Attachment 1: Penrith Housing Market Review - Feasibility Testing

SGS Economics & Planning

PENRITH HOUSING MARKET REVIEW – FEASIBILITY TESTING

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Prepared for
Penrith City Council

Independent insight.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

SUMMARY

This report considers the impact of three hypothetical planning policy changes on development feasibility: changes to parking rates for apartment developments; lot amalgamation requirements for townhouse developments; and adaptable dwelling requirements.

Parking rates

Two lower parking rate scenarios for apartments were tested: 0.8 spaces per dwelling and 0.5 spaces per dwelling. The testing found that both scenarios improve development feasibility assuming there is a market for dwellings with lower parking provision at a discount of $50,000 per space 'lost' compared to current apartment prices.

A higher parking rate scenario was also considered: a rate of 1.3 spaces per dwelling, compared to the current requirement of around 1.1 spaces per dwelling. The higher rate was found to have a negative impact on development feasibility.

Sensitivity testing found that all four scenarios (the base parking rate, two lower rates and one higher rate) appear feasible at FSRs of 2.1 and higher. However some scenarios become unfeasible if the base land value assumption is increased.

Lot amalgamation

To test the impact of lot amalgamation requirements for townhouse developments, it was assumed that a developer would need to pay a higher price premium to acquire the second site. Although this would increase the costs to acquire land, the feasibility analysis suggested there is sufficient uplift after townhouse development sales are considered, to cover this price premium. This suggests a requirement to amalgamate sites should not impact on the feasibility of townhouse developments.

Adaptable housing

Adaptable housing requirements are likely to increase construction costs. Nevertheless, assuming a cost increase of 5% and a requirement for 20% of dwellings to be adaptable, the feasibility testing found the apartment and townhouse development scenarios considered in the previous tests would still be feasible.

Overview

The table below provides a summary of the feasibility testing results. The ratio (row 3) of residual land value (RLV or row 2) to the existing site value (row 1) is an indicator of development feasibility. It measures the price premium a developer should be prepared to pay to entice the land owner to sell. Assuming a price premium of 25% is required (a ratio of 1.25, row 6), most developments shown would be feasible given the RLV to existing value ratios are above the target. In the case of the second townhouse scenario, a higher target ratio was applied to account for the anticipated higher price premium to acquire the second site.

SUMMARY OF FEASIBILITY TESTING RESULTS

		Apartment : base case	Apartment - lower parking	Apartment - very low parking	Apartment - higher parking	Townhouse – single site	Townhouse – site amalgamation
1.	Existing use value	$2.25 M	$2.25 M	$2.25 M		$0.8 M	$1.6 M
2.	Residual land value (RLV)	$3.12 M	$3.76 M	$3.87 M	$2.90 M	$1.20 M	$2.40 M
3.	Ratio: RLV to existing value	1.39	1.67	1.72	1.29	1.50	1.50
4.	RLV with adaptable dwellings	$2.99 M	$3.62 M	$3.76	$2.77	$1.18	$2.37
5.	Ratio with adaptable dwellings	1.33	1.61	1.67	1.23	1.48	1.48
6.	Target ratio	1.25	1.25	1.25	1.25	1.25	1.375

Source: SGS Economics and Planning, 2017

Implications for planning

- A key issue in setting parking rates for apartments is to ensure that the planning regulations do not mandate unnecessarily onerous 'inclusionary requirements' that impose costs on the community, or reduce the choices available to them. Our analysis suggest that lower parking rates could improve the feasibility of development. This could have a positive impact on dwelling supply and dwelling choice (offering dwellings with lower and no parking provision). If Council were to reduce parking requirements, appropriate on-street parking management measures should be in place (e.g. on-street parking restrictions and resident parking permits) to ensure dwellings without parking do not generate negative externalities.

- Amalgamation requirements for medium density development could make land more expensive for developers, *if* they need to pay a premium to acquire multiple adjoining sites. However, our analysis suggests that on a typical site in Oxley Park, developers could afford to pay a significant premium on the existing value of dwellings that would be sufficient to entice land owners to sell. If additional dwellings could be achieved on amalgamated sites, this would enhance development feasibility. To promote innovation in the form of infill housing developed on R3 zoned land, Council might undertake target investigations of possible alternative infill typologies (see examples in this report). The recent 'Missing Middle' design competition conducted by the Department of Planning and Environment is a potential source of alternative design ideas.

- Adaptable housing requirements that add 5% to the construction cost to 20% of the dwellings would have a modest impact on development feasibility and, in general, are unlikely to make development unfeasible. The actual costs of adaptable housing requirements will depend on detail of the specific requirements Council wishes to pursue, and the proportion of dwellings these will apply to. Before taking a definitive position based on this analysis Council should specify its objectives and determine the approach it wishes to purse. A building/planning industry expert with a thorough knowledge of accessibility policies and construction might assist Council in this task.

1. INTRODUCTION

1.1 Study scope

Penrith Council's brief for this component of the *Housing Market Review & Dwelling Demand Forecasting for Penrith Local Housing Strategy* sought commentary on the impact of the following current and potential development controls on development feasibility in Penrith:

- Parking rates in high density residential development (i.e. land zoned R4 and B4).
- Consolidation of two or more lots for medium density development within existing R3 zoning
- Adaptable and/or accessible dwellings in low, medium and high density developments

In response this report considers the impact of three hypothetical planning policy changes on development feasibility: changes to parking rates for apartment developments; lot amalgamation requirements for townhouse developments; and adaptable dwelling requirements.

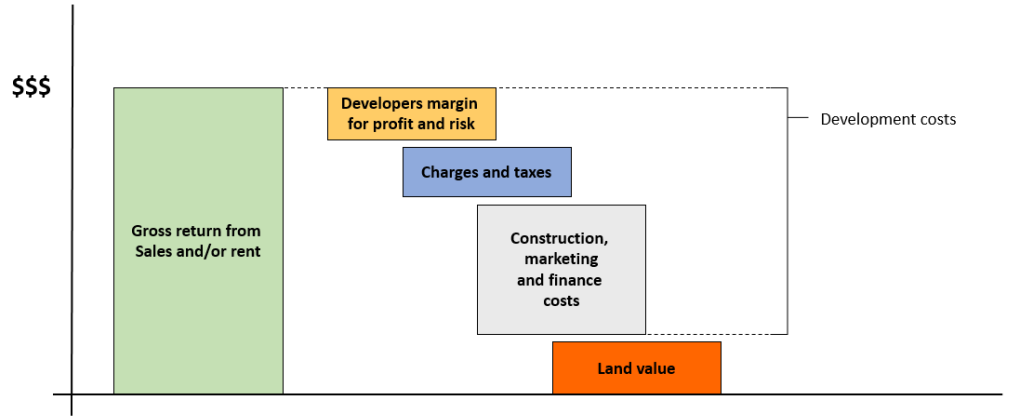
An introduction to the basics of property development feasibility follows below with some implications identified, before the specific feasibility testing is described in section 2. Section 3 summarises the feasibility analysis and includes some concluding remarks.

1.2 Residual land value

To determine the maximum amount they can afford to pay for a site, developers deduct anticipated development costs from anticipated revenues and the left over amount – the residual – is the value of the land that would be anticipated. This is the meaning of the term 'residual land value' (RLV) and as shown conceptually in Figure 1.

A development project is most likely to go ahead when the residual land value – the maximum amount a developer should be prepared to pay for the land – is sufficient to entice the current landowner to sell their site.

FIGURE 1: RESIDUAL LAND VALUE APPROACH TO VALUING LAND



1.3 Cost development and feasibility

Discussions on the impact of additional development costs, such as development contributions or higher construction costs, often start with the premise that the additional cost can be 'passed forward'. This means they are added to the final price, increasing the cost to the end purchaser. However, in general, developers are not in a position to set the price of their products. The price of new dwellings is an outworking of a range of factors including the quantity, quality and mix of the existing housing stock, demographic changes, infrastructure investments, interest rates, taxation policies and so on.

Developers are therefore 'price takers' rather than 'price makers' and as a consequence have limited opportunity to pass additional costs forward. They can however pass additional, known costs 'backward' to the land seller at the point of sale. The residual land value valuation approach suggests additional development costs reduce the amount a developer can afford to pay for a development site.

Passing costs back will impact development feasibility if the residual land value of a site to a developer is too low to entice the current land owner to sell. For example, assume a house has a current value of $500,000, but a residual land value of $750,000 if the site were developed as townhouses. In this case a developer can afford to pay the land owner $250,000 more than the current land (a 50% premium) which is more than likely sufficient to encourage the owner to sell. However, if development costs were to increase by $250,000, the residual land value of the site for the townhouse development decreases to just $500,000. Under these circumstances the development is less likely to go ahead as there is no enticement above the current market value, based on the existing use, to encourage the land owner to sell their site.

1.4 Implications

The discussion and modelling that follows applies the residual land value approach and the assumption that, in general, additional development costs are passed back to land sellers. Any cost savings will have a similar effect but in reverse: they will increase the amount a developer can pay for a site whilst still covering their costs including an allowance for profit and risk.

The key question when assessing the impact of policy changes on development feasibility is to consider whether the proposed change will leave a sufficient land value premium to entice the incumbent landowner to sell their land for redevelopment.

2. FEASIBILITY TESTS

2.1 Assessing the feasibility of development

The feasibility testing in this chapter used a residual land value (RLV) approach. The RLV is the amount a rational developer should be prepared to pay for a potential development site after all other costs, including a margin for profit and risk, are deducted from all revenues.

A development is assessed as being feasible if the RLV is at least 125% of the existing site value. This 25% margin on top of the existing land value assumes a rational land owner will seek a premium when selling their land for redevelopment. 25% is considered a realistic but not excessive expectation. In practice, individual land owners may seek higher margins or accept a lower margin, depending on their particular circumstances.

When sites are amalgamated a developer may purchase the first site for close to the market price, but may then need to offer a higher premium to acquire a second or third site adjoining the first (that is, the owner may demand such a premium given the motives of the developer). For this reason, amalgamation of adjoining sites can require developers to pay an even higher premium than that for the purchase of an individual site.

2.2 Impact of lower parking rates

This test considered the impacts of different parking rates on the development feasibility of apartment developments.

Four scenarios were tested:

- A base case where parking is provided at the current default rates (1 space per 1 or 2 bed apartment; 2 per 3 bed; 1 per 14 dwellings for service; 1 per 5 dwellings for visitor)
- A lower rate of parking provision where parking is provided at a rate of 0.8 spaces per dwelling and 1 per 5 for service/visitors
- A very low rate of parking provision where parking is provided at a rate of 0.5 per dwelling and 1 per 5 for service/visitor
- A higher rate where parking is provided at a rate of 1.25 spaces per dwellings and 1 per 4 dwellings for service and visitors.

The feasibility testing was based on the redevelopment of 115, 117 and 119 Derby Street. A development has been approved by Council on this site and has the following characteristics:

- Three lots and a total site area of 2,090 square metres
- 61 dwellings: 5 x 3 bed; 40 x 2 bed; 6 x 1+study; 10 x 1 bed
- 81 parking spaces: 66 resident spaces; 12 visitor; 2 service; 1 carwash
- 6 levels above ground and 1.5 basement levels for parking
- An implied FSR of 2.12:1 based on dwelling sizes on the approved plans (FSR of gross floor area is 2.65:1 assuming an 80% gross to net efficiency rate)

The land is zoned R4 and has no FSR control.

These sites in Derby Street sold together for $4.2 million in November 2015[1] which equates to $70,000 per dwelling or $1,900 per square metre of site area. Analysis of other similar sales of nearby sites suggested this was a very high price and a rate of $1,600 per square metre for development sites might be a more typical benchmark (see Table 1) .

[1] Realestate.com.au, website: https:/www.realestate.com.au/sold/property-house-nsw-penrith-120289797 (accessed on 9 June 2016)

TABLE 1: SALES OF R4 ZONED SITES IN PENRITH

Address	Zone	Site area (sqm)	Price	$/sqm	Date of sale
115-119 Derby Street	R4	2090	$4,000,000	$1,914	10-Nov-15
24 & 26 Colless Street	R4	1229	$1,930,000	$1,570	10-Dec-16
21 and 23 Hope Street	R4	1214	$2,000,000	$1,647	16-Dec-16
32, 34 & 36 Hope Street	R4	1860	$2,850,000	$1,532	9-Jun-17
Area weighted average				$1,576	
Median				$1,609	

Source: SGS Economics and Planning, 2017.

The median house price in Penrith is $682,500. For the purpose of this feasibility analysis it was assumed the average value of a detached dwelling in the R4 zoned land is $750,000, which is higher than the suburb median reflecting the better locational attributes of these dwellings.

Lowering the rate of parking will reduce both construction costs (with less parking spaces to construct) and sales revenues (dwellings without parking will sell for less). Higher parking rates will increase costs and revenues. The assumptions concerning these reductions are outlined below.

Assumptions

Base case scenario:

- 61 dwellings and **81 parking spaces**
- An implied FSR of 2.1:1 based on 4435 sqm of net floor space on a 2090 sqm site
- Average dwelling prices: 1 bed, $375,000; 2 bed, $450,000; 3 bed, $550,000
- Average revenue per sqm gross floor area: $4,950
- Average construction cost per sqm gross floor area (includes parking): $2,450.

Lower parking rate scenario:

- 61 dwellings and **61 parking spaces: 0.8 per dwelling and 1 per 5 visitors/servicing**
- Reduction in total revenue by $50,000 for each 'lost' residential parking space
- Average revenue per sqm gross floor area: $4,800 (3% reduction from base case)
- Average construction cost per sqm gross floor area (includes parking): $2,250 (a 8% reduction from base case by virtue of fewer parking space).

Very low parking rate scenario:

- 61 dwellings and **43 parking spaces: 0.5 per dwelling and 1 per 5 visitors/servicing**
- Reduction in total revenue by $50,000 for each 'lost' residential parking space
- Average revenue per sqm gross floor area: $4,600 (7% reduction from base case)
- Average construction cost per sqm gross floor area (includes parking): $2,100 (a 14% reduction from base case).

Higher parking rate scenario:

- 61 dwellings and **92 parking spaces: 1.2 per dwelling and 1 per 4 visitors/servicing**
- Increase in total revenue by $50,000 for each additional residential parking space
- Average revenue per sqm gross floor area: $5,050 (2% increase from base case)
- Average construction cost per sqm of gross floor area (includes parking): $2,550 (4% increase from base case as a result of the additional parking spaces).

Results

The table below presents the result of the feasibility analysis of the four scenarios with different parking rates.

The 'existing site value' is based on the assumption that the existing value of the three dwellings is $750,000 per dwelling. The residual land value (RLV) is an estimate of the maximum price a developer would offer to pay for the site based on the yield, costs and revenue assumptions outlined above. The final line of the table compares the RLV to the existing site value. This shows the price premium a developer might pay to entice the land owner to sell.

The value of 1.39 for the base case suggests a developer could pay almost 1.4 times the current land value. Assuming the margin that a land owner might expect when selling a site for redevelopment is 25% (a ratio of 1.25), this finding suggests the development would be feasible.

Both of the lower parking rate scenarios have higher RLV/existing value ratios than the base case. This suggests lower parking rates would improve development feasibility, assuming there is a market for dwellings with lower parking provision, including dwellings with no off-street parking.

The higher parking rate had a negative impact on development feasibility, although this scenario is still within the feasible range with the ratio of RLV to existing value being slightly higher than 1.25.

TABLE 2: FEASIBILITY TESTING FOR DIFFERENT PARKING RATES (115-119 DERBY STREET)

	Base case	Lower parking	Very low parking	Higher rate
Parking rate per dwelling	1.10	0.80	0.50	1.25
Total spaces per dwelling	1.33	1.10	0.70	1.51
Existing use value	$2,250,000	$2,250,000	$2,250,000	$2,250,000
Residual land value (RLV)	$3,117,000	$3,755,000	$3,866,000	$2,694,000
Ratio of RLV to existing value	1.39	1.67	1.72	1.29

Source: SGS Economics and Planning, 2017.

Sensitivity testing – FSR changes

The above results are based on an FSR of 2.1:1. Lower or higher FSRs will affect the results. The table below shows the impact of FSR changes on the ratio of RLV to existing value. Applying the assumption that a margin of 25% on the existing land value is required for the development to proceed, most scenarios tested appear feasible at the lower and higher FSRs. The base case at FSR 1.9:1 is only just feasible, whereas the higher parking rate scenario is not feasible at this lower density.

TABLE 3: SENSITIVITY TESTING – CHANGES TO FSR

	Base case	Lower parking	Very low parking	Higher rate
FSR of 1.9	1.25	1.51	1.55	1.17
FSR of 2.1 (as per approval)	1.39	1.67	1.72	1.29
FSR of 2.4	1.58	1.91	1.96	1.47

Source: SGS Economics and Planning, 2017.

Sensitivity testing – base land value changes

A further sensitivity test considered the impact of a higher existing land value assumption. This tests the impact on development feasibility of an increase in the 'use value' of the existing properties.

The testing below shows that an increase in the base land value assumption would have a negative impact on viability, assuming a 25% margin benchmark. The feasibility of the lower parking scenarios is more robust in the face of higher land prices. These sensitivity tests were applied to the 2.1:1 FSR scenario.

TABLE 4: SENSITIVITY TESTING – CHANGES TO BASE LAND VALUE

	Base case	Lower parking	Very low parking	Higher rate
Base land value $750,000 per dwelling	1.39	1.67	1.72	1.29
Base land value $833,000 per dwelling	1.25	1.50	1.55	1.16
Base land value $1,000,000 per dwelling	1.04	1.25	1.29	0.97

Summary

- Both lower parking rate development scenarios improve development feasibility, assuming there is a market for dwellings with lower parking provision.
- The higher parking rate has a negative impact on feasibility, particularly when the results of the lower density and high land price sensitivity tests are taken into consideration.
- The base case scenario also becomes unfeasible when the base land value assumption is increased.

Discussion

The feasibility analysis suggests that lower parking rates would have a positive impact on development feasibility and higher rates would have a negative impact.

The key planning policy issue is to ensure that the planning regulations do not mandate unnecessarily onerous 'inclusionary requirements' in new development that impose costs on the community, or the choices available to them.

The feasibility analysis suggest that lower parking rates could improve the feasibility of development and thereby have a positive impact on dwelling supply and, in time, dwelling choice (by providing dwellings with lower parking provision which would be attractive to households choosing not, or not able to afford, to own a car).

If Council was to reduce parking requirements, appropriate on-street parking management (e.g. on-street parking restrictions and resident parking permits) should be in place to ensure dwellings without parking do not generate negative externalities in the form of on-street parking congestion.

A key assumption that influences these results is the value of parking spaces and the revenue that developers receive, or forego, by including more or fewer spaces. Because on-site parking is 'bundled' with the dwelling, and there is no recent sales data on dwellings without parking, it is difficult to make an accurate assessment of the market's willingness to accept lower prices for dwellings without parking.

A related question is the depth of the market for dwellings without parking. While there will be some latent demand for dwellings without parking, the size of this market is difficult to gauge.

Nevertheless, there is a latent market for housing without parking because the data reveals that a small but notable share of households in the LGA do not own a car. The 2016 Census suggests that 5% of households in the Penrith LGA had no motor vehicles – 2800 households. This figure is 14% in the suburb of Penrith and 9% in Kingswood, where there is rail station access (and a number of students in the latter suburb). More fine-grained analysis finds further variability in rates of vehicle ownership. More than 20% of households in six SA1s in the suburb of Penrith reported not having any vehicles; a total of 350 households.

2.3 Lot consolidation for medium density housing

This test considered the impacts on development feasibility of requiring two adjoining sites to be amalgamated for a townhouse development. The test assumes that amalgamating lots *does not* increase development yield. Analysis of townhouse development sites in R3 zoned land in Oxley Park suggest that a yield of one dwelling per 200 sqm of site is relatively constant, regardless of lot size.

The requirement to amalgamate lots could result in developers having to pay a price premium for the second allotment. Whereas a premium of 25% might be sufficient to acquire the first development site, a higher premium, say 50%, might be required for the second site. This equates to an average price premium of 37.5% or 1.375 times the existing value.

While land owners may seek even higher premiums, in competitive land markets developers will have options to purchase from land sellers seeking lower premiums. Where land owners seek a premium that exceeds the residual land value, a rational developer will not purchase the site.

The feasibility testing was based on the redevelopment at 16 Braddon Street, Oxley Park. The development has been approved by Council and has the following characteristics:

- A single lot of 1,258 square metres
- 6 dwellings: 6 x 4 bedroom, 2 storey townhouses
- Implied FSR of 0.64:1 based on dwelling sizes on the approved plans

No sales data was available for this site but similar development sites with and without dwelling approvals in Oxley Park sold for between $850 and $1,200 a square metre. The site value of 16 Braddon Street as a development site would be in the order of $1.2 million dollars.

The median house price in Oxley Park is $645,500. For the purpose of this feasibility analysis it was assumed the value of a detached dwelling on a larger site that is zoned R3 was $800,000. This is somewhat higher than the suburb median reflecting the fact that sites that would be acquired for townhouse developments are generally larger than the average.

Assumptions

Base case:

- 6 dwellings
- 1 site of 1,258 square metres
- Average price for a 4 bedroom townhouse of $575,000
- Average revenue per sqm gross floor area: $4,250
- Average construction cost per square metre gross floor area: $1,900
- Price premium for development to be feasible: 25%

Site amalgamation:

- 12 dwellings
- 2 adjoining sites of 1,258 square metres
- No change to cost and revenue assumptions
- Higher price premium: 25% to acquire the first development site; 50% for second site; average premium over both sites of 37.5%.

Results

The table below presents the result of the feasibility analysis of the two scenarios.

In both cases the ratio of the RLV to the existing site value is 1.58 reflecting the fact that the relationship between development costs and revenues is consistent.

In the case of the amalgamation scenario the RLV is still sufficient to cover the higher price premium by a significant margin. This suggests that a requirement to amalgamate sites should not impact on the financial feasibility of townhouse development.

TABLE 5: FEASIBILITY TESTING FOR SINGLE VS AMALGAMATED SITES

	Base case	Amalgamation
Dwellings	6.00	12.00
Sites	1	2
Site area	1,245	2,490
Existing use value	$800,000	$1,600,000
Residual land value (RLV)	$1,199,975	$2,399,950
Ratio of RLV to existing value	1.50	1.50
Target ratio	1.25	1.375

Source: SGS Economics and Planning, 2017.

Discussion

Amalgamation requirements for medium density development could make land more expensive, if developers find they need to pay a higher premium to acquire multiple sites compared to a single site.

However, the feasibility analysis suggests that lot amalgamation requirements would not prevent townhouse developments from being feasible. In the case of a 12 townhouse development over two sites of 1250 sqm, a developer could afford to pay as much as $2.4 million for the land. This is likely to be a significant premium on the existing value of dwellings on R3 zoned land in Oxley Park, where the medium property price is close to $650,000.

If additional dwellings could be achieved on the amalgamated site this would enhance the feasibility by providing additional revenue. However, the testing suggests additional yield is not essential to making development feasible.

To promote innovation in the form of infill housing that is developed on R3 zoned land, Council might undertake target investigations of possible alternative infill typologies (see text box on the following page).

The recent *Missing Middle* Design Competition conducted by the Department of Planning and Environment is a potential source of alternative design ideas for small-scale infill housing developments[2]. At the time of writing the competition entries were not publicly available.[3]

[2] http://www.planning.nsw.gov.au/About-Us/Office-of-the-Government-Architect/Design-competition
[3] SGS has made inquiries with the Department but as yet we have not been able to access the entries.

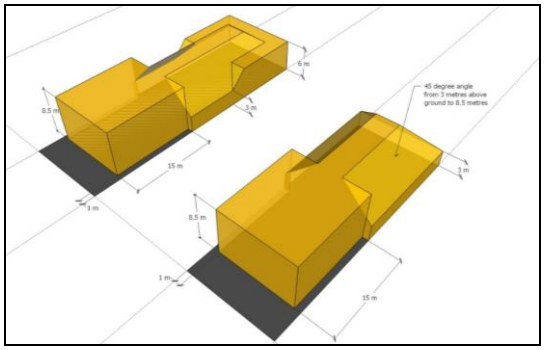
Alternative approaches to infill housing in Newcastle and Land Macquarie

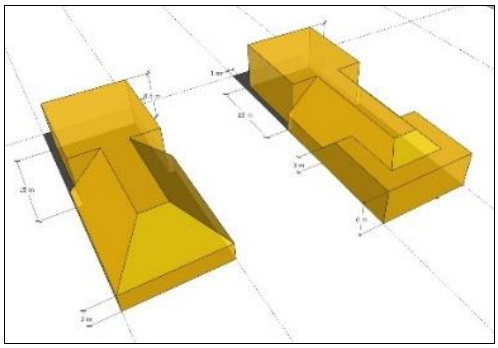
In 2014 SGS was commissioned by the Department of Planning and Infrastructure to review the existing planning controls in and around strategic centres in Newcastle and Lake Macquarie and recommend alternative built form strategies and planning controls to encourage a greater diversity of infill housing.

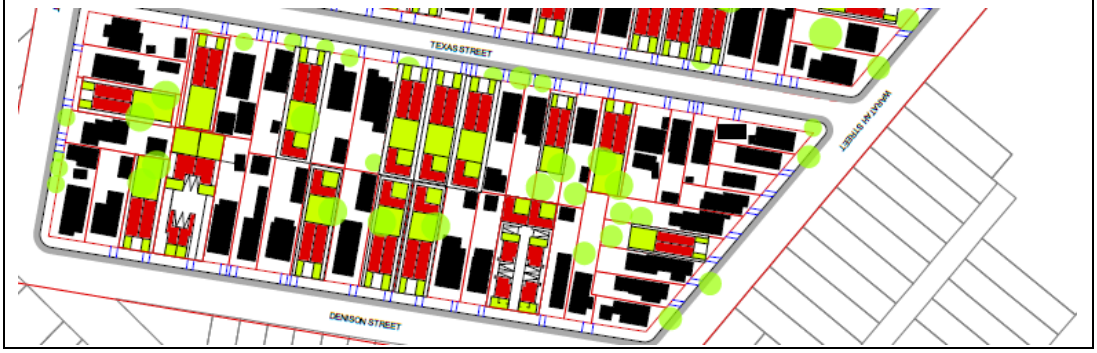
A built form envelope approach was used. The objectives of building envelopes were to: provide favourable planning conditions for infill development on single lots; respond to the existing context and likelihood of an incremental process of redevelopment; and enhance the existing public domain character and private amenity. Envelopes were development for both front and rear loaded lots (see below).

Planning changes recommended to encourage small-scale, infill housing development included:

- A reduction in the minimum lot size and minimum lot width requirements for infill housing developments
- The introduction of the alternative built form envelope to manage the bulk of new developments and encourage a larger proportion of built form to be located towards the public domain
- The removal of FSR controls for small-scale medium density developments
- Allow building to rear boundaries and side boundaries towards the rear of the lot.
- Waive strict on-site resident parking requirements and allow parking provision to be determined by the market
- Remove visitor parking requirements for small-scale infill developments
- Simplify private open space, landscaping and deep soil requirements, and
- In the case of Lake Macquarie, allow all residential forms (medium density and apartments) in areas where infill developments are encouraged.







2.4 Adaptable housing requirements

This test considered the impacts on development feasibility of adaptable housing requirements. Adaptable housing refers to designing dwellings to allow for conversion at a later date to suit the needs of future occupants with a physical disability. The relevant Australia Standard is AS 4299-1995 (Adaptable Housing).

Compliance with adaptable housing requirements can be met at relatively low or no cost. One commentator has suggested a 5% increase in construction costs.[4] For the purposes of this testing it has been assumed that the adaptable housing requirements would apply to 20% of the dwellings in a development.

Assumptions

Base case:

- As per the six developments tested above:
  - Apartment development with 61 dwellings and 81 parking spaces (FSR 2.1)
  - Apartment development with 61 dwellings and 61 parking spaces (FSR 2.1)
  - Apartment development with 61 dwellings and 43 parking spaces (FSR 2.1)
  - Apartment development with 61 dwellings and 95 parking spaces (FSR 2.1)
  - Townhouse development on single site with 6 dwellings
  - Townhouse development on two amalgamated sites with 12 dwellings.

With adaptable dwelling requirements:

- 5% increase in construction costs applied to 20% of dwellings in the development.

Results

The table below shows the ratio of the RLV of each development *without* the adaptable dwelling requirements from the previous feasibility test in the first column. These ratios *with* the adaptable dwelling requirements are shown in the second column. The final column is the target ratio for each development.

Owing to the additional construction cost, all case the RLV/existing value ratio with the adaptable dwelling requirements is slightly lower than the ratio without. But, in all but one case, the second ratio still exceeds the target ratio which suggests that the level of adaptable housing requirements assumed in this test would not, in general, impact on the financial feasibility of the apartment or townhouse developments.

TABLE 6: FEASIBILITY TESTING WITH ADAPTABLE DWELLING REQUIREMENTS

	RLV/existing value ratio without adaptable dwelling requirements	RLV/existing value ratio WITH adaptable dwelling requirements	Target ratio
Apartment development – base case	1.39	1.33	1.25
Apartment development – lower parking	1.67	1.61	1.25
Apartment development – very low parking	1.72	1.67	1.25
Apartment development – higher parking	1.29	1.23	1.25
Townhouse – single lot	1.50	1.48	1.25
Townhouse – with site amalgamation	1.50	1.48	1.375

Source: SGS Economics and Planning, 2017.

[4] Bringolf, J. (2004) Adaptable, Accessible or Adjustable? Independent Living Centre, NSW. (http://www.e-bility.com/articles/adaptablehousing.php)

Discussion

The testing suggests that adaptable housing requirements that add 5% to the cost of 20% of dwelling would have a modest impact on development feasibility and, in general, are unlikely to make development unfeasible.

The actual costs of adaptable housing requirements will depend on the detail of the specific requirements Council wishes to pursue, and the proportion of dwellings these will apply to.

There are several approaches to adaptability:

- Liveable house — designed to meet the changing needs of most home occupants throughout their lifetime without the need for specialisation.
- Accessible house — designed to meet the needs of people requiring higher level access from the outset, and usually designed and built with a specific person's needs in mind. An accessible house meets Australian Standard AS 1428.1-2001, Design for access and mobility, and is able to accommodate wheelchair users in all areas of the dwelling.
- Adaptable house— adopts the idea of a liveable house but in addition is able to be easily adapted to become an accessible house if the need should arise. [5]

Before taking a definitive position of the impact – and the additional construction costs that might be incurred – Council should specify its objectives and determine which approach it wishes to purse. A building/planning industry expert with a thorough knowledge of accessibility policies and construction might assist Council in this task.

[5] Palmer, J and S. Ward (2013) The livable and adaptable house.

3. CONCLUSION

This report has reviewed the impact of three hypothetical planning policy changes on development feasibility: changes to parking rates for apartment developments; lot amalgamation requirements for townhouse developments; and adaptable dwelling requirements.

The summarised results below indicate that, at a high level, developments comparable to those tested will still be feasible even with the introduction of the policy changes. However, some scenarios become unfeasible if the base land value assumption is increased, most notably, the scenario where the parking rate for apartments is higher than the current requirements.

TABLE 7: SUMMARY OF FEASIBILITY TESTING RESULTS

	Apartment : base case	Apartment - lower parking	Apartment - very low parking	Apartment - higher parking	Townhouse – single site	Townhouse – site amalgamation
Existing use value	$2.25 M	$2.25 M	$2.25 M		$0.8 M	$1.6 M
Residual land value (RLV)	$3.12 M	$3.76 M	$3.87 M	$2.90 M	$1.20 M	$2.40 M
Ratio: RLV to existing value	1.39	1.67	1.72	1.29	1.50	1.50
RLV with adaptable dwellings	$2.99 M	$3.62 M	$3.76	$2.77	$1.18	$2.37
Ratio with adaptable dwellings	1.33	1.61	1.67	1.23	1.48	1.48
Target ratio	1.25	1.25	1.25	1.25	1.25	1.375

Source: SGS Economics and Planning, 2017

Council can therefore consider these policy changes in light of the social benefits they might yield in the understanding that there is unlikely to be widespread negative impacts on development feasibility.

However, further testing should be undertaken prior to the introduction of policy changes to reflect updated market data and the specifics of the planning policy changes, both of which may differ to the assumptions in this report.

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