primarily Mangawhai Heads Holiday Park), rent baches, or stay with friends or relatives. (Former camping grounds at the Domain, on Moir Point, and Black Swamp Rd have been transformed into sites for dwellings with limited camping capacity).

Some of these people will holiday regularly in Mangawhai, others only occasionally. Some may stay for just a night or two as passers-by during multi-destination holidays or road trips.

Second home (or bach) owners are another group of holidaymakers. Having made a significant investment in Mangawhai, they can be expected to visit frequently and stay for extended periods. (In some cases, the “second home” in Mangawhai may be more substantial than the “first home”, which could be an apartment in Auckland, for example).

Day visitors are a group distinct from holidaymakers. They may simply be passing through; live elsewhere in Kaipara or be staying in nearby parts of adjoining districts (Auckland and Whangarei). Some of them may visit regularly for personal business, shopping, or recreation.

#### **Terminology:**

The analysis treats *visits* or *bookings* as equivalent terms for overnight visitors. It uses the term *holidaymaker* to distinguish over-night from *day visitors*. It also talks about groups (multiple-person bookings) and length of stay (LOS), or the number of nights a group stays. It also treats baches and second homes as one and the same, despite any inference of difference in substance and style.

#### 3.1 The Recent Record

*This section describes recent trends in holiday numbers from data supplied by MHHP and Bach Stay to provide some background to the subsequent analysis of the benefits of visiting. It describes some of the characteristics of holiday-maker visits that can be used to assess how many come and what they spend to be here in subsequent sections.*

The figures from the two operators were combined to ensure confidentiality of their individual data. Together, they accounted for 24,500 bookings over the four years to March 2023, at an average of 3.1 nights. In 2023, 6,600 bookings accounted for a19,300 nights’ accommodation. At just under 3 nights, this was a slightly shorter average length of stay than over all four years.

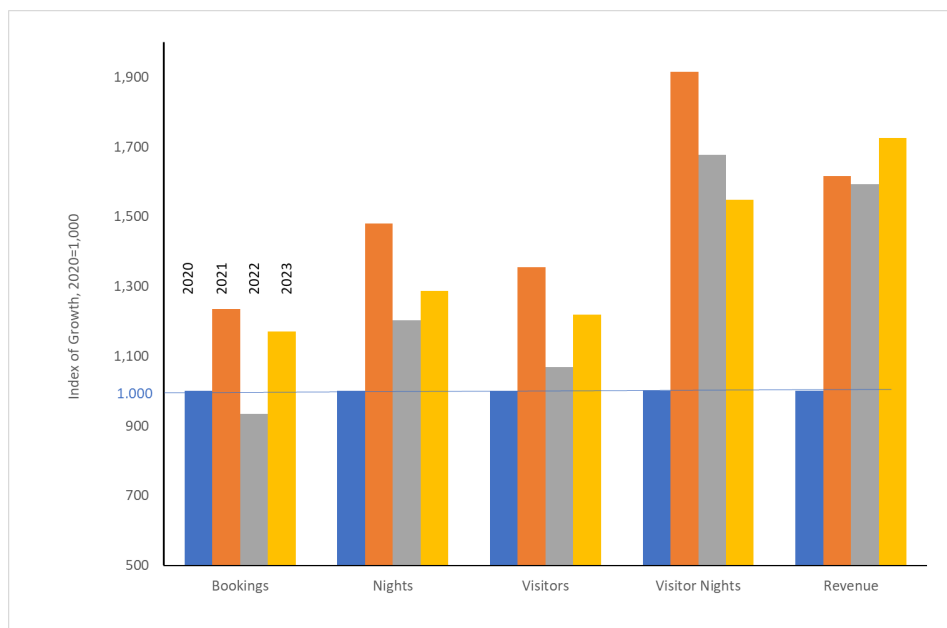
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<sup>1</sup> Bach Stay and Bach Care act as agents for owners who make their properties available as holiday accommodation.

Bookings grew by 17% from 2019 to 2023, and length of stay by 15%. The growth was driven mainly by the bach sector, with a 60% gain in nights sold.

Figure 2 shows changes in four indicators of holiday-maker presence over the four years: bookings (visits), nights sold, visitor numbers, and the cost of accommodation. The figures are converted to indices with a common base of 1,000. This enables the rates of change to be compared between indicators. Revenue was first converted to 2023 dollars.

**Figure 2 Visitor Activity Indicators, 2020-2023**



There are two key observations:

- (1) There was significant volatility in arrivals over just four years. Strong bookings growth in 2021 was followed by a substantial contraction the next year, and then a modest recovery in 2023;
- (2) Differences among indicators reflect more subtle changes. Length of stay fell even as visits grew in 2023, presumably reflecting the poor weather. Gains in bach bookings were possibly a response to the Covid lockdown with the bounce back explaining revenue growth in 2023.

### 3.1.1 The Summer Peak

While most data were aggregated for reasons of confidentiality, some differences between campers and bach users can be shown (Table 1).<sup>2</sup> Bach users are less concentrated in summer (December to February) than campers, and they tend to stay longer. In both groups, though, there has been an increase in visits outside the summer peak post-Covid (in March year 2023).

<sup>2</sup> The analysis omits around 50 long-term caravan rentals. On average, their owners stay around 34 days a year.

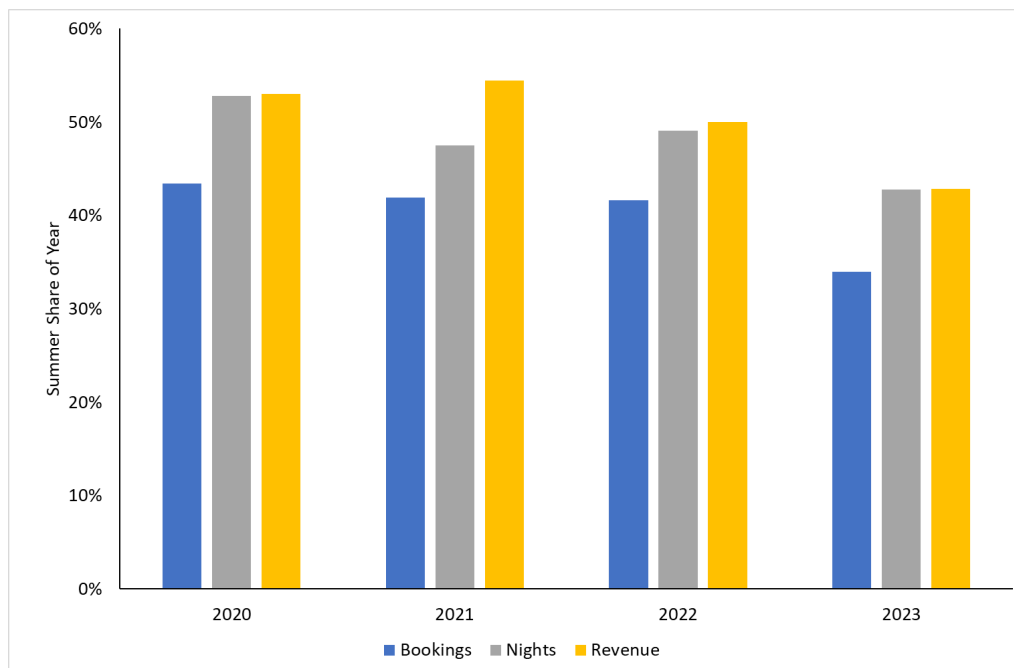


**Table 1 Holiday-Maker Characteristics**

		2019	2020	2021	2022	2023	
Total Bookings		NA	5,657	6,991	5,283	6,620	
Total Nights Sold		NA	14,994	22,202	18,041	20,456	
Summer Bookings (Share of Year)	Bach	NA	43%	42%	33%	29%	
	MHHP	47%	44%	42%	46%	36%	
Length of Stay (Average Nights)	Bach	NA	4.0	3.8	3.8	3.6	
	MHHP	2.8	2.3	2.9	3.2	2.9	
Average Group Size		MHHP	3.0	3.0	3.2	3.3	2.9

Nights stayed are more peaked than bookings because of longer holidays over summer than the rest of the year. In the years ending March 2020, summer accounted for 53% of revenue compared with 45% in 2023. Seasonality declined on all three measures after that. Summer bookings in 2023 were just 34% of the total, reflecting a wider spread of visits over the year, especially among bach users, and a poor summer season in MHHP.

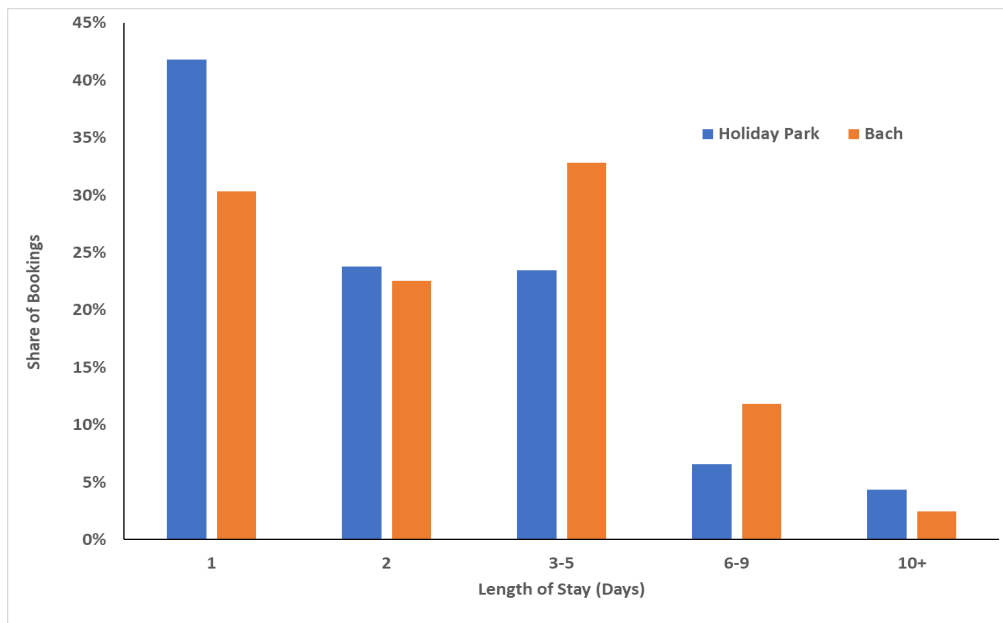
**Figure 3 Changing Seasonality: Summer Share of Activity**



### 3.1.2 Length of Stay

A bigger share of single-night stays at MHHP reflects the impact of short-stay campervans (Figure 4), although the majority of MHHP visitors (48%) stay between two and five days. While 30% of bach stays are overnight, many more stay between three and nine nights (42%).

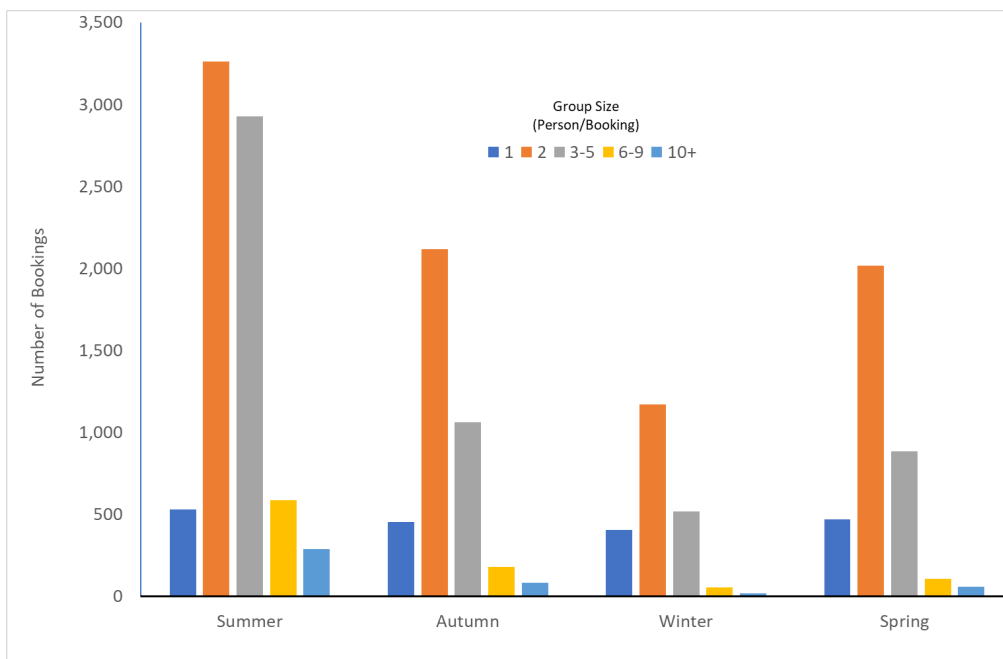
**Figure 4 How Long They Stay - Campers and Bach Renters, 2023**



### 3.1.3 Group Size

Turning to the number of campers per booking<sup>3</sup>, a large share of couples reflects the growing presence of campervans and caravans (Figure 5). Couples are the dominant summer group in terms of total bookings, but not in terms of total visitors. They are also less peaked (at 43% in the summer) than the larger groups. 56% of typical family-size bookings (3 to 5 people) and 70% of the larger 6-9 people group are in the summer. Single person visits are most evenly spread.

**Figure 5 Group Sizes, MHHP Bookings 2019-2023**



<sup>3</sup> BachStay data did not record persons per booking, so Figure 4 shows variations in group size at MHHP only.

In summary, growth has been stronger and more consistent in higher value bach accommodation, which offers longer bookings, although group size is unavailable from this data. While MHHP visits and visitor numbers are more peaked, the off-peak periods are sustained to an extent by the two-person touring market, trends that are holding up overall revenue growth. The level of the summer peaking generally appears to be diminishing with bach bookings showing a wider spread as numbers grow.

### 3.2 How Many Visitors?

This section provides estimates of annual visitor numbers. With no other source available data, from the summer visitor survey (Research Note 2) and the bookings data provided by BachStay and MHHP are used to estimate annual visits, visitors, and visitor nights.

The starting point is the distribution of respondents to the visitor survey across accommodation types (Table 2). Annual bookings data for MHHP can then be used to estimate visits across the other three accommodation categories by assuming that the share of respondents who were camping (10.9%) is a reasonable estimate of campers as a share of all visitors to Mangawhai.

**Table 2 Accommodation used by survey respondents**

	Heads Holiday Park	Rented Bach	Own Bach	With Friends or relatives	Total R respondents
Bookings	20	57	36	71	184
Nights	52	165	121	258	596
Visitors	69	244	152	258	723
Share of Bookings	10.9%	31%	20%	39%	100%
Share of Nights	9.5%	34%	21%	36%	100%
Share of Visitors	9.5%	34%	21%	36%	100%
Nights/Booking	2.6	2.9	3.4	3.8	3.2
People/Booking	3.5	4.3	4.2	3.7	3.9

Rather than use actual figures, however, MHHP booking numbers were rounded and averaged over three years (2021 to 2023). This smooths annual variations (Figure 3) It also avoids revealing actual numbers. The result suggests around 40,500 visits to Mangawhai in a “typical” year. This total was then allocated across accommodation type based on their shares of respondents (Table 3). The results provide a “base case” for estimating the benefit in monetary terms of visiting Mangawhai.

This estimate will be distorted by differences in the frequency and timing of visits over the year across the accommodation categories. The following adjustments have been made to compensate.

First, bach owners are likely to be under-represented in a summer-only survey as they make more visits through the balance of the year than other categories. Surveyed bach owners indicated that they visited an average of seven times during the four months December to March. It can be assumed that they also visit Mangawhai at least once a month for the balance of the year, for maintenance, public holiday, and school holiday purposes. This suggests around 15 visits a year for bach owners, with just under half (47%) taking place during the period over which the survey took place. On these grounds, it was decided to scale up the total visits by bach owners by a factor of 2.1.

Second, while it can be reasonably assumed that people renting a bach visit only once a year, they are also likely to be under-represented to the extent that they are less likely to have visited the survey sites than other visitors (see Research Note 2, Appendix 3). Also, the BachStay data indicates

that the summer months account for just 35% of bach renters' visits compared with 43% of all visitors to MHHP. On these grounds, the number of renters were scaled up by 1.18 (i.e., 0.41/0.35).

No adjustment was made to the visitor to friends and relatives category (VFR) on the grounds that they were more likely to visit the survey sites and be interviewed than other groups and that their numbers are likely to be oriented to the summer holiday period in much the same way as campers.

The revised figure of 51,600 visitors/year may be considered the better estimate for present purposes (Table 3).<sup>4</sup> The average length of stay and group size derived from the visitor survey has been applied to estimated visits by category (except camping, which have actual data) to give an estimate of total nights of accommodation sold and total people visiting (Table 3).

**Table 3 Indicative annual visitor numbers**

	Holiday Park	Own Bach	Rental Bach	Friends & Relatives	Total
Visits	4,400	16,800	14,800	15,600	51,600
Nights	11,400	48,600	49,700	59,000	168,700
People	15,200	71,900	62,500	57,300	206,900
Average	2.6	2.9	3.4	3.8	3.2
Group	3.5	4.3	4.2	3.7	3.9

Based on average MHHP visits, 2021-23

One check on the plausibility of the figures related to bach use is to identify the accommodation capacity potentially provided by second homes or baches. The 2018 Census indicated 906 empty dwellings in early March (in addition to 290 with owners absent). Taking this as a measure of the bach stock, there would have been around 110,000 nights of accommodation available over the four months December to March when the visitor survey was conducted<sup>5</sup>.

The estimate of owners' visits, above, suggests that 47% of these take place over that period, i.e., around 22,900 (Table 3). The data on renters indicates that 53% of their visits take place over the same period, or 26,300. This leads to an estimate of 49,000 nights accommodation demand by bach owners and renters over that period, or 45% of estimated capacity. This is plausible: although it is unlikely that higher occupancy would be achieved, it is also likely that the capacity available has increased significantly since our 2018 base.

The figures in Table 3 and 4 provide a basis for estimating what people spend to visit Mangawhai in Section 3.3, below. They can be considered conservative to the extent that they do not fully reflect the high visitor numbers evident pre-Covid (year ending March 2021).

<sup>4</sup> The share of people staying with friends and relatives compared with those staying at MHHP appears reasonable. Residents and bach owners surveyed indicated that the majority hosted people over the summer (95% and 73% respectively). No adjustment was made in this case.

<sup>5</sup> 2023 Census results are not yet available. However, with 710 consents issued over calendar years 2018 to 2022 (Stats NZ) and assuming a 90% completion rate with between 10% and 20% second homes, the available stock will have increased by between 60 and 130 dwellings, or by up to 14%.

### 3.3 The Value of Visiting Mangawhai

This section provides an estimated of what people spend to visit Mangawhai. This can be considered a monetary representation of the value they receive directly from their visits. It is estimated using the data provided by the operators and the results of the visitor survey described in Research Note 2.

Section 3.3.1 describes how recreational benefits may be valued. Section 3.3.2 provides an estimate of the travel costs incurred by visitors and Section 4.3 sets out the accommodation costs incurred.

#### 3.3.1 Valuing Recreation

Methods have been developed to value intangible benefits for use in the economic analysis of decisions about natural recreational assets such as parks, beaches, and bush. The easiest approach for valuing destinations that attract visitors (such as national parks or heritage sites) is to identify what people spend to access them (use value) by way of trip and accommodation costs and entry charges, if they apply.

The tangible costs incurred by users to access recreational resources, such as the goods, accommodation, or food they purchase when there, represent revenue to local businesses (Section 2.1). While they do not add to national economic activity (but simply transfer spending from elsewhere) they are they are considered a local economic impact, generating income and jobs in Mangawhai rather than somewhere else.

On the other hand, the act of coming and participating in recreation creates value to the visitors known as *use value*. When quantified, use benefits can be used to assess the value of using resources (in this case the recreational ecosystem services provided by Mangawhai Harbour and coast) in conventional cost:benefit analysis. They provide a figure against which expenditures intended to protect the utility of the harbour for recreation, or to direct it to other uses which might exclude recreation, can be assessed.

It is not only visitors who receive benefits from a destination. Non-users may value the opportunity to visit or use an amenity should they wish or get the opportunity to. This is known as *option value*.

Others may have no expectation of visiting but gain satisfaction from knowing the resource is there (*existence value*). People may be happy to pay a tax or donation to protect a particular landscape, heritage or cultural site, or an endangered species, because they value what it represents.

Identifying all these sources of value – use, option, and existence - is important for developing policies for the restoration or protection of natural, cultural, and heritage resources. It enables the benefits of policies to be weighed against their costs, even if the benefits are intangible.

Although Mangawhai Harbour has option and existence value, no attempt is made monetise them here given the cost of collecting the relevant data, usually through expensive survey design directed towards the wider population. Instead, we rely on our measure of use value to represent the benefits received by visitors.

#### 3.3.2 Estimating Travel Costs

The first cost visitors incur to take advantage of Mangawhai’s recreational resources is the cost of getting there (and back home). Estimating a figure for this involved:

1. Estimating the number of visitors by accommodation category (Section 4, above).

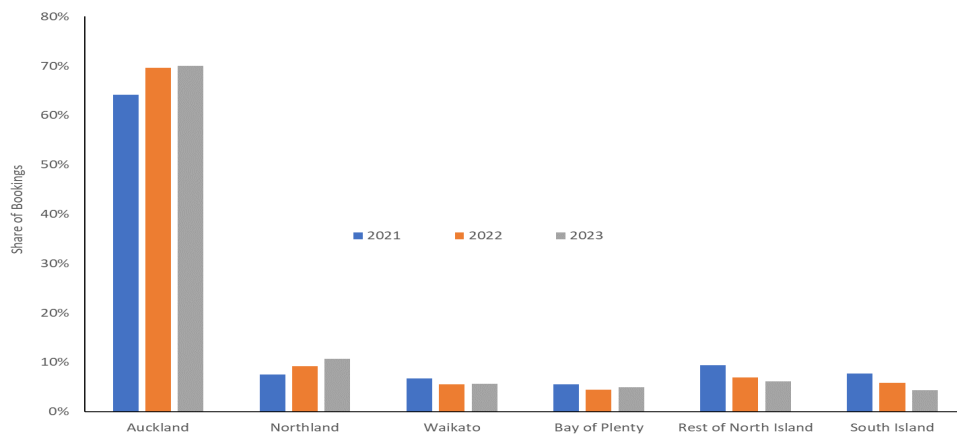
2. Removing overseas visitors and Mangawhai residents<sup>6</sup> from the analysis;
3. Allocating all bookings that gave a home address (or locality) to the relevant region;
4. Assigning a representative “origin” to each region based on the dominant localities within them (usually the principal city) and calculating an average travel distance and travel time to Mangawhai for all visits originating in that region;<sup>7</sup>
5. Applying representative vehicle and (weekend/holiday) travel time costs (sourced from the Waka Kotahi, *Monetised Costs and Benefits Manual*, (March 2023)) to those distances;
6. Adding a representative vehicle charge for the Cook Strait crossing for South Island origins;
7. Discounting costs incurred from origins more than four hours from Mangawhai to allow for any recreational benefits they derived from staying at destinations *en route*;
8. Multiplying the resulting total trip cost for each origin by the visits from the relevant region.

The parameters used for these calculations are provided in the appendix.

### 3.3.3 Where visitors come From

New Zealand visitors were allocated to their home region. This was done for campers using three years of MHHP bookings data which included the origin (by address, town, or region) for most bookings. Over 91% of bookings listed an address. Of these, 8% were from overseas. Of the New Zealand bookings, 91% (11,110) provided a home address (Figure 6). Aucklanders accounted for 70% of all New Zealand visitors to the MHHP over the past two years. Visitors from Northland increased to 11% of the total in 2023. Those from further afield were well down in absolute and percentage terms from two years earlier.

**Figure 6** Origins of Domestic visitors to Mangawhai Heads Holiday Park, 2021-23

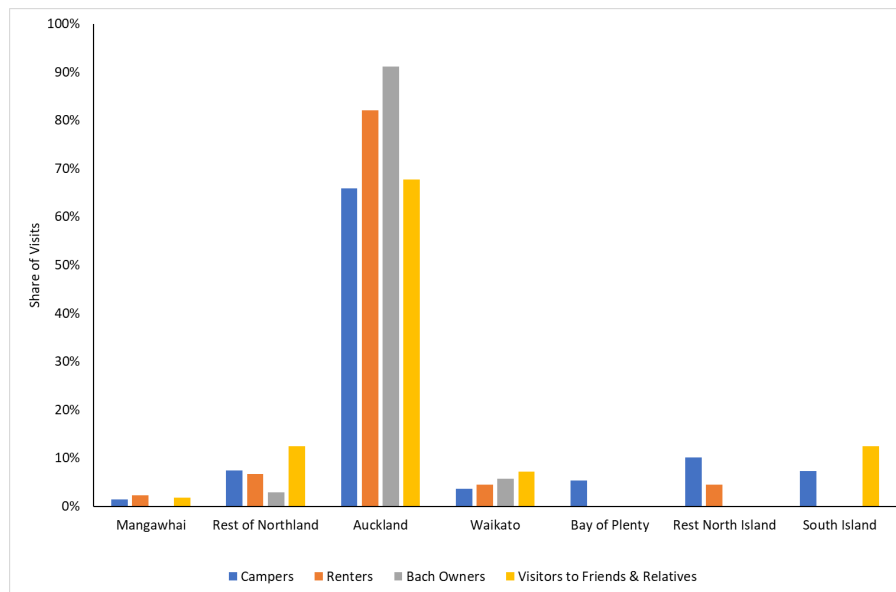


The origins of visitors in the other categories were based on information gathered in the visitor survey. Although the number of respondents involved were small, the pattern of origins appears consistent. Visitors across the board were overwhelmingly from Auckland (0). Campers and people staying with friends and relatives were the least concentrated. Not surprisingly, second homeowners were most likely to come from Auckland (91% of respondents in that category).

<sup>6</sup> A few Mangawhai residents move to the MHHP in the holiday season and rent their residences to holidaymakers.

<sup>7</sup> Auckland bookings were from visitors across the region, from Tuakau to Hibiscus Coast, but favouring the west and the North Shore. The Constellation Drive/SH1 intersection was used as the representative node for Auckland.

**Figure 7** Origins of Visitors by Accommodation Type



### 3.3.4 What it costs them to get to Mangawhai

The second step was to estimate the return travel costs incurred by visitors. The economic value of a resource such as a national park, a heritage or culturally significant site, a museum and the like can be measured by identifying what people are prepared to pay to access it. This includes travel costs, accommodation costs, and access charges. If charges are not made (as in New Zealand national parks for example), the benefit is at least equal to the cost of getting and staying there.

For this analysis, travel costs were based on representative vehicle and trip time costs for getting to Mangawhai (including provision for a ferry crossing for South Island visitors) from representative nodes in each region of origin. Round-trip costs were discounted from more distant origins to account for the value visitors may receive from staying at intermediate destinations. The discount was applied to origins beyond 330km; a four-hour trip from the Bay of Plenty falls in this band. Every *additional* four hours was assumed to involve an overnight stay yielding a benefit which offset equivalent to 20% of the travel cost. Based on this approach, travel costs from Gisborne, for example, are discounted by 20%, the southern North Island and northern South Island by 40%<sup>8</sup>, and the balance of the South Island by 60%. Details are provided in Appendix One

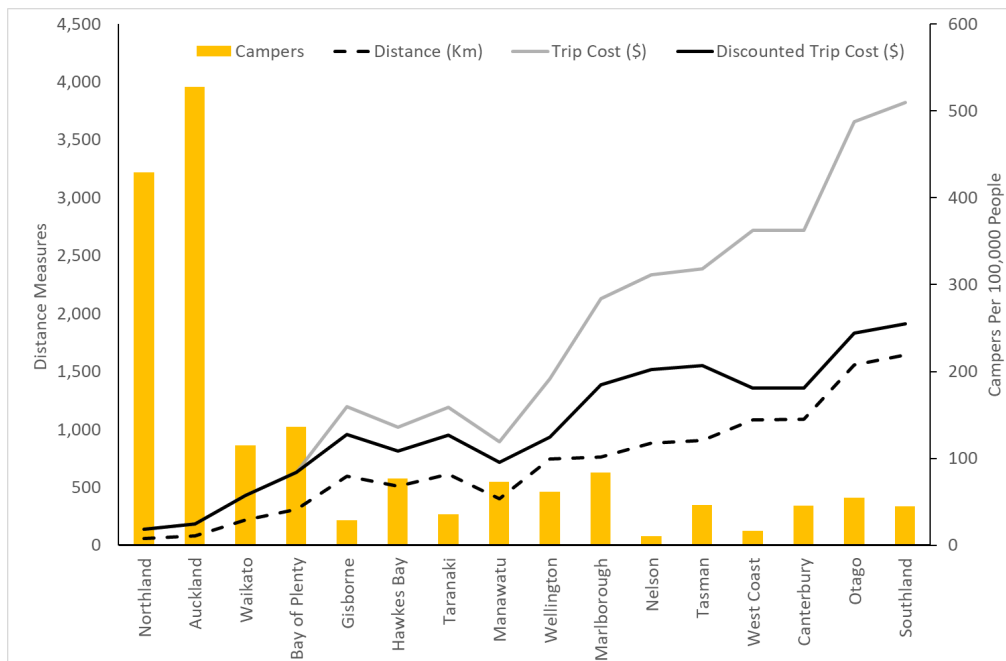
The level of visitation of people from each region is set against the distance measures in Figure 8, with visitor numbers expressed as the number per 100,000 people. Proximity is clearly critical: Auckland dominates, followed by Northland, the Bay of Plenty and Waikato.<sup>9</sup> Beyond these regions, there is only a modest decline in visits with distance<sup>10</sup>. Relative and absolute levels of visitation highlight the importance of the Auckland visitor market to activity in Mangawhai, and, conversely, the significance of Mangawhai as a holiday destination for Aucklanders.

<sup>8</sup> The day allowed for Cook Strait was not counted to reflect the value of the crossing experience.

<sup>9</sup> The regional level of measurement may distort the relative distance measures between Auckland and Northland, given that the Auckland boundary falls just south of Mangawhai. In addition, Northland's population is dispersed, with many intervening opportunities by way of the combination of sheltered waters, harbours, and open coast.

<sup>10</sup> The correlation between visitors/100,000 people and the log of the discounted travel cost across regions is  $r=0.88$ , confirming (1) the dominance of proximate markets and (2) the weak relationship between visitation and transport costs beyond the northern North Island.

**Figure 8 Distance, Trip Costs, and Visitor Numbers\***



\* Visitor Numbers based on three years of MHHP data.

By multiplying the estimated visits from each region by the cost of getting to Mangawhai, it is possible to derive a total travel cost. Four set of results were generated, one each for the high and low visitor estimates and between them, one each for the undiscounted and discounted transport costs. Because the focus is on the benefits to visitors, the discounted costs are preferred as they allow for benefits gained during longer trips.

The midpoint of these low and high visit estimates (\$11.3m in total) is adopted as the best estimate of travel costs for this analysis.

**Table 4 Indicative Annual Visitor Travel Cost Estimates (\$m)**

Visitors:	Undiscounted		Discounted	
	High	Low	High	Low
Campers	\$2.1	\$2.1	\$1.5	\$1.5
Bach Renters	\$3.1	\$2.8	\$3.0	\$2.7
Bach Owners	\$3.3	\$1.9	\$3.3	\$1.9
VFR	\$4.3	\$4.3	\$3.9	\$3.8
<b>Total</b>	<b>\$12.8</b>	<b>\$11.0</b>	<b>\$11.7</b>	<b>\$9.8</b>

### 3.3.5 What they pay to stay

Mangawhai has limited commercial accommodation. With other campgrounds converted to residential cabins or closed to the public, MHHP is the principal site for holiday rentals of tent and caravan sites. The bookings data provides an accurate record of commercial camping visitors. Private bachs are the other source of commercial accommodation. Motel or hostel capacity is almost non-existent. BachStay data shows recent trends and spending in the rental accommodation market.



Payment for bach accommodation is made to owners, often via intermediary “consolidators” such as Air BnB or Booking.Com. The owners themselves are most likely to be residents in Auckland or elsewhere, not Mangawhai. That means only a small share of total expenditure on baches may stay in Mangawhai (for servicing and supplies, for example), although spending by renters contributes directly to local business activity (see Research Note 1). However, it is what they are willing to spend to stay here that is a measure, in part, of the value that visitors derive from being in Mangawhai.

This section uses an estimate of visitor spending on accommodation to develop a picture of what they are prepared to pay to stay here.

To play down volatility in recent visitor numbers and maintain commercial confidentiality, figures for the two operators, MHHP and BachStay, were averaged across the three years, 2021 to 2023. The spend per visit was calculated for each and applied across our estimated figures for all camping and rental visitors. The derived figure suggests average annual spending on accommodation of \$18m.

The value of accommodation to people staying with friends and relative or visiting their own second home is, in effect, capitalised in the value of the relevant properties. Rather than impute an accommodation cost for these visitors, it is simply accepted that the notional benefit of using these two forms of accommodation is equivalent to the mid-point between the relatively low costs of camping and relatively high costs of renting (\$965/visit or \$300/night)<sup>11</sup>. Given the large number of visits and relatively long lengths of stays, this adds a further \$27m to the “cost” of staying.

### 3.4 Conclusion: the value to visitors

The indicative estimate of tangible (vehicle and accommodation expenses) and intangible (travel time) costs to visitors (Table 5) are based on assumptions about visitor numbers, trip costs, and the value of staying with friends and relatives or in an “own bach”. These assumptions are informed by detailed stay and cost data for campers and renters and survey-based information for the others. Given that the results are internally consistent, they represent a reasonable “best estimate” of what people are prepared to spend to holiday in Mangawhai (\$57m), which can be generalised by suggesting that the real figure will lie somewhere between \$55m and \$60m.

**Table 5 The cost of holidaying in Mangawhai**

	Transport \$m	Accommod- ation \$m	TOTAL \$m	\$/Visit	\$/Night	\$/Person
Campers	\$2	\$1	\$3	\$650	\$220	\$210
Bach Renters	\$3	\$17	\$20	\$1,460	\$440	\$350
Bach Owners	\$3	\$12	\$15	\$1,180	\$410	\$280
VFR	\$4	\$16	\$20	\$1,270	\$340	\$350
	\$11	\$46	\$57	\$1,240	\$370	\$320

These figures yield estimates of the value to overnight visitors of coming benefits to Mangawhai for a or \$1,240/visit, or \$32/person. Supporting this estimate of the value of the benefits visitors receive from holidaying in Mangawhai is the fact that the costs per trip and per night that are derived are reasonable. It is also notable that campers pay significantly less to stay but incur relatively higher transport costs (62% of the total) compared with the other categories (e.g., 18% for bach renters), reflecting a combination of lower accommodation costs and a wider visitor catchment.

<sup>11</sup> On the basis that they are enjoying more amenities than campers but would not necessarily pay more than bach renters.

In addition, the figures appear reasonable when compared with a recent estimate by the New Zealand Institute of Economic Research of the recreational value of the Hauraki Gulf at \$1,310 per active user per year, or \$2,600/year for the average household. The total value estimated accruing to visitors to Mangawhai of \$55m/year is just 2% of the recreational value estimated for the Hauraki Gulf (excluding fishing).

While based on several assumptions they can be considered conservative on several grounds:

- They omit international and day visitors;
- Travel costs are based on a medium size car with no allowance made for the additional costs (including ferry charges) of towing a caravan or boat;
- They do not incorporate any additional costs that people may incur to take advantage of recreational opportunities, in hire or purchase of watercraft or fishing gear, for example;
- They do not make provision for consumer surplus (the difference between the identified costs and willingness to pay).

At the same time, they do not make provision for opportunity costs, or the value of the “next best” alternative to Mangawhai as a holiday destination. However, this would raise questions over the availability of comparable recreational resources and the additional distances required to access them. Similar combinations of recreational resources are found north of Whangarei or on the Coromandel, but well removed from Auckland, the main source of visitors to Mangawhai.

Perhaps the biggest omission is lack of quantifying option and existence values. What can be concluded in this respect is that option value is likely to be high given proximity to Auckland as a large, urban population concentration. Existence value takes on special significance in the case of Mangawhai, given its historic association with Te Uri O Hau. In terms of the cultural and historic value of the harbour, the spit, the coastline, and catchment, this justifies a separate statement by Te Uri O Hau.

The contingent valuation methods that might be used to put numbers on these values are expensive to mount and based, usually, on several stages of complex surveys that explore respondents’ preferences and trade-offs. Their cost and complexity places them beyond the resources and expertise available to this study.<sup>12</sup> Instead, the simple notion is adopted that the willingness to pay exceeds the costs that people incur. On these grounds, treating the use costs incurred by visitors as a surrogate for the benefits they receive from the recreational services offered by the Mangawhai Harbour and coast is conservative.

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<sup>12</sup> Contingent valuation surveys of selected panels may be a useful tool for exploring the support for different harbour management methods at a later stage in the Sustainable Mangawhai Project.

## 4 The Value to Residents

This section shifts the focus to the residential sector by considering the effect of recreational and environmental (or aesthetic) services provided by the harbour and the coast on residential property values. It commences with a short discussion of how these attributes of a locality are valued before outlining the approach adopted for this assessment.

### 4.1 Measuring the Effect of Recreational Services on Property Values

The benefits households derive from a given residential location are reflected in what they pay to live there. Variations in house sales and prices reveal the impact of the character of a locality once the attributes of sites and dwellings (structural factors) are accounted for. This is typically done through regression analysis across many property prices to identify the premium associated with, say, a view, a pleasing aesthetic environment, heritage areas, greenery, or easy access to amenities<sup>13</sup>.

For example, a 2008 study estimated that in Auckland a wide water view at the coast “*increases the mean sale price approximately by 44%*” relative to a similar dwelling elsewhere.<sup>14</sup>

In the absence of any such analysis for Mangawhai, broad geographic differences are presented using 2021 valuation figures across three contrasting areas within Mangawhai to estimate a generalised premium associated with proximity to the shoreline. These valuation figures are already dated because of subsequent price increases associated with market drivers increasing demand for life-style localities. These drivers include work practices providing for more remote work and less regimented working hours, a social response to the experience of Covid and lockdowns, higher city house prices, increasing densities and congestion in Auckland, and improving small town services.

The impact of these factors on the value of Mangawhai properties in general have not been analysed. However, they will be associated with the rapid recent growth. Between 2013 and 2022 Mangawhai’s town population grew by 114% compared with 18% across the rest of Kaipara District and 14% across Auckland (Statistics New Zealand). 2013 and 2018 census results show that this growth has been marked by a growing share of working families reducing the past dominance of post-retirement households. The expansion and diversification of the housing market over the past decade is likely to increase any premium associated with proximity to the coast.

### 4.2 The Benefits of Waterside Living in Mangawhai

The valuation roll data has been aggregated into three areas<sup>15</sup>.

- **Waterfront:** Homes on roads adjacent to the coast and harbour shoreline or no more than one road back with elevated and expansive harbour or coastal views;
- **Mangawhai East:** The balance of homes east of and including Molesworth Drive, which are generally within walking distance of the shoreline;
- **Mangawhai West:** The balance of the built-up area from the Insley Road to Mangawhai Domain and Longview Drive, Thelma Road, and as far as but excluding Cove Road.

<sup>13</sup> Xiao, Y. (2017). Hedonic Housing Price Theory Review. In: *Urban Morphology and Housing Market* Springer Geography. Springer, Singapore

<sup>14</sup> Samarasinghe, O.E. and B. Sharp (2008) “The value of a view: A spatial hedonic analysis” *New Zealand Economic Papers* 42, 1, pp59-78

<sup>15</sup> Properties outside these areas were removed (mainly rural lifestyle and rural production). Properties that were not dwellings or baches or were vacant were also removed.

In terms structural differences, waterfront land and sites generally date back thirty or more years with large sections reflecting early reliance on septic tanks. Houses are older, although with a recent history of replacements and refurbishments. In contrast, the bulk of development west of Molesworth Avenue is less than 25 years old, within planned subdivisions with smaller section sizes. The eastern group sit between these two, with a mix of section sizes and dwelling ages.

Some 350 properties, or 10%, were identified as “waterside”, accounting for 17% of land by value, and 13% of improvements. Land values comprised 60% of the value of properties classified to the waterfront compared with 56% in the balance of the east, and 42% in the west. The implication is that location closer to the shoreline is marked by ore expensive land.

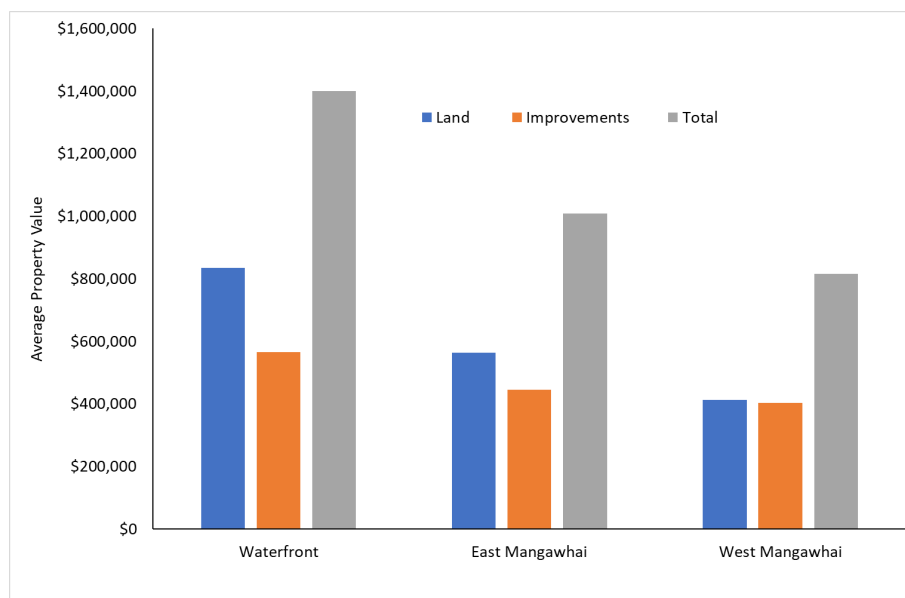
**Table 1: The Distribution of Real estate Value, Mangawhai 2021**

Mangawhai	Properties	Land	Improvements	Total	Land %
Waterfront	350	\$292	\$198	\$490	60%
East Mangawhai	1,120	\$631	\$498	\$1,129	56%
West Mangawhai	1,980	\$818	\$798	\$1,615	51%
Non-Waterfront	3,100	\$1,449	\$1,296	\$2,745	53%
TOTAL	3,450	\$1,741	\$1,494	\$3,234	54%
Waterfront Share	10%	17%	13%	15%	

Source, 2021 Valuation, Kaipara District Council

These differences are even more evident in strong differences in average property values. Waterfront properties were worth \$390,000 or 39% more a site than the average value of other properties east of Molesworth Drive, and more than twice as much as properties to the west (Table 6).

**Table 6 Average Residential Property Values within Mangawhai**



Source, 2021 Valuation, Kaipara District Council

Just over 70% of the price difference between the waterfront properties and the rest of Mangawhai is attributable to the difference in the value of land<sup>16</sup>, and only 29% attributable to differences in the

16 69% east of Molesworth and 72% west.

value of improvements (dwellings, garages, and the like). This points to a significant price premium based on locality close to the shoreline even allowing for possible differences in average site area.

If we assume that just half the difference in land values is attributable to proximity to the coast, the average value premium is \$184,000/property.<sup>17</sup> This gives an aggregate for 350 waterfront properties of \$64m, or around 13% of their value.

In practice, the premium will fall in a linear fashion with increasing distance from the coast, rather than curt off in an arbitrary manner at the boundary of our geographic units. Also, higher sites away from the waterfront will attract a premium, albeit a smaller one, based on their views of the coast. Given the significant ridges running parallel to the harbour and coasts in Mangawhai, this is likely to be significant although again lower than the average waterfront premium.

In addition, this analysis does not account for the generic premium reflected in the town's growth associated with the town's easy accessibility to coastal multiple recreational opportunities. Our estimate of the value of shoreline proximity within Mangawhai, then, may be considered on the low side. However, it does it with the 14% premium estimated for properties with wide coastal views in Auckland in 2008 and is adopted as a base figure for present purposes.<sup>18</sup>

### 4.3 Capitalising the benefits

Paying extra for a coastal view or proximity to the shoreline capitalises the continuing benefits households anticipate from to access recreational opportunities and views. Baches similarly capitalise the benefits a locality offers. In their case, none, or very little, of their value is attributable to providing the shelter and day-to-day living amenities of a primary dwelling. Rather, the total value of second homes can be attributed to the recreational services Mangawhai offers.

While now dated, the 2018 Census provides a reasonable indication of the number of baches in Mangawhai, with 806 empty dwellings at that time (other than those from which the owners were away)<sup>19</sup>. While many of these assumed second homes will fall within the Waterfront, as identified above, it is assumed for this exercise that their average capital value (i.e., value of land and improvements) is the same as the average for properties in Mangawhai East (just over \$1m). This gives rise to an estimated capitalised value of recreational benefits of \$914m.

Ideally, an annualised measure of value to the households would be based on the length of time a property is held, a measure of opportunity costs (alternative investments), annual ownership costs (rates, services, maintenance)<sup>20</sup>, and the residual value (i.e., the inflation adjusted price at sale). Determining this value would require intensive interviewing beyond the reach of this project. Jointly, these figures, however, reflect an investment of nearly \$980m in ongoing access to the recreational services provided by Mangawhai's natural environment.

17 Calculated as  $(\$834,800 - \$467,300) * 350 * 0.5$ , where \$834,800 is the average value of waterfront land, \$467,300 is the average value of all other residential land, and 250 is the number of houses classified as waterfront.

18 Samarasinghe, O.E. and Sharp, B.M.H. (2008) "The value of a view: A spatial hedonic analysis, New Zealand Economic Papers, 42, 1, 59-78

19 Kaipara District Council provided a summary of property values classified local or non-local according to the mailing addresses of owners. Unfortunately, this was only available for the entire Mangawhai-Kaiwaka Ward and did not distinguish between residential and other property. It did, however, indicate a very high level of non-local investment cross the ward which included commercial and rural properties.

20 Annual ownership costs may be offset by rental income from third party holiday makers

## 5 A Note on Cultural Values

### 5.1 Mana whenua

Cultural values may be reflected in the strength of association people have with a locality, site, structure or an artefact. In Mangawhai, tangata whenua have a long-standing association:

*Mangawhai was of strategic significance as an important route and canoe portage between the eastern coastline and the Kaipara Harbour. The strategic importance of Mangawhai Harbour is reflected by the fact that its entrance was defended by two pā. Te Ārai ō Tāhuhu (Te Ārai Point) and further to the south Te Whetumakuru was a tribal boundary marker that is clearly of major historical, cultural and strategic significance.<sup>21</sup>*

While no assessment has been undertaken in Stage One of the project, the assessment for the proposal to reconstruct the historic wharf identified the significance of shell midden in the vicinity and the health of the harbour and the shellfish beds it supported at the time. With the wider focus on the harbour in its entirety, the spit and the coast and the threats they may face from climate volatility, a further assessment is justified to inform the current study.

### 5.2 Maintaining the Connection

The value of the harbour to the wider community today is demonstrated in other initiatives. It is at the heart of the museum, built in 2014 with significant community donations of design, funds, labour, and materials and valued at over \$4m reinstatement costs. It is run largely by volunteer labour with a paid manager and part time assistant. The museum is designed in the form of a stingray, providing a direct link with the harbour. It researches, exhibits, and preserves local history, heavily focused on the role of the harbour.

Adjoining the museum is the Daring, a major historical link with the harbour. The schooner was built in a harbourside shipyard in Mangawhai in 1863. Wrecked not long after on Muriwai Beach, it was retrieved in 2018 from, returned to Mangawhai where volunteers are repairing and preserving her. The recovery and preservation exercise along with construction of a building to house and exhibit it expected to cost \$6m, much of which will be by way of local donations. The restoration is being undertaken entirely by local volunteer labour.

In another demonstration of cultural connection with the harbour, The Mangawhai Tracks Charitable Trust has developed and maintains a network of tracks providing access to and views of the harbour and coast. Over the past three years, for example, it has constructed a 500m boardwalk through the Back Bay mangroves and provided a walkway and seating to the mid-harbour at Breve Street at a total cost of \$170,800 in materials and \$160,500 in volunteer labour (5,350 hours at \$30/hour).

While monetising cultural values is challenging and, ultimately arbitrary, the commitment of the community to them can be observed in other ways. Volunteerism and donations in cash and kind reflect individual and collective commitment to their protection. A willingness to set aside, refurbish, or re-establish areas and artefacts of historical and heritage significance reflect the community at large's acknowledgement of their significance.<sup>22</sup>

<sup>21</sup> Environs Holdings Ltd (April 2018) *Cultural Impact Assessment Application for Resource Consent, Mangawhai Harbour Restoration Society Historic Mangawhai Wharf Rebuild Moir Point Road, Mangawhai, Whangarei*

<sup>22</sup> Further illustration of the community's recognition and commitment to Mangawhai's heritage was the \$80,000 raised to prepare a proposal for the re-establishment of the historic wharf in 2018.

## 6 Conclusion

While data and analytical demands limit the precision of analysis, the available figures demonstrate the centrality of the visitor sector and recreational amenities generally to Mangawhai's economy.<sup>23</sup> Through its spending on accommodation and in the retail stores, the holiday market is a key component of Mangawhai's economy and employment.

The analysis described in this note suggests that the visitors themselves incur costs of at least \$57m to visit and stay at Mangawhai. Given their extensive use of harbour, ocean beach, and coast this represents a reasonable first estimate of the annual value holiday makers receive from the recreational services Mangawhai offers, even during a period in which the rate of visiting was depressed by the Covid lockdowns and a summer of poor holiday weather.

Beyond that, the recreational and aesthetic services associated with the Mangawhai Harbour and coastal environment are associated with close \$1billion in private residential assets, in the value of access to the coast and coastal views and, primarily, in the value of second homes.

While it is difficult to establish cultural values – subsumed in the notion of existence value – there is a clear commitment to Mangawhai and its harbour reflected in very high levels of volunteerism and fund raising in areas like the museum, restoration and preservation of associated structure, and in providing access. There is a deep and long-standing association with iwi, evident in other things in remnant middens on the inner harbour as well as largely intact middens on the coast.

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<sup>23</sup> See Research Note 2: *What we do in the Shallows: Recreation in Mangawhai*

## Appendix 1: Estimating Holiday Trip Costs

**Trip Costs** are based on *Monetised Costs and Benefits Manual*, Waka Kotahi, March 2023, with the July 2021 dollar figures reported updated by the CPI to March 2023 for this analysis.

The vehicle operating and travel time costs used are those recommended by Waka Kotahi. In transport project assessment, benefits arising from lower travel time are estimated recognising the opportunity cost of time spent travelling and distance related vehicle costs. In this report, they represent the costs people meet to visit Mangawhai using the current transport network.

### Vehicle Operating Costs

Source - Appendix 4, Table A17; assume average 4% Gradient, 65km/hr:

**Assume** 27.88 cents/km (2023 \$)

### Travel Time Costs

Source Table 16: Weekend/Holiday/Vehicle Hour

**Assume** \$57.30/vehicle/hour

(Valuing travel time according to passenger numbers was also tested. At \$21.30/person/hour it gave rise to a higher cost given the generally higher loading of vehicles travelling for holidays).

### Travel Distances and Trip Times

The following representative nodes were used to estimate return trip times and distance. South Island origins were also assumed to incur a Cook Strait crossing return cost of \$600.

Region	Node	Kilometres	Hours
Northland	Whangarei	91	1.4
Mangawhai	Mangawhai	5	0.1
North Harbour	Albany	57	0.9
Waikato	Hamilton	220	3.8
Bay of Plenty	Tauranga	330	4.0
Gisborne	Gisborne	602	7.0
Hawkes Bay	Napier	515	6.3
Manawatu	Palmerston North	617	8.6
Taranaki	New Plymouth	464	6.0
Wellington	Wellington	740	9.0
Nelson	Nelson	880	11.0
Tasman	Tasman	979	12.6
Marlborough	Blenheim	771	9.4
West Coast	Greymouth	1,080	13.4
Canterbury	Christchurch	1,084	13.4
Otago	Queenstown*	1,555	19.2
Southland	Invercargill	1,640	20.4

Notes: Cook Strait crossing time excluded

\* Central Otago dominated trips ex Otago

### Discounting longer distances

**Weighting:** An average day's holiday travel is assumed to be no more than 4 hours, equivalent to the distance from Tauranga to Mangawhai. Localities beyond four hours away are first allocated the full cost of a day's drive and then assumed to take a day for every additional four hours driving time. The cost associated with each additional four-hour band was discounted to recognise the benefit from staying at other destinations. The distance covered on day two was discounted by 20%. Two extra days were discounted by 40%, three by 60% and four, the distance to Invercargill, by 80%.

This excludes the day spent crossing Cook Strait by South Island visitors on the assumption that they benefit from the crossing accrues in transit.



The table below is an example of the work sheet for generating travel costs based on the estimated number of trips by visitors to friends and relatives and distributed in proportion to the distribution of origins identified for that segment in the Visitor Survey. Vehicle and travel time costs are based on the relevant coefficients from the Waka Kotahi Monetised Costs and Benefits Manual (as above) multiplied by distance travelled and time taken respectively to generate a total trip cost which is then discounted and multiplied by the number of visits for each origin to generate total travel cost.

Estimates From Bach Stay	Km to Mangawh	Trips	Shares	Persons	Hrs/Trip	Vehicle Cost	Travel Time Cost	Total Trip Cost	Discount Factor	Discounted Trip Cost	Total Travel Costs
<b>TOTALS</b>		13,100		41,100							
Auckland	91	8,157	62%	25,591	1.4	\$51	\$159	\$209	0%	\$209	\$1,706,453
Mangawhai	5	247	2%	775	0.1	\$3	\$10	\$12	0%	\$12	\$3,049
Kaipara	57	0	0%	0					0%		
Northland	57	1,730	13%	5,428	0.9	\$32	\$99	\$131	0%	\$131	\$226,768
Waikato	220	989	8%	3,102	3.8	\$122	\$432	\$554	0%	\$554	\$547,948
Bay of Plenty	327	0	0%	0	4.0	\$182	\$459	\$640	0%	\$640	\$0
Gisborne	602	0	0%	0	7.0	\$334	\$803	\$1,137	20%	\$1,038	\$0
Hawkes Bay	511	0	0%	0	6.3	\$284	\$723	\$1,006	20%	\$933	\$0
Taranaki	617	247	2%	775	8.6	\$343	\$984	\$1,327	40%	\$1,053	\$260,146
Manawatu	464	247	2%	775	6.0	\$258	\$688	\$946	20%	\$885	\$218,703
Wellington	740	494	4%	1,551	9.0	\$411	\$1,026	\$1,438	40%	\$1,119	\$553,036
Nelson	880	494	4%	1,551	11.0	\$489	\$1,258	\$2,347	40%	\$1,664	\$822,670
Tasman	979	0	0%	0	12.6	\$544	\$1,443	\$2,587	60%	\$1,419	\$0
Marlborough	771	0	0%	0	9.4	\$428	\$1,082	\$2,110	40%	\$1,522	\$0
West Coast	1,080	0	0%	0	13.4	\$600	\$1,539	\$2,739	60%	\$1,480	\$0
Canterbury	1,084	247	2%	775	13.4	\$602	\$1,541	\$2,743	60%	\$1,481	\$366,164
Otago	1,555	247	2%	775	19.2	\$864	\$2,200	\$3,664	60%	\$1,850	\$457,236
Southland	1,640	0	0%	0	20.4	\$911	\$2,341	\$3,853	80%	\$1,283	\$0
<b>TOTAL COST</b>										<b>\$5,162,000</b>	