COROMANDEL PENINSULA

Peak Population Study 2009/10

Policy and Planning Group 2010

THAMES COROMANDEL DISTRICT COUNCIL

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1 EXECUTIVE SUMMARY

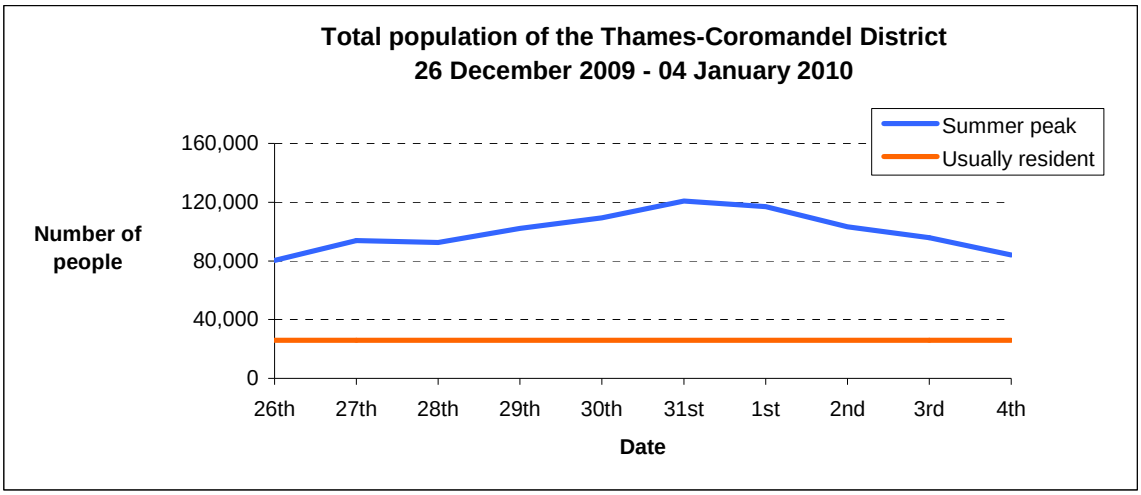
This report details the methodology and findings of the Thames-Coromandel District Council's 2009/10 Peak Population Study. The study was undertaken from 23 December 2009 to 10 January 2010 to identify when the summer peak period was estimated to have occurred, and to estimate the summer peak population of the District and its settlements. The methodology used also enabled a more general assessment of peak population trends, and of the people on the Peninsula during the study period.

The methods used to determine the summer peak population and identify trends relating to the population were:

- a count of dwellings in the settlements and areas in the District using 2006 Census information and building consent approvals for new dwellings since March 2006
- a door-to door survey of dwellings in the main settlements and popular holiday destinations[1] to determine the average number of people-per-property
- commercial accommodation surveys of capacity and occupancy in hotels, motels and backpackers
- collection of traffic count data at strategic locations, and a people-per-vehicle survey at a sample representative entry/exit point to the Coromandel Peninsula
- analysis of Council-provided water, wastewater, and rubbish and recycling data for serviced settlements
- aerial observation on the day of New Years Eve, relevant to summer peak population
- obtaining anecdotal evidence regarding demographics and social trends of holidaymakers, and general activity in settlements.

Consideration was also given to the potential influence on summer peak population trends of tourism and recreational events, and weather conditions over the study period.

The study concludes that the total population of the Thames-Coromandel District peaked at 120,900[2] people on New Years Eve 2009. The research indicates that there was a gradual increase in the population from the beginning of the survey period to the peak on the night of New Years Eve, which was followed by a gradual decline in the population out to at least 04 January 2010 when population surveying ended. When the population peaked, the number of people in the District was estimated at over four times the usually resident population[3].

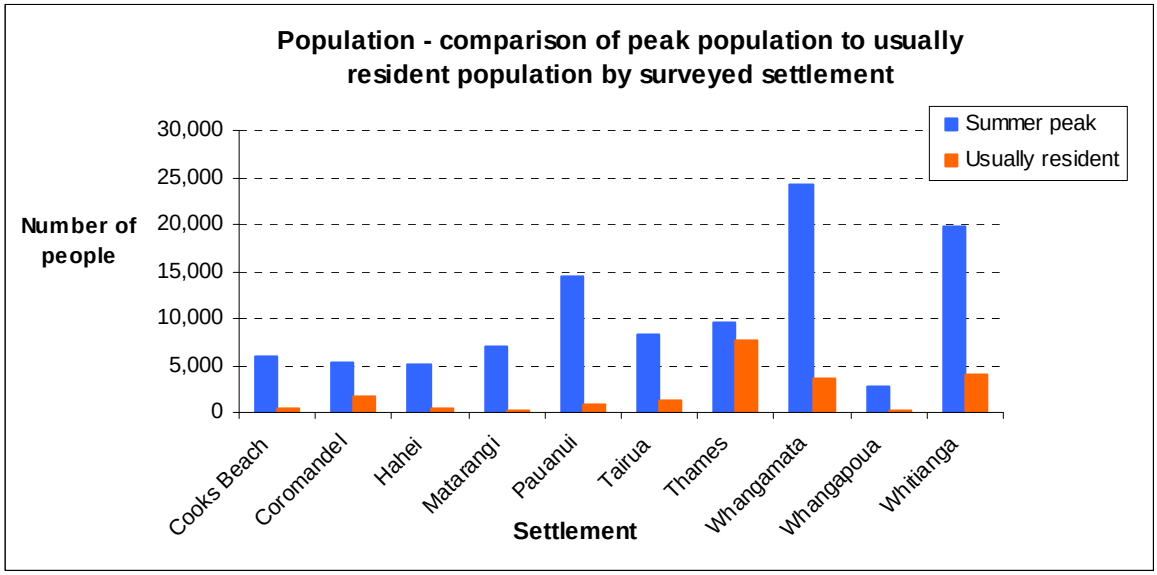


[1] The District Plan, section 213, defines eight main settlements - Cooks Beach, Coromandel, Matarangi, Pauanui, Tairua, Thames, Whangamata and Whitianga. This study has used these settlement area definitions. The popular holiday destinations of Hahei and Whangapoua have also been surveyed for the purposes of this study.

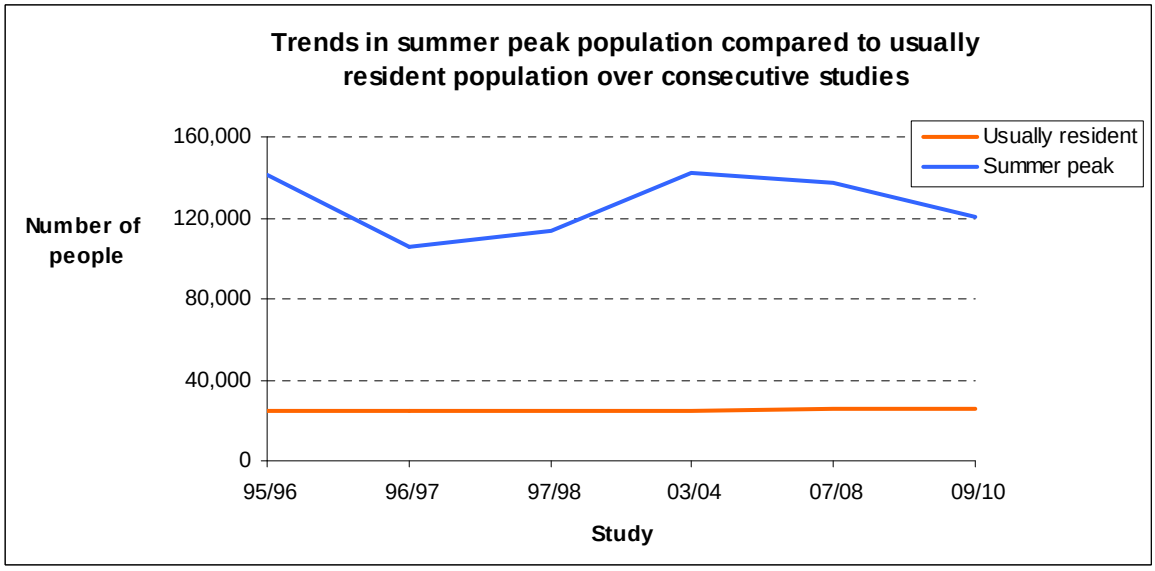
[2] Figures in text have been rounded to the nearest 100. Refer to tables and Appendix A for actual figures.

[3] 2006 Census data for usually resident population.

Whangamata was found to be the settlement with the highest peak population, with 24,300 people on New Years Eve. The greatest increase over usually resident population was in Matarangi where the peak population on New Years Eve was 25 times greater than the usual resident population. However, Whitianga experienced the sharpest peak in population.



Trends over consecutive studies indicate varying summer peak populations. The peak population of the District this summer was estimated to be lower than in 2007/08 and 2003/04, yet the District's population has consistently been estimated at over 100,000 people since the original study in 1995/96, and over four times the total usually resident population. Trends identified since 2003/04 indicate fewer people staying in residential accommodation over the study periods, but an increase in campground occupancy and people visiting the Coromandel Peninsula on day trips.



2 INTRODUCTION

The Coromandel Peninsula has traditionally been a popular place for a summer holiday. This means that over the Christmas and New Year period in particular, the District experiences a large influx of visitors, causing the population to increase to many times larger than the usually resident population[4]. This is referred to as the summer 'peak' population.

Approximately half of all the properties in the District are homes considered 'holiday/part-time' homes - owned by people who visit occasionally or who, increasingly, live here on a part-time basis. This creates a pattern of 'peak' and 'lull' populations over the calendar year which poses challenges for the Council in regards to infrastructure and service provision. Therefore, it is important for the Council to identify population fluctuations and collect information on the summer peak population to inform its decisions regarding provision of infrastructure and services, for current and future generations.

Peak population studies have been carried out by the Thames-Coromandel District (TCDC) periodically since 1996. Each successive study has refined the methods used previously, with the intention of producing a study as effective and efficient as possible, while still enabling comparative information to identify and analyse trends over consecutive summers.

Research as part of the peak population study was carried out over the 2009/10 Christmas/New Year period. This study is intended to provide up-to-date data to inform Council decisions and other work programmes.

To increase the credibility and validity of the study's conclusions, multiple methods were used to collect data to enable cross-examination of results.

The methodology used and the findings of this study are presented within this report.

[4] The place of 'usual residence' is the place where a person considers that they live most of the time.

3 STUDY OBJECTIVES

The objectives for this study were to:

- determine the timeframe within which the population of the Thames-Coromandel District is at its summer peak
- determine the total population, both District-wide and by settlement/area over the summer peak period
- determine where visitors to the District originate from
- provide information to inform decision-making regarding provision of current and future infrastructure and services in the District's settlements
- assess the effectiveness of the information used to determine the summer peak population and make recommendations for future studies.

4 METHODOLOGY

The methods used for this study were based on refined methods of previous summer peak population studies carried out in 2003/04, 2005/06, 2007/08 and similar earlier studies in 1995/96, 1996/97 and 1997/98.

It is noted that there is no one method to measure the peak population of the District or its individual settlements. Therefore, a triangulation approach has been used, where multiple data sources have been cross-examined in order to validate results and provide a comprehensive estimate of summer peak population trends[5]. Population estimates are deemed to be as accurate as possible for the purposes of this study.

Study methodology includes:

- surveying residential accommodation
- surveying commercial accommodation
  - accessing commercial accommodation data from Statistics New Zealand's Commercial Accommodation Survey
    - gathering data on capacity in hotels, motels, backpackers, and bed and breakfasts
  - surveying campground accommodation
- conducting traffic surveys
  - collecting vehicle count data at strategic locations
  - surveying people-per-vehicle at a sample representative entry and exit point to the Peninsula
- extrapolating Council water, wastewater and rubbish and recycling data
- observing activity on the Peninsula from an aerial perspective
- obtaining anecdotal evidence.

Consideration was also given to tourism and recreation events scheduled over the study period and to weather conditions, in order to assess any influence these factors may have had on summer peak population trends.

[5] When referring to summer peak population and trends in this report, reference is often given to the (Coromandel) Peninsula (the majority of the District). Area in the District not on the Peninsula is south of Kopu to Hikutaia. Due to form and character, this rural area has a high usual resident population, zero-few holiday homes and is not estimated to experience significant increase in summer population (unlike settlements on the eastern Peninsula). However, a total summer peak population has been estimated for the District as a whole (including all rural areas), and therefore when referring to the summer peak population of the District, it is referenced as such.

Key assumption:
For any increase in the population to be included within this study, visitors must have stayed for at least one night in accommodation.

Accommodation includes residential properties, campgrounds, hotels, motels, and backpackers[6].

Therefore, the total number of people in the District on any given day may have been higher than that reported. However, a range of information collected has been used to help verify the peak population and assumptions made within this report.[7]

The details of the methods used are outlined below.

4.1 Residential accommodation survey

The purpose of this particular survey was to determine the population of the District and its settlements over the summer peak period.

The survey consisted of three elements:

a. determining the number of residential properties in the District and its settlements
b. surveying of residential properties in the main settlements and holiday destinations[8]
c. assessing the population of the District (including specific settlement/area data, and the population for the remaining areas within the District).

Note: the population information collected within the residential accommodation survey was carried out from 26 December 2009 to 04 January 2010.

4.1.1 Total number of residential properties

The total number of residential properties, both occupied and unoccupied, in each settlement/area and the District was determined prior to the study using:

- 2006 Census data, as this is the latest confirmed data available
- approved building consents for residential dwellings from March 2006 to August 2009[9] to determine the number of new residential dwellings since the 2006 Census.

4.1.1 Surveying household population in the main settlements and holiday destinations:

A residential accommodation survey was used to estimate the average number of people per residential property in settlements and areas in the District. Settlements were selected for surveying based on their capacity for summer population in terms of the number of residential properties, as well as in terms of form, character and location. Consideration was also given to available resources and the sample size required in settlements and in total, for a representative, viable and statistically acceptable survey.

[6] Since September 2009, hosted accommodation has been removed from the Statistics New Zealand Commercial Accommodation Survey. Therefore, occupancy in bed and breakfasts over the summer peak period has not been assessed.

[7] Traffic data collected enables estimates to be made on the total number of people on the Peninsula per day (by multiplying an average number of people per vehicle by the number of vehicles, and adding this to the usually resident population). However, there are many variables which make these calculations subject to a high degree of error and are therefore used as estimates only and to support other study data.

[8] The District Plan, section 213, defines eight main settlements - Coromandel, Matarangi, Pauanui, Tairua, Thames, Whangamata, Whitianga and Cooks Beach. This study has used these settlement area definitions. The popular holiday destinations of Hahei and Whangapoua have also been surveyed for the purposes of this study.

[9] Under the assumption that a majority of building consents for residential dwellings issued after this date would not have been completed by the time of this study.

Surveying of residential accommodation was undertaken in the following main settlements and popular holiday destinations:

- Cooks Beach
- Coromandel
- Hahei
- Matarangi
- Pauanui
- Tairua
- Thames
- Whangamata
- Whangapoua
- Whitianga

A random sampling method was used to identify a representative number of residential properties in the above settlements. Surveyors visited each settlement three times over the survey period and collected information from the selected sample on the number of people staying at each property per night. Data relating to several nights was collected per visit, therefore occupancy numbers were collected for all 10 nights of the survey period.

This data enabled an average number of people-per-property to be estimated for each of the surveyed settlements. In conjunction with the dwelling data, this enabled total population estimates for each of the surveyed settlements per night of the survey period.

As well as collecting information on the number of people staying at each surveyed property, information was also requested:

- on visitors place of usual residence
- the number of days they intended to spend in the District
- whether the property was a permanent home or a part-time home.

In total, 3,018 residential properties were surveyed (13% of the total in the District). A margin of error of 3% applies to the residential accommodation survey, which is within a statistically acceptable range[10].

For findings specific to the residential accommodation survey, refer to section 5.1 of this report.

4.1.2 District wide population assessment

Due to cost and resource limitations, it was impractical to survey all settlements and areas in the District. Settlements and areas not surveyed were therefore allocated people-per-property assumptions calculated for surveyed settlements similar in form and character. This enabled total population estimates to be made for residential accommodation in the District each night of the survey period.

4.2 Commercial accommodation survey

The commercial accommodation survey involved estimating the number of people staying in commercial accommodation. A variety of information sources were used:

- Statistics New Zealand Commercial Accommodation Survey
- local directories regarding commercial accommodation
- campground survey.

[10] An acceptable margin of error of 5% is commonly used for surveying purposes.

4.2.1 Statistics New Zealand Commercial Accommodation Survey

Statistics New Zealand (NZ) carries out a monthly commercial accommodation survey to report on capacity and occupancy rates for the commercial accommodation industry[11]. This information was used as an indicator of summer peak population in commercial accommodation, by comparing data for the summer holiday months (December and January) to that for the rest of the year. Census 2006 data on the usual resident population, and trends identified through the residential accommodation survey, were used to extrapolate the monthly data sourced from Statistics NZ to per night data for commercial accommodation extending over the study period[12].

4.2.1 Local directories for commercial accommodation

Information on available capacity in commercial accommodation in the District was gathered from various local directories such as AA Travel guides and internet listings. This information was used to estimate where in the District nights in commercial accommodation (data obtained from Statistics NZ) were likely to have been spent[13].

4.2.3 Campground survey

A campground survey was carried out to determine the number of people staying in campground accommodation each night over the study period. Although Statistics NZ does report on campground capacity and occupancy, as noted above this data is not available at a District or settlement level, and it does not include all campgrounds[14]. Therefore, conducting a separate campground survey provided insight into campground accommodation trends for the District and its settlements, not identifiable through the Statistics NZ data alone.

All campgrounds in the District that operated over the summer peak period, including Department of Conservation campgrounds, were asked to participate in the survey by recording daily occupancy numbers for each night of the survey period. Campground managers were contacted prior to survey commencement, and information was collected at the end of the survey period.

In addition to those staying in formal campgrounds, data was obtained on the number of people who stayed in temporary campgrounds set up to provide accommodation for people attending specific events.

For campgrounds where survey sheets were not received / did not participate in the survey, estimates were made based on:

- the number of available sites and estimated occupancy rate[15]
- aerial observation
- assessment of data obtained for the previous peak population study.

For findings specific to the commercial accommodation survey, refer to section 5.2 of this report.

[11] While Statistics New Zealand takes care in processing, analysing and extracting information, all statistical data is subject to error, either through incompleteness of response or by way of limitations imposed by the design of the survey. Therefore, the information presented in the Commercial Accommodation Survey should be treated with some caution as to its accuracy.

[12] The data available fro Statistics NZ is at a regional tourism organisation level (RTO). Tourism Coromandel encompasses the regions of the Coromandel Peninsula, Hauraki Plains / Seabird Coast, Waihi / Waihi Beach and Paeroa / Karangahake. Regions within the Thames-Coromandel District make up the majority, especially regarding commercial accommodation, therefore this data has been used for the purposes of the peak population study.

[13] Information was gathered on capacity in hotels, motels, backpackers and hosted accommodation. However, since September 2009, hosted accommodation has been removed from the Statistics New Zealand data, therefore actual occupancy in this form of accommodation in the District over the summer peak period was not assessed.

[14] Due to Statistics New Zealand's reporting criteria for commercial accommodation providers.

[15] Calls were made to campground managers following the survey period, requesting the number of available sites in their campground and occupancy estimations over the 19 day survey period.

4.3 Traffic survey

The traffic survey included:

- Vehicle counts
- A people-per-vehicle survey

4.3.1 Vehicle counts

Directional traffic counters were strategically placed around the Peninsula to measure the number of vehicles entering and leaving the Peninsula each day, and traffic travelling to different places on the Peninsula. In total, 20 traffic counters were used to collect vehicle count data during the survey period. The vehicle count data was used as one indication of the length of the summer peak period as well as the traffic fluctuations that occurred during that time.

Traffic counters were located at the three entry/exit points to the Coromandel Peninsula[16]:

- Kopu Bridge
- South of the Kopu-Hikuai turn-off
- South of Whangamata

In addition, traffic counters were also situated along access routes to the following settlements:

- Cooks Beach
- Coromandel
- Hahei
- Hot Water Beach
- Matarangi
- Pauanui
- Tairua
- Thames
- Thames Coast
- Whangamata
- Whitianga

A map of traffic counter locations is provided as part of **Attachment B**.

4.3.2 People-per-vehicle survey

In order for the traffic count data to be transposed into estimated population data, a survey was undertaken at the Kopu Bridge during the summer peak period to estimate the average number of people-per-vehicle coming onto the Peninsula[17]. The survey was carried out once during the summer peak period, on 29 December 2009[18]. To better enable comparisons between the summer peak period and other times of the year, an initial people-per-vehicle survey was also carried out at the Kopu Bridge on 04 November 2009.

For findings specific to the traffic survey, refer to section 5.3 of this report.

[16] The traffic counter south of the Kopu-Hikuai turn-off is located at the access route to the Peninsula, not the access route to the District (which is further south through Hikutaia). Therefore, traffic data was collected for the Peninsula, as opposed the District as a whole.

[17] Kopu Bridge was chosen as the only survey point as traffic must slow down, making it easier to count the number of people in each vehicle. The survey was based on the assumption that inbound traffic at the Kopu Bridge is representative of traffic onto the Peninsula at other entry points. However, this assumption has not been tested recently by roading contractors or TCDC, and only surveying one of the three entry points may mean that less accurate data has been collected, than if a survey was conducted at all three entry points.

[18] The previous peak population study had conducted the survey three times - at the beginning, middle and end of the study period. The difference in the number of people-per-vehicle on each of these survey days was statistically insignificant, and therefore a recommendation was made to carry out the Kopu Bridge survey only once during the summer peak period.

4.4 Assessing water, wastewater and rubbish and recycling data

Information relating to the usage of Council-provided water, wastewater, and rubbish and recycling services over the study period provided useful trend information on infrastructure and service demand, especially when comparing data over the summer peak period with data for other times of the year. It is noted that not all residential properties receive Council-provided water, wastewater and rubbish and recycling services. Therefore, this information was used to assist with identifying and verifying trends over the summer peak period.

Limitations exist relating to the use of water, wastewater and rubbish and recycling data as an indicator of summer peak population trends. Key factors taken into consideration when analysing this data included:

- Water
  - the water data available is abstraction data, as opposed to consumption data. There is a time lag of approximately one day from when water is abstracted to when the water is used
  - water data can be affected by issues such as dirty water that can't be treated and/or rainfall, and not all water supplies are subject to the same issues. Therefore, water data may not accurately reflect population, and accurate comparisons between water data for different settlements cannot be made
  - water bans were in place over the summer period as a result of hot and dry weather conditions. Therefore trends in water data may not directly correlate to the actual population using water services
  - the data collected did not take private water supplies into account
- Wastewater
  - rainfall can affect the inflow of wastewater to treatment plants, causing changes in inflow levels that may not correlate to the actual population using wastewater services
  - some properties have private disposal methods such as septic tanks
- Rubbish and recycling
  - data on the amount of rubbish and recycling collected is only available at a District level and on a monthly basis.

Despite the limitations of water, wastewater and rubbish and recycling data for purposes of the peak population study, it does assist in verifying the peak period by enabling clear trends in infrastructure and service demand to be identified, and therefore an approximation of users.

For findings specific to water, waste water and rubbish and recycling trends, refer to section 5.4 of this report.

4.5 Aerial observation

An aerial flight over the Peninsula was undertaken on the day of New Years Eve 2009. The flight enabled Council staff to make observations, and record these by photograph, that were not captured via other methods. Observations were made regarding:

- people movements in and between settlements/areas
- usage of boat ramps
- campground occupancy
- informal camping
- the number of vehicles parked at residential properties (indicating occupancy level)
- the level of activity on beaches

- general activity in settlements, such as gatherings, events, and level of activity in towns.

Generally, the observations provided a 'freeze-frame' picture of activity on the Peninsula at a set time[19] and therefore cannot provide accurate observations regarding the entire summer peak period. However, the recorded observations have been used to verify, or not, actual data collected.

For findings specific to aerial observations, refer to section 5.5 of this report.

4.6 Anecdotal evidence

Both during and after the study period, anecdotal evidence was obtained from over 40 information sources around the Peninsula who were expected to be in a position to observe population trends and/or have contact with a large number of people. Multiple sources of the same type (e.g. Visitor I-Site staff, see below) were contacted to enable possible trends and consistent observations to be identified. Observations sought included when the period of increased population occurred, the days when population seemed to peak, and how the level of population this summer compared to previous summers. Observations were also sought regarding characteristics and age of holidaymakers, and how any event(s) and weather conditions may have influenced summer peak population trends. It is recognised that while this is subjective information and cannot provide actual population figures, it has provided insight into the nature of the population on the Peninsula and settlements over the study period and was used to verify data collected via other methods.

Sources contacted for anecdotal evidence include:

- Service station managers
- General stores and supermarket managers
- Visitor I-Site and information centre staff
- Surf Club staff
- Inspector of District Police
- Participants in the residential accommodation survey
- Campground managers
- Events co-ordinators[20]
- Council staff[21]
- Elected members

For details specific to anecdotal evidence, refer to section 5.6 of this report.

4.7 Overall methodology

As outlined above, multiple methods were used to collect data relevant to summer peak population. Once collected, all data was collated, analysed and cross-examined in order to verify results. This triangulation approach has attempted to reconcile any possible discrepancies in study data to enable valid conclusions to be drawn, as accurate as possible for the purposes of this study.

[19] The flight was undertaken between 11am and 1pm, with the flight route following the coastline up the northern side of the Peninsula, around the tip and down the southern coastline. Therefore, aerial observations are reflective of activity on the Peninsula at the location and time the observation occurred.

[20] Regarding Pauanui events and the Whitianga Coromandel Gold festival.

[21] Bylaws Officers, Area Managers, Policy and Planning staff.

5 COMPONENT RESULTS

As detailed in section 4 of this report, the 2009/10 Peak Population Study incorporates data collected from a number of sources in an attempt to better validate data. The main results of the various components are summarised below.

5.1 Residential accommodation survey

For each of the surveyed settlements the total number of people staying at residential properties each night during the survey period was estimated by multiplying the average number of people-per-property by the total number of properties.

The following section provides a summary of the:

- average number of people-per-property
- total number of people staying in residential accommodation
- usual home of visiting holidaymakers
- length of stay of visiting holidaymakers
- proportion of permanent homes to part-time homes[22]

5.1.1 Average number of people per property

Over the 10 nights of the accommodation survey, data indicates that there were considerable differences between the average number of people-per-property in each of the surveyed settlements. However, this can be justified given the different form and character of each settlement. For example, Thames, Coromandel and Whitianga are settlements with a high proportion of permanent homes and thus usually resident populations, as opposed to having a high number of unoccupied/part-time homes, such as Cooks Beach, Hahei, Matarangi, Pauanui and Whangapoua. Tairua and Whangamata each have a solid usually resident base, yet are also popular places to holiday or visit part-time.

Although the night of New Years Eve is considered to be the 'peak' night when there were more people-per-property in the majority of settlements and the District as a whole, it is noted that some settlements had more people-per-property at times either side of New Years Eve. See **Figure 1** below.

Figure 1

Settlement	Average people-per-property - usually resident*	Average people-per-property - summer peak*	The peak night in people-per-property
Cooks Beach	0.36	5.84	02 January
Coromandel	1.66	3.67	27 December
Hahei	0.77	6.20	02 January
Matarangi	0.27	6.64	31 December
Pauanui	0.33	5.82	01 January
Tairua	0.88	5.37	31 December
Thames	2.20	2.51	26 December
Whangamata	0.85	5.24	31 December
Whangapoua	0.38	7.06	31 December
Whitianga	1.34	4.23	31 December

* usually resident = Census 2006 data for average number of usual residents per household
* summer peak = over the survey period (26 December 2009 - 04 January 2010)

[22] For the purposes of this study, 'part-time' homes include homes considered 'holiday' homes.

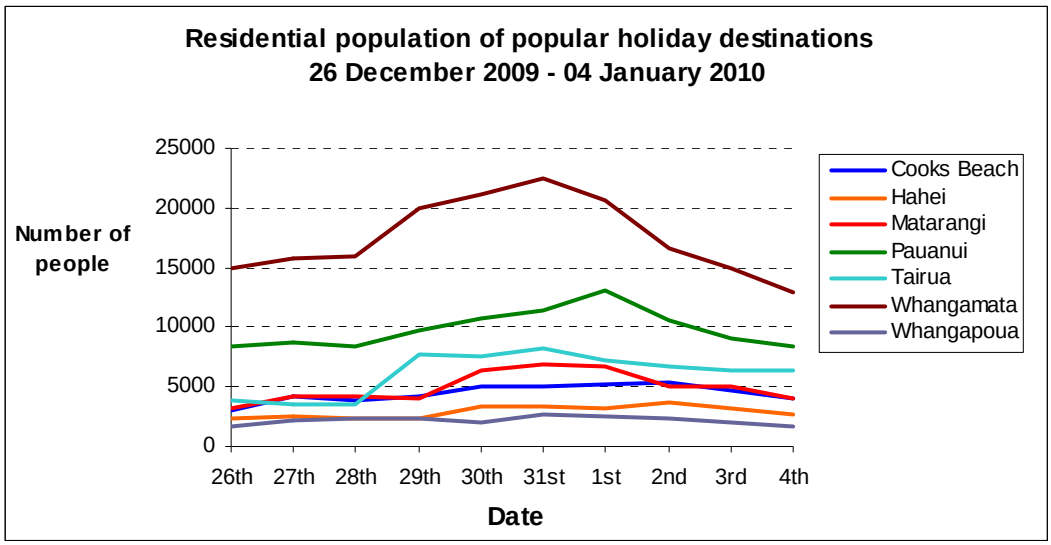
The residential accommodation survey indicated that in the majority of settlements that were surveyed, there was a steady increase in the average number of people-per-property up to New Years Eve or shortly after. This was then followed by a subsequent gradual decrease in people-per-property. The exceptions were Thames and Coromandel (where there is a high usually resident population). The average number of people-per-property in these settlements peaked earlier, shortly following Christmas (26 and 27 December respectively) and gradually decreased throughout the remaining nights of the survey.

Relating to the District as a whole, the average number of people-per-property over the 10 nights of the survey, was 3.69 which is considerably higher than the usually resident average for the District of 1.14 people per house[23].

5.1.2 Total number of people staying in residential accommodation

Trends in the number of people staying in residential accommodation in popular holiday destinations on the Peninsula are shown in the **Figure 2** below. It is noted that Whangamata has the most residential properties and is also a popular holiday destination. This is reflected in a summer population that was significantly higher than other settlements on the Peninsula.

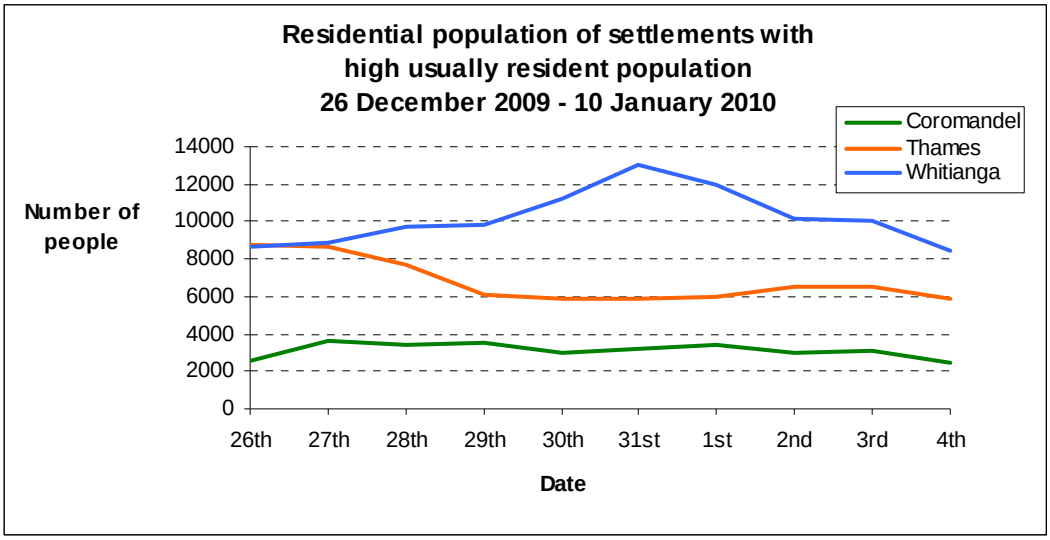
Figure 2



Trends for settlements with a high number of permanently occupied homes and thus usually resident population are shown in the **Figure 3** below. Although Whitianga has a higher proportion of usually resident population compared to other east coast settlements, a clear peak in the number of people staying in residential accommodation is evident on New Years Eve this summer.

[23] Based on 2006 Census results for average number of usual residents per household.

Figure 3



Comparing the usually resident population and the peak population for people staying in residential accommodation in the surveyed settlements, there was a population increase over the usually resident population per settlement of between one times (for Thames) and 24 times (for Matarangi). See **Figure 4** below.

Figure 4

Settlement	Usually resident population*	Estimated summer peak population	Increase of PP over URP**	Night the population peaked
Cooks Beach	332	5,355	16.1	02 January
Coromandel	1,657	3,652	2.2	27 December
Hahei	457	3,661	8.0	02 January
Matarangi	279	6,802	24.4	31 December
Pauanui	747	13,076	17.5	01 January
Tairua	1,335	8,139	6.1	31 December
Thames	7,657	8,737	1.1	26 December
Whangamata	3,655	22,466	6.1	31 December
Whangapoua	145	2,654	18.4	31 December
Whitianga	4,115	12,987	3.2	31 December

* Estimated as at 2009 (Census 2006 average number of usual residents per household multiplied by number of dwellings as at 2009). An assumption has been made that the usual average number of residents per household in 2009 has not changed from 2006 Census levels.
**Based on the number of times the peak population (PP) increased over the usually resident population (URP).

5.1.2.1 How this compares to previous studies

In all the surveyed settlements except Pauanui and Whangapoua, there were less people staying in residential accommodation this summer compared to the summer of 2007/08. While properties were generally occupied (as opposed to vacant), there were less people-per-property. There was also greater variance this summer relating to **when** the number of people staying in residential accommodation peaked over the study period.

Comparisons in the average number of people-per-property and the peak night for each of the surveyed settlements is provided in **Figure 5** below[24].

[24] Accurate comparisons to studies earlier than 2007/08 are unavailable.

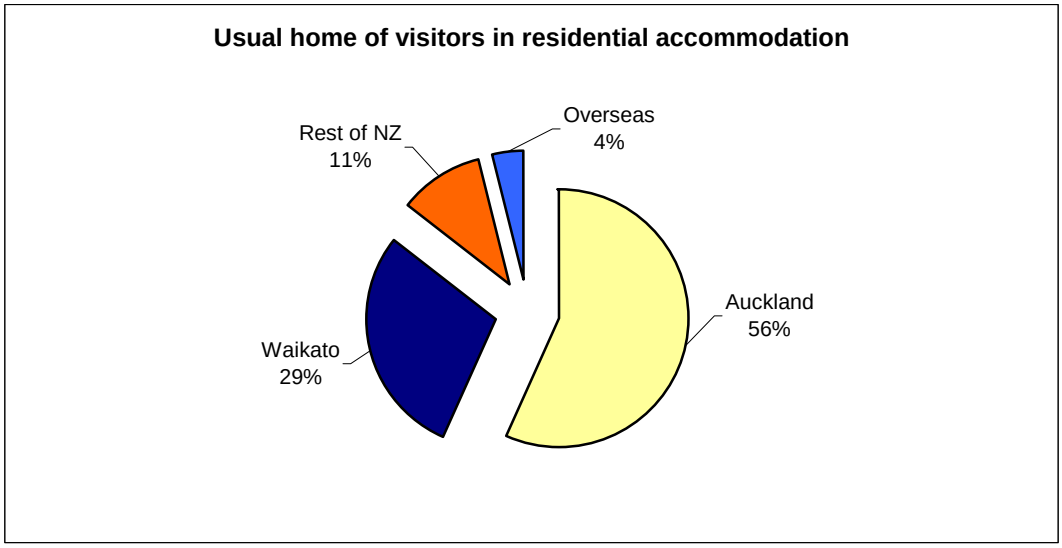
Figure 5

Settlement	2007/08		2009/10	
	Average people-per-property - summer peak	Night the population peaked	Average people-per-property - summer peak	Night the population peaked
Cooks Beach	8.56	31 December	5.84	02 January
Coromandel	4.15	31 December	3.67	27 December
Hahei	6.34	31 December	6.20	02 January
Matarangi	7.13	31 December	6.64	31 December
Pauanui	5.34	01 January	5.82	01 January
Tairua	5.74	31 December	5.37	31 December
Thames	3.55	31 December	2.51	26 December
Whangamata	6.03	31 December	5.24	31 December
Whangapoua	6.03	01 January	7.06	31 December
Whitianga	5.76	31 December	4.23	31 December

5.1.3 Usual home of visiting holidaymakers

During the residential accommodation survey, information was obtained from visitors staying in residential homes on their place of usual residence. If visitors from multiple locations were staying at the same property, each different location was recorded once per property, regardless of the number of people visiting from each location per property[25]. Therefore, the information presented in **Figure 6** below reflects the total number of responses per location rather than the total number of people per location. Auckland was the most frequent response for visitors staying at residential properties in the surveyed settlements, with the Waikato region second. This was similar to that obtained for the previous study.

Figure 6

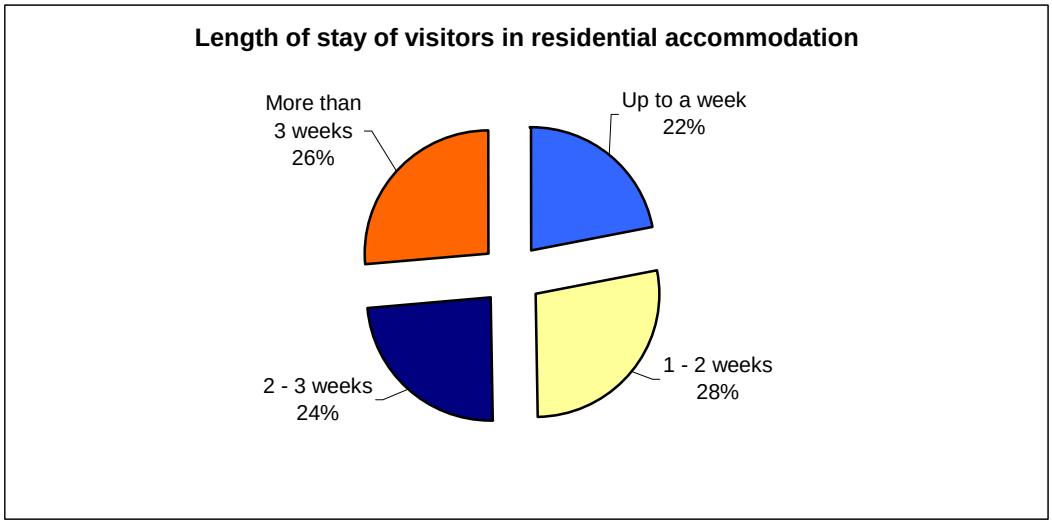


[25] For example, if at one property four people were visiting from Auckland and two people from Hamilton, one response was recorded for Auckland and one response for Waikato. Thames-Coromandel District permanent residents are not reflected in the data.

5.1.4 Length of stay of visiting holidaymakers

Information was also gathered on the amount of time visitors staying in residential accommodation planned to spend on the Peninsula this summer. **Figure 7** indicates that there was a fairly even distribution of holiday time duration, from several days to more than three weeks. This compares to a majority of visitors over the 2007/08 summer indicating staying less than two weeks.

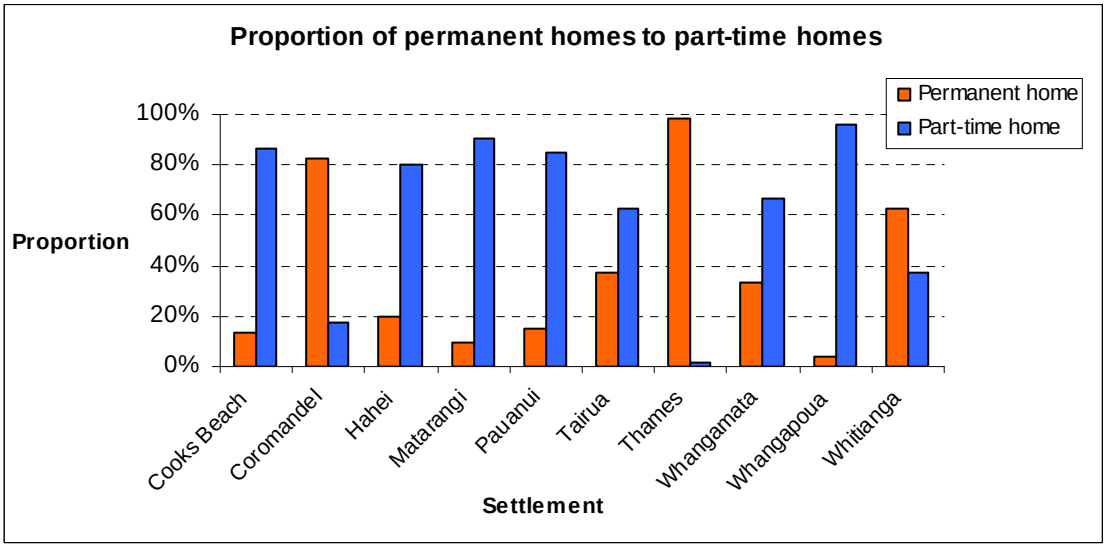
Figure 7



5.1.5 Proportion of permanent homes to part-time homes

The residential accommodation survey asked respondents whether each property was considered a permanent home or a part-time home. From the survey responses, the proportion of permanent homes versus part-time homes by surveyed settlement is detailed in **Figure 8** below. It is noted that almost all the surveyed properties in Thames were permanent homes, whereas almost all the surveyed properties in Whangapoua followed by Matarangi, were considered part-time homes.

Figure 8

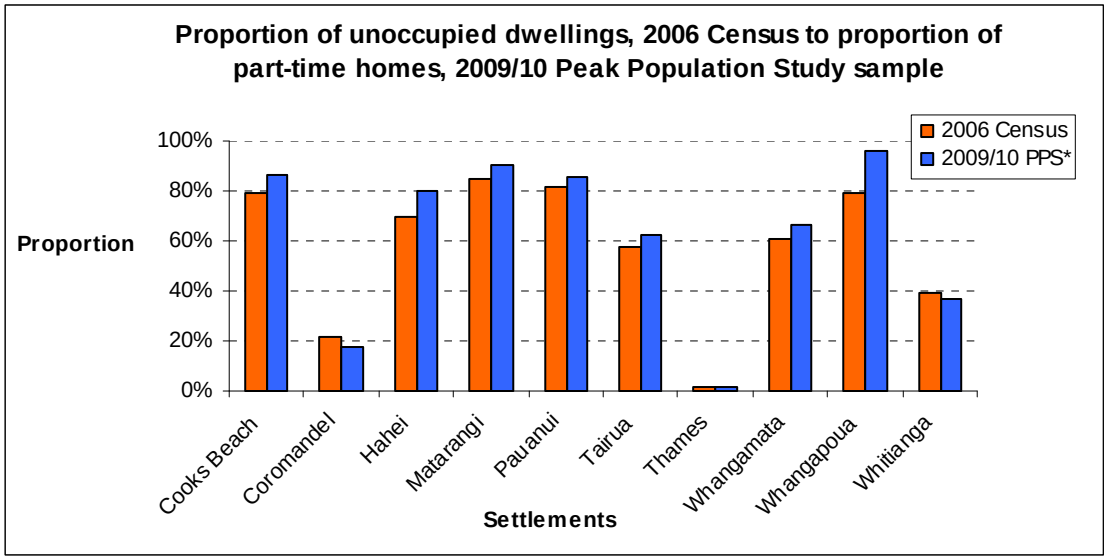


5.1.5.1 How this compares to 2006 Census data

2006 Census data is available relating to the number of occupied and unoccupied dwellings in main settlements in the District (as at 2006). The proportion of unoccupied dwellings in 2006 (from a total of unoccupied plus occupied) has been compared to the proportion of part-time homes in 2009/10 (from a sample total of part-time homes plus permanent homes) obtained from surveying residential properties this summer.

When comparing the proportion of unoccupied dwellings in 2006 to the 2009/10 sample proportion of part-time homes, there may be an increase from 2006 in Whangapoua, Hahei, Cooks Beach, Pauanui, Matarangi, Tairua and Whangamata. This suggests that these settlements are increasing in popularity as holiday/part-time destinations, especially Whangapoua. The settlements of Coromandel, Thames and Whitianga, where there is high usually resident population, indicate decrease in the proportion of unoccupied dwellings/part-time homes since 2006 (to occupied/permanent homes), suggesting these settlements are rather being viewed as places to reside permanently. These comparisons are provided in **Figure 9** below.

Figure 9



* Peak Population Study

5.2 Commercial accommodation survey

5.2.1 Statistics New Zealand commercial accommodation survey

Trends in commercial accommodation for the Coromandel region over the summer period can be summarised as:

- There were 40,384 guest nights[26] during December 2009
- This increased to 55,232 guest nights during January 2010
- The average number of guest nights per month during off-peak times (from February 2009 to November 2009) was 24,216.

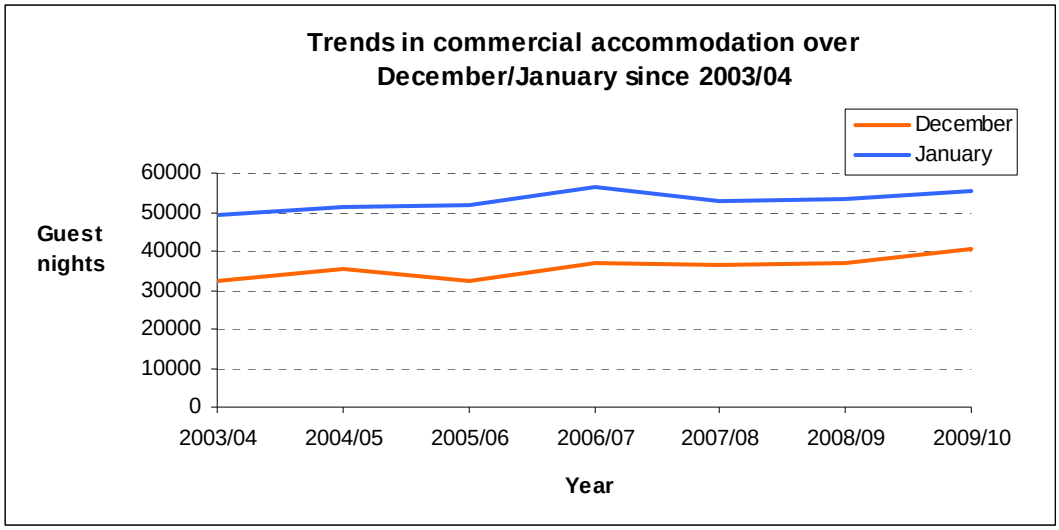
It is noted that TCDC staff undertook a separate campground survey. Therefore, 'holiday park' results were removed from the Statistics NZ survey to avoid double counting.

[26] A guest night is equivalent to one guest spending one night in an establishment. For example, a motel with 15 guests for two nights would report provision of 30 guest nights of accommodation.

5.2.1.1 How this compares to previous studies

Statistics NZ's monthly Commercial Accommodation Survey (independent from TCDC's own peak population field research) enables data for each consecutive December/January period since 2000 is able to be accessed. **Figure 10** below shows an overall gradually increasing trend for nights spent in commercial accommodation (hotels, motels and backpackers) in the Coromandel region since 2003/04. Although there was a noticeable increase from 2005/06 to a peak in 2006/07 (and a subsequent decrease), the number of guest nights spent in commercial accommodation each December/January since then has consistently increased, most significantly this summer over the last (the increase this December/January over last (2007/08) was over four times the increase for 2008/09 over 2007/08). The combined December/January figures for this past 2009/10 was higher than those of the peak in 2006/07.

Figure 10



5.2.2 Campground survey

A campground accommodation survey was carried out over the 19 days from 23 December 2009 to 10 January 2010. The survey enabled estimates to be made on the number of people-per-night staying in campgrounds on the Peninsula.

Campground occupancy not only influenced the total population of the District per night, but the location and capacity of campgrounds also influenced the spread of the population within settlements and areas. The number and location of campgrounds on the Peninsula has remained relatively consistent over the years since the 2003/04 study. However, there have been several recent changes for this 2009/10 study, such as the establishment of new campgrounds at Hot Water Beach and Otama and the closure of the Tairua campground.

The greatest number of campgrounds operating over this study period were located in the Thames area and in the area north of Coromandel. However, the majority of camp sites in Thames are smaller Department of Conservation (DoC) camp sites up the Kauaeranga Valley, whereas at the northern end of the Peninsula there are a number of larger privately-owned campgrounds, as well as DoC owned campgrounds.

In addition to permanent campgrounds, two temporary sites were established in Whitianga to provide accommodation for people who attended the Coromandel Gold festival. Both sites were open on the night of New Years Eve and one on the night of 01 January. Although these camp sites were not open over the full study period, they were well occupied and influenced the total occupancy in campgrounds on the nights they did operate. Over the full study period however, total campground occupancy for the northern

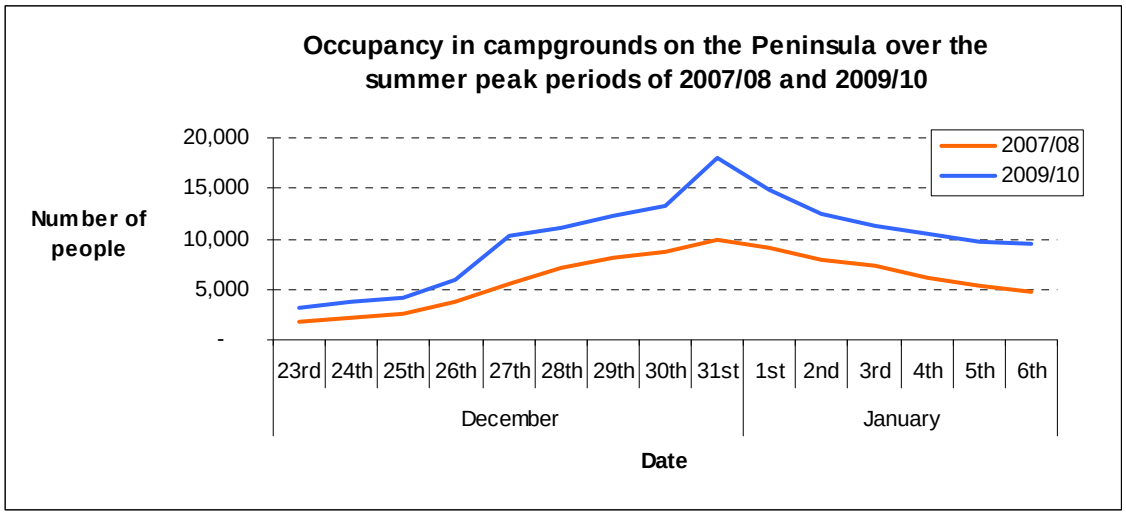
end of the Peninsula far exceeded campground occupancy in any other settlement/area on the Peninsula.

Overall, occupancy of campgrounds this summer was high. Many campgrounds reported having no vacant sites over the period from 27 December to 04 January. Anecdotally, although there were no sites available in a number of campgrounds over the New Year period, there was an increase in people-per-site. Some campgrounds were full until at least the end of the survey period on 10 January.

5.2.2.1 How this compares to previous studies

Figure 11 below indicates an increase in the number of people staying in campgrounds on the Peninsula this 2009/10 summer over the 2007/08 summer, especially notable on New Years Eve[27].

Figure 11



While the Council did not conduct a peak population study last summer, Statistics NZ's monthly Commercial Accommodation Survey reported an increase in campground occupancy for the Coromandel region of 9% for December 2009 over December 2008, and an increase of 24% for January 2010 over January 2009.

5.3 Traffic survey - vehicle counts

Vehicle count data was collected from 23 December 2009 to 10 January 2010. Data was collected via the use of 'traffic counters', which were strategically located around the Peninsula to measure traffic flows. Trends in traffic movements were used to verify the summer peak period and to indicate highs and lows which occurred during that time.

The following section provides a summary relating to:

- traffic entering and leaving the Peninsula
- traffic volume via the Kopu Bridge
- general trends in traffic movement
- average number of people-per-vehicle

[27] Accurate comparisons to earlier studies are not available.

5.3.1 Traffic entering and leaving the Coromandel Peninsula

Summaries of traffic movements relating to the Peninsula include the following:

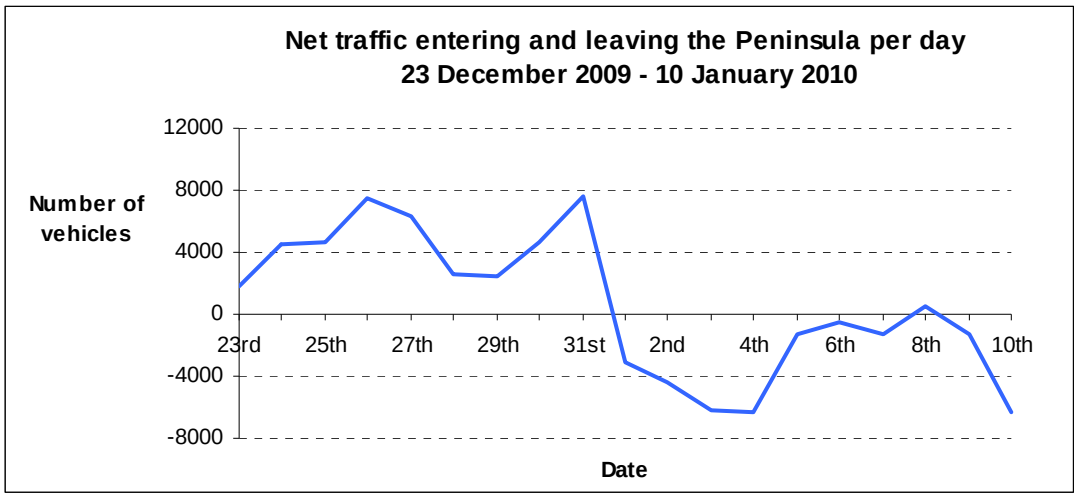
a. Traffic **entering** the Peninsula:
- A total of 214,181 vehicles entered the Peninsula
- There was consistent inbound traffic with an average of more than 13,000 vehicles per day prior to 01 January
- Inbound traffic peaked at 16,179 on New Years Eve
- The lowest number of inbound vehicles recorded was on 10 January, with 7,502 vehicles.

b. Traffic **leaving** the Peninsula:
- A total of 202,444 vehicles left the Peninsula
- The greatest volume of outbound traffic was recorded from 01 to 04 January
- Outbound traffic peaked at 16,652 on 03 January
- The lowest number of vehicles recorded leaving the Peninsula was on Christmas Day, with 5,586 vehicles.

c. Traffic **entering and leaving** the Peninsula:
- The peak for traffic leaving the Peninsula was higher than that for traffic entering the Peninsula. This indicates that outbound traffic occurred as an 'exodus' with higher traffic volume over a shorter period compared to traffic entering the Peninsula, which was at a lower volume but over a longer period
- The net number of visitor[28] vehicles on the Peninsula peaked at 41,916 on New Years Eve.

Trends in traffic movements entering and leaving the Peninsula per day over the survey period are shown in **Figure 12** below.

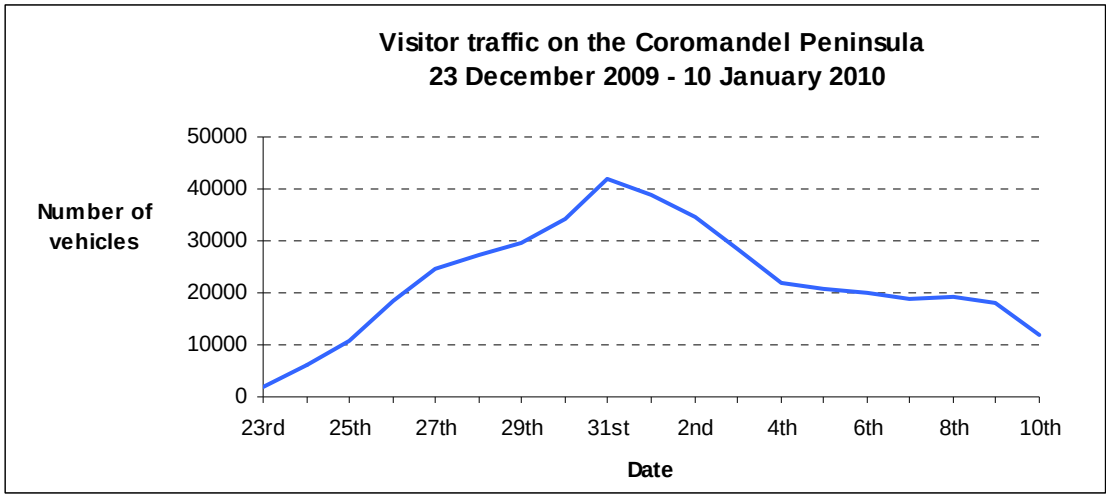
Figure 12



The above per day data in **Figure 12** can be transposed to show total visitor traffic on the Peninsula each day over the survey period. The overall trend is shown in **Figure 13** below.

[28] For the purposes of this study, 'visitor' traffic (vehicles) on the Peninsula is defined as traffic that entered the Peninsula over the survey period.

Figure 13



5.3.2 Traffic volume via the Kopu Bridge

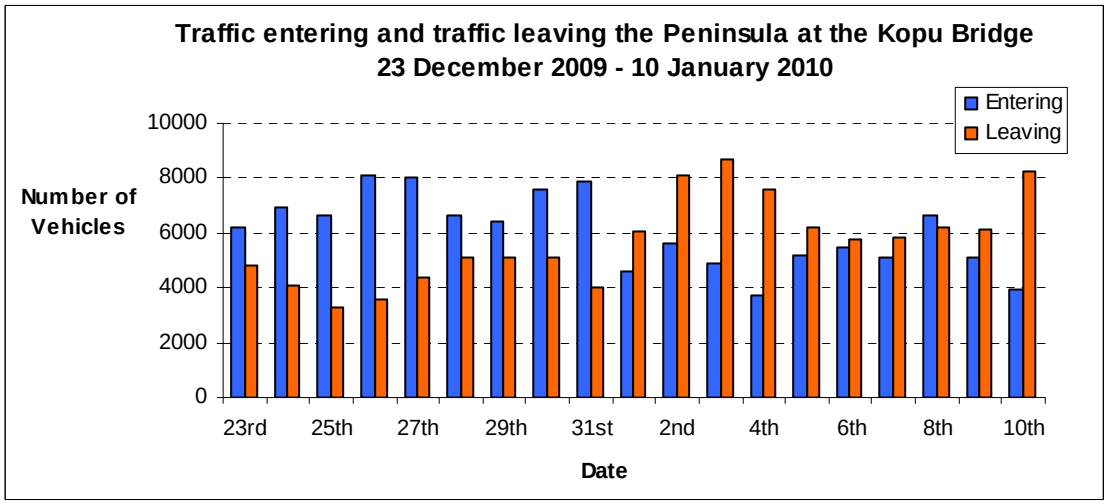
It is noted that traffic over the Kopu Bridge followed a similar trend as that for total traffic entering and leaving the Peninsula at all three entry and exit points. Traffic count data collected at the Kopu Bridge can be summarised as:

- Over the survey period, a total of 223,190 vehicles crossed the Kopu Bridge
- Of all vehicles travelling to and from the Peninsula, an average of 54% used the Kopu Bridge
- It is noted that a further 23% of all vehicles to and from the Peninsula used the route south of the Kopu-Hikuai turn-off, while 23% used the route south of Whangamata.

Therefore, the survey indicates that the Kopu Bridge is the most popular route to enter and leave the Peninsula by vehicle.

Trends in traffic entering and leaving the Peninsula via the Kopu Bridge are presented in **Figure 14** below.

Figure 14



5.3.3 General trends in traffic movement

In general, trends in traffic movements for the majority of settlements on the Peninsula[29] mirror those trends for traffic onto and off the Peninsula, and can be summarised as:

- an increase in traffic entering and staying in settlements over the Christmas period
- an increase in traffic leaving settlements during the week between 26 December and New Years Eve
- an influx of traffic into settlements on New Years Eve
- an exodus of traffic from settlements on 01 January, continuing for several days
- an increase in traffic entering and staying in settlements from 04 to 08 January
- an increase in traffic leaving settlements during the weekend of 09 and 10 January[30].

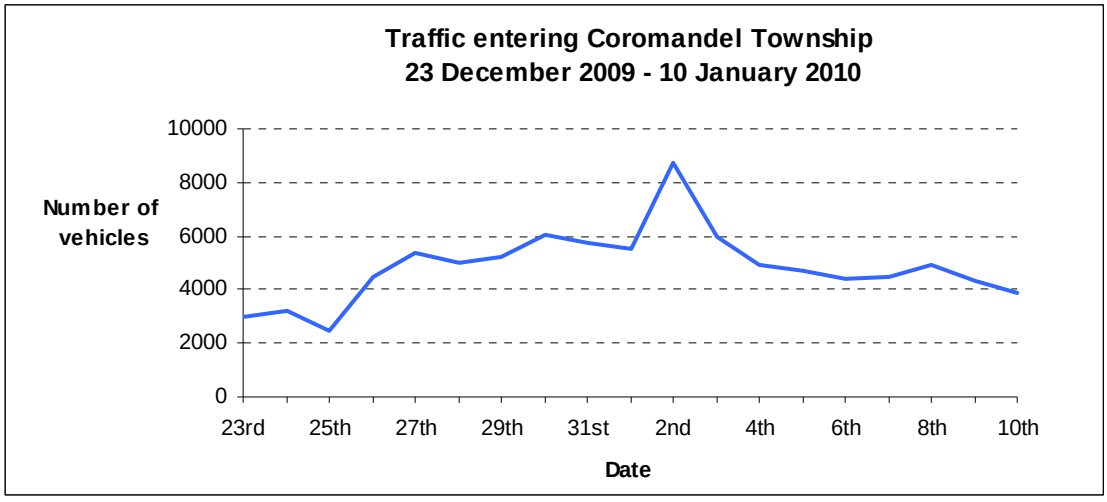
However, it is noted that a deviation from these general trends was observed for Hot Water Beach and Tairua. Traffic movements indicated that more traffic left than entered these settlements on New Years Eve, whereas on 01 January, more traffic entered than left.

In addition, traffic data collected for Thames showed an almost opposite trend to that of other settlements on the Peninsula. Thames has a high usual resident population and on average, more traffic left Thames than entered Thames per day over the survey period.

Other notable observations regarding traffic movement on the Peninsula include:

- Net traffic in the majority of holiday settlements on New Years Eve was similar to, or lower than, net traffic on 26 December[31]
- Whitianga was the exception, where net traffic in the settlement on New Years Eve far exceeded that on earlier survey days[32]
- Traffic movement reflected when and where larger events were held on the Peninsula. Examples being:
  - an influx of traffic to Whitianga for New Years Eve when the Coromandel Gold festival was held in the settlement, and a subsequent exodus immediately after
  - a peak in traffic entering Coromandel township on 02 January 2010, the day of the Keltic Fair in the settlement (see **Figure 15** below).

Figure 15



[29] Traffic movements varied somewhat for individual settlements, however general trends have been identified.

[30] The weekend of 09-10 January 2010 was prior to the first normal working week in the New Year that was not short due to Christmas and New Year public holidays.

[31] Over the Christmas period, 26 December was the day of highest net traffic in the majority of settlements where traffic count data was collected.

[32] Complete traffic data for Whitianga from 01-05 January was unavailable due to counter malfunction.

5.3.4 Average number of people-per-vehicle

The people-per-vehicle survey was carried out at the Kopu Bridge on 29 December 2009. The survey had a sample size of approximately 2,000 vehicles and a margin of error of 2% applies to the survey.

The survey determined that on average, there were 2.1 people-per-vehicle during the summer peak period, as compared to an average of 1.6 people-per-vehicle at off-peak times[33].

Traffic count data collected for this 2009/10 Peak Population Study, and calculations for net number of vehicles at each site location, is included as **Appendix B (Tables B and C)**.

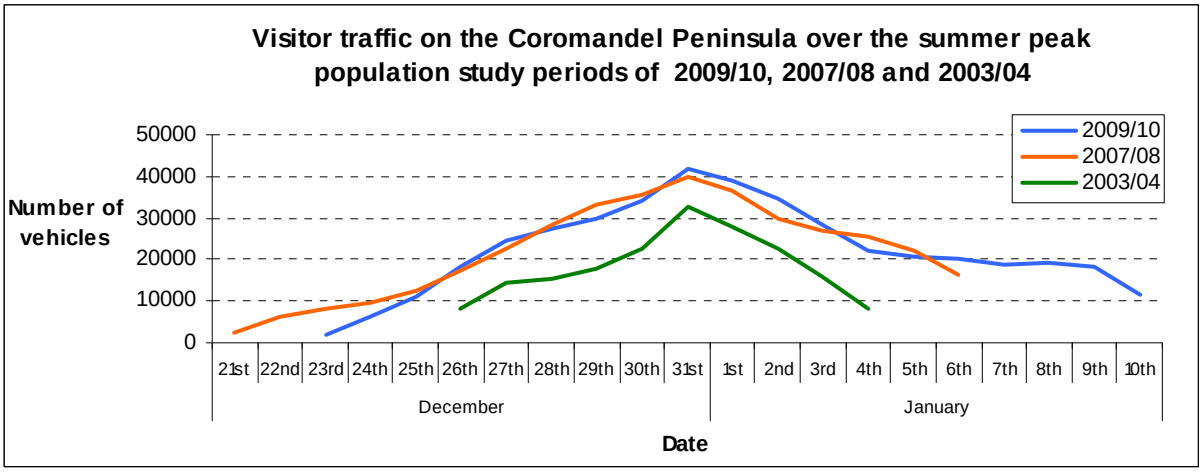
5.3.5 How this compares to previous studies

The amount of visitor traffic on the Peninsula over this 2009/10 study period and the previous 2007/08 study period was very similar, indicating similar duration of the summer peak period and also a similar peak in visitor traffic on the Peninsula on New Years Eve. The peak traffic volume this summer was actually higher than reported in the last study. This may indicate that there were more day visitors to the Peninsula at times this summer who did not stay overnight in accommodation.

Compared to traffic data collected in 2003/04, there was significantly more traffic on the Peninsula in 2007/08 and 2009/10, and traffic remained high over a longer period of time (see **Figure 16** below). Given that the estimated peak population for 2003/04 was higher than for 2007/08 and noticeably higher than for 2009/10 (142,400 compared to 137,700 and 120,900 respectively), this may indicate that the number of people visiting the Peninsula as a day trip and not staying overnight has significantly increased since 2003/04. Another noticeable difference in traffic movement over the study periods is the more pronounced influx and subsequent exodus of traffic before and after New Years Eve 2003.

Overall however, the traffic data collected for the previous three studies indicate increased traffic on the Peninsula over the full survey periods. Also, there is significantly more visitor traffic on the Peninsula during the week including New Year, with a definite peak in traffic on New Years Eve[34]. These observations indicate that although trends over the summer peak period have changed since 2003/04 (with more recent summer peak periods extending over a longer period of time, with higher and more consistent traffic movement) there is a consistent pattern of extreme peaks over the Christmas/New Year period.

Figure 16



[33] An off-peak survey at the Kopu Bridge was undertaken on 04 November. The survey had a sample size of approximately 800 vehicles and a margin of error of 3% applies.

[34] Accurate comparisons to earlier studies are unavailable.

5.4 Water, wastewater and rubbish and recycling data

5.4.1 Water

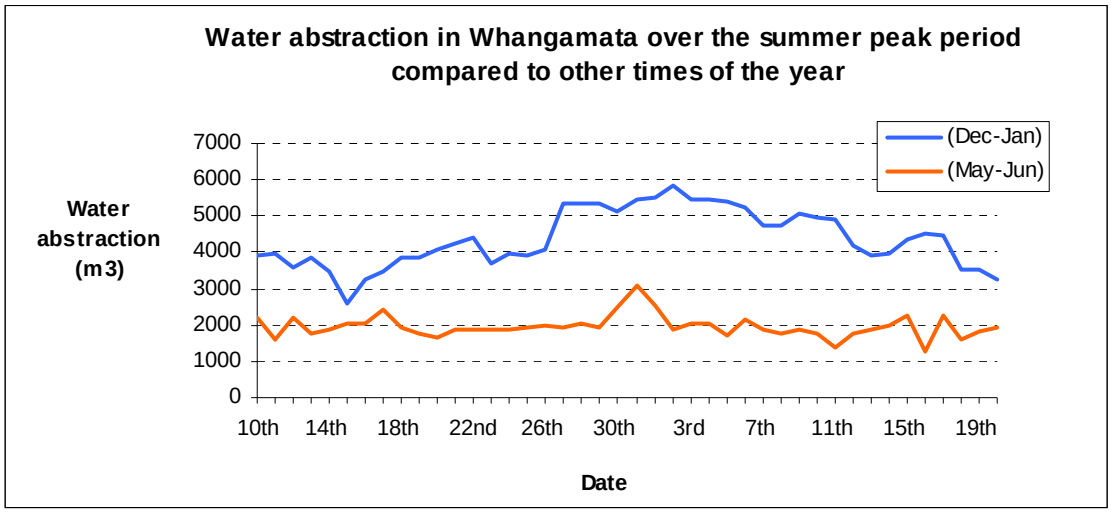
Daily data collected from a number of Council-provided water schemes was analysed to identify general trends in water abstraction, which can be used to indicate water consumption and approximate users[35].

The water schemes analysed for this study include:

- Coromandel
- Matarangi
- Pauanui
- Tairua
- Thames
- Whangamata

By graphing water data over the summer peak period and comparing this to water data during other times of the year, trends can be identified that may indicate an increase in the number of people using the Council water supply in popular holiday destinations (where data analysed) over the summer peak period. Water data for Whangamata is given as such an example in **Figure 17** below, where water abstraction (indicating water consumption) over the December/January summer holiday period was significantly higher than over a period in May/June.

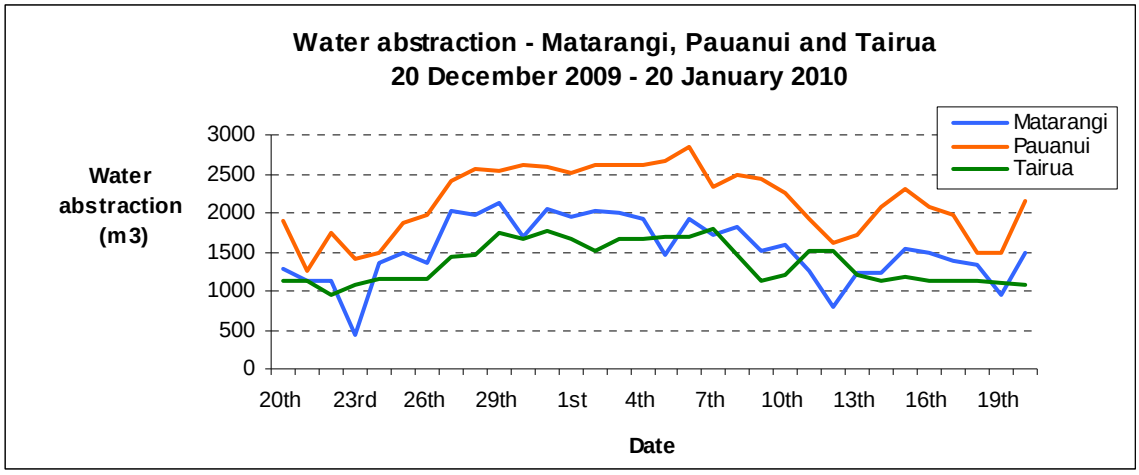
Figure 17



To further illustrate the trends indicating an increase in water use over the summer peak period in popular holiday destinations[36], water data for Matarangi, Pauanui and Tairua is graphed in **Figure 18** below. An increase in water use can be identified as starting around 23-27 December and continuing to 10-13 January. This indicates that there was increased demand for water, which may indicate an increase in users, for an extended summer period from shortly before Christmas to two-three weeks into January. Given that correlation has been identified in other data sources for popular holiday destinations, the trends described above are likely to have occurred for such settlements where water data was not analysed also.

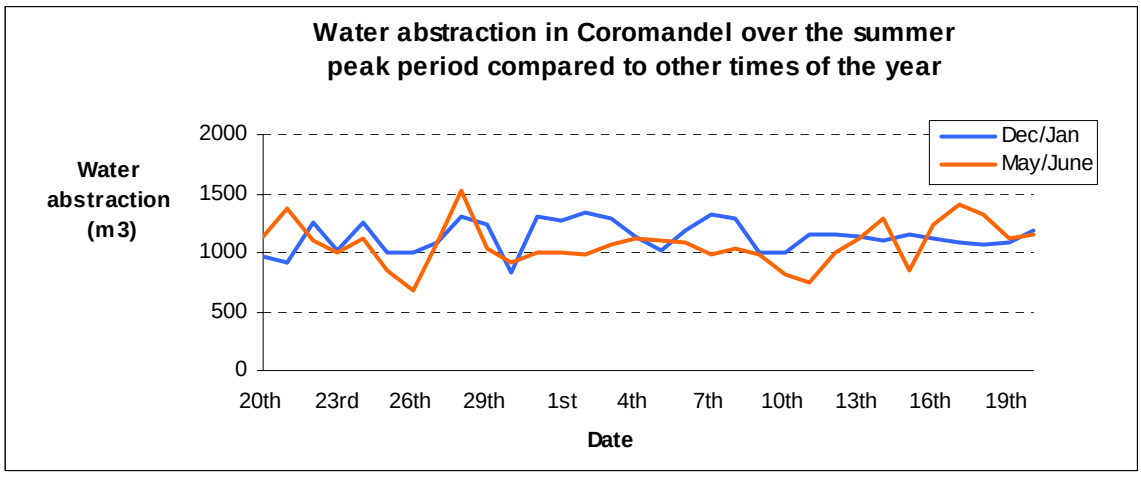
[35] Note the limitations of using water data discussed in section 4.4.
[36] Indicated by an increase in water abstracted, where data was analysed.

Figure 18



The indicated increase in water use over the summer peak period compared to other times of the year (identified for popular holiday destinations) was less evident in settlements that have a higher usually resident population, such as Coromandel, Thames and Whitianga[37]. **Figure 19** below shows that water abstraction in Coromandel township over the peak summer period followed peaks and flows not dissimilar from those during other times of the year. Data for Thames indicated in general, slightly increased water abstraction over the entire December/January period compared to May/June data, but levels remained fairly consistent and an increase over the Christmas/New Year period was not evident. This may indicate that the number of users remained fairly consistent in these settlements, without the increase and subsequent decrease indicated for east coast settlements.

Figure 19



5.4.2 Wastewater

Daily data collected from a number of Council-provided wastewater treatment schemes was graphed and analysed to identify general trends that could be related to summer peak population[38]. The wastewater treatment schemes analysed for this study include:

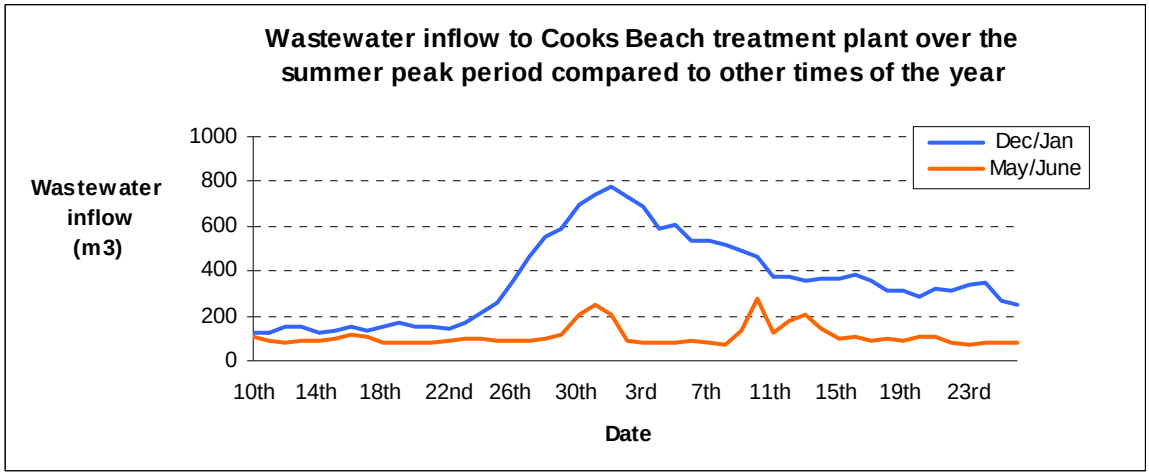
- Cooks Beach
- Coromandel
- Matarangi
- Thames
- Whangamata

[37] Water data was not available for Whitianga at the time of reporting.

[38] Note the limitations of using wastewater data discussed in section 4.6.

General trends that could be related to summer peak population were identified for the popular holiday destinations of Cooks Beach, Matarangi and Whangamata (where data anlaysed)[39]. In general, there was significant increase in wastewater inflow to treatment plants over the Christmas/New Year period compared to other times of the year[40]. When using this data to identify trends in population, an evident increase in population is indicated from about 26 December to New Years Eve (seen as an influx for Whangamata), followed by a more gradual decrease in population throughout January[41].Trends in wastewater inflow into the Cooks Beach treatment plant are graphed in **Figure 20** below as such an example. As mentioned above, given that correlation has been identified in other data sources for popular holiday destinations, the trends described above are likely to have occurred for such settlements where wastewater data was not analysed also.

Figure 20



As for trends in water data for settlements with higher usually resident populations (such as Coromandel, Thames and Whitianga), an increase in wastewater inflow to the treatment plants over the summer peak period was not evident[42]. Levels over the summer peak period for Coromandel and Thames were very similar to levels at other times of the year (which may indicate fairly consistent population) and for Thames, the wastewater inflow level during December/January was consistently slightly lower than during May/June (data analysed as an example of other times of the year). This may indicate that the population in Thames during December/January was lower than the usually resident population.

5.4.3 Rubbish and recycling

Rubbish and recycling data is only available on a monthly basis and is therefore of limited help to identify trends over the study period. However, the overall trends in monthly data can be analysed to identify general summer peak population trends.

The amount of rubbish and recycling collected in the District from July 2008 to January 2010 is shown in **Figure 21** below. The data indicates that demand on rubbish and recycling collection services in the District over this period increased in December, and there was significantly greater demand in January. Demand on collection services in February had returned to November levels (similar to other months of the year, where data available). These trends indicate that more rubbish and recycling was produced, and/or more people were using the services during December/January.

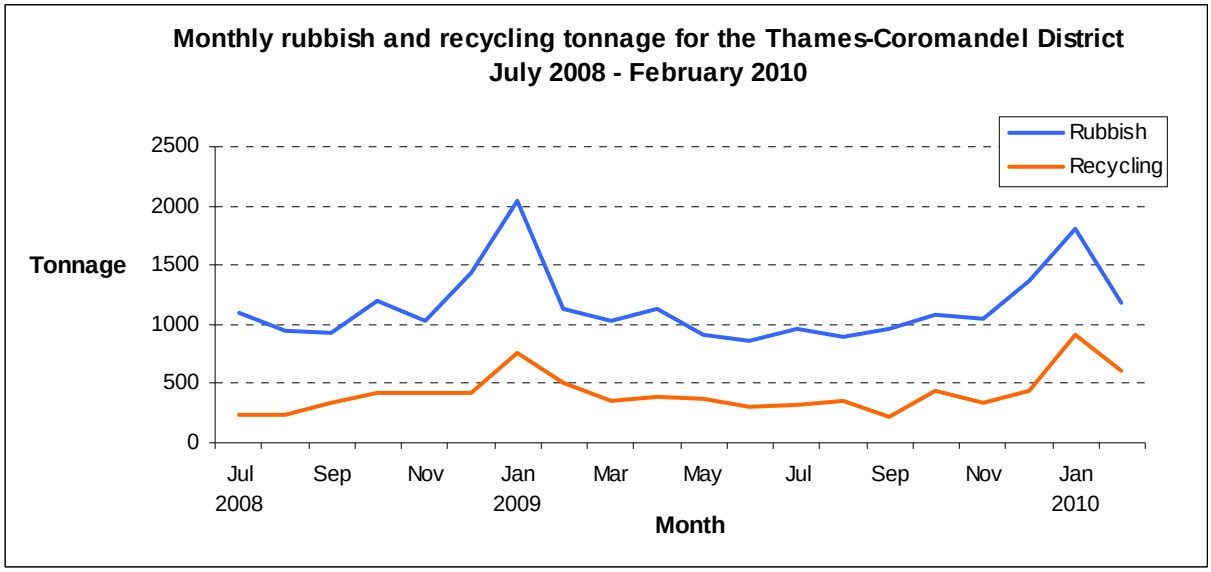
[39] Note the limitations of using wastewater data discussed in section 4.6.

[40] As noted in section 4.4, rainfall can affect the inflow of wastewater to treatment plants. When graphed, this can be seen as peaks and troughs. There was little rainfall on the Peninsula during the summer period when data was analysed. Therefore, the graphed data shows fairly steady inflow levels.

[41] It is noted that data analysed for Thames (where there is high usually resident population) indicated consistently lower levels of wastewater inflow over the Christmas/New Year period than for other times of the year.

[42] Wastewater data for Whitianga was not available at the time of reporting.

Figure 21



5.5 Aerial observation

Aerial observations made this summer included:

- Campgrounds were well occupied, with few vacant sites.
- The area north of Coromandel was popular for private camping in remote areas along the coast. A number of small camp sites (one or two tents) were observed on private land.
- Few properties were observed with more than two-three parked vehicles.
- Beaches such as Pauanui and Whangamata were populated but not congested, with people generally spread out within surf patrolled areas.
- Groups of moored boats were observed at Coromandel and Te Kouma harbours, as well as in smaller bays such as Flaxmill Bay and Long Bay.
- Traffic was flowing smoothly with no congestion observed[43].
- Event preparation was observed at several locations, such as in Whitianga.

Analysis of a series of photographs taken during the flight suggests that although there was indications of increased activity on the Peninsula compared to other times of the year, settlements and areas were not congested. Campground accommodation appeared well occupied, including remote DoC campgrounds, and people were undertaking outdoors activities such as beach activities and boat usage (possibly encouraged by the fine settled weather at the time).

A summary of the photographs taken during the aerial observation flight are included as **Appendix C**.

[43] The flight was undertaken between 11am and 1pm, with the flight route following the coastline up the northern side of the Peninsula, around the tip and down the southern coastline. Therefore aerial observations regarding traffic movement is reflective of traffic movement at the location and time the observation occurred.

5.6 Anecdotal evidence

As outlined in section 4.6 anecdotal evidence was obtained from various sources around the Peninsula. Sources such as the NZ Police were able to provide observations on a Peninsula-wide level, whereas others were settlement specific. However, when analysed collectively, consistent observations are able to be made both for the Peninsula as a whole, and for individual settlements. Observations made by multiple sources are summarised below[44]:

a. The summer peak period and peak population
- The busiest times in all main settlements and holiday destinations were over the Christmas period and New Year period:
  - 24 to 26 December
  - 30 December 2009 to 04 January
- The peak period lasted longer this summer, extending well into January.
- In general, the population on the Peninsula was lower this summer compared to previous summers. However, there were more day visitors this summer.

b. Accommodation
- There were less people staying in hotel and apartment commercial accommodation, and residential accommodation, compared to previous summers, with vacancies and less people-per-property.
- Occupancy in campgrounds was high, especially in DoC campgrounds.

c. Events
- The main events on the Peninsula over this summer peak period were:
  - Coromandel Gold festival in Whitianga on New Years Eve 2009
  - Keltic Fair in Coromandel township on 02 January 2010
  - Tairua Wine and Food festival in Tairua on 09 January 2010
- Traffic volume on the Peninsula was especially heavy at times when main events were held, especially through Tairua and Thames (arterial routes to other locations) and congestion was experienced at Tairua on several occasions.
- Where possible, boating was a popular form of travel to get to main events, such as the Keltic Fair and Tairua Wine and Food festival.
- The Coromandel Gold festival attracted mainly young adults (aged in their late teens and twenties) and Whitianga was a main 'hub' for New Years Eve. The event was positive for the Peninsula, being a controlled environment for "young partygoers".
- Settlements other than Whitianga experienced a quieter New Years Eve without the large crowds and parties experienced in previous summers.

d. The holidaymakers
- There were three noticeable changes in demographics of holidaymakers on the Peninsula over this summer peak period:
  - For the one week following Christmas and including the New Year, there was a large proportion of young adults (aged in their late teens and early twenties), especially in Whitianga.
  - For the following one week between the New Year holiday and the second week of January, there was a general mix of demographics with a noticeable number of middle-aged people and couples.
  - For the following two weeks holidaymakers were mainly families (especially mothers with young children), older people aged over 40 years, and international visitors.
- There were noticeably more families this summer than previous summers.
- The attitude of holidaymakers was positive and people were generally happy.

[44] Observations noted here are those made by multiple sources. The total anecdotal evidence collected was extensive and includes observations not noted here but that may be valid.

e. Weather

- The weather over the summer peak period was the most consistent experienced for several years, with long fine sunny spells. However, the wind may have been a "nuisance" for boaties at times.
- Except in extreme cases, weather conditions tend to affect day visitors (who may make decisions at short notice as to whether or not to visit the Peninsula) more than holidaymakers who have pre-booked their time on the Peninsula and/or who are already on the Peninsula.
- Weather conditions, except in extreme cases, affect activities of holidaymakers rather than duration of holiday time. i.e. if the weather is unfavourable, rather than holidaymakers deciding to abandon their holiday and leave the Peninsula, activities are undertaken that are less affected by weather conditions. Such an example this summer being that more people were observed on the beaches on hot sunny days, compared to days of less favourable weather, when shopping activity increased.
- Beaches on the Peninsula were generally well populated.

Further observations made by multiple sources specific to settlements, are included as **Appendix D**.

5.7 Events

As in previous summers, musical, sporting and cultural events were scheduled this summer, many of which occurred during the summer peak period. Traffic and accommodation data, and anecdotal evidence, indicate that recreational events and those not publicised widely did not have a noticeable influence on summer peak population trends. Anecdotal evidence suggests that these smaller events were largely patronised by people already in the settlements where they are held, rather than attracting people from elsewhere.

However, traffic data and anecdotal evidence suggest that events on the Peninsula over the study period that were ticketed and/or publicised on a regional or national level did more significantly impact on summer peak population trends for the District and individual settlements. As noted earlier, the larger events this summer included:

- Coromandel Gold festival (concert) in Whitianga on New Years Eve 2009
- Keltic Fair in Coromandel Township on 02 January 2010
- Tairua Wine and Food Festival in Tairua on 09 January 2010

The influence of these larger events on summer peak population trends is indicated through traffic movements on the Peninsula that correlate with the location and time of the events. Anecdotal evidence also supports this data with multiple observations noted regarding the increased activity from external visitors in Whitianga, Coromandel and Tairua when the applicable event occurred.

The influence of the Coromandel Gold festival on summer peak population trends is also indicated in campground data. Two temporary sites were open in Whitianga on New Years Eve and one temporary site on 01 January for attendees of the concert. The occupancy in these camping sites on New Years Eve accounted for 80% of the total occupancy in campgrounds in Whitianga that night, and more than 50% on the night of 01 January.

Both the Coromandel Keltic Fair and Tairua Wine and Food festival were day events. Traffic and accommodation data, supported by anecdotal evidence, suggests that these events were largely patronised by day visitors, rather than people staying in accommodation in the settlements. This is indicated through significant increases in traffic movements on routes to and from Coromandel and Tairua on the days of these events, yet

in the instance of Coromandel, influence of the Keltic Fair on occupancy in residential accommodation was not notable[45].

A summary of events scheduled over the survey period is included as **Appendix E**.

5.8 Weather

Weather conditions were noted for each day of the study period to assess any possible influence that the weather may have had on summer peak population trends.

Weather forecasts predicted mainly fine weather, which proved to be correct. No extreme weather conditions were experienced and although some days were overcast and windy, the majority of days over the study period were fine and sunny with temperatures between 20 and 30 degrees. Anecdotally, the consistent good weather for the Peninsula this summer potentially contributed to the duration of the peak period, which extended significantly through January.

[45] The Tairua Wine and Food festival occurred after the accommodation survey period, therefore accommodation data relevant to this event was not analysed.

6 CONCLUSIONS AND TRENDS

As detailed in **section 4**, the peak population of the District can be estimated using a number of methods. The data has been collated and analysed within two distinct categories:

a. the entire Thames Coromandel District
b. the surveyed settlements (refer to **section 4.1** for details)

These findings are presented below, including total population comparisons to previous peak population studies.

Key assumption:
For any increase in the population to be included within this study, visitors must have stayed for at least one night in accommodation.

Accommodation includes residential properties, campgrounds, hotels, motels, and backpackers.

Therefore, the total number of people in the District on any given day may have been higher than that reported. However, a range of information collected has been used to help verify the peak population and assumptions made within this report[46].

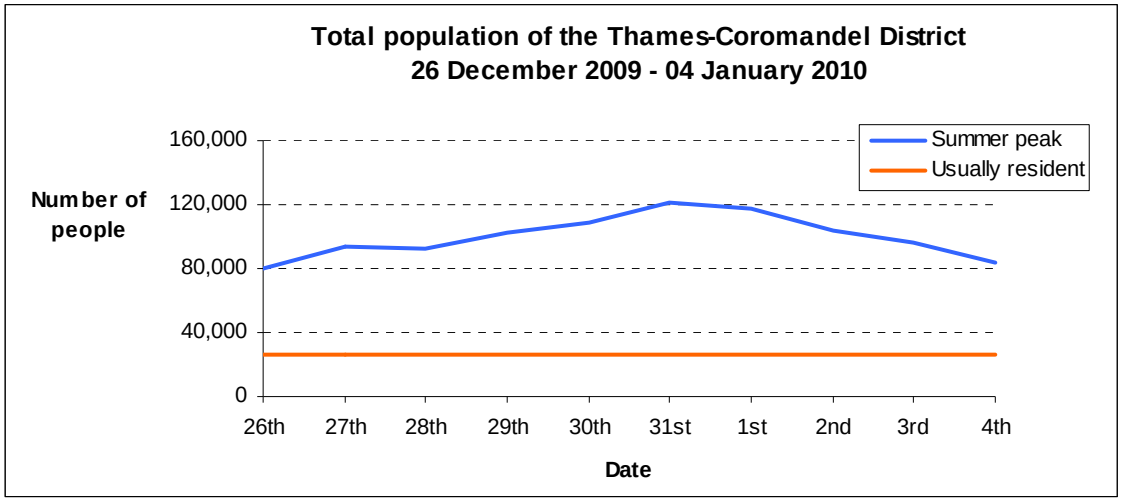
6.1 The Thames-Coromandel District

The research indicates that the population of the Thames-Coromandel District peaked at an estimated 120,900 people on New Years Eve 2009.

Other key observations relating to the total population of the Thames-Coromandel District over the survey period include that:

- the peak population (120,900 people) was over 4.5 times the usually resident population (26,000 people) (See **Figure 22** below)
- over the survey period, there was a fairly steady increase in the number of people up to the peak on New Years Eve, followed by a gradual decrease
- on 04 January 2010, the population was estimated at 84,000 people, which is still over three times the usually resident population.

Figure 22



[46] Traffic data collected enables estimates to be made on the total number of people on the Peninsula per day (by multiplying an average number of people per vehicle by the number of vehicles, and adding this to the usually resident population). However, there are many variables which make these calculations subject to a high degree of error and are therefore used as estimates only and to support other study data.

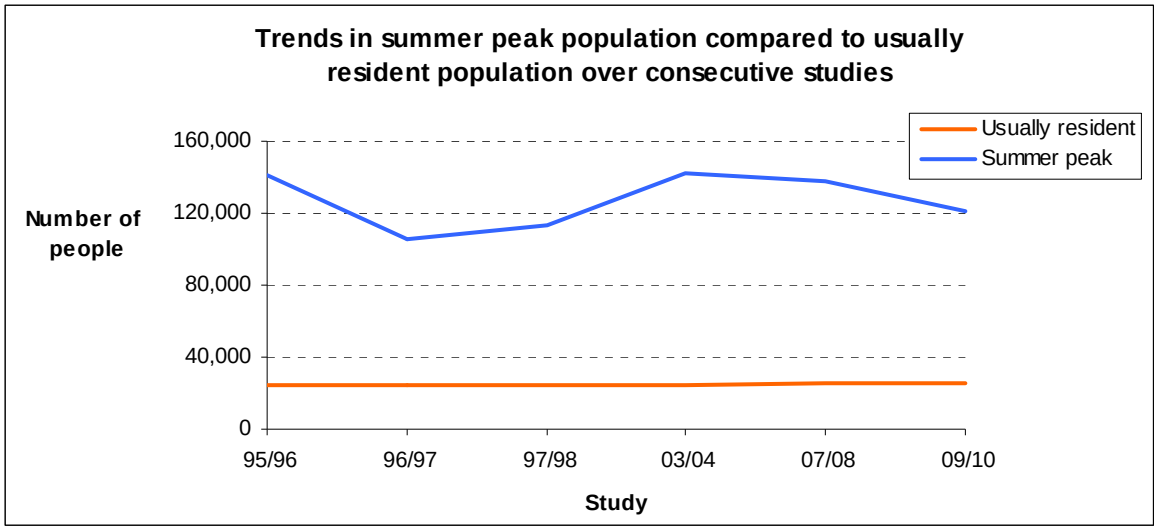
6.1.1 How this compares to previous studies

The estimated peak population of the District this summer of 120,900 people was lower than that for the previous two studies, when there was estimated to be 137,700 people in 2007/08 and 142,400 people in 2003/04.

It is noted that the methodology has varied between each consecutive peak population study in order to better refine methods and increase the comprehensiveness and validity of the study. For example, the use of a distribution method to survey residential accommodation for earlier studies carried out in 1996/98 and 1997/98, whereas a door-to-door surveying method has been used in the last three studies. The 2009/10 Peak Population Study followed very similar methodology as that used in 2007/08.

While the estimated peak population has varied over the past 14 years, it is clear that there is a consistent pattern of extreme peaks during the Christmas/New Year period. This can be seen in **Figure 23** below.

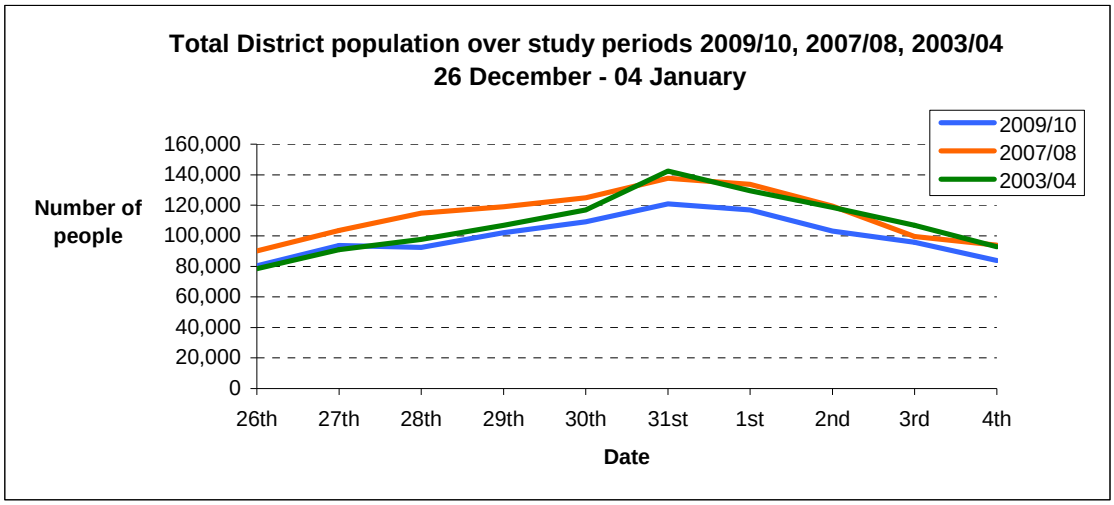
Figure 23



Trends in population over the Christmas/New Year period for the previous three studies are shown in **Figure 24** below. In general, there was an increase in population to a peak on New Years Eve, followed by a gradual population decrease. The peak in 2003/04 is noticeably more evident than in 2007/08 and 2009/10, when the peak population was lower, but the population more consistent on either side. The higher level of people estimated to be in the District leading up to New Years Eve 2007 is also noticeable, compared to lower levels of people estimated prior to New Years Eve 2003 and more recently this summer[47].

[47] It is noted that Christmas Day and New Years Day in 2003/04 and 2009/10 fell later in the week on Thursday and Friday consecutively, whereas in 2007/08 Christmas Day and New Years Day fell on a Tuesday. This potentially influenced when people took work leave, and thus population trends.

Figure 24



6.2 The Settlements

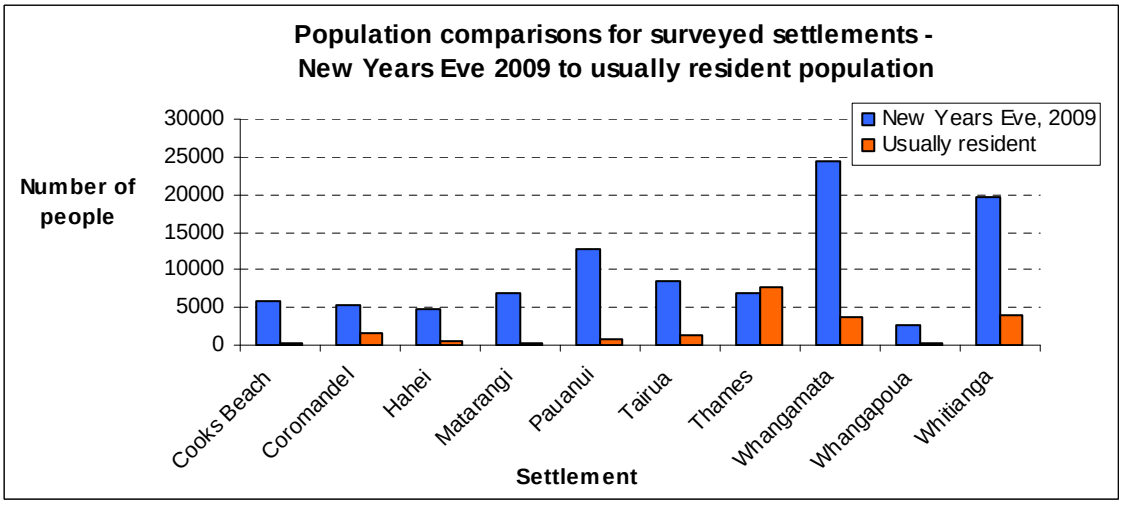
Different settlements experience different peak populations, largely in relation to the number of residential properties and the form and character of the settlement/area.

Key observations relating to the 2009/10 summer peak population as compared to the usually resident population in the surveyed settlements include:

- although New Years Eve was the peak night for the majority of settlements this summer and the District as a whole, it was not the peak night for all settlements
- Whangamata had the greatest peak population with 24,300 people, as compared with the usually resident population of 3,655
- the greatest increase in peak population over usual population was in Matarangi where the number of people in the settlement was 25 times greater than usual
- the sharpest peak in population occurred in Whitianga on New Years Eve.

Comparisons between the estimated population in surveyed settlements on New Years Eve (when the population of the District as a whole peaked) and usually resident population for each of the settlements is presented in **Figure 25** below. As shown, Thames is the only settlement where the usual resident population is higher than the estimated population on New Years Eve this summer.

Figure 25



Comparisons between usually resident population of surveyed settlements and 2009/10 summer peak population is detailed in **Figure 26** below. Also identified for each settlement is the estimated night on which the population peaked, and the population on New Years Eve - when the population in the District as a whole peaked.

Figure 26

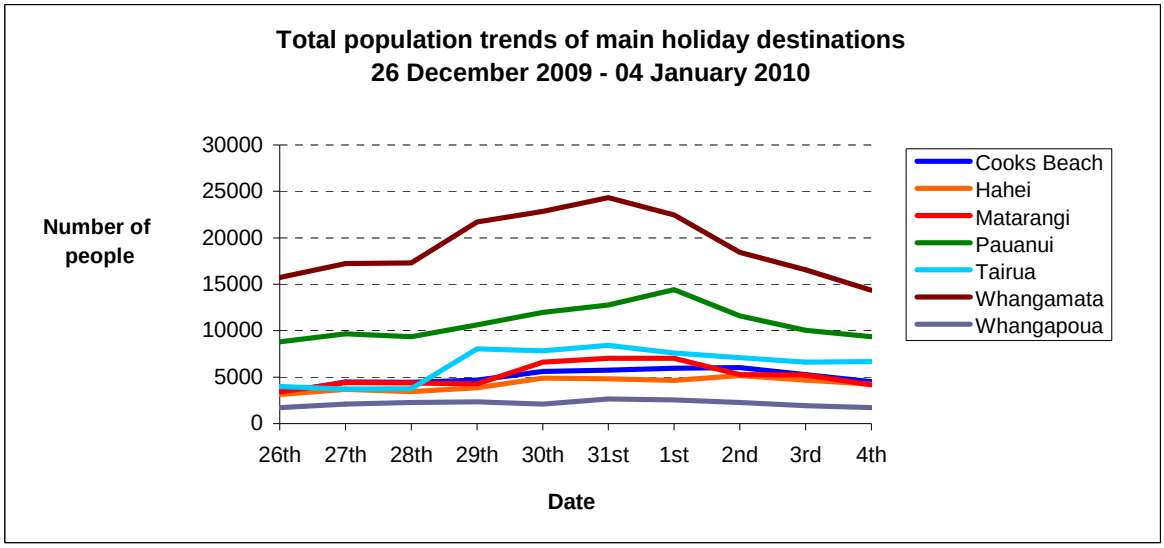
Settlement	Usually resident population	Estimated peak population	Increase of PP over URP*	Night the population peaked	Population on New Years Eve 2009 (graphed F.25)
Cooks Beach	332	6,015	18	02 January	5,729
Coromandel	1,657	5,380	3	01 January	5,294
Hahei	457	5,150	11	02 January	4,821
Matarangi	279	7,015	25	31 December	7,015
Pauanui	747	14,401	19	01 January	12,770
Tairua	1,335	8,437	6	31 December	8,437
Thames	7,657	9,501	1	27 December	6,833
Whangamata	3,655	24,337	7	31 December	24,337
Whangapoua	145	2,654	19	31 December	2,654
Whitianga	4,115	19,770	5	31 December	19,770

*Based on the number of times the peak population (PP) increased over the usually resident population (URP).

The significant increase in peak population over usually resident population in Matarangi reflects the form and character of Matarangi as being primarily a holiday home destination. This increase is also observed for Cooks Beach, Hahei, Pauanui, and Whangapoua.

Trends for popular holiday destinations are illustrated in **Figure 27** below. The high population in Whangamata is notable, as is the evident population peak in Pauanui on 01 January. In addition, the trend for Tairua shows an increase in population on 29 December, which remains fairly steady out to the end of the survey period.

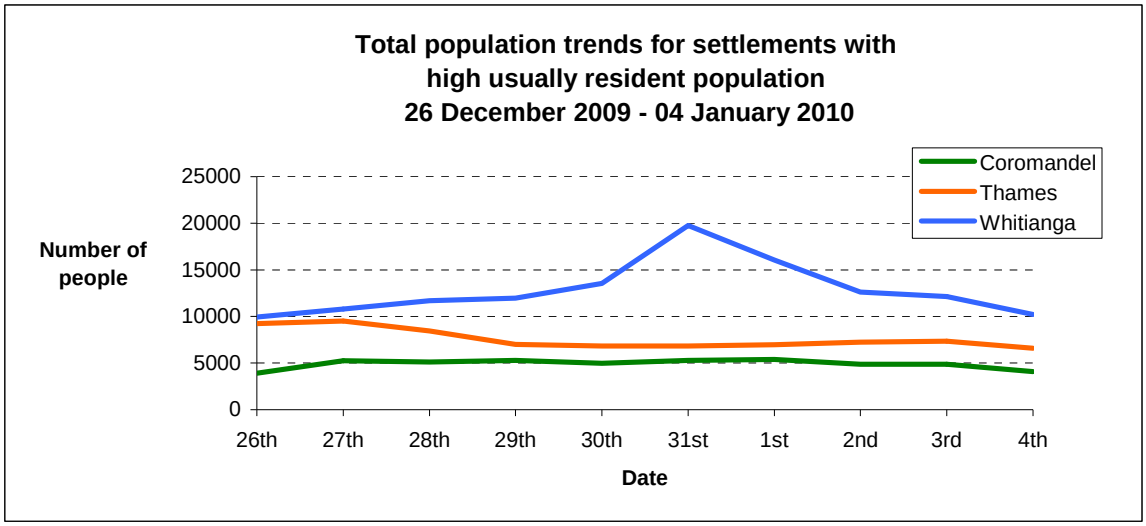
Figure 27



Regarding settlements that have a high usually resident population, Whitianga was the only settlement which showed marked increase in population over the survey period. This occurred as a sharp peak on New Years Eve.

In contrast to Whitianga, the population in Thames followed opposite trends over the survey period, while the population in Coromandel township remained fairly static. Population trends for settlements with high usually resident populations are presented in the **Figure 28** below.

Figure 28

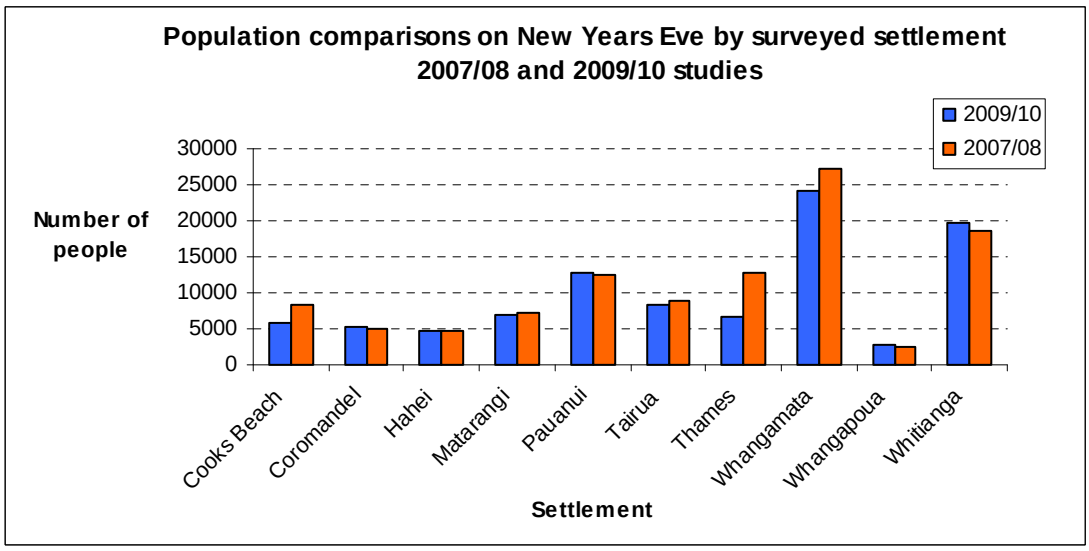


Note - Total summer peak population figures for the Thames-Coromandel District and individual settlements/areas for each day of the survey period is included as **Appendix A**.

6.2.1 How this compares to previous studies

In the majority of settlements surveyed in 2009/10, the population on New Years Eve 2009 was similar to that on New Years Eve 2007 (the peak for the District as a whole) and some settlements actually experienced a higher New Years Eve population this summer than two years ago[48]. As shown in **Figure 29** below, notable differences in New Years Eve population can be observed in Thames, and to a lesser extent in Cooks Beach and Whangamata where the population in 2007 was noticeably higher than in 2009[49].

Figure 29



[48] Due to varying project methodology relating to area definitions, accurate comparisons to earlier studies are not available.

[49] The area defined as 'Hahei' for the 2007/08 study was larger than that for the 2009/10 study, therefore accurate comparisons for Hahei are not available.

For both the 2007/08 and 2009/10 studies, the population trends observed for Thames had implications for trend assumptions made for smaller settlements and areas not surveyed, and therefore also for the District as a whole. The recent findings for population trends in Thames are in contrast to those of the 2007/08 study, which found the population in Thames to generally follow trends similar to those of other surveyed settlements, showing a gradual increase to a peak during the New Year period, followed by a gradual decrease.

As per project methodology for both 2007/08 and 2009/10 studies, the average number of people-per-property determined in Thames for residential properties (through the residential accommodation survey) was allocated (in whole or part) to a majority of the smaller settlements and areas (where there is high usual resident population) where a survey of residential properties was not carried out (refer to **section 4.1**)[50].

Therefore, the population of the District as a whole was directly related to the population in Thames (as reported in both studies). The change in population for Thames for the 2009/10 study may better reflect the number of people in areas of high usually resident population throughout the District this summer.

6.3 The visiting holidaymakers

Regarding place of usual residence of visitors staying in residential accommodation, as for two summers ago, Auckland was the most popular response. Given the high number of holiday/part-time homes on the Peninsula, this suggests that the majority of those homes are also owned by Aucklanders[51].

The duration of time visitors spent on the Peninsula this summer was generally longer than that reported two years ago, with fairly even proportions of between less than a week and more than three weeks. Given that the last study reported the majority of visitors staying less than two weeks, this suggests an extending summer peak period.

This 2009/10 study has estimated there were less people staying in residential accommodation compared to the previous two studies, yet more people using campground accommodation and commercial accommodation (specifically motels and backpackers). Overall however, occupancy in residential accommodation far exceeds that in both campground and commercial accommodation (see **Figure 30** below)[52]. As such, the increase in campground and commercial accommodation in 2009/10 over 2007/08 has had little impact on total population comparisons.

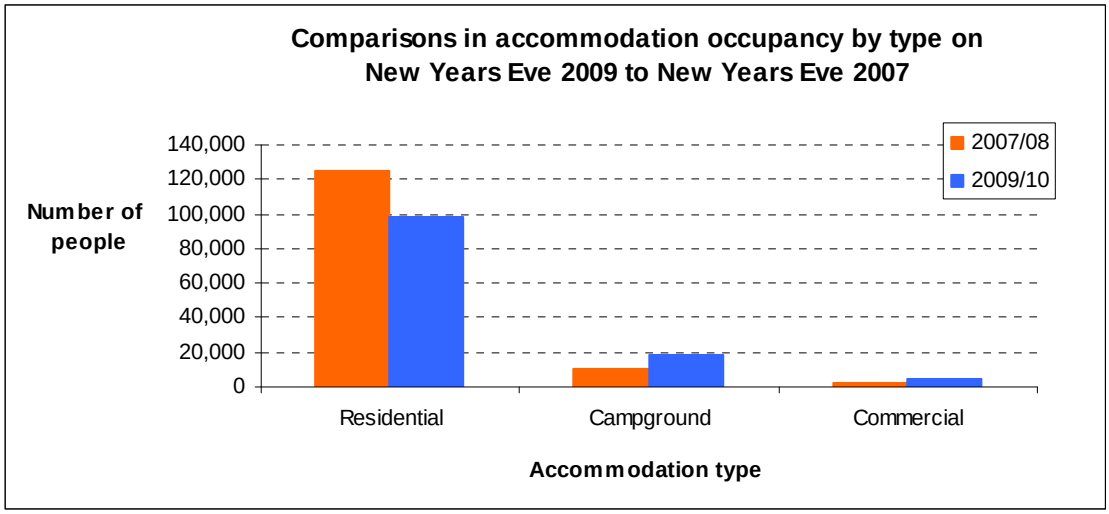
However, although the total summer peak population of the District has decreased over consecutive studies, traffic movements over the 2009/10 and 2007/08 study periods were similar, and significantly higher than in 2003/04. This suggests there is an increasing number of people visiting the Peninsula as day trips during the summer peak period, as opposed to staying overnight in accommodation. Overall, this may suggest that the Peninsula is increasingly seen as a tourist destination.

[50] It is noted that the methodology regarding area definitions (for the purpose of the peak population study) has varied between peak population studies. Where appropriate, area definitions of surveyed settlements have remained consistent. However, area definitions for smaller settlements/areas not surveyed are inconsistent in some cases, as efforts have been made to better reference and reflect these areas. Therefore, accurate comparisons regarding these areas is not available. Area definitions for settlements/areas within the District does not impact on the total estimated population for the District as a whole.

[51] However, it is understood that the homes may also have been rented to other holidaymakers.

[52] Due to varying project methodology, accurate comparisons to earlier studies are not available.

Figure 30



6.4 Influencing factors on summer population trends

Events

Both the Keltic Fair in Coromandel and the Tairua Wine and Food festival have been held on the Peninsula in previous years. Traffic and accommodation data, supported by anecdotal evidence, suggest that these larger events had a noticeable influence on traffic movements on the Peninsula, but did not significantly affect accommodation trends.

This was the first summer that the Coromandel Gold festival was held, with over 10,000 people attending the New Years Eve concert in Whitianga. The impact of this event is most noticeable through the traffic data (where a significant increase is seen in traffic entering Whitianga just prior to the event) and campground occupancy, as well as being supported by anecdotal evidence.

Anecdotally, although there was a large number of people who attended the Coromandel Gold festival, the environment was considered to be controlled and people were generally well behaved. Observations also suggest that, by attracting New Years Eve revellers from nearby settlements, the Coromandel Gold festival influenced the quieter New Years Eve experienced elsewhere on the Peninsula.

Weather conditions

Weather conditions over this summer peak period were consistently fine and sunny, similar to that experienced two summers ago when the previous peak population study was undertaken. Anecdotally, the fine, settled weather on the Peninsula potentially encouraged people to visit and stay in the area over the summer peak period, and influenced their length of stay.

7 LOOKING TO THE FUTURE

The results presented in this 2009/10 Peak Population Study suggest a number of implications for peak population trends in future, including:

- There is a clear trend showing a continued extreme peak population occurring each summer which is likely to continue to put pressure on infrastructure and services.
- Previous peak population studies have indicated an extending of the summer peak period into January, especially when the weather is fine. This trend was notable this summer and is likely to continue in future.
- The peak day for individual settlements appears to vary periodically. Data this summer indicates that where the 'hot spots' will be for New Years Eve in future, and when the peak day occurs for individual settlements may, in part, be influenced by the entertainment provided.
- The Coromandel Peninsula Blueprint is a strategy for the District that seeks to plan for future development and recognises the demands on infrastructure created by peak populations. The strategy concentrates future development within the three main settlements of Thames, Whangamata and Whitianga[53]. In the longer term, this is likely to influence peak population trends, as main factors determining the number of people in the District over the summer peak period are the number of residential properties in settlements, and second, capacity in commercial accommodation. Studies indicate that Whangamata and Whitianga continue to be the most populated settlements over the summer peak period. This is likely to become more so in future if development, and with development capacity in residential and commercial accommodation, increases in these locations.
- Matarangi and Whangapoua had the greatest increase this summer in peak population over usually resident population. **If** the proportion of permanent homes to part-time homes in these settlements remains similar, then this trend is likely to continue in future.
- The study found that campground accommodation was popular this summer. This may indicate that future capacity of campground accommodation in the District may influence summer peak population trends.

[53] For further information on the Coromandel Peninsula Blueprint Strategy, visit www.coroblueprint.govt.nz

8 RECOMMENDATIONS FOR FUTURE STUDIES

General recommendations for future TCDC peak population studies include consideration of the following, that:

- Subject to resourcing available, data collection for future studies continues to be extended to at least the second week of January (although consideration should also be given to Christmas and New Year public holidays). Trends indicate an extending summer peak period and data relating to this period is important if a comprehensive analysis of the summer peak population is to be made.
- Regarding traffic count surveys, consider to:
  - collect data on traffic entering and leaving the District as opposed to the Peninsula
  - collect data on traffic movement over the Kopu-Hikuai road. If the consideration above is actioned, this would still enable data to be available relating to the Peninsula. Also, Council staff have noted that data for traffic using the Kopu-Hikuai road may be useful for other work programmes
  - collect data on traffic entering and leaving Whangapoua, in order to use this data to help verify estimates for the population in Whangapoua
  - discontinue collecting traffic data for the Kauaeranga Valley as this counter location was found to add minimal benefit to the overall study.

  (Note: further details on recommendations relating to traffic data will be provided in the project debrief report).
- Regarding anecdotal evidence, consider to:
  - use similar methodology and/or consider scope for further development of that used for this study. Gathering anecdotal evidence from a variety of sources and assessing observations for consistencies can help verify other study data, and therefore increase the validity of the study. Also, observations can provide valuable insight into the population on the Peninsula during the summer peak period.

Further recommendations regarding project execution is to be provided in the project debrief report.

9 CONCLUSION

The 2009/10 Peak Population Study was carried out according to plan and provided an estimate of the population of the District on New Years Eve 2009 to be around 120,900 people. This was lower than the 2007/08 estimate of 137,700 people. However, trends over consecutive studies do indicate varying summer peak populations, yet the summer peak population of the District has consistently been estimated at over 100,000 people since the original study in 1995/96, and over four times the District's usually resident population.

This summer, Whangamata township had the highest summer peak population with 24,300 people, followed by Whitianga with 19,800. Whitianga experienced the sharpest peak in population, while some of the smaller holiday settlements such as Matarangi and Whangapoua had the most dramatic increase in summer peak population over usually resident population.

10 APPENDICES

Appendix A : Table of total population figures (Table A)

Appendix B : Traffic count results (Tables B and C)
Map of traffic counter locations

Appendix C : Aerial observations summary - a selection of photographs
(Photographs 1 to 8)

Appendix D : Anecdotal evidence - consistent observations specific to settlements

Appendix E : Summary calendar of tourism and recreational events
(during survey period)

Appendix A: Table of total population figures

Table A: Total population figures by settlement / area for the Thames-Coromandel District											
Settlements		December 2009						January 2010			
		26th	27th	28th	29th	30th	31st	1st	2nd	3rd	4th
Settlements surveyed	Cooks Beach	3,292	4,470	4,448	4,695	5,603	5,729	5,951	6,015	5,253	4,520
	Coromandel	3,901	5,239	5,124	5,297	4,962	5,294	5,380	4,871	4,854	4,074
	Hahei	3,129	3,665	3,439	3,837	4,876	4,821	4,644	5,150	4,674	4,216
	Matarangi	3,412	4,398	4,376	4,281	6,598	7,015	7,010	5,274	5,214	4,150
	Pauanui	8,801	9,668	9,354	10,623	11,979	12,770	14,401	11,591	10,037	9,350
	Tairua	4,007	3,704	3,764	8,038	7,839	8,437	7,612	7,072	6,619	6,657
	Thames	9,235	9,501	8,438	7,002	6,818	6,833	6,949	7,230	7,349	6,584
	Whangamata	15,711	17,243	17,300	21,722	22,838	24,337	22,458	18,424	16,552	14,345
	Whangapoua	1,722	2,110	2,268	2,341	2,090	2,654	2,544	2,276	1,939	1,722
	Whitianga	9,947	10,798	11,698	11,975	13,545	19,770	16,052	12,611	12,127	10,213
Settlements / areas not surveyed	Colville and North	3,726	4,437	4,566	4,663	4,604	5,176	5,177	4,562	4,154	3,729
	Hot Water Beach	649	974	947	958	901	938	972	911	905	825
	Kennedy Bay/Little Bay/Tuateawa	1,057	1,478	1,388	1,406	1,191	1,310	1,392	1,231	1,238	1,000
	Kuaotunu	1,426	2,262	2,183	2,271	2,674	2,696	2,785	2,782	2,479	2,152
	Manaia/Te Kouma	778	935	859	795	706	749	785	746	748	632
	Onemana	1,253	1,684	1,612	1,691	2,056	2,076	2,156	2,190	1,915	1,621
	Opito Bay/Otama/Matapaua Bay	678	889	823	943	865	902	934	900	901	801
	Opoutere	624	899	892	945	1,083	1,104	1,132	1,148	1,032	887
	Thames Coast	3,630	5,256	5,023	5,111	4,535	4,936	5,130	4,658	4,623	3,849
	Thames South	1,089	1,084	962	762	737	732	747	810	807	733
	Rest of District	2,235	3,045	3,079	2,703	2,781	2,594	2,695	2,716	2,312	1,901
TOTAL DISTRICT		**80,300**	**93,739**	**92,543**	**102,058**	**109,280**	**120,874**	**116,907**	**103,167**	**95,728**	**83,960**

Usually resident population, 2006 Census
TOTAL DISTRICT 25,944

Appendix B: Traffic count results (Tables B and C)

Table B: Net traffic count results by location / settlement where data collected

Net totals by location settlement / area	Reference no. to base data in Table B	December 2009									January 2010									
		23rd	24th	25th	26th	27th	28th	29th	30th	31st	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Net entering South of Kopu	1	185	899	544	1,620	1,395	711	563	1,062	1,663	-559	-911	-879	-1,105	-10	-100	-256	-93	-167	-775
Net entering Kopu bridge	2	1,398	2,844	3,339	4,531	3,636	1,540	1,358	2,439	3,824	-1,467	-2,517	-3,794	-3,873	-1,014	- 290	- 713	436	-1,051	-4,340
Net in Thames	3, 4	0	94	-117	*	*	*	-121	-52	-144	190	91	47	-202	-77	-106	-120	-53	-67	48
Net Thames Coast	4, 5	37	277	256	316	86	-60	-35	44	211	110	-210	-361	-333	-29	-23	-132	-21	-48	-329
Net Colville North	8	68	248	285	655	587	234	244	211	336	-94	-324	-292	-391	41	-21	-108	-147	-130	-296
Net Coromandel	6, 7, 8	34	180	153	343	212	3	40	155	247	171	-84	-369	-323	-12	-33	-42	33	-67	-248
Net Matarangi	9	158	244	270	527	453	203	122	235	216	-81	-230	-395	-379	-116	-7	-153	-37	-171	-333
Net Whitianga	10, 11	148	345	485	906	741	506	502	852	3,118	*	*	*	*	*	-17	-122	-78	-197	-553
Net Cooks Beach	12	143	258	251	449	379	279	333	296	372	-231	-474	-334	-331	-186	-110	-138	-52	-216	-308
Net Hahei	13	99	235	161	344	250	134	78	237	170	-97	-138	-179	- 176	-2	- 24	-31	-38	-32	-155
Net Hot Water Beach	14	6	22	39	70	123	81	61	54	-18	63	-9	-99	-68	18	-12	-14	-20	-39	-54
Net Tairua	15, 16	103	347	391	460	276	129	166	347	-921	-135	-296	-460	-303	-99	-5	-17	390	85	-868
Net Pauanui	17	172	539	558	723	547	-18	-95	40	792	-96	-359	-712	-739	-286	-75	-70	277	-181	-1,216
Net Whangamata	18, 19	400	1,048	1,159	1,707	1,433	428	491	846	1,820	-557	-797	-1,294	-1,332	-280	-85	-174	260	-132	-1,394
Net Kauaeranga Valley	1, 2, 20	-6	9	38	35	52	-8	-22	27	54	-2	-60	-16	-34	45	5	-23	-36	16	-41
Net entering District		1,811	4,475	4,611	7,454	6,267	2,641	2,465	4,601	7,591	-3,064	-4,360	-6,187	-6,384	-1,230	-542	-1,229	456	-1,329	-6,310

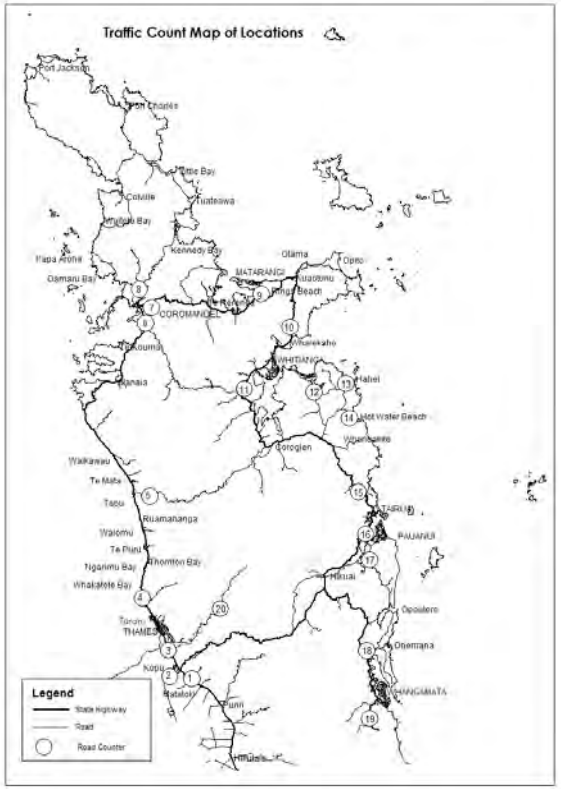
Note: * data not available

Table C: Base data by traffic counter site

Site No.	Site location		December 2009									January 2010									
			23rd	24th	25th	26th	27th	28th	29th	30th	31st	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1	South of Kopu	North	2,611	3,096	2,002	3,348	3,168	2,786	2,745	3,459	3,869	1,966	2,796	2,682	1,852	2,247	2,385	2,175	2,529	2,134	1,774
		South	2,426	2,197	1,458	1,728	1,773	2,075	2,182	2,397	2,206	2,525	3,707	3,561	2,957	2,257	2,485	2,431	2,622	2,301	2,549
2	Kopu Bridge	East	6,210	6,967	6,652	8,114	8,043	6,631	6,458	7,558	7,871	4,565	5,597	4,892	3,736	5,199	5,455	5,126	6,625	5,113	3,926
		West	4,812	4,123	3,313	3,583	4,407	5,091	5,100	5,119	4,047	6,032	8,114	8,686	7,609	6,213	5,745	5,839	6,189	6,164	8,266
3	South of Thames	North	7,752	7,717	4,931	*	*	*	6,695	7,539	7,393	5,177	6,678	6,021	4,381	6,424	6,732	6,241	6,795	5,655	4,695
		South	7,280	6,438	3,787	*	*	*	6,265	6,551	5,885	5,023	7,584	7,505	6,189	6,543	6,814	6,706	6,887	6,265	6,128
4	North of Tararu	North	2,994	3,486	3,099	4,745	4,382	3,663	3,461	3,992	4,487	3,256	4,334	3,285	2,282	3,062	3,166	2,762	3,175	3,232	2,188
		South	2,522	2,301	1,838	2,458	2,622	3,065	2,910	2,952	2,835	3,292	5,331	4,816	3,888	3,104	3,142	3,107	3,214	3,775	3,669
5	East of Tapu	East	223	218	242	321	381	342	288	375	391	302	466	324	215	267	293	270	239	330	206
		West	218	199	191	248	283	317	277	324	326	341	539	398	267	297	262	290	253	543	246
6	South of Coromandel	North	1,922	2,236	1,796	3,278	3,445	2,827	2,803	3,344	3,467	2,629	3,768	2,644	1,912	2,433	2,271	2,206	2,535	2,177	1,602
		South	1,492	1,347	842	1,380	1,869	2,194	2,228	2,399	2,091	2,736	4,482	3,740	3,133	2,416	2,255	2,399	2,539	2,459	2,714
7	East of Coromandel	East	838	946	839	1,468	1,584	1,344	1,456	1,848	1,770	1,214	2,486	1,358	1,052	1,171	1,153	1,068	1,270	996	767
		West	510	485	323	568	807	948	1,165	1,269	977	1,398	2,792	1,793	1,559	1,183	1,083	1,111	1,160	1,081	1,335
8	North of Coromandel	North	595	770	642	1,298	1,677	1,430	1,488	1,632	1,671	1,416	1,824	1,254	1,038	1,094	1,029	1,054	1,060	951	666
		South	527	522	357	643	1,090	1,196	1,244	1,421	1,335	1,510	2,148	1,546	1,429	1,053	1,050	1,162	1,207	1,081	962
9	Road into Matarangi	North (in)	721	766	547	1,116	1,383	1,399	1,669	1,896	1,828	1,580	1,989	1,532	1,272	1,310	1,292	1,215	1,309	920	827
		South (out)	563	522	277	589	930	1,196	1,547	1,661	1,612	1,661	2,219	1,927	1,651	1,426	1,299	1,368	1,346	1,091	1,160
10	North of Whitianga	North	1,461	1,560	908	1,641	2,177	2,611	3,128	3,598	3,201	*	*	*	*	*	2,233	2,180	2,164	1,803	1,573
		South	1,412	1,436	849	523	2,027	2,597	3,048	3,554	3,505	*	*	*	*	*	2,317	2,381	2,382	2,021	1,739
11	South of Whitianga	North	2,048	2,153	1,596	2,665	3,162	3,469	3,924	4,901	5,781	2,913	3,518	2,870	2,440	2,684	2,521	2,548	2,647	2,063	1,773
		South	1,851	1,684	052	1,641	2,271	2,949	3,342	4,005	2,967	5,346	5,026	3,977	3,368	2,956	2,622	2,871	2,943	2,478	2,492
12	Road into Cooks Beach	West (in)	789	919	689	,249	1,526	1,837	2,200	2,441	2,285	1,931	2,104	1,837	2,356	1,473	1,546	1,547	1,650	1,184	1,045
		East (out)	646	661	438	800	1,147	1,558	1,867	2,145	1,913	2,162	2,578	2,171	2,687	1,659	1,656	1,685	1,702	1,400	1,353
13	Road into Hahei	North (in)	1,076	1,229	969	1,555	2,000	2,189	2,421	2,977	2,610	2,509	3,157	2,596	2,228	2,164	2,166	2,246	2,387	1,839	1,549
		South (out)	977	994	808	1,211	1,750	2,055	2,343	2,740	2,440	2,606	3,295	2,775	2,404	2,166	2,190	2,277	2,425	1,871	1,704
14	Road into Hot Water Beach	East (in)	600	590	622	922	1,324	1,514	1,722	1,920	1,399	1,737	2,119	1,645	1,532	1,349	1,325	1,350	1,354	1,066	1,087
		West (out)	594	568	583	852	1,201	1,433	1,661	1,866	1,417	1,674	2,128	1,744	1,600	1,331	1,337	1,364	1,374	1,105	1,141
15	North of Tairua	North	1841	2203	2062	3314	3887	3,929	3,766	4,987	5,428	2,782	3,426	2,998	2,404	2,433	2,289	2,288	2,614	2,206	1,827
		South	1,384	1,216	1,014	1,415	2,058	2,757	2,909	3,251	2,549	5,287	5,412	4,930	3,985	2,923	2,567	2,778	3,032	2,718	3,052
16	South of Tairua	North	2,489	3,033	2,744	4,211	4,746	4,638	4,523	5,908	5,815	3,241	4,101	3,629	2,915	2,983	2,906	2,874	3,552	2,938	2,210
		South	1,929	1,699	1,305	1,852	2,641	3,337	3,500	3,825	3,857	5,881	6,383	6,021	4,799	3,572	3,189	3,381	3,580	3,365	4,303

Site No.	Site location		December 2009									January 2010									
			23rd	24th	25th	26th	27th	28th	29th	30th	31st	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
17	Road into Pauanui	East (in)	1,106	1,345	1,270	1,827	2,036	1,910	2,198	2,480	2,619	1,946	2,298	2,034	1,636	1,603	1,614	1,723	2,065	1,855	1,246
		West (out)	934	806	712	1,104	1,489	1,928	2,293	2,440	1,827	2,042	2,657	2,746	2,375	1,889	1,689	1,793	1,788	2,036	2,462
18	North of Whangamata	North	1,570	1,652	1,185	1,971	2,628	3,083	3,653	4,358	4,048	3,401	4,517	3,872	3,162	2,873	2,653	2,722	2,782	2,625	2,598
		South	1,742	1,968	1,616	2,375	2,825	3,121	3,600	4,104	3,764	3,882	4,652	4,092	3,236	2,799	2,720	2,808	2,929	2,604	2,399
19	South of Whangamata	North	1,473	1,927	1,813	2,786	3,269	2,898	3,120	3,956	4,439	2,760	3,701	2,891	2,167	2,126	2,091	2,019	2,403	2,178	1,802
		South	1,245	1,195	1,085	1,483	2,033	2,508	2,576	2,856	2,335	3,798	4,633	4,405	3,573	2,332	2,243	2,279	2,290	2,289	2,997
20	Kauaeranga Valley road	East (up)	97	117	170	240	254	227	186	232	262	257	262	260	144	255	233	181	158	216	163
		West (down)	103	108	132	205	202	235	208	205	208	259	322	276	178	210	228	204	194	200	204

Note: * data not available



Appendix C : Aerial observations summary - a selection of photographs (Photographs 1 to 8)

Photo 1: DoC campground at Fletcher Bay

Photo 2: Kuaotunu Bay boat ramp

Photo 3: Opito Bay beach front

Photo 4: Hahei beach front

Photo 5: Pauanui beach front by surf club

Photo 6: Hot Water Beach Holiday Park

Photo 7: Long Bay Camp Ground

Photo 8: Oamaru Camp Ground

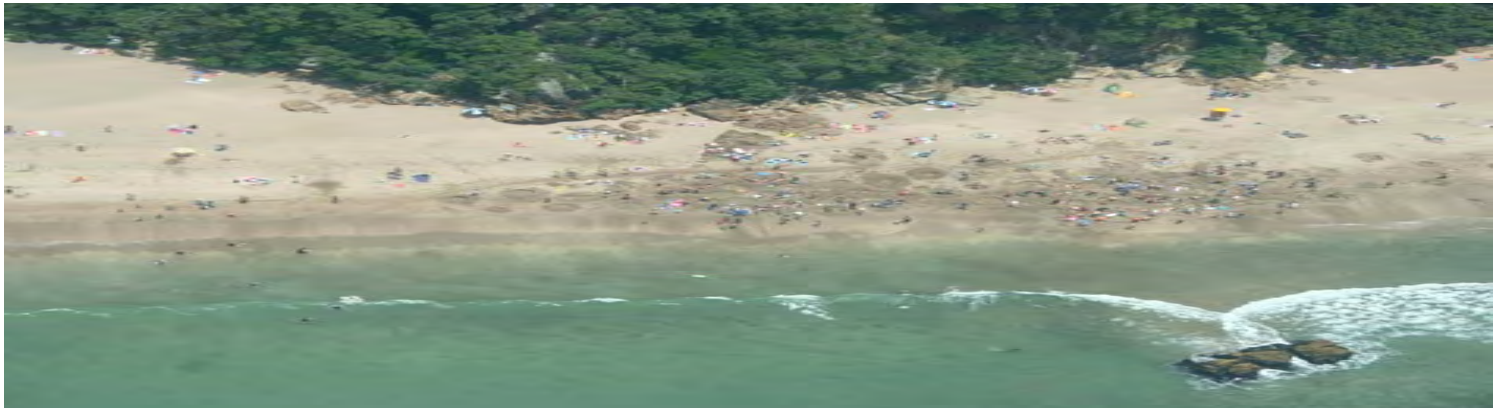


Photo 3: Hot Water Beach

Photo 4: Coromandel Harbour

Photo 5: Kopu Bridge

Appendix D: Anecdotal evidence - consistent observations specific to settlements

Colville and North of Colville

- Secluded areas on private land in the north of the Peninsula are attractive locations for small groups of campers.

Cooks Beach

- There was a larger proportion of younger people (aged in their late teens and twenties) than in previous summers.

Coromandel

- The Keltic Fair on 02 January attracted a large number of day visitors. The music festival on 03 January was also popular.
- Although there were large numbers of people in the town, these were mostly day visitors - the number of visitors staying in accommodation was lower than in previous summers.

Hahei

- Cathedral Cove was a very popular destination over the summer period, especially on 01 and 02 January.
- The Park and Ride bus was a popular means of getting to the Cathedral Cove walkway.

Matarangi

- Matarangi was very quiet compared to previous summers.
- Behaviour of holidaymakers staying in Matarangi was more positive than in previous summers, with no "problems" in the settlement.

Pauanui

- There were fewer teenagers this summer than in previous summers.
- There were more families in the settlement over the peak summer period than in previous summers.

Tairua

- There were less people staying in accommodation in the settlement, but more traffic travelling through the settlement than in previous summers.
- Road blockages at the one-way bridges near Tairua were more pronounced this summer, with longer lines occurring over a longer period (more days). This led to unhappy motorists.

Thames

- Many people visit Thames on their way to other destinations on the Peninsula (such as to shop at Pak'n'Save or visit a café).
- Thames is an arterial route to get to other locations on the Peninsula, rather than being a holiday destination.

Whitianga

- There was a noticeable 'peak' on New Years Eve when the Coromandel Gold festival attracted a large number of people specifically for the event.
- There was a large proportion of young people (aged in their late teens and twenties) in Whitianga on the days immediately around, and on, New Years Eve.
- On either side of the New Year period, there were fewer people in Whitianga than in previous summers with a general mix in demographics of holidaymakers.

Whangamata

- Whangamata attracts mostly families.
    - This has been a trend developing over the past three to four years where the settlement is becoming more family-orientated year by year.
- The majority of events scheduled over the summer period in Whangamata attract holidaymakers already staying in the settlement, rather than visitors from elsewhere.

Appendix E: Summary of tourism and recreational events during survey period

Settlement and event:	Date:
Cooks Beach	
• Summer gala	04 January 2010
Coromandel	
• Keltic fair	02 January 2010
• Coro music festival	03 January 2010
Hahei	
• Hahei Library market day	08 January 2010
Pauanui	
• Family concert in the park (Pauanui/Tairua)	01 January 2010
• Pauanui sports and recreation club events	10 December 2009 - 07 January 2010
• Pauanui summer series	26 December 2009 - 06 February 2010
• Sports day and live band	30 December 2009
• Triathlon	31 December 2009
• Pauanui craft fair	03 - 10 January 2010
• Antique fair	08 - 09 January 2010
Tairua	
• Tairua wine and food festival	09 January 2010
Thames	
• Thames races	03 January 2010
• Market day	06 January 2010
• Harness racing	10 January 2010
Whangamata	
• Carols by candlelight	24 December 2009
• Whangamata week activities	27 December 2009 - 02 January 2010
• Whangamata summer festival	28 December 2009 - 03 January 2010
• Coke summer party	29 December 2009 - 10 January 2010
• ETA summer BBQ	30 December 2009
• Billabong N2 skate competition	31 December 2009
• Thundercats	03 January 2010
• National triathlon series	03 January 2010
Whitianga	
• Whitianga farmers market	26 December 2009, 09 January 2010
• Peace and wellbeing festival	28 December 2009 - 03 January 2010
• Mercury Bay summer festival	30 December 2009
• Coromandel gold festival	31 December 2009