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AUCKLAND 2040: A RESILIENT URBAN REGION ON THE WATER

Further spatial expansion of Auckland is inevitable, but this does not have to lead to environmental disaster and a poor quality of life. An alternative approach has been developed.

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AUCKLAND IS THE LARGEST CITY IN NEW Zealand. Auckland has a pleasant climate and is situated in an extraordinary natural landscape setting on a volcanic isthmus between two harbours. It is a low-rise, car-based city, with a population of 1.4 million, that is expected to add another 800,000 people in the next 20 years. The recent amalgamation of different parts of the city into one super city has given rise to speculation about what form the city should develop. The recently drafted Auckland Spatial Plan (Council 2011) has suggested that growth should be concentrated in three inland areas of the city – essentially inside the existing boundaries – and follow a neo-urbanist design methodology for future development.

We believe that a productive and sustainable

integration of new development and the peri-urban landscape is possible and thus the conventional sprawl avoided. The Auckland Spatial Plan should therefore advocate a resilient city region rather than a compact city.

WHERE ARE WE?

Auckland is part of the upper North Island urban system – a cluster of cities and towns north of the Mt Pironga/Mt. Te Aroha line. It is likely that – thanks to a mix of demographic, economic and technological drivers – a discontinuous but discernible, low-density conurbation of about 300 km will appear sometime in the future along the northern coast of New Zealand, stretching from Whangarei to Whakatane. Possible names for this new, discontinuous quasi-city include: the New

Zealand Riviera, the Big Banana or Whānga-Tane.

Mayor of Auckland Len Brown has a vision for Auckland to become the most liveable city in the world. Achieving this would not only make Aucklanders very lucky people but would also attract capital and talent from all over the world and put Auckland's economy on the path of prosperity. Preventing urban sprawl is seen as an essential aspect of this vision.

THE COMPACT CITY STRATEGY

Auckland Council believes that the best strategy for the management of the future growth of Auckland is the compact city (CC) model, supported by the specific lines of containment, the so-called Metropolitan Urban Limits (MULs.) The key themes of the compact city are containing urban

expansion and increasing population densities by building more concentrated building fabrics, typically 5-6 story mixed-use apartment and office blocks. With increased population density comes more efficient use of public transport, and this lessens dependency on the car, with the associated benefits of less pollution and an increase in pedestrian and cyclist activity. Other benefits postulated by advocates of the compact city are lower energy consumption, a better social mix and tighter community life (Frey 1999).

We believe that there are at least six reasons why the CC/MUL model is both inappropriate and ineffective for the future growth of Auckland:

1. It's too late: the car has shaped most of the growth of the Auckland area – the horse has well and truly bolted.
2. Wrong geography – it is hard to have a dense, compact city on a site like Auckland. The land for development is severely constrained by the central city's position on an isthmus between the Pacific and the Tasman; the coastline is heavily indented with a huge number of estuaries; there are ranges, hills, volcanic cones and basins and protected forests in most directions.
3. Technology – both the trends in information technology (IT) and environmental technology (ET) domains are pointing towards increased decentralisation and mobility. The same with transport technology (TT), never mind the expected crisis of the automobile due to the imminent peak oil situation. Indeed personal automobility will become more expensive but the impact will be moderated with further fuel efficiency gains, energy sources substitution and behavioural change. Overall, the combined IT, ET and TT developments will only strengthen the centrifugal forces in urbanisation.
4. Sustainability is not all about cars – there

is at least as much evidence that urban sustainability does not depend on density – and travel distances – as there is that it does. The role of the compact development in urbanism has been exaggerated for a long time. Regarding dirty energy consumption and GHG emissions, the main concern in the modern city is the buildings, not the vehicles.

5. The sustainability/resilience transition – the new focus on resilience (instead sustainability,

economic and environmental picture and concluded that cities are critical in the global battle for sustainable development. A new, green urban economy, based on eco-planning and eco-design innovation and massive transition to clean (green) technology seems inevitable. This model is not only needed in Auckland – in fact it is easier to achieve it in Auckland than in most cities. Our research suggests that Auckland should grow along two rationales. Industrial and commercial growth

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understood as mitigation) tells us that low density urban development is less risky. On a number of accounts high density cities are dangerously dependent on outside resources and cannot easily provide them on their own.

6. The liveability/lifestyle factor – if Auckland is indeed to become (one of) the best cities in the world to live, enabling a close connection to its extraordinary natural landscape is more likely to appeal to the footloose capital and brains that we are told we must attract to make Auckland a successful city, than trying to imitate the dense urban environments of the Old World.

LANDSCAPE AS THE NEW INFRASTRUCTURE

We have developed an alternative development strategy. It is based on a close study of the recent history of Auckland's development, which is a low-rise sprawling city along the north-south motorway system, and an acknowledgement of the importance of the natural water landscape of Auckland's harbours, coasts, and many urban streams. We have also looked at the global

should seek the most convenient and efficient form of organisation in terms of circulation. This is linear form. Luckily, the Auckland conurbation already has a linear shape along the existing State Highway One. On the other side, residential growth should seek natural amenity – landscape and climate. It can then be allocated along Auckland's many waterways and coastline.

The linear city (Figure 1)

Auckland, in contrast to many cities around the world, has not expanded in all possible directions; rather, it is growing in four major directions in the shape of a skewed cross.

However, Auckland's main axis of growth is still north-south and it has displayed this linear conurbation trend for at least 50 years. The pronouncedly linear character of the Auckland conurbation is the result of two main transport corridors – the railway (historical) and the motorway (present). Those two are, in turn, a consequence of the isthmus location of Auckland – right on the narrow neck of land that connects Northland to the rest of the North Island.



LEFT: Drivers of linear growth-opportunities and obstacles.

RIGHT: One spine and two arcadias

The natural suitability of land for urban development in the Auckland region shows that potential future growth of Auckland can only make it even more a linear city. The overall land suitable for urbanization is about 100 km long and on average 15 to 25 km wide. Thus the linear shape and organization (infrastructure) is almost inevitable. Should there be any valid reason to fight the linearity trend, any policies and instruments aimed at delivering a different shape would have a very hard time succeeding.

The water city (Figure 2)

As already noted, Auckland is located on an isthmus between two harbours and between two seas. It is cut with a myriad of streams from the dominant ranges: the Waitakeres to the northwest and Hunuas to the south-west. All in all, Auckland is a very "watery world" (Toy 2005). Aucklanders have a special relationship to the water. Just as the square is the meeting place for European communities, the beach is the place where all Aucklanders, regardless of social position, gather to eat, swim, and play.

The challenge for intensifying Auckland's urban development by the water is to find sites that are not going to attract the opprobrium of existing inhabitants, yet can provide a water experience. There is one important opportunity that has not been fully explored and that is the use of industrial/brownfield sites. There are many obsolescent industries that for historical reasons were located on the edge of the Manukau and Waitemata harbours. These are often sites that have been heavily contaminated and need extensive remediation of both the site and the adjacent foreshore. However, the location of these sites, next to the water, means they have considerable real estate value. We suggest that local government agencies could take the lead in decontaminating the foreshore and establishing treatment facilities such as wetlands to rehabilitate the contaminated stormwater entering the harbours (Rock 2001). Gradually, the occupational structure of the harbour edge will change, and Auckland will gain a remediated harbour, a new green public foreshore and a zone of intensified accommodation for the increasing population.

A DELIBERATE DUALITY

The resulting concept is a combination of the water city and the linear city. The duality is deliberate and fortunate – the two ideas highlight the dialectic of contemporary life where the rationality of work and production opposes the hedonism of free time and consumption. More importantly, the two herald the new culture of urban living – the reconciliation of the work-play dichotomy and the meeting of economy and lifestyle. The water city symbolises the attraction of the beach and the waterside living; it embodies the philosophy of a good life between nature and the city.

The linear city is the backbone of the entire metropolitan with the heavy transport infrastructure and a series of urban nodes serving as high-density, mixed-use town centres. The town centres have, to some degree, all the same



The linear city and the water city, forming a 'necklace' of town centres.

activities; on the other hand each one has some particular service or industry or amenity that makes them unique in the 'necklace' and complementary to other centres. Thus, wherever you are in the 'necklace', you are 10 or 20 minutes away by train or bus or car from the town centre that has your requirements.

The linear city is the symbol and guarantee of Auckland's efficiency. The water city is the symbol and locus of Auckland's status as the 'world's lifestyle capital'.

Each town centre has some particular service or industry or amenity that makes them unique in the 'necklace' and complementary to other centres. Thus, you are only 10 or 20 minutes away from the town centre that has your requirements.

The investigation demonstrates how a landscape-based methodology for an ecological urbanism can be developed from a close understanding of both infrastructure and landscape to produce a radically new design for the post-city Auckland.

The result, by 2040, would be a 100 km linear conurbation with about 10 city nodes along the infrastructure spine at a range of densities. Medium-to-low density development would be created around the harbours and coastline.

The world needs a new economy just like it needs a new model of how the contemporary city can develop. Approaching the city as a landscape, internally supported with green, grey, smart infrastructure, offers a fresh direction.

In Auckland's case, due to a fortunate set of historic and geographic circumstances, this model would be easy to implement. By accepting a low-rise, regionally polycentric city, Auckland can become a new model of urban-regional development of relevance for all low-density cities in the world. This is of no little significance,

globally speaking. Such cities now comprise 60% of all the urban fabric in the world, and within 10 -20 years might even reach 90%. For them, the compact city model is of little relevance. ■

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