

Submission to Productivity Commission – Using Land for Housing - Issues paper

Recommendations

That the Board:

- i. Approves Auckland Transport lodging a submission in accordance with the key messages of the attached draft.
- ii. Authorises the Chief Executive to approve any subsequent changes necessary to ensure consistency with the Auckland Council submission.

Executive summary

The Productivity Commission Inquiry is tasked with identifying improvements to increase the efficiency of land development for housing in New Zealand and has released an Issues paper and invited submissions.

The Auckland Transport (AT) draft submission (Attachment 1) is focused mainly on matters relating to the planning, provision and funding of transport infrastructure for housing development.

AT has responded to 14 of the 74 questions; it is considered that others are relevant to Council and developers. AT's key messages include:

- The challenge of providing for Auckland's forecast growth
- Programmed development is needed to allow forward planning and co-ordination – by area and timing and by provider e.g Watercare
- Priority should be to encourage development where infrastructure and services with surplus capacity are in place – brownfields and infill ahead of, or as well as, greenfields
- A structure planning approach and orderly land release will facilitate efficient future infrastructure provision
- Need to align development programmes and transport funding cycles, recognising lead times for both
- Development capacity should be looked at in the context of a land use planning framework which facilitates the effective and efficient provision of infrastructure and thus reduces costs
- Providing infrastructure for ad hoc and unsequenced new development impacts on other projects and spreads funding resources thinly across the region

Submissions are due with the Productivity Commission on 22 December

Staff understand that Auckland Council (AC) has been granted an extension to 23 January and AT has requested the same to allow time for amendments that may be needed to resolve any possible material contradictions between the AT and AC submissions

Background

The Productivity Commission is undertaking an inquiry into the supply of land for housing in New Zealand. An Issues paper has been released and submissions invited.

The Inquiry will examine the by-laws, processes and practices of local planning and development systems, and their effectiveness, in order to make recommendations to improve performance in four main areas:

- Policies, strategies, outcomes and processes for urban land supply, including the provision of infrastructure
- Funding and governance of water and transport infrastructure
- Governance, transparency and accountability of the planning system;
- Involvement and engagement with the community.

The Commission will also consider:

- What implications leading practices in the supply and development of land for housing have for the range of laws governing local authority planning
- What lessons can be learned from recent initiatives such as the introduction of Housing Accords and Special Housing Areas and the planning, legislative and governance frameworks associated with the rebuild of Christchurch.

The AT submission is focused mainly on matters relating to the planning, provision and funding of transport infrastructure for housing development.

Staff have attended AC workshops. It is considered important that the key messages from both organisations are aligned. AC has developed the following high-level key messages:

- Auckland has released land for housing and continues to do so
- Development capacity is as important if not more important than land supply to housing affordability
- Regulation is needed to deal with economic externalities; where there are not negative externalities (negative social impacts) regulation is not required
- Planning is an enabler not a constraint
- Council doesn't build houses. We recognise other parties in the housing market have roles
- Big planning decisions should be made by and for communities
- Council has a role to play in enabling quality built form and delivering enabling, facilitating and delivering amenity
- Building infrastructure now has on-going cost implications for the future

AT draft submission

The Issues paper includes 74 questions as a guide to input. AT has responded to 14 of these, focusing on the provision and funding of transport infrastructure and the need for an integrated, programmed approach to development and infrastructure provision in alignment with the statutory planning and funding cycles.

The draft submission includes costs for providing transport infrastructure and services at Hobsonville and estimates of costs related to the Huapai SHA where these are available. It also draws attention to the on-going operational costs that will be incurred by AT with the vesting of new infrastructure.

Key messages

The key messages of AT's submission include:

- The challenge of providing for Auckland's forecast growth
- Programmed development is needed to allow forward planning and co-ordination – by area and timing and by provider e.g Watercare
- Priority should be to encourage development where infrastructure and services with surplus capacity are in place – brownfields and infill ahead of, or as well as, greenfields
- A structure planning approach and orderly land release will facilitate efficient future infrastructure provision
- Need to align development programmes and transport funding cycles, recognising lead times for both
- Development capacity should be looked at in the context of a land use planning framework which facilitates the effective and efficient provision of infrastructure and thus reduces costs
- Providing infrastructure for ad hoc and unsequenced new development impacts on other projects and spreads funding resources thinly across the region

Other points

The AT submission also notes that land supply and housing costs are influenced by factors other than planning and regulation and that new development creates on-going costs for maintenance and for the provision of public transport services to new developments.

The paper also seeks views on the concept of an agency with the ability to aggregate land and plan, and initiate development. Staff view is that AT would support in principle the concept of a mechanism (that could be a development agency) to facilitate forward planning of land release and development and potentially value capture, to align with planning and funding for transport and other infrastructure provision.

Experience in the SHA process has demonstrated clearly that a significant impediment to successfully releasing large blocks of land for housing is ownership by multiple parties.

Timing

The deadline to lodge a submission is 22 December 2014 but AC has obtained an extension to 23 January 2015. AT has requested the same extension to ensure that there are no material contradictions between the finalised AC submission and this AT draft submission. Some changes to the attached document may be necessary but it is anticipated that these will be minor due to the co-operation already undertaken in preparation.



Recommendations

- i That a submission including the following key themes is made to the Inquiry into Using Land for Housing:
- The challenge of providing for Auckland’s forecast growth
 - Programmed development is needed to allow forward planning and co-ordination – by area and timing and by provider e.g Watercare
 - Priority should be to encourage development where infrastructure and services with surplus capacity are in place – brownfields and infill ahead of, or as well as, greenfields
 - A structure planning approach and orderly land release will facilitate efficient future infrastructure provision
 - Need to align development programmes and transport funding cycles, recognising lead times for both
 - Development capacity should be looked at in the context of a land use planning framework which facilitates the effective and efficient provision of infrastructure and thus reduces costs
 - Providing infrastructure for ad hoc and unsequenced new development impacts on other projects and spreads funding resources thinly across the region
- ii That the Board authorises the Chief Executive to approve any subsequent changes necessary to ensure consistency with the Auckland Council submission.

Attachment

Number	Description
1	AT draft submission to the Productivity Commission Inquiry into Using Land for Housing

Document ownership

Submitted by	Don Munro Manager Strategic Transport Integration	
Recommended by	Peter Clark General Manager Strategy & Planning	
Approved for submission	David Warburton Chief Executive	

Glossary

Acronym	Description	Business Unit
AC	Auckland Council	
AT	Auckland Transport	

SUBMISSION TO THE NEW ZEALAND PRODUCTIVITY COMMISSION: USING LAND FOR HOUSING – ISSUES PAPER

Auckland Transport (AT) thanks the Productivity Commission ('the Commission') for the opportunity to make this submission in response to the *Using Land for Housing* Issues Paper.

AT is an Auckland Council controlled organization (CCO) instituted under the Local Government (Auckland Council) Act 2009 (LGACA). Its purpose is "to contribute to an effective, efficient, and safe Auckland land transport system in the public interest"¹. AT has a significant role to play both in enabling Auckland's growth and in dealing with its externalities. In particular, AT's activities contribute to better urban outcomes for Aucklanders by:

- Increasing access to a wider range of quality, affordable transport choices
- Enabling people and goods to move efficiently
- Enabling growth in a way that supports communities and a high-quality urban form
- Reducing adverse effects from the transport system
- Making better use of transport investment.

In preparing this submission, AT has responded to the consultation questions that are relevant to its purpose. The Introduction below presents the position regarding growth in Auckland to provide background for our answers and to make clear that Auckland's experience is unique in the New Zealand context in terms of scale and the demands it places on the transport network.

INTRODUCTION

Projected population growth in Auckland over the next three decades will place significant pressure on both the city's housing supply and its infrastructure networks.

The medium-growth scenario outlined in the Auckland Plan forecasts a population of 2.2 million by 2041², an increase of 700,000 over the current population and representative of approximately 70 per cent³ of NZ's population growth over the period. This scale of growth is unprecedented in the NZ context, and is equivalent to adding the combined current population of the next three largest territorial authorities (Christchurch City, Wellington City and Hamilton City,) to Auckland over the next three decades⁴. Auckland's growth challenges are therefore distinct from those faced by the remainder of the country.

AT's high-level support for the quality compact urban form proposed in the Auckland Plan is partly predicated on the need to use the existing transport network more efficiently and to reduce demand for costly new extensions to the network. Nevertheless, AT's current funding

¹ (s39 LGACA)

² Statistics NZ, 2012, cited in: Auckland Council. 2012. *The Auckland Plan – High Level Development Strategy*.

³ Statistics NZ, 2012, cited in: Auckland Transport. 2012. *Integrated Transport Programme 2012-2041*

⁴ Statistics NZ. 2014. *Estimated Resident Population for Territorial Authority Areas, at 30 June 2014*.

sources fall \$12 billion short of the investment required to deliver the optimal Auckland Plan Transport Network over 30 years⁵.

AT therefore supports a response to the housing shortfall which aligns new housing supply with infrastructure capacity and funding. The housing supply question cannot be seen in isolation, but rather should be considered in the context of its implications for the funding and performance of the whole transport network.

Key messages

- The challenge of providing for Auckland's forecast growth
- Programmed development is needed to allow forward planning and co-ordination – by area and timing and by provider e.g Watercare
- Priority should be to encourage development where infrastructure and services with surplus capacity are in place – brownfields and infill ahead of, or as well as, greenfields
- A structure planning approach and orderly land release will facilitate efficient future infrastructure provision
- Need to align development programmes and transport funding cycles, recognising lead times for both
- Development capacity should be looked at in the context of a land use planning framework which facilitates the effective and efficient provision of infrastructure and thus reduces costs
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QUESTIONS FROM THE ISSUES PAPER

Q1

Is it helpful to think of the planning and development system as a means of dealing with externalities associated with land use and coordination problems? What other factors should the Commission consider in evaluating the role of the planning and development system?

Quality transport infrastructure is a key input in determining the extent to which urban growth can generate productivity gains that offset and reduce the negative externalities of urbanisation. The planning system has an important role in managing these externalities by regulating in the public interest. Much of the Commission's work to date has focused on the relative impact of planning processes and controls on the affordability of housing. While these factors can add to delays and cost increases there are a number of other drivers that need to be considered, for example:

- Market conditions do not adequately reflect the total cost of provision for development and therefore the link between prices and servicing costs is imperfect
- RMA processes with many stages of litigation and re-litigation lead to delays and add to costs
- Landbanking

⁵ Funding Auckland's Transport Future – Final report; Consensus Building Group

- A still largely unregulated, lending sector
 - High building costs allegedly due to high import costs
- ***AT agrees that the planning and development system is the main means of dealing with the externalities associated with urbanisation and endorses the Commission's attention to this issue.***
 - ***AT strongly argues that the planning, funding and integration of transport and other infrastructure is a key factor in addressing many of the externalities associated with urbanisation.***
 - ***It is recommended that a broader view be taken when addressing land supply, 'complex Council processes' and housing affordability.***

Q2

Can the current land planning and development system be made to work better to benefit cities throughout New Zealand? Is a different type of planning system required to meet the needs for housing in New Zealand's fastest growing cities?

As noted above, the scale of growth in Auckland is unprecedented in the New Zealand context. The infrastructure associated with this growth will be unaffordable if development capacity is not provided for in a coordinated way. As AT would be spreading its funding resources very thinly across the region if land release were totally liberalised, it therefore favours greater coordination between the release of development capacity and the funding and provision of transport infrastructure and alignment with other infrastructure providers.

There is a need to future-proof connections beyond a given development site so that the transport network can be more easily extended to service future growth. Currently available planning mechanisms (i.e. designations) are not sufficiently responsive to fast-track land development, as they have a lengthy (often 5+ years) gestation period and then require additional time for land purchase. The release of land should allow for such future requirements without immediately incurring costs. The structure planning approach for future urban zones as set out in the Proposed Auckland Unitary Plan (PAUP) is a key means to coordinate transport planning with the release of greenfield land to ensure that networks are logical and complete.

Brownfields development is heavily weighted to objections making for a drawn-out planning process and, with compromises, perhaps less than optimal outcomes.

- ***A structure planning approach before land is released will facilitate future infrastructure provision in an efficient manner***
- ***A planned progression of expansion is needed that builds incrementally, to include urban brownfields and intensification areas with existing capacity, as well as greenfields areas where new provision is necessary***
- ***This programme should be aligned with transport funding programmes – the Regional Land Transport Programme (10 years) and AT's Integrated Transport Programme (30 years). If the need for funding to support urban expansion is not anticipated and included in the funding programme, the required infrastructure cannot be provided.***

- ***Providing infrastructure for ad hoc and unsequenced new development impacts on other projects and spreads funding resources thinly across the region***

Q4

Would a significantly increased supply of development capacity lead to an increased supply of affordable housing, or would further regulatory or other interventions be required to achieve that outcome?

Unconstrained increases in development capacity will incur significant costs to infrastructure providers and therefore to the public. In short, AT considers that growth must be affordable not only to prospective homebuyers, but to the city as a whole.

AT therefore endorses Auckland Council's high-level development strategy as it seeks to enable significant increases in development capacity through both intensification and expansion of the urban area in a controlled manner which enables the efficient and coordinated provision of infrastructure.

AT has participated in and supported a number of Council workstreams seeking to implement this strategy including a land release strategy to accompany the Unitary Plan, and spatial priority areas to coordinate upzoning/intensification with infrastructure investment.

- ***Significant increases in development capacity are one of a number of measures necessary to increase the supply of affordable housing.***
- ***Further liberalisation of the planning regime with respect to development capacity should consider affordability impacts and be accompanied by appropriate infrastructure funding mechanisms to ensure costs are borne in an equitable and efficient manner.***
- ***AT would support further investigation of land value capture mechanisms by the Commission given the significant land value increments associated with urban expansions / rezoning.***

Q7

What policies and practices from other countries offer useful lessons for improving the supply of effective land or development capacity for housing in New Zealand?

AT's primary concern with respect to increasing development capacity is to ensure that new development can be serviced by transport infrastructure in a manner which delivers value for money and maximises the return on public investment. To those ends, overseas experiences and research⁶ tell us that:

- Urban form has a significant influence on the need for and utilisation of transport infrastructure. greater urban density provides the critical mass of population necessary to support a high standard of public transport which promotes a spatially efficient use of transport corridors and services.
- Increasing development capacity through intensification can often induce land value increments which ensure that (a) more rates revenue per unit of land area is generated, and (b) that this revenue is spread across a greater number of residents.

⁶ References - see endnote

This means that infrastructure requirements associated with intensification can become largely self-financing.

- Large-scale additions to the transport network through greenfield development are not only costly in capital expenditure, but incur significant new operating expenditure and are often inefficiently utilised.
- More generally, international research shows that development capacity is reflected in land values which in turn are dictated by the capitalised value of physical and social infrastructure, and access to services, markets and amenities⁷. Therefore, transport infrastructure directly influences land values. Many overseas examples use value capture mechanisms on the basis that a part of the unearned increment should be retained for public benefit.

- *Development capacity should be looked at in the context of a land use planning framework which facilitates the effective and efficient provision of infrastructure and thus reduces costs*
- *The land value increments which result from increased development capacity provide an opportunity to support infrastructure provision if their value can be partly or wholly captured.*

Q18.

How effective are local authority processes for connecting decisions across the different planning frameworks? Which particular processes have been successful? What explains their success?

It is early in the process as yet, but the amalgamation of Auckland's former legacy councils provides an unprecedented opportunity to improve connections and rationalise planning frameworks. It is important that this opportunity is not lost.

Q19

What impact does transport planning have on the supply of development capacity?

Adequate infrastructure provision is the key prerequisite to open up development capacity and any major constraints will have implications for land supply.

Transport must be closely aligned with land use planning but implementation has long lead times that must be recognised in the release of land. Designations may take several years with more time required for securing funds and property. The transport planning process also needs adjustment to allow streamlined procedures with flexibility for faster responses to changing circumstances.

The transport funding process requires long term planning; preparation of the regional Land Transport Programme (LTP) has a lead time of about 18 months from initiation through consultation to adoption. The LTP is then in effect for three years. The Council Long Term Plan also has a long lead-in time and is also in force for three years and has a 10-year planning horizon. It is difficult for transport funding to respond to the demands of accelerated development, e.g. of SHAs, that may not have been anticipated during plan preparation.

⁷ Fensham, P., Gleeson, B. 2003. Capturing Value for Urban Management: A New Agenda for Betterment. *Urban Policy and Research*, 21(1): 93-112.

- ***Co-ordination is needed to align development programmes and the legislated long term planning framework for transport infrastructure investment and supply of services.***

Q43

Do council-led Plan changes or variations help or hinder the supply of development capacity?

Council-led plan changes should contribute to the availability of development capacity; but development capacity does not automatically mean that land will be developed. The process can be hindered by unwilling land-owners. Land development happens where developers have bought land (at a favourable price before rezoning) and initiate the process so that Councils and infrastructure providers are pushed into a reactive mode.

Where land is proposed to be re-zoned and developed is not necessarily where infrastructure is ready or likely to be readily available or even where there is an actual need for the proposed development. . Very often land ownership dictates where development will occur because the RMA, as an effects-based piece of legislation, struggles to account for Council-led development programmes.

Planning decisions often can only 'have regard to' Council strategic plans.

- ***In an ideal planning world Councils, supported by infrastructure providers, would embark on timely structure/area planning for areas identified for growth (including clear definition of necessary infrastructure projects and timing of delivery to support development) before implementing these structure/area plans into the statutory RMA context through Council-led Plan Changes.***

Q44

What is your experience working with the infrastructure component of the land supply system?

Most major infrastructure components cannot be delivered on an 'ad hoc' basis. They need long term planning, funding programming, designations, land acquisition, design, and procurement.

- ***Funding and planning instruments should be aligned to allow proactive provision of infrastructure and flexibility to respond to changes and market conditions***

Q48

Are there differences in the approaches taken between council controlled and private infrastructure organisations (eg, electricity lines companies)? What is the nature of these differences? What explains the differences?

Private companies have the option to not provide a supply or connection whereas a public sector agency such as AT is obligated to provide a connection to public roads and cannot prohibit their use. The private sector organisation thus has more ability than AT to influence development.

Private organisations are generally self-funding on a commercial basis so that fees and charges accruing from development can at least partly meet the cost of provision Three models can be identified:

- A fully private sector organisation can charge and obtain a return on capital.

- Watercare, an AC CCO, is able to charge and recover costs, in whole or in part
- This is not the case for AT which is publicly funded.

Q53

Are there particular types of development (eg, greenfields, infill etc) that are less costly to service with infrastructure? What evidence can you provide about any variation in infrastructure costs?

Brownfield development usually occurs where there has been previous infrastructure investment and spare capacity exists. It is cheaper to use that capacity in preference to providing new infrastructure for greenfields areas. For transport in particular, it is more expensive to provide public transport services where they are required for greenfield development in areas not already covered. Greenfields developments are usually lower density and thus less conducive to public transport viability and add to its cost.

An example from a Centre for International Economics study of Sydney is appended in Attachment 1.

An example from a Centre for International Economics study of Sydney is appended in Attachment 1.

Two examples relating to the current development at Hobsonville and the proposed Huapai SHA are provided below. Attachment 2 provides illustrations of the proposed Huapai development area.

Huapai

Development proposed as a greenfields SHA at Huapai will incur significant costs to upgrade the existing transport network to handle traffic from the proposed 1200 new dwellings. For example, upgrading the intersection of SH16 and local roads and the rail crossing is estimated to cost around \$7.05 million (see picture Attachment 1). This is in addition to upgrades of local roads, cycle and footpath works outside the development and possible 4-laning of SH16 by NZTA between Huapai and Kumeu – approximately an additional 1 km. The currently proposed 4-laning between Kumeu and Brigham Creek (approximately 5.5 kms) is estimated to cost \$100 million.

AT will become responsible for additional annual operating costs associated with both the additional publicly provided infrastructure as well as the vested infrastructure which while unresolved at this stage will be significant. At this stage an estimated cost is not available. It is expected that additional public transport provision will be required with resulting additional operational costs.

Hobsonville

At Hobsonville additional housing including an SHA development is being provided. In addition to the extension of an existing bus service (in length and frequency) Auckland Transport has introduced a peak-hours only ferry service to support this growth. A ferry terminal has been built at a cost to AT of \$3.2 million and morning and evening services are currently provided. As current fares cover only 16% of the total operating costs, AT subsidises the service at a current annual net cost of around \$450,000. As development continues, increased demand will require additional services. The AT Ferry Development

Plan estimates the potential gross cost of gradually adding trips to provide an all-day, all week timetable could reach a total of around \$1.0 million by 2026.

The ferry terminal and the vested roads and other transport facilities such as a future park and Ride site will also incur on-going annual operating costs.

- **Recognising the scale of Auckland's growth, existing capacity should be used to the fullest extent practicable as well as embarking on greenfields development.**

Q59

What alternative approaches for funding infrastructure should be considered in New Zealand's high-growth areas?

NZTA funding from the national land transport fund is prioritised against national transport strategies and allocated within narrowly defined work categories. In most cases the financial assistance rate is close to 50%. Thus central government can strongly incentivise councils to invest their own funding in certain areas. Generally, transport projects in already congested areas tend to score more highly than in greenfields areas. Without matching funding from NZTA the cost of providing infrastructure and services to greenfield areas becomes more of a burden on council resources.

AT recognises the challenge of balancing the prioritisation accorded to addressing existing problems or deficiencies versus servicing new growth but NZTA processes make this more difficult for AT.

- **The provision of transport infrastructure to greenfields areas could be assisted by addressing the NZTA prioritisation and funding system.**

Q63

What impact does heritage protection have on the supply and development of land for housing?

Heritage and other protections limit the potential for intensification along transport corridors. Intensification supports a more efficient transport system at lower cost by increasing public transport patronage and thus making it more viable, and also by reducing congestion and the need for more roading investment.

The value of heritage protection needs to be carefully balanced against the costs that it can incur.

Q67

Is there a need for public agencies that can aggregate land in New Zealand cities? If so, who should establish these agencies? What powers and functions should they have?

Multiple ownership is one of the biggest obstacles to the release of land. AT would support an initiative to develop a mechanism or tool that could acquire land, capture value increments and integrate the planning and funding of development with infrastructure provision.

Q72

What are the advantages and disadvantages of the Housing Accords and Special Housing Areas Act 2013 and of its implementation to date?

The Housing Accords and Special Housing Areas Act 2013 (HASHA) section 16(3) states the following with respect to infrastructure provision:

“(3) The Minister must not recommend the making of an Order in Council under this section unless the Minister is satisfied that –

- (a) Adequate infrastructure to service qualifying developments in the proposed special housing area either exists or is likely to exist, having regard to relevant local planning documents, strategies, and policies, and any other relevant information...⁸*

Compliance with this requirement of the Act is difficult to assess at SHA proclamation stage due to the limited information and short timeframes available to process applications for development. There is limited ability to address the question satisfactorily at later stages. This also makes funding provision in LTPs difficult.

The requirement needs to be more clearly defined, for example, by linking such requirements to evidence in specific planning documents especially the Long Term Plan which provides for the funding of supporting infrastructure projects in development areas within reasonable timeframes that will match this development's aspirations. If this is not applicable to a particular area then the area should not benefit from a fast tracked, largely rate payer funded, planning process. Funding constraints create a challenge for the provision of infrastructure which compromises the ability to respond to HASHA areas and fast-track process for infrastructure delivery.

⁸ Housing Accords and Special Housing Areas Act 2013, section 16(3).

There is no provision for route protection or designation in HASHA for infrastructure to support development of SHAs where this is not part of the SHA. There is no equivalent fast-track process for infrastructure as for SHAs. It would be helpful to have such a provision.

¹ References:

Betterment taxes

- Sources:
 - SGS Economics and Planning Pty Ltd. 2007. *Value Capture Mechanisms: International Models and their relevance to New Zealand*. Available: <http://mfe.govt.nz/publications/urban/value-capture-mechanisms/value-capture-mechanisms.pdf>.
 - Walters, L. 2012. *Land Value Capture in Policy and Practice*. Available: http://www.landandpoverty.com/agenda/pdfs/paper/walters_full_paper.pdf.

Tax increment financing

- Sources:
 - Kemp, A., Mollard, V., Wallis, I. 2013. Value capture mechanisms to fund transport infrastructure. *NZ Transport Agency research report 511*. Available: <http://www.nzta.govt.nz/resources/research/reports/511/docs/511.pdf>.
 - Crane, T., McIntosh, J., Mouritz, M., Newman, P. 2011. *Discussion paper – Alternative Funding Mechanisms for Public Transport in Perth. The Potential Role of Value Capture*. Available: <http://www.committeeforperth.com.au/pdf/Advocacy/Report%20-%20AlternativeFundingforPublicTransportinPerthDecember2011.pdf>

Negotiated agreements

- Sources:
 - SGS Economics and Planning Pty Ltd. 2007. *Value Capture Mechanisms: International Models and their relevance to New Zealand*. Available: <http://mfe.govt.nz/publications/urban/value-capture-mechanisms/value-capture-mechanisms.pdf>.

State-led development

- Sources:
 - SGS Economics and Planning Pty Ltd. 2007. *Value Capture Mechanisms: International Models and their relevance to New Zealand*. Available: <http://mfe.govt.nz/publications/urban/value-capture-mechanisms/value-capture-mechanisms.pdf>.
 - Gray, N., Hill, G. 2010. *Planning Auckland's Housing Future*. Auckland: Auckland Regional Council.
 - Cervero, R. 2009. Transport Infrastructure and Global Competitiveness: Balancing Mobility and Livability. *The Annals of the American Academy of Political and Social Science*, 626: 210-225.

Attachment 1

Sydney example

In work undertaken for Sydney by the Centre for International Economics, the transport infrastructure/connections and congestion costs were estimated to be around \$15.8 billion AUD (in Net Present Value terms) over the period 2010-2030 to deliver a 'fringe focused' growth strategy. The transport costs for a strategy focused on more infill areas was closer \$12 billion⁹.

For Sydney the transport related costs were estimated to be between \$26 900 per dwelling to \$35 000 per dwelling depending on which growth scenario was adopted. In comparison the costs related to water/wastewater and electricity network costs amounted to between \$15 700 to \$18 900 per dwelling. The infrastructure cost related to education, health services, fire services and local council infrastructure was around \$41 000 per dwelling.

Another study by Newman and Kenworthy¹⁰ estimated the transport costs associated with inner city and fringe development in Australian cities using functions of vehicle kilometres travelled covering all private, public and external costs (e.g. fatalities, injuries, property damage, air pollution and noise pollution). This study found that the recurring annual cost of transport for an inner city dwelling was \$18,611 relative to \$36,747 for a dwelling on the urban fringe. It also found that capital expenditure on roads for inner city dwellings amounted to approximately 10 per cent of total capital infrastructure investment relative to 22 per cent for a dwelling on the urban fringe.

⁹ CIE (2010), *The Benefits and Costs of Alternative Growth Paths for Sydney*, p.13.

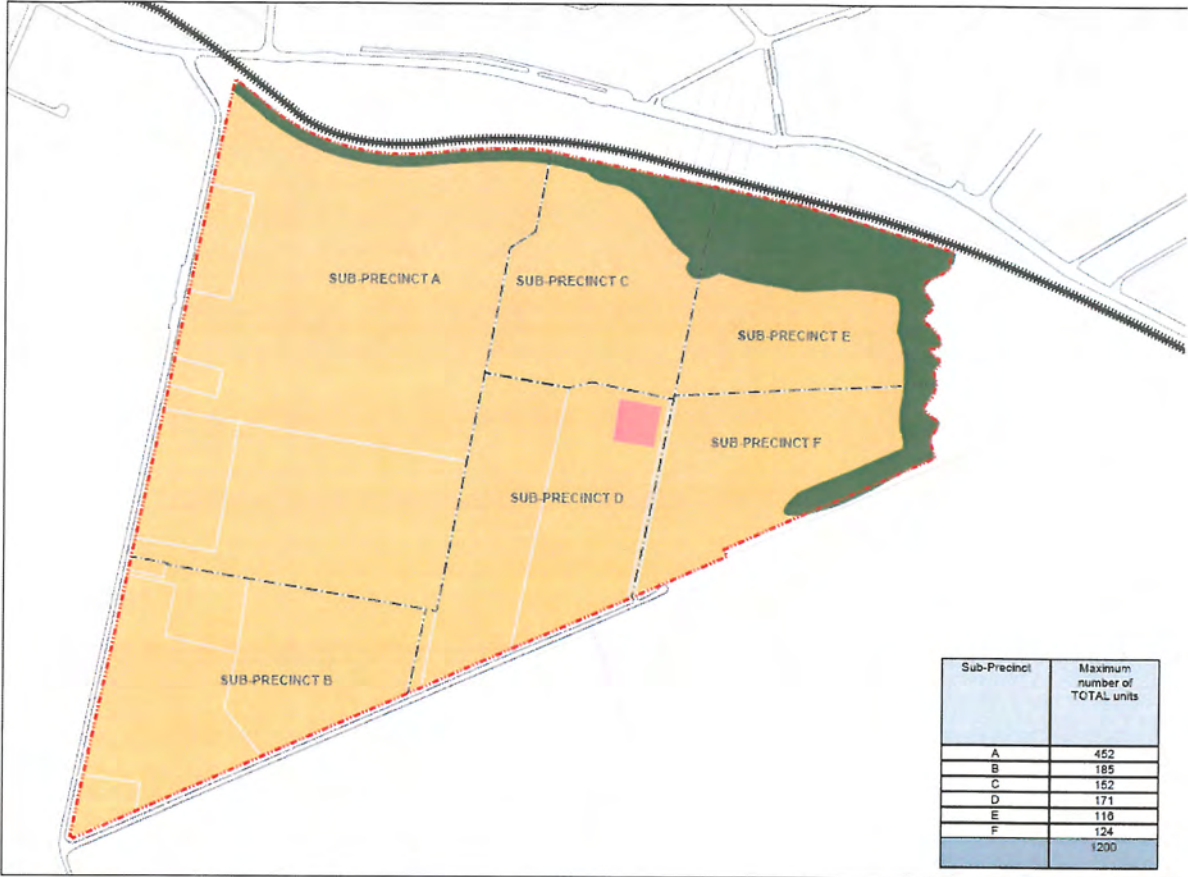
¹⁰ Newman, P and Kenworthy, J (1999), *Sustainability and Cities: Overcoming Automobile Dependence*, Island Press, Washington.

Attachment 2 Huapai Triangle SHA

Development area



2. Huapai Precinct plan



The plan provides for a total of 1200 dwellings.

3. Huapai intersection to be upgraded

Estimated cost \$7.05 million

