Spatial plans and the Auckland region
Past, present and future

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Introduction

• Retrospective
• The Growth Challenge
• The Future
• Lessons and Conclusions
I am sure that it comes as no surprise when I say that Auckland is used to growth (and its associated problems). Since 1886 Auckland has been the largest city in the country. There have been problems with water supply, waste water and traffic congestion ever since. For example:

“At one time in 1943, the city faced a water crisis so serious that the upland storage reservoirs held only one day’s supply.”

The transport system and provision of bulk utility services (especially drainage) have shaped metropolitan Auckland in the later half of this century. The decisions in the 1950s to develop a motorway system and to provide drainage services to the greater part of urban Auckland from a system in Mangere greatly facilitated urban expansion. Sustained investment in the motorway system and high levels of car ownership, encouraged suburban growth and led to the low-density urban form of today.

Settlements such as Mt Albert and Avondale, then later Otahuhu, Takapuna and Howick, and more recently Manurewa and Glenfield, were once individual settlements surrounded in rural countryside, but have now been consumed in the urban sprawl of the city. Auckland is today an amalgam of many towns and cities developed along transport routes and in response to growth pressures and infrastructure provision.
The Auckland region has been growing rapidly for over a century, with impacts on natural resources becoming increasingly clear.

Growth and its impacts and opportunities have been the focus of a multitude of local bodies since the early 1920s. Region-wide planning was discussed in the 1920s but it wasn’t until the 1940s when the Ways and Means committee took up the challenge of developing a regional approach to coordinating local development.

Over time a range of growth options (and management techniques) have been considered – from limiting growth to laissez faire expansion, from creating new settlements to containment and intensification.

The Auckland Metro Planning Organisation produced the first Outline development plan for the Auckland region in 1951 – focussing on the efficient provision of infrastructure, roads, rail, water, power, sewage.

ARA (1963) produced the regional planning schemes in 1974 and 1988 (lots of consideration of growth options and their implications). The successor of this was the current Regional Policy Statement development under the 1991 RMA. (Only region then where RPS provided strategic direction for development – others focus on resource issues)

The RGF was set up in 1996 at a time when it was felt that growth was out of control and that its effects on infrastructure, environment and communities needed to be better controlled or managed. The initial interest in “effects” from RMA soon become more positive and a vision-and outcomes based strategy was developed (at a time when proactive planning or planning full stop was frowned upon). Another aim was to have everyone in the tent and to develop consensus among local authorities about Auckland’s future. (Central government at this stage were only marginally interested, and were not yet into sustainability, economic transformation and did not acknowledge Auckland's role in New Zealand’s future.
1950s - Master Transportation Plan for Metropolitan Auckland

Prepared by the Technical Advisory Committee of the Auckland Regional Planning Authority in 1955.

Quote inside cover: “It is vain to be always looking towards the future and never acting towards it” – J F Boyes

Scope of the plan: “This Master Plan does not, in fact cannot, attempt to deal with matters of detail. It aims at defining the principles and setting the pattern or framework within which more detailed planning can be carried out and within which actual work can be programmed.”
The two maps show the Distribution of Metropolitan Population 1954-1955 (left) and the Possible Future Distribution of Population and Industry in 1975 (right).

Distribution of Metropolitan Population 1954-1955 (left)
• Population in 1955 was 370,000

Possible Future Distribution of Population and Industry in 1975 (right)
• High scenario population projection 620,000, low scenario projection 477,000
• Possible future industrial areas shaded dark including Wairau, Rosebank, Penrose and significant areas surrounding CBD.
The two maps show the Constructed and Projected Motorways (left) and Existing and Proposed Railway Routes (right).

**Constructed and Projected Motorways (left)**
- Proposed projects total 35kms and include:
  - Harbour Bridge to Albany
  - Nelson St to Point Chevalier
  - Beach Rd to Penrose
  - South-Western Motorway
  - South-Eastern Motorway

**Existing and Proposed Railway Routes (right)**
- Proposed Projects discussed:
  - CBD Rail Link
  - Avondale – Southdown Connection
  - Avondale – Rosebank Connection
  - Electrification
1960s – Comprehensive Transportation Plan, De Leuw, Cather & Co.
The graph on the left shows projected growth in both population and motor vehicle registration to 2000.

The map on the right indicates potential highway projects required by 1986, including:
- Isthmus Loop
- Dominion Rd Motorway
- South- Western Motorway
- New Waitemata Harbour crossing
The conclusions and recommendations in this report (1976) differ from those in previous transport reports:

• De Louw Cather Report promoted actions which required high public investment, this report stages recommendations so that high cost capital works are put off as long as possible.

• Whereas previous reports have taken a confident line on future transport needs, this report is more cautious. “It is beyond the power of anyone to accurately predict the next 10 years of transport requirements.”
The two maps show 1986 Final Test Road Network (left) and 1986 Final Test Public Transport Network (right) discussed in the report.

1986 Final Test Road Network (left)
• South-Western Motorway
• Additional lanes on Harbour Bridge and Southern Motorway

1986 Final Test Public Transport Network (right)

Key message – Everything we have built and are building today was designed in the 50s and 60s. City shaping is not an accident. This infrastructure has a very long life and profound impact on nature and shape, efficiency and success of city and quality of life.

Key message – Regionalism – the need to do this on a regional scale (have been doing it since 50s)
1980s – Auckland Regional Planning Scheme

• Focuses on making best use of region’s resources – capital, infrastructure, land, natural environment and people
• Promotes three main strategies: urban consolidation, maximising primary production potential and improving travel relationships between jobs, home and facilities.

1988 – Auckland Regional Planning Scheme becomes operative after being first proposed by ARA in 1982.
1990s – Regional Development Strategy

- Identifies regional issues, strategies and planning processes.
- Recommends urban containment and consolidation, but with provision of south-eastern growth corridor towards Beachlands, to accommodate some growth.
- Seeks integrated framework for decisions on major works to be coordinated and logically staged.
Metropolitan Urban Limits

- First appeared in 1950s
- Purpose has evolved over time:
  - Originally a tool for staging growth and efficient infrastructure provision
  - Then refocused to achieve containment and consolidation objectives
2000s - Auckland Regional Growth Strategy

- Vision for managing growth in Auckland Region - 2 million population by 2050
- A strategy of intensification around selected transport nodes
- Integration with other strategies - especially RLTS

Adopted by all the region's councils in 1999, the Regional Growth Strategy (RGS) sets a vision for how the region can manage growth sustainably for the next 50 years. It aims to improve livability, protect the environment and get the right infrastructure in place. It was developed by the Regional Growth Forum.

It was the first strategy of its kind in New Zealand, involved a major collaborative effort and partnership across the Auckland region, and has been used as a model elsewhere. The development of the RGS involved research, analysis, evaluation of options, extensive stakeholder and public consultation over 3 years.
Growth Concept 2050

- Quality, compact urban form
- Intensification in growth nodes supported by passenger transport
- Provides housing choice and business opportunities
- Ensures at least 20 years land supply
- Implemented through RPS and district plans
- Partnership between all parties including central government
1945
2050?
The Growth Challenge
Auckland - 2006 Census

- The population was 1,303,068
- Home to one third (32.4%) of the national population
- Just over a third (37%) were born overseas
- More than 620,000 jobs
- Contributing an estimated 35% of national GDP

This means: 1 million more people
350,000 more dwellings
375,000 more jobs

Graph shows low, high and medium population growth rates sourced from the ARC Population Projection Model. 2.3 million is the medium growth rate.

The jobs figure comes from the ARC / Market Economics Economic Futures Model “business as usual scenario”.
Composition of Auckland's Population Growth: 1919 - 2009
Population Growth - real and estimated 1926 to 2026

Growth of New Zealand’s Five Main Urban Areas

[Graph showing population growth over time for five main urban areas in New Zealand from 1926 to 2026.]
Changing Demographics

- Auckland’s population will become more diverse
- Changes to ethnic and cultural composition – increasingly Pacific, Asian and Maori
- Ageing - more people over 65 years (21% population 2031 compared to 12% today)
- Six times as many people aged over 85 years, NZ
- By 2025 more people over 65 than under 16 years of age
- Manukau much younger (22% <15 years 2031, compared to 26% today, NZ 17% 2031)
- Labour force will be older, include more women and be more ethnically diverse.

Need to keep in mind – not just scale of growth but nature of the community is changing

Source – START Forces paper – Demographics June 2006
• Increasing ethnic diversity and likely to continue as these groups have younger populations and higher rates of fertility
• This brings a range of world views
The transparent bars show the age/sex structure of the Auckland regional population at 2006 and the coloured bars show the projected age/sex structure by 2051. What this is showing us, in a nutshell, is that over time, the age/sex structure is projected to narrow, and there will be proportionately less people in the younger age groups and proportionately more people in the older age groups. This is due to ‘population ageing’, a demographic phenomenon which is occurring in many developed economies across the world, exacerbated by the size of the baby boom cohort entering older age.
What does this growth look like?

Wellington Region is coming to Auckland . . . twice

Wellington Region has:
- 450,000 People
- 183,000 Dwellings
- 234,000 Jobs
- 15 Hospitals
- 3 Universities
- 23,000 Students
- 200 Primary Schools
- 35 Secondary Schools

To try and visualise the scale of growth we’re talking about - it is more than twice the entire current population of the Wellington Region arriving in Auckland over the next 40 years.
The Future
Environmental Values

• Kaipara Catchment
• Waitakere Ranges
• Gulf Islands
• Marine Reserves
• Productive land

With regard to the environmental layers – these have been modified to separate out the different messages.

There are 3 layers - The first layer recognises that the region has some highly valued areas and features these include our harbours, ranges, coastal areas, landscapes, and some highly sensitive areas and catchments.

This map suggests a protection emphasis – based on our values.
Constraints to Future Development

- Pristine catchments
- Low lying estuaries
- Coastal hazards
- Flooding
- Peat Soils
- Fault lines

This second layer map shows sensitive areas where development should be avoided ....or putting it another way, the presence of these features will effect what development can/should occur.

These include those listed on the slide
Growth Implications

- No go areas?
- Areas of limited future development
- Infrastructure constraints

Putting all of this together we get a growth implications map

- The no go areas are represented by the large crosses - in the Hunuas and Waitakeres, smaller crosses Helensville, Whitford, Franklin Lowlands, Awhitu, Waiheke and Great Barrier
- The map also indicates areas of limited future development – Hauraki Gulf Islands
- An additional assumption behind this map is around limited development due to infrastructure development and servicing in more distant locations

With regard to the greenbelt areas we got the signal that it is a good concept – but more work needs to be done on the developing the concept further – particularly around the extent and location.

Not intending to go through these today – as mentioned the environmental evaluation process will look at these
Auckland in 2051: Intensive Scenario

- All growth focused within the existing MUL and future urban area
- Growth concentrated in centres on the RTN
- No residential infill
- No additional business land
- Countryside living provided
- A strong PT focus

This figure shows one of three long term land use scenarios for Auckland. This is an intensive scenario and you’ll notice very little new land opened up for development (the red areas), with population growth focused on the CBD and town centres.

**Implications/ Key challenges**

More urban rather than suburban future

Protects land/coast from impacts of urbanisation/ increased environmental impact in built up area

Improved accessibility/Efficient provision of PT and other infrastructure

Greater accessibility to centres-based services and facilities (although these may be harder to provide given shortage of space).

Potential productivity growth through employment in CBD and centres, however no space for new business (manufacturing, distribution, logistics etc);

More limited housing choice - a significant change in housing typologies for many people away from single dwellings and gardens to multi unit typologies (apartments, terraced and town housing); impacts on housing affordability

Risks to heritage and cultural values within urban area where there is competition for space.

Most significant change from current market practices. New development models and designs required.
Auckland in 2051: Current policy - PC6

- All growth focused within the existing MUL and future urban area
- Growth concentrated in centres throughout the urban area
- Residential infill
- No additional business land
- Countryside living provided
- A moderate PT focus

This figure shows a second scenario, and represents current policy. You’ll see it also opens up very little new land before 2051. This scenario involves greater concentration of the population in fewer centres.
Auckland in 2051: Expansive Scenario

- 50% growth outside MUL
- Growth dispersed to areas where there is strong market demand – coastal and high amenity areas.
- Residential infill
- 2000 hectares of additional greenfield business land
- Additional countryside living
- A strong road focus

This figure shows the final scenario to be projected and tested by officials. This is an expansive scenario and more or less permits the market to determine where growth develops. As you can see from the orange and red, large tracts of currently green fields areas will be urbanised under such a scenario.

Implications/challenges

“Business as usual” future.

Increased housing choices – new locations and typologies – housing affordability also deteriorates

Provision for new business land – choice for business

Least change from current market approaches required.

High environmental impact - Urban footprint increases significantly with consequent impact on rural and coastal land

Longer travel distances, increased CO2

Difficulty in efficient provision of PT and transport choices.

Expensive additional infrastructure both physical and social in all new areas. Potential underutilisation of existing facilities.
### Futures project: what’s important?

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<th>Environment</th>
<th>Social</th>
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<td>Greenhouse gas emissions</td>
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<td>Accessibility for all households</td>
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<td>Water and air quality</td>
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<th>Economic</th>
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<td>Accessibility to economic activity</td>
<td>Protection of cultural heritage</td>
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<td>Access to labour pool</td>
<td>Opportunities for tangata whenua</td>
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<td>Increased productivity</td>
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The three scenarios were tested against the four well beings articulate in the Local Government Act and these indicators were examined...

The scenarios are then assessed in terms of a series of economic, social and cultural, and environmental criteria. (i.e. against what’s important)

None is envisaged as being the answer, but they have been developed to ‘test’ our methods of land-use and transport investment.
Conclusions from scenario testing

- Scale of growth leads to deterioration in many criteria measures
- Scenarios have different strengths and weaknesses
- Compact urban form generally performed the best against most of the criteria (but not all criteria)
- Compact scenarios provide greater accessibility improvements.

The key findings

- All scenarios require significant future infrastructure investment
- Transport infrastructure has the greatest additional cost component
- Land use is necessary but not sufficient by itself - Need for complementary policy
- But a clear message about the importance of land use and transport integration
- It provides some significant opportunities to achieve desired regional outcomes
- While a compact urban form enables many good outcomes to be achieved it also has some weaknesses – lack of business land, exposure to air pollution, etc
- Irrespective of what spatial form is chosen additional policy mechanisms (car emission controls) and implementation mechanisms (PPPs) are needed if we are to achieve agreed outcomes

The expansive scenario requires the greatest investment in transport infrastructure yet generally provides the worst accessibility

My point is though, that in all cases, the city loses levels of environmental quality, and accessibility to housing, goods and services. Traditional methods of spatial planning in the region, and the consequent investment and regulatory practices won’t deliver what is important.

Current reform could help us get there…
Taking the RGS Forward

- **Accelerated implementation**
- Refined classification
- Get the planning in place
- **Prioritise** areas for implementation
- **New approaches** to intensification and redevelopment
- Enhanced public-sector role
- **Broader partnership** – deliberate planning for social outcomes
- **Regional coordination** of infrastructure - better data and monitoring
- **Communication, education, consultation**

Top priority needs to be given to the following actions:

Establishing a refined classification for Auckland’s centres, corridors and business areas, in order to provide greater certainty as to the location and sequencing of growth.

Completing plan changes to enable quality centres-based development.

Identify priority areas for implementation, aligned with key infrastructure development and investment.

Developing, trial and implement approaches to encourage quality intensification and redevelopment in centres and corridors.

Progressing initiatives to improve urban amenity in relation to open space, heritage and the natural environment.

Investigating enhanced roles for the public sector in large-scale urban (re)development.

Broadening the partnership around social objectives, at both the strategic planning level, and at the local implementation level (using place-based, master planning and ‘whole-of-government’ approaches).

Strengthening alignment of land use, transport and economic development through the Regional Land Transport Strategy review and other initiatives.

Co-ordinating infrastructure planning and priorities at a regional level.

Improving communication and dialogue with Auckland’s diverse communities and key stakeholders on sustainability and the growth strategy’s intent and progress.

Improving monitoring, information sharing and reporting.
Conclusions

At the cross roads – horse and rider at the intersection of Great South Road (left to right) and Portage Road (leading to Manukau Harbour). A late 19th century view from Mt Richmond.