QUEENSTOWN LAKES DISTRICT COUNCIL

Queenstown Lakes District Council

Council Community Plan – 2004/2014

Volume	1	Overview and Summary
	2	Council Activities
	3	Detailed Financial Information and Council Policies
	4	Growth Forecasts

CONTENTS

Introduction from the Chief Executive

Duncan Field

The preparation of this first Council Community Plan has involved a 'cast of thousands'. My thanks go out to the large cross-section of the community who took part in the workshops and to the large number of staff and other advisers who prepared, assessed and summarised the thousands of pages of information on which the CCP is based.

At this point however I also want to reserve special praise for the small group of dedicated employees who have brought this project to a conclusion over two years of sustained effort. The value of this document to the community, and its influence on the governance of our services and facilities into the foreseeable future, is the result of their effort and dedication.

What you will see in CCPs now and in future years represents international best practise. The new Local Government Act 2002 set new standards for planning, forecasting and public participation in decision-making and accountability. Today's CCP is already a major improvement on past annual plans:

a) We have gone into the process with a view we are making decisions with the community instead of for the community

b) For the first time we have hard three year budgets and defensible 10 year forecasts, all supported by detailed investigations and published asset management plans.

c) The Council has identified seven community outcomes and dedicated itself to their advancement.

d) The document begins to encourage public debate about the alternatives to current policies and priorities.

e) It encourages debate about major changes in services that are likely to affect you in the years ahead.

f) It allows the community to fully scrutinise the Council.

The CCP does not stand alone; it fits comfortably in a family of planning documents, which govern a structure with assets in excess of $500 million, and a total annual expenditure of $83 million. The CCP simply brings the threads together for any reader to develop an overview of the governance of the community, and for a dedicated student of local affairs to find the detail.

The most important of the source documents are:

a) The partially operative District Plan which is the principal means by which the community influences development.

b) Council's asset management plans which record, assess and plan for infrastructure and facilities.

c) A series of planning studies and assessments which have already been completed.

d) Reserve development plans which identify our intention to invest in public recreation land.

e) Reserve management plans which provide clear guidance on how key public parks will be administered.

f) The Council's bylaws.

g) The Council's embryonic policy register which captures policy decisions made by the body corporate over an extended period.

Early on in this process we committed ourselves to achieving far more than 'just a bare pass'. We could have avoided preparing community outcomes, our forecasts could have been superficial and certain components like a waste management strategy were not required until a future stage. All of these things are included in this CCP. They have all been thoroughly prepared and rigorously reviewed. They are all based on up to date information, and they can all be objectively justified.

But the CCP is a 'work in progress'. In the two years between now and 30 June 2006 we will need to do more.

- The plan is there to be used by the community. As residents and ratepayers use it they will find the local aspects that need to be built in. Please, tell us what the plan needs to meet your requirements.
- Most of the problems faced by our community can't be solved by the Council alone. The community outcomes need to be the focus for a wide range of other organisations, from Government agencies to community groups. The Council has already begun to foster this common focus through co-operative ventures such as the joint library service with Central Otago, the Remarkable Roads initiative, and a flood mitigation partnership with the Otago Regional Council.
- The plan does not describe how we will monitor and report to the community on progress towards economic, social, cultural and environmental wellbeing. That is a priority for the coming year.
- Our performance measures are of variable quality. They are for infrastructure rather than other functions. That is largely because we have worked with them for longer years. This will need to change.

- There are matters which require considerably more work before they are understood to a standard expected of the CCP. No provision has been made in this plan for new water standards being mooted by Government. Planning for the Queenstown Aquatic Centre and performing arts centre still has a way to go. We also need to complete the current Transportation and Parking Study and review its impact on our roading network.
- Over time reports on the CCP will be evidence of how far we have moved to creating a sustainable future.

For Council management, the value in this plan lies in the way in which it focuses us on what has to be done to achieve the community outcomes. It can be a 'highway', helping us make progress quickly and efficiently. It could also be a 'noose', tying us up in bureaucratic knots of trivia, report writing and insincere consultation.

I'm determined it will be a highway.

Duncan Field

Chief Executive

The Four Volumes Explained

Volume 1 is a summary of the information contained in the other three volumes. It contains an overview of the current situation and presents the major issues facing the District over the life of the plan. Information on the community outcomes and Council's response to these issues is presented. A financial overview, using graphs, shows the impact on rates for the 2004/05 year. Volume 1 is intended to be the main consultation document which will be widely distributed.

Volume 2 presents all the detailed information for each of Council's activities. This volume includes details of asset information, performance measurement, operational and capital expenditure as well as funding implications. It presents disclosure of Council activities at a level not produced before in one document.

Volume 3 includes all the required financial data over a 10 year timeframe. This includes all financial statements and financial policies. Details of rates required for the 2004/05 are disclosed in this volume.

Volume 4 deals with the growth assumptions that underpin the analysis within the plan. Most of this information has been developed through the Growth Options study and it has been collated into a separate volume as a resource for use by other agencies and interested parties.

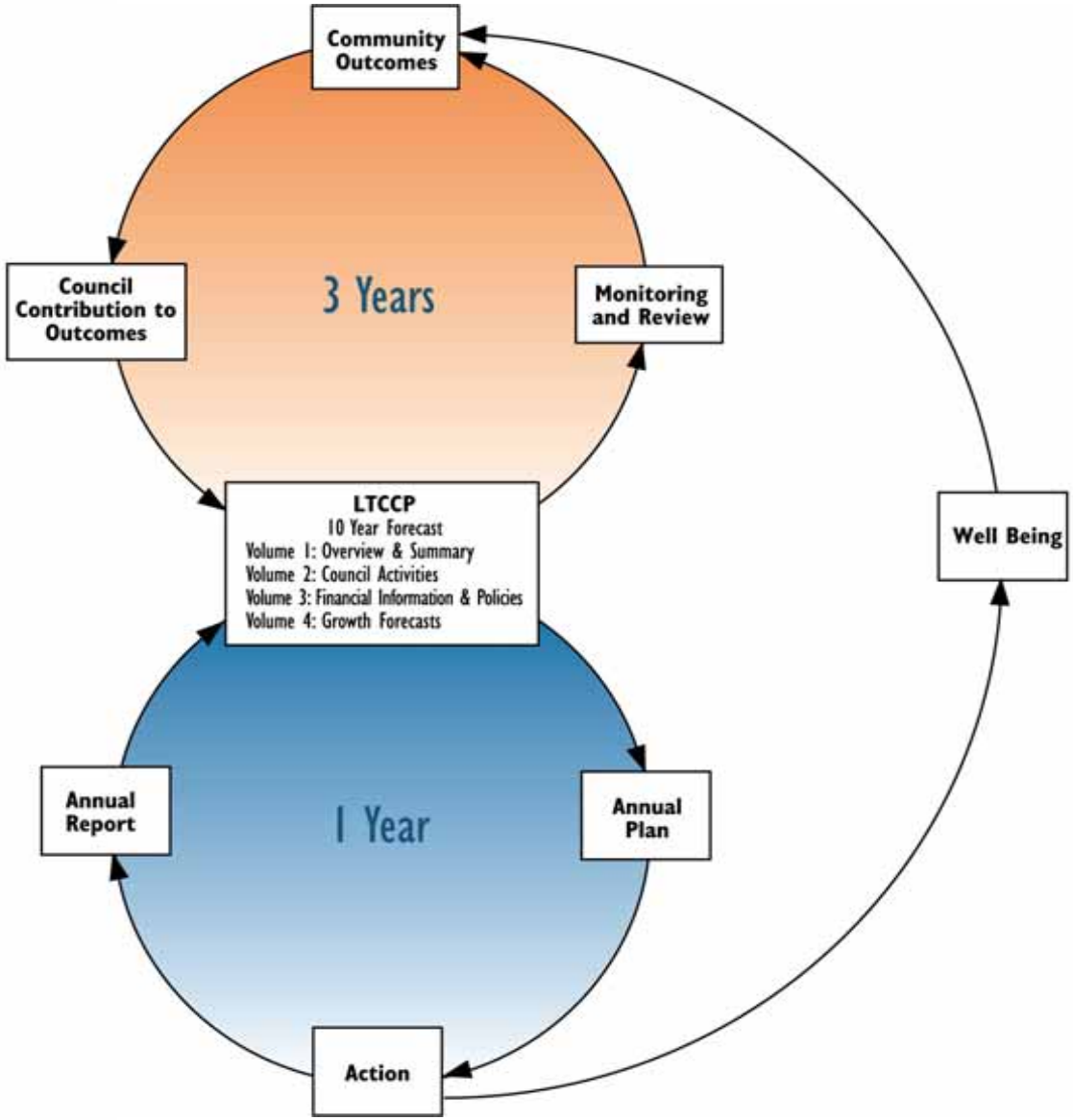
Consultation

The QLDC Council Community Plan is an important part of the process of managing the Council. It is the primary opportunity for ratepayers and residents to have their say prior to the Council confirming its plans and budgets.

Submission

- Submissions on any aspect of any of the four volumes were called for in May 2004. The Council received 99 submissions which were all duly considered at a hearing in June.
- Any comment that you still wish to make on any aspect of the CCP is valued. Send to CCP Comment Queenstown Lakes District Council, Private Bag 50072, Queenstown or email **services@qldc.govt.nz**
- Submissions will be called for each year the CCP is adopted or amended (every three years). Submissions will also be called for on an Annual Plan, which will be produced next year, 2005 and each year a CCP is not adopted.

THE STATUTORY LONG TERM COUNCIL COMMUNITY PLAN (LTCCP) PROCESS

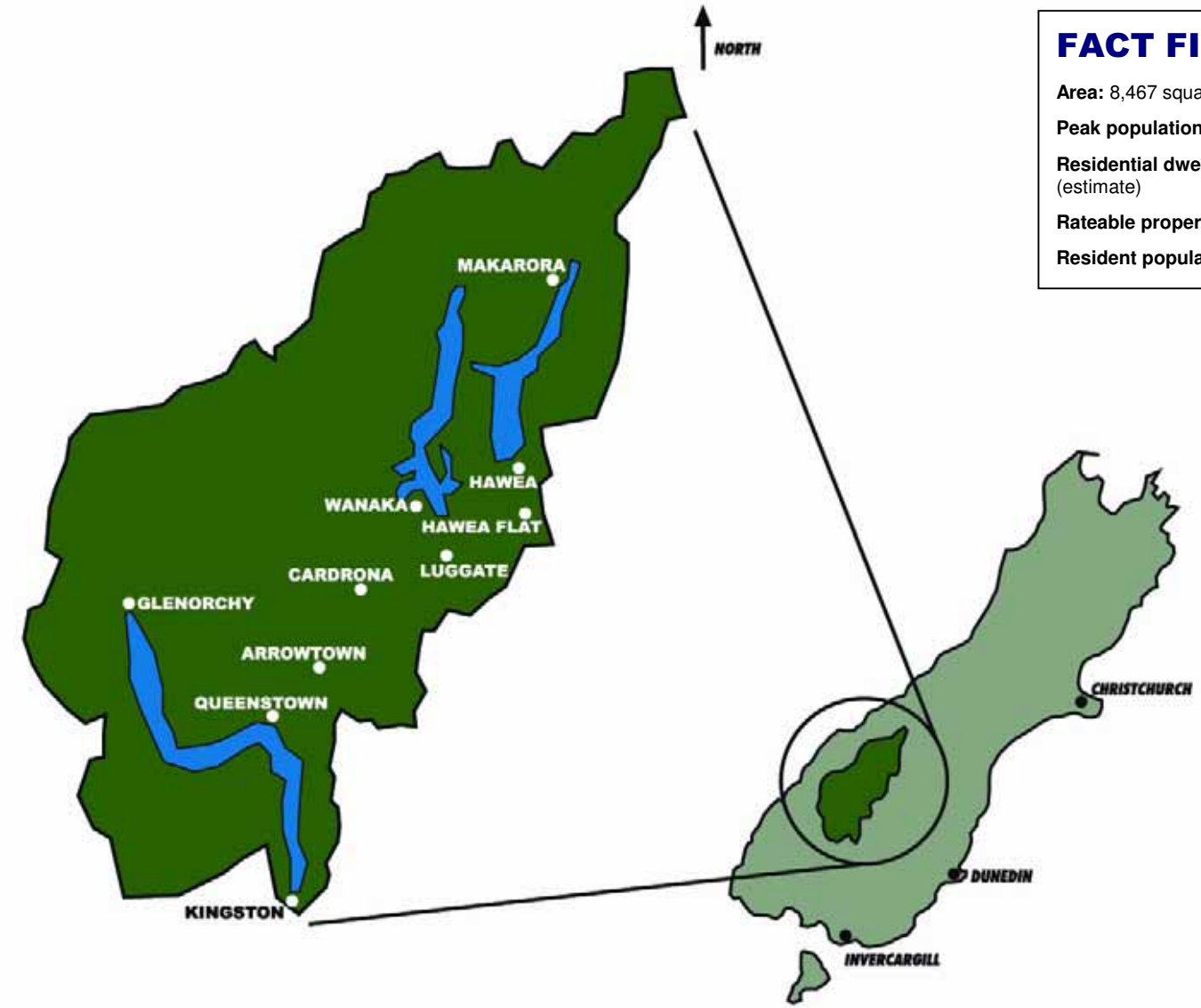


This year (2004)
The Council will adopt a draft **Council Community Plan** with three year and ten year forecasting and financial information.

Next year (2005)
In each year between the three yearly **Council Community Plan** process we will produce an annual plan.

In two years (2006)
The Council will adopt a new **Council Community Plan** in 2006 which will be the subject of the first full audit.

Every six years
The Community Outcomes must be revisited.



FACT FILE

Area: 8,467 square kilometres

Peak population 2004: 44,393 (estimate)

Residential dwellings 2004: 11,760 (estimate)

Rateable properties 2004: 15,713

Resident population 2003: 20,700 (estimate)

QUEENSTOWN LAKES DISTRICT COUNCIL

Council Community Plan - Growth Forecasts

Demographic and Economic trends and projections

A Understanding the present population, census statistics, and recent trends

B Population and visitor projections

C Peak day population projections for calculating future infrastructure needs

DEMOGRAPHIC AND ECONOMIC TRENDS AND PROJECTIONS – QUEENSTOWN AND WANAKA

The purpose of this Volume is to outline what the Council knows about the current and future situation of the District and the growth projections that it has used to inform its future planning. The Council considered it important to collate this information for inclusion in its CCP in order to enable it to be shared with the community and other agencies and in the hope that it will be useful to others in their own strategic planning.

The projections contained in this part of the CCP have been determined from two sources:

- An analysis into projections and trends was undertaken in order to help the Council consider growth management options for Wanaka and Queenstown. This developed a set of high-level projections for population, housing, visitor numbers, and employment trends based on the key demographic and economic trends facing the two settlements. From these projections, the future demand for land for housing, employment and other activities was then estimated.
- These projections were further refined in order to make them useful as the basis for the 20 year modelling of the District's likely demands on infrastructure (i.e. water, sewage, and roading). This second tier of analysis required:
  a) Further detailed assessment of the projected peak population;
  b) Further detailed assessment of the geographic distribution of the average and peak population; and
  c) An assumption that housing will be built in those areas identified as new growth areas in the Wanaka 2020 report (2002).

The information gathered in these two exercises provides high-level projections that can be used to understand the consequences of growth and provides the basis for the Council's future planning.

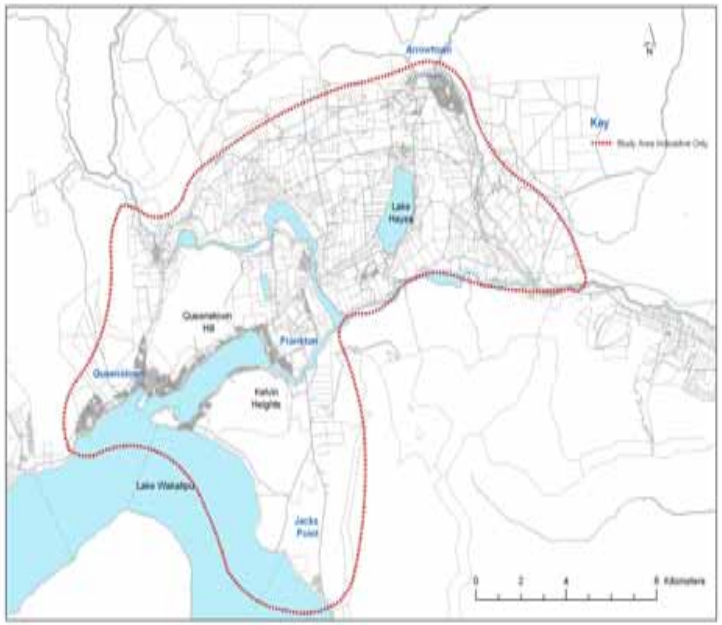
Whilst a lot of the more detailed information provided in this Volume relates specifically to the study areas of **Queenstown and Wanaka** shown in the maps on the following page, projections have also been done for the smaller communities. As part of the community workshops (and/or feasibility studies into sewage of water), the Council now has good information as to the possible future dwelling capacity and population for the communities **of Glenorchy, Kingston, Cardrona**, **Luggate, Hawea, Hawea Flat, and Makarora**. As the additional capacity for growth in these smaller townships is relatively small, the council is confident that the long term projections provided in Part B of this Volume provide realistic estimates for the district-wide population into the future.

In addition to the information contained in this Volume, the Council maintains a dwelling capacity model (updated 6 monthly), which estimates the remaining capacity for future growth throughout the district, under the current zoning.

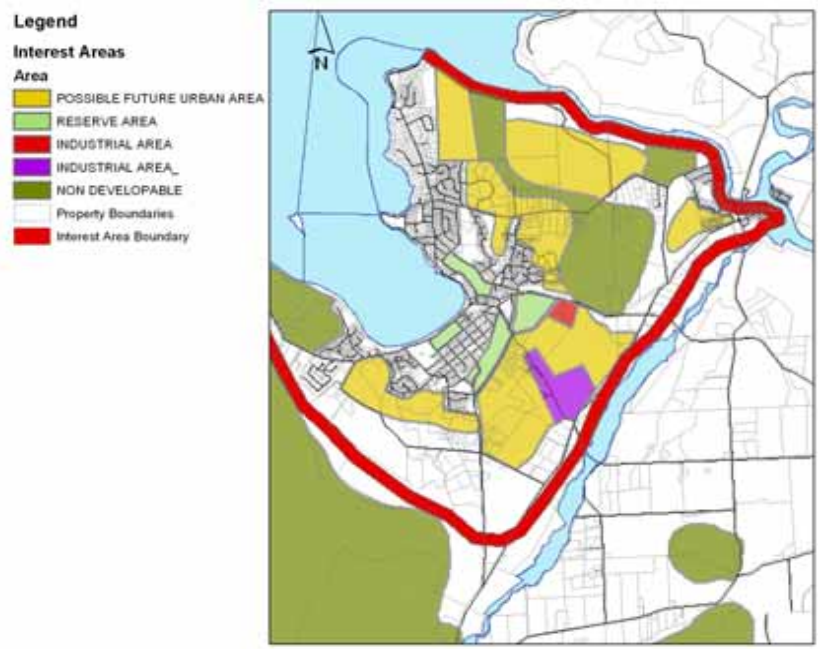
Proviso

The data presented in this report draws upon a number of sources. Because of this, figures for a particular area or locality may differ slightly between different parts of the report. Random rounding of statistical data undertaken by Statistics New Zealand to ensure confidentiality further creates small changes in the figures used in the report. As the projections presented have undergone a number of iterations, the numbers presented in this Volume may differ somewhat from earlier work presented by the Council. Nevertheless, at this point in time, the following data is considered by the Council to be the most up to date and accurate available.

Queenstown Study Area



Wanaka Study Area



Council Community Plan - Growth Forecasts

Part A Understanding the present population, census statistics, and recent trends

PART A - PRESENT POPULATION AND RECENT TRENDS

Existing Projections

To understand the consequences of growth and, in turn, align activities and plan accordingly, an analysis of the existing projections was undertaken. Whilst some of these proved to be of limited use (e.g. Statistics NZ population projections), others provided useful base information from which to derive our own projections.

Population and Housing

Population projections have been produced by Statistics New Zealand, using data from the 2001 census. These projections are for a 20 year period and are available at the area unit level. These projections are for the usually resident population only.

Visitors

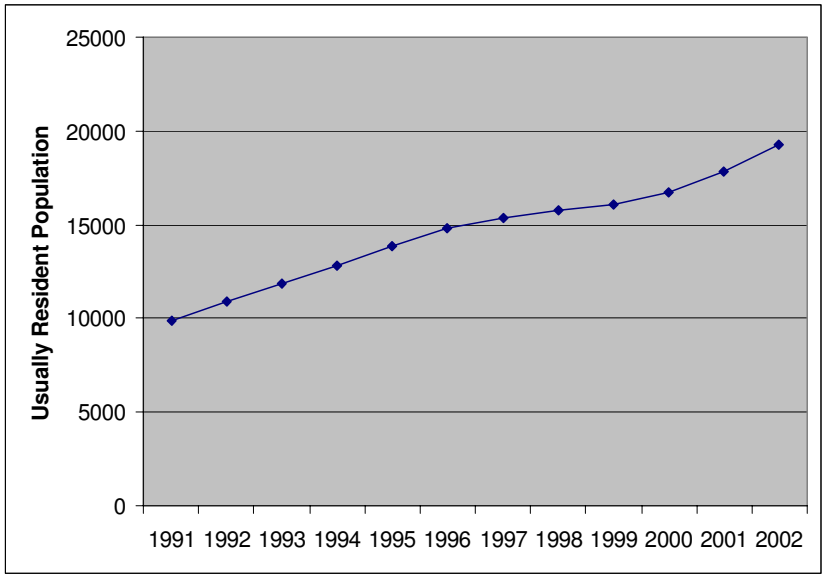
Projections for the Queenstown Lakes/Central Otago Regional Tourism Organisation area are available out to 2009. These projections have been produced by the Tourism Research Council. The Tourism Organisation area covers Queenstown, Wanaka and the rest of Central Otago. The projections cover both domestic and international visitors.

Employment

No projections were available in regard to the number of full time equivalent workers (FTE's) that would be required to service the projected economic growth.

1.0 Permanent resident population growth

The following graph shows the growth of the resident population of the District, since 1991. The most recent estimate from Statistics New Zealand places the population of the district at just under 20,000 people.



1.1 Population Growth (Permanent Residents) – QLDC – 1991-2002

Statistics New Zealand figures show that over the recent past, 77% of the District's growth has been attributable to inward migration. This highlights the point that population growth rates in the area are very dependent upon economic trends. Statistics New Zealand expects this high rate of inward migration to continue. Clearly, in forecasting future population levels, estimating the number of people moving into the area is critical.

1.1 Population growth – usually resident population - 1991-2001

In terms of the growth of specific areas, the following table sets out the headline data on changes to the usually resident population between 1991 and 2001 for specific areas, based on census data.

Area	Usually resident population 1991	1996	2001	% Change 1991-2001
Wanaka urban	1,851	2,523	3,327	79.7%
Wanaka locality	900	1095	1,347	49.7%
Queenstown urban	5,142	7,530	8,538	66.0%
Queenstown locality	1,812	2,778	3,432	89.4%

Source: 2001 Census

What is interesting to note is that in the Wanaka area, growth has been strongest in the settlement, while in Queenstown, growth has been fastest in the surrounding locality[1]. As a result of these trends, the share of all growth accommodated by the two main settlements of the district has remained the same over the past 10 years, but for the Queenstown urban area, its share of growth has fallen slightly.[2]

1.2 Share of total usually resident population – settlements 1991-2001

Settlement	1991	1996	2001
Wanaka Urban	18.5%	17.7%	19.5%
Queenstown Urban	51.5%	52.7%	50.1%
Total Urban Areas	70.0%	70.4%	69.6%

Source: 2001 Census

[1] The Wanaka Census Area Unit has increased in size between 1991 and 2001

[2] Wanaka Urban = Wanaka Census Area Unit; Queenstown Urban = Kelvin Heights, Frankton, Earnslaw, Queenstown Bay and Sunshine Bays Census Area Units.

These last two sets of figures highlight the dispersal of population which is occurring in the Queenstown area. This is a core issue for the "Tomorrow's Queenstown" growth management strategy, which seeks a containment of the urban area, but clearly market forces are in favour of dispersal. Understanding the social and economic drivers of this dynamic of dispersal is therefore important.

1.3 Population growth – usually resident population - Queenstown urban area

Census area units	1991	2001	Change 1991-2001	% Change
Kelvin Heights	519	789	270	52.0%
Frankton	786	1641	855	108.8%
Earnslaw	1419	2340	921	64.9%
Queenstown Bay	1461	1908	447	30.6%
Sunshine Bay	957	1860	903	94.4%

Source: 2001 Census

Within the Queenstown urban area, the fastest growing areas have been the Frankton and Sunshine Bay areas – areas on the fringe of the settlement. Central Queenstown has seen the slowest increase in the permanent population.

2.0 Housing

A significant issue is the number of existing 'dwelling units' in the district and the number that will be required in the future, in order to accommodate the projected number of residents (permanent and transient) and visitors.

2.1 Growth in total dwellings (occupied and unoccupied)

The following table shows the growth in total dwellings – occupied and unoccupied at the night of the census, by study area.

Area	1991	2001	Change 1991-2001	% Change
Wanaka urban	1,731	2,565	834	48%
Queenstown urban	3,198	4,644	1,446	45%
Queenstown locality	1,293	1,941	648	50%
Total district	7,164	10,491	3,327	46%

Average occupancy rates have increased from 2.1 people per house to 2.39 people in Wanaka, and from 2.4 people per house to 2.5 in Queenstown. This is a desirable trend in that it means that better use is being made of the existing housing stock. However, clearly this trend will not continue forever and it is likely that occupancy rates will begin to settle down as they are now close to the national average.

2.2 Occupied and unoccupied dwellings - 1991 and 2001 Census

A related issue which is of utmost importance to this district is the number of homes in the area that are not occupied all year. In Wanaka, over 40% of homes are not occupied all of the time – these are holiday/ second homes.

Urban Area	Occupied		Unoccupied	
	1991	2001	1991	2001
Wanaka urban	51%	56%	49%	44%
Queenstown urban	66%	75%	34%	25%

Source: 2001 Census

2.3 Types of occupied dwellings - 1996 and 2001

Stand-alone housing dominates in Wanaka, while in Queenstown flats and apartments are an important part of the market. Between 1996 and 2001 attached housing types (such as apartments and flats) increased in Queenstown as a proportion of occupied dwellings.

Urban Area	Detached		Attached	
	1996	2001	1996	2001
Wanaka	79.2%	79.7%	10.4%	13.0%
Queenstown	54.6%	51.3%	38.8%	43.0%

Source: 2001 Census

2.4 Household composition

In both Wanaka and Queenstown, there are more households formed by singles and couples than in the district as a whole. Queenstown is notable for the size of the non-family households – households of unrelated people flatting together. This again reinforces the point that Queenstown is increasingly the home of younger people attracted by the work opportunities and lifestyle, while families are more attracted to the surrounding district.

Area	One Person households	Couples	Families	Households with unrelated people
Wanaka urban	23.3%	38.0%	32.5%	6.2%
Queenstown urban	25.4%	28.9%	31.3%	14.4%
District	21.9%	33.2%	35.0%	9.9%

Source: 2001 Census

3.0 Age Structure

Changes in the age structure of the usually resident population create differing demands on social and community infrastructure, as well as for housing.

Over the 10 years between 1991 and 2001, the biggest change in the age structure in Wanaka has been the growth of the 40-65 age band. This implies that the settlement is attractive to people and families in their middle years. The number of younger people (0-19 age bands) has also increased indicating a growing demand for educational and recreational activities. Growth of both groups further suggests increasing demands for retail and commercial services associated with a growing home-based population.

In contrast, in Queenstown the largest growth has been in the 20-39 year age band, an age group often underrepresented in provincial cities and towns. This age group is more associated with entertainment and leisure-based consumption, and renting rather than home ownership.

In both settlements, the number of older adults has also increased, suggesting that both settlements are still seen as a retirement destination, but more so for Wanaka than Queenstown.

As a result of these trends, Queenstown's age profile has got a lot younger than it was 10 years ago. In Wanaka, the change is less dramatic, and has seen the population get a bit more middle aged.

3.1 Share of population by age bands

Age band	Wanaka urban area		Queenstown urban area	
	1991	2001	1991	2001
0-19	24%	23%	24%	22%
20-39	26%	26%	42%	45%
40-65	31%	34%	27%	25%
65+	19%	17%	8%	8%
Total	100%	100%	100%	100%

Source: 2001 Census

In the surrounding Queenstown locality – which has been growing faster than the Queenstown urban area – most growth has been in the 40-65 age band, mirroring the trend in Wanaka. Again this highlights the growing dichotomy between the Queenstown urban area and the surrounding district. The centre is characterised by a large number of younger people and a high proportion of temporary residents, while the surrounding district has more of a family focus.

4.0 Jobs and Employment

The 2001 census records that of the usually resident population aged 15 and over, 10,140 people were employed in full-time or part-time work. This is an increase from 8,469 people in 1996. Note that these figures are not the number of jobs in the Queenstown area as some people who live outside the district will drive to jobs in the area, although this will be a small figure.

In terms of the ratio of employment to people of working age (15-65 years old), the ratio is relatively high, indicating that most adults work, and as a result most people moving into the area would appear to do so for work-related purposes.

4.1 People of working age

Year	Population aged 15-65 years	Number of usually resident people employed	Ratio – population to people employed
1996	10,380	8,469	0.82
2001	12,267	10,140	0.83
% Increase 1996-2001	18%	20%	

Source: 2001 Census

The structure of the local economy has not changed much over the five years between 1996 and 2001. The business sector has grown somewhat faster than other sectors, while the primary sector has slipped back a bit. The manufacturing sector comprises only a few jobs. Table 14 sets out data from the 2001 census.

4.2 Employment make-up 1996–2001 – share of employment by industry sector

Industry sector	1996	2001
Primary (agriculture)	6.6%	5.3%
Manufacturing	3.6%	4.3%
Construction and infrastructure	11.9%	10.5%
Wholesale and retail	17.5%	17.0%
Accommodation	22.4%	22.1%
Transport and communications	9.4%	8.7%
Business	21.5%	23.8%
Government	7.1%	8.4%
Total	100.0%	100.0%

Source: 2001 Census

4.3 Full time equivalent jobs

As is often noted, the economy of the District is still heavily focused on tourism. The following table provides a breakdown for full time equivalent jobs (full time and part time added together) by area.

Area unit	1998	2002
Hawea	170	250
Frankton	470	740
Wanaka	1020	1710
Glenorchy	110	220
Kelvin Heights	55	110
Sunshine Bay	250	310
Skippers	360	870
Lake Hayes	30	15
Matukituki	60	65
Arrowtown	310	460
Queenstown Bay	2850	3580
Earnslaw	1010	1210
Total	6695	9540

Council Community Plan - Growth Forecasts

Part B Population and Visitor Projections

- Queenstown
- Wanaka

PART B – POPULATION AND VISITOR PROJECTIONS FOR QUEENSTOWN

The process

The following process was used to develop the projections for Queenstown:

1. Consider the existing Statistics NZ projections.
2. Establish a broad relationship between visitor growth, employment growth and population growth.
3. Using visitor growth as the main driver of employment and population growth in the area, determine likely growth in visitor numbers, based on expected annual rates of increase.
4. From the total visitor numbers, project out the number of full time equivalent (ftes) workers, based on the current ratio between the number of visitors and the number of workers.
5. Based on the growth of employment (ftes), determine the likely population based on the current ratio of ftes to permanent residents, maintaining the 2001 ratio between workers and permanent residents. The trend has been for the ratio between workers and residents to fall over time.
6. Based on the number of permanent residents, determine the number of occupied and unoccupied houses. This is achieved by first applying an assumed number of people per household to the permanent population. This figure is derived from the 2001 census. This then gives the number of permanent homes. A ratio between permanent and temporary homes is then applied to gain the total number of dwellings.

These steps are discussed in turn.

1.0 Existing Statistics New Zealand Projections

1.1 Statistics NZ Projected population growth rate – Queenstown Lakes District Council

It is prudent to consider the high growth scenario due to the fact that the district's growth has consistently outstripped even the high projection in recent years and in order to ensure that the district's long term infrastructure needs are effectively planned for.

Time period	Total growth	Growth from natural increase	Growth from inward migration	% of growth from migration
1996-2001	3050	680	2350	77.0%
2001-2006	5950	930	5000	84.0%
2006-2011	3500	990	2500	71.4%
2011-2016	3400	900	2500	73.5%
2016-2021	3300	810	2500	75.8%

1.2 Projected growth by area – Statistics NZ high growth scenario – usually resident population

Looking at the main settlements and their hinterlands, under the Statistics New Zealand high growth scenario, the Wanaka urban area and the Queenstown locality are expected to accommodate the largest numerical increase in population in the district.

Area	2001[3]	2006	2011	2016	2021	Change
Wanaka urban	3,450	5,610	6,830	8,020	9,160	5,710
Queenstown urban	8,990	10,770	11,830	12,870	13,880	4,890
Queenstown locality (Basin)	3,580	5,470	6,580	7,690	8,790	5,210
Total	17,840	24,290	28,330	32,340	36,250	18,410

2.0 Visitor Numbers

2.1 Total visitor projections

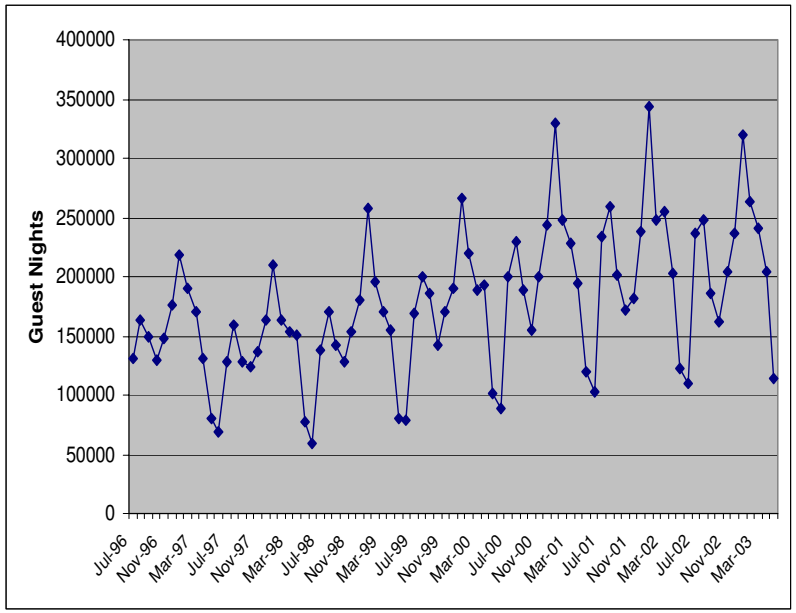
The main source of data on total visitor numbers is projections prepared by the Tourism Research Council. The Research Council has recently produced a new set of projections for the Queenstown Lakes/Central Otago area out to the year 2009. They assume a continuation of the historical rate of growth in visitor numbers of 4.75% per year. Extrapolating this growth rate out to 2021 results in total national and international visitors of around 12 million; up from 5.5 million in 2004.

[3] The resident population figure reported in the 2001 Census and the base (2001) population used by Stats NZ for its population projections differ slightly.

Year	Queenstown District/Central Otago forecast
2001	4,863,360
2002	5,066,000
2003	5,273,000
2004	5,567,000
2005	5,871,000
2006	6,136,000
2007	6,400,000
2008	6,670,000
2009	6,969,000

Source: Tourism Research Council

2.2 Statistics New Zealand's commercial accommodation survey and guest nights for QLDC area – June 1996 to March 2003



Statistics New Zealand's Commercial Accommodation Survey highlights the strong seasonality of the visitor accommodation sector. The commercial accommodation survey only records visitors staying in hotels, motels, camping grounds, backpackers, farm stays and other forms of visitor accommodation. It does not cover people staying with friends and relatives in their private homes. This figure could potentially be significant, as could the number of people renting private homes on an informal 'non-commercial' basis. The Council intends commissioning research to enable it to better understand the use of unoccupied homes and the behaviour of absentee owners and it is anticipated that additional information on this will be available for inclusion in the 2006 CCP.

2.3 Total visitors in 2002 by area

Area	Total visitors
Queenstown	2,845,402
Wanaka	992,855
Total	3,838,257

The Tourism Research Council figures for total visitors to the QLDC and Central Otago Region in 2002 was 5,066,000 visitors. Our estimates indicate that a total of 3, 838,257 people (i.e. 75% of the "QLDC and Central Otago" total) visit the Queenstown Lakes District per year.

These figures have been used as a basis to calculate the daily number of visitors in Queenstown and Wanaka on an average day.

2.4 Assumed growth rates – total visitors

The annual growth rates (which are close to the projected rates from the Tourism Research Council) have then been applied to this daily figure. For this purpose, the following annual growth rates have been adopted:

	2001-2006	2006-2011	2011-2016	2016-2021
Yearly growth rate	4.75%	4.50%	4.25%	4.00%

2.5 Estimated additional visitor units – Queenstown area

From this demand, an estimate has then been made of the amount of commercial accommodation that will be needed to accommodate this number of visitors. Different assumptions need to be made for Queenstown and Wanaka because in Wanaka the commercial accommodation sector is much smaller than in Queenstown.

In Queenstown, the commercial accommodation monitor suggests that around 70% of visitors stay in commercial accommodation. Of this 70%, about 75% stay in hotels, motels and increasingly in apartments. The proportion of people staying in these forms of accommodation is likely to increase in the future.

Year	Total visitors staying in commercial accommodation	% Staying in hotels / motels / apartments	Total in motels / hotels / apartments	Total capacity needed	Average daily demand (beds) (visitors)	Total visitor units required	Additional visitor units
2001	1,979,441	75.0%	1,484,581	1,781,497	4,881	-	-
2006	2,599,345	77.0%	2,001,496	2,401,795	6,580	2,632	680
2011	3,378,053	80.0%	2,702,442	3,242,931	8,885	3,554	922
2016	4,273,511	82.0%	3,504,279	4,205,135	11,521	4,608	1,054
2021	5,199,334	85.0%	4,419,434	5,303,320	14,530	5,812	1,203

The total capacity provided by the commercial accommodation sector always runs ahead of the demand, and so an allowance of 20% spare capacity has been provided. Based on an estimated number of 2.5 visitors per visitor accommodation unit, the daily demand for visitor beds can be roughly translated into the number of visitor units (most likely to be apartments) that will be needed to cope with the projected demand. There could therefore be demand for around 4,000 visitor units between 2001 and 2021.

Adding in the capacity available in the camping grounds and official home stays (say 1,000 beds) daily bed capacity will need to grow from around 6,000 beds in 2001 to 16,000 beds by 2021.

3.0 Employment projections

Having established estimates of future visitor numbers, the next step in the process has been to estimate the amount of employment likely to be generated over the next 20 years.

3.1 Estimated employment (full time equivalent jobs)

Employment	2001-2006	2006 -2011	2011-2016	2016-2021
Ratio (fte /visitor)	0.89	0.90	0.91	0.93
Total ftes	9,095	11,429	14,191	17,580
Increase in ftes	1,800	2,334	2,762	3,389

In 2002, there were 7,295 full time equivalent (ftes) jobs in the Queenstown area. This means that for each visitor, there is currently 0.90 of an fte job. These jobs are spread across the economy, they are not just jobs related to the tourism sector. Obviously employment is related to a range of factors like growth of the permanent population, more service jobs and growth of the agricultural and business base of the area, but the bulk of the economy is driven by tourism and therefore, for Queenstown at least, it is valid to expect a relationship between the number of visitors and the numbers of people employed. Allowing for the ratio between ftes and visitors to increase (which assumes that, over time, the economic base of the area will widen and an increasing proportion of people will work in activities other than tourism), employment could grow to around 17,500 ftes by 2021, which could equate to up to 20,000 full time and part time jobs.

3.2 Current estimated employment capacity of business areas

In terms of the location of this employment, current estimates are that 50% of this employment is located in business areas (the CBD, Frankton and the various industrial areas) and the other 50% is in residential areas. Those located in residential areas accounts for those working in the construction industry for example, where the workers do not require x m² to work in as they are working "on-site" in various ever-changing locations.

The first step in calculating future land needs for businesses is to work out the capacity for jobs available in the current business areas. The following table sets out the relevant data and assumptions.

Business area	Area (Ha)	Capacity (ftes/ha)	Total ftes	Current ftes (estimated)	Estimated spare capacity (ftes)
Queenstown CBD	9.3	275	2,556	2,000	556
Gorge Road	10.4	50	522	500	22
Frankton industrial	16.5	50	827	500	327
Airport	27.7	30	831	250	581
Frankton Flats commercial	20	100	2,000	300	1,700
Arrowtown industrial	3.5	30	105	100	5
Total	**87.5**	**535**	**6,841**	**3,650**	**3,191**

Based on these assumptions, it is possible to identify when the existing employment areas will "fill up" and new areas will be needed.

3.3 Future employment location

The following table sets out the assumptions about the future split of employment between commercial and industrial areas.

Employment area 2001 FTEs		Current split	Projected split	Estimated full time equivalent jobs			
				2001-2006	2006-2011	2011-2016	2016-2021
Commercial areas	2,300	31.5%	25%	450	583	690	847
Industrial areas	1,350	18.5%	25%	450	583	690	847
Other areas	3,645	49.9%	50%	900	1,167	1,381	1,695
Total	7,295	100.0%	100%	1,800	2,334	2,762	3,389

3.4 Location of future commercial employment

For the employment to be located in commercial areas, the next step is to split this employment between the Queenstown CBD and Frankton. The following table sets out the assumptions in regard to this.

Commercial area	2001-2006	2006-2011	2011-2016	2016-2021
CBD (%)	70%	50%	40%	30%
Frankton (%)	30%	50%	60%	70%
CBD (ftes)	315	292	276	254
Frankton (ftes)	135	292	414	593

3.5 Future land needs – commercial land (ha)

Taking into account the current capacity available in the CBD and at Frankton, the following estimates can made of the amount of additional land needed for commercial activities. It is assumed that there is about 20,000 square metres of floor space that can be added to the CBD and 60,000 square metres at Frankton, within current zonings.

Period		2001-2006	2006-2011	2011-2016	2016-2021
Additional floor space needed	CBD @ 35 sqm per fte	11,026	10,210	9,666	8,897
	Frankton @ 40 sqm per fte	5,401	11,669	16,570	23,726
Additional commercial land needed (Ha)	CBD	0.0	0.3	1.4	1.3
	Frankton	0.0	0.0	0.0	0.0

3.6 Future land needs – industrial

The following table sets out the relevant assumptions about future demands for industrial land. This is industrial land over and above what is already zoned.

Period	2001-2006	2006-2011	2011-2016	2016-2021
Demand – additional ftes	450	583	690	847
Less current capacity (ftes)	744	186	0	0
Net demand (ftes)	-293	398	690	847
Industrial land needed (ha)@ 30 ftes per ha	0	13.3	23.0	28.2

4.0 Population projections

The population projections have been based on the employment projections on the basis that the key component of population growth is inward migration, whereby expansion of the economy is drawing more people to live in the Queenstown area.

4.1 Projected resident population

In 2002, for every full time equivalent job in the Queenstown area, there were 1.65 permanent residents. Increasing this ratio over time (which assumes that the population remains mainly of people of working age), the permanent population of the Queenstown area reaches around the 30,000 people by 2021. It is considered that this methodology is more robust than simply projecting forward an assumed growth rate.

	2001-2006	2006-2011	2011-2016	2016-2021
Ratio (pop to employment)	1.65	1.66	1.68	1.70
Total resident population	14,963	18,996	23,830	29,826
Increase	2,993	4,033	4,834	5,997

4.2 Demand for households and the estimated dwelling growth

Between 1991 and 2001, the ratio of unoccupied houses to occupied houses fell from 0.57 to 0.37. It is assumed that this ratio will continue to fall, so that by 2021 only 20% of the housing stock will be unoccupied most of the time. It is also assumed that the number of people per household will decline (in line with national trends) but then increase as housing costs rise. The following table sets out how the number of households that will be required over time has been calculated.

	2001	2016	2011	2016	2021
Resident population	11,970	14,963	18,996	23,830	29,826
Average people per household	2.49	2.45	2.4	2.35	2.35
Occupied dwellings	4,815	6,107	7,915	10,140	12,692
Ratio occupied to unoccupied	0.37	0.37	0.35	0.3	0.25
Unoccupied dwellings	1,770	2,260	2,770	3,042	3,173
Total dwellings	6,585	8,367	10,685	13,183	15,865

4.3 Supply and location of households

The location of future households has been based on an assessment of:

- The capacity of different areas to absorb more dwellings
- Current growth trends.

The Council's housing capacity study has been used to determine the capacity of different zoned areas to absorb growth. This study is district-wide, is updated regularly and is available on the website.

Based on the Council's figures (July 2003 data), an allowance has then been made for visitor units. This is necessary as visitor accommodation units can take up part of the total dwelling capacity provided for by the District Plan, due to the fact that visitor units can be developed 'as of right' in the high density residential zone, the town centre zone (above ground level) and, in many of the special zones.

For this study, the Queenstown/ Wakatipu area has been subdivided into a number of planning areas, mostly on the basis of infrastructure service areas. The following table sets out the data on the total dwelling capacity in these areas (based on the council study) and the allowance that has been made for visitor units.

Capacity for growth

Planning Area	Additional capacity provided by District Plan	Expected visitor units	Net capacity - residential units
Sunshine / Fernhill	423	0	423
Wider CBD Area	2,500	1,200	1,300
Frankton Rd	1,173	700	473
Frankton Flats	2,478	700	1,778
Kelvin Heights	1,801	0	1,801
Arrowtown	252	0	252
Wakatipu	4,564	1,400	3,164
Total	13,191	4,000	9,191

Based on this data, as well as recent growth trends, the estimated housing growth has then been allocated to these different planning areas. Initially, areas grow on the basis of past growth rates, but as areas reach capacity, then growth is reallocated to other areas with capacity.

Estimated housing growth – 2021

Planning area	2006	2011	2016	2021
Sunshine	1,098	1,243	1,325	1,325
Wider CBD area	1,845	2,031	2,437	3,091
Frankton Rd	1,050	1,291	1,291	1,291
Frankton Flats	1,313	2,129	2,378	2,378
Kelvin Heights	632	911	1,472	2,397
Arrowtown	1,339	1,359	1,359	1,359
Wakatipu	1,021	1,650	2,672	3,776

PART B – POPULATION AND VISITOR PROJECTIONS FOR WANAKA

Process

For Wanaka, a different approach was taken to that of Queenstown, because the drivers of growth in Wanaka are different to those of Queenstown. In Wanaka, the following process has been adopted:

1. Population projections as provided by Statistics New Zealand were used as the starting point.
2. From these estimates the number of dwellings was estimated (occupied and unoccupied).
3. Employment growth was based on the growth of the population.
4. Finally, growth in visitor numbers was estimated based on the growth of the population on the basis that as more people live in the area, there will be a bigger service base, more activities and better transport links and these features will draw in more visitors to the area.

1.0 Population

The projected population for the Wanaka area is set out in below. The figures used are very similar to those proposed by Statistics New Zealand. The same base population as that used by Statistics New Zealand is adopted (3,450 people rather than the census figure of 3, 327).

1.1 Projected population growth for Wanaka Area

	2001	2006	2011	2016	2021
Resident population	3,450	4,839	6,475	8,264	9,581
Visitors (average day)	2,720	3,774	4,963	6,142	6,816
Jobs ftes	1,710	2,359	3,085	3,797	4,191

1.2 Estimated housing

As with Queenstown, an estimate has been made as to the number of dwellings needed to accommodate this population.

	2001	2016	2011	2016	2021
Resident population	3,450	4,839	6,475	8,264	9,581
People per occupied dwelling	2.39	2.35	2.40	2.40	2.35
Occupied dwellings	1,446	2,059	2,698	3,444	4,077
Ratio occupied to unoccupied dwellings	0.77	0.7	0.65	0.6	0.55
Unoccupied dwellings	1,119	1,441	1,754	2,066	2,242
Total dwellings	2,565	3,500	4,452	5,510	6,319

1.3 Housing capacity – Wanaka Area

This demand was then allocated to different areas within Wanaka, based on the council's housing capacity study. As with Queenstown, assumptions had to be made about how much of the capacity provided by the District Plan might be taken-up by visitor accommodation.

Planning area	Additional capacity provided for by District Plan	Less allowance for visitor units	Net dwelling capacity
Wanaka town centre	40	40	0
Wanaka high density	814	600	214
Albert town	188	50	138
North Wanaka	1,160	110	1,050
South Wanaka	731	50	681
Peninsular Bay	400	0	400
Wanaka rural residential	591	0	591
Wanaka rural lifestyle	88	0	88
Penrith Park	98	0	98
Total	4,110	850	3,260

For the purpose of planning its infrastructure, the Council's engineers looked into the future slightly and have assumed a change of zoning in the Wanaka South area, from rural to urban.

Therefore, the model used by the engineers for the planning of roading, sewage, and water (etc) assumes that this zone change would create 3,420 additional dwelling capacity units in the Wanaka South zone. This is the most significant difference between the model that was initially prepared by the Council and that which was further refined for the purpose of planning future infrastructure.

2.0 Employment

Future employment has been calculated on the basis of the ratio of full time equivalent jobs to permanent residents.

2.1 Employment growth

In 2001, for every 2.02 people there was one fte. It is expected that this ratio will slowly grow in the future as the population base of the settlement broadens out.

Employment	2001 2006	2006-2011	2011-2016	2016-2021
Ratio (population to ftes)	2.05	2.10	2.18	2.30
Total ftes	2,359	3,085	3,797	4,191

2.2 Future employment location

The following table sets out the assumptions related to the location of this employment.

Area	Current Split	Future Split	2001-2006	2006-2011	2011-2016	2016-2021
Wanaka CBD	42.69%	37%	241	268	262	139
Wanaka Ind	27.49%	33%	215	239	233	124
Other	29.82%	30%	195	217	212	112

2.3 Land needs – commercial and industrial

This split results in the following demand for additional land, assuming that the current commercial and business areas are largely developed and there is little room for additional growth:

Commercial land	2001-2006	2006-2011	2011-2016	2016-2021	Total
Floor area (sqm) @ 40 sqm per fte.	9,626	10,702	10,471	5,543	36,342
Additional area (ha)	1.9	2.1	2.1	1.1	7

Industrial Land	2001-2006	2006-2011	2011-2016	2016-2021	Total 2001-2021
Land Needed (ha) @ 30 Fte/ha	7.2	8.0	7.8	4.1	27

3.0 Visitor Accommodation

In Wanaka, fewer people stay in visitor accommodation, and fewer of these people stay in hotels, motels and apartments, compared to Queenstown.

3.1 Commercial accommodation demands

The following table sets out the assumptions used to determine the number of people that are likely to want to stay in visitor accommodation units like hotels and apartments.

Year	Visitors staying in all forms of commercial accommodation	% Staying in hotels/ motels / apartments	Number of visitors	Total capacity	Daily capacity	Demand for "visitor units"
2001	475,898	45.00%	214,154	289,108	792	
2006	688,755	47.00%	323,715	420,829	1,153	144
2011	921,402	50.00%	460,701	598,912	1,641	195
2016	1,233,007	53.00%	653,493	849,541	2,328	275
2021	1,492,737	55.00%	821,005	1,067,307	2,924	239

QUEENSTOWN LAKES DISTRICT COUNCIL

Council Community Plan - Growth Forecasts

Part C Peak day population projections for calculating future infrastructure needs

PART C - PEAK DAY POPULATION PROJECTIONS FOR CALCULATING FUTURE INFRASTRUCTURE NEEDS

Peak day population figures are required to be as accurate as possible in order to enable the Council to calculate the future capacity and needs of its infrastructure network (roads, parking, water supply, sewage, stormwater, etc). This is because all infrastructure needs to be able to cope with the peak day demand even though that may mean that there is spare capacity "in the pipes" so to speak, for much of the year.

Process

To arrive at these peak day population figures the following process was undertaken:

1. The average day projections described above have been used as the base line.
2. The entire usually resident population has been assumed to be at home at all times. This means that the population fluctuations can be associated to visitor numbers only. (Visitor numbers include holiday home owners, guests staying in private residences, visitors staying in commercial accommodation and day visitors).
3. The ratio of visitors in a peak month (PM) compared with the average month (AM) has been used from past years to give a peak month average day (PMAD) visitor population figure.
4. Wastewater pumping records have been analysed to arrive at a peak day (PD) to average day (AD) ratio for the peak month (i.e. January). The wastewater pumping records are considered to be a good indicator of population increases at peak times and of the increased loading on systems in such times. By comparing the wastewater pumping records on an average day to those of a peak day in January, a ratio is able to be determined (see table below). Assuming that there is a direct relationship between this and the population, this factor has then been applied to the peak month average day population (PMADP) to give the peak day population (PDP). Therefore, this model assumes that the peak population and loading on council's systems is 1.2 times greater on the peak day than the average day for the peak month.

   A summary of the ratios used for Queenstown and Wanaka are shown in the following table.

	Peak Month Factor (PM/AM)(For Visitors)	Peak Day Factor (PD/AD)(For the Peak Month & applied to the total population)
Queenstown	1.39	1.2
Wanaka	1.53	1.2

   Using these ratios, the Council was then able to determine the peak populations in various years. For example: 67,605 in the Queenstown study area in 2021 (inclusive of residents, day visitors, and visitors staying overnight).

5. The peak day population is then broken down into Usually Resident population, Visitors staying in Private Residence, Visitors in Commercial Accommodation and Day Visitors using the ratios as determined in the Market Economics assessment.

Area	Private Residence ratio	Commercial Accommodation ratio	Day Visitor ratio
Queenstown	0.22	0.70	0.08
Arrowtown	0.62	0.25	0.12
Wanaka	0.51	0.38	0.11

6. Under these headings the population staying in private residences has been evenly spread over the dwellings, which are split into areas as per the dwelling study. Visitors staying in commercial accommodation have been divided into area units based on a study of current accommodation locations and an assumed trend to future locations.

Queenstown	2001 percentage	2021 percentage
Sunshine Bay	11.5	20
Queenstown Bay	70.5	50
Frankton Road	7	20
Frankton Flats	3.5	7.5
Kelvin Heights	1.5	1
Millbrook	3	3
Arthur's Point	3	2.5

Wanaka	2001 percentage	2021 percentage
Central	60	50
Wanaka West	30	30
Wanaka South	5	15
Beacon Point	5	5
Albert Town	0	0

This additional work has enabled the Council to make additional projections for both Wanaka and Queenstown in respect of the following key information:

- The distribution of usually resident population on a peak day and on an average day.
- The distribution of visitors staying in private residences on a peak day and on an average day.
- The distribution of visitors staying in commercial accommodation on a peak day and on an average day.
- The number of day visitors on a peak day and on an average day.

This information is contained in the tables overleaf.

Peak Day Analysis – Queenstown

Dwellings	Business as usual				
	2001	2006	2011	2016	2021
Sunshine	902	1111	1262	1325	1325
QT Bay	1791	1848	2054	2521	3091
Frankton Rd	818	1065	1291	1291	1291
Frankton Flats	778	1293	2089	2378	2378
Quail Rise	83	138	192	211	211
Kelvin Heights	507	640	945	1585	2308
Arrowtown	1107	1354	1359	1359	1359
Wakatipu	399	706	1193	2019	2713
Millbrook	78	138	233	393	528
Arthurs Point	89	158	260	433	579
Total	6552	8451	10876	13516	15783

Total by Area

	2001	2006	2011	2016	2021
Sunshine	3383	4423	5499	6680	8140
QT Bay	12901	14508	16542	19345	22718
Frankton Rd	2711	3871	5201	6376	8057
Frankton Flats	2251	3530	5422	6249	6693
Quail Rise	201	328	445	492	518
Kelvin Heights	1386	1700	2398	3923	5910
Arrowtown	2973	3629	3917	4301	4848
Wakatipu	967	1678	2770	4708	6661
Millbrook	501	721	1030	1519	2029
Arthurs Point	527	751	1052	1538	2032
Total	27802	35140	44276	55132	67605

Total by Type

	2001	2006	2011	2016	2021
Usually Resident	11970	15174	19394	24493	30329
Private Residence	3857	4864	6062	7464	9082
Accommodation	10620	13393	16690	20551	25004
Day Visitors	1355	1709	2130	2623	3191
Total	27802	35140	44276	55132	67605

Average Day Analysis – Queenstown

Dwellings	Business as usual				
	2001	2006	2011	2016	2021
Sunshine	902	1111	1262	1325	1325
QT Bay	1791	1848	2054	2521	3091
Frankton Rd	818	1065	1291	1291	1291
Frankton Flats	778	1293	2089	2378	2378
Quail Rise	83	138	192	211	211
Kelvin Heights	507	640	945	1585	2308
Arrowtown	1107	1354	1359	1359	1359
Wakatipu	399	706	1193	2019	2713
Millbrook	78	138	233	393	528
Arthurs Point	89	158	260	433	579
Total	6552	8451	10876	13516	15783

By Area

Total					
	2001	2006	2011	2016	2021
Sunshine	2532	3232	3905	4581	5396
QT Bay	8178	9020	10225	12098	14489
Frankton Rd	2115	2910	3780	4396	5322
Frankton Flats	1844	2937	4590	5297	5651
Quail Rise	177	288	394	438	463
Kelvin Heights	1161	1430	2048	3408	5186
Arrowtown	2507	3041	3184	3400	3751
Wakatipu	850	1477	2455	4194	5951
Millbrook	325	489	728	1124	1532
Arthurs Point	348	522	763	1169	1581
Total	20037	25347	32072	40105	49323

Total by Type

	2001	2006	2011	2016	2021
Usually Resident	11970	15174	19394	24493	30329
Private Residence	1965	2479	3089	3803	4627
Accommodation	5411	6824	8504	10471	12740
Day Visitors	691	871	1085	1336	1626
Total	20037	25347	32072	40105	49323

Peak Day Analysis – Wanaka

Dwellings	Business as usual				
	2001	2006	2011	2016	2021
Central	394	609	705	705	705
Wanaka West	644	804	957	1117	1224
Wanaka South	38	77	129	530	1342
Beacon Point	1395	1820	2279	2840	3119
Albert Town	344	439	537	674	792
Total	2814	3749	4607	5866	7181

Total by Area

Total					
	2001	2006	2011	2016	2021
Central	2533	3645	4643	5301	5605
Wanaka West	1941	2585	3362	4018	4298
Wanaka South	175	369	659	1829	3814
Beacon Point	3070	4199	5697	7086	7360
Albert Town	734	982	1302	1629	1804
Total	8453	11779	15663	19863	22881

Total by Type

	2001	2006	2011	2016	2021
Usually Resident	3450	4839	6475	8264	9581
Private Residence	2553	3542	4689	5920	6788
Accommodation	1892	2624	3474	4386	5029
Day Visitors	558	774	1024	1293	1483
Total	8453	11779	15663	19863	22881

Average Day Analysis – Wanaka

Dwellings	Business as usual				
	2001	2006	2011	2016	2021
Central	394	609	705	705	705
Wanaka West	644	804	957	1117	1224
Wanaka South	38	77	129	530	1342
Beacon Point	1395	1820	2279	2840	3119
Albert Town	344	439	537	674	792
Total	2814	3749	4607	5866	7181

Total by Area

Total					
	2001	2006	2011	2016	2021
Central	1445	2127	2705	3014	3129
Wanaka West	1329	1764	2291	2721	2883
Wanaka South	107	226	405	1255	2740
Beacon Point	2348	3217	4373	5449	5662
Albert Town	569	762	1012	1268	1407
Total	5797	8095	10786	13706	15821

Total by Type

	2001	2006	2011	2016	2021
Usually Resident	3450	4839	6475	8264	9581
Private Residence	1198	1662	2200	2778	3185
Accommodation	888	1231	1630	2058	2360
Day Visitors	262	363	481	607	696
Total	5797	8095	10786	13706	15821

Full Time Equivalent Workers

Queenstown						
		2001	2006	2011	2016	2021
QT Bay	Commercial	2000	2337	2654	2960	3231
	Industrial	500	500	500	500	500
Frankton Flats	Commercial	300	445	761	1219	1853
	Industrial	750	1232	1866	2629	3535

Wanaka						
Central	Commercial	800	800	800	800	800
Beacon Point	Industrial	268	268	268	268	268
Wanaka South	Commercial	0	260	558	876	1095
	Industrial	132	327	551	789	953