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1. Introduction

1.1 Purpose of Taupo District 2050

Relative to its size, Taupo District is currently one of the fastest developing areas of New Zealand in terms of land development and building activity. This development is predominantly centred on Lake Taupo. The growth of its population however, lags behind the development. Nonetheless, the tempo and the cumulative effect of the development are changing the District more than ever before. The growth has significant impacts on the District – social, economic, environmental, spatial, infrastructural, fiscal – which Council is charged with tackling.

Managing the growth in a sustainable way is therefore one of the most important challenges facing the District. The challenge is a fundamental statutory responsibility of Taupo District Council under the Local Government Act 2002 ('LGA 2002'), Resource Management Act 1991 ('RMA 1991') and Land Transport Management Act 2003 ('LTMA 2003').

As a consequence, Council has agreed to develop a growth management strategy and implementation plan, 'Taupo District 2050', ('the Strategy') for the District to provide an overarching framework to manage its growth in a sustainable way – as a 'coat hanger' for the implementation of Council's growth-related strategies/policies.

There are five key growth management goals which the Council believes are necessary for it to keep to in order to develop and implement Taupo District 2050 successfully.

Leadership

The District Council will show leadership to provide clear direction for future growth, greater certainty for all parts of the community, in order to achieve credible growth management outcomes.

Governance

Taupo District 2050 will provide a strategic framework, which will guide growth management and decision-making in Taupo District.

It will provide the 'coat hanger' for all of Council's lower-level planning.

Prudent Stewardship

Council will exercise prudent stewardship over the environment, infrastructure and related funding. There is recognition that the costs of growth should be allocated to those creating the need in an equitable manner.

Collaboration and Partnership

It is recognised that whilst Council is taking a leadership role in growth management, successful implementation relies on partnership with Tangata Whenua, strategic partners, the regional council and central government.

Central government engagement is critical for successful growth management.



It is about using the best of the public and private sector to implement the strategies and specified actions.

Integrated Approach

Council will take an integrated approach recognising that successful growth management does not occur in isolation. Land use, infrastructure and funding which must all be dealt with in an integrated manner.

1.2 Purpose of the Base Case Report

The purpose of the Base Case Report is to gather together existing data and information relevant to the Strategy.

The data and information have been collected from a variety of sources including:

- Statistics New Zealand
- Land Information New Zealand
- Taupo District Council databases, GIS system and records
- Environment Waikato
- The Council databases
- The Real Estate sector
- Central Government Agencies
- Other sector-based organisations
- Interviews with key sector groups and developers

The source material will enable the Base Case Report to take a snapshot of the District at this point in time from a growth management perspective and help shape the framework for the development of growth options in the Strategy.

2. Historical Backdrop

This section outlines the important developments in Taupo District's history, from a growth management perspective.

It groups the information according to the former local government organisations that had jurisdiction over the District: Taupo County Council, Taupo Borough Council, Taupo United Council and the Waikato Valley Authority. These organisations were disbanded as part of local government reforms in 1989 and replaced with Taupo District Council and Waikato Regional Council (Environment Waikato).

Most, if not all of the District's contemporary growth management issues have a historical basis, which hold as true for the present time as has been the case historically.

2.1 Taupo County Council

Initially a Core Infrastructure Focus

1952. Taupo County Council established.

The focus of planning to establish the necessary infrastructure to develop the District and improve the standard of housing.

1955. Building bylaws introduced to help address the housing concerns.

1950s-1960s. The development of the Western Access Road (State Highway 32) and Poihipi Road in cooperation with Central Government opens access right round the Lake. Taupo and Taumarunui Counties better able to construct local roads, opening up large tracts of land for development.

The Long Germination of the Eastern Taupo Arterial

1963. Taupo Eastern Bypass first publicly discussed. The bypass proposal subsequently influences the design and construction of Taupo's roading network.

1964. The Lands and Survey Department suggests a route for the Bypass through the County (close to present designation).

1968. The bypass debate comes to a head out of concerns held by the Borough and County regarding the amenity effects on Taupo of a Ministry of Work's proposal to construct a four lane highway along the Lakefront, including a new bridge over the harbour.

1969. The Ministry of Work's plan is moth-balled



The Planning Importance of Lake Water Quality and Amenity Protection

1955. The inaugural County Plan comes into effect (operative 1959), regulating 'urban sprawl' in the County and seeking to establish green belts and public access to the Lake.

1957. The concept of a 'Lakeshore Preservation Scheme' first publicly discussed and promoted.

1968. Lake Shore Reserves Scheme. A joint Central Government-Council project to:

1. Maintain the high water quality of Lake Taupo.
2. Maintain / enhance the natural vegetation around Lake Taupo and its tributaries.
3. Subject to maintaining the natural environment, maximise public access and enjoyment of the Lake and river margins.
4. Maintain existing natural ecosystems (including trout fisheries) and protect historical sites around the Lake.
5. Preserve in perpetuity the outstanding natural character of the Lake and its environs.

This project was taken up by the Taupo United Council, further refined and carried over into the revised District Schemes.

Ultimately a total of 18,601 hectares was to be put into reserve around Lake Taupo and its tributaries, throughout both Taupo and Taumarunui Counties, requiring the acquisition of 13,133 hectares of both private and Crown land.

The scheme was dependent on Central Government funding to acquire the identified land, either through negotiated acquisition, or at the time of subdivision. However, Government enthusiasm dwindled over the years, as did the funding for land acquisition. Although the County carried the designations over in its Planning Schemes until it was superseded by the Proposed District Plan, the project was never fully implemented.

1968. Taupo and Taumarunui County Councils designate land for Lakeshore Reserves.

2.2 Taupo Borough Council

Taupo town Grows from the Intersection of Lake, River and Arterial roads

1956. The first town Borough Plan. Initially the town grows from the Lakefront between the Waikato River and the Napier-Taupo highway back toward the AC Baths following arterial routes. Conventional zoning pattern, based on segregating commercial, residential and industrial activities, interspersed with plentiful neighbourhood parks. The Lakefront naturally attracts motel accommodation for the tourist industry.



The Long and Controversial Germination of a Proposed Second River Crossing

1979. A proposal for second bridge over the Waikato River linking to Titiraupenga Street to bypass the Taupo Central Business District (CBD) adopted into the Taupo Borough Plan. Part of the proposal to provide additional parking for the CBD, substantial capital spent acquiring land within the Taupo CBD for this purpose.

1984. The second bridge withdrawn from the Plan, prompting a comprehensive review of Taupo's transport network, eventually resulting in the construction of Arrowsmith Avenue and Kiddle Drive, linking Crown Road to Broadlands Road and extending Acacia Bay Road to Poihipi Road.

2.3 Taupo United Council

Following the introduction of the town and Country Planning Act 1977 the Tongariro United Council (TUC) undertook a comprehensive evaluation of growth management issues in the central North Island area. The TUC produced a Regional Planning Policy Discussion document which highlighted the issues below which remain as true for the present as they were then:

The Protection of Lake Taupo

Deterioration of the Lake's water quality from effluent, farm and forestry run-off and erosion the fundamental and unifying issue for the area. Closely linked to this the undermining of the natural integrity of the Lake and immediate environs. (The very porous

nature of Taupo soils mean that land discharges made their way into waterways relatively quickly, resulting in the under performance of conventional effluent disposal systems).

Lakeshore Reserve Scheme encountering difficulties securing Central Government funding for acquisition, as well as difficulties with Government agencies wishing to retain the land for other uses.

The mandatory Lake Taupo Catchment Control Scheme (1976) proving very successful in controlling erosion, but not other concerns.

Haphazard Urban Settlement Around the Lake Margin

Piecemeal development at the Lake margin contributing to contamination of the Lake, created physical and economic difficulties for the provision of public services, access and competing use difficulties and detracting from the Lake's natural character.

The Continued Development of Geothermal Energy Resources

Electricity generation plants considered a mixed blessing for the District. While initially attracting a large workforce to the area – bringing economic benefits – the majority of the workforce left after construction was completed, leaving an economic and social vacuum. Environmental problems were also identified, such as changes in water flow patterns (both fluvial and geothermal), discharges of concentrated contaminants, resource access / use competition and diminished aesthetics.



Transportation and Connection

The isolation of the District from key market areas an impediment to the exploitation of the District's raw material resources. Thus the improvement and expansion of the roading networks a priority, including the investigation of rail transport to the eastern side of the Lake.

The Diversification and Expansion of the District Economy

The desire for industrial development and expansion for the District's economic wellbeing, balanced by concerns regarding pollution and a trend toward reliance upon one form of industrial activity (i.e. forestry).

Attracting a larger, balanced and permanent population structure, without undermining the quality of the natural environment

The Continued Development of Tourism

The benefits of expanding the recreational tourism industry, balanced against issues of seasonal population fluctuations, access and competing uses (both within the industry and with other industries, as well as between residents and visitors).

The Continued Development of Forestry

Exploitation of indigenous forestry (at that time 20% of New Zealand's indigenous forest lay within the TUC boundaries). However, problems associated with utilising the resource included competition for land use, erosion, reliance on fluctuating overseas markets, pollution (including fertiliser use)

and wood waste disposal problems, identifying appropriate processing sites and damage to roading infrastructure from logging trucks.

Land Tenure Difficulties

Much of the District's land under Crown ownership or control. Often the management practices of these blocks were inconsistent with the policies and requirements of the TUC or member Council's. Furthermore, the land was unavailable for alternative private development / use, or for Council acquisition for urban or industrial expansion. Similarly, large areas of land were in multiple Maori ownership and perceived as not being used to its full potential.

The Continued Development of Farming

A reliance and predominance on extensive pastoral practices, the limitations imposed by the pumice soil and climate, few rural services in remote places and limitations of too few rural water supplies. Rural-residential land perceived as being in conflict with 'valid rural practices' and detrimental to the Lake by drawing the population away from urban centres.

The Continued Development / Use of National and Forest Parks

The Crown-managed National and Forest Parks perceived to be under utilised and out of sync with the surrounding District. For example, the provision of accommodation and services for the Parks from centres such as Turangi and Tokaanu not fostered, despite the potential benefit to the



purpose and operation of those Parks. Greater cooperation / coordination required.

2.4 Waikato Valley Authority

Catchment Control for Lake Water Quality Protection

Catchment Control Scheme in parallel to the Central Government-Taupo County Council-Taumarunui County Council Lakeshore Reserve Scheme. The scheme designed to control Lake Taupo Catchment erosion and soil nutrient loss by:

1. Excluding stock from water courses and eroding hillsides by fencing, planting stream banks and hillsides.
2. Retaining swamp areas for water retention during high rainfall.
3. Retaining stream bed works and structures to control water flow.
4. Placing encumbrances on land titles when blocks were subdivided to ensure protection of water course protection works.



3. Growth Drivers & Influences

The development and growth of the District is strongly influenced by a number of key drivers.

3.1 Iconic Landscape and Amenity

The District is situated on the central North Island volcanic plateau. The great expanse of Lake Taupo and the vast mountain ranges form a dramatic backdrop – complemented by the Tongariro and Waikato rivers, the forests and farmland. These features combine to produce one of New Zealand’s most iconic landscapes; one that has a well-established international reputation. The outstanding nature of the landscape and amenity is an attractant which helps drive tourism, the property market and population growth.

In addition, the local communities in the District and Council, through the District Plan, have sought to protect the landscape and amenity from the adverse effects of unrestrained development. The scarcity of readily developable land close to water has resulted in the most concentrated urban development taking place on the shores of Lake Taupo, particularly at Taupo, Kinloch and Turangi.

3.2 Critical Mass

Taupo town is the most urbanised area in the District and has the widest variety of:

- Patterns of development – greenfields, renewal, intensification
- Densities of development – high, medium, low
- Types of development – for example, residential, rural-residential, commercial accommodation, commercial, industrial and other non-residential.
- ‘Environments’ (land-use zones) to cater for the patterns, densities and types of development that occur – for example, Low Density Residential, Residential, High-Density Residential, Town Centre, Pedestrian Precinct Block, Industrial and Rural.

Taupo town is the District economy’s key centre and attracts the largest share of its growth. These observations are important because they mean that the broadest options for providing for the growth of permanent residents and visitors and associated land and building development, all lie in the vicinity of the head of the Waikato river with Taupo town as its business and cultural heart.



Recent gains in visitor numbers, holiday home owners and permanent residents may be self-reinforcing. A greater mass of visitors, holiday makers and residents and attendant services because of the recent growth will increase the desirability of the District as a residential destination. This cycle of increased amenities and services reflecting and attracting additional population will become self-sustaining.

Turangi is experiencing a similar change, albeit at smaller scale.

3.3 Nature of the Local Economy

Lake Taupo is one of New Zealand's largest visitor destinations, attracting more than 1.5 million overnight visitors annually, 80% of which are domestic visitors. Direct and downstream spending amounts to around \$300 million, per annum supporting around 2,500 jobs in the District – one in five of the total jobs.

The economy is boosted and maintained by the forestry and wood processing industries. The area of plantation forests in Taupo District is greater than any other district in New Zealand. Forestry covers 30% of the District's land area and provides employment for thousands of people in new plantings, silviculture, logging and clearing, trucking, milling, processing and an extensive range of support services. Forestry makes a significant contribution to the economy.

Agriculture is another significant industry to the District. Like forestry, 30% of the total land area is devoted to farming, (20% is pastoral farms), with a variety of uses including dairy, sheep and cattle, deer, horses, poultry and a growing diversity of

horticultural enterprises. Farming is and will remain important in any rural environment.

Energy is also an important sector, with the primary forms of generation in the District being hydroelectric and geothermal. Surplus heat from geothermal energy generation is being put to some innovative new uses, including hot houses, timber drying and prawn farming.

As at February 2004 there were 12,170 people in the paid workforce working in Taupo District. Employment patterns by industry in Taupo differ from national averages. Retail trade and accommodation, cafes and restaurants are the biggest employers. These make up a far greater proportion of the work force than is the case nationally. Cultural and recreation services are also well above the national average, as is agriculture, forestry and fishing. Manufacturing and property and business services provide a far smaller proportion of jobs than in the rest of New Zealand.

3.4 Lifestyle Migration

While tourism is a main driver of the local economy, it also has strong influence on population growth. Taupo District is one of the summer holiday capitals of New Zealand alongside the Far North, the Coromandel, the Bay of Plenty and Nelson-Marlborough - yet is also a winter holiday capital alongside Queenstown and Wanaka. Some of the tourists and holiday makers return to live permanently.

As tourist numbers to Taupo continue to grow there is an increased need to provide additional accommodation to match



the increasing diversity of visitors. A corollary to this has been an increased demand on local housing to meet the accommodation needs of a growing working population associated with the tourism sector.

Visitors to Taupo District from the major urban centres elsewhere in the North Island (particularly Auckland) are also being attracted to the area by the lifestyle it offers. This extends now beyond merely the wonders of natural landscape, amenity and winter-summer outdoor adventure, to the development of cafes, bars, restaurants, vineyards and a more cosmopolitan culture. Many have sought to establish a foothold by acquiring residential property to either live or holiday in. Many want a slice of Taupo District's heaven, for example:

- Aucklanders who are sick and tired of waiting in traffic, never seeing their children and paying for the escalating costs of life in the city.
- Expat Kiwis who are returning home with fond memories of summer holidays at the bach and on the Lake.
- Retiring Baby Boomers who want comfort and safe small communities.
- Urban Maori who are returning home to their ahi kaa (home fires).
- People from the UK, South Africa, the US and Europe who know the good life when they see it.

3.5 Diversifying Visitor Accommodation

Commercial visitor accommodation in Taupo town has been structured on the traditional hierarchy of hotels, motels, hostels/backpackers and camping grounds. An increase in family holidays in the area from the early 2000s however, has provided an impetus for the surge of apartment developments. Based on the successful concept of 'managed apartments' used in Australia, owners are leasing their apartment through the in-house manager to holidaymakers at times outside their vacation plans. This form of accommodation has proved to be cost effective and comfortable for families.

While there are no direct international flights to Taupo (comparable to the Australia-Queenstown trans-Tasman route), domestic transfers at Auckland International Airport and the short flight time from Auckland Domestic Airport have made access to the area easier. These flights have introduced a largely untapped market of high-flying, luxury-seeking, international visitors wanting privacy and comfort in exclusive accommodation. To cater for this in addition to the well-established and internationally renowned Huka Lodge, new luxury lodges are being developed. It is likely that 'boutique' hotels, which provide a more personal and homely environment, will also emerge to fill the middle ground



between the existing large quality hotels and more expensive lodges.

3.6 The Rise of Apartments

There are now a range of purchasers currently active in the market for apartments. For investors, managed apartments, those which provide rental accommodation for holiday makers and longer term renters, can provide strong returns making them an attractive investment option. Residential apartments are also proving to be popular, particularly amongst recent arrivals to Taupo from larger urbanised centres who seek a more 'maintenance free' living option which allows more time for other activities.

The strong demand for apartments has also led to astute developers purchasing and redeveloping under-utilised high amenity sites near the shores of Lake Taupo in the vicinity of Taupo town centre.

3.7 The Emergence of Satellite Settlements

Developers recognising the pressures which growth is imposing on Taupo's residential sector have presented integrated developments to Council for consideration. These developments seek to incorporate residential, recreational and commercial land uses within the one development area, at some distance away from established urban areas. The comprehensive developments at Kinloch are a good example. The proximity of

Kinloch to Taupo (20 minutes drive) has enabled it to become a satellite settlement or dormitory suburb to Taupo.

3.8 Lifestyle Blocks

The enabling nature of the 'Rural Environment' section of the District plan, has made rural-residential development (lifestyle blocks) an attractive alternative to trying to gain entry on established lake-shore / lake-view positions in the vicinity of Taupo. Demand is being driven predominantly by Aucklanders and expats, with a particular interest in these properties having shelter and privacy, lake and/or mountain views and lakeside positions.

3.9 Improved Connectivity

The State Highway networks between Auckland-Taupo-Wellington have been improved and prices of airfares for direct flights between Auckland, Wellington and Taupo have decreased. The reduced drive times, cheaper airfares and shorter flight times make it practical for out-of-towners to keep a holiday home in the District.

This convenience combined with that of internet technology has also enabled businesspeople to relocate and operate from Taupo, while regularly commuting to the major North Island urban centres by road or air.

The formal designation of the Eastern Taupo Arterial ('ETA') to the east of Taupo town centre gives more certainty to Taupo's urban form, having the potential to act as a distinct urban fence, diverting unrelated State Highway traffic from



lakeside properties and the CBD, containing urban sprawl and buffering existing and future residential areas from industrial and geothermal development activities.

The influence of the ETA on the reorientation of Taupo to its lakefront by removing through traffic will be a significant transformation. It will be one of the largest State Highway diversions ever undertaken in New Zealand.

Existing and proposed future arterial roads to the west of Taupo town centre would play a similar role to the ETA. However, there is growing concern in the community that the amenity and character of the areas west of Taupo has the potential to be eroded by the sprawl of rural-residential development along arterial roads (such as Mapara Road) and the intensification of existing urban areas, particularly at Acacia Bay and Kinloch.

3.10 Rising Property Values

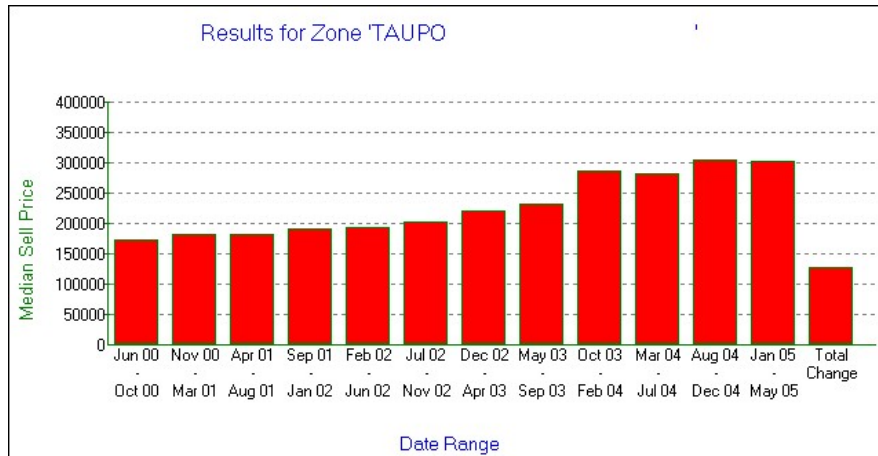
The iconic landscape and amenity, proximity to water and the winter and summer tourism cycle, has elevated Taupo to the top-end of New Zealand's property market, on parity in some areas with the Auckland and the national coastal property markets. The performance of the Taupo District property market, which shows little signs of falling, is an attractive investment option and national and international (often expat) property investment has continued to strengthen in line with the growing visitor numbers.

The pressure imposed by the growing investor interest has resulted in property value building further on the record levels achieved in the early 2000s. Taupo town, Kinloch and Turangi have followed each other closely as a result of experiencing similar drivers.

The increase in residential property prices has made housing less affordable to many. The graph below shows the increase in residential property prices since 2000.



Figure 1 Median Residential Property Price in Taupo District 2000 – 2005



Source: REINZ

Average income levels are also below the national average making housing affordability a big issue for the District. The median annual income in 2001 in Taupo was \$17,900 compared to \$18,500 for the country as a whole. But the Taupo median house price for January to May 2005 was \$302,330 compared to \$186,400 nationally.

3.11 Limited Taupo CBD Commercial Space

Taupo’s commercial space (office and retail) remains largely accounted for with occupancy levels close to 100%. As the

tourism industry has grown, so too has demand for retail space from tourism-related businesses.

Given that tenant demand still greatly outweighs supply, it is not surprising to see that the investment market has become even more aggressive than it has been over previous years. More investors are now active in the market being attracted by the rental growth and the resulting capital growth.

Developers have become more prevalent in the market and are actively seeking prime sites which are currently under utilised.

This trend is likely to be reinforced by the outcomes of the Taupo Town Centre Structure Plan which aspires to reposition and revitalise the town centre. The area is being repositioned from an existing service centre to an attractive, high quality, year-round destination for residents and visitors and revitalised by a focus on commercial (especially retail) development in a central, compact and pedestrian-friendly area.

The conclusion of a recent Large Format Retail Study undertaken by Council shows that there is a scarcity of land and floor space in the Taupo CBD which will lead to a demand for large format retail to establish on the periphery of Taupo town.



3.12 Major Changing Rural Land-Use Patterns

The proposed major Landcorp forest to farm conversion north of Taupo, outside of the Lake Taupo catchment of 27,000 hectares (twice the size of Tauranga City) is a response to the ongoing domestic and international demand for dairy products as well as a trough in the international commodity price cycle for forestry.

In addition, major land-use changes are anticipated in the Lake Taupo catchment as a result of the 'Protecting Lake Taupo' initiative.

This involves a variation to the Proposed Waikato Regional Plan (Variation 5) which seeks to maintain or improve current Lake water quality by reducing nitrogen output from existing land-uses and prevent further nitrogen intensive landuse changes. A joint public fund by Central Government, Environment Waikato and Taupo District Council, will also be run in tandem to Variation 5 aimed at removing 20% of manageable nitrogen inputs to the Lake through securing permanent change on individual properties to a lower nitrogen leaching land-use (by purchasing the properties and/or nitrogen allocation).

The net effect of the 'Protecting Lake Taupo' initiative is likely to lead to the exiting of much conventional farming in the

catchment. It is uncertain as to what land-use change this will result in.

3.13 Conclusions

A number of conclusions can be drawn from the preceding sections of this chapter:

- The iconic nature of the District's landscape and amenity is an attractant which helps drive tourism, the property market and population growth.
- However, there are now other factors in addition to the iconic landscape and amenity and winter-summer outdoor adventure, which are acting as attractants to potential new permanent residents:
 - The facilities: quantity, quality and diversity of accommodation, tourist activities, retail, restaurants, bars, cafes and vineyards.
 - The infrastructure: State Highway network, Taupo Airport and flights, ETA and arterial roading, internet connectivity.
- Continuing gains in visitor numbers, holiday home owners and permanent residents have lead to an increase in amenities and attendant services, a self-reinforcing cycle which has given Taupo town the 'critical mass' to move from a secondary service and holiday centre to a lifestyle



destination in its own right. Turangi is also experiencing a similar 'sea change', albeit at a smaller scale.

- Lifestyle migration (from Auckland and other larger North Island centres) seems to be reinforcing the patterns, densities and types of development established by the demands of tourist visitors – changing the traditional character of residential settlement in and around Taupo town.
- Lifestyle migration is also deepening and diversifying the local economy and changing the culture of the District.
- Development opportunities are greatest in Taupo town and surrounding environs, since these are the most urbanised areas in the District and have the widest variety of patterns, densities and types of development. A diversity of development is being offered to the market in these areas, spanning residential, visitor accommodation and business (lodges, apartments, satellite settlements, lifestyle blocks, potential big-box retail).
- The property market has maintained momentum to keep pace with these trends – however, this has impacted on housing affordability.
- While Taupo CBD presently remains the business and cultural heart of the District, the commercial space it offers is at occupancy levels close to 100% - there is resultant pressure for large-format retail to establish on the periphery of Taupo.

- Large scale forestry to farming conversion north of Taupo town (in area terms twice the size of Tauranga City) and the impacts of the 'Protecting Lake Taupo' programme on the mass exiting of conventional farming out of the Lake Taupo catchment signal a major changes in the rural sector – the positive and negative effects of which remain uncertain.



4. Demographics

Summary

- An Ageing Population. The population is ageing. This is likely to lead to: smaller household sizes, a decreasing population post 2051, greater demand for different forms of housing, hospital services and public transport.
- The Unknown Dimension of Inward and Outward Migration. Little is known about the District's population turnover – migration in and out of the District. More research and analysis would be helpful in this area.
- A Large and Rapidly Growing Maori Population. Maori account for 30% of the District's population – this is relatively large in national terms – and is projected to grow at a faster rate. The settlement patterns and drivers of this population are in large part unknown – again, more research and analysis would be helpful in this area.
- Declining Household Size. Due to the ageing population and changes in family sizes, average household size will decrease from 2.68 people per occupied dwelling to around 2.35 between 2004 and 2026.

4.1 An Ageing Population

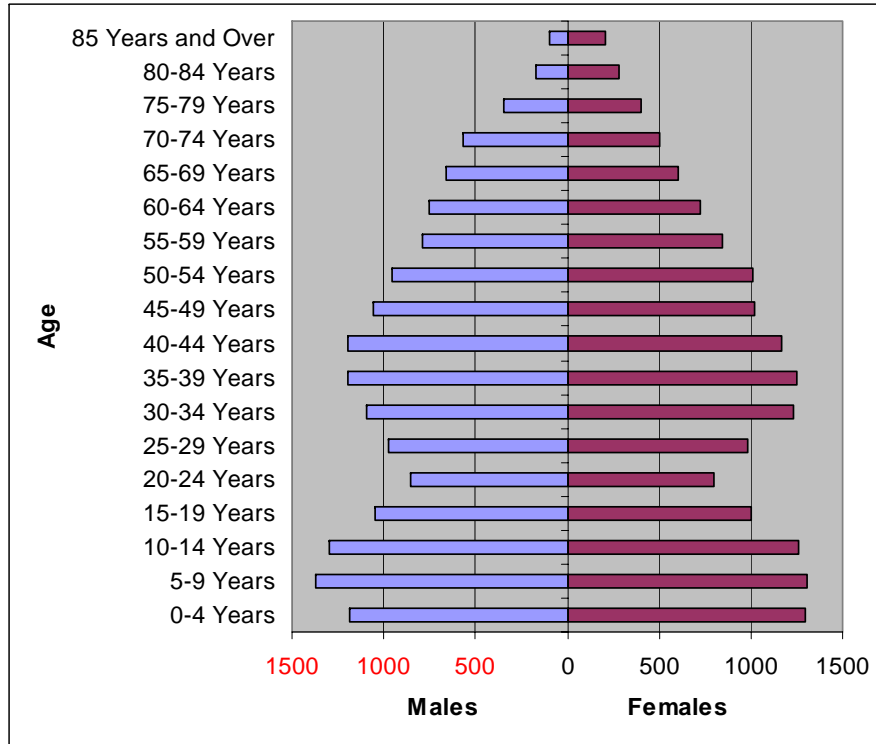
The age structure of the population of Taupo indicates a large proportion of adults aged between 35 and 44 years, as well as the 'Baby Boomers', typical of an aging population. While the proportion of children is also large the number of young adults is relatively small. This is an indication of a trend of people moving elsewhere after finishing local secondary education.

The average age of the population is expected to increase as the Baby Boomers age and elderly people as a whole make up a larger proportion of the population. This is likely to lead to smaller household sizes, a decreasing population from 2051 to 2101 and greater demand for health facilities and public transport.

The graphs below show the age and sex structure of the District at 2001 and the changes anticipated by 2026.

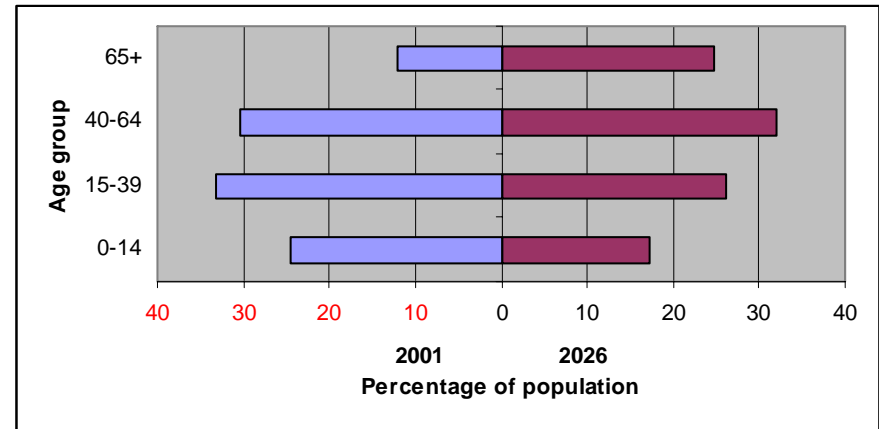


Figure 2 Taupo District Population Age and Sex Structure 2001



Source: Statistics New Zealand

Figure 3 Taupo District Projected Age and Sex Structure 2001 and 2026



Source: Statistics New Zealand

4.2 The Unknown Dimension of Inward and Outward Migration

Reliable information on migration is hard to come by. Census information shows that in each five year period from 1982 to 2001 the net migration figure for the District has fluctuated from -1,300 to +1,060. The total net migration figure over the 20 year period was -1,280. In recognition of the boom in development over the past few years, Statistics New Zealand has used a net migration figure of 0 to 200 people per year in its Medium and High series population projections for the District. However, this may mask the large numbers of people who enter and leave the District annually.

The information on inward and outward migration is important particularly because of the District's characteristics as a visitor and lifestyle destination. The annual 'churn' of people in and out of the District each year places significant demand on local infrastructure. It is also of some interest in terms of understanding who is coming, who is going and why.

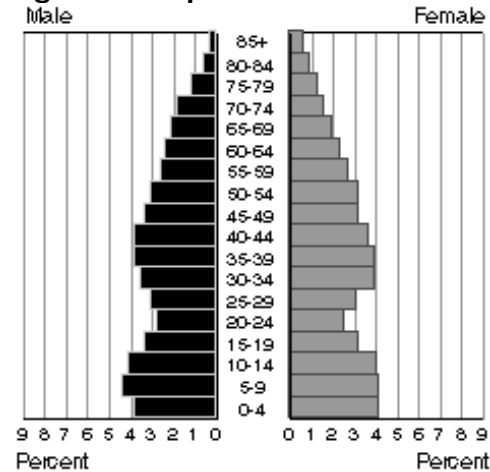
4.3 A Large and Rapidly Growing Maori Population

People of Maori ethnicity form a relatively large proportion of the District's population. In the 2001 census, 30% of residents identified themselves as Maori.

The Maori population is projected to grow at a rate of around double that of the general average for the general population. This higher growth rate may mean that the national trend of an ageing population may be slightly delayed in Taupo.

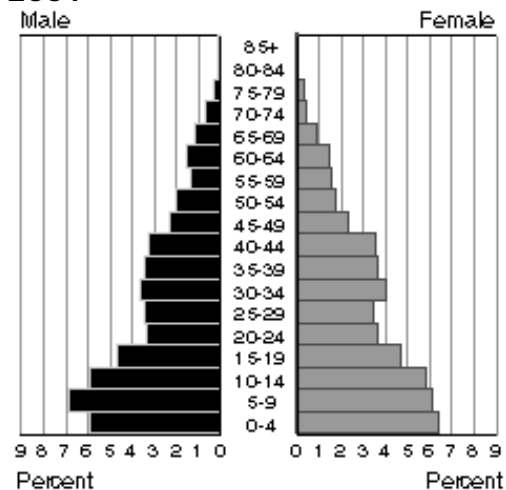
It is known that the Maori population is far younger than the Taupo population as a whole. The graphs below show that younger people make up a much greater proportion of the Maori population.

Figure 4 Population Structure of Taupo District 2001



Source: Statistics New Zealand

Figure 5 Maori Population Structure of Taupo District 2001



4.4 Occupancy Rate

There were 11,763 occupied dwellings and 4,848 unoccupied dwellings in 2001, giving an occupancy rate for the District of 71%.

There is variation in this rate across the different areas of the District:

- Taupo town 82%
- Turangi 71%
- Kinloch 67%
- Rural areas 60%

The rate is much lower in particular areas, for example the south-western lakeshore settlements have an occupancy rate of 19%.

4.5 Household Size

The average number of people per occupied household is expected to decline from 2.68 in 2001, to approximately 2.35 in 2021 (high projections). This is part of a growing national trend toward smaller households in response to a greater proportion in the population of senior citizens, couples without children and single people living alone. This has an implication in that an increase in population will require a proportionately larger increase in the number of dwellings than what is the case presently.



5. Growth Projections

Summary

- Growth Dynamics. From a planning perspective, 'growth' is a combination of things: growth in visitor and permanent residents as well as associated land and building development.
- Long-Term Growth Projection Timeframes. The projection timeframes are 2006 to 2026 (specific) and 2026 to 2051 (indicative).
- New Zealand Population Growth. The population of New Zealand is going to level out and then decrease in the long term.
- Various Projection Models for Population Growth and Total Dwellings Required. There are three main methods which can be used for projecting the demand on land and for dwellings:
 - The Taupo District Council Growth Model
 - Statistics New Zealand forecasts
 - Models with an increased migration emphasis
- Land Subdivision Outstrips Building Construction which Outstrips Population Growth. The last few years have seen significant development activity in the Taupo District. There

has been far more subdivision than the amount that the resident population could occupy in the short term.

5.1 Growth Dynamics

Growth is a complicated concept. Although net population growth increase is readily associated by most people as being what 'growth' is, other land and building development factors also have a bearing.

In growth management terms 'growth' is a function of:

- Net population increase (including inward and outward migration)
- Changes in the structure of the population
- Changes in the composition of households
- Increases or changes in the style or character of business activity
- Seasonal fluctuations in areas that attract high numbers of visitors and have a significant proportion of holiday homes and visitor accommodation
- Further subdivision of landholdings

Land and building development is a natural corollary to population growth and typically occurs according to three distinct patterns:



- Greenfields development of rural land for urban purposes, where infrastructural needs are the greatest but the opportunities for strategic structure planning can assist in the design, costing, funding and provision of that infrastructure.
- Renewal development, where significant changes in land-use can occur on land which is already serviced, but that infrastructure does not meet the needs of the new land-use.
- Infill/Intensification development, where the existing land-use does not change, but changes in its scale and intensity place increased strain on existing infrastructure. For example, lakeside apartment development.

On top of factors internal to a District, the rate of population growth and associated land and building development is also subject to external influences such as interest rates, employment rates, business confidence, immigration-emigration, which are managed at a Central Government level.



5.2 Growth Projection Timeframes

The projection timeframes are 2006 to 2026 (specific) and 2026 to 2051 (indicative), in line with Statistics New Zealand's projection timeframes.

5.3 New Zealand Population Growth – The Context

The New Zealand population is projected to remain relatively small in world terms. It will grow to 4.6 million by 2051 and then fall back slightly to 4.2 million in 2101. Births presently exceed deaths but this is expected to change around 2035 due to the ageing population. At this point migration will maintain population growth until natural decrease exceeds immigration some time after 2051. Of interest to Taupo District is its future share of this growth as well as the drivers which influence it.

5.4 Growth Projection Models

5.4.1 Projection 1: The Development Contributions Growth Model

The first model for consideration is the Development Contributions Growth Model. This model was prepared by Taupo District Council in 2004 under the Local Government Act 2002. It is a forecasting model based on building and subdivision rates.

The Growth Model used historical data on resource and building consents from 1998 to 2003 to provide an indication of future subdivision and building activity for the next 30 years. It uses a trend equation to account for possible short-term fluctuations in building rates. These trends are carefully monitored.

The Growth Model forecasts that for the period of 2006 to 2026 there will be an increase of 8,400 dwellings District wide. The increase that this will create in population is projected as 13,000 people. This information is graphed in the summary at the end of this section.

5.4.2 **Projection 2: Statistics New Zealand Official Subnational Population and Household Projections**

A second model for population and dwelling projections is run by Statistics New Zealand.

These projections are based on a number of information sources, the main one being the Statistics New Zealand Census of Population and Dwellings which is carried out every five years. The Census provides information on household size, family structure, age, fertility levels, migration, occupancy and other factors. These demographic factors are used to create a picture of the number of families and households in the District. It then runs a model that applies ageing factors, life expectancy and fertility factors to determine how those families will grow and change over the projection period.

For instance, it takes into account that in 25 years, a four person family may have become split into three new households as the children separately moved out of home as they grew up.

Another example could be that two single person households may become one family household of three as the original people moved in together and had a child.

There are many other possibilities and these trends are allowed for by the model. Thus, using this model, Statistics New Zealand projects both population and the number of new dwellings needed over the projection period.

The model also uses information on migration to account for people moving in and out of the District. Combined with building consent information the model helps to provide a picture of the factors influencing population growth in addition to the Growth Model.

Statistics New Zealand produces three alternative scenarios – Low, Medium and High. The 'High' and 'Low' alternatives are scenarios with slightly higher and lower than expected rates of natural increase and migration.

The Medium population projection predicts a total population growth of 2,400 people from 2006 to 2026 (from 34,200 people in 2006 to 36,600 by 2026). This is accompanied by a growth in the number of occupied dwellings of approximately 2,700.¹

To work out the actual number of new dwellings needed, the number of unoccupied dwellings must also be considered.

¹ The official household projections are for the period of 2001 to 2021 which does not exactly correlate with the 2006 to 2026 period as growth is expected to be much lower in the 2021-26 five year period compared to the 2001-06 period. The official number for the 2001-21 period is growth of 3,300 homes. For greater clarity the figure of 2,700 has been used rather than an approximate range of 2,500 to 3,300.



Information from Statistics New Zealand tells us that over the census years of 1991, 1996 and 2001 the household occupancy rate has been very steady at 71%. Following international trends, this rate may change over time as many current visitors become retirees.

The figure of 2,700 new dwellings only accounts for occupied dwellings which make up 71%, so an additional 29% must be added to give the total number of houses needed. This is done in the table below and gives a total number of new houses needed of 3,800.

Table 1 Occupied and Unoccupied Dwellings Using the Statistics NZ Medium Projection

New Dwellings	Percent of Total	Number of Dwellings
Occupied	71%	2,700
Unoccupied	29%	1,100
Total	100%	3,800

The reason the number of houses needed is higher than the population increase is due partly to the household occupancy factor as mentioned above, but also due to the decreasing 'household size'. Household size refers to the average number of people living in each occupied home in the District. This has been decreasing for decades. In the 1960s there was an average of 3.8 people per occupied home. In 2001 this had decreased to 2.68.

This is due to a number of factors, the largest being an ageing population and decreasing family size. More elderly people are

moving into smaller homes or apartments, or living alone. This means there has been a huge rise in the number of single person households. There has also been a tendency for families to be smaller, often only one or two children. Additionally, there is also a trend of couples waiting to have children until later in life.

These factors all contribute to the trend of fewer people living in each home. It is projected that this will continue to decrease as time goes by, down to as small as 2.3 people per home by 2021.

5.4.3 Projection 3: Statistics New Zealand Subnational Population and Household Projections – with Increased Migration Assumptions

One of the concerns raised by a number of people in the community was that Taupo District has recently seen high pressure for land development. Many people say that this is because Taupo District has become a much more desirable place to live over recent years. A number of factors have been sighted as to why this is the case:

- The desirability of living by water – so-called 'sea change' factors which have seen a huge growth in areas like Tauranga, Northland and Surfers Paradise, Australia.
- A deeper, more diversified economic base with improved employment opportunities – moving away from a rural town to a resort city.



- Improvements in technology making communication and transportation much more efficient and effective (e.g. broadband internet).
- Expanded and improved health facilities.
- Improving education facilities.
- Improved civic and cultural events and facilities.
- Improved nodal infrastructure such as Taupo airport and the Eastern Taupo Arterial.

On the whole it was considered that because Statistics New Zealand's projections give more weighting to historical trends rather than emerging possibilities, a third projection approach should be considered.

Therefore Projection 3 increases the migration figures to simulate the effect of less people leaving the District and more people coming to live here.

There are two alternatives in this model. Both use the Statistics New Zealand moderate assumptions for natural increase (life expectancy and fertility). The first which can be called Projection 3 uses the migration assumptions used in the Statistics New Zealand High alternative projections. Thus it combines expected natural increase with migration figures that are a bit higher than the historical rates.

The second alternative uses even higher figures by eliminating the net emigration of young adults from the District and slightly increasing the migration figures for most other age groups. This

results in even higher migration numbers and is termed Projection 3a.

Projection 3 provides an increase in population of 5,200 people from 2006 to 2026. The increase in total dwellings (occupied and unoccupied) is 5,350.

Projection 3a has higher figures of an increase of 7,500 people and 6,500 dwellings. These figures are summarised in the table below in the next section.



5.4.4 Summary of Projections

Table 2 Summary of Projections for Taupo District 2006 to 2026

Growth	Population	Total Dwellings
Projection 1: Growth Model	13,000	8,400
Projection 2: Stats NZ Med	2,400	3,800
Projection 3: Increased Migration	5,200	5,350
Projection 3a: Higher Migration	7,500	6,500

The following graphs show the various projections and the results they provide that could be used to indicate District population and dwelling growth for the period 2001-2026.

Figure 6 Taupo District Population Projections 2001 to 2026

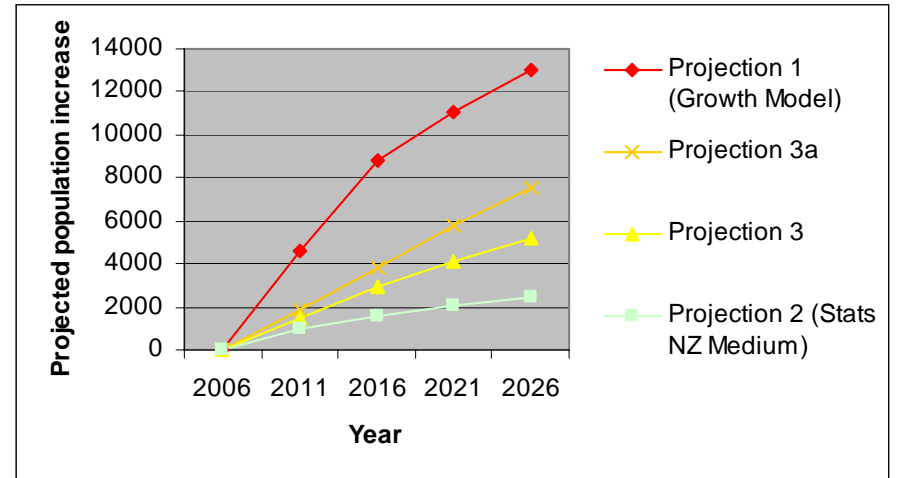
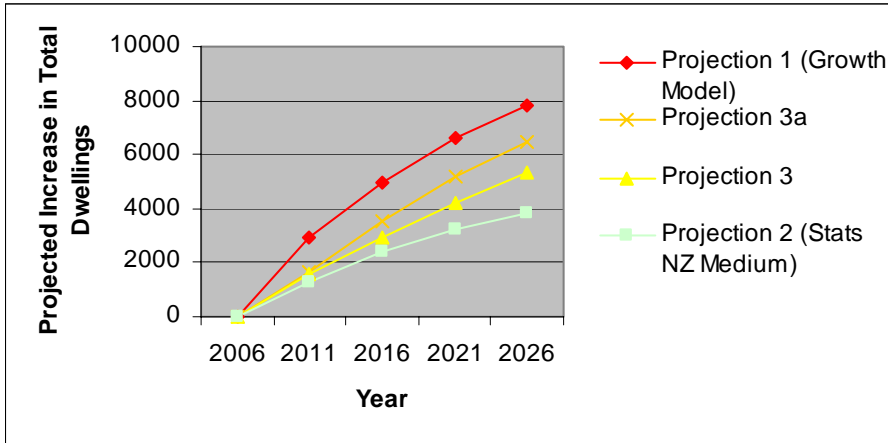


Figure 7 Taupo District Total Dwelling Projections 2001 to 2026



by the construction of dwellings, since there is frequently a time lag between subdivision and development.

The present activity is considered to be part of a property market boom, one that has been particularly large, though it appears there was also one of similar scale in the late 1960s/early 1970s. The booms in the District’s property market appear to occur to some extent every six to seven years in line with the national economy and property market and as land demand ‘catches-up’ with land supply in the District. This means that the amount of subdivision that has occurred recently may well provide enough choice for the residential property market for many years to come.

5.5 Growth Projections 2026 to 2051

Projections for the period 2026 to 2051 are only intended to give an indicative long-term trend for growth as Statistics New Zealand only projects territorial authorities’ populations out to 2026.

The factors affecting national and local population projections are discussed above and in the preceding section of this report.

5.6 Land and Building Development

The number of residential lots in the District has grown rapidly in recent years. The rate of subdivision has not been matched



Turning to the figures for the District:

Table 3 Selected Building Consents Issued and Resource Consent Applications for Taupo District

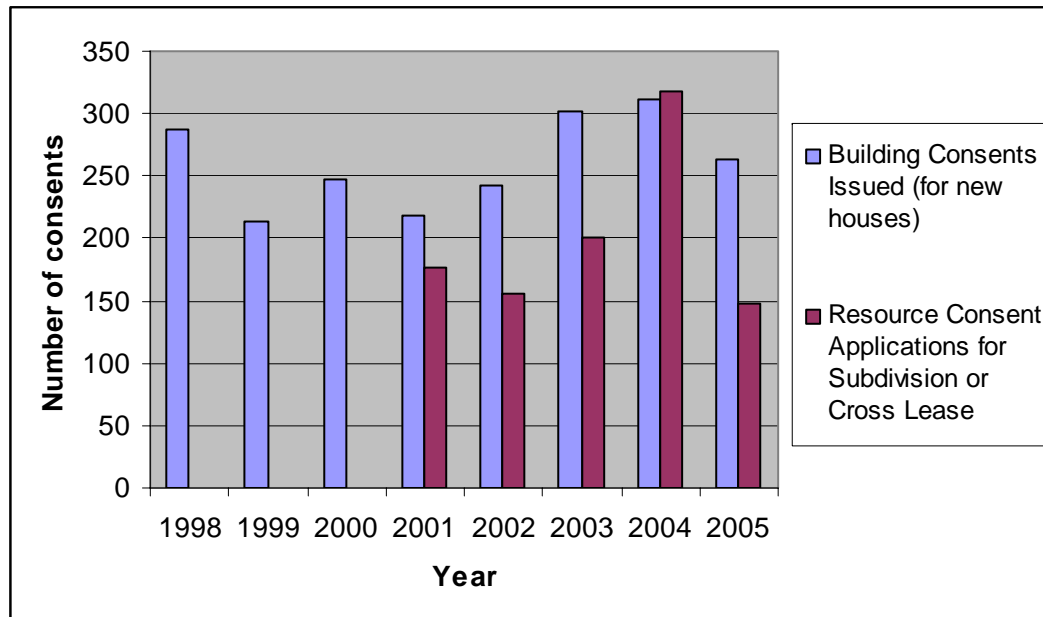
Financial Year	1998	1999	2000	2001	2002	2003	2004	2005
Building Consents Issued (for new houses)	287	213	247	218	242	302	311	263
Resource Consent Applications for Subdivision or Cross Lease	*	*	*	177	155	200	318	148

* No data available for these years

The following graph shows consent activity over the past few years.

Figures are for consents granted (not necessarily carried out).

Figure 8 Selected Building Consents Issued and Resource Consent Applications for Taupo District

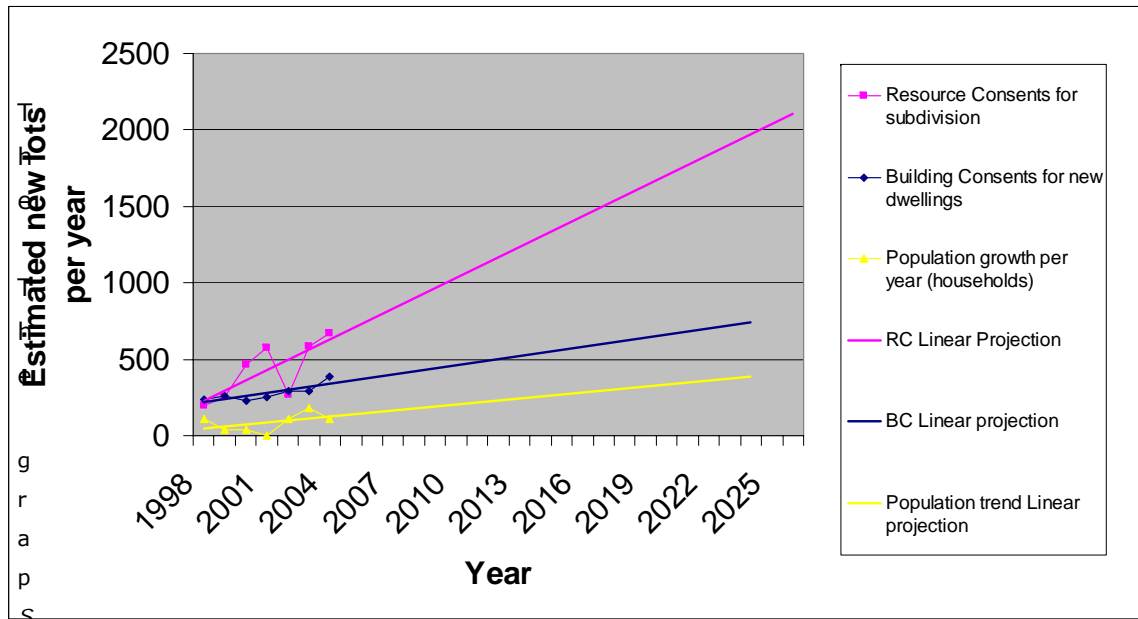


Source: Taupo District Council, Consents database.

Building seems to have slightly levelled off in 2004 and then dropped in the 2005 financial year.

The following graph represents the District’s projected growth in subdivision consent and building consent activity for the period 1998-2004. The population figures is measured in units that each equate to one household (2.7 people per household). Consents are often to create one new dwelling or lot, but sometimes can be for more than one.

Figure 9 Taupo District Subdivision and Building Activity Projections 1998 to 2026



Source: Statistics New Zealand and Taupo District council consents database.

assumes they are all for one household and therefore the building consent and resource consent figures do not completely reflect the actual number of new dwellings or lots created.

The trend lines (projected out to 2025) clearly show that if the growth per year was to increase in the way that it has in the past few years, there will be a significant discrepancy between subdivision, building rates and population growth.



The differences in rates of subdivision, building and population growth will relate partly to the way the property market works. It is assumed that many developers are trying to capitalise on the recent property boom by subdividing land. While the land may be bought, it is unlikely to be built on until later. The rate of uptake is steadier than the rate of subdivision which fluctuates depending on property prices and land supply.



6. Residential Land Use Density

Summary

- Residential Development. Averages 8.8 dwellings per hectare in new developments (includes roads and reserves).

6.1 Lot Size and Yield

According to Council's Rates Database the District-wide average lot size for residential dwellings is 712m². This figure excludes rental flats, vacant lots, or lifestyle blocks.

The average lot yield per hectare (including roads and reserves) can be worked out based on the following recent subdivision average yields:

Table 4 Taupo District Approximate Lot Yield Per Hectare for Standard Residential Subdivision

Subdivision	Average lots per hectare
Brentwood	6.6
Wharewaka Point	10.0
Botanical Heights	8.0
Victoria Street	10.2
Hindmarsh Drive	7.8
Vaucluse	10.4
Average Yield	8.8

An average yield of 8.8 lots per hectare is thus derived.

There are other factors that are likely to affect this yield in the future. A trend toward smaller lots, smaller dwellings, more apartments and rising property prices may all result in a higher yield in the future. The figure will also need to be checked against the land supply, infrastructural and geographic factors identified in this report.

Table 5 Taupo District Approximate Lot Size and Yield per Hectare for all forms of Residential Subdivision

Lot Type	Approximate Size	Yield per Hectare
Residential	0.1 hectares	8.8 per hectare



7. Industrial and Commercial Land Demand

Summary

- Industrial Land Projection. Industrial land required by 2026: 20 - 111 hectares depending on which population projection adopted.
- Commercial Land Projection. Commercial land required by 2026: 5.8 – 46 hectares depending on which population projection adopted.

7.1 Business Land Demand

Various factors affect the demand for industrial land. Industrial land is affected particularly by large developments based on natural resources. For example, the development of timber mills, dairy factories and geothermal power stations are influenced more by resource availability and geographic location. Population growth is often a result of large industrial development rather than a driver of it.

Tourism and exports are affected especially by fluctuating foreign exchange rates. This makes it very difficult to predict the demand for business land.

The purpose of this document is to determine a base case for the growth in industrial and commercial land. There is a base amount of industrial and commercial activity that is needed by

any population, even one that is driven in part by a lifestyle, visitor and retirement market.

Because of the difficulties with predicting the factors that specifically affect business growth, population growth rates have been considered as the way to project the base business land demand. This would also be in keeping with the use of population projections to determine residential land demand.

7.2 Business Land Projections

Industrial

In 2004 the ratio of industrial land was 85m² per head of population (286ha / 33,700). By using this ratio and the various population projections it is possible to get an indication of future demand for industrial land. This is summarised in the table below.



Table 6 Projections for Industrial Land Requirements (at 85m² per Person)

	Population Growth	Land Requirement
Projection 1	13,000	111 hectares
Projection 2	2,400	20 hectares
Projection 3	5,200	44 hectares
Projection 3a	7,500	64 hectares

Commercial

The ratio of commercial land is 24m² per head of population (81ha / 33,700). Of this 81 hectares, 32.7 are in the Taupo town centre (Taupo Large Format Retail Study 2004).

From another point of view, the Taupo Large Format Retail Study 2004 (TLFRS) states that there are currently 126, 872m² in commercial floor area in Taupo town centre. This floor area is set on 24.6 hectares of land (32.64ha minus vacant land of 8.04 hectares) giving an average coverage of 53%. This is expected to increase by 172,353m² by 2018, in other words more than doubling over 14 years. This value is based on forecasts of retail sales and present commercial floor area. This projection will need to be monitored.

Table 7 Projections for Commercial Land Requirements (at 24m² per person)

	Population Growth	Land Requirement
Projection 1	13,000	31 hectares
Projection 2	2,400	5.8 hectares
Projection 3	5,200	12 hectares
Projection 3a	7,500	18 hectares
TLFRS		46 hectares

At an average coverage of 53% this growth in floor area equates to 32.5 hectares of land. As this value is only over 14 years it must be extrapolated out to 2026. Doing so gives a total growth of commercial land area of 46 hectares.

This projection is shown on the table below along with the population ratio projections.

Some of the demand for land could be accommodated by increased use of multi-storey buildings, though from an economic perspective rental returns are unlikely to offset increased construction costs.



8. Visitor Industry and Commercial Accommodation Land Demand

Summary

- Commercial Visitor Accommodation Land Projection. Commercial accommodation land required by 2026: approximately 22.5 hectares.

8.1 Lake Taupo is a Significant Visitor Destination

Visitors contributed \$396 million to the local economy in 2003, mostly by overnight, domestic visitors. Events are a large part of this, providing an estimated \$80 million per year. Domestic travellers make up 80% of all visitors. The Tourism Research Council NZ has forecast an increase in visitor numbers to the District from 2.52 million in 2004 to 2.9 million in 2011 (increase of 1.9% per year). Almost half of these visitors are on day trips or passing through.

These figures emphasise the importance of having land available for commercial accommodation, good transport linkages on main routes and land-use and infrastructure planning that facilitates tourism activities and business.

8.2 Visitor Accommodation Land Demand

This is an example of land demand that is less influenced by population as it is by the economy. An assumption can be made that the amount of commercial accommodation land in the District will need to increase to accommodate growth in the visitor industry. It will increase at a similar rate to visitor night numbers. 'Visitor nights' is a measure of the total number of nights spent by visitors in the District. It is not the same as total visitor numbers as it only considers visitors who stay overnight in the District, though it responds to changes in length of visitor stay.

A simple projection of land demand for commercial accommodation can be made by multiplying the present land space by the rate of increase in visitor nights (available from Tourism Research Council New Zealand). This is a very simple forecast and does not account for certain factors including changes in accommodation style, for example an increase in the number of managed apartments or large hotels.



Projected growth in visitor nights:	1.5% per year ²
Number of years:	20 years from 2006 to 2026
Total increase:	30% growth
Land in 2004:	75 hectares ³
Projected growth in land needed (40%)	22.5 hectares needed

It should also be noted that the projections provided by the Tourism Research Council New Zealand forecasts are only for the period from 2005 to 2011. The number of visitor nights is forecast to grow at 1.5% per year over this period but there are no numbers for the period after 2011. Therefore we have assumed that the number of visitors will continue to increase at the same rate from 2011 to 2026. Again, ongoing monitoring is required.

² Tourism Research Council New Zealand, New Zealand Regional Tourism Forecasts 2005-2011.

³ Does not include a large property of 75 hectares which is far outside the standard range of commercial accommodation property sizes.



9. Infrastructural Factors

Summary

- Wastewater treatment and reticulation is the most significant infrastructural factor involved in residential development planning.
- The East Taupo Arterial will assist reorientation of Taupo town toward the Lake.
- The present infrastructural capacity of some existing settlement areas lend themselves as good places for future residential development.
- Lake water quality and infrastructure are closely related.

9.1 Wastewater Treatment and Stormwater Management

It is not ideal to have many small settlements around the Lake as each requires its own utilities. Every extra water pump, treatment plant and irrigation system costs money to set up. From the perspective of infrastructure, it is desirable to concentrate people in as few areas as possible to minimise the number of systems and plants needed and take advantage of economies of scale.



9.1.1 Amalgamation of Wastewater Services

Taupo town has multiple wastewater catchments that could potentially be linked together into one larger system. This would allow it to service the entire Tapuaeharuru Bay area from Waitahanui around Taupo town to Acacia Bay and growth could be accommodated in the areas between. On a small distance scale such a system becomes more economical than multiple, independent catchments.

At present this is not a feasible option for the many settlements around the Lake. The distances are too great, requiring extensive pumping systems to service only a small demand. In the future it may be possible to link together smaller areas such as Motuoapa and surrounding settlements. This is likely to be the focus of long term services planning.

9.1.2 Where is the Capacity?

Kinloch and Turangi currently have sufficiently competent wastewater systems to accommodate forecast growth (1,258 lots for Kinloch and 1,000 for Turangi).

Some projects are already underway to meet the projected demand set out in structure plans. Others are becoming more urgent. Taupo town wastewater treatment is already at capacity and will require upgrading. A large system in Taupo town would have the potential to accommodate extensive

infill around the bay. Motuoapa is another area that will require upgrading to handle more growth.

9.1.3 Environment Waikato Lake Water Quality Rules

New lake water quality regulations from Environment Waikato will have a large impact on the District and development patterns within the Lake catchment. Some of the effects will be quite large. Each lakeside town within the catchment may have to upgrade old reticulation systems or septic tanks to a new reticulated wastewater system. Within 200m of the Lake edge advanced septic tanks or a reticulated system would be necessary.

Outside this area the same will be necessary for smaller lots. These rules will involve significant costs for particular settlements, especially those of a smaller size. Therefore only large towns (with a large, well funded system) or very small settlements (using high quality septic tanks) are likely to be economical.

Another implication of these changes is that eventually areas outside the Lake catchment may also come under the effect of water quality rules. This is something to keep in mind for the future.

Nitrogen release levels will also be capped, affecting farming. Farms will not be able to increase their nitrogen output without obtaining 'nitrogen credits' from other land users.

9.2 Airport

The airport is unlikely to expand in size over the next 10 to 20 years without significant funding increases. The present location of the airport (on undulating land) makes an extension of the runway cost-prohibitive due to the earthworks required to support it. Therefore, regularly scheduled international flights are practically ruled out. It is also noted that the relocation of the airport would require a very significant capital investment alongside the write off of the capital already invested in the present site.

The airport is vital to the economy and community well-being of the District and surrounding environs. As the biggest central plateau airport it links us and our neighbours to the rest of the country. People enjoy and depend upon the flexibility and peace of mind that an airport provides. Therefore it is essential that it be maintained.

The airport will cause some restrictions in particular areas. Height restrictions in the flight paths mean that in some areas buildings cannot be constructed above a certain number of levels. In particular, this affects parts of the Napier Taupo Highway.

Noise is another issue and should be taken into account when planning new residential areas. No new residential areas should be developed within the Air noise Boundary or the Outer Control Boundary. These approach Richmond Heights





to the north and State Highway One to the south. These extend around the airport, particularly away from the ends of the runway. Should noise sensitive development (including residential, schools, hospitals, etc) be deemed essential, strict standards on construction (e.g. such as double glazing of windows) will be required.

9.3 Transport – New Links Essential for Development to the Northwest

Generally the existing transportation network does not place constraints on where growth can occur. The majority of road links can be easily upgraded to cope with additional capacity.

However, development to the north and west of Taupo is currently limited by the capacity of the existing roading network. Development of the proposed East Taupo Arterial (ETA) and the Second Taupo Town River Crossing will make development in these areas a lot more attractive. The ETA is programmed for construction from 2006 to 2008 with the Second Taupo Town River Crossing following closely once the Lake Terrace state highway designation has been lifted.

These two projects will also trigger a realignment of the town centre with greater connections between the town and the Lake and Domain. Diverting heavy traffic from the Lakefront will make the area more attractive aiding the visitor industry and waterfront development. It will also allow the CBD to develop to be more pedestrian friendly.

There is potential here for the use of designations in the District Plan for key assets and land use. This tool has not been used to its full potential in the past.

Other key transportation projects that will aid development include the Acacia Bay to Mapara Collector (ABC) and the Wakeman Road extension. The ABC provides a link into the Acacia Bay growth node as shown on the Taupo Urban Structure Plan 2004 so that traffic does not have to use Mapara Road which is not at a standard suitable for such volumes. A designation for this route was lodged in January 2006.

The Wakeman Road extension provides a relief road to Acacia bay Road which has known areas of instability and risk. Designation has been granted and the road is due to be gazetted.

Further into the future there are proposals for a western ring road as well as for another major collector into the area west of Taupo. These projects still require further scoping and feasibility work.

9.4 Water Supply

Water supply has not been an issue in the District to date. Most areas of the District can be supplied with water if not directly from the Lake then by drilling bores.

When the New Zealand Drinking Water Standards become mandatory it will increase the cost of ensuring water is of a high quality. Monitoring of drinking water quality is already an expensive process. Imposing these requirements on small settlements will add another expense that may require exterior funding aid.

At present compliance with these standards is not mandatory and is not necessary as the water quality in the District has remained at high standards.



10. Geographic Factors

Summary

- There are certain landscapes in the District that require special care and protection from development. These areas must be effectively identified and preserved through stronger land-use regulation.
- Geothermal areas are unsuitable for further residential development due to subsidence and other issues. They may be more useful for reserves, greenbelts, or industrial development provided they do not compromise future geothermal development.
- Most of the land in the District is used for farming, forestry and large reserves.
- Maori-owned land is a large component of the District's area, along with Landcorp and the Department of Conservation lands.

10.1 Landscapes

10.1.1 Protecting Outstanding Landscapes

Outstanding landscapes are extremely important areas in the District where development should be limited. These areas include Tongariro National Park, Lake Taupo itself and parts of the western lake shore. These areas are mapped in the District Plan. Work is currently underway to update these areas in the Plan.



10.1.2 Natural Value Areas and Amenity Management Areas

These areas also put major restrictions on the form of development that can occur and it is in the interest of the community not to have these areas developed. They are shown in the District Plan. There are also areas that were proposed as lakeshore reserves. It would be preferable not to develop these areas.

10.1.3 Sensitive Natural Areas

Other areas in the District have high natural value but are not protected in any way. Ridgelines and lakefronts should be preserved in areas that are not already developed. These are some of the areas that people most appreciate about Taupo District.

10.2 Parks and Reserves

Taupo District is known for its natural landscape and for its parks and reserves. The District has been fortunate in that in the past it has been gifted with large tracts of land from the Crown and from Maori. In addition to this is Tongariro National Park which was given by the Maori to the people of New Zealand to protect it for future generations. These parks and reserves are managed by various organisations including the Department of Conservation and the Taupo District

Council. They must all be conserved especially as it is unlikely that any new significant areas like these will be donated to the public.

To maintain the character and amenity of the District the Council will need to provide additional parks and reserves as the population grows. These will mainly be local and District reserves such as parks and sports grounds rather than natural or forested areas.

As at the beginning of 2005 TDC provided 415 parks and reserves covering an area of 921 hectares. This is made up of 11 sports grounds, 401 parks and reserves and 3 cemeteries.

Council also provides and maintains playgrounds, recreational paths, park furniture, landscape features and other amenities.

10.3 Geology

10.3.1 Geothermal Features

Geothermal fields limit residential development. Subsidence and the general unstable nature of the land mean that development should be restricted. However the land does have uses. These areas may have possibilities for geothermal energy development or tourism as well as continued use for farming and certain types of non-residential development.

The location of dwellings or buildings in an area affected by subsidence, or perceived to be at risk from landslips will affect the property market. People prefer not to buy land that is thought to be unstable.

10.4 Land Use and Tenure

10.4.1 Forests and Farms – Three Quarters of District Land Area

Almost 50% of the District's land is covered in forests, most of that exotic. Of this, protected forests only make up 4.72% of total land. Pastoral farms also cover a large part of the District at just under 20%. Passive reserves make up 16% of total land.

This means that at present over three quarters of the land in the District is unavailable for development due to established land uses. Retiring some farms or forests may change this dynamic in the future.

10.4.2 Existing Urban Areas

Taupo town is the centre of growth in the District with the majority of large subdivisions occurring around the outskirts and Acacia Bay. Kinloch and Motuoapa are other areas that have undergone rapid development in recent years. Turangi and Mangakino have the potential to become larger towns if development is focussed there. Focussing growth in existing urban areas will have many advantages including more efficient transport systems, infrastructure (wastewater and water reticulation), better commercial development and preservation of natural landscapes.



11. Existing Policy and Planning Framework

This section of the report looks at the existing policy and planning framework at the national, regional and district level. Its aim is to provide a summary of existing policy/plan directives which are relevant to the Strategy's objectives and the development of the growth options.

11.1 National

NZ Housing Strategy (2005)

- Relevant 'areas of action' are: sustainable housing supply, improving housing assistance and affordability, improving housing quality and sustainability, meeting diverse housing needs.
- The principal means for implementation at the District Council level are:

Planning and zoning

- Trial the use of planning and zoning instruments, such as inclusionary zoning and developer incentives, to increase the supply of affordable housing in high pressure areas.
- Planning and zoning solutions including integrated cross-sectoral planning in alignment with LTCCPs.

- Promote the use of local government planning to secure the development of affordable housing and infrastructure investment.

Infrastructure provision

- Consider how to improve the affordability of urban and rural infrastructure (including land development and essential services).

Urban sustainability and urban design

- Identify how housing and sustainable urban form can contribute to reducing housing costs and pressure on infrastructure and the environment.

NZ Urban Design Protocol (2005)

- Taupo District Council is not currently a signatory to the protocol but may become one in the near future.
- The key urban design qualities are: context, character, choice, connections, creativity, custodianship, collaboration.
- The protocol requires the following actions of its signatories:
 - Appointment of a 'Design Champion', someone influential at a senior level who can promote and champion urban design and who can challenge existing approaches throughout the organisation.

- Creation of an action plan for relevant projects.
- Reporting back to the Ministry for the Environment every two years on progress. The first time to report back is 2006.
- The role of signatory councils is to implement the key urban design qualities by:
 - Leading at the local level
 - Demonstrating quality urban design through its own development and activities
 - Developing appropriate statutory policies, rules and guidance
 - Managing statutory decision-making processes to ensure quality urban design outcomes
 - Promoting local awareness of urban design
 - Sharing research and 'best practice'
 - Integrating urban management
 - Working collaboratively with the private sector

New Zealand Land Transport Strategy (2002)

- Relevant objectives and principles include: environmental sustainability (objective), integration (principle), responsiveness (principle) and sustainability (principle)
- The principal means for implementation at the District Council level is through the LTCCP / District land transport programme taking guidance from the Regional Land Transport Strategy.

11.2 Regional

Proposed Waikato Regional Plan: Variation 5: 'Protecting Lake Taupo' (2004)

- The target is to reduce the manageable sources of nitrogen flowing into Lake Taupo by 20 percent over the next 15 years.
- 93% of manageable nitrogen comes from stock effluent on farmland leaching through soil and 7% of manageable nitrogen comes predominantly from urban wastewater, such as sewage and septic tank seepage.
- Regulatory implementation involves a variation to the objectives, policies and methods (including rules) which apply to land-use in the Lake Taupo catchment.

Farms and Forests

- Cap on the amount of nitrogen leaching from such properties

Lifestyle properties and rural holiday homes

- Properties will have to meet low stocking rates and fertiliser application standards.
- Individual landowners who are not part of community wastewater systems will need to meet higher domestic onsite wastewater disposal standards.



Urban landowners

- Taupo District Council will upgrade community wastewater systems to a higher standard (no regulatory impacts on landowners within urban areas).

Changes in land-use

- Generally less stringent resource consent requirements where the change in land-use is from high (e.g. farming) to low (e.g. rural residential subdivision) nitrogen loading activity.
- A raising of wastewater treatment standards the closer an activity gets to the Lake (Near-Shore Zone).
- Non-regulatory implementation:

Environment Waikato

Environment Waikato will be taking the additional step of working to permanently remove 20 percent of total annual manageable load of nitrogen leached from farming land use activities and wastewater from the Lake Taupo catchment by 2020. A partnership of Environment Waikato, Central Government and the Taupo District Council has established an \$81.5 million Fund that is designed to achieve permanent land use change. The major portion of the Fund will be used to purchase nitrogen from pastoral landowners in the Lake Taupo Catchment.

Taupo District Council

Environment Waikato will expect that Taupo District Council reticulates all settlements around the Lake to achieve a 20 percent removal of the manageable sources of nitrogen. This will be met through the reticulation and centralised treatment of sewage from

settlements around the Lake including Hatepe, Waitetoko, Oruatua/Tauranga-Taupo, Te Rangiita and Waihi Village. In addition, Environment Waikato will advocate the progressive upgrading of existing community wastewater plants.

Waikato Regional Land Transport Strategy (2002)

- Subject to update in order to achieve compliance with the New Zealand Transport Strategy and the LTMA 2003.
- Key needs include: economic efficiency, safety for all, environmental sustainability, accessibility. Each need is supported by 'goals', which are the means for implementation of each need.
- The relevant needs and corresponding goals at the District Council level are as follows:

Need 1: Economic Efficiency

- *Goal 1.1: Develop a Strategic Roding Network Hierarchy*

Environment Waikato and Road Controlling Authorities will develop a Strategic Roding Network Hierarchy by June 2004 which will have a 25-year outlook and be linked to planning documents (e.g. District Plans, TLA Strategic Plans and Growth Strategies).

- *Goal 1.2: Prepare Integrated Transport Strategies*

All Road Controlling Authorities are to have in place an Integrated Transport Strategy by June 2004. These strategies are to focus on the movement of people and goods within the District on both state highways and District roads and also the links between adjoining Districts.



Integrated Transport Strategies are to be presented to the RLTC upon completion and strategic transport projects identified will form part of the RLTS. Road Controlling Authorities are to review Integrated Transport Strategies at least 5 yearly.

Need 3: Environmental Sustainability

- *Goal 3.2: Protect and Enhance People and Communities*

The RLTC shall encourage Territorial Local Authorities (TLAs) to undertake growth strategies to ensure integrated development of growth areas and to complement the Regional Growth Strategy. TLAs are encouraged to make adequate provisions for the transport implications of growth and for changes in land use. The concept of Structure Plans for large 'greenfield' areas will be promoted.

11.3 District

Transitional Taupo District Plan

- Largely superseded by the Proposed Taupo District Plan

Proposed Taupo District Plan

- Utilises environments rather than zoning techniques for the control of land-use.
- Taupo District is divided into 'environments': Residential Environment; Rural Environment; town centre Environment; Industrial Environment.

- Growth management approach is to link the District Plan's 'objectives' and 'policies' to Council prepared structure plans as 'other methods'.

2004-2014 LTCCP

- Outlines what the Council intends to do over a 10 year period
- The main features of the 2004-2014 LTCCP are: protecting Lake Taupo; water, wastewater and stormwater; urban development; Development Contributions Policy; development planning; the East Taupo Arterial and financials.
- The LTCCP also identifies community outcomes under the following 'goals': community (social, cultural); economy; and environment.
- Other drivers are also identified which Council needs to take account of: rising standards; growth; new legislation; increasing operating costs and increasing demands on Council time and resources.
- The 2006-2016 LTCCP is currently being developed. This will update and replace the 2004-2014 LTCCP.

Development Contributions Policy and Growth Model

- Development Contributions Policy is part of the LTCCP.
- The Policy requires developers to provide contributions in money or land to fund the additional demand on services



including roading, water supply, waste water, parks and storm water management.

- Council is currently reviewing the Development Contributions Policy to take account of changes to policies and plans, Council's capital works programme and the pattern and distribution of development. The review will also consider whether contributions should be levied for: car parking, community facilities, solid waste and parks, reserves, community infrastructure from non residential developments.
- The Taupo District Growth Model was developed to input into the Development Contributions Policy. It forecasts population and households for the Taupo District.

District Visitor Industry Strategic Plan

- A Strategic Plan for Taupo District has been developed by the Lake Taupo Tourism Advisory Board. It mentions many projects that would be relevant to Taupo District 2050.

Taupo Economic Development Strategy 2002

- The Strategy was developed with the aim of stimulating sustainable economic growth and building a strong, viable regional economy.
- Taupo District's natural environment is seen as a key strength.
- The Strategy has strategic objectives and actions under business development; Maori economic development, agriculture and horticulture, education, energy, forestry, tourism, Mangakino, Mokai and Turangi.
- It is due to be reviewed in 2006

11.4 Local

Taupo Urban Structure Plan 2004

- The Taupo Urban Structure Plan updates and replaces the Taupo town Urban Structure Plan 2001.
- The Structure Plan focuses on the need to allocate anticipated growth and identify Taupo's future urban form.
- The Plan covers land demand, the pattern and distribution of development, designation of key infrastructure, the geothermal resource and Lake Taupo.



Taupo Town Centre Structure Plan 2004

- The Taupo Town Centre Structure Plan was established to guide the continued development of the town centre of Taupo over the period 2004 to 2024.
- A preferred structure plan option for the town centre was selected and a number of implementation tools are outlined in the plan.

Kinloch Community Structure Plan 2004

- The Kinloch Community Structure Plan was developed in order to provide an all encompassing approach to managing growth in Kinloch. The Plan was driven by community concerns and a strong desire to protect the unique environment of Kinloch.
- The resulting Structure Plan puts in place a community objective and policy framework to recognise the unique Kinloch environment and to provide for future infrastructure requirements that are related to new subdivision and development.

Proposed Taupo West Rural Structure Plan

- The proposed structure plan was developed in response to a surge of demand for subdivision in the rural area and followed extensive consultation. Taupo District Council has deferred further consideration of a proposed Taupo West Rural Structure Plan while the District wide Growth Management Strategy is being prepared.

Taupo Large Format Retail Discussion Document 2005

- The discussion document looks at options for development of large format retail complexes in the Taupo area.
- Suggests they would be best located beside arterial roads that link to the town centre.
- The final report identifies five possible locations in the urban area and outlines potential issues for each. The possible locations include:
 - The Rangitira Maori land off Acacia Bay Road
 - State Highway One north (intersection of Poihipi Road and Huka Falls Road)
 - A Broadlands location with access off Broadlands Road close to the East Taupo Arterial
 - A location close to the East Taupo Arterial with access off Crown Road
 - The southern edge of the urban area in the vicinity of Taupo airport

