# Urban intensification in New Zealand


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## Introduction

New Zealand is a small country comprising two main islands located in the South Pacific.

Prior to the end of the 18th century, New Zealand was inhabited solely by the Polynesian Maori people of whom over 80 percent were concentrated in the northern half of the North Island. This settlement location in the north was the result of migration by sea from the north, the warmer northern climate, better conditions for cultivating sub-tropical food crops, and the availability of other food sources.

Initially planned European settlement of New Zealand was concentrated in the South Island as a result of the gold rush, the land wars of the northern regions and the relative ease of farming the open pastoral lands of the South Island. However, over time settlement from both internal and external migration occurred mainly in the north of the country, encouraged initially by the development of the dairy industry, the growth of forest-processing industries, and the exploitation of deepwater harbors.

Migration to the northern regions of New Zealand has been continuous throughout the 20th century, driven by the urban economy and by the warmer climate. Immigration has included people from the Pacific Islands and, more recently, from Asia.

Today, New Zealand has a total population of 3.8 million people, with some 50 percent of this population living in the northern regions of the North Island, and over 30 percent of the total population living in the Auckland region alone.

There is thus sustained long-term urban intensification occurring in the northern regions of the country, and particularly within the metropolitan area of Auckland.

## Ecumenopolis

In the long-term future, major external migrationary pressures on New Zealand must be assumed to continue in the context of global population growth and distribution. If today's world population of 6 billion was evenly spread over world habitability zones with no significant limitations for extensive habitation, New Zealand would theoretically have a population of 40 million. Further, in about 100 years' time, the world's population is likely to double. In this global context, New Zealand's current share of the world's habitable land resources is inequitable and, in the future, likely to be untenable.

Over the last 100 years, New Zealand's average annual increase in population was 1.7 percent. Assuming this rate of growth could be sustained in the future, New Zealand could have a population of 20 million in 100 years' time. Assuming a continuation of past trends of regional population concentration, over 60 percent of these people are likely to live in the northern regions of New Zealand (around 12 million people).

## The northern regions of New Zealand

Potential exists, within the northern regions of New Zealand, for a unique interconnected, linear, regional urban system based on the intensification of a multiplicity of centers and connecting corridors. This super-region is about 350 km long, but significantly constrained in width by topography and two coastlines.

Success of human settlements in New Zealand in the 21st century will depend largely on the strategic planning of this dynamic urban system on the macro scale addressing social, cultural, economic and environmental issues in an integrated way (fig. 1).

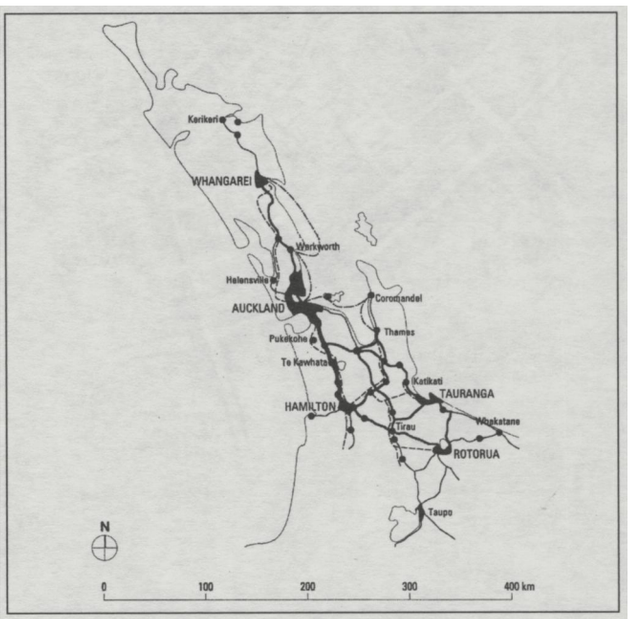


**Fig. 1:** Northern regional urban system of New Zealand.

## Auckland region

Central to this northern super-region of urban intensification is the Auckland region. The Auckland Regional Council and all constituent city councils have formed a collaborative growth forum proposing a growth strategy for this region for the year 2050. This assumes a doubling of the regional population by 2050 with intensification occurring primarily within existing urban limits.

Intensification (mixed-use) is proposed to be focused around town centers and along major transport corridors. Associated with this intensification is the protection of sensitive natural areas and catchments.

However, statutory techniques for achieving this strategy are currently limited due to the lack of planning legislation at the regional scale.

## Auckland City

Central to the Auckland region is the city of Auckland situated on a narrow isthmus between two harbors. The Auckland City Council has promoted Liveable Community principles in selected areas of the city where intensification will be channelled into areas where land use, transport and other infrastructure are integrated. This involves a system of mixed-use centers and corridors across the city based largely on main road and railway routes.

However, city planning legislation in New Zealand is limited to sustainable resource management focusing on the adverse effects of development on the existing environment. Unfortunately this encourages public "not in my backyard" attitudes towards urban intensification which will of course result in significant change.

However, Liveable Community strategies have been formulated for selected areas, identifying potential intensification based on capacity, pedestrian/cycle linkages, safety of the public realm, choice of housing, access to passenger transport, sense of place, social interaction and economic development and employment.

## Neighborhood reconfiguration

A major task for the success of Auckland City in the 21st century is the reconfiguration of existing single-use, low-density, homogeneous neighborhoods which make up most of Auckland City.

The task is to transform existing urban areas into identifiable, mixed-use, diverse walkable neighborhoods within structural urban cells bounded by main roads and bus routes. Restructuring should involve high-density mixed-use development along the main roads and around railway stations, medium-density housing fronting public major open space and existing low-density housing retained elsewhere (figs. 2 and 3).

## Housing types

Housing typologies associated with urban intensification in New Zealand must evolve indigenous to New Zealand conditions. Such typologies in the northern regions must be shaped

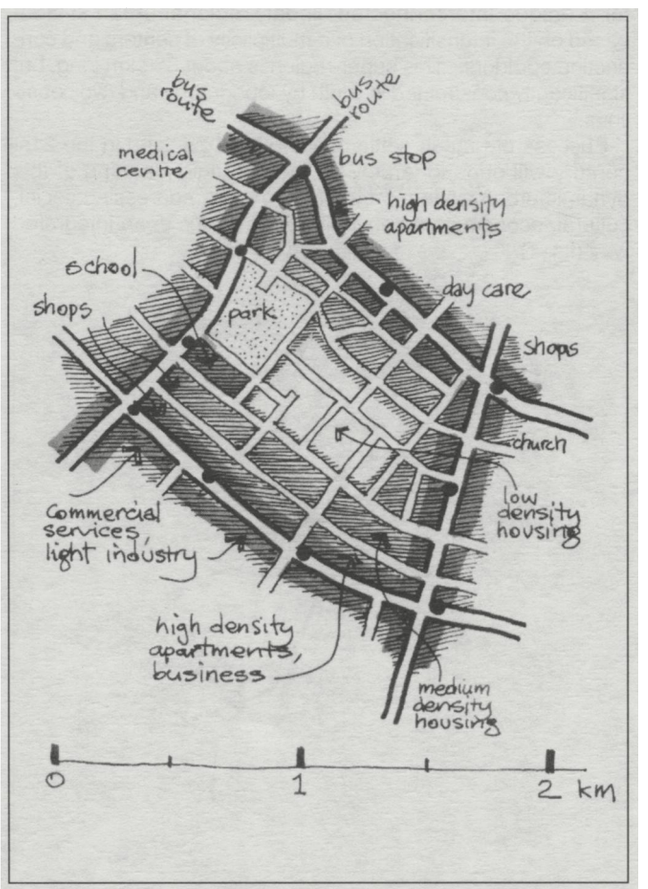


**Fig. 2:** Mixed-use walkable neighborhoods.

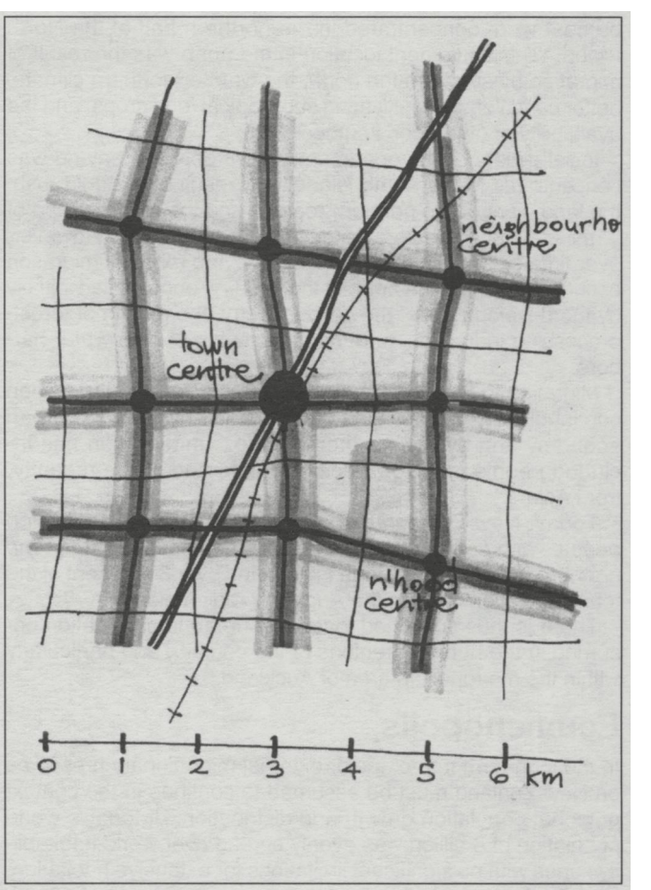


**Fig. 3:** Structural urban cells.

by the unique cultural mix, changing demographics in respect of household formation and age structures, the temperate coastal climate, the informal outdoor lifestyle, recognition of natural systems of heating and ventilation, and economic diversity including home-based business.

## Criteria for successful intensification

The model shown in table 1 may help to generate criteria for the success of the city in the 21st century, particularly in respect of urban intensification.

**Table 1**
**Possible criteria for assessing the success of the city in the 21st century**

| ENVIRONMENTAL SYSTEMS | ELEMENTS | CRITERIA | SPATIAL UNITS: Dwelling | Neighbourhood | Urban Area | Regions |
|---|---|---|---|---|---|---|
| NATURAL ENVIRONMENT | Air, Water, Land, Fauna, Flora | Landscape values | | ■ | ■ | ■ |
| | | Eco-system quality | ■ | ■ | ■ | ■ |
| | | Fit to climate | ■ | ■ | | |
| | | Minimisation of energy | ■ | ■ | ■ | ■ |
| | | Resource efficiency | ■ | ■ | ■ | ■ |
| | | Fit to topography | ■ | ■ | ■ | ■ |
| | | Food production | | | | ■ |
| | | Heritage values | | ■ | ■ | ■ |
| | | Bio-diversity | | | | ■ |
| HUMAN ENVIRONMENT | Anthropos, Households, Society | Health & safety | ■ | ■ | ■ | |
| | | Social & cultural wellbeing | ■ | ■ | ■ | |
| | | Maximisation of contacts | | ■ | ■ | ■ |
| | | Diversity of lifestyles | | ■ | ■ | ■ |
| | | Diversity of workstyles | | ■ | ■ | ■ |
| | | Cultural diversity | | ■ | | |
| | | Employment opportunities | | ■ | ■ | ■ |
| | | Economic opportunities | | | ■ | ■ |
| | | Human development | ■ | ■ | ■ | ■ |
| | | Demographic diversity | | ■ | | |
| BUILT ENVIRONMENT | Buildings, Networks, Open Space | Shelter | ■ | | | |
| | | Human scale | ■ | ■ | | |
| | | Permeability | | ■ | | |
| | | Adaptability | ■ | ■ | | |
| | | Connectivity | | ■ | ■ | ■ |
| | | House type diversity | | ■ | | |
| | | Diversity of building type & age | | ■ | ■ | |
| | | Heritage values | ■ | ■ | | |
| | | Identity | ■ | ■ | | |
| | | Legibility | | ■ | | |
| | | Robustness | | ■ | | |
| | | Accessibility to facilities | | ■ | ■ | ■ |
| | | Transport efficiency | | | ■ | ■ |
| | | Amenity values | ■ | ■ | ■ | ■ |
| | | Quality of private & public open space | ■ | ■ | ■ | ■ |
| | | Infrastructure capacity | | ■ | ■ | ■ |