

NPS-UDC : CURRENT FEASIBILITY PROVISIONS

Discussion Paper

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NPS-UDC : CURRENT FEASIBILITY PROVISIONS

Discussion Paper

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Auckland Council, Future Proof Partnership,
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Partnership

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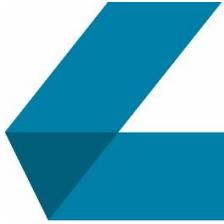
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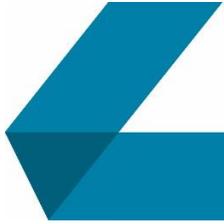


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Executive Summary

Situation

The National Policy Statement on Urban Development Capacity (NPS-UDC, 2016) has provisions which require councils to assess the sufficiency of capacity for housing and business activity. Sufficiency is to be assessed in terms of feasible capacity. The test in the NPS-UDC is set out as “current feasibility” in PB3(c)¹ and the guidance is that this should be done using “current prices”. If there is not sufficient capacity which is feasible, the NPS-UDC requires councils to provide for additional development capacity.

High growth councils are completing their first Housing and Business Development Capacity Assessments, including to examine whether there is sufficient feasible capacity to meet demand over the next 30+² years. These council reports are assessed by MBIE and MfE.

The guidance provided by MBIE is that the assessment of current feasibility must be based on today’s market conditions, and that current feasible capacity needs to be sufficient for the next 30+ years of growth.

This position is reiterated in the most recent MBIE guidance:

Feasibility modelling needs to consider current market conditions as the baseline scenario. A key aim of the NPS-UDC is to ensure sufficient development capacity is provided to avoid driving up house prices. Other assumptions about housing and land prices and development costs may be useful as sensitivity tests³

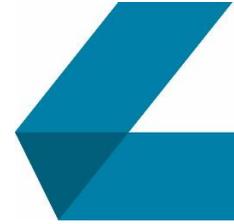
This implies that land markets be assumed to remain unchanged throughout the next 30+ years (termed here a “Locked Market” approach).

Several of the high growth councils in preparing their capacity assessments have expressed concern to MBIE and MfE about the guidance and interpretation of the NPS-UDC in regard to feasibility being based on current prices. The core concerns are that if feasibility is able to be assessed only on the basis of today’s market conditions, then the assessments will understate the likely development capacity, especially in the medium and long terms. Under Policy PC3 of the NPS-UDC, councils are required to respond to a sufficiency shortfall by providing additional development capacity within a 12-month time-frame. If they are required to comply based on a capacity assessment which understates capacity because of that “nil change” assumption, then they would be required to undertake costly and unnecessary actions to provide

¹ The NPS-UDC Interpretation is “**Feasible** means that development is commercially viable, taking into account the current likely costs, revenue and yield of developing; and **feasibility** has a corresponding meaning.” (p6)

² The requirement is for 30 years +/- 15%, which translates to 34.5 years, or effectively 35 years.

³ Ministry for the Environment. 2018. National Policy Statement on Urban Development Capacity: *Summary evaluation report of Housing and Business Development Capacity Assessments for high-growth urban areas*. Wellington: July 2018; p13;



substantially more development capacity, in more locations, than is indicated or required by their long term growth outlook.

The “nil change” assumption is not supported by the evidence base from urban economic theory and research, which holds that the feasibility of development improves over time, as economies expand, cities grow and existing property estates age and depreciate. The capacity analysis which allows for these established market trends and processes to continue into the future, shows much greater sufficiency, and less need to provide for additional capacity (the “*Economy-based*” position).

Adding large areas of land for development as required by the NPS-UDC (under PC3) – which is the likely direct consequence of the “nil change” position – does little to improve feasible capacity, and is likely to detract from the feasibility of intensification and brownfield redevelopment. It would add to the cost of urbanising greenfield areas, especially by triggering large-scale infrastructure liabilities for councils and central government. There is concern about high, and unnecessary, financial costs from funding infrastructure over much more extensive areas of land than the growth will require, or be able to pay for. There is also substantial risk of undermining urban growth objectives, especially for urban intensification and more compact and efficient urban form outcomes.

Negative effects on housing affordability may arise from reduced opportunity for urban intensification to lower land costs per dwelling and increased costs of infrastructure for greenfield growth, together with higher whole of life travel and other costs for households because of less efficient urban form outcomes.

In the RMA context, there are concerns about councils’ ability to support - in a council or Environment Court hearing - a district plan which has to be based on a position of “nil change” in the market, despite 30+ years of population and business growth.

Objective

This paper examines the NPS-UDC with specific regard to the guidance on “*current feasibility*”. It considers the nature of the NPS-UDC, its structure and underlying rationale, and how these relate to New Zealand’s urban economies.

It considers the implications for urban economies of the *Locked Market* interpretation of the NPS-UDC provisions on feasibility, and some key implications for councils’ financing, and planning.

It has been prepared to assist interpretation and future development of the NPS-UDC.

M.E is grateful for significant contributions to the development of this Discussion Paper from the high growth councils’ professional staff, for both conceptual inputs and practical understanding of urban growth issues⁴.

⁴ Auckland Council, Hamilton City Council and Future Proof Partners, Queenstown Lakes District Council, Smart Growth Partnership, Greater Christchurch Partnership.



NPS-UDC as an economic tool

The NPS-UDC is intended as a core economic tool, to help achieve sufficient and efficient housing and business capacity for urban growth. There are important challenges in housing, especially in the Auckland market where high prices and constrained dwelling supply have seen ownership levels decline significantly.

The Auckland Unitary Plan hearings (2014-16) saw considerable focus on not just plan-enabled capacity for growth, but the likely commercial feasibility of that capacity. Elements of the methods developed to assess how much plan-enabled capacity would be feasible were subsequently picked up for the NPS-UDC.

However, the NPS-UDC takes matters much further. It requires councils to consider the economics of land development and housing, to monitor some key indicators, and to take a more direct role in urban housing markets. If a capacity assessment indicates a likely shortfall in capacity - short, medium or long term – this triggers a specific required response by councils, to provide additional plan-enabled capacity until the assessment indicates sufficient currently feasible capacity for the next 30+ years.

Going beyond providing for sufficient plan-enabled capacity adds a significant layer to councils' planning. Councils must explicitly examine and take into account the economics of urban development, and then take significant actions based on their assessments of how efficiently the economy overall and land markets are functioning, and are likely to function into the long term.

Better understanding of how economies function is important for urban planning. However, the responsibility for councils to take actions places a very high requirement that any capacity assessment is accurate and based both on good knowledge of how urban economies function, and sound information on relevant matters. This same responsibility applies to the key market efficiency indicators.

Key Issues

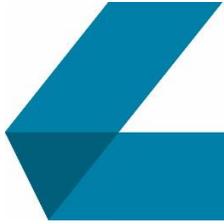
These responsibilities for economic assessment and actions in the NPS-UDC raise a number of issues.

a. NPS-UDC Structure and Rationale

The structure of the NPS-UDC is highly significant. It requires detailed analysis of plan-enabled capacity, and of the commercial feasibility of that capacity. It contains a significant required response under PC3 - if feasible capacity is not sufficient for 30+ years' of growth - to provide additional development capacity.

That structure implicitly assumes that if currently feasible capacity is not sufficient, then the required response by councils to provide for more plan-enabled capacity will by itself result in sufficient capacity that is feasible. The implied rationale is that providing for more plan-enabled capacity will by itself provide sufficient feasible capacity. If that does not happen, it still does not alter the next required response, which is also to provide more plan-enabled capacity.

The implied underlying assumption is that adding more plan-enabled capacity will improve the feasibility of all new capacity – one basis being that increasing the signalled land supply will reduce the price of (rural) land to the point where new development becomes feasible.



The obvious issue is that the extra plan-enabled capacity may be no more feasible than the initial plan-enabled capacity - in which case adding more plan-enabled capacity may have no effect on the sufficiency of feasible capacity. This is especially because the initial plan-enabled capacity (already identified in many district plans) is likely to focus on the most suitable locations close to the existing urban edge. Development in these locations is generally more feasible than in next-most-suitable locations (the 2nd or 3rd tranches) which are often further from the existing urban edge.

Moreover, signalling that future land supply for urbanisation will be greater may have minimal effect on the feasibility of development. That is because the price of rural land – which is potentially affected by providing for additional land supply - has a limited effect on development feasibility, compared with other influences. In any case, other major drivers of land values including infrastructure costs, are not directly affected by increasing the competition among potential sellers of rural land. Those other costs are directly affected by the amount of land to be serviced, and the sequence of development, which may more than offset a possible lowering of the price of rural land.

b. “Currently Feasible”

The second major issue is how feasibility is to be estimated. The MBIE/MfE guidance is that NPS-UDC test of “current feasibility” which is defined in terms of “current likely costs, revenues and yield” means today’s costs and prices. On that basis, the feasibility of development should be examined in terms only of today’s costs and prices, and there should be no allowance for market conditions to change - for example in response to growth and changes in the urban economy.

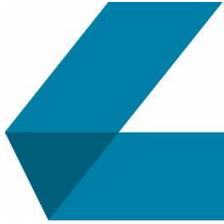
The consequent assumptions implicit in the MBIE guidance are that expansion of the urban economy, population growth, and growth in demand for housing – arising from the projected growth in household numbers, changes in socio-demographics, and so on – must have no effect on land and housing prices, throughout the next 30+ years.

However, there are strong and established economic processes which affect the housing market and are affected by population and business growth and change – which are all part of the reason why the high growth councils have been so defined. This implies an underlying assumption of the MBIE guidance, that the existing economy will no longer function in the way it has over the decades to date. Further, that existing land markets are assumed to be in effect locked in place for the next 30+ years.

Locked Market Position

The *Locked Market* position assumes there will be no change in prices or costs over 30 years, and the housing market will stay unchanged. It is important to note that the NPS-UDC wording and guidance is not simply avoiding the need to make a decision about growth and change in the market. Rather, it is a firm assumption that the growth rate will be 0% for 30+ years. Key implications include:

- a. capacity which is currently feasible also represents the amount of capacity which will ever be feasible - if prices will not change over 30 years, then the supporting assumption must be that they will not change over 60 or 90 years;

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- b. If there is to be no future change, then to be consistent it must also be assumed that there have been no changes in the past 10, 20 or 30 years for the estimates of current feasibility. Such an assumption clashes with evidence of substantial change in the land markets over the last 30+ years;
 - c. the anticipated growth and associated changes in all other areas of the economy are assumed to have no impact on either building costs or prices.
 - d. urban economies will no longer function as they have up until the present, and economic processes to date will cease to have effect.

Such assumptions would normally require a substantial technical basis, especially given the contrast with the actual patterns to date. The absence of any technical documentation to support the *Locked Market* position means there is to date no written rationale as to why that position should be preferred to an *Economy-based* position which allows for continuation of the core economic processes and patterns observed in urban economies over the long term.

Economy-based position

The *Economy-based* position has less onerous assumptions. It allows for the core economic processes observed and studied to date to continue to have effect, in a manner generally consistent with the scale and timing of growth in an economy. Accordingly, there is no requirement to assume that economic processes evident to date will no longer occur, or that observed relationships within the economy which affect land markets directly and indirectly will no longer have those effects.

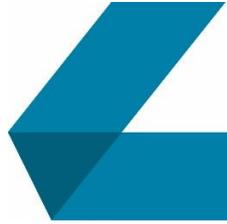
Economic approach – Normative and Positive

At the core of the MBIE guidance is a *Normative Economic* expression. In economic theory, this *Normative Economic* position reflects a subjective judgement about “*what ought to be*”, rather than “*what is likely*” according to analysis or modelling of how the economy functions, or recognition of the historical relationships between urban growth and changes in land values which underpin urban growth and development. For the NPS-UDC, the basis appears to be that housing prices are too high/unaffordable, and that the future position should be different.

The principal alternative to this is a *Positive Economic* perspective, which recognises how urban economies function. This uses assessment and projections to reflect historic trends and known cause-and-effect behavioural relationships. The approach is applied to explain economic phenomena, and to model possible market outcomes.

The *Normative Economic* approach runs counter to the very broad range of economic studies looking to the present or future in New Zealand, where the basic approach is the *Positive Economic* one - whether from Reserve Bank and Treasury modelling, Government entities, private banks, councils, universities, crown agencies or private economic research institutions.

Hence there is an apparent contradiction, where the *Normative Economic* approach is implicit if “*current feasibility*” is limited to today’s costs and prices, but at the same time the NPS-UDC requires assessment into the long term future (30+ years).



c. No Formal Technical Assessment for the Locked Market position

It is understood that there has been no formal technical assessment prepared by MBIE or MfE to support the interpretation that the NPS-UDC feasibility provisions (PB3) should apply the *Locked Market* position, and be according to today's prices only.

It is also understood that the preparation of the NPS-UDC drew heavily from the findings of the Auckland IHP on the Auckland Unitary Plan. However, the IHP recommendations and findings did not provide a technical assessment for using the today's prices approach.

The s32 report for the NPS-UDC appears to not support the *Locked Market* position. It specifically accepted that market feasibility is not static - "*we also acknowledge that market feasibility will change over time.*" Section 8.2.2.1 (p 74). That finding agrees with the *Economy-based* position.

Similarly, there has been no formal technical assessment of the PC3 requirement for a council to provide more development capacity if the capacity assessment does not show sufficient capacity based on "*current feasibility*".

d. Housing Affordability

The MBIE guidance that there should be no allowance for price change appears to relate to concerns about housing affordability, such that no further increase in housing prices may be contemplated.

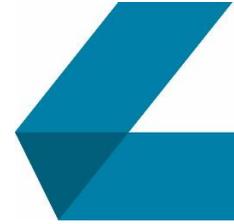
The negative effects of very strong housing price growth in the period to 2016 are well recognised. However, a key driver of improving affordability is to reduce the land component of dwelling prices, especially through urban intensification (less land per dwelling) - which is itself enhanced by increases in real land values flowing through to improve the feasibility of that intensification.

Further, the capacity modelling shows that improvements in development feasibility do not depend on substantial or even material increases in dwelling prices. This is because feasibility improves primarily as a result of different growth rates in dwelling prices compared with construction costs. The modelling analysis consistently shows that feasibility improves over time with only minor changes in prices, in real terms (for example, a difference of 1.0% in the rate of price growth and construction cost growth would see a gain of around 1% in net return from new dwelling construction).

e. NPS-UDC alignment with urban spatial economics

Further issues relate to the effectiveness of the NPS-UDC as an economic tool, and how well its provisions - especially the required actions to provide more capacity - accurately capture how urban economies function. The NPS-UDC relies heavily on a single route to affect land and housing markets by adding more development capacity (additional land or up-zoning).

Urban economies are dynamic spatial entities. Their key influences on development feasibility vary over time and by location. The feasibility assessment is the basis for estimating sufficiency in the NPS-UDC. It is therefore very important that the feasibility assessment is able to take into account how urban spatial economies work – notably, how the core economic processes which drive feasibility have effect across locations and over time. This is because feasible development is driven by the opportunity to intensify



through adding improvements to greenfield land or by increasing the improvements on already developed land, a process augmented by the ageing of the existing dwelling estate.

As the growth in a city sees development opportunity progressively taken up, other locations not-yet-(re)developed then become the most feasible to intensify. One result is that the geographic focus of feasible opportunity and growth progressively changes. Another is that the feasibility of (re)developing individual parcels changes over time, and is influenced especially by its location relative to already developed areas, relative to the CBD, and relative to the urban edge. The feasibility assessment needs to recognise this, especially at a city-wide level over a long time period. This highlights the differences between the *Locked Market* and *Economy-based* approaches.

Unless the assessment of capacity is able to take account of how feasibility changes across locations and over time, then it is likely to understate the potential for feasible development, and may trigger a response to provide for more capacity which is simply unnecessary.

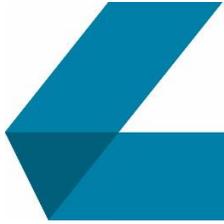
This makes it important to consider how cities form and function, how the benefits of co-location vary over time and space, and what this means for demand and development feasibility. Land and property values are key influences on urban form and land use patterns, and are core drivers of development feasibility. Values, and associated development feasibility, change progressively over time and by location as cities grow, in a generally predictable manner. For the city as a whole, land values grow as the city grows, and generally increase in real terms (ie ahead of inflation). Cities grow incrementally over time, as a combination of greenfield development at the outer edge - non-urban land becomes urbanised - and intensification of already urbanised land, whose potential uses and value increase as the total urban economy grows.

The common pattern is for city-wide value gain to be consistent with overall growth, but for potential value gains for individual land parcels to occur through infrequent quantum shifts – initially the addition of a dwelling to previously non-urban land, and some decades later through the opportunity to intensify by adding another dwelling or replacing one dwelling with 2+ dwellings⁵. Once that development opportunity is taken up, however, there is then little economic incentive for further intensification until those most recent improvements in turn get nearer to the end of their economic life.

Because of this, urban development and redevelopment tends to occur as a sequence of moving fronts, where once (further) development has occurred the opportunity moves on to the next land parcels. This sees development feasibility move progressively outward from the centre as urban edge land is taken up, and the next candidate areas move into the “feasible” band.

This is unremarkable, but it means that the amount and location of feasible capacity shifts progressively over time. Within any time period the amount of change is limited by the volume of growth in the market. It also means that within any time period – for example, 3-5 years - market conditions change as available land is used up. The overall market is larger than it was 3-5 years ago, and new areas are experiencing the uplift in value as greenfield and brownfield development advances.

⁵ For simplicity, we focus on residential, but similar trends and drivers affect business land development and intensification.



This is why assessing development feasibility over a 30+ year period on the basis of current market conditions is fraught. In particular, it means that feasibility assessment under the *Locked Market* position is unable to take into account the value uplifts associated with urban growth, which are critical drivers of progressive improvements in feasibility over time, and across locations.

f. No “fail-safe” in the NPS-UDC Structure

One consequence of the NPS-UDC’s dependence on supply-side responses by councils to meet both sufficiency and feasibility objectives is that there appears to be no effective “fail-safe” mechanism. This would be required if the assessments show that increasing development capacity (by re-zoning or up-zoning) is not able to provide sufficient feasible capacity. If the initial assessment does not show sufficient feasible capacity and the required addition of more development capacity (under PC3) still does not show sufficient capacity, then a council may possibly become caught in an open-ended loop.

The structure of the NPS-UDC could mean that land which is less and less feasible for development currently has to be progressively added to the district’s plan-enabled capacity in the search for sufficient feasible capacity – the solution to insufficient capacity being to add more capacity. A council may be simply unable to show sufficient capacity based on “current feasibility”, irrespective of the amount of plan-enabled capacity.

Future Potential Use of Non-feasible land

The *Locked Market* approach raises the question of the potential uses for the land which is initially intended for urbanisation - most existing plans identify areas for future growth - but which the assessment shows is not feasible. Since prices are assumed to not change over 30 years, that land on which development is not yet feasible is effectively deemed to be “surplus to requirements” for urban growth.

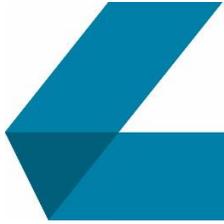
Opportunity for development outside planned growth areas

If a district plan shows sufficient plan-enabled capacity but insufficient feasible capacity (*Locked Market* position), then that apparent gap in supply offers opportunity for private initiatives (through private plan changes, structure plans) to seek consent for urban development in locations which are not contemplated in the plan. A core part of an appellant’s case could be that the council cannot show sufficient feasible capacity, while proponents would need only to assert the feasibility of their proposed development.

Uncertainty

There is substantial risk to councils from the uncertainty of feasibility. Simply, aspects of planning such as the scale of population, household and business growth, the capacity requirements, plan-enabled capacity and land value effects are well researched and are reasonably predictable (within the limits of looking to the future).

However, the feasibility of development faces greater degrees of uncertainty. It is based on estimated sale prices and costs at a point in time, in the context of prices and costs which characteristically change through time. Much of the uncertainty relates to the combined effects of time and location, as distinct from whether a development will ever be feasible. Research to date shows that feasibility estimates may show significant



differences in capacity as a result of short term price fluctuations, whereas allowance for the underlying longer term trends shows limited fluctuation.

The *Locked Market* position places high reliance that today's prices and costs do accurately represent the most likely longer term situation, whereas the *Economy-based* position offers greater ability to research and reflect the underlying economic trends.

Cost Implications

There are risks from potential over-provision of plan-enabled capacity in the quest for sufficient feasible capacity, with significant negative outcomes possible from inefficient urban growth and form, and high infrastructure and other development costs.

Urbanisation is costly. As well as higher development costs from inefficient growth paths, poor urban form outcomes generally mean long term higher costs for households and businesses, in living, operating and transport costs.

Such risks mean it is important for the NPS-UDC to be well aligned with how urban spatial economies function and change over time, and with efficient urban form outcomes – especially because of the PC3 requirement (PC3) to provide more capacity. Poor alignment is likely to result in urban development being more costly than necessary, and less sustainable.

Findings

1. The NPS-UDC as an economic tool will have major influence on urban planning and urban growth outcomes throughout New Zealand.
2. The NPS-UDC focuses on the economics of the land market, and requires councils to take a direct role in urban markets, by providing more development capacity - when key economic indicators trigger a response.
3. The review of the NPS-UDC shows that in order to be effective, and not produce adverse outcomes, it needs to be well aligned with how urban economies function and deliver development capacity.
4. The current guidance is that capacity must be assessed according to “current feasibility” as of today's costs and prices, as per the *Locked Market* position.
5. The review of urban economies, and development feasibility indicates the *Locked Market* approach is likely to substantially understate feasible capacity, especially medium and long term sufficiency.
6. Analysis of feasibility for high growth councils in the *Locked Market* approach indicates insufficient capacity for growth. Analysis using the *Economy-based* approach shows much more feasible capacity, and greater sufficiency.
7. The NPS-UDC assumes that more capacity (under PC3) will *per se* deliver more feasible capacity.
8. The requirements under PC3 to provide more capacity indicates that high (and medium) growth councils are likely to have to provide additional capacity, in excess of likely urban growth requirements over the next 30+ years, in less efficient locations.

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9. The clear misalignment between basic urban economics, and adherence to the *Locked Market* position can be expected to result in adverse growth outcomes.
 10. We consider it would be very difficult for a council to defend in a hearing the *Locked Market* position as a key assumption or basis for a district or regional plan.

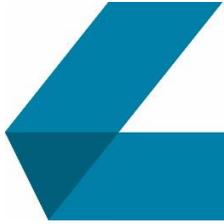
There are sound reasons, from an economic perspective, to adopt the *Economy-based* approach for feasibility assessment through the NPS-UDC, and to not apply the *Locked Market* approach.

Conclusions

1. There are both conceptual and practical difficulties with the Locked Market position as a basis for assessing development feasibility.
2. It is highly unlikely that assessment based on the *Locked Market* position can provide sound estimates of long term feasible capacity, or sufficiency.
3. It is highly likely that an assessment using the *Locked Market* position will substantially understate the sufficiency of capacity for growth, particularly in the medium and long terms.
4. The combination of the *Locked Market* position's understatement of capacity, with requirements under PC3, indicates considerable potential for poor outcomes in terms of capacity, urban form and efficiency, and housing affordability.

Recommendations

1. That assessment of "current feasibility" be applied to the short term assessment of capacity only; and
2. That assessment of feasibility for medium term and long term capacity be based on the likely or estimated future feasibility, which is able to account of likely market changes as economies expand, and is consistent with the definition of feasibility in the NPS-UDC, based on "*taking into account the current likely costs, revenue and yield of developing.*"



1 Introduction

The National Policy Statement on Urban Development Capacity (NPS-UDC) was enacted in December 2016. The NPS has provisions which require councils to assess the sufficiency of capacity for housing and business activity. Sufficiency is to be assessed in terms of feasible capacity, with the test in the NPS-UDC set out as “*current feasibility*” in PB3(c)⁶ and the guidance is that this should be done using “*current prices*”. If there is not sufficient capacity which is feasible, the NPS-UDC requires councils to provide for additional development capacity.

Councils are required to prepare a Housing Development Capacity Assessment (HDCA) and a Business Development Capacity Assessment (BDCA), which demonstrate there is sufficient capacity for projected housing and business growth. The HDCA and BDCA will inform a Future Development Strategy (FDS).

High growth councils are completing their first Housing and Business Development Capacity Assessments, including assessment of whether there is sufficient feasible capacity to meet demand over the next 30+⁷ years. Councils need to establish that there is sufficient feasible housing capacity for projected population growth in the long term (30 years +/- 15%), as well as in the short (3 years) and medium terms (10 years). These council reports are being assessed by MBIE and MfE.

The Ministry of Business Innovation and Employment (MBIE) is administering the implementation of the NPS-UDC, and is responsible for assessing councils’ compliance, particularly in relation to the sufficiency of capacity for growth, and associated indicators of the efficiency of land and housing markets.

The guidance provided by MBIE is that assessment of feasibility is to be based on today’s market conditions, and that feasible capacity needs to be sufficient for the next 30+ years of growth. This implies that land markets be assumed to remain unchanged throughout the next 30+ years (a “nil change” or “*Locked Market*” position).

Several of the high growth councils which have prepared the HDCA and BDCA reports have expressed concern to MBIE about how the terminology of the NPS-UDC relating to feasibility of capacity is to be interpreted and applied. The core concerns are that if feasibility is able to be assessed only on the basis of today’s market conditions, then the assessments will understate the likely development capacity. Assessment of feasible capacity which allows for market conditions to change over time rather than remain frozen, in line with economic processes of urban growth, show that substantially more capacity will be feasible into the medium and long terms than is shown by assessment based on current market conditions only.

Under Policy PC3 of the NPS-UDC, councils are required to respond to a sufficiency shortfall by providing for additional development capacity within a 12-month time-frame. If they are required to comply based on a capacity assessment which understates capacity because of that “nil change” assumption, then they

⁶ The NPS-UDC Interpretation is “*Feasible* means that development is commercially viable, taking into account the current likely costs, revenue and yield of developing; and *feasibility* has a corresponding meaning.” (p6)

⁷ The requirement is for 30 years +/- 15%, which translates to 34.5 years, or effectively 35 years.



would be required to undertake costly and unnecessary actions to provide substantially more development capacity, in more locations, than is indicated by their long term growth outlook.

This could see councils being required to provide for substantially more development capacity in more locations especially in greenfield areas beyond the urban edge, with attendant responsibilities to provide for infrastructure. There is concern about high, and unnecessary, financial costs from funding infrastructure over much more extensive areas of land than the growth will require, or be able to pay for.

Adding large areas of land for development as required under PC3 does little to improve feasible capacity, and is likely to detract from the feasibility of intensification and brownfield redevelopment. It would add to the cost of urbanising greenfield areas, especially by triggering large-scale infrastructure liabilities for councils and central government.

Negative effects on housing affordability may arise from reduced opportunity for urban intensification to lower land costs per dwelling and increased costs of infrastructure for greenfield growth, together with higher whole of life travel and other costs for households because of less efficient urban form outcomes.

Such outcomes risk undermining councils' urban growth objectives, especially for urban intensification and more compact and efficient urban form. There are related concerns about councils' ability to support a district plan based on the current feasibility position, particularly if called upon to defend - in a council or Environment Court hearing – a position that there will be no change in markets throughout the next 30+ years, despite 30+ years of population and business growth.

The “nil change” position is not supported by the evidence base from urban economic theory and research, which holds that the feasibility of development improves over time, as economies expand, cities grow and existing property estates age and depreciate. The capacity analysis which allows for these established market trends and processes to continue into the future (an “*Economy based*” position), indicates there will be much greater sufficiency, and less need to provide for additional capacity.

The *Locked Market* position that there will be nil change in dwelling prices or costs has attendant assumptions that market conditions will not change over the next 30+ years, and as a consequence suggests that the core urban economic processes evident to date will cease to have effect.

1.1 Objective

This paper examines the NPS-UDC provisions on current feasibility, within the overall structure of the NPS.

To do this, it considers from an economic perspective the nature of the NPS-UDC, especially its structure and the underlying rationale, and how these relate to the core drivers and processes in New Zealand's urban economies. It examines the role and effects of the NPS-UDC provisions on feasibility, and the related requirements for councils to provide additional development capacity, the expected effects of these on urban economies and growth outcomes, and some key implications for urban and district planning.



The particular focus is on two critical provisions of the NPS-UDC (PB3 and PC3) which in combination have potential to significantly impact district plans, and the councils' required FDS reports.

It compares the implications of the “**Locked Market**” position within a “normative economics” paradigm, with the “**Economy-based**” approach within a “positive economics” paradigm where observed processes and patterns in urban economies are assumed to continue into the future.

1.2 NPS-UDC Key Provisions

The NPS-UDC has two critical provisions, which when combined have significant implications for city and district plans, and for the councils' required FDS reports.

The first is the requirement under Policy PB3 to assess the sufficiency of feasible capacity.

The second is the required response under Policy PC3 if the sufficiency assessment does not show sufficient feasible capacity to provide for additional development capacity.

1.2.1 Sufficiency Assessment

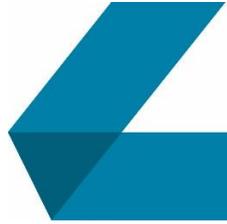
The sufficiency assessment is required under Policy PB3, which requires councils to take into account several matters:

1. opportunities for development (PB3(a) or plan-enabled capacity);
2. the “current feasibility of development capacity” (PB3(c));
3. the past and estimated future rate of uptake of capacity (PB3(d));
4. the market's response to planning decisions (PB3(e));
5. the availability of infrastructure (PB3(b)).

1.2.2 Current Feasibility

To date, the guidance is that the term “*current feasibility*” must be interpreted as being based on today's land and property prices only, at a selected point in time which is considered to represent “*current*”.

The guidance is also that the assessment of feasible capacity is not able to take into account any allowance for prices or costs to change over time.



1.2.3 Provide for Development Capacity

Under PC3, councils are required to respond to any shortfall in sufficiency by “(a) providing further development capacity” and “(b) enabling development⁸”. A response is required to be initiated within 12 months.

1.2.4 Guidance

The guidance on the NPS-UDC is that the assessment of feasible capacity is to be based on current (today’s) prices and costs, and is not able to take into account allowance for prices or costs to change over time⁹.

*Assess how much development capacity is **commercially feasible**. This should produce an estimate of the number of dwellings feasible in **current market conditions**..*

1.3 Feasibility Assessment

The feasibility of development is commonly assessed by direct comparison of the costs of development (dwelling construction, services, land, etc) with the potential return (dwelling sale price). If there is sufficient margin between sale price and costs, then a development is considered (commercially) feasible.

Dwelling sale prices, construction costs, land values and services costs vary over time. They do not vary at the same rate. The feasibility calculations are sensitive to quite small annual shifts in prices and costs. This means that the feasibility of individual developments will also vary over time.

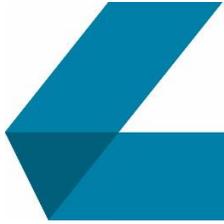
For this reason, selecting a single point in time for the feasibility assessment is able to present only a snapshot relating to that time. The feasibility assessment is not able to take account of changes to all or any of the returns and costs which may provide a different estimate of capacity.

This is the reason that the time point selected is highly significant.

Equally, an assumption that prices and costs will not change into the long term is also highly significant.

⁸ PC3: When the evidence base or monitoring obtained in accordance with policies PB1 to PB7 indicates that development capacity is not sufficient in any of the short, medium or long term, local authorities shall respond by: (a) Providing further development capacity; and (b) enabling development; in accordance with policies PA1, PC1 or PC2, and PC4. A response shall be initiated within 12 months.

⁹ Ministry for the Environment. 2018. National Policy Statement on Urban Development Capacity: *Summary evaluation report of Housing and Business Development Capacity Assessments for high-growth urban areas*. Wellington: July 2018; p10. – emphasis/bolding as per MfE text)



1.4 Initial Findings

Several high growth councils have reported¹⁰ or will be reporting¹¹ to MBIE during 2018 on the sufficiency of their capacity for growth. Most have identified that if the *Locked Market* assumption is applied, then there is not sufficient feasible capacity, especially in the long term (30+ years).

However, the common finding is that there is sufficient capacity shown if the assessment includes allowance for market conditions to change through time, as urban economies grow (*Economy-based* approach).

1.5 Possible Implications

If the assessments are to be interpreted according to current guidance that the *Locked Market* position should be applied, then that would show some high growth councils do not comply with the NPS-UDC.

The practical issue is that if a council is deemed to not comply with the NPS-UDC, then the required action is to provide more development capacity.

If a council does otherwise comply except for the *Locked Market* interpretation of “*current feasibility*” then the risk is that additional development capacity which must be provided will be substantially in excess of that required for future growth over the next 30 years, even though plan-enabled capacity is well sufficient. This is especially where the additional plan-enabled capacity provided may in any case not satisfy the MBIE feasibility requirements, if it too is deemed to be not yet feasible under the *Locked Market* assumption.

Hence, councils’ concerns that providing substantially more plan-enabled capacity than anticipated growth may require is likely to incur significant direct costs for councils, especially in relation to infrastructure. It may also result in growth outcomes which are not consistent with growth strategies or objectives for efficiency and sustainability.

The substantially different outcomes in the sufficiency assessment between the *Locked Market* and the *Economy-based* positions, and the major differences in the required actions by councils, is the reason for the strong focus on the *Locked Market* position which is contained in the guidance on the NPS-UDC.

1.6 Report Structure

This Report is structured into four more sections, as follows:

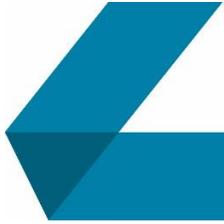
- Section 2 considers the context for the NPS-UDC

¹⁰ Auckland Council; Hamilton City and Waikato District and Waipa District councils (Future Proof Partners); Queenstown Lakes District Council; Tauranga City and Western Bay of Plenty District councils (SmartGrowth) Christchurch City and Waimakariri District and Selwyn District councils (Greater Christchurch).

¹¹ Whangarei District Council; New Plymouth City Council.



- Section 3 sets out the key issues
- Section 4 examines how urban economies function, and the implications for NPS-UDC's feasibility assessment
- Section 5 sets out some key implications



2 Context

2.1 Urban Growth and Housing

The context for the NPS-UDC is reasonably well understood. New Zealand is facing major challenges in housing, with issues around the supply of new housing and construction capacity, strong price growth (2000-2016), high housing prices and associated widespread concerns about housing affordability for both renting and ownership, and significant decreases in the levels of dwelling ownership observed since 1996.

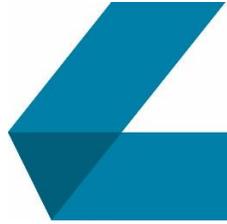
Responses to date include the NPS-UDC itself, amendments to the RMA, specific action through the creation of Special Housing areas (SHAs) and the KiwiBuild initiative. Common elements include accelerating processes around urban growth (including plan provisions), and objectives to improve housing affordability and seek higher levels of dwelling ownership.

These issues are most obvious in Auckland, by far the biggest urban economy, which has had to cater for the largest share of population growth for the last 100 years. It will need to do so into the long term future. One effect of the sustained growth is that the Auckland urban economy has become progressively more differentiated from the other urban economies including Wellington, Christchurch and Hamilton as the next largest urban centres, because it has had to cater for a major share of total national growth.

Auckland's seven local authorities were amalgamated in 2010, and the new Unitary Plan was under development from then until its adoption in 2016. Auckland and New Zealand had seen rapid growth in housing prices since 2000, which led in turn to a significant shift in the residential property market as land values outstripped improvement values, altering the economics of new residential development. At the same time, the region's residential construction sector lost considerable capacity following the GFC, and new dwelling construction rates halved. The sector began recovery from about 2012 but from 2013 there was very rapid growth in inward migration, which saw Auckland's population growth rate double, with more than 120,000 migrants added to the natural increase over the 2013 to 2016 period. Quite relaxed financial conditions, in combination with strong demand growth and limited supply of new dwellings, and a liberal regime allowing overseas investment in property, all influenced the strong growth in housing prices observed through to 2016.

2.2 Auckland Unitary Plan's new focus on the feasibility of urban development

The Auckland Unitary Plan hearings were held in this environment of high housing prices, constrained dwelling supply and obsolete legacy District plans. A core objective of the RPS and Unitary Plan was to provide for sufficient capacity for housing and business growth by updating and unifying the legacy District plans. The Unitary Plan sought for 60% to 70% of additional capacity to be provided within the existing metropolitan urban area, primarily through intensification including re-development of already urbanised land. This meant there was considerable focus on both the amount of capacity enabled by the Plan

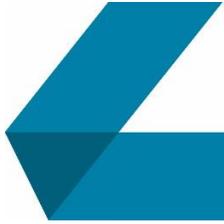


provisions (“plan-enabled capacity”) and on the amount of that capacity which it was feasible to develop (“feasible capacity”). This was because the feasibility of brownfield redevelopment differed significantly from that of greenfield development.

Considerable effort was given to assessing plan-enabled and feasible intensification and brownfield capacity, as well as greenfield capacity beyond the existing urban edge. There was research into both capacity which was currently feasible (as at \$2016 prices) and that which would become feasible in the future as the economy continued to grow and the observed patterns of change in the land market progressively came into effect. In the event, the IHP adopted a conservative view and assessed housing capacity according to what was plan-enabled and currently feasible only, with a focus on the next **7 years**.

The closer attention in the AUP hearings to the economic processes of urban systems and effects on residential development and land use change, provided some learnings and material for the subsequent drafting of the NPS-UDC.

Nevertheless, some other matters were not fully picked up by the IHP, nor subsequently in the preparation of the NPS-UDC. These were particularly with regard to the dynamics of markets and urban spatial economies, and how these dynamics affect the housing market over time and by location. Similarly, they did not directly address the economics of the transition from rural (non-urban) land to urban land at the city edge, especially the effects of urban limits.



3 Key Issues

The NPS-UDC was enacted in December 2016, to help ensure both that urban economies provide sufficient capacity for future growth in housing and business, and at the same time to improve the affordability of housing.

The knowledge acquired as the high growth councils have prepared their HDCA and BDCA Reports shows that there are key issues relating to the structure of the NPS-UDC, how it has been interpreted and applied to date. These issues will affect district plan provisions and future urban growth and form outcomes.

3.1 NPS-UDC Purpose

The NPS-UDC is intended to be a core economic tool for achieving sufficient and efficient capacity for growth in our urban economies. Its focus is on the economics of the land and housing markets, specific assessment, and requirements for action by councils to provide growth capacity.

It is intended to have effect by requiring councils to take a direct role and deliberately step in – as a response to their economic indicators - so as to influence urban housing markets by ensuring there is feasible capacity. Such a role is much more direct than the common practice to date of providing adequate plan-enabled capacity and relying on the functioning of (mostly) commercial processes to convert plan-enabled opportunity into dwellings or business premises “on the ground”.

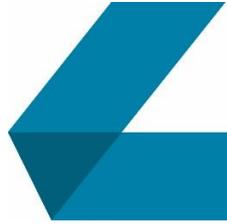
That structure has added a substantial extra layer to urban planning. It requires councils to not only explicitly take into account the economics of urban development, but to then take significant actions - based on their assessments of how efficiently the economy overall and land markets in particular are functioning now, and are likely to function in the future.

A better understanding of how economies function is an important positive advance for urban planning.

Nevertheless, the requirements for councils to take actions mean it is also essential that their economic assessments are soundly based and accurate. This requires strong understanding of how urban economies function, and how core processes are likely to affect land markets and future urban development.

The requirements are equally strong for good methodologies and accurate information from councils to comply with the NPS-UDC requirements, and for MBIE in its assessments of the councils’ reporting.

A key matter is that councils are required to take action now in anticipation of how markets are expected to be functioning within their economy up to 30+ years from now. Moreover, the 30+ year time frame means that any required actions are likely to be relatively large scale, and apply to substantial areas of land.



3.2 NPS-UDC Structure

The **structure** of the NPS-UDC is highly significant. It requires detailed assessment of plan-enabled capacity, and of the feasibility of that plan-enabled capacity. The base position of the NPS-UDC is that capacity must be provided for 30+ years' of growth, and that providing for additional development capacity into the long term is the core mechanism for achieving efficient and sustainable urban economies.

As a consequence, the NPS-UDC is structured so that providing additional capacity is the primary and default response (under PC3) to an assessment that shows an economy does not have sufficient feasible capacity.

The NPS does consider other matters such as the efficiency of urban form and appropriate location for growth, though only in generic terms. It also has requirements to monitor the efficiency of the housing and land markets, to guide responses in the form of providing for additional development capacity.

3.3 NPS-UDC Rationale and Assumptions

Important aspects of the underlying rationale of the NPS-UDC are evident in this structure. In particular, it relies on the effects of supply-side responses on the land and housing markets, to by themselves produce both sufficiency of capacity and the feasibility of that capacity.

The underlying assumption is that providing additional plan-enabled capacity must therefore also improve the feasibility of new capacity. The apparent rationale is that by increasing land supply, the operation of commercial markets will reduce the price of (rural) land to the point where development becomes feasible.

One inherent difficulty with this assumption is that adding more plan-enabled capacity will not necessarily increase the amount of feasible capacity, and it may have no effect at all on the feasibility of development assessed in today's prices.

This is because the price of rural land – which is potentially affected by providing for additional land supply - has a limited effect on development feasibility. The major drivers of land values and development feasibility include infrastructure and other costs which are not directly affected by greater competition among potential sellers of rural land. Peri-urban land values are strongly influenced by demand for rural lifestyle activity, which confers substantially higher values on land than do farming and other rural activities.

Moreover, demand for housing emerges over time as markets grow. The demand and supply conditions which will affect the feasibility of the development in 3-5 years' time is not yet evident.

3.4 NPS-UDC ‘Normative Economic’

The NPS-UDC terminology on current feasibility and the guidance that this is today’s prices and costs is a *Normative Economic*¹² expression - that housing prices are too high/unaffordable, and that the future position should be different. This is a subjective judgement about “*what ought to be*”, as distinct from an assessment based on analysis or modelling of how the economy functions. As a consequence, this *Normative Economic* perspective by default does not acknowledge how the (urban) economy functions, and it does not recognise the historic relationships between urban growth and consequent changes in land values which give rise to land use change and urban (re)development.

The more general implication of the *Locked Market* position is that the existing economy will no longer function in the manner that it has functioned over the decades to date.

The feasibility analysis undertaken by councils and M.E which applies the *Economy-based* approach represents a *Positive Economic*¹³ perspective. That recognises how urban economies function, and reflects both historic trends and known cause-and-effect behavioural relationships to explain economic phenomena, and to model the market outcomes that could occur.

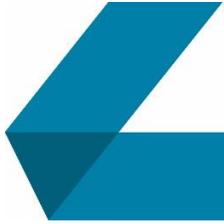
The *Normative Economic* approach would imply that councils have levers in their tool box of policy options that would allow them to change the key functions of the economy – that is, some policy change that can freeze depreciation, growth, technology change etc. This is because the assumption of *Locked Market* has consequent assumptions that urban economies will not increase in size, or change, that infrastructure will not age, technology change will not have impact, the existing property estate will not age or depreciate, there will be no demographic change, or demand growth, and so on. Those seem to be the only circumstances in which the housing and land markets might be expected to show no change or minimal change.

Alternatively, this may occur if population growth and economic growth simply ceased, and in that no-growth situation no other changes in the economy arose in response.

Such assumptions run counter to the very broad range of economic studies looking to the present or future in New Zealand, where the basic approach is the *Positive Economic* one - whether from Reserve Bank and Treasury modelling, Government entities, private banks, councils, universities, crown agencies or private economic research institutions. At the heart of these models is the suite of historic facts and knowledge about how the economy functions which is very difficult to reasonably ignore, where economists focus on facts and cause-and-effect behavioural relationships to explain economic phenomena and anticipate future outcomes, rather than seeking to impose the normative wishes of the community or government.

¹² “Normative economics (as opposed to positive economics) is a part of economics that expresses value or normative judgments about economic fairness or what the outcome of the economy or goals of public policy ought to be.” https://en.wikipedia.org/wiki/Normative_economics

¹³ “Positive economics (as opposed to normative economics) is the branch of economics that concerns the description and explanation of economic phenomena. It focuses on facts and cause-and-effect behavioral relationships and includes the development and testing of economics theories.” https://en.wikipedia.org/wiki/Positive_economics



A very important implication is that the *Normative Economic* approach needs to be sustained from an economic perspective, while at the same time the NPS-UDC also requires assessment into the long term future (30+ years) of economic patterns and processes which are well understood and well documented, and which generate change in the very attributes which the *Locked Market* position seeks to hold frozen.

3.5 NPS-UDC Technical Assessment

Another issue is the lack of technical assessment to support either the application of the *Locked Market* position, or the single response to a finding of insufficient capacity. There appears to be no formal documentation of technical assessment relating to these NPS-UDC provisions on feasible capacity (PB3) and the requirement for councils to provide additional development capacity (PC3). It is understood that the preparation of the NPS-UDC drew heavily from the findings of the Auckland IHP.

3.5.1 NPS-UDC s32 Report

The cost and benefit assessment / s32 report which was undertaken for the NPS-UDC did identify important aspects of urban processes and urban form. <http://www.mfe.govt.nz/publications/towns-and-cities/cost-benefit-analysis-policy-options-national-policy-statement-urban>

In particular, the s32 report does not support the *Locked Market* assumption. Rather, it acknowledged that market feasibility is not static:

“we also acknowledge that market feasibility will change over time.” Section 8.2.2.1, p 74.

That finding is directly counter to the *Locked Market* position, and it concurs with a core tenet of the *Economy-based* position.

The s32 report also acknowledged several fundamental drivers of urban economies, and key characteristics which directly impact development feasibility, and variations over time and by location, including how urban land values tend to increase with city size.

3.5.2 Auckland IHP Material

MBIE’s guidance sets out its reliance on the work done by the Auckland Independent Hearings Panel (IHP), as follows:

“...we consider that the wording of the NPS-UDC is unambiguous in requiring feasibility modelling to be done using current prices. This method was thoroughly tested during the IHP process for the AUP, and we based the approach set out in the NPS on this example. The NPS guidance on evidence and monitoring that has subsequently been developed clarifies this further. “Current” means “now”. (MBIE, email to Market Economics Ltd, 9 April 2018).

We have examined recommendations, material and reports prepared by the Auckland IHP, to identify relevant statements.

The Auckland IHP did state in regard to feasible supply:



“Feasible enabled residential capacity means the total quantum of development that appears commercially feasible to supply, given the opportunities enabled by the recommended Unitary Plan, current costs to undertake development, and current prices for dwellings. The modelling of this capacity at this stage is not capable of identifying the likely timing of supply.”¹⁴”

However, the IHP reporting did not include reference to any technical papers or formal assessment of the basis for its approach that feasibility is to be based only on current prices and costs.

Notably, beyond the reference to current costs and prices, the IHP recommendations simply did not address the matter of how feasibility will change over time. The IHP did not offer any recommendation or offer any rationale as to why feasibility would not change over time, and it made no recommendation on how to assess the effects of changes in viability over time. This is very important.

Substantial research was presented in evidence to the IHP about how development feasibility changes through time. That evidence detailed the underlying economics of city formation and urban growth, and the conceptual basis for urban development *per se*. It also examined the associated rationale which underpinned the feasibility analysis. The research covered how development feasibility in the Auckland market had changed over the 20 years to 2015, and could be expected to change in the future as the core economic processes driving Auckland’s residential land market continued to have effect into the future. The research presented detailed analysis of shifts in relative property values over the 1995-2015 period throughout Auckland, the effects on development feasibility, and how the future evolution and development of the housing market would continue to affect prices and values.

The analysis of the Auckland residential property market was based on some 444,650 residential assessments, across all locations, and across all years from 1995 to 2015. It showed very clearly there had been substantial and consistent patterns of change in land and property values, with land values increasing more than twice as quickly as improvement values. These consistent and long term shifts in value differentials underpinned the situation observed in the 2015 market, on which the IHP relied for their assessment.

Further, it is important to recognise that in adopting the feasibility model, the IHP adopted a methodology which is based on differences in property values as the drivers of development feasibility, and a conceptual base that shifts in property values and value differentials do drive feasibility and changes in feasibility.

3.5.3 IHP Focus on Short-Medium Term

Also, the Independent Hearing Panel’s recommendations reflected a flexible and short-medium term basis, rather than the full life of the Auckland Plan. In particular, it had a focus on the **medium term 7-year** outcomes, supported by ongoing monitoring of the market situation.

¹⁴ Report to Auckland Council - Overview of recommendations on the proposed Auckland Unitary Plan – IHP 22 July 2016
<http://temp.aucklandcouncil.govt.nz/EN/planspoliciesprojects/plansstrategies/unitaryplan/Documents/ihprecommendations/ihpoverviewofrecommendations.pdf>



The recommendations show a clearly flexible approach which recognises the uncertainties of current knowledge, referring to:

“...enabling sufficient capacity for projected long term demand (based on current information)”,

The IHP recommended that Council should ensure that:

“on an ongoing basis there is sufficient feasible enabled capacity to meet at least the next seven years demand”. (p9).

The IHP adopted the 7-year outcome as satisfying the RPS requirements, and concluded:

“The Panel has recommended in the regional policy statement that the Council be required to ensure on an ongoing basis there is sufficient feasible enabled capacity to meet at least the next seven years’ demand, and that the Council undertakes periodic market studies to test the extent to which this requirement is being met. It is also appropriate that this recommended regional policy statement requirement is used to test the sufficiency of the Panel’s recommended Unitary Plan.”

“As the amount of feasible enabled residential capacity exceeds expected demand over the next seven years, the Panel finds that its recommended Unitary Plan meets this proposed regional policy statement requirement.” (p 10)

The IHP also noted that it had adopted a deliberately conservative approach in providing for additional capacity, on the grounds that the costs of under-provision were likely to be greater than the costs of over-provision.

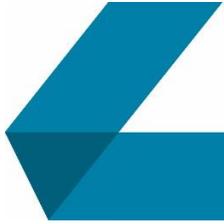
“The Panel considers the Unitary Plan should err toward over-enabling, as there is a high level of uncertainty in the estimates of demand and supply over the long term, and the costs to individuals and the community of under-enabling capacity are much more severe than those arising from over-enabling capacity.” (p7)

The IHP position, after careful consideration of a large amount of evidence, sets out a more flexible and shorter term basis for assessing feasibility than is implied in the current guidance on the NPS-UDC for a 30+ year horizon and only today’s costs.

3.6 Assessment of PC3 Response

At this time, there is no apparent technical assessment of the requirement under PC3 of the NPS-UDC to *“..respond by providing further development capacity...”*. We note that this requirement is for a significant action to be initiated by a council within 12 months.

To illustrate, if a council’s assessment were to show a capacity shortfall of 2,000 dwellings over the 30 year horizon, then that may require an area of 140-200 ha to be provided in the short term, and in addition to identified plan-enabled capacity. Changes of such scale may be significant.



Moreover, one direct implication of the *Locked Market* position is that land which would provide for plan-enabled capacity but which is not currently feasible becomes surplus to requirements for future urbanisation (since it is assumed to not become feasible to develop in the future either). The prospect of land areas in existing district plans being deemed no longer suitable for urbanisation (not feasible) while other areas may be added would suggest substantial change to urban growth strategies.

To our knowledge, there has been no technical assessment or documentation of potential outcomes of the combined effects of the Locked market position and implementation of the PC3 requirements. This is a substantial gap in the evidence base.

3.7 Feasibility and Housing Affordability

An important aspect of the *Normative Economic* approach appears to be the desire to hold housing prices to current levels.

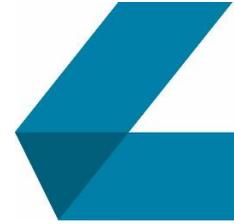
The feasibility modelling typically identifies what capacity is plan-enabled, and then tests what of that is feasible, currently or in the future. Since the calculation is a direct comparison of returns and costs, adjustment of either can indicate that a development is more feasible, or less feasible. Model inputs may be based on estimates to represent the current situation, and to allow for changes to occur over time.

There is some reluctance to allow for increases in housing prices in the feasibility modelling, if further capacity is seen to depend on some worsening of housing affordability over time. Certainly, the negative effects of the very substantial increases in dwelling prices in the period to 2016 are well documented, especially in respect of decreasing levels of dwelling ownership, and the loss of benefits which accrue from ownership for a substantial number of households.

However, a key driver of development feasibility and urban growth *per se* is the progressive increase in property values, especially land values, over time. As the gap grows between current property value and its potential value – when fully developed – so the feasibility of (re)development improves, until a point is reached where the value uplift from intensifying the land means that (re)development is feasible. For residential in greenfield situations this is usually by adding a dwelling to non-urban land, and in brownfield situations by adding more dwellings.

Growth in land values is thus an important driver of urban intensification and outward expansion. Real increases in property values, especially land, occur with urban growth, and such increase ahead of real costs progressively enhances the feasibility of new development and intensification. As experience overseas has shown¹⁵, commonly it is not until urban land values are sufficiently high that the more intensive options like apartments and terrace houses become feasible. There was considerable evidence presented to the Auckland IHP showing how the feasibility of redevelopment was strongly influenced by the difference in growth rates for land values (8.4% pa in Auckland over the 2000-2015 period) compared

¹⁵ Grattan Institute 2011



with improvement values (+3.5% pa) on residential properties, and how both increased much faster than construction costs (0.55% pa in real terms).

It is important to not assume that increases in development feasibility depend on substantial increases in dwelling prices, of the scale observed in the 2012 to 2016 period, for example, which was driven by a combination of exogenous and some endogenous factors. Assessment across major markets shows that feasibility improves over time with minor changes in prices, in real terms. For example, a difference of 1.0% in the rate of price growth and construction cost growth would see a gain of around 1% in net return from new dwelling construction. It is quite straightforward to recognise that substantial increases in the numbers of dwellings which can be feasibly built can arise from small annual changes within the relatively long time frames of the NPS-UDC, where returns in time surpass the (currently) standard 20% threshold. In this regard, there is considerable potential to reduce construction costs in real terms through achieving better economies of scale, and greater use of prefabrication¹⁶.

The same applies to greenfield feasibility, where there may be significant uplifts in dwelling prices on a quite location-specific basis. This occurs locally as the urban edge moves outward, even if there are low or nil price increases across an urban market as a whole. It is because the price which a new dwelling can sustain is higher if it is at the urban edge than if it is some distance away, and there may be significant differences between “*at the urban edge*” and “*near the urban edge*” prices, particularly for dwellings which have not yet been built. That difference may be the margin between feasible and not feasible. As the city expands, and previous development opportunity has been taken up, a location which is now “at the urban edge” or the now-best location, may command dwelling prices significantly above what it could achieve previously for a similar dwelling. Hence, (outward) growth is associated with changing feasibility over time. It also means that significant localised dwelling price increases may occur even where the city-wide price change is nil or very low. Given that such price change occurs over time and place, and because of the sheer volume of what may happen in a 3-decade time period, it would be rare for current property prices to be high enough that 30 years’ worth of growth would be feasible immediately¹⁷.

Urban intensification is commonly more of a step-wise process than a linear one. As land values rise - but before they pass the thresholds at which intensification is feasible - the highest returns are from developing high value standalone dwellings, rather than multiple attached dwellings on a site. This pattern has been evident in a number of New Zealand’s cities, as average dwelling sizes and values have increased, and detached dwellings account for the bulk of new builds. Plan provisions have commonly had a role in this, through limits on the extent of intensification possible. Such trends have run counter to objectives of improving housing affordability.

This means that some price growth is important if development feasibility is to improve over time. While price growth is part of changes in affordability, price is not the sole driver. Household income and accumulated wealth are other key influences on affordability, and if prices are growing but more slowly than incomes, then affordability may be improving. For example, in Auckland average household incomes

¹⁶ For example, the move by Westpac Bank (May 2018) to improve funding access for construction of prefabricated dwellings, and the estimate that this may reduce a dwelling construction cost by up to 15%.

¹⁷ and if that were the case, it is more likely to reflect a market imbalance where prices are too high.



rose by over 12% in 2017¹⁸ while housing prices did not move, which means housing affordability appears to have improved substantially. In any case, modelling does not drive prices in any way – it is simply a tool that may identify, among other things, the prices at which additional capacity is likely to be feasible.

A further key point is that intensification also enhances affordability, despite the apparent conflict with high land values. When more dwellings may be feasibly added to a parcel, then the land value per dwelling is reduced - a key part of improving housing affordability through delivering greater supply and at the same time limiting cost increases. To illustrate this, modelling in Auckland (undertaken for the AUP hearings) showed that intensification saw the land value component drop to 15-20% of new dwelling prices, whereas pre-redevelopment it had been around 70%¹⁹.

This makes it important that the *Economy-based* position which has allowance for future price change is not resisted simply because it is seen as being automatically contrary to affordability objectives, with the hope that adopting the *Locked Market* position will increase the prospect that feasible development may arise without any change in prices – for example, through the effects of increased competition among the suppliers of non-urban land. Assessment of the processes of land use change at the urban edge indicates that providing additional development capacity (including through PC3) can be expected to have little impact on housing prices. This is because the cost of non-urban land is a small component of final dwelling prices, and because prices for newly-urban or about-to-be-urban land are heavily influenced by the prices of existing urban land, rather than by the price of rural land.

A related risk is that the higher cost development outcomes associated with over-provision of land, less efficient supply of infrastructure, and higher living costs in less efficient locations will act to increase the costs of housing, rather than improve affordability.

3.8 Implications of NPS-UDC Provisions

There are other direct implications of the *Locked Market* position, and its combination with PC3 requirements.

3.8.1 Locked Market Position

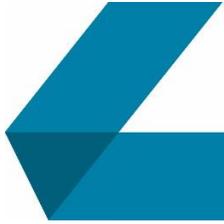
The apparent inconsistency between the *Locked Market* position and the s32 Report which recognises that feasibility will change over time, has been noted above. There are other implications.

To begin with, the *Locked Market* position should not be seen as simply avoiding the need to make a decision about the rate of growth and change in the market. Rather, the *Locked Market* position has a very firm assumption that the growth rate will be 0% for 30+ years.

Such an assumption would normally require a substantial technical basis to justify its use, especially given the sharp contrast with the patterns to date. The absence of any technical documentation to support the

¹⁸ Statistics NZ Household income and housing cost statistics: Year ended June 2017

¹⁹ The average across 332,964 feasible dwellings in the ACDC Maximum Dwellings scenario, 2016.



Locked Market position means there is to date no written rationale as to why that position should be preferred to an *Economy-based* position which allows for continuation of the core economic processes and patterns observed in our urban economies over the long term.

As already noted, the IHP adopted a position of current prices when it made its Recommendations to Auckland Council. However, the IHP focused on the short-medium term, and did not offer supporting documentation for its position, or advance a case that “current prices” would endure for 30 years.

Second, it is useful to consider the assumptions which are implicit in the *Locked Market* position. One implication is that a position that there will be no change in future prices or costs over 30+ years, carries with it that the capacity which is currently viable also represents the amount of capacity which will ever be viable. There would be no apparent basis for assuming that prices will not change over 30 years, but then changing that position to allow for change to occur subsequently over 60 or 90 years.

Equally, if there is to be no change in costs or prices into the long term future, then it must also be assumed that there have been no changes in the past – whether 10 years, 20 years or 30 years or more – for the estimates of current feasibility. The inconsistency with the extensive evidence base, that there has been substantial change in the housing and land markets throughout the last 30+ years, is very apparent.

Third, the high growth urban centres are by definition areas which are expected to undergo substantial growth and change into the long term. Given that changes in housing and land markets are reasonably well understood and the influences of growth and wider economic conditions are generally known, then the consequent assumption required to hold to the *Locked Market* position is that the anticipated growth and associated changes in all other areas of the economy will have no impact on either building costs or prices.

The broader implication – in the light of substantial evidence of how prices change as urban markets grow and evolve - is that adherence to the *Locked Market* position would require corresponding assumptions that urban economies will no longer function as they have up until the present.

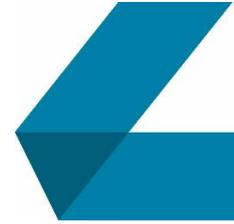
3.8.2 Economy-based Position

The *Economy-based* position does not have such assumptions. Rather, it allows for the established core economic processes which have been observed and studied will continue to have effect, in a manner which is generally consistent with the scale and timing of growth in an economy.

There is no requirement to assume that economic processes evident to date will no longer occur, or that observed relationships among different parts of the economy - which affect land markets directly and indirectly - will no longer have those effects.

3.8.3 No limit to PC3 requirements

The NPS-UDC structure depends on the effects of supply-side responses to provide for both sufficiency and feasibility objectives. There is no apparent “fail-safe” mechanism, to take effect where it is apparent that increasing development capacity is by itself not able to provide sufficient feasible capacity.



The risk - especially under the *Locked Market* position - is that if the sufficiency assessment does not show adequate feasible capacity and the required addition of more development capacity (under PC3) still does not show sufficient capacity, then a council may be caught in an open-ended loop. That is because the required response is to provide more development capacity.

The practical implication is that land which is already plan-enabled but is not yet feasible is likely to be close to the urban edge and be the most suitable for urbanisation, based on the council's assessment – call this the “1st tranche for development”.

The nature of urban growth suggests that developments in some parts of this 1st tranche will not yet be feasible, as demand for those locations is not yet strong enough.

If PC3 therefore requires additional development capacity, the next most suitable land for urbanisation is the obvious candidate area to be added - the “2nd tranche”. However, that 2nd tranche is likely to be less feasible than the land in the 1st tranche, especially where it is further from the urban edge and/or has less favourable characteristics than the first choice land.

If that 2nd tranche land also shows as being not feasible to develop, the required response under PC3 is to provide for additional development capacity. This “3rd tranche” even though the next most suitable land is itself less likely to be feasible than the 1st or 2nd tranches. And so on.

The practical outcome could be that land which is less and less feasible for development currently has to be added to the city's or district's development capacity in the search for sufficient feasible capacity - because development capacity must be added under PC3 until feasible capacity is sufficient.

The PC3 requirements to provide additional development capacity are apparently un-capped. In extreme situations there is potential for the PC3 requirement to flow through as very significant increases in development capacity and consequent expansion of the land areas identified for urban expansion.

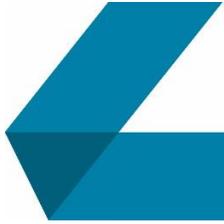
The obvious next question is what must a council do if the 1st, 2nd and subsequent tranches do not in total show sufficient feasible capacity. This may arise where land in the 1st tranche is actually closest to being feasible for development, but does not pass the threshold, and subsequent tranches are all less feasible. That situation would mean the NPS-UDC sufficiency requirements cannot be met, and the council cannot provide for additional development capacity.

3.8.4 Future Potential Use of Non-feasible land

The *Locked Market* approach also raises the important question of the potential uses for the land which is intended for urbanisation and has plan-enabled capacity which is not (yet) feasible.

The direct implication of having to provide for additional development capacity under PC3 is that some or all of the 1st tranche of land initially identified for urbanisation is deemed to not have feasible potential.

It is effectively surplus to requirements for urban growth, at least over the next 30+ years. Otherwise, it would simply be identified as suitable to accommodate future growth even if market conditions at present do not show that development is yet feasible.



Presumably a council will be required to signal an alternative, non-urban, use and indicate appropriate zoning for that land, even if it is otherwise the most suitable location for urban growth.

3.8.5 Risk to District Plans: opportunity for development outside planned growth areas

A further risk is that if a district or city plan shows there is sufficient plan-enabled capacity but cannot show sufficient feasible capacity (under the *Locked Market* position), then that apparent gap would provide opportunity for private initiatives - through plan changes, and/or consent applications - seeking to undertake urban development in locations which are not contemplated in the plan, or bring forward urbanisation earlier than currently intended.

This may be on the basis that a proposed development is considered by the proponents to be feasible. There would be no requirement for the proponents to demonstrate that their own feasibility assessment would be subject to the same *Locked Market* position as the council's own assessment would be, even though the council is unable to demonstrate sufficiency in the area contemplated in the plan.

An important consideration for councils is their requirement to provide for infrastructure to service such growth. The cost of infrastructure is high²⁰, and an important aspect of housing affordability is cost efficient delivery - especially to minimise financing costs and deadweight loss from depreciation where infrastructure has to be provided well ahead of final uptake.

We note that there were multiple developments proposed by private interests in areas around Auckland during the AUP hearings, including for rural residential and lifestyle properties.

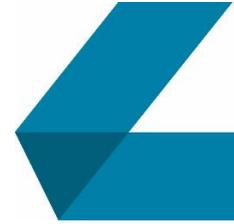
3.8.6 Uncertainty

There is considerable uncertainty around future economic conditions generally, and uncertainty around development feasibility is even higher.

Aspects such as the scale of population, household and business growth, the capacity requirements for growth, and how urban growth is likely to affect urban land values are well researched and are reasonably predictable (within the obvious limits associated with looking into the future). In the same way, the amount of plan-enabled capacity is reasonable for a given set of plan provisions applied to a defined land area.

Historically, urban growth has been provided for on the basis of making sure there is adequate plan-enabled capacity, with the underlying assumption that enough of that plan-enabled capacity will become feasible to develop for housing or business activity within the planning horizon. The location and scale of the plan-enabled capacity was based predominantly on observation of patterns to date, and assessment of the likely suitability of the land and its location for the zoned use. Importantly, the plan enabled capacity does not usually have a specific time element, a concept introduced as part of the feasibility assessment.

²⁰ In Auckland it is estimated to be in excess of \$140,000 per dwelling in greenfield areas



However, the feasibility of development is subject to much greater degrees of uncertainty. The additional uncertainty is because more elements are part of the feasibility assessment - both timing and location elements need to be included.

One implication is that the significance of any feasibility assessment is most relevant in the short term, and is progressively less relevant as the assessment gets closer to the planning horizon. For a long term assessment, the plan-enabled capacity is the more reliable indicator. That is likely to be based on the longer term fundamentals of economic growth and change, in the knowledge that the shorter term fluctuations and cycles - which have considerable influence on the feasibility assessment - are likely to affect timing and rates of growth toward the long term outcome.

Another is that this greater uncertainty needs to be recognised in applying feasibility assessment for the NPS-UDC. One obvious way to do this is to incorporate ranges around the values used in the feasibility assessment – for example, using +/- 25% in price and cost values, rather than a more conservative 10-15% range - and to consider a range of feasibility thresholds. The MBIE guidance model includes 20% return as the appropriate feasibility threshold, but a range from 10% upward is likely to be more appropriate to the inherent uncertainties.

3.8.7 Cost Implications

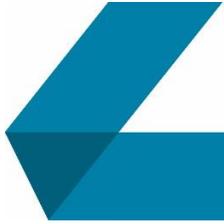
Urbanisation is a costly process, especially the provision of infrastructure. Both under-provision and over-provision of zoned and serviced land relative to demand growth may impose considerable unnecessary costs.

The effects of the *Locked Market* position and PC3 in combination can be expected to push toward over-providing plan-enabled capacity in the search for sufficient currently feasible capacity. There may be significant negative outcomes from this, directly through additional servicing costs and indirectly through inefficient urban growth paths and poor urban form outcomes.

The high cost of infrastructure means that provision before it is required, and consequent lags in uptake and cost recovery may add significantly to the final costs of housing and businesses. This is especially where development occurs across several fronts in parallel, and islands of development emerge instead of incremental outward growth which is a generally more efficient growth path. In addition to higher development costs, poor urban form outcomes (primarily from dispersed rather than compact form) generally mean long term higher costs for households and businesses, especially through living, operation and transport costs.

Such risks arise from the Locked Market – PC3 combination, and where the monitoring of market efficiency required by the NPS-UDC is not accurate and/or the measures applied are not adequate for the task.

These risks highlight the importance of the NPS-UDC – as an economic tool - being well aligned with how urban spatial economies function and change over time, and with efficient urban form outcomes.



4 Urban Spatial Economies

4.1 Scope

This section examines the context for the NPS-UDC, the economic structure in which the NPS-UDC is intended to have effect. It considers how urban spatial economies function, their core attributes, the economic processes which drive them, how these processes affect urban development (residential and business) across locations and over time, and how these relate to development feasibility, and to the NPS itself.

In order for the NPS-UDC to be effective and efficient, and contribute to its objectives, it is important that its practice – its application and interpretation by councils in particular – is based on sound understanding of how urban economies function. This applies especially to the ways in which core processes and patterns affect urban land and property markets, and development feasibility.

Simply, if the manner in which the NPS-UDC provisions are interpreted and applied does not accurately concord with how urban economies function, then poor and/or costly outcomes are likely. This concern applies especially to the structure of the NPS-UDC and with the *Locked Market* approach to assessing development feasibility.

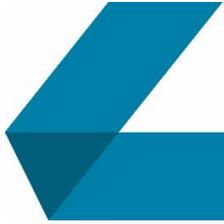
The NPS-UDC structure relies on the effects of supply-side responses by councils to affect land and housing markets, and to provide for both sufficiency of capacity and the feasibility of that capacity.

An obvious question is whether that single supply-side-led path in the NPS-UDC may be expected to by itself achieve those twin outcomes of sufficiency and feasibility, particularly when in combination with the *Locked Market* position.

Urban economies are dynamic spatial entities. They function and develop over time and in space. They are not simply homogeneous points on a map with uniform features and market conditions throughout, rather there are substantial differences in market conditions within urban economies which change over time. Urban economies typically grow incrementally (outward and upward) over time, and the effects of growth are cumulative – the situation in any location at any point in time is directly affected by what has occurred already, and by the fact that development to date has occurred sequentially with flow-on and feedback effects.

These urban dynamics and their spatial and temporal patterns are generally well understood, and this knowledge is applied in urban planning and the preparation of city and district plans.

Of critical importance for applying the NPS-UDC is that the key influences on development feasibility also vary over time and by location. This this needs to be well understood when assessing development feasibility, and the sufficiency of capacity, especially at a city-wide level over a long time period. This is a key reason for the high level of concern about the proposed application of the *Locked Market* approach, because it excludes from the calculation of sufficiency any consideration of these fundamental influences.



If the implementation of the NPS-UDC does not adequately recognise key urban economic processes and patterns - especially their influence on feasibility of development over time and across locations – then it is likely to undermine objectives for efficient and sustainable urban growth outcomes, and New Zealand’s urban development is likely to be more costly than is necessary, and less sustainable.

4.2 City Formation

The core economic processes which drive city formation and growth, and which determine how spatial economies function, are well documented.

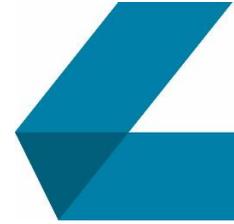
Towns and cities (central places) form because most aspects of economic and social activity derive benefit from co-location and proximity. Economic entities derive benefit from co-locating with other entities, and people and businesses group together to gain advantages of transactional efficiency, and economies of scale and scope. This geographic concentration also increases the opportunity for shared “non-market” services to viably support commercial and social activity, in turn making a central place more attractive as a place to locate.

These benefits of co-location underpin the formation of towns and cities across the world. The benefits generally increase with city size, because entities have access to more complementary and competing businesses, to infrastructure and to consumer markets; economies of scale and scope are greater and easier to achieve; and agglomeration benefits are enhanced as cities grow. Size and growth *per se* attracts more activity to co-locate and to gain the existing benefits, with growth then further enhancing those benefits²¹.

Over time, the drive to intensify activity in urban centres has been supported by technological advances, which allow higher densities, larger urban mass, and realisation of greater co-location benefits. Cities have been able to increase in size (population and business activity) by outward growth and by increasing their density and utilising land more intensively, especially by vertical (upward) expansion.

An important part of growth and urban intensification has been consequent gains from increases in property values, especially land values. This is mainly because the range of potential uses continues to increase, and the competition for land increases. This was recognised in the s32 report for the NPS-UDC. Land value is typically highest in a city centre and decreases with increasing distance from the centre, and increases in land value from urban growth mean there is consequent incentive for businesses and households to limit their land costs by occupying a smaller area of land, hence intensification. This enables higher densities and allows for lower distance-related costs – especially travel and infrastructure – because people and businesses are closer to each other. A further consequence is that the benefits of co-location, enabled by higher density, increase as cities grow in size (other things being equal).

²¹ Venables A J Evaluating Urban Transport Improvements: Cost-Benefit Analysis in the Presence of Agglomeration and Income Taxation Journal of Transport Economics and Policy Vol. 41, No. 2 (May, 2007), pp. 173-188



The pattern of urban growth and intensification continues internationally, as the largest cities typically grow faster than nations as a whole (Auckland has attracted more than half of New Zealand's total population growth consistently since the 1920s), and central city and overall urban densities increase, as do urban land values. The differences in land value between the largest city and other cities in a region or nation also increase.

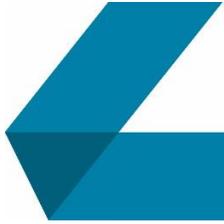
4.2.1 Urban Spatial Patterns

The economic processes which drive urban growth as a whole also result in important patterns within urban economies (intra-urban patterns). These are strong and inter-related spatial and temporal (time) intra-urban patterns, which are of direct significance to the NPS-UDC.

Urban spatial patterns are influenced by both the basic central place effects, and the requirements of the different sectors which make up an urban economy. The core urban economic processes give rise to strong patterns - in both activity and the value of resources - by location within cities, and over time as cities grow. The benefits of co-location and concentration are typically strongest in the geographic centre - as the most accessible location - which also encourages intensification of activity and land use (land being a fixed resource), together making the centre the most attractive (and valuable) location for activity.

In addition, the sectors in an urban economy have different characteristics, which affect *inter alia* their ability to compete for land. This typically sees the highest value activities such as commerce, retail and business services able to secure the most central and valuable locations, including because their land requirements per unit of output are low (for example, high rise office blocks can achieve high employment density per ha). Business activities with lower output value and/or greater land needs such as manufacturing or warehousing typically locate outside the city core but still adjacent in order to access the benefits - of proximity to city centre business activity, co-location with related businesses not necessarily in the city centre, and to transport infrastructure and to consumer markets. Residential activities are typically lower value again, and often with greater per unit (per household) land requirements, locating outside the city centre (or other sub-regional centres which form) while remaining as close as affordable so as to access the goods and services and employment opportunity. This is why urban economies are characterised by concentration of commerce and services in the most central location(s), other businesses such as manufacturing grouping around CBDs and transport infrastructure, and residential uses surrounding the city centre(s) and business areas occupying the major share of the land resource. These all reflect the differing abilities of sectors to compete for land, and the differences in land values influenced most strongly by distance from the city centre.

This is unremarkable. However, it means that as part of the urban land use mix there are other important spatial patterns and differences within sectors, which are influenced especially by higher land values in the more central areas. The benefits of central locations mean higher value business activities within a sector establish there, with lower value activities or those with greater land requirements locating further from the centre - for example, more specialised retail may sustain the higher costs of CBD premises, whereas the greater land requirements of large format retail make edge-of-centre and suburban locations more sustainable.



For residential activity, higher land values are usually associated with higher development intensity in terms of built improvements. Generally, residential intensity is higher in a city centre and reduces with distance from the CBD (excluding other important effects on values such as views, coastal proximity and so on). This intensity is manifest both as larger and higher quality individual dwellings, and as more intensive development, as evidenced by the greater incidence of attached dwellings (terrace houses, duplexes, apartments) and fewer detached dwellings in the more central areas, and greater incidence of detached dwellings in areas further from the centre where land costs are lower.

Location is not neutral, it is a fundamental influence on city growth over time. Dwelling and land values vary significantly by location, reflecting differences in the values of accessibility and amenity, as well as locations' relative attractiveness on other dimensions.

It is important to consider that both the size of the city (supply) and population base (demand) are changing through time. Growth means the physical *location* of individual properties remains fixed, but their *relative* position (to the city as a whole, especially to the city centre and the urban edge) changes through time with growth in supply (city expansion). For an individual property or area, its relative location changes over time as a city grows. For example, the value of a new property located at the urban edge in the 1980s will reflect its relatively low land value, near the lowest percentile because it is furthest from the centre. Over time, it will have moved up relative to the average simply because more land further from the centre will have been developed subsequently, and that land will no longer be at the lowest percentile. At the same time, land values overall will have increased as the city grows. The feasibility of intensifying that land will have improved accordingly, especially through infill.

Furthermore, changes to the size of the urban economy increase demand in each area across the city overall. As location cannot be manufactured, this acts to increase land values and prices in each area, because their relative location and scarcity value increases as the urban economy expands outwards.

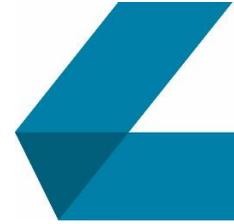
4.2.2 Urban Temporal Patterns

Urban economies have very important temporal or time patterns, linking with the spatial patterns.

As the first-established and most accessible place, the city centre typically gains the benefits of agglomeration and co-location earlier than other locations, as well as to a greater degree. Those effects are cumulative, with city centres typically maintaining their relative attractiveness as the urban economy grows, even though outward expansion over time will sustain the establishment of other (sub-regional) centres to serve suburban areas.

Urban areas typically expand incrementally outward, with new growth locating on the urban edge to be as close as is feasible in order to attain the benefits of being part of the urban economy. In parallel with outward expansion there is commonly intensification of land use, allowing more economic activity to establish while consuming little additional land.

Just as the transition from non-urban to urban uses typically occurs as outward incremental growth, so there is also a pattern where intensification of established urban land typically occurs first in the central areas, and advances outward over time.



There are several reasons for this. First, urban redevelopment typically involves intensification, because growth in the economy has meant the land resource is more valuable, and there is greater opportunity for gain from intensification to enable more activity on the land. Second, agglomeration and other benefits are highest in the centre which *a priori* suggests this is the location where intensification is most feasible (as sale prices will be higher in these areas). Other things being equal, the gains from intensification decrease with increasing distance from the centre. Third, intensification of urban land is generally cyclical, with the return period for redevelopment and intensification broadly in line with the economic life of the built improvements on the land – typically several decades. Redevelopment decisions take account of comparative advantage, and once redevelopment occurs on a parcel, then that land is no longer a candidate for further intensification in the current cycle. The next best opportunities for redevelopment and intensification on the remaining not-yet-intensified areas closest to the centre move up the ranks to become the best opportunities.

Fourth, in broad terms the net gain from redevelopment is driven by the additional value able to be realised from using the land more intensively, and this arises directly from the difference between current development intensity and the land's potential development intensity. The value of improvements added 50 years ago will reflect the land's value at that point in time, and the net gain from redevelopment in the current market will reflect 50 years' of growth in the economy, and the lower opportunity cost of losing a 50 year old structure – as compared with a 20 year old structure, for example. The more central areas were generally developed earlier than those further out, which adds to the opportunity for financial gain from intensification.

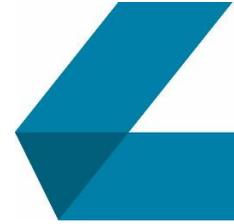
An important implication of these patterns for the NPS-UDC assessment is that at any point in time the feasibility of brownfield (re)development and greenfield development is not uniform across an urban economy. Rather, feasibility will generally be highest in the yet-to-be-redeveloped locations adjacent to recently redeveloped locations. In the same way, feasibility of greenfield development will be highest in locations close to the urban edge.

The combination of effects highlights the strong time element in development feasibility, generally greatest in the more central areas, and occurring there generally earlier than other areas, but with the opportunity for feasible redevelopment advancing outward from the city centre over time. This is why it is usual to see urban intensification proceed outward from the city centre, in a pattern which broadly repeats the initial outward advance of urban activity in the past. Again, this is unremarkable.

4.2.3 Urban Structure and Processes

To understand these spatial and temporal patterns of urban growth, it is important to recognise that cities are aggregations of multiple independent entities, some functioning as individuals (such as private households) others functioning within formal or informal groupings (such as a chain of retail outlets, or public sector offices). Cities are also geographical aggregations of land holdings, controlled by those individuals or groups, with multiple land use and development decisions giving rise to urban land use patterns, over time.

Development and use decisions at the individual land parcel level are characterised by a sequence of quite infrequent quantum shifts, based on adding built improvements - typically with decades between each



quantum shift, as influenced mostly by the economic life of the built improvements. The quantum shifts are predominantly toward intensification by adding to the improvements, and permanent removal of improvements is rare.

As an urban economy grows and market conditions change, the potential use and associated value of each land parcel also changes. This generally increases the opportunity to intensify the parcel's use. The typical quantum shifts are the initial transition from non-urban to urban use (usually adding services and constructing a dwelling), with the subsequent shift being addition of another dwelling(s) as infill, or replacement of the original dwelling with several dwellings, or a single larger and more valuable dwelling.

The main opportunity for financial gain for the property owner is through a quantum shift, commonly to maximise the improvement value on the land. For example, the potential gains from replacing one dwelling with two or more dwellings are usually greater than replacing with just one larger dwelling.

Once that intensification has occurred, the potential for further intensification of the site is low for a significant time. This is because the opportunity cost of replacing near-new improvements is high, and the increase in potential for any parcel is incremental and in line with growth in the city. Initially, the difference between the current use and the maximum potential is small, and it grows in relatively small annual increments.

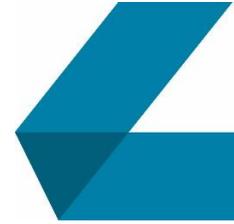
As a consequence, at the individual parcel level, urbanisation and intensification typically occur as a sequence of infrequent quantum shifts or step changes, and in the periods between these shifts there is nil or limited change. For context, replacement and intensification may see the total value of a parcel (land and improvements) triple or quadruple in a short space of time, but its value growth thereafter reverts to more modest economy wide shifts for the next 5 or 6 decades, or longer.

The number of such parcel-level shifts which can be sustained in any year is governed by the demand for more dwellings, from the increase in household numbers and dwelling replacement.

The opportunity for greenfield or new urban development is generally quite location-specific, focused on areas at or near the urban edge where the uplift in value from the non-urban to urban transition is greatest. The opportunity for uplifts through intensification may be more widely spread, though it is generally highest in the yet-to-be intensified more central areas.

This means that in any year, the major share of the increase in the total value of the housing estate is likely to be from development or redevelopment (quantum shifts) on a relatively small number of parcels, with only small change on the great majority of parcels²². The following years will each likely see a similar

²² For example, if an urban economy is growing by 1.5% annually, then the built capacity for business activity and housing would be expected to increase at about the same rate, through some intensification, and some development of newly urban land. If that growth is put "on the ground" as actual development (assuming a one-third : two-thirds split between intensification and greenfield expansion), it would translate to an area broadly equivalent to 0.9% of the total existing estate being added in any year through greenfield opportunity at or near the urban edge or through infill, and to around 0.6% of the already urbanised land being redeveloped and intensified as part of the existing estate is replaced and added to.



pattern, with growth driven mainly by shifts for a relatively small number of different parcels – but they will each year be different parcels, and their location will (progressively) change.

That pattern is very important for any feasibility assessment for the NPS-UDC. It means that at any point in time the amount of development which is feasible is generally aligned with the level of demand and is focused on a relatively few locations, especially for greenfield development. The sequential nature of urban growth means that those locations progressively shift as available opportunity is taken up, and new capacity is demanded.

The fact that development opportunity is sequential and cumulative also means that market conditions are progressively changing, as previously-existing opportunities are taken up. This is a key reason why feasibility modelling for 30+ years of capacity at a single point in time is simply unable to replicate or estimate likely market conditions for most of that capacity unless allowance is made for progressive change in the market, to reflect the development sequence over time and across locations. The feasibility modelling is undertaken primarily on a parcel by parcel basis, to take account of specific circumstances where possible.

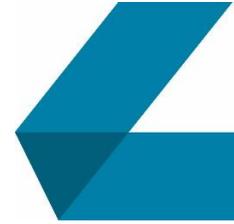
To illustrate, allowing for 5 to 7 years' of demand to be 'development ready' at any point in time as per the IHP position, then the question of development feasibility would apply at most to those 5 to 7 years' of growth or 16% to 20% of the next 30 years' total long term growth requirement. The other 80% to 84% of plan-enabled capacity is likely to be too far into the future for its development feasibility to be assessed according only to current prices and values.

How does this translate into differences in demand and value in the market as at 2018? The current situation is the basis of the *Locked Market* position. For greenfield development, the land closest to the existing urban edge is generally the most attractive and valuable for new housing (other things being equal), while land away from the edge and further from the city centre is progressively less attractive as distance increases²³. The next most attractive location will be land for which likely development is +/- one year away, ahead of that for which likely development is +/- two years' away. A short term outlook implies less risk because most growth will be a minor increment on the observed current situation, while outright purchase incurs lower holding costs prior to likely uptake by the market.

Three years out from now the market conditions will be different. In particular, the urban edge will have moved outward as development continues, so that the land whose urbanisation potential had been three years' away in 2018 will now be at the urban edge, and (other things being equal) the most attractive for development. The land which was taken up in the first three years will no longer be a candidate area for development. The land and housing values will also be different.

At any point in time, the potential area of land available or intended for urban development is expected to be greater than the annual demand by some multiple, since commercial entities will compete by offering to the market a range of candidate sites in different locations and at different price points. The time horizon for this total offering is finite, however. This is because the potential for commercial developers is generally

²³ Importantly, there are two effects here. One is the generally observed distance-price gradient across the city. The second, is the presence/absence of demand at each location. Areas further away from the existing urban edge will not yet have demand expressed there so the prices they can secure will be lower than those at the urban edge.



maximised by quick turnover to minimise holding costs, while at the same time having sufficient potential capacity for the short-medium term future to remain in business, commonly staging development to have a stable or steady future work stream, and taking account of the current and expected scale of demand. However, there is no fixed horizon, as development land does not always come to the market in neat 4 or 5 year chunks.

This means that at some point beyond the short-medium term, there is a transition from securing land for foreseeable development activity, to securing land as a longer term investment which may or may not realise development returns two or three decades from now. This reflects therefore developer and investor perspectives.

The NPS-UDC has a long time frame, and for commercial entities, there is limited scope to take actions from which the returns will not accrue for 30+ years. While property developers commonly look to secure land for future development opportunities, the holding costs and uncertainties over a long period are much greater than for a short term focus where the likely outcomes over the next 5 or so years are likely to reflect mostly incremental change from the (relatively well understood) present.

In Auckland, the IHP identified the need to consider the feasibility of capacity in relation to about 7 years' demand, albeit assuming no change in the market over that period.

4.3 Feasibility Assessment

These spatial and temporal patterns in urban economies, and the scale of growth within any time period, are important influences on the feasibility of urban (re)development in relation to the NPS-UDC. Hence the need to understand how the dynamics of urban economies can be expected to affect new dwelling values and land values over time, and across locations, and consequently affect feasibility.

Property value, especially the potential sale price of a new dwelling relative to its costs, is the key influence on feasibility. The modelling applied for the growth councils' assessments, and in the MBIE guidance, is based on a relatively straightforward formula where a development is considered feasible if the likely sale price of the new dwelling exceeds the total costs (land, construction, services, interest, sales costs and so on) by a sufficient margin that a typical commercial developer would deem acceptable (the base case is currently a 20% net return).

Estimates of land and development (construction) costs, and dwelling sale prices are key to the assessment of feasibility, and therefore sufficiency of capacity.

As noted, urban land and property values tend to increase in real terms as the city grows. This means that if sale prices grow at different rates from construction costs and the residual value of existing improvements on land, then the feasibility of development must also change – to become less feasible if prices grow more slowly than construction and residual costs, or more feasible if prices grow more rapidly than construction and residual costs.

The common pattern in growing cities is the typically faster rates of price growth than cost growth, the former reflecting the underlying increase in the size of the urban economy, which helps drive feasible



development It is a necessary condition for development or intensification to occur. This is why it is important that the feasibility analysis allows for this differential change.

A significant part of this is that as the economy grows, property values and prices typically grow in real terms. The increase in urban size means the range of potential uses for each land parcel increase, and the number of potential purchasers increases. Both are greatest in the centre and diminish with distance. Growth over time, and the progressive uptake of opportunities for intensification, means this potential also moves progressively outward.

Progressive outward expansion means that existing properties gain in value because they become relatively more attractive than the dwellings being added at the edge (other things being equal), and because the larger size of the urban economy generates an economy-wide lift. Dwellings in each location accrue some gain from small increases in scarcity value as the population base expands, together with some offset because the number of alternatives also increases with the size of the dwelling estate, as well as offsets from depreciation.

The movement of demand into new locations or for new typologies (e.g. apartments within town centres) also drives faster changes in prices relative to costs. While the new dwellings added at the edge are progressively lower relative value because they are further from the city centre, their feasibility is driven predominantly by the uplift from non-urban to urban use. Over time, faster growth in prices means that more expensive, higher density forms of construction (such as apartments) become feasible in new locations²⁴.

4.3.1 City-wide Changes in Land Value

Urban growth influences property values and development feasibility at aggregate and localised level. The s32 report for the NPS-UDC acknowledged that feasibility will change over time, and also acknowledged that urban growth and size affects land values:

“We also note that a competitive market does not necessarily imply low prices in all situations. Prices may rise in a competitive market if the marginal cost of supply is increasing. For example, research from the United States and France shows that larger cities tend to have higher land prices – a 10% increase in city size is associated with a 6-7% increase in land prices, all else being equal (Albouy and Ehrlich, 2013; Combes et al, 2014). This increase appears to reflect both increased congestion / crowding, which may push up demand for central land, as well as the fact that larger

²⁴ For example, it was feasible to construct standalone houses around the edges of Takapuna centre in Auckland in the 1960s on full sites. Demand growth through time, combined with increases in the value of Takapuna (as part of the larger economy and relative scarcity within the total Auckland market) mean that sufficiently high prices can now be achieved by apartment buildings²⁴ in the locations which were not feasible for apartments in the 1960s. In order for higher intensity to be feasible, the sale prices of dwellings must have risen faster than the cost of construction. If prices and costs increased at the same rate (with depreciation of the existing dwelling being the only driver of redevelopment), then redevelopment could only occur at the same density as that being replaced (eg standalone housing).

cities offer economies of scale in production and the supply of consumer amenities (de Groot et al, 2015)” (p26)

If that relationship is applied to the high growth urban areas, using projected population growth as the indicator of the likely increase in the size of the economy, then the implied annual changes in real terms may be 0.9%pa (medium) to 1.3%pa (high) in Auckland, 0.8%pa to 1.2%pa in Hamilton (Future Proof Partners), 0.7%pa to 1.2%pa in Greater Christchurch, 1.3%pa to 1.7%pa in Queenstown Lakes, and 0.9% to 1.2% in Tauranga City. These indicative figures are shown in Table 4.1.

Table 4.1: Implied Land Value Change from Economy Growth 2016-2046

FUTURE	Population Growth 2016-46 (%pa)	Implied Land Value Change (%pa Low)	Implied Land Value Change (%pa High)	Implied % Change in LV (Low)		
				Short (3 yrs)	Medium (10 yrs)	Long (30 yrs)
Medium Growth						
Auckland	1.3%	0.8%	0.9%	2%	8%	27%
Hamilton City	1.2%	0.7%	0.9%			
Waikato District	1.3%	0.8%	0.9%			
Waipa District	0.9%	0.5%	0.6%			
Future Proof Partners	1.2%	0.7%	0.8%	2%	7%	23%
Christchurch City	0.7%	0.4%	0.5%			
Waimakariri District	1.4%	0.8%	0.9%			
Selwyn District	2.2%	1.3%	1.5%			
Greater Christchurch	1.0%	0.6%	0.7%	2%	6%	20%
Queenstown Lakes	1.8%	1.1%	1.3%	3%	12%	39%
Tauranga City	1.2%	0.7%	0.9%	2%	8%	24%
High Growth						
Auckland	1.8%	1.1%	1.3%	3%	11%	38%
Hamilton City	1.8%	1.1%	1.2%			
Waikato District	1.8%	1.1%	1.2%			
Waipa District	1.4%	0.8%	1.0%			
Future Proof Partners	1.7%	1.0%	1.2%	3%	11%	35%
Christchurch City	1.3%	0.8%	0.9%			
Waimakariri District	2.2%	1.3%	1.6%			
Selwyn District	2.9%	1.8%	2.1%			
Greater Christchurch	1.6%	1.0%	1.2%	3%	10%	34%
Queenstown Lakes	2.5%	1.5%	1.7%	5%	16%	56%
Tauranga City	1.8%	1.1%	1.2%	3%	11%	37%

Source: SNZ 2017; Market Economics

Research into the long term trends in residential property values in the Auckland market, using detailed statistics from Corelogic over the 1995 to 2015 period, showed that residential capital values increased well ahead of CPI. Table 4.2 shows the recorded pattern with land value (LV) increasing at more than twice the rate of improvement values (IV), and overall values consistently growing well ahead of construction costs (0.53% pa in real terms according to SNZ). This differential in the growth rates of LV and CV saw residential land values increasing faster than residential dwelling values over the period, and dwelling values increasing consistently faster than improvement values. This reflects the combined effects of improvement values being anchored to the point in time at which they were developed, and subsequent depreciation.



The critical point for the feasibility of redevelopment is that over time feasibility improves because the opportunity cost represented by the existing improvements will progressively reduce relative to the value of new dwellings possible on the land. This is because sales prices increase faster than costs. Construction costs typically increase in line with wider economic trends, subject also to cyclical variations.

Table 4.2: Recorded Trends in Residential Property Values in Auckland 2000 - 2015

TLA within AUCKLAND	Per SQM Land			
	LV/SQM	IV/SQM	CV/SQM	LV:CV Differential
Auckland - Rodney	7.8%	4.1%	5.9%	1.9%
Auckland - North Shore	6.6%	2.5%	4.8%	1.8%
Auckland - City	8.9%	5.4%	7.6%	1.3%
Auckland - Waitakere	10.3%	3.1%	6.4%	3.9%
Auckland - Manukau	9.7%	2.0%	5.5%	4.2%
Auckland - Papakura	8.8%	3.1%	5.5%	3.4%
Auckland - Franklin	2.1%	4.2%	0.0%	2.1%
TOTAL AUCKLAND	8.4%	3.5%	6.1%	2.3%

Source: Corelogic 2015; Market Economics 2018

4.3.2 Localised changes in Land Value

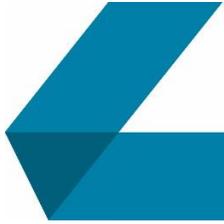
Urban growth also directly affects feasibility at the local level, with changes and trends city-wide being the aggregate of localised changes. These local area changes are particularly important because they represent the demand-supply interface at any point in time.

The incremental and location-specific nature of urban growth, as identified above, means that the aggregate changes are not the result of annual price increments evenly spread over time and location. Rather, the value uplift associated with relatively imminent urbanisation tends to be more location- and time-specific, reflecting something more akin to a once-off lift as ongoing development and take-up of competing land sees new opportunity become the new highest priority within a relatively short time frame.

In simple terms, this lifts the value of possible new dwellings to around the value of those recently developed and in place, from their previously lower value as dwellings some distance away from the urban edge. That final lift in value does not need to be major to shift a new dwelling from being not yet feasible to being now feasible. Nor is it a shift from very low value, as much of the future potential of land relatively close to the urban edge will have been recognised and priced in for some time. Dwellings which would not have been the best opportunity when the urban edge was still two or three years' distant now become the best opportunity available, once the previously available competition has been consumed.

To a large degree, the value uplift and improvement in feasibility is a matter of time and distance. The commercial development sector is well aware of the variations in opportunity, and the additional value which can be realised by getting the timing right, and coordinating development activity with underlying market growth.

This is by no means a precise science. Nevertheless, the above discussion illustrates why the common pattern of urban growth is for the feasibility of new development to vary by location and over time, and



why timing and location relative to the amount of growth are such important influences on development feasibility.

4.4 Implications for Assessing Development Feasibility

These common patterns of growth and change in urban economies, while they vary in scale and time, make it very important that feasibility assessment for the NPS-UDC is structured to take them into account. The practical requirement is for the assessment to recognise especially the ways in which property values and development feasibility varies by location (now and in the future) and is likely to shift over time. The conceptual requirement is to establish a valid basis for assessment over 30 years.

4.4.1 Major Variations within Growth Areas

An obvious matter is the sheer scale of the land area which needs to be assessed. Among the high growth councils, 30 years' of growth amounts to 328-418,000 households for Auckland, 77-117,000 households for greater Christchurch, 54-70,000 households for Hamilton, Waipa and Waikato, 31-42,000 households for Tauranga City and Western Bay of Plenty, 11-14,000 for Queenstown Lakes, 11-16,000 for Whangarei and 8-13,000 for New Plymouth. These large volumes of household growth imply substantial areas of greenfield land for expansion beyond the urban edge – in the order of 900-11,000 ha or 9-11 km² for each additional 10,000 households.

Moreover, a significant share of growth is anticipated to be through infill (adding new dwellings to existing developed parcels) and redevelopment of already urbanised lots. The feasibility of infill and redevelopment requires assessment of much or all of the already developed urban land in each city.

The large and varied land area which need to be assessed makes it very difficult – by itself - for a feasibility assessment which is based on a single snapshot model at one point in time to adequately capture the market conditions currently relevant to such a broad variety of conditions. Assessment of greenfield feasibility needs to encompass land immediately adjacent the urban edge and land some distance from that edge, whose likely urbanisation is 20-25 years into the future. Assessment of redevelopment feasibility needs to encompass properties on which existing improvements currently have a wide range of ages and values, including those with improvements which will be 30 years older by the end of the planning period.

Such variations in the existing land estate mean it is problematic to identify one “current” set of market conditions – dwelling prices, costs, land values – which can be applied across the whole area.

4.4.2 Locked Market Position

An important conceptual challenge is that the evidence of systematic change in market conditions – over time, by location - is difficult to reconcile with the *Locked Market* position as a basis for assessing the next 30 years' of growth.

It applies a single snapshot of the current market, to assess all plan-enabled capacity. The feasibility model approach is based conceptually on change occurring over time. It applies price and cost information, to in



effect assess how far potential development(s) are along the continuum from infeasible to feasible. A temporal component is inherent in this approach.

That conceptual basis is difficult to reconcile with assessment based on current conditions only, with its underlying assumptions that at the aggregate (city-wide) level there will have been no change during the next 30 years. This is because using the nil change position to assess 30 years' sufficiency is to effectively examine feasibility in 2046, applying current prices and costs. In order for those prices and costs to be relevant to the 2046 market situation, the following conditions would have to be met:

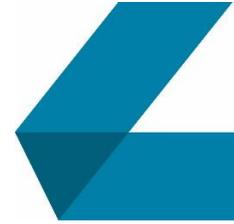
1. no additional dwellings have been built during the 2016-2046 period, and no dwellings have been replaced. This means that the feasibility assessment is based on 30 years' of development occurring within a very short time;
2. the existing residential property estate has incurred no depreciation during 2016-46, so there is no change in the opportunity cost of redevelopment;
3. there has been no spatial expansion of the urban economy, and no outward advance of the urban edge;
4. there is no change in the competitive environment, such as where competing opportunities closer to the city centre become developed, and remaining opportunities thereby become relatively more attractive;
5. there is no change in the relative location of areas of plan-enabled capacity, which may arise as every component of the plan-enabled capacity is as close as is feasible to the city centre (without displacing established activities).
6. the values of new dwellings will not change over the period;
7. construction costs will not change;
8. there will be no technological or other changes which may affect the relative values of the existing and new dwelling estate;
9. there will be no changes in the market socio-demography which may influence dwelling preferences, including no change in the accumulated wealth of the resident population.

A wider implication is that there is a scale to which the city can grow – by 2046 – but not exceed. This is because the conditions as at 2046 are assumed to not take account of expected population and economic growth after 2046.

4.4.3 Effects of allowing for economic change over time.

Analysis of the effects of market change, including continuation of observed property value differentials into the future – albeit at low levels - and historic construction cost trends, showed that small annual increments in feasible capacity could be expected into the long term. Over time, small annual increments, consistent with small annual shifts in prices and costs, can be expected to add significantly to the levels of currently feasible capacity.

This was evident in the Auckland market, and the feasibility modelling undertaken by the high growth councils shows a similar outcome, where allowance for observed economic processes and trends to continue shows small annual increments in feasible capacity over time.



These increments are significant when the sufficiency of developable capacity has to be assessed, under the NPS-UDC provisions.

Importantly, the modelling shows that feasibility improves over time in a manner consistent with changes in the urban economy, and the changes arise from small differences in land and dwelling values, and small differences between price growth and cost growth. For example, a 1% differential between dwelling price growth and construction cost change results in a +/- 1% change in development feasibility. This is again unremarkable, because the structure of the modelling reflects the structure of real-world feasibility analysis. However, it illustrates two key important points:

1. First, the long NPS-UDC time frame means small annual changes or differentials – within the range of actual historical trends - result in substantial incremental change in feasible capacity over 15 or 20 or 30 years, without substantial annual shifts;
2. Second, substantial increases in feasible capacity are indicated without significant rises in dwelling prices. To illustrate, a real increase of 1.5% pa in dwelling prices together with a 0.5% increase in construction costs would see on average the returns from development increase by around 1% per year. This is important in relation to concerns that modelling which allows for change over time is based on high ongoing price inflation. The same conclusion was reached in the research for the IHP hearings.

This means that *Economy-based* feasibility modelling using a range of price and cost changes over time can be expected to offer a more accurate assessment of likely sufficiency than the *Locked Market* approach, without substantial implied dwelling price inflation. Faster growth in prices than costs will not necessarily reduce housing affordability, a matter which is a key concern of MBIE. This is because improvements in feasibility are affected by the differential between housing values and costs over time, rather than the absolute changes.

4.4.4 Avoiding Poor Outcomes

One benefit of the *Economy-based* approach would be to reduce the risks of poor outcomes which may arise from the direct application of the PC3 provisions based on sufficiency assessment under the *Locked Market* position.

This does not suggest that the PC3 provisions will necessarily produce poor outcomes wherever they may be applied. However, what it does mean is that the *Economy-based* approach can be expected to help avoid situations where the PC3 provisions would be otherwise applied unnecessarily to drive excessive provision of development capacity.

This is especially because the *Locked Market* position can be expected to substantially understate likely feasible capacity. It does not adequately allow for dwelling prices to increase over time as urban economies grow. It does not adequately allow for depreciation in the existing dwelling estate, which will progressively improve the feasibility of urban intensification. It does not allow for shifts in property values over time and by location, which can be expected to substantially improve development feasibility in specific locations as urban economies grow and expand outwards. It does not allow for the dynamics of urban economies which drive these spatial and temporal changes in value change and feasibility over time, and across locations.

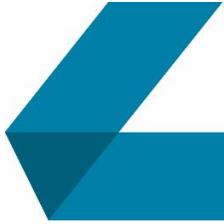


These observations are based simply on understanding of how urban economies function and understanding of the core drivers of development feasibility.

4.5 Observations

The assessment of the provisions, particularly PB3 and PC3, shows clearly that sound understanding of urban spatial economics is critical if the NPS-UDC is to be applied efficiently and effectively. Specific conclusions are:

1. the feasibility of urban development - especially housing - is directly affected by urban growth patterns and dynamics;
2. development feasibility changes significantly over time and across locations within an urban economy;
3. this is particularly so for New Zealand's high growth urban economies;
4. analysis of key urban processes and patterns indicates that shifts in development feasibility are broadly predictable;
5. research into the key patterns and processes in urban economies suggests that the feasibility of new development can be expected to improve over time, driven by cumulative shifts which arise from small annual shifts in market conditions;
6. improvements in feasibility do not depend on substantial growth in dwelling prices. Instead, they are driven predominantly by the different rates of change in urban land and dwelling values – which are influenced especially by growth in the economies – from changes in construction costs, and the cumulative effects of dwelling depreciation.
7. Application of the *Locked Market* position can be expected to substantially understate likely feasible capacity, particularly in relation to the medium and long term growth outlooks.



5 Conclusions

5.1 Findings

The key findings from this assessment are:

1. The NPS-UDC will have major influence on urban planning and urban growth outcomes throughout New Zealand. It is a core economic tool, which seeks to achieve sufficient and efficient capacity for urban growth.
2. The NPS-UDC focuses on the economics of the land market and requires councils to take a direct role in urban markets, by stepping in with supply-side actions – under PC3 to provide more development capacity - when key economic indicators trigger a response. These include sufficiency and assessments of how efficiently the economy overall and land markets are functioning.
3. The review of the structure and functioning of the NPS-UDC, and its intended outcomes, shows that it must be well aligned with how urban economies function and deliver development capacity, in order for it to be effective, and not produce adverse outcomes.
4. The current guidance is that development feasibility must be assessed according to current prices - as of today - as per the *Locked Market* position.
5. The assessment of urban economies, and how feasibility of development and intensification changes over time and across locations, indicates clearly that the *Locked Market* approach is unlikely to accurately reflect the sufficiency of capacity. The *Locked Market* position can be expected to substantially understate likely feasible capacity, especially as to medium term and long term sufficiency.
6. Analysis of feasibility for a number of high growth councils, using today's prices only indicates there is not sufficient capacity for growth. However, analysis of feasibility with allowance for prices and costs to change over time as urban economies expand - the *Economy-based* approach - shows substantially more feasible capacity, and greater sufficiency.
7. The structure of the NPS-UDC is based on the view that providing additional development capacity – as required under PC3 - will in and of itself deliver additional feasible capacity.
8. The requirements under PC3 to automatically provide for more development capacity indicates that high (and medium) growth councils are very likely to be required to provide additional development capacity which is substantially in excess of the likely urban growth requirements over the next 30+ years, and to do so in locations which are likely to produce inefficient urban form and growth outcomes.
9. The clear misalignment between basic urban economics, and adherence to the *Locked Market* position can be expected to result in adverse growth outcomes.
10. We consider it would be very difficult for a council to defend in a hearing the *Locked Market* position as a key assumption or basis for a district or regional plan.



5.2 A Rationale for the *Locked Market* approach

This Discussion Paper concludes there is a sound economic rationale for adopting the *Economy-based* approach for feasibility assessment under the NPS-UDC.

The *Locked Market* approach represents a Normative Economic position, which contrasts with the widely applied approach in New Zealand and overseas to base economic assessment and forecasting on knowledge of the economy as it functions currently, and the expectation that core processes will continue into the future (the *Economy-based* position).

The implication of the *Locked Market* approach is that there are significant consequent assumptions about the economy. The approach is not just that land and housing prices will not change over the next 30+ years, but more significantly that the substantial growth and change expected in the high and medium growth cities will not have consequent effects on land and housing markets, nor affect development feasibility.

That represents an unusual and quite extreme position for an economic assessment.

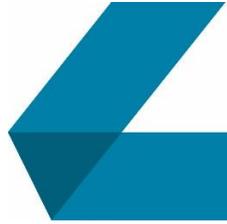
If the *Locked Market* position is to be used in the application of the NPS-UDC, then it would be expected that a sound and defensible economic justification had been prepared some time ago.

However, that is not the case. Review of the material provided by MBIE as to the rationale suggests there is no technical documentation which compares the *Locked Market* and *Economy-based* positions. The matter is not covered in the s32 assessment for the NPS-UDC. While it has been indicated that the guidance relies on the reporting and recommendations of the Auckland IHP, the IHP recommendations stated that feasibility should be assessed based on current costs and prices and focused on the short-medium term (7 years). The recommendations do not provide technical documentation or discussion as to a current price approach, or its application into the long term.

5.3 Conclusions

The core conclusions are:

1. There are both conceptual and practical difficulties with the *Locked Market* position as a basis for assessing development feasibility.
2. It is highly unlikely that assessment based on the *Locked Market* position can provide sound estimates of long term feasible capacity, or sufficiency.
3. It is highly likely that an assessment using the *Locked Market* position will substantially understate the sufficiency of capacity for growth, particularly in the medium and long terms.
4. The combination of the *Locked Market* position's understatement of capacity, with requirements under PC3, indicates considerable potential for poor outcomes in terms of capacity, urban form and efficiency, and housing affordability.



5.4 Recommendations

Based on the assessment, the key recommendations are:

1. That assessment of “current feasibility” be applied to the short term assessment of capacity only; and
2. That assessment of feasibility for medium term and long term capacity be based on the likely or estimated future feasibility, which is able to account of likely market changes as economies expand, and is consistent with the definition of feasibility in the NPS-UDC, based on *“taking into account the current likely costs, revenue and yield of developing.”*