



CESSNOCK HOUSING PREFERENCES STUDY



© SGS Economics and Planning Pty Ltd 2019

This report has been prepared for Cessnock Council . SGS Economics and Planning has taken all due care in the preparation of this report. However, SGS and its associated consultants are not liable to any person or entity for any damage or loss that has occurred, or may occur, in relation to that person or entity taking or not taking action in respect of any representation, statement, opinion or advice referred to herein.

SGS Economics and Planning Pty Ltd
ACN 007 437 729
www.sgsep.com.au
Offices in Canberra, Hobart, Melbourne, Sydney

TABLE OF CONTENTS

EXECUTIVE SUMMARY	IV
1. INTRODUCTION	1
1.1 Purpose	1
1.2 Background	1
1.3 Method	2
1.4 Report Structure	4
2. PREFERENCES SURVEY	5
2.1 Overview	5
2.2 Method	5
2.3 Survey findings on locational preferences	7
2.4 Survey findings of housing preferences	13
2.5 Key findings	21
3. CHOICE MODELLING	23
3.1 Model overview	23
3.2 Choice model values	24
3.3 Sub-group choices	26
3.4 Choice simulation	27
3.5 Conclusions	30
4. KEY FINDINGS	31
4.1 There is unmet demand for more compact dwellings	31
4.2 Housing preferences vary considerably with age	32
4.3 Couples with no children and single person households value smaller and more affordable housing options	32
4.4 Dwelling type is the most important factor in housing preferences	32
4.5 Price and affordability drive location and housing choice	33
4.6 Affordability is the main barrier to obtaining preferred housing	33
4.7 People value rural living on large blocks	33
4.8 Concluding remarks	33
APPENDIX 1 – POLICY REVIEW	35
APPENDIX 2 – HOUSING PREFERENCES SURVEY INSTRUMENT	38
APPENDIX 3: HOUSING PREFERENCE SURVEY DATA	44
APPENDIX 4: CHOICE MODEL	47

LIST OF FIGURES

FIGURE 1: EXISTING HOUSING MIX, SURVEY AND SIMULATION RESULTS	VI
FIGURE 2: THREE COMPONENTS	3
FIGURE 3: GEOGRAPHIC ZONES AND CHARACTER AREAS IN CESSNOCK LGA	4
FIGURE 4: MAIN REASONS FOR MOVING INTO CESSNOCKAREA WORD CLOUD	7
FIGURE 5: MAIN REASONS FOR LIVING IN THEIR CURRENT LOCATION WORD CLOUD	8
FIGURE 6: LIKELINESS OF MOVING BY TIMEFRAME	9
FIGURE 7: CROSS TABULATION – MOVING WITHIN 5 YEARS AND AGE GROUPS	9
FIGURE 8: MAIN REASONS FOR THE PREFERRED LOCATION WORD CLOUD	11
FIGURE 9: MAIN REASONS FOR CHOOSING CURRENT HOUSING TYPE WORD CLOUD	13
FIGURE 10: BARRIERS TO PREFERRED HOUSING TYPE IN PREFERRED LOCATION	18
FIGURE 11: ANNUAL HOUSEHOLD INCOME AND BARRIERS TO DESIRED HOUSING TYPE IN DESIRED LOCATION	20
FIGURE 12: SUMMARY OF FINDINGS ABOUT HOUSING TYPES	21
FIGURE 13 AN EXAMPLE OF A CHOICE TASK	23
FIGURE 14 CHOICE VALUE OF HOUSING ATTRIBUTES IN CESSNOCK	25
FIGURE 15: PREFERENCES FOR CHARACTER TYPE-SIMULATION	29
FIGURE 16: EXISTING HOUSING MIX, SURVEY AND SIMULATION RESULTS	31
FIGURE 17: HOUSING OPPORTUNITIES 2018	36
FIGURE 18: MAIN URBAN AREAS, CESSNOCK LOCAL GOVERNMENT AREA	37
FIGURE 19: COMPARISON OF THE SHARE OF AGE GROUPS	45
FIGURE 20: COMPARISON OF THE SHARE OF GENDER SPLIT	45
FIGURE 21: COMPARISON OF THE SHARE OF HOUSEHOLD TYPES	46
FIGURE 22 AN EXAMPLE OF A CHOICE TASK	48

LIST OF TABLES

TABLE 1: AVERAGE SCORES OF THE LOCATION ASPECTS	12
TABLE 2: CURRENT HOUSING TYPE	14
TABLE 3: CURRENT LAND SIZE OF HOUSE ON SEPARATE LOT	14
TABLE 4: CURRENT LAND SIZE FOR RURAL BLOCK/ ACREAGE	14
TABLE 5: PREFERRED HOUSING TYPES	15
TABLE 6: PREFERRED HOUSING TYPES AND AGE GROUPS	16
TABLE 7: PREFERRED LAND SIZE FOR HOUSES ON SEPARATE LOTS	16
TABLE 8: PREFERRED LAND SIZE FOR RURAL BLOCK/ ACREAGE	16
TABLE 9: DIFFERENT HOUSEHOLDS' PREFERRED HOUSING TYPES	17
TABLE 10: AVERAGE SCORE OF FACTORS THAT INFLUENCE HOUSING CHOICES	18
TABLE 11: PREFERRED HOUSING TYPES AND BARRIERS	19
TABLE 12: HOUSEHOLDS ANNUAL INCOME 2016 CENSUS	20
TABLE 13: PREFERENCES COMPARED- EXISTING STOCK, SURVEY AND SIMULATION	27
TABLE 14: HOUSING TYPE PREFERENCES BASED ON AGE GROUP	28
TABLE 15: DEMAND BY REGION	28
TABLE 16: DEMAND BY DWELLING TYPE AND REGION	29

TABLE 17: DEMAND BY CHARACTER TYPE AND REGION COMBINED	29
TABLE 18: CHOICE MODELLING ATTRIBUTES AND LEVELS	48
TABLE 19 CHOICE VALUE OF HOUSING TYPE, BASED ON WHERE THE RESPONDENT LIVES	51
TABLE 20 FACTORS IMPORTANT TO THOSE WHO PREFER TO LIVE IN MEDIUM DENSITY	52
TABLE 21 CHOICE VALUE BY AGE GROUP	53
TABLE 22 CHOICE VALUE BY HOUSEHOLD STRUCTURE	54
TABLE 23 GEOGRAPHIC ZONE AND CHARACTER TYPE CHOICE VALUE, BY WHERE RESPONDENTS LIVE	55
TABLE 24 CHOICE VALUE, BY HOUSEHOLD INCOME	56
TABLE 25 FACTORS IMPORTANT TO THOSE WHO ARE PRICE SENSITIVE	57

EXECUTIVE SUMMARY

Study purpose

SGS Economics and Planning was engaged by Cessnock Council to prepare a Housing Preference Study.

This study provides insights into the housing preferences of residents of Cessnock in terms of particular types of properties, their features and location that are most important to them, and the trade-offs they might make between these attributes given their financial constraints. More importantly, it compares these preferences to the current supply of housing in the municipality to identify where there is a mismatch between demand (preferences) and supply.

Background

In choosing where to live, households make decisions and typically trade-offs based on what they value in relation to location, dwelling size and type and other characteristics. These decisions are made in the context of individual housing budgets and the housing products available on the market at any one time. Improved understanding of the types of housing people want (and the trade offs they are willing to make) will help to better match new housing supply with housing demand. These insights into the community's decision making regarding housing choices will assist in shaping Council's Housing Strategy, which is currently being prepared.

Misalignment between the housing preferences and the existing housing stock can and do arise. On the demand-side, misalignment can happen as preferences change over time with lifestyles and local household demographics. Demographic shifts include an ageing population, the rise of single person households, and changes to 'traditional' family structures.

On the supply side, misalignment can happen when property developers build too much or too little of particular housing types. Developers might not have enough information about residential preferences or there could be certain business and risk factors associated with certain housing types. Reluctance to change a proven business model can mean that developers are hesitant to change the type of housing product they have been delivering which is typically 3-4 bedroom dwellings. Planning regulations and land supply can also cause supply side factors if they restrict or favour housing types and locations.

As houses typically have long life spans, at least 50 years, there can be a lag between the supply of appropriate dwellings to meet changing demand. Market price changes can also affect the type of housing that households can afford. The community profile as a whole can change, but only a small proportion of housing stock will be new housing that can respond to such changes.

Study method

The study has three components: a housing preference survey, a choice modelling survey and choice simulation, based on findings from the choice modelling.

Preference survey

- Identifies why respondents choose to live where they do, what they like about their homes and neighbourhoods, and, if they were to move, what location and type of dwelling they might move to.

Choice model

- Analyses the relative value respondents place on various attributes (e.g. dwelling location, type, size) through a series of "choice tasks" exercises.

Choice simulation

- Uses the choice model values to simulate what survey participants would choose in a new unconstrained market that has all available housing types; it shows what housing people would choose *if* it was available on the market and within their budget.

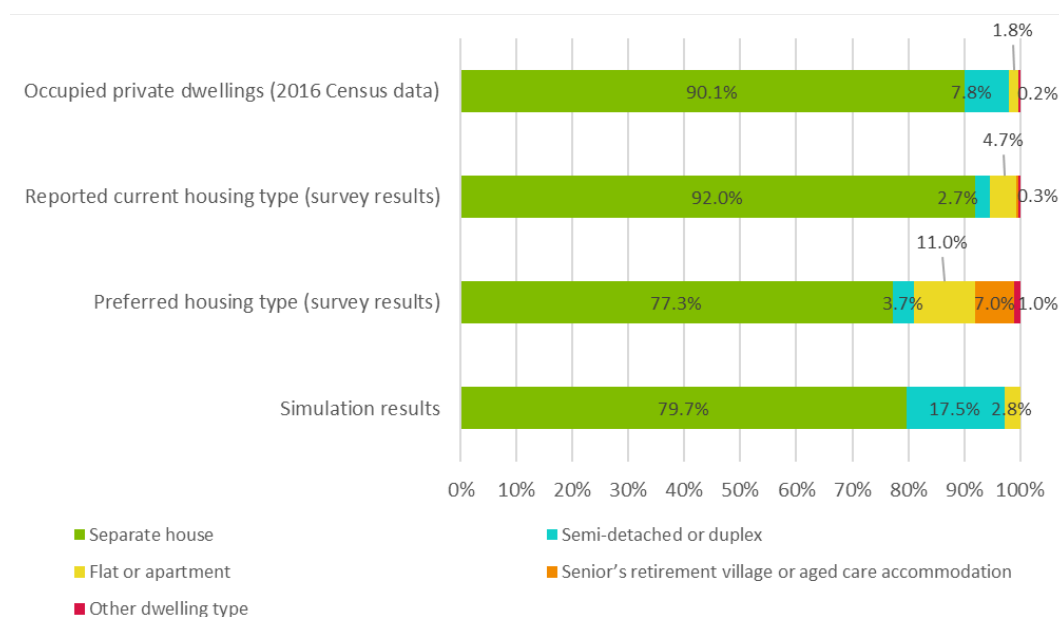
Key findings

The housing preference survey, choice modelling exercise and simulation provide three different approaches to understanding the housing preferences of the Cessnock community. From these analyses we can draw the following key findings:

- **There is unmet demand for more compact dwellings:** While most residents prefer to live in detached housing, both the survey preference and the simulation results indicated that a significant share of households would prefer more compact forms of housing (semi-detached dwellings, villas, duplexes or apartments), than is currently available in Cessnock.

The simulation results indicate that 20.3 per cent of households would choose semi-detached dwellings or flats and apartments, which is significantly higher than the current provision – in 2016 only 9.9 per cent of all housing stock was not a detached house. Results from the simulation also showed an appetite for smaller lot sizes for detached dwellings due to their lower maintenance, lower cost and accessibility.

FIGURE 1: EXISTING HOUSING MIX, SURVEY AND SIMULATION RESULTS



Source: SGS Economics and Planning; Myriad Research; Prescience Research; ABS Census

- **Price and affordability drive location and housing choice:** Affordability was a reason for people moving to Cessnock (as it was cheaper than Newcastle and Sydney) and for deciding which part of Cessnock to live in. Affordability is an important determinant of housing preference shifting towards more compact dwellings.
- **Housing preferences vary considerably with age and household type:** Younger households and families tend to prefer detached housing but the preference for semi-detached dwellings and apartments increases with age.
- **Affordability is the main barrier to obtaining preferred housing:** Low income households (those with household incomes less than \$50,000 per year) were more likely to state lack of affordable housing as a barrier than medium and high income households. Older people were also more likely to see affordability as a barrier.
- **People value rural living on large blocks:** The study highlighted that a large proportion of the community currently lives in what they see as rural areas and would prefer to continue living in rural areas. This reflects the high value placed on large houses and spacious lots, and is one of the reasons to (continue to) live in Cessnock.

Concluding remarks

There is a mismatch between the demand (preference for) and supply of different housing types in Cessnock, and these preferences vary across demographic cohorts. The current supply of housing is predominantly in the form of detached houses. More people live in detached housing than want to, and with other pressures like congestion building over time lifestyle will be compromised without more compact living options.

The number of **older person** and **lone person households** is expected to grow significantly in the future, and these household types revealed a preference for more compact, semi-detached housing, that is currently not being met in the housing market. **Couple households with no children** are also more likely to prefer semi-detached and apartment housing than other cohorts. There are opportunities to better match housing supply to the preferences of these groups.

Opportunities need to be provided for older households to move into housing that is not only compact, but also low maintenance and accessible, and located in well serviced areas. This would have the added advantage of freeing up existing detached housing stock for younger families and alleviate the pressure to build more detached houses.

Housing costs are a major concern for residents, and people recognise that townhouses/villas and apartments are more affordable than detached housing. The households that are more likely to prefer semi-detached housing are also households that are typically more price sensitive. New semi-detached housing aimed at responding to this demand should be affordable.

Council has a role to play in facilitating the supply of new housing that better match the community's preferences- urban development can better meet the needs of people moving within the LGA, as well as those who are moving into the LGA.

Council should consider steps to encourage greater diversity in housing types in Cessnock to meet the unmet demand for semi-detached and apartment dwellings. While this study has not considered supply side factors in detail, Council has two main avenues it can take to encourage housing diversity:

- Providing information to the property development sector about the demand for greater housing diversity in the municipality. This project provides a clear evidence base to send strong messages about the market potential for semi-detached dwellings in particular.
- Ensuring planning controls aren't creating barriers to development of more compact forms of housing. For example, through zoning controls or restrictions on amalgamating small lots that make development of more diverse housing unfeasible.
- Ensuring planning controls aren't promoting excessive development of detached housing in poorly serviced areas.

1. INTRODUCTION

1.1 Purpose

SGS Economics and Planning have been engaged by Cessnock Council to prepare a Housing Preference and Choice Modelling Study for the Local Government Area (LGA).

This study provides insights into housing preferences of residents in Cessnock. It identifies what makes people choose to live where they do in terms of property and location features, and what is most important to them, along with how they make trade-offs between features within their financial constraints.

Specifically, the study has sought to understand:

- What residents of Cessnock value most in terms of housing and location.
- What barriers stop people living in their preferred housing choice.
- The housing choices and trade-offs of different types of households including those at various life stages, those who rent, single person households and different incomes.
- The demand for different types of dwellings (i.e. separate houses, semi-detached dwellings or apartments) and demand by locations when compared to the type and distribution of the current housing stock.

The study findings are intended to assist council in the development of its housing strategy by providing a better understanding of the underlying demand for housing, the housing preferences of the community, and the barriers faced by different household types in findings their preferred accommodation.

1.2 Background

In choosing where to live households make decisions and typically trade-offs based on what they value in relation to location, dwelling size and type and other characteristics. These decisions are made in the context of individual housing budgets and the housing products available on the market at any one time.

Insights into the community's decision-making regarding housing choices will assist in shaping Council's Housing Strategy, which is currently being prepared. Misalignment between the housing preferences and the existing housing stock can and do arise. This can be exacerbated when local household demographics shift. E.g. with an ageing population, the rise of single person households, or changes to 'traditional' family structures. As houses typically have long life spans, at least 50 years, there can be a lag between the supply of appropriate dwellings to meet changing demand. New housing stock only accounts for a small fraction of all housing, so understanding the needs of a changing community is crucial. Market price changes can also affect the type of housing that households can afford.

Cessnock Local Government Area (*referred to as Cessnock*) is situated at the western side of Greater Newcastle. It is well-known for its vineyards and wineries.

The *Greater Newcastle Metropolitan Plan 2036* states that Cessnock and Kurri Kurri are Strategic Centres that could provide local housing and jobs opportunities. They will also maintain the rural setting, improve access to open space and retain their place identities.

In 2016, there were 20,625 occupied private dwellings and 2,048 unoccupied private dwellings in Cessnock LGA.¹ Of the occupied private dwellings, 90.1 per cent were separate

¹ ABS Census 2016, Counting Dwellings, Place of Enumeration

houses, 7.8 per cent were semi-detached dwellings, 1.8 per cent were flats or apartments, and 0.2 per cent were other dwelling types.

Between 2016 and 2036 Cessnock is expected to accommodate an additional 6,350 dwellings.²

The Hunter Regional Plan 2036 identified the following future housing opportunities for Cessnock:

- Deliver existing Urban Release Areas at Bellbird North, Nulkaba, Huntlee, Greta (Anvil Creek), West Street Greta, Golden Bear, Vintage Balance, Mount View Road, Rose Hill, Cliftleigh and Avery's Village.

1.3 Method

The study has three components: a housing preference survey, a choice modelling survey and market simulation, based on findings from the choice modelling.

The preference survey, conducted via telephone, sought to identify why people choose to live where they do in terms of house type and location, and, were they to move, whether they would have different housing preferences. The results of the survey provide an understanding of what is important to residents of Cessnock. The preference study provides direct feedback on how people choose housing, while the choice modelling provides insight into the trade-offs people are willing to make regarding housing choices.

The choice modelling survey was designed to understand the relative importance of the different factors that influence housing decisions. Through an online survey (completed by a subset of preference survey participants), households were asked to choose their most preferred dwelling from a series of options. Each option had various property and neighbourhood attributes. This 'choice task' was repeated 8 times with the housing options varying with each iteration.

The data was collected from multiple households, undertaking multiple choice tasks. This provided information on the importance of various attributes (e.g. housing type, location, size and parking provision) and how those attributes influenced the housing choices and different household types.

This data was used to simulate the housing preferences for the Cessnock community (and was not affected by the types of housing currently available). When the results were compared with the existing housing stock, the simulation provided an indication of where there are mismatches between the existing houses (type and location) and the housing people say they wanted (preferred distribution as indicated in the revealed preferences discovered through the choice modelling task).

Figure 2 illustrates the three components of the study.

² NSW Government 2016, Hunter Regional Plan 2036

FIGURE 2: THREE COMPONENTS

Preference survey

- Identifies why respondents choose to live where they do, what they like about their homes and neighbourhoods, and, if they were to move, what location and type of dwelling they might move to.

Choice model

- Analyses the relative value respondents place on various attributes (e.g. dwelling location, type, size) through a series of "choice tasks" exercises.

Market simulation

- Uses the choice model values to simulate what survey participants would choose in a new unconstrained market that has all available housing types; it shows what housing people would choose *if* it was available on the market and within their budget.

Source: SGS Economics and Planning

For the choice modelling tasks, participants were asked questions and required to make choices that related to four different geographic areas and four different 'character area'.

The four geographic areas were:

- Branxton
- Kurri Kurri
- Cessnock
- Southern Area

And the four character areas were:

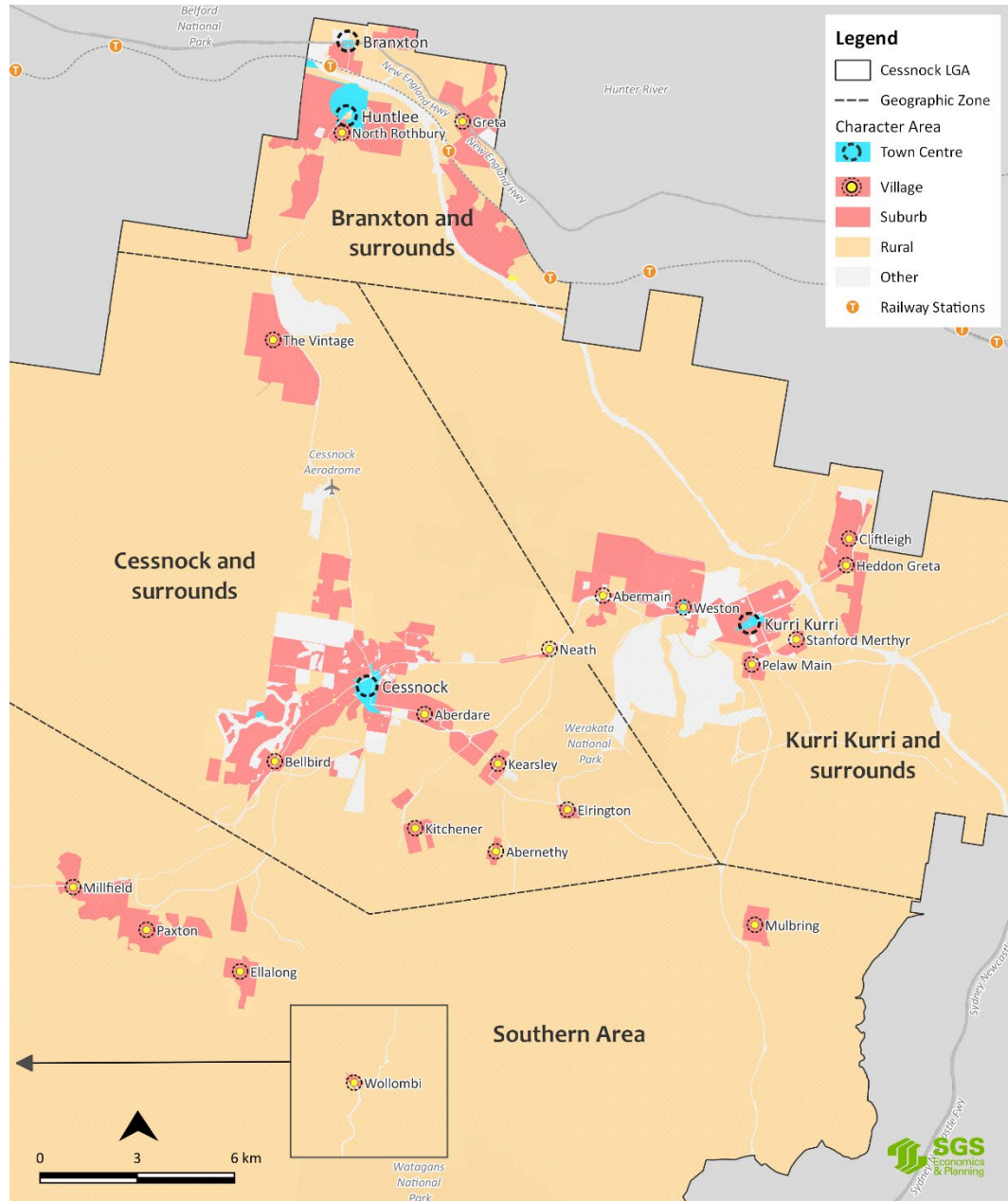
- Town Centre
- Village
- Suburban
- Rural

Figure 3, shows the demarcation of geographic area and character areas used in the choice modelling. The geographic areas include a range of housing types and are highly socially and economically diverse. This means that generalisations regarding preferences for different geographic areas are difficult to confirm.

1.4 Report Structure

The remainder of this report has four chapters. The three main study components are each described in a chapter, in the order shown in the figure above. The final chapter draws together some key conclusions. A series of appendices provides additional supplementary information.

FIGURE 3: GEOGRAPHIC ZONES AND CHARACTER AREAS IN CESSNOCK LGA



Source: SGS Economic and Planning

2. PREFERENCES SURVEY

The housing preferences survey was conducted with 300 households participating. This chapter describes the method and key findings.

2.1 Overview

The housing preferences survey was conducted as a phone survey. Cessnock residents were asked a series of questions relating to their choice of location and dwelling in Cessnock. Initial focus groups tested the survey design and also allowed for in depth responses to be collected.

The preference survey asked respondents about two aspects of housing preferences: locational preference and type of housing. The following section reports on the location and type of housing preferences.

2.2 Method

Focus groups

Two focus groups and a survey of residents within the Cessnock LGA were conducted to assess housing and neighbourhood preferences (both current and future) as a key component of the Cessnock Housing Preferences Study. Information on survey implementation is included in Appendix 2. The focus group was used to test the survey and gather in depth responses from participants to identify key local priorities.

Sample size and characteristics

The survey included responses from 300 participants. This number is statistically valid in relation to the total survey population (all Cessnock LGA households), with a relative sampling error range between 2.5% and 5.8% at the 95% confidence level. This means that there was a 95% chance that the sample responses reflect the population with minor sampling errors.

This composition of sample households is generally consistent with the broader population, with some qualifications: the sampled households are more likely to be 'a couple with children living at home' households than the general population; and they are less likely to be 'lone person' households than the general population. They are also more likely to be older. This means that results are stronger for well represented age groups. Further information on the profile of survey participants is included in Appendix 3.

Survey content

The survey instrument is provided in Appendix 2.

The survey asked participants about the following aspects of their location preferences:

- How long participants have lived in Cessnock
- Likelihood of moving
- Main reasons for moving into Cessnock
- Main reasons for residing in current location
- Current and preferred locations for residing³
- Main reasons for liking preferred locations

³ This aspect was not well represented by the survey results due to the format of this question being an open-ended question. Many participants did not specify the exact location. Due to the low reliability of this data, the result will not be presented and discussed in the main report. The raw data is included in the Appendix for reference.

- Important aspects in the choice of location within budget

The survey asked participants about the following aspects of their housing preferences:

- Lengths of living in current home
- Type of housing currently occupied
- Main reasons for choosing the current housing type
- Housing type preferences within budget
- Important aspects in the choice of housing within budget
- Barriers to accessing preferred housing types.

2.3 Survey findings on locational preferences

What were the main reasons for moving to Cessnock?

Being closer to work was one of the primary reasons for people moving to Cessnock. Other reasons that were mentioned included affordable house prices/cheaper price to buy a house, they wanted to be closer to family, and they wanted to have a better lifestyle. Some typical responses are listed below and a 'word cloud' of keywords from responses to this question is provided at Figure 4.

WHAT SURVEY PARTICIPANTS SAID...

"It was closer to my work."

"I moved here for a job."

"Sister was living down here, so I visited her and then I got a new job here."

"I wanted to buy a property with some land and Cessnock is an area that has those types of properties."

"We bought a house and went from renting to purchasing a property and essential for our families and work."

"It's a lot cheaper to live here."

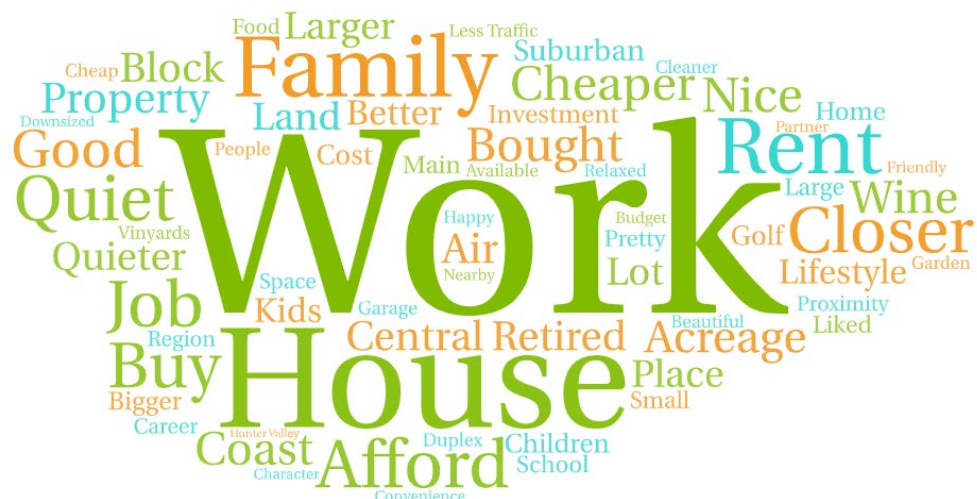
"Because the houses in Cessnock were cheaper than Maitland."

"Better lifestyle than Lake Macquarie and the houses were affordable."

"Like the area in general as it has a character and the people are friendly."

"We like the area, very pretty and the wine, vineyards."

FIGURE 4: MAIN REASONS FOR MOVING INTO CESSNOCKAREA WORD CLOUD

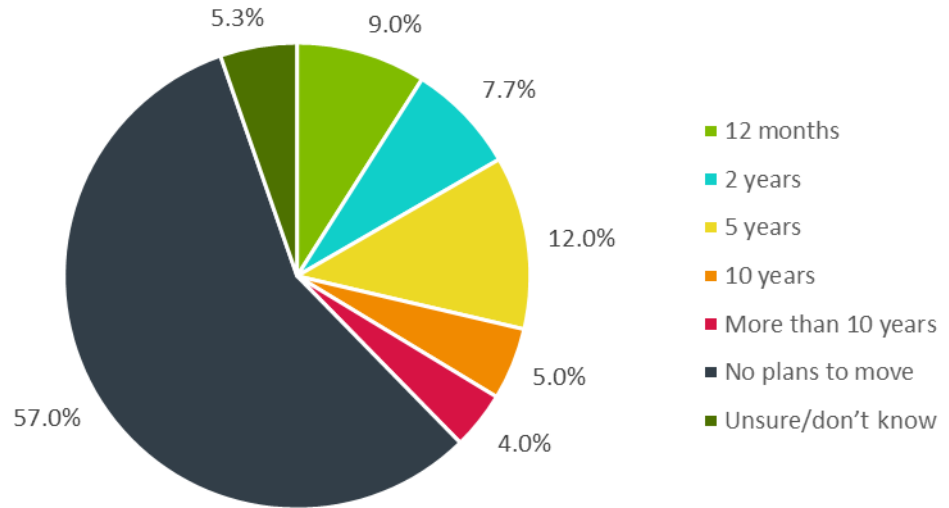


Source: SGS Economics and Planning; Myriad Research

How many households are planning to move?

Over half of participants (57 percent) have no plans to move in the foreseeable future. Collectively 28.7 per cent intend to move within 1 to 5 years' time, indicating that at least 1 in 4 households are planning to move in the short to medium term (see Figure 6).

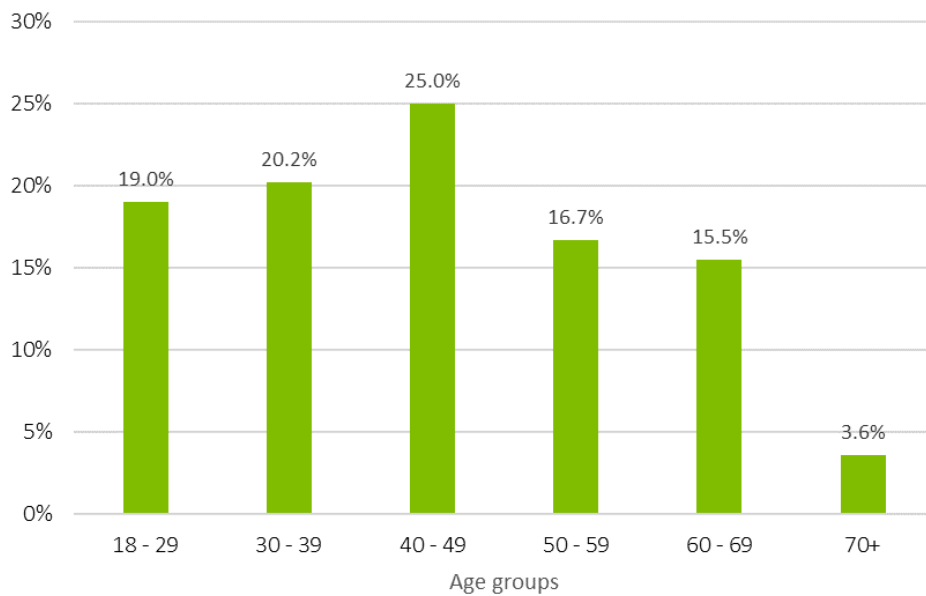
FIGURE 6: LIKELINESS OF MOVING BY TIMEFRAME



Source: SGS Economics and Planning; Myriad Research

Of households who are considering a move within the next 5 years, they are more likely to be in the 18 to 49 age group. Figure 7 shows the age brackets of survey respondent planning to move within the next 5 years. Participants in the 40 to 49 age brackets are the largest proportion considering moving in the next 5 years (25 per cent), followed by participants in the 30 to 39 age brackets. Of the participants who are considering a move within the next 5 years, most were looking to move into a house on separate lot (80.2 per cent).

FIGURE 7: CROSS TABULATION – MOVING WITHIN 5 YEARS AND AGE GROUPS



Source: SGS Economics and Planning; Myriad Research

What were the main reasons for wanting to move to the preferred location?

For people wanting to move to a new location, some of the popular places that participants mentioned were: Newcastle (for job opportunities, better infrastructure, more amenities and city lifestyle), Cessnock (to stay in the same area and to stay close to friends and family), Kurri Kurri (to stay in the same area and to be close to friends, family and work) and Maitland (for better infrastructure and more amenities).

The most common response participants stated for wanting to move to their preferred location was to be close to family. Other common responses were being close to work and to the beach and wanting to either buy a bigger house or needing to downsize to a smaller house. Some participants also mentioned wanting to move to somewhere with better access to infrastructures such as hospital, school, shops and public transport.

Some participants indicated that they want to stay in the same area because they like the area and know the neighbourhood well. Some typical responses are listed below and a 'word cloud' of keywords from responses to this question is provided in Figure 8.

WHAT SURVEY PARTICIPANTS SAID...

"Because I grew up there and that's where my kids live."

"For job opportunities and being closer to more things, good and services, hobbies etc."

"By the sea and at the beach, sea breeze."

"Probably because it's closer to the schools and shopping centres."

"Don't want to leave the area just because my friends and family are here."

"I would move there for another job, but I have no plans to move so no particular reason."

"Affordability of the area and family lives here."

"Close to doctors and family, close to ocean."

"Around the corner, more convenient to town and it's a nice area, scenery, wineries."

"Better infrastructure, better roads, bigger hospitals, more schools, better public transport."

"More services, more things to do, family."

"Because Cessnock is pretty empty and not many facilities. We don't receive many services from the council. I lived at Maitland when I was little, and the facilities are a lot better than Cessnock. Maitland has a good working opportunity for my kids, and the public transport is very good."

"If we were unable to drive and our health deteriorated, we'd have to move to that location as it's convenient to shops and health services."

"Because we want to live in a house on a large beautiful acreage, we want land with a beautiful view."

FIGURE 8: MAIN REASONS FOR THE PREFERRED LOCATION WORD CLOUD



Source: SGS Economics and Planning; Myriad Research

Important aspects in the choice of location within budget

Participants were asked to rate on a scale of ‘very important’ (5) to ‘not important’ (1), the importance of various factors in their choice of housing location, if they were to move. Table 1 shows the average importance of various location aspects.

Safety and security was the attribute that attracted the highest rating of importance (4.4 out of 5). Cost and affordability attracted the second highest number of nominations as “very important” vote, followed by convenient to health and medical services (4.2 out of 5).

Some other aspects that received relatively high scores were the locations convenient to shopping centres, cafes, markets and convenient to other family, friends, social network.

The aspects that received an average score below 3 (somewhat important) were sporting and recreational facilities, community centres and churches, schools, childcare, other education, and public transport’.

These results need to be considered in light of the strong representation of older participants and couple families with children living at home. It is likely that older people are more likely to value proximity to health facilities and local amenities such as shopping centres.

TABLE 1: AVERAGE SCORES OF THE LOCATION ASPECTS

Location aspects	Average score out of 5
Convenient to work	3.2
Convenient to other family, friends, social network	3.7
Convenient to public transport	2.9
Convenient to main roads (for private transport)	3.3
Convenient to footpaths, walkways and cycle ways	3.2
Convenient to schools, childcare, other education	2.7
Convenient to community centres and churches	2.5
Convenient to shopping centres, cafes, markets	3.8
Convenient to business services and facilities	3.6
Convenient to health and medical services	4.2
Convenient to bushland or vineyards	3.0
Convenient to sporting and recreational facilities	2.8
Views and general outlook	3.6
Local character and heritage	3.1
Community atmosphere	3.6
Safety and security	4.4
Cost and affordability	4.3

Source: SGS Economics and Planning; Myriad Research

2.4 Survey findings of housing preferences

What were the main reason for choosing the current housing type?

Most participants are currently living in a house on separate lot (92 per cent). Family was also the most common response when participants where asked about their main reasons for choosing the current housing type. Instead of being close to family, most participants mentioned family in terms of needing space for family.

Although the majority of participants had chosen to move to a house with yard to raise children, some participants have downsized into smaller dwellings. Some typical responses are listed below and a ‘word cloud’ of keywords from responses to this question is provided at Figure 9.

WHAT SURVEY PARTICIPANTS SAID...

“Always used to live on acreage, so chose a house on a separate lot. Like this type of housing.”

“Because I like the rural atmosphere.”

“I wanted a spacious yard for kids.”

“We had kids at the time and needed the space to raise the kids.”

“We wanted to build our own house with lots of space.”

“Because of the cost of the house, the convenience to work and the nearness to family.”

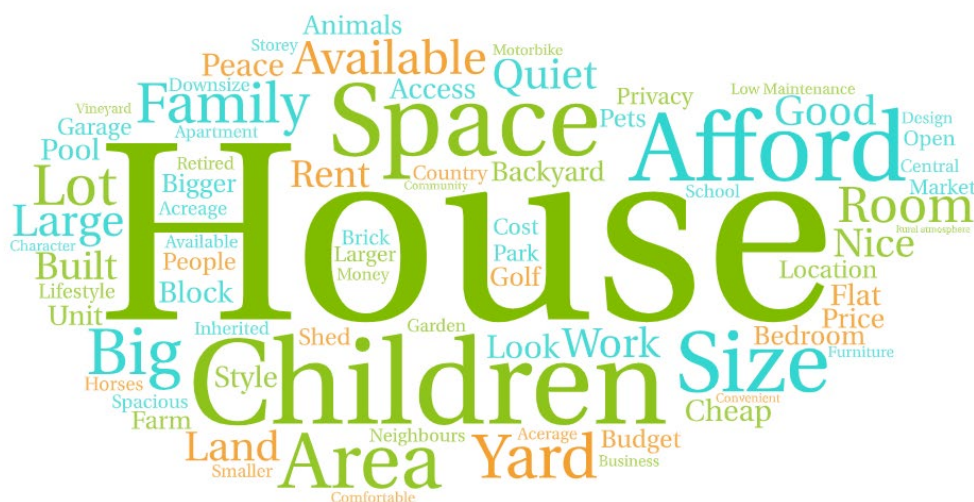
“It was just what we could afford at the time.”

“I liked the design of the house.”

“I was living on a house with 5 acres and wanted to downsize to house on a smaller land size.”

“Less work as I get older, not a big backyard.”

FIGURE 9: MAIN REASONS FOR CHOOSING CURRENT HOUSING TYPE WORD CLOUD



Source: SGS Economics and Planning; Myriad Research

Current housing type

Most participants are living in a house on separate lot (92 per cent), and a small percentage are living in a flat, unit or apartment (4.7 per cent). Very few participants are living in a duplex (2 per cent), or semi-detached dwelling (0.7 per cent), see Table 2.

TABLE 2: CURRENT HOUSING TYPE

Housing types	Participants existing housing type count	Participants existing housing type share
House on separate lot	276	92.0%
Semi-detached, row or terrace house, townhouse	2	0.7%
A flat, unit or apartment	14	4.7%
In a duplex/villa unit	6	2.0%
Senior's retirement village & aged care accommodation	1	0.3%
Other dwelling type, e.g., caravan, cabin, houseboat	1	0.3%
Total	300	100.0%

Source: SGS Economics and Planning; Myriad Research

Land size for house on separate lot

Out of the 276 participants who are living in a house on separate lot, 49.3 per cent are on an acreage block, followed by 21 per cent who live on a large lot, see Table 3. Large lots are residential lots that are greater than 800 square metres. Rural blocks/acreage are those located in a rural setting, and they may or may not be primarily for residential use.

TABLE 3: CURRENT LAND SIZE OF HOUSE ON SEPARATE LOT

Land size	Existing land size count	Percentage of existing house on separate lot group
Small (up to 250 sqm)	11	4.0%
Small medium (250 - 500 sqm)	22	8.0%
Medium (500 - 800 sqm)	49	17.8%
Large (more than 800 sqm)	58	21.0%
Rural block/acreage	136	49.3%
Total	276	100.0%

Source: SGS Economics and Planning; Myriad Research

Out of the 136 participants who identified as living on a rural block or acreage, 50 per cent of them have a land size between 800 and 1,200 sqm, while 30.9 per cent of them have a land size of over 4,000 sqm.

TABLE 4: CURRENT LAND SIZE FOR RURAL BLOCK/ ACREAGE

Size of the rural block/ acreage	Existing size of the rural block/ acreage count	Percentage of existing rural block/ acreage group
800 - 1200 sqm	68	50.0%
1200 - 2000 sqm	11	8.1%
2000 - 4000 sqm	15	11.0%
Over 4000 sqm	42	30.9%
Total	136	100.0%

Preferred housing type

There was a mismatch between what participants want and the type of housing they are currently living in.

A house on separate lot was the most common housing type that participants are currently living in (92 per cent), however only 77 per cent of participants would choose this housing type if they were to move (see Table 5). This means that 15 per cent of all participants are living in detached housing but would prefer to live in a different type of housing

While only 4.7 per cent of participants are living in a flat, unit or apartment, 11 per cent of participants would choose this housing type if they were to move (see Table 2). This indicates that 6.3 per cent more participants would likely to live in a flat, unit or apartment in the future if there is available stock.

Only 0.3 per cent of participants are living in a senior’s retirement village or aged care accommodation, however 7 per cent would choose this housing type if they were to move. This indicates that 6.7 per cent more participants were likely to live in a senior’s retirement village in the future if there is available stock.

There were some preferences for semi-detached and duplex, at 1.3 per cent and 2.3 per cent respectively.

TABLE 5: PREFERRED HOUSING TYPES

Housing types	Preferred housing types count	Preferred housing types share
House on separate lot	232	77.3%
Semi-detached, row or terrace house, townhouse	4	1.3%
A flat, unit or apartment	33	11.0%
In a duplex/villa unit*	7	2.3%
Senior’s retirement village & aged care accommodation	21	7.0%
Other dwelling type, e.g., caravan, cabin, houseboat	3	1.0%
Total	300	100.0%

Source: SGS Economics and Planning; Myriad Research *also referred to as dual occupancy

Age was a factor that could influence people’s choice of housing type (see Table 6). Participants aged 50 and above were less likely to prefer a house on separate lot than participants in the 18 to 49 age group. Participants aged 50 and above were more likely to prefer a more compact dwelling form such as semi-detached or a flat, unit or apartment. Senior’s retirement village or aged care accommodation was a preference for participants aged 50 and above but not for younger participants.

TABLE 6: PREFERRED HOUSING TYPES AND AGE GROUPS

Housing types	18-49 years		50 years and above	
	Preferred housing types count (18-49)	Preferred housing types share (18-49)	Preferred housing types count (50+)	Preferred housing types share (50+)
House on separate lot	128	92.8%	104	64.2%
Semi-detached, row or terrace house, townhouse	1	0.7%	3	1.9%
A flat, unit or apartment	7	5.1%	26	16.0%
In a duplex/villa unit*	1	0.7%	6	3.7%
Senior's retirement village & aged care accommodation	0	0.0%	21	13.0%
Other dwelling type, e.g., caravan, cabin, houseboat	1	0.7%	2	1.2%
Total	138		162	

Source: SGS Economics and Planning; Myriad Research *also referred to as dual occupancy

For participants who preferred a house on separate lot, most preferred rural blocks/acreage land sizes (They comprised 39.7 per cent of participants who preferred house on separate lot, see Table 7).

TABLE 7: PREFERRED LAND SIZE FOR HOUSES ON SEPARATE LOTS

Land size	Preferred land size count	Percentage of house on separate lot preference
Small (up to 250 sqm)	17	7.3%
Small medium (250 - 500 sqm)	20	8.6%
Medium (500 - 800 sqm)	51	22.0%
Large (more than 800 sqm)	52	22.4%
large lo	92	39.7%
Total	232	100.0%

Source: SGS Economics and Planning; Myriad Research

However, the overall number of participants who preferred rural block/ acreage land size was less than the number of participants who are currently living on rural block/ acreage land.

There were slightly more participants who preferred over 4,000 sqm land size than the number of participants who are living on them (see Table 8). This indicates that despite some preferences for smaller blocks of land and smaller dwelling types, there was still a relatively stable amount of people who would prefer larger rural blocks and bigger dwellings.

TABLE 8: PREFERRED LAND SIZE FOR RURAL BLOCK/ ACREAGE

Size of the rural block/ acreage	Preferred size of the rural block/ acreage count	Percentage of rural block/ acreage preference
800 - 1200 sqm	19	20.7%
1200 - 2000 sqm	9	9.8%
2000 - 4000 sqm	19	20.7%
Over 4000 sqm	45	48.9%
Total	92	100%

Source: SGS Economics and Planning; Myriad Research

What do different households prefer?

The share of participants who preferred detached housing was most pronounced for the 'couple family with children' households.

A house on separate lot was also the most preferred housing type for couple with no children living at home households and lone person households, but to a lesser extent (see Table 9). 70 per cent of couple families with no children and only 53.2 per cent of lone person households would prefer to live in a house on a separate lot. Over 25 per cent of lone person households would prefer to live in a flat/unit or apartment. These two household types also showed an appetite for senior's retirement village and aged care accommodation.

TABLE 9: DIFFERENT HOUSEHOLDS' PREFERRED HOUSING TYPES

Household types	No. of participants in each household type	House on separate lot	Semi-detached, row or terrace house, townhouse	A flat, unit or apartment	In a duplex/villa unit	Senior's retirement village & aged care accommodation	Other dwelling type, e.g., caravan, cabin, houseboat	Total
Couple with children living at home	116	91.4%	1.7%	5.2%	1.7%	-	-	100.0%
Couple with no children living at home	86	69.8%	1.2%	7.0%	4.7%	16.3%	1.2%	100.0%
Lone person household	47	53.2%	2.1%	25.5%	-	14.9%	4.3%	100.0%

Source: SGS Economics and Planning; Myriad Research

Factors that influence housing choices

All housing aspects listed were relatively important, with an average score above 3 out of 5, see Table 10. Some of the higher rated ones were 'price/ affordability', 'privacy', 'onsite car parking', 'storage areas, garage and sheds', and 'energy efficiency'.

'Size (total floor space) and 'size of yard/ garden' were important aspects for participants when considering moving. These aspects were also mentioned when asked about the main reasons for choosing their current house, see Figure 9. However, compared to some of the other aspects, there were fewer participants who rated 'size (total floor space) and 'size of yard/ garden' as 'very important'. They only received an average score of 3.9 and 3.8 respectively. This indicates that some participants were willing to trade off these aspects for 'price/ affordability' or 'privacy'.

TABLE 10: AVERAGE SCORE OF FACTORS THAT INFLUENCE HOUSING CHOICES

Housing aspects	Average score out of 5
Privacy	4.5
Price/affordability	4.5
Onsite carparking – availability/number of spaces	4.4
Storage areas, garage and sheds	4.3
Energy efficiency	4.2
Low maintenance house/property	4
Size (total floor space)	3.9
Pet friendly (including approval if renting)	3.9
Number of bedrooms	3.8
Size of yard/garden	3.8
Single level / accessible for special needs	3.6
Rural aspect/outlook	3.6
Number of levels	3.1

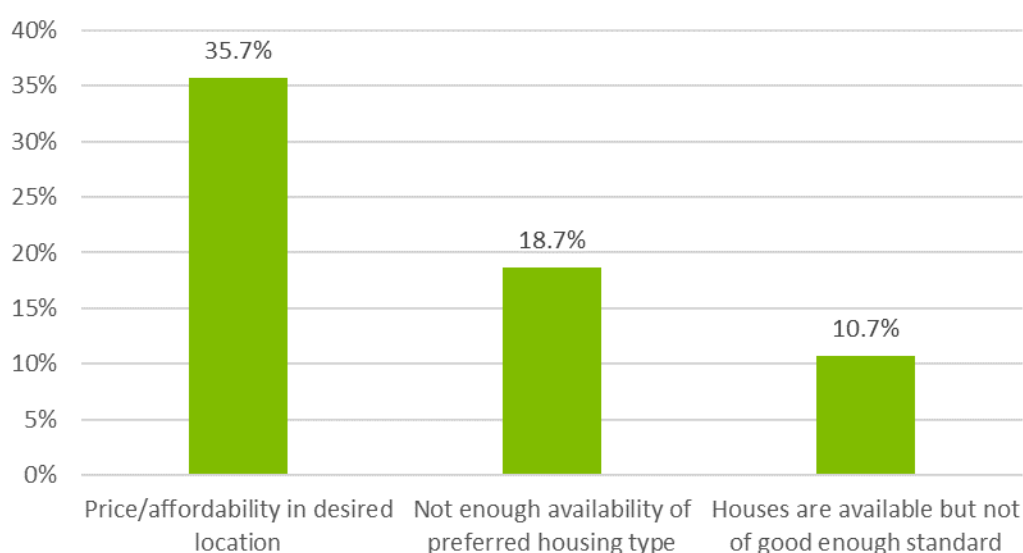
Source: SGS Economics and Planning; Myriad Research

Barriers to getting preferred type of housing

Participants were asked to identify any potential barriers in being able to secure their preferred type of housing in their preferred location, see Figure 10. Out of all participants, 50.3 per cent saw a potential barrier, and 49.7 per cent did not see any potential barriers.

For participants who identified a barrier, the most common response was ‘price/ affordability in desired location’ (35.7 per cent), followed by ‘not enough availability of preferred housing type’ (18.7 per cent) and ‘houses are available but not of good enough standard’ (10.7 per cent).

FIGURE 10: BARRIERS TO PREFERRED HOUSING TYPE IN PREFERRED LOCATION



Source: SGS Economics and Planning; Myriad Research

Figure 17 shows what type of housing type was preferred for each response about the potential barrier. Most participants who preferred ‘house on separate lot’ saw ‘price/affordability in desired location’ as a potential barrier (83 participants, or 27.7 per cent

of all participants). Only three participants who preferred semi-detached dwellings saw a potential barrier. The same goes to participants who preferred duplex or villa unit.

Most participants who preferred a flat, unit or apartment saw 'price/affordability in desired location' as a barrier.

Most participants who preferred senior's retirement village or aged care accommodation saw 'not enough availability of preferred housing type' as a barrier (4 participants, or 1.3 per cent of all participants).

TABLE 11: PREFERRED HOUSING TYPES AND BARRIERS

Preferred housing types	'Not enough availability of preferred housing type' count	'Price/affordability in desired location' count	'Houses are available but not of good enough standard' count
House on separate lot	42	83	24
Semi-detached, row or terrace house, townhouse	1	1	2
A flat, unit or apartment	8	18	5
In a duplex/villa unit	0	3	-
Senior's retirement village & aged care accommodation	4	2	1
Other dwelling type, e.g., caravan, cabin, houseboat	1	-	-
Total	56	107	32

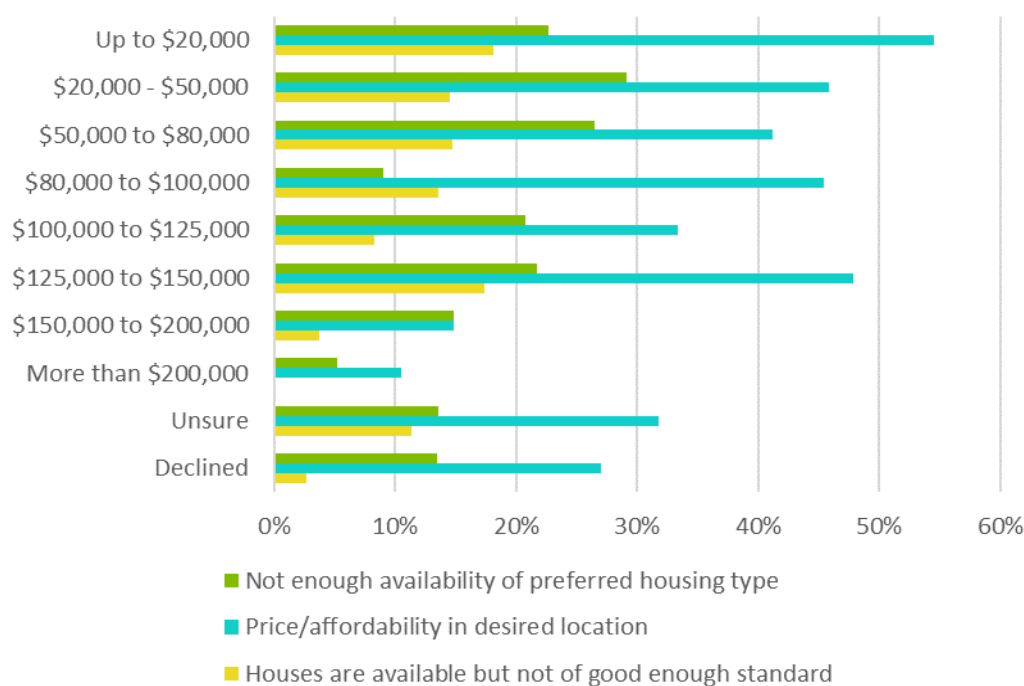
Source: SGS Economics and Planning; Myriad Research

Price/ affordability in desired location

Household annual income could have an impact on people's ability to purchase or rent their desired property, this barrier was more prominent for households with an annual income less than \$150,000, see Figure 11. Most participants have an annual household income of \$20,000 to \$50,000. Most participants in this income range reported 'price/ affordability in desired location' as a potential barrier (45.8 per cent of participants in the \$20,000 to \$50,000 annual income range).

The other two barriers 'not enough availability of preferred housing type' and 'houses are available but not of good enough standard' were less dependent on annual household income.

FIGURE 11: ANNUAL HOUSEHOLD INCOME AND BARRIERS TO DESIRED HOUSING TYPE IN DESIRED LOCATION



Source: SGS Economics and Planning; Myriad Research

Participants' annual household income largely reflected the 2016 Census data, where most households had an annual income of 20,800 to 51,999 dollars (28.8 per cent), see Table 12.

TABLE 12: HOUSEHOLDS ANNUAL INCOME 2016 CENSUS

Total household annual income	Count	Percentage of total households
Up to 20,799	1,325	5.9%
\$20,800 - \$51,999	6,442	28.8%
\$52,000 to \$77,999	3,458	15.4%
\$78,000 to \$103,999	2,481	11.1%
\$104,000 to \$129,999	2,036	9.1%
\$130,000 to \$155,999	1,155	5.2%
\$156,000 to \$207,999	1,154	5.2%
Over \$208,000	784	3.5%
Negative income	43	0.2%
Nil income	202	0.9%
Partial income stated	1,532	6.8%
All incomes not stated	627	2.8%
Not applicable	1,162	5.2%
Total	22,401	100.0%

Source: SGS Economics and Planning; ABS 2016

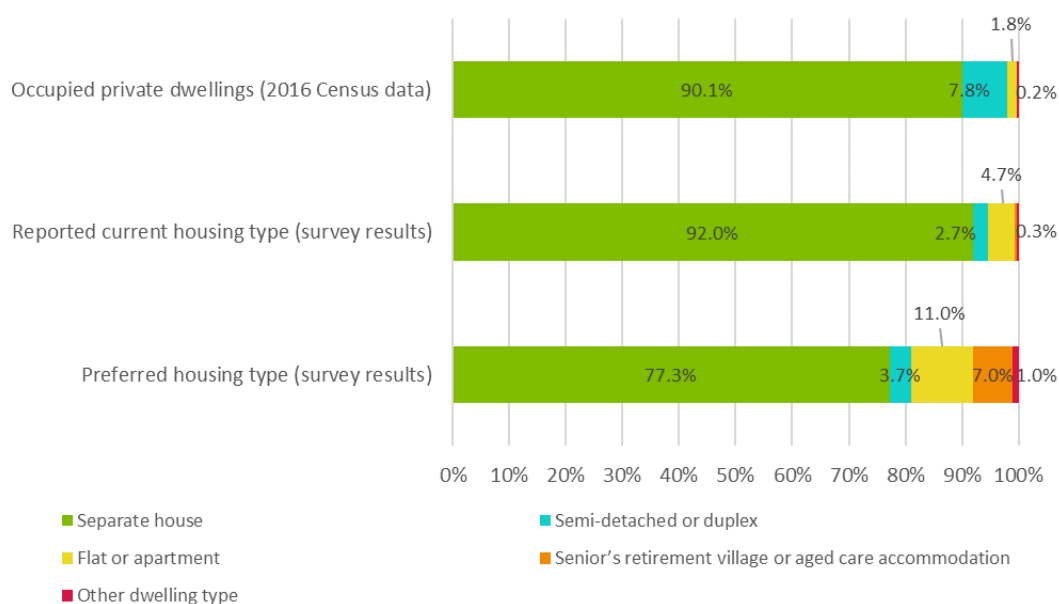
2.5 Key findings

Figure 12 reports the different results about housing types from the Census data and the housing preferences survey conducted as part of this study. The key findings from the housing preferences survey are:

- The key locational drivers emerged were ‘close to family’, ‘close to work’ and ‘affordable price for desired dwelling type’.
- People at different life stages have different demand for services and amenities. For example households with school aged children need access to schools, while older people need access to medical services and to be close to shops.
- Preferences for housing type were age dependent. Participants aged 18 to 49 were more likely to prefer a house on separate lot than older participants- older participants were more likely to prefer semi-detached, apartment and senior’s retirement village.
- Preferences for housing type were life stage dependent. Households with children were more likely to choose a house on separate lot than other households, whereas households with no children and lone person households showed a stronger preference for more compact housing types.
- Flat or apartments were more popular than semi-detached or duplexes as a housing type preference.
- Flat or apartments were most popular among participants aged 50 and above and lone person households.
- Separate houses were most popular among participants’ aged 18 to 49 and couple households with children.

The study illustrates that people’s housing needs and location preferences are largely influenced by the life stage they are in. Young couples are more likely to move around because of work, they have less requirement for access to amenities and services. Couples with young children are more likely to prefer bigger detached houses with land for children to play. Couples with school aged children are more likely to prefer locations close to schools and they are less likely to move while their children are still attending school. Older couples are likely to downsize to smaller dwellings (that were duplexes, apartments or retirement homes) that are easier to manage and value proximity to family members and amenities.

FIGURE 12: SUMMARY OF FINDINGS ABOUT HOUSING TYPES



Source: SGS Economics and Planning; Myriad Research, ABS 2016

Limitations

The survey had a greater representation of people over 50, and a weaker representation of people under 30 than the population of Cessnock. It also had a substantially higher representation of people who owned or were mortgaging their own home. This means that the needs of young people and young families, (who are more likely to rent) are under-represented. It is likely that a more representative sample would have some differences in the results. This could include a greater preference than the study showed for infill housing, in either flats/units or apartments or villas/duplexes, and would have provided greater insight into the experiences of these groups.

3. CHOICE MODELLING

Choice modelling can help us understand how people value the different attributes of housing like type, size, location and price. This section presents the modelled housing choices of Cessnock residents and compares that to the current supply of dwellings.

3.1 Model overview

People weigh up lots of factors when making choices between different products. They think about the how much the products cost, the quality and durability of the products, whether the products suit their needs and many other factors. Some factors have a big influence on our decisions and some have a smaller influence. Choice modelling helps us understand how people make decisions by putting numbers on those factors and how much influence they have on a decision.

SGS and Prescience Research applied the choice modelling approach to help Council understand how people make choices in the Cessnock housing market. Home type, location, dwelling size, garden size, parking and price are all important factors when weighing up different properties to either rent or buy. This project surveyed 143 Cessnock residents to understand how important these factors are in their housing choices.

Participants were given a set of hypothetical choices between four different options. Figure 13 gives an example of one of the choices, each of the four properties has different attributes that influenced the decision made. The participants repeated this process eight times with different options each time. The properties were randomly allocated to each participant from 300 different combinations of the attributes; type, location, size, parking and price.

FIGURE 13 AN EXAMPLE OF A CHOICE TASK

	Option 1	Option 2	Option 3	Option 4
Home type	Semi-detached / villa / duplex	Flat, unit or apartment in block	House on a separate lot	House on a separate lot
Where the home is located	Southern Area Village	Cessnock Town Centre	Kurri Kurri Suburban	Southern Area Rural
Property size ^(?)	1 bed 65 sq.m floor Small garden (eg. 100 sq.m)	2 bed 125 sq.m floor	3 bed 175 sq.m floor Large garden (eg. 500 sq.m)	4+ bed 250+ sq.m floor 50,000 sq.m (12.5 Acres, 5 Ha)
Parking spaces (flat / villa)	165 sq.m	125 sq.m	675 sq.m	50,000 sq.m
Cost	2	1		
	\$314,000	\$314,000	\$288,000	\$349,000
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Given what you know you can afford, would you really buy the home you chose above?

Source: Prescience Research, 2019

As respondents proceeded through their choice tasks, the changing make-up of the homes continually presented trade-offs between the different attributes (for example, a larger block of land vs higher price) such that the utility of each attribute on choices could be established.

The hypothetical choices of all participants were then modelled to understand which attributes were most important in their choices. The modelling shows how valuable each attribute is by estimating how much they contribute to the chance that someone will actually choose a property. This indicates the value, or 'utility' in economic terms, of those attributes. Appendix 3 gives a full description of the survey design and modelling method. The results of the modelling are explored below.

3.2 Choice model values

As noted above, choice modelling gives us information about how people make property choices by estimating the relative value of the different attributes that make up a property. The choice values and overall influence of these attributes in the Cessnock housing market are shown in Figure 14. These are the average results for the whole survey sample. A higher value in the influence column indicates that an attribute is more valued (see description in text box below figure).

The choice model indicates that home type is the most influential attribute in decision making. This is followed by the price, number of parking spaces (if selecting a semi or flat) and home size. The geographic zone, character area (i.e. town centre, suburbs or rural), garden size and the size of rural lots are the least influential attributes in decision-making.

Within the **home type** attribute, a separate house is the most preferred dwelling type on average. This is followed by semi-detached dwellings, and then flats/apartments. However, it is important to note that while detached dwellings are the most preferred home type on average, this does not necessarily mean that *all residents* in Cessnock want to live in a detached dwelling. Some prefer smaller dwelling types and this is explored as part of the market simulation in the next section.

Geographic zone was one of the least influential attributes. There was a slight preference to live in the Cessnock 'zone' and there was little difference between the Branxton, Kurri Kurri and Southern Area zones.

Location character type indicates the urban environment within those broader regions, for example, a town centre versus a rural area. Character type also had very little overall influence on participant choices, however, there was an overarching trend of preferences aligning with less developed areas. Rural areas had the highest value on average and town centres had the least value, with villages and suburbs in between.

Home size was a moderately influential factor on housing choices. There were two attributes which correspond to the realistic sizes of different housing types. Detached dwellings varied between two and four bedrooms (home size 1), while semi-detached dwellings and flats varied between one and three bedrooms (home size 2). Larger dwellings are preferred for both attributes.

While there were some differences in the value participants place on the **size of land**, these differences were generally small and did not have a large influence on participants' choices. Three attributes captured the value of the size of land that a property sits on:

- Garden size for separate houses in centres and suburban areas (non-rural) – there was a somewhat lower value placed on small gardens than medium and larger gardens
- Rural lot size for separate houses in rural areas – somewhat higher value placed on smaller rural lots (one or five acres) than very large lots (12.5 acres)
- Courtyards for semi-detached dwellings – some preference for either a small courtyard or small yard, over a large courtyard.

FIGURE 14 CHOICE VALUE OF HOUSING ATTRIBUTES IN CESSNOCK



Source: Prescience Research, 2019

HOW TO INTERPRET THE CHOICE MODELLING RESULTS

There are 10 ‘attributes’ broken down into different ‘levels’, for example, home type can be a house on a separate lot, a semi-detached dwelling or flat.

The green bars show the average ‘choice value’. This is how valuable one level is relative to other levels when making a choice. For example, two a four-bed house (choice value of 13) is more valuable than a two-bed house (choice value of 4).

The red numbers show the ‘influence’ of each attribute; this is the overall importance of an attribute when making a choice. For example, whether or not a property is a house or flat (home type) is far more influential on a decision than the number of parking spaces (influence score of 36 versus 11).

See Appendix 3 for a full explanation of these metrics.

The value of **parking space** was moderately influential on decision making. However, this was only considered for semi-detached dwelling or flat; separate houses had a default minimum of two car spaces in all options. Having at least one car park was a highly valuable attribute when choosing a semi-detached dwelling or flat

Price was also moderately influential. In each option, the price was set to the median price of in Cessnock then multiplied by a factor ranging from 0.7 to 1.3. This ensured prices were mostly realistic while providing sufficient variation to model the influence of price on decisions. However, there were some less realistic combinations of property type, location and price. There was an intuitive preference for cheaper dwellings amongst the study participants, while the lowest value across all attributes was placed on the most expensive dwellings.

3.3 Sub-group choices

It is also possible to breakdown the results for different sub-groups of the population to understand how different groups have different preferences. Appendix 4 explores these breakdowns in detail but some of the headline findings are:

- Younger households (those where the respondent who made housing decisions were under 35) and families generally have a strong preference for houses on separate lots with large gardens; however, the preference for separate housing decreases with age. Conversely the preference for semi-detached dwellings increases as households get older and more compact, low maintenance living is sought. Older households are generally more price sensitive than younger households and families.
- When the results for geographic zone are broken down by where participants currently live, they show strong alignment between current and preferred geographic zone. For example, people who live in Branxton still have a stronger preference for properties in Branxton than in Cessnock. Therefore, some of the overall preference for Cessnock is driven by the fact that it is the most populous zone and the sample had more participants from this area.
- The value of the location character type (town centre, suburbs, village or rural types) was also heavily influenced by where participants lived. Those who live in Cessnock and Kurri Kurri did not place a higher value on any particular character type but those who live in the Branxton and the Southern Area placed a much stronger value on rural living over town centres.
- Household income had a strong influence on the housing preferences. Those with a household income greater than \$80,000 per annum had a stronger preference for separate houses with more bedrooms and larger gardens. The opposite was true for those households earning less than \$80,000; these participants were particularly price sensitive, showing a much stronger preference for properties at 0.7 times the median price than households with higher income levels.

Note: The survey had an under representation of people aged 20-29, and an over representation of people aged 60-69. This meant that the preferences of the 60-69 age group biased the results for the younger household category, and it is difficult to identify the preferences of young adult households ie. those in the 20-29 bracket

3.4 Choice simulation

The choice simulation is a modelling technique to test what housing Cessnock residents might choose in an unconstrained market. That is, a market that has all available housing types – separate houses, semi-detached dwellings and flats – in all locations across the municipality.

Currently, resident’s real world housing choices are limited to what housing is available on the market. This exercise shows what housing people would choose if it is available (and they can afford it). It can inform the mix of housing supply that Council can encourage through its Housing Strategy and other policies.

The modelling step in the previous section estimates what relative value each individual survey participant places on the various attributes of a property when buying or renting in the market. The choice simulation uses those values to see what housing every participant would choose in a new market.

The new market is made up of 48 products which represent properties with different house types, locations and size. The products were spread evenly between the different house types and the different locations across Cessnock. This is intentionally different to the actual housing market in the municipality where new housing is only available in certain areas and mostly only as separate houses.

The key results are shown below, and Appendix 3 gives a full account of the methodology.

Demand by dwelling type

The simulation findings suggest that there is more demand for more compact housing types – semi-detached housing and apartments – than is currently available in Cessnock.

Applying the utilities discovered in the choice modelling exercise to the simulation suggested that while 90.1 per cent of existing housing stock is detached dwellings, only 79.7 per cent of households would prefer a detached dwelling; 17.5 per cent would prefer a semi-detached dwelling and the remaining 2.8 per cent would prefer an apartment.

These are similar findings to the survey preferences results. However, the option of ‘Senior’s retirement village or aged care’ was offered in the survey and was the preferred dwelling type for 7 per cent of households surveyed. Over 37 per cent of respondents were over the age of 60, and this could be interpreted as over a quarter of people over the age of 60 were looking for retirement village housing or aged care accommodation, which is often in the form of semi-detached/townhouse or villa housing. This could partially explain why the simulation results have shown more preferences towards semi-detached than flat or apartments (see Table 13).

TABLE 13: PREFERENCES COMPARED- EXISTING STOCK, SURVEY AND SIMULATION

Dwelling type	Existing stock (2016 Census)	Survey preference	Simulation results
Separate house	90.1%	77.3%	79.7%
Semi-detached or duplex	7.8%	3.7%	17.5%
Flat or apartment	1.8%	11.0%	2.8%
Senior’s retirement village or aged care accom.	-	7.0%	-
Others*	0.2%	1.0%	-

Source: SGS Economics and Planning; Prescience Research; Myriad Research; ABS Census

*The ‘others’ category includes caravan, cabin, houseboat, improvised home, tent and sleepers out.

Although there are differences between the simulation and survey findings in relation to dwelling types, both approaches suggest a notable appetite for alternative dwelling types to

detached housing. The findings show alternatives to the detached house are more popular with households than is reflected by the current housing stock.

Table 14 shows that different age groups have different preferences for housing types. Younger respondents (49 years and under) had less appetite for semi-detached and apartments than older respondents (50 years and above).

TABLE 14: HOUSING TYPE PREFERENCES BASED ON AGE GROUP

Housing type	Under 35 y.o	35 - 49 y.o	50 - 64 y.o	65 y.o and older
House on a separate lot 2+ car spaces	88.0%	89.4%	77.8%	57.7%
Semi-detached / villa / duplex	12.0%	10.6%	15.6%	38.5%
Flat, unit or apartment in block		-	6.7%	3.8%

Source: SGS Economics and Planning; Prescience Research

Demand by region

Most respondents were living in the Cessnock and surrounds region (41.3 per cent), followed by Kurri Kurri (28.7 per cent). The simulation results show that some respondents preferred a different region to where they currently reside in.

The most notable one was Branxton and surrounds. The share of respondents who preferred this region in the simulation was 7.7 percentage points more than the share of respondents who reside in this region. Branxton and surrounds region include Branxton Town Centre, Huntlee Town Centre, North Rothbury Village and Greta Village.

In the preferences survey, respondents mentioned the following reasons for wanting to move to the Branxton and surrounds region:

- “We bought property there. Larger area to run around for our cattle.”
- “Just closer for the husband to travel for work.”

The Southern Area also attracted more respondents than those who currently reside there (4.2 percentage points more), see Table 15.. The Southern Area covers several villages including Millfield, Paxton, Ellalong, Wollombi and Mulbring.

In the preferences survey, respondents mentioned the following reasons for wanting to move to the Southern Area:

- “Larger Property for the kids.”
- “Kids are grown up now, more space, acreage.”

TABLE 15: DEMAND BY REGION

Region	Distribution of choice modelling respondents	Simulation results	Percentage points difference
Branxton	18.9%	26.6%	7.7%
Kurri Kurri	28.7%	25.2%	-3.5%
Cessnock	41.3%	32.9%	-8.4%
Southern Area	11.2%	15.4%	4.2%

Source: SGS Economics and Planning; Prescience Research

Demand by dwelling type and region

In the simulation, the most popular product was house on a separate lot in Cessnock and surrounds (24.5 per cent), followed by house on a separate lot in Branxton and surrounds (21 per cent), see Table 16.

Branxton and surrounds and Kurri and Kurri and surrounds were the only locations where respondents would choose flat, unit or apartment as a housing type. Kurri and Kurri and surrounds was the most popular region for flat, unit or apartment.

For semi-detached, villa or duplex, respondents preferred Branxton and surrounds, Kurri Kurri and surrounds and Cessnock and surrounds. Cessnock and surrounds was the most popular region for semi-detached, villa or duplex.

TABLE 16: DEMAND BY DWELLING TYPE AND REGION

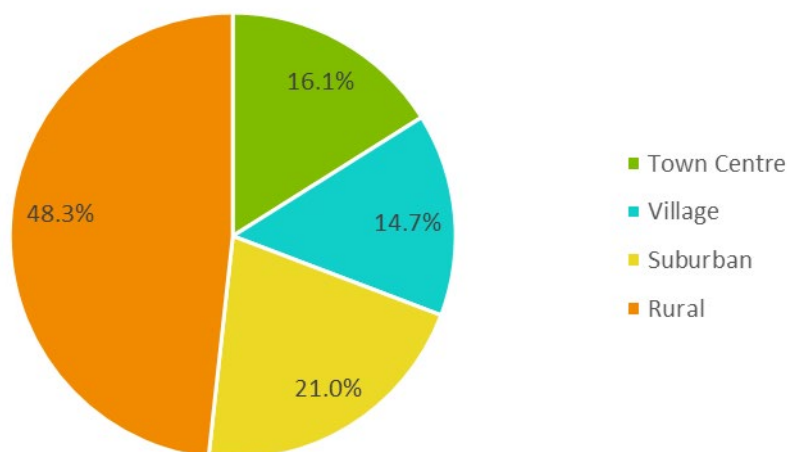
Housing type	Branxton	Kurri Kurri	Cessnock	Southern Area
House on a separate lot 2+ car spaces	21.0%	18.9%	24.5%	15.4%
Semi-detached / villa / duplex	4.9%	4.2%	8.4%	-
Flat, unit or apartment in block	0.7%	2.1%	-	-

Source: SGS Economics and Planning; Prescience Research

Demand by Character type

In the simulation, rural was the most popular choice for character type (48.3 per cent of all respondents), see Figure 15. Rural area describes the areas that are outside of town centre, village and suburbs.

FIGURE 15: PREFERENCES FOR CHARACTER TYPE-SIMULATION



Source: SGS Economics and Planning; Prescience Research

The table below combines the two previous analyses to show which character types are preferred across the four sub-regions of Cessnock. The most preferred location was the rural area of Cessnock and surrounds (18.2 per cent), followed by the rural area of Branxton and surrounds (14 per cent), and the rural area of Kurri Kurri and surrounds (10.5 per cent). It needs to be noted that the Cessnock and surrounds region covers a much greater area than the Branxton and Surrounds region which could have some impacts on the results.

TABLE 17: DEMAND BY CHARACTER TYPE AND REGION COMBINED

Character type	Branxton	Kurri Kurri	Cessnock	Southern Area
Town Centre	0.7%	4.9%	7.0%	3.5%
Village	4.2%	6.3%	2.8%	1.4%
Suburban	7.7%	3.5%	4.9%	4.9%
Rural	14.0%	10.5%	18.2%	5.6%

Source: SGS Economics and Planning; Prescience Research

3.5 Conclusions

The choice modelling and choice simulation have presented some clear messages to inform Council's planning for housing supply:

- Home type, location, size and price are all very important factors for residents when choosing a home to rent or buy.
- Most residents would prefer to live in a separate house but not all residents. There is a substantial latent demand for medium density housing forms which is greater than the current supply in Cessnock.
- Households under the age of 35, (often with young families), tend to show greater preference for separate houses while older residents often prefer semi-detached dwellings, villas or apartments. The poor sample size of 18-29 year olds mean that it is difficult to draw any conclusions about the housing needs of students or young couples compared to the over represented 30-39 age group.

LESSONS LEARNT FOR FUTURE STUDIES

Representation of different age groups

The survey and choice modelling sought to ensure a representative sample of the Cessnock community. While the sample broadly aligned with the demographics recorded in Census 2016, there were some discrepancies. The under representation of those aged 20-29 meant that the needs of very young households were poorly represented. The choice modelling also necessitated aggregation of age groups, resulting in a broad under 35 age group. This meant that the preferences of student households or young couples could not be distinguished.

Price in choice modelling

The inclusion of price in the choice modelling complicated the results. Given that choice modelling relies on a randomised allocation of different values for a series of attributes, this meant that choices were at times unrealistic. Eg. A 4 plus bedroom detached house in a desirable geographic zone could be presented with a similar price to an apartment in a less desirable area. It is recommended that future modelling revises the approach to price.

Choice modelling experiment refinement

The choice modelling experiment was complex and required extensive changes. A focus group was conducted to test the housing preferences survey, however it would have been more effective to use the focus group to test and refine the choice modelling experiment.

Ongoing value

Repeating the housing preferences survey and choice modelling experiment in the future will be invaluable. This will allow Council to track changes to housing preferences over time.

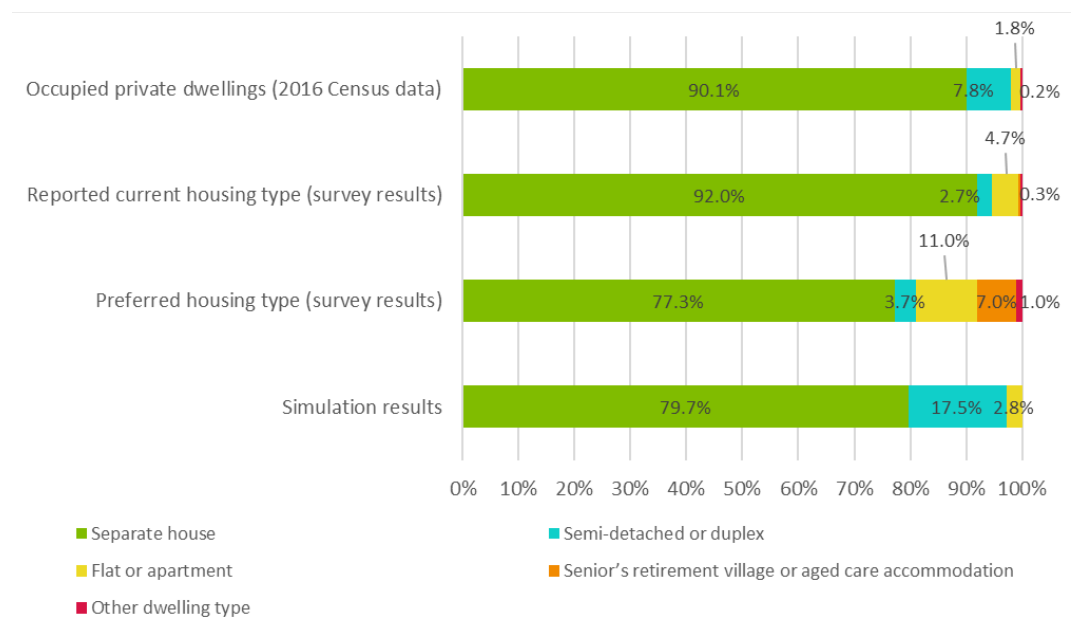
4. KEY FINDINGS

4.1 There is unmet demand for more compact dwellings

Both the survey preference and the simulation results indicated that a significant share of households would prefer more compact forms of housing (semi-detached or apartments).

The table below compares (i) the current mix of housing stock, (ii) the mix of dwellings of survey participants, (iii) the implied dwelling mix based on the housing preferences survey and, (iv) the results of the simulation, based on the choice modelling exercise.

FIGURE 16: EXISTING HOUSING MIX, SURVEY AND SIMULATION RESULTS



Source: SGS Economics and Planning; Myriad Research; Prescience Research; ABS Census

The survey results and simulation indicated that significantly fewer people would choose to live in separate houses who currently do, 77.3 per cent and 79.7 per cent respectively. In 2016, 90.1 per cent of all housing stock was not a detached house.

The survey results suggest that households that prefer semi-detached dwellings or apartments desire locations that are safe and have a community atmosphere, and that are convenient to shopping and health services. They also desire private, single level and low maintenance living that is affordable and has low overall living costs (i.e. energy and water efficient).

The highest demand for semi-detached housing was in Cessnock.

This suggests that to meet this demand in the market, semi-detached and flats should be in safe areas with a strong community identity, and where there is good access to services, particularly health services and be accessible to all life stages.

4.2 Housing preferences vary considerably with age

The market simulation indicated that younger households (those under 35) and families prefer detached housing, while preference for more compact living increases with age of respondents. Younger households overwhelmingly prefer detached houses (88 per cent of those aged 35 years and under, and 89.4 per cent of those aged between 35-49). It is noted that the preferences for 18-29 year olds were underrepresented in the choice modelling experiment, and these results are more consistent with the housing preferences of people aged 30 and over.

Preference for detached housing decreases remarkably with age, with only 57.7 per cent of those aged 65 and over preferring a detached house. The market simulation indicates that for those aged 65 and over, 38.5 per cent would prefer to live in a semi-detached while 3.8 per cent would prefer to live in a flat/apartment.

Age is assumed to be closely associated with household structure- those under 35 are more likely to have (or be planning to have) young families and require more space. As people get older, they are more likely to live alone, or in a couple with no children household.

The market simulation indicates there is likely to be latent demand for those aged between over 50 for semi-detached and flats/apartments.

4.3 Couples with no children and single person households value smaller and more affordable housing options

Single person households have a strong preference for smaller dwellings: 5.9 per cent would prefer a duplex/villas, 7 per cent would prefer flat/units or apartments and 16.3 per cent would prefer seniors' accommodation. Couple with no children households also have a strong preference for smaller dwellings: 2.1 per cent would prefer a duplex/villas, 25.5 per cent would prefer flat/units or apartments and 14.9 per cent would prefer seniors' accommodation.

The relatively strong preference for senior's accommodation suggests that many single person and couple with no children households are older persons. The choice model indicates that single person households have a slight preference for living in towns and suburbs, with little preference for rural settings.

4.4 Dwelling type is the most important factor in housing preferences

The choice modelling indicated that the attributes that wield the largest influence in households housing decisions are (in descending order):

- the choice of dwelling type
- price
- number of parking spaces (if in a semi-detached or flat)
- home size

The choice modelling findings suggest that some attributes have a more limited influence on housing decisions. Elements that were identified as less influential included geographical zone, character area (Town Centre, Small Centre, Suburb, Rural), garden size and the size of rural lots.

4.5 Price and affordability drive location and housing choice

Price and affordability are fundamental considerations in people's decision making about housing. Affordability was a reason for people moving to Cessnock (as it was cheaper than Newcastle and Sydney) and for deciding which part of Cessnock to live in.

Affordability is an important determinant of housing preference shifting towards more compact dwellings.

4.6 Affordability is the main barrier to obtaining preferred housing

More than 50 per cent of survey participants suggested that they experienced barriers to appropriate housing in Cessnock. Price and affordability was the main barrier (37 per cent), followed by not enough preferred housing type (19 per cent), and lastly, inadequate housing quality (2 per cent).

Survey participants who preferred a house on a separate lot were the most likely to state price and affordability as the main barrier, which is consistent with the increased costs associated with detached housing.

Low income households (those where the income is less than \$50,000) were most likely to state price and affordability as a barrier to housing in their preferred location. This may reflect the broader expectations of much of the community to having a detached house, as well as a lack of availability of viable affordable housing products. More compact housing was recognised as a more affordable housing option, however there is little available in the current housing market,

4.7 People value rural living on large blocks

The simulation highlighted that almost half of the community would prefer to live in a rural area, particularly around Cessnock and Branxton. The survey confirmed a preference for rural living but at a lower level- it showed that 39.7 per cent of people would prefer to live on rural blocks/ acreage. This is likely attributable to the smaller sample size in the choice modelling experiment.

For people who would prefer to live on rural land, almost half of those are seeking lots that are greater than 4,000 square metres. The survey results highlighted that the community places high value on large lots, and is part of why they live in Cessnock. It provides them with space for children, and is also associated with larger dwelling sizes.

4.8 Concluding remarks

Cessnock is a place where people value a strong community atmosphere, living near family and for many, living in rural areas.

However, there is a mismatch between the demand (preference for) and supply of different housing types in Cessnock, and these preferences vary across demographic cohorts. The current supply of housing is predominantly in the form of detached houses. However, this study has revealed that more people live in detached housing than may want to. This represents a mandate for Cessnock Council to encourage more compact and diverse housing options. This is further supported by the forecasted change in population characteristics.

The number of **older person** and **lone person households** is expected to grow significantly in the future, and these household types revealed a preference for more compact, semi-detached housing, that is currently not being met in the housing market. **Single family households** are also more likely to prefer semi-detached and apartment housing than other

cohorts. There are opportunities to better match housing supply to the preferences of these groups.

Opportunities need to be provided for older households to move into housing that is not only compact, but also low maintenance and accessible, and located in well serviced areas, particularly with good access to health care. This would have the added advantage of freeing up existing detached housing stock for younger families and alleviate the pressure to build more detached houses.

Housing costs are a major concern for residents, and people recognise that townhouses/villas and apartments are more affordable than detached housing. The households that are more likely to prefer semi-detached housing are also households that are typically more price sensitive. New semi-detached housing aimed at responding to this demand should be affordable.

There is also demand for **more affordable housing stock** particularly for households with low incomes. Increasing the provision of more compact dwellings (apartments and secondary dwellings) in and around centres that have access to services and amenities would assist in meeting this demand.

There is strong evidence to support the development of more compact and affordable housing in Cessnock however it will be critical to ensure that the sense of privacy so valued by the respondents is embodied in design.

Council has a role to play in facilitating the supply of new housing that better match the community's preferences. Residential development can better meet the needs of people moving within the LGA, as well as those who are moving into the LGA.

Council should consider steps to encourage greater diversity in housing types in Cessnock to meet the unmet demand for semi-detached and apartment dwellings. While this study has not considered supply side factors in detail, Council has three main avenues it can take to encourage housing diversity:

- Providing information to the property development sector about the demand for greater housing diversity in the municipality. This project provides a clear evidence base to send strong messages about the market potential for semi-detached dwellings in particular.
- Ensuring planning controls aren't creating barriers to development of more compact forms of housing. For example, through zoning controls or restrictions on amalgamating small lots that make development of more diverse housing unfeasible.
- Ensuring planning controls aren't promoting excessive development of detached housing in poorly serviced areas

APPENDIX 1 – POLICY REVIEW

The following section provides a summary of the different State and Local Government policies relevant to the Housing Preference Study. The review focuses on the diversity and types of housing, housing preferences, demographic trends relevant to housing provision and growth areas.

Hunter Regional Plan 2036

The Hunter Regional Plan 2036 was released by the NSW Government in 2016 to guide strategic planning in the Hunter Region. Cessnock LGA is situated at the Lower Hunter Region. Two Strategic Centres were identified: Cessnock and Kurri Kurri. Cessnock has two centres of local significance: Branxton and Huntlee and a critical industry cluster: Pokolbin viticulture area.

The Regional Plan identifies the following priorities for Cessnock Strategic Centre:

- Retain an administrative, retail and service function for the Local Government Area.
- Investigate opportunities to leverage the heritage character of the centre, and growth in wine tourism in Pokolbin.
- Provide additional housing in the adjoining town.
- Implement the Cessnock CBD masterplan.

The Regional Plan identifies the following priorities for Kurri Kurri Strategic Centre:

- Retain a retail and service function for surrounding communities.
- Leverage its proximity to the Hunter Expressway and existing significant industrial land.
- Investigate opportunities for urban renewal of the town centre and new housing opportunities.
- Develop and implement a masterplan for Kurri Kurri CBD.

Greater Newcastle Metropolitan Plan 2036

The Greater Newcastle Metropolitan Plan 2036 was released by the NSW Government in 2018 to set out strategies and actions that will drive growth across Cessnock, Lake Macquarie, Maitland, Newcastle and Port Stephens Local Government Areas (LGAs). The Plan sits under Hunter Regional Plan 2036 and guides local planning across the five Greater Newcastle Council area.

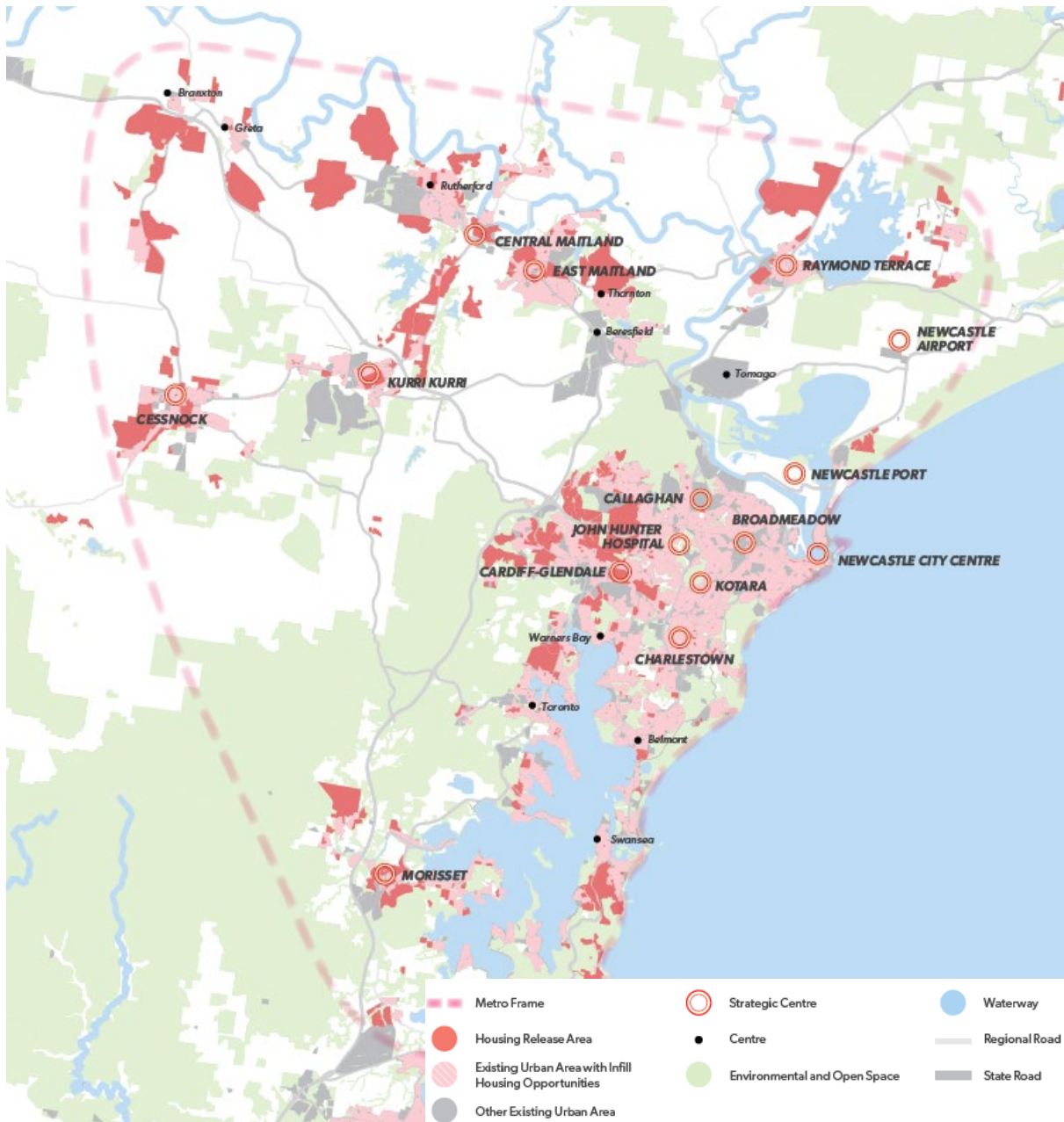
The Plan identifies **Cessnock, Kurri Kurri, Branxton** and **Greta** as lifestyle centres where rural setting needs to be protected. The total new dwellings for Cessnock are projected to be **6,350** by 2036, with 40 per cent greenfield and 60 per cent infill developments. The Plan suggests that the 60 per cent infill development target may be achieved a variety of housing types, including secondary dwellings, apartments, townhouses and villas. The focus of housing delivery in existing urban areas will be within strategic centres and along urban renewal corridors in the metro core.

The actions for **Strategy 19 Prepare local strategies to deliver housing** are:

- Reflects the priority to deliver infill housing opportunities within the existing urban areas
- Identifies new residential release areas if there is less than 15-year supply of land to meet dwelling projections

- Achieves a minimum residential density of 15 dwellings per hectare in housing release areas, with 25% of lots capable of providing small lot (less than 400 square metres) or multi-dwelling housing types
- Identifies individual councils greenfield and infill housing targets that deliver the overall 40% greenfield and 60% infill housing split across Greater Newcastle by 2036
- Is prepared in consultation with State agencies, industry and the community
- Ensures social and affordable housing requirements for Aboriginal people, and low and very low-income households are met (in consultation with Department of Family and Community Services).

FIGURE 17: HOUSING OPPORTUNITIES 2018



Source: Department of Planning & Environment 2018

Community Strategic Plan Cessnock 2027

The Plan was released by Cessnock City Council in 2017 to identify the community’s main priorities and aspirations for the future and to identify strategies for achieving these goals. The vision for Cessnock is that ‘Cessnock – thriving, attractive and welcoming’. The rating for

the statement ‘Quality housing is both available and affordable’ has declined from 3.88 in 2012 to 3.11 in 2016. The target for this measure is to maintain the rating. Residents’ priorities were:

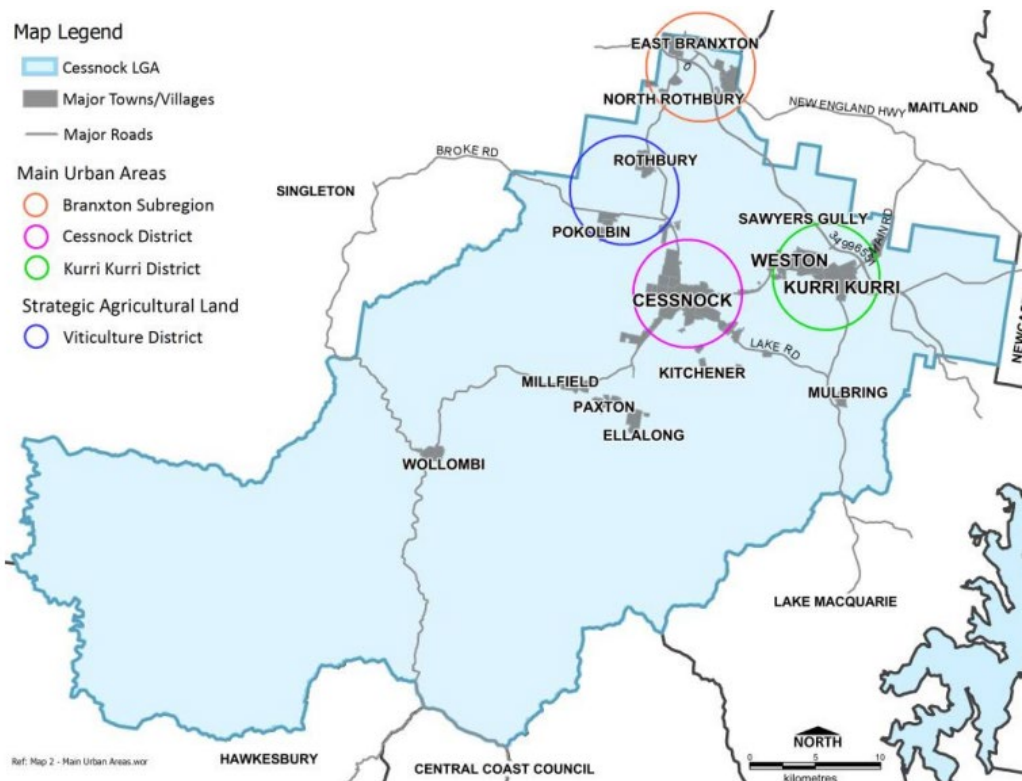
- Employment opportunities
- Maintenance of roads
- Health services
- Safety
- Community facilities
- Public transport

Kurri Kurri District Strategy

The Strategy was adopted by Cessnock City Council in 2018 to guide future public domain improvements, revitalise and differentiate the Kurri Kurri and Weston centres and encourage visitation, new business and redevelopment.

The Kurri Kurri District is the second most populated urban area in the LGA, Figure 18 shows the locations of the main urban areas, strategic agricultural land and major towns.

FIGURE 18: MAIN URBAN AREAS, CESSNOCK LOCAL GOVERNMENT AREA



Source: Cessnock City Council 2018

By 2036, the Kurri Kurri District is projected to increase to approximately 21,000 people and will need a minimum of 1,800 additional dwellings. It is expected that the majority of the growth will occur in the urban release areas in the north of the Hunter Expressway.

The vision for the District is “the Kurri Kurri District will be an active and accessible community supported by revitalised and distinct commercial centres, strong industry and high-quality open spaces”.

APPENDIX 2 – HOUSING PREFERENCES SURVEY INSTRUMENT

This appendix contains the survey instrument used for the housing preferences survey.

Town/area: No: /

Cessnock Housing Study – Resident Survey

Hello, my name is from Q&A Research, calling on behalf of the Cessnock City Council. Council is conducting an important study about future housing in the Cessnock area and would like to hear your views.

Can I firstly check that you live in the Cessnock City Council area? (close if no)

Would you be the best person in your household to talk to about housing choices? (if no, ask to speak to appropriate person; re-introduce or arrange call back if necessary)

And are you aged 18 years or over? (if no, ask for h'hold member who is, or close)

Start time:

1. What is your town, suburb or area?
check quotas

2a. How long have you lived in your current home? (total years)

2b. And how long have you lived in the Cessnock City Council area? (total years)

(if more than 10 years go to 3a)

2c. Where did you move from? (city/town/suburb/area)

2d. And what was your main reason/s for moving into the Cessnock area?
.....
.....

3a. Do you rent, own or are you purchasing your home?
rent 1 purchasing 2 (go to 4) own 3 (go to 4)

3b. (if renting) Is that public/supported or private housing? public 1 private 2

4. What is the main reason/s you live in your current location?
.....
.....
.....

5a. What type of housing do you currently live in?

- House on a separate lot 1
- What is your land size?** (approx. sq metres)
 - small (up to 250m²) i
 - small medium (250 – 450m²) ii
 - medium (450 – 600m²) iii
 - large (600 - 800m²) iv
 - larger, rural block/acreage
- (specify)* acres/hectares
- Semi-detached, row or terrace house, townhouse (one storey) 2
- Semi-detached, row or terrace house, townhouse (two or more stories) 3
- A flat, unit or apartment - in a one or two storey block 4
- A flat, unit or apartment - in a three or more storey block 5
- In a duplex/villa unit 6
- Flat, unit or apartment – attached to a house, eg. granny flat 7
- Seniors retirement village (independent living) 8
- Aged care accommodation (independent living) 9
- Aged care accommodation (dependent living) 10
- Other dwelling type, eg, caravan, cabin, houseboat 11

5b. What is your main reason/s for choosing this type of housing?

.....

.....

.....

6a. Are you likely to move from your current residence within the next...

- 12 months 1
- 2 years 2
- 5 years 3
- 10 years 4
- More than 10 years 5
- No plans to move 6
- Unsure/don't know 7

6b. And if you were to move from your current residence, where would you be likely to move to? (may be multiple)

(city/town/suburb/area)

6c. And why would you move to that location/s? (main reason)

.....

6d. And would you expect to be renting or buying your home? rent 1 buy 2

6e. And if you were to move, what would be your budget – just approximate is OK.

(don't read out, record actual, then circle relevant code) \$.....

if buying – house value

Under \$200,000	1	\$500,000 - \$600,000	7
\$200,000 - \$250,000	2	\$600,000 - \$700,000	8
\$250,000 - \$300,000	3	\$700,000 - \$800,000	9
\$300,000 - \$350,000	4	\$800,000 - \$900,000	10
\$350,000 - \$400,000	5	\$900,000 - \$1,000,000	11
\$400,000 - \$500,000	6	Over \$1,000,000	
		specify \$.....	

if renting – weekly rental

Under \$200	1	\$400 - \$500	4
\$200 - \$300	2	\$600 - \$700	5
\$300 - \$400	3	\$700 - \$800	6
		More than \$800 (specify)	\$.....

7a. And within your budget if you were to move, how important are the following aspects in your choice of location – on a scale of 1 to 5, where 5 = very important, 3 = somewhat important, 1 = not important at all. (rotate, mark first mention)

convenient to						
work	5	4	3	2	1	na/dk
other family, friends, social network	5	4	3	2	1	na/dk
public transport	5	4	3	2	1	na/dk
main roads (for private transport)	5	4	3	2	1	na/dk
footpaths, walkways and cycle ways	5	4	3	2	1	na/dk
schools, childcare, other education	5	4	3	2	1	na/dk
community centres, churches	5	4	3	2	1	na/dk
shopping centres, cafes, markets	5	4	3	2	1	na/dk
business services and facilities	5	4	3	2	1	na/dk
health and medical services	5	4	3	2	1	na/dk
bushland or vineyards	5	4	3	2	1	na/dk
sporting and recreational facilities	5	4	3	2	1	na/dk
views and general outlook	5	4	3	2	1	na/dk
local character and heritage	5	4	3	2	1	na/dk
community atmosphere	5	4	3	2	1	na/dk
safety and security	5	4	3	2	1	na/dk
cost and affordability	5	4	3	2	1	na/dk

7b. Are any other aspects important in your choice of location if you were to move? no

(if yes, specify)

8a. And within your budget, what housing type would you choose?

- House on a separate lot 1
- What is your land size?** (approx. sq metres)
 - small (up to 250m²) i
 - small medium (250 – 450m²) ii
 - medium (450 – 600m²) iii
 - large (600 - 800m²) iv
 - larger, rural block/acreage

(specify) acres/hectares
- Semi-detached, row or terrace house, townhouse (one storey) 2
- Semi-detached, row or terrace house, townhouse (two or more stories) 3
- A flat, unit or apartment - in a one or two storey block 4
- A flat, unit or apartment - in a three or more storey block 5
- In a duplex/villa unit 6
- Flat, unit or apartment – attached to a house, eg. granny flat 7
- Seniors retirement village (independent living) 8
- Aged care accommodation (independent living) 9
- Aged care accommodation (dependent living) 10
- Other dwelling type, eg. caravan, cabin, houseboat 11

8b. And how important are the following aspects in your choice of housing – on a scale of 1 to 5, where 5 = very important, 3 = somewhat important, 1 = not important at all. (rotate, mark first mention)

size (total floor space)	5	4	3	2	1	na/dk
number of bedrooms	5	4	3	2	1	na/dk
single level/accessible for special needs	5	4	3	2	1	na/dk
low maintenance house/property	5	4	3	2	1	na/dk
privacy	5	4	3	2	1	na/dk
energy efficiency	5	4	3	2	1	na/dk
size of yard/garden	5	4	3	2	1	na/dk
pet friendly (including approval if renting)	5	4	3	2	1	na/dk
storage areas, garage and sheds	5	4	3	2	1	na/dk
onsite carparking – availability/number of spaces	5	4	3	2	1	na/dk
rural aspect/outlook	5	4	3	2	1	na/dk
price/affordability	5	4	3	2	1	na/dk

8c. Are any other aspects important in your choice of housing? no

(if yes, specify)

9. If you were to move, do you see any potential barriers in being able to secure your preferred type of housing in your preferred location –

- not enough availability of preferred housing type (to buy or rent) 1
- price/affordability in desired location 2
- houses are available but not of good enough standard (eg. age, state of repair) 3
- other (specify)

And just to finish, to make sure we have a good cross section of people in the survey, can I just check ...

10a. How many people usually live in your household?

10b. Which of the following best describes your household type?

- | | |
|--|---|
| A couple with children living at home | 1 |
| A couple with no children living at home | 2 |
| One parent with children living at home | 3 |
| Other family member household | 4 |
| Lone person household | 5 |
| A group or shared household | 6 |

other 7

10c. (if renting) What is your current weekly rental? \$.....
(go to 4a)

10d. (if purchasing/own) What would you estimate to be the current market value of your home?
\$.....

10e. And may I have your age?
prefer not to say 1

10f. Gender (record automatically code 1 or 2 for telephone survey)

male 1 female 2 other 3 prefer not to say 4

10g. Your occupation (previous if retired/home duties)

10h. What is the highest level of education you have reached so far?

- | | | | |
|---------------------------|---|----------------------|-------|
| Primary school | 1 | Undergraduate degree | 5 |
| Year 10 | 2 | Post graduate degree | 6 |
| Year 11/12 | 3 | Refused | 7 |
| Trade certificate/diploma | 4 | | |
| Other | | | |

10i. And your total annual household income before tax (approximate is OK)?

- | | | | |
|------------------------|---|------------------------|----|
| Up to \$20,000 | 1 | \$125,000 to \$150,000 | 6 |
| \$20,000 - \$50,000 | 2 | \$150,000 to \$200,000 | 7 |
| \$50,000 to \$80,000 | 3 | More than \$200,000 | 8 |
| \$80,000 to \$100,000 | 4 | Unsure | 9 |
| \$100,000 to \$125,000 | 5 | Declined | 10 |

And may I record your first name and phone number to verify the survey?

Name: Phone:

That completes the survey today.

There is a second stage to this survey for completion online, with a prize draw. It would just take a few minutes of your time and is very important for this study. Would you like to take part?

Yes 1 No 2

*(if yes) **May** I have your email address and we can send you the survey link?*

Email –

If you have any questions about this project you may contact our office or the Cessnock City Council – would you like the contact numbers?

Cessnock 02 4933 4127 Q&A

Thankyou for your time and help today. In case you missed it, my name is ... from Q&A Research, calling on behalf of the Cessnock City Council.

Thanks again. Goodbye.

Finish time:	Length: mins	ID No:	Date: / / 2019
Audited by		Date: / / 2019	

APPENDIX 3: HOUSING PREFERENCE SURVEY DATA

This appendix describes the implementation of the housing preferences survey and the characteristics of the survey participants.

Survey Implementation

A telephone survey of local residents living within the Cessnock LGA was conducted during the week commencing 5th August 2019, with survey parameters as follows:

- A draft survey instrument was developed by Myriad/SGS and tested at focus groups conducted in Cessnock by SGS on June 25, 2019
- The final survey instrument was provided for client review and sign off
- Interviews were conducted by Myriad's field partner Q&A Research after a comprehensive briefing
- All survey fieldwork was conducted in accordance with industry quality assurance standards for telephone survey (ISO 20252) and the Market and Social Research Privacy Code
- Households were selected at random from landline and mobile phone number listings provided by SamplePages⁴, with selected respondents being 'the best person in the household to talk to' about housing choices
- Quotas for area, age group and gender were set to generally reflect the ABS Community Profile for the Cessnock LGA
- Calling times and call back protocols were adopted to ensure the sample comprised a broadly representative cross section of residents.

Survey approach and demographic data

The survey included 300 households and all respondents were invited to complete a second stage online survey (with prize draw incentive) to inform a discrete choice modelling (DCM) component being conducted by Prescience Research.

For each household surveyed, an individual representative of the household was asked to respond on behalf of their broader households. The demographics reported below reflect the demographic characteristics of these *individuals* rather than the characteristics of the entire sample population (being all members of all surveyed households).

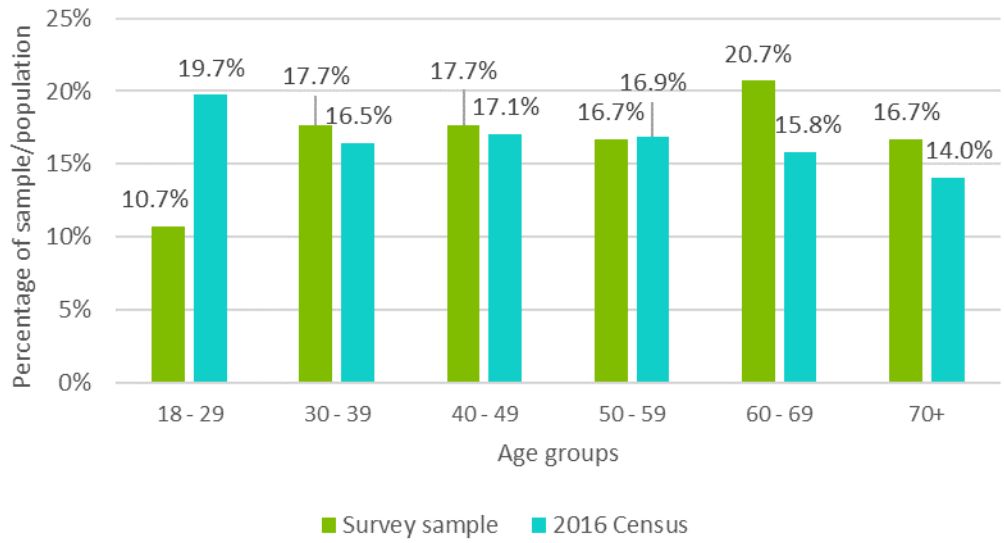
For this reason, there will be differences between the demographic characteristics of the survey respondents and the population of Cessnock.

Age of survey participants vs age of the Cessnock population

The survey sample has a greater share of over 60 years people and a smaller share of people aged 18 to 29 as compared to the 2016 Census data, see **Error! Reference source not found..**

⁴ SamplePages is a market and social research data provider that supplied landline and mobile phone numbers to Myriad for sample selection

FIGURE 19: COMPARISON OF THE SHARE OF AGE GROUPS

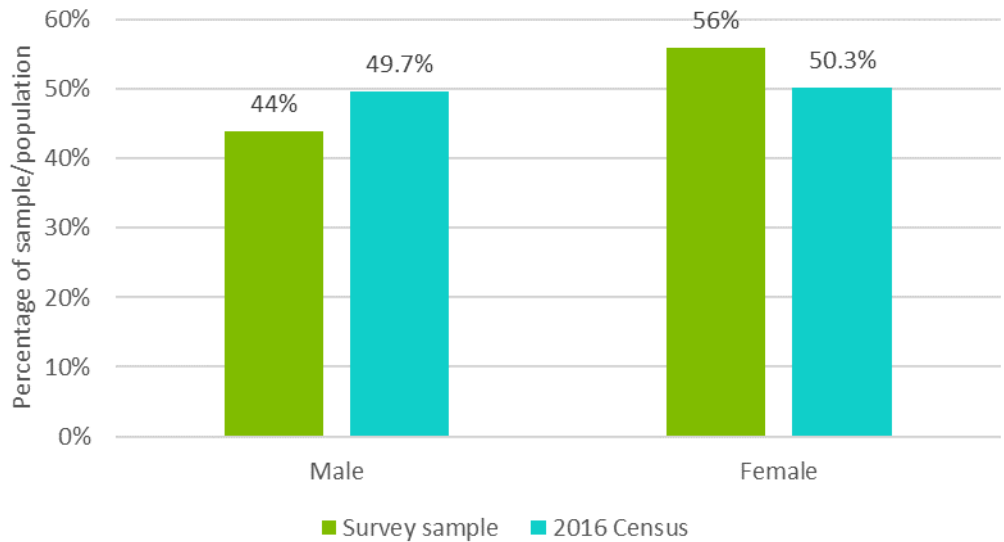


Source: SGS Economics and Planning; Myriad Research; ABS 2016

Gender

The survey sample has a greater share of females than the 2016 Census data, see Figure 20.

FIGURE 20: COMPARISON OF THE SHARE OF GENDER SPLIT

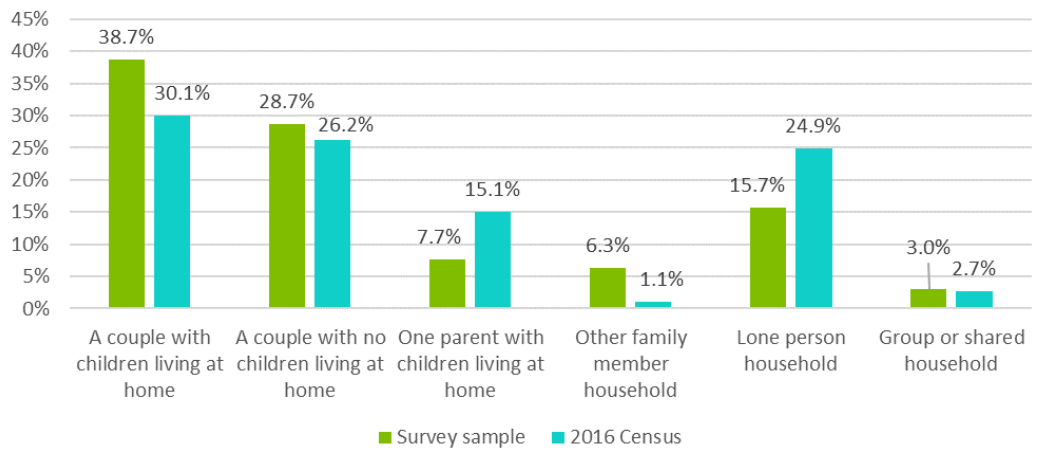


Source: SGS Economics and Planning; Myriad Research; ABS 2016

Household type

The survey sample has a greater share of couple households and a smaller of lone person households than the 2016 Census data, see Figure 21.

FIGURE 21: COMPARISON OF THE SHARE OF HOUSEHOLD TYPES



Source: SGS Economics and Planning; Myriad Research; ABS 2016

APPENDIX 4: CHOICE MODEL

Methodology

Choice modelling

Choice modelling seeks to model the decision process of an individual or demographic subset via their preferences within a specific setting, in this instance the Cessnock housing market.

Choice modelling assumes that people make choices that will maximise the *utility* they expect to derive from the choice. Note that the “utility” referred to here should be interpreted in a very broad sense as including personal and family benefits, psychological outcomes and social benefits in addition to any financial considerations.

When deciding on which house they would choose to move to, the household decision-maker(s) subconsciously refers to their perceived utility for housing options which is derived from various home features (called *choice attributes* i.e. cost, location, housing size, number of bedrooms and other characteristics). The key idea behind choice modelling is that the total utility for a housing option represents the sum of each individual’s utility for *each* of the individual choice attributes. For example, a person might prefer four bedroom houses over those with three bedrooms – this preference would mean that this person would, in the parlance of choice modelling, have a higher utility for a four bedroom house compared to a three bedroom house and they would be more likely to choose a four bedroom house *all other characteristics being equal*. Utility is measured by *how much more likely* the person would be to choose the four bedroom house than houses of other sizes.

Choice modelling studies usually aim to establish the utility of each choice attribute for a range of settings. For example, in this study the choice attribute “home size” was tested at three different sizes: 2 bedrooms, 3 bedrooms and 4 or more bedrooms. In choice modelling these different attribute settings are referred to as *levels*. Choice attribute levels are designed to be easily understood and unambiguous in meaning.

This housing choice modelling study asked Cessnock residents to choose *their preferred home to buy or rent* from sets of four homes that were described in combinations of choice attribute levels. Figure 22 overleaf gives one example of the many sets of homes that people responded to. Each person responded to eight different sets of houses in eight *choice tasks*.

Later, at the data modelling stage, the homes choices by each person are mathematically related to the attribute levels pertinent to all the homes shown to them the choice tasks. This determines the utility of each choice attribute level.

Table 18 shows the choice attributes and relevant levels that were selected to create home options and choice tasks for the Cessnock study. An *experimental design* was used to create 300 different sets of 8 choice tasks. Each survey respondent was randomly assigned one of the 300 choice task sets to respond to.

As respondents proceeded through their eight choice tasks the changing make-up of the homes presented by the experimental design continually presented trade-offs between the attribute levels (e.g. larger block of land vs higher price) such that the utility of each attribute on choices could be established.

FIGURE 22 AN EXAMPLE OF A CHOICE TASK

	Option 1	Option 2	Option 3	Option 4
Home type	Semi-detached / villa / duplex	Flat, unit or apartment in block	House on a separate lot	House on a separate lot
Where the home is located	Southern Area Village	Cessnock Town Centre	Kurri Kurri Suburban	Southern Area Rural
Property size ^(?)	1 bed 65 sq.m floor Small garden (eg. 100 sq.m)	2 bed 125 sq.m floor	3 bed 175 sq.m floor Large garden (eg. 500 sq.m)	4+ bed 250+ sq.m floor 50,000 sq.m (12.5 Acres, 5 Ha)
Parking spaces (flat / villa)	165 sq.m	125 sq.m	675 sq.m	50,000 sq.m
Cost	2	1		
	\$314,000	\$314,000	\$288,000	\$349,000
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Given what you know you can afford, would you really buy the home you chose above?

Source: Prescience Research, 2019

TABLE 18: CHOICE MODELLING ATTRIBUTES AND LEVELS

Attributes	Levels to test...					Conditional display
	L1	L2	L3	L4	L5	
A1 Home type	House on a separate lot	Semi-detached / villa / duplex	Flat, unit or apartment in block			
A2 Geographic zone	Branxton	Kurri Kurri	Cessnock	South of Cessnock		
A3 Character type	Large Centre	Small centre	Suburban	Rural		A3=L4 if not A1=L3
A4.1 Home size #1	2 bed 125 sq.m floor	3 bed 175 sq.m floor	4+ bed 250+ sq.m floor			if A1=L1
A4.2 Home size #2	1 bed 65 sq.m floor	2 bed 125 sq.m floor	3 bed 175 sq.m floor			if A1=L2,L3
A5.1 Non-rural house garden size	Small garden (eg. 100 sq.m)	Medium garden (eg. 250 sq.m)	Large garden (eg. 500 sq.m)	Extra large garden (eg. 1000 sq.m)		if A1=L1 & A3=not Rural
A5.2 Rural Lot Size	4,000 sq.m (1 Acre, 0.4 Ha)	20,000 sq.m (5 Acres, 2 Ha)	50,000 sq.m (12.5 Acres, 5 Ha)			if A1=L1 & A3=L3
A5.3 Semi-detached garden size	Small courtyard (eg. 30 sq.m)	Large courtyard (eg. 75 sq.m)	Small garden (eg. 100 sq.m)			if A1=L2
A6 Parking spaces	None	1	2			if A1=L2 or L3
A7 Price	formula X (0.7)	formula X (0.85)	formula X (1.0)	formula X (1.15)	formula X (1.30)	

Note: The price attribute (no. 7) was equal to the median price of the relevant home type (house, semi-detached or flat), then multiplied by the factor above, ranging from 0.7 to 1.3. This ensured prices were mostly realistic while providing sufficient variation to be able to model the influence of that factor.

Source: Prescience Research, 2019

The experimental design ensured, across all the survey respondents, that all the choice attribute levels were tested in an unbiased and balanced way. This in turn made sure that at the modelling stage that the attribute utilities would be unbiased, that is, estimated independently of the influence of other home attributes.

The choice modelling attributes included a home price and the respondent was instructed to consider their home budget (which had been stated earlier in the questionnaire) when making their home choices. In this way the choice modelling explicitly included each individual's financial considerations.

The choice modelling survey received a total of 274 respondents via an online questionnaire. The respondents were a subset of the 400 participants that completed the preference survey and went on to complete the online choice model questionnaire.

Choice simulation

Choice model utility data provides an appreciation of how relatively influential choice model levels are in the choice of homes. A typical extension of this is to take this utility data and estimate how many people would be expected to choose particular homes from a set of homes. This is the process of market simulation.

The simulation process is relatively straightforward and involved these steps:

- Define a set of home types. First a set of home types are defined using the choice model attributes and levels that were tested. Initial simulations attempted to re-create the breadth of home stock that is currently available in the Cessnock region.
- Simulate "preference share" for each of these home types. This involves:
 - For the home types defined at step 1 a prediction is made for each survey respondent of which home type they would be expected to prefer, given their choice model utilities
 - A tally of the preferred homes across all the respondents then yields the percentage that are predicted to prefer each home type.
 - Given that there were a large number of different home types in each simulation, further calculations yielded preference for major home characteristics such as "detached home" vs "flat", "region 1" vs "region2" etc.

The market simulation tested people's choices across the 47 housing products. The products were based on combinations the following variables:

- Home type
- Geographic zone
- Character type (small centre or rural)
- Number of bedrooms
- Parking spaces

Key terms

Choice Attributes

When deciding on which house they would choose to move to, the household decision-maker(s) subconsciously refers to their perceived utility for housing options which is derived from various home features (called *choice attributes* i.e. cost, location, housing size, number of bedrooms and other characteristics). The key idea behind choice modelling is that the total utility for a housing option represents the sum of each individual's utility for *each* of the individual choice attributes.

Attribute Levels

Choice modelling studies usually aim to establish the utility of each choice attribute for a range of settings. For example, in this study the choice attribute "home size" was tested at three different sizes: 2 bedrooms, 3 bedrooms and 4 or more bedrooms. In choice modelling these different attribute settings are referred to as *levels*. Choice attribute levels are designed to be easily understood and unambiguous in meaning.

Choice Tasks

An exercise carried out by survey respondents whereby they are shown various choice options (home options in this study) and are asked to select the home option that they prefer or would choose. The options shown in choice tasks are constructed from the choice attribute and levels.

Experimental design

The procedure for producing the choice tasks such that, when the survey is completed, the utility of each attribute level can be calculated in an unbiased way. This usually involves devising choice tasks such that, across all tasks and respondents, the attribute levels are included in options in a balanced and uncorrelated way. For example, in this study, one aim of the experimental design was to display homes with 3 bedrooms as frequently as homes with 4 bedrooms – along with other balanced level displays, this meant that the relative influence of having a 3 bedroom home vs a 4 bedroom home would not be affected by giving one of these levels more opportunity to be selected in a chosen home.

Utility

The utility of each choice attribute level within the context of a home choice is established by modelling the relationship between the home choices that were made against the levels that were presented within the options. Various statistical procedures may be used to determine level utilities. In this study the procedure of hierarchical bayes multinomial logit was used. This allowed an estimate to be made of the utility of each of the attribute levels, for each survey participant.

Choice level attributes have the very useful property of being able to be summed to provide an estimate of the utility of a home comprising a set of levels. So for example, the utility for a 3 bedroom home would be achieved by summing the utility of “home” with the utility for “3 bedrooms”. To complete the picture other choice attribute level utilities would also need to be summed (eg. garden size) to arrive at the total utility of a home.

Note that in this report the utility values shown have been scaled in the following way:

- The highest “raw utility” for all attribute and all levels for all people takes the value of “100”
- The lowest utility for attributes and all levels for all people takes the value of “0”
- All other raw utility values are rescaled to lie in this 0-100 range such that their relative values are identical to the original raw utilities.

Influence Metric

The “influence” metric represents the degree to which each attribute influenced home choices. The metric is calculated by considering the levels that were tested for each attribute and subtracting the lowest average level utility from the highest average level utility. The resulting influence metric can be compared between attributes to provide a relative impact of all the attributes on home choices.

Detailed results

The following pages present some of the detailed analysis of the choice modelling results. The full results and breakdowns can be explored in the full data tables which are an addendum to this report.

Dwelling type

The type of dwelling is the most influential attribute in choosing a property. Within this attribute, separate houses with at least two car spaces is the most preferred dwelling type. This is followed by semi-detached dwellings, and then flats/apartments (refer to Table 19).

Table 19 shows that separate houses are preferred in all areas. It also shows that residents in Branxton and Kurri Kurri have a particularly strong choice value for detached housing.

Those in the Southern Area had the weakest choice value for separate houses, while still having a low choice value for semi-detached dwellings and flats. Respondents from this area placed stronger value on other attributes, in particular, whether the property was on a rural lot.

It is important to note that while detached dwellings are the most preferred home type *on average*, this does not necessarily mean that all residents in the Cessnock municipality want to live in a detached dwelling. Some prefer smaller dwelling types.

TABLE 19 CHOICE VALUE OF HOUSING TYPE, BASED ON WHERE THE RESPONDENT LIVES

Q3a. Region					
	Total	Branxton	Kurri Kurri	Cessnock	Southern Area
<i>Base</i>	143	27	41	59	16
House on a separate lot 2+ car spaces	38	42	41	37	29
Semi-detached / villa / duplex	8	6	7	10	6
Flat, unit or apartment in block	2	2	3	1	1

Source: Prescience Research, 2019

Combining the choice modelling survey data with the preference survey data allows us to investigate respondents' preferences in more detail. Table 20 shows preference survey data (across the rows) for respondents who placed a high value on each property type (down the columns). The rows show the proportion of people in each category who rated each factor as important or very important. The columns separate the sample into groups that valued each property type more than most other participants (choice value above the median). This shows what property factors are important to people who like each property type.

The bolded boxes show property factors that rate more highly for those who place a strong value on semi-detached dwellings. They include:

- For location: Convenient to public transport, footpaths, walkways and cycle ways, community atmosphere
- For house attributes: Single level / accessible for special needs, low maintenance, energy efficient
- Urban character area that provides: proximity to shops, health and medical services
- Low overall cost of living

The favoured aspects of housing choices are mostly related to urban characters and less about the attributes of housing stock.

TABLE 20 FACTORS IMPORTANT TO THOSE WHO PREFER TO LIVE IN MEDIUM DENSITY

		Home type			
		Total	House on a separate lot 2+ car spaces	Semi-detached / villa / duplex	Flat, unit or apartment in block
<p>** The High level [Column] was based on respondents who have a utility score is greater than the Median value for each of these factors. ** The factors [Row] of Q7a, Q8b, Q9b in this table are based on respondents who rated code 4 - Important or 5 - Very important for each of these factors.</p>					
<i>Base</i>		143	71	71	71
Q7a Location Choice Factors	Convenient to work	52.4	54.9	45.1	54.9
	Convenient to other family, friends, social network	62.9	64.8	59.2	59.2
	Convenient to public transport	35.7	25.4	49.3	39.4
	Convenient to main roads	48.3	40.8	54.9	50.7
	Convenient to footpaths, walkways and cycle ways	52.4	43.7	63.4	54.9
	Convenient to schools, childcare, other education	36.4	45.1	21.1	32.4
	Convenient to community centres and churches	19.6	15.5	25.4	21.1
	Convenient to shopping centres, cafes, markets	67.8	62.0	74.6	66.2
	Convenient to business services and facilities	49.7	46.5	54.9	50.7
	Convenient to health and medical services	72.7	70.4	77.5	71.8
	Convenient to lake, beaches, bushland	51.0	53.5	50.7	40.8
	Convenient to sporting and recreational facilities	36.4	43.7	28.2	26.8
	Views and general outlook	69.9	76.1	69.0	62.0
	Local character and heritage	40.6	36.6	47.9	39.4
	Community atmosphere	70.6	60.6	80.3	70.4
	Safety and security	90.2	91.5	87.3	84.5
	Cost and affordability	85.3	81.7	87.3	91.5
Q8b House attribute importance	Size	36.4	42.3	28.2	33.8
	Number of levels	20.3	21.1	21.1	16.9
	Number of bedrooms	35.7	43.7	25.4	35.2
	Single level / accessible for special needs	23.8	16.9	28.2	25.4
	Low maintenance house/property	35.7	29.6	39.4	40.8
	Privacy	43.4	42.3	42.3	49.3
	Energy efficiency	39.9	36.6	42.3	42.3
	Size of yard/garden	34.3	39.4	23.9	36.6
	Pet friendly	37.1	38.0	32.4	40.8
	Storage areas, garage and sheds onsite carparking	43.4	42.3	39.4	46.5
	Rural aspect/outlook	30.1	28.2	32.4	31.0
Price/affordability	46.2	42.3	46.5	52.1	
Q9b Character Type Importance	Just a few minutes to public transport	33.6	28.2	39.4	29.6
	Quick to reach main roads and freeways	60.8	54.9	67.6	59.2
	Good access to local walking or cycling	51.7	47.9	56.3	49.3
	Just a few minutes to shops, etc.	62.9	54.9	77.5	59.2
	Just a few minutes to business services and facilities	50.3	45.1	60.6	47.9
	Just a few minutes to health and medical services	65.7	57.7	77.5	66.2
	Has a community atmosphere	59.4	52.1	67.6	62.0
	Has attractive local character and heritage	53.8	49.3	62.0	47.9
	Offers peace and quiet	87.4	84.5	91.5	90.1
	Offers views and outlooks	72.0	74.6	74.6	66.2
	Offers safety and security	85.3	85.9	88.7	81.7
Provides affordable housing	78.3	73.2	80.3	85.9	
Low overall cost of living	75.5	66.2	81.7	81.7	

Source: Prescience Research, 2019

Age and life stage

A household's age and life stage influence its housing choices. Younger households and families have a strong preference for houses on separate lots with large gardens; however, the preference for separate housing decreases with age. Conversely the preference for semi-detached dwellings increases as households get older, and more compact, low maintenance living is sought.

Table 21 and Table 22 also show that:

- Rural areas are more preferred by younger households and families. Preferences for living in small and large town centres increases with age.
- Younger people and families place a high value on houses with more bedrooms.
- The youngest and oldest groups are the most price sensitive.

Some caution should be taken when interpreting the results for the youngest age group because this group was somewhat underrepresented in the sample. However, this should not be too concerning when looking at the consistent trend across age groups of higher preferences for detached dwellings at younger ages.

TABLE 21 CHOICE VALUE BY AGE GROUP

		Total	Under 35 y.o		65 y.o and older	
			35 - 49 y.o	50 - 64 y.o		
<i>Base</i>		143	25	47	45	26
Home type	House on a separate lot	38	44	45	36	25
	Semi-detached / villa / duplex	8	2	6	13	9
	Flat / unit / apartment	2	4	1	1	3
Geographic zone	Branxton	12	18	11	10	9
	Kurri Kurri	11	11	11	13	9
	Cessnock	16	13	15	14	23
	Southern Area	12	10	11	15	13
Character type	TownCentre	6	4	4	7	10
	Village	9	9	7	9	11
	Suburban	9	12	7	9	9
	Rural	12	12	13	10	9
Home size #1	2 bed 125 sq.m floor	4	3	2	5	8
	3 bed 175 sq.m floor	10	8	11	10	10
	4+ bed 250+ sq.m floor	13	21	15	11	7
Home size #2	1 bed 65 sq.m floor	3	1	5	3	3
	2 bed 125 sq.m floor	9	9	8	11	7
	3 bed 175 sq.m floor	14	25	10	12	12
Non-rural house garden size	Small garden (100 sqm)	5	5	3	7	8
	Medium garden (250 sqm)	11	9	11	10	11
	Large garden (500 sqm)	10	7	12	10	9
	Extra large garden (1000 sqm)	10	11	12	8	10
Rural Lot Size	4,000 sqm (1 acre)	9	6	7	11	9
	20,000 sqm (5 acres)	9	18	6	10	4
	50,000 sqm (12.5 acres)	6	2	8	4	10
Semi-detached garden size	Small courtyard (30 sqm)	13	22	8	10	14
	Large courtyard (75 sqm)	7	4	7	8	6
	Small garden (100 sqm)	13	15	15	9	14
Parking spaces	No car spaces	2	3	1	4	0
	1 car space	8	8	10	4	14
	2 car spaces	13	7	16	8	21
Price	0.7 x median price	13	22	10	11	15
	0.85 x median price	11	19	10	7	12
	1 x median price	10	16	8	7	10
	1.15 x median price	7	12	7	6	7
	1.3 x median price	0	0	0	0	0

Source: Prescience Research, 2019

TABLE 22 CHOICE VALUE BY HOUSEHOLD STRUCTURE

		Total	Young single or couple no kids	Family	Older single or couple no kids	Other
<i>Base</i>		143	7	76	47	13
Home type	House on a separate lot	38	38	46	29	29
	Semi-detached / villa / duplex	8	6	6	11	10
	Flat / unit / apartment	2	1	2	2	2
Geographic zone	Branxton	12	12	13	9	12
	Kurri Kurri	11	6	11	11	16
	Cessnock	16	15	14	18	18
	Southern Area	12	16	12	14	8
Character type	TownCentre	6	7	4	10	6
	Village	9	6	8	10	11
	Suburban	9	11	9	9	8
	Rural	12	10	14	9	10
Home size #1	2 bed 125 sq.m floor	4	5	2	6	4
	3 bed 175 sq.m floor	10	10	11	9	10
	4+ bed 250+ sq.m floor	13	14	15	10	11
Home size #2	1 bed 65 sq.m floor	3	2	4	2	5
	2 bed 125 sq.m floor	9	5	10	9	10
	3 bed 175 sq.m floor	14	18	14	12	16
Non-rural house garden size	Small garden (100 sqm)	5	3	4	8	8
	Medium garden (250 sqm)	11	10	11	10	9
	Large garden (500 sqm)	10	6	10	11	8
	Extra large garden (1000 sqm)	10	15	11	9	7
Rural Lot Size	4,000 sqm (1 acre)	9	4	8	10	9
	20,000 sqm (5 acres)	9	11	10	5	13
	50,000 sqm (12.5 acres)	6	5	5	7	7
Semi-detached garden size	Small courtyard (30 sqm)	13	25	13	11	11
	Large courtyard (75 sqm)	7	6	7	7	7
	Small garden (100 sqm)	13	14	14	10	14
Parking spaces	No car spaces	2	3	2	2	2
	1 car space	8	9	8	9	8
	2 car spaces	13	7	13	13	12
Price	0.7 x median price	13	13	11	15	20
	0.85 x median price	11	11	10	12	15
	1 x median price	10	10	8	11	10
	1.15 x median price	7	7	7	9	5
	1.3 x median price	0	0	0	0	0

Source: Prescience Research, 2019

Rural living

As noted in the body of the report, the value people place on where they live is strongly linked to where they currently live.

This is shown below in Table 23 which shows that:

- Respondents placed the highest value on properties located in the geographic zone that they already live in.
- Those living in Branxton and the Southern Area place a strong value on rural living while those living in Kurri Kurri and Cessnock have a similar value for all character types.

The results indicate that participants generally prefer to remain in their current suburbs. This may reflect that they like where they live and the significance of local connections and attributes.

TABLE 23 GEOGRAPHIC ZONE AND CHARACTER TYPE CHOICE VALUE, BY WHERE RESPONDENTS LIVE

		Total	Branxton	Kurri Kurri	Cessnock	Southern Area
<i>Base</i>		143	27	41	59	16
Geographic zone	Branxton	12	28	6	8	11
	Kurri Kurri	11	7	25	5	4
	Cessnock	16	12	10	22	14
	Southern Area	12	9	9	15	15
Character type	TownCentre	6	2	7	8	3
	Village	9	10	7	9	9
	Suburban	9	13	9	7	11
	Rural	12	18	8	10	16

Source: Prescience Research, 2019

Price sensitive households

The following two tables show information about the price sensitivity of Cessnock residents. Table 24 shows the choice values of respondents for different household income groups and Table 25 shows the preference survey factors rated highly by price sensitive households (this combined choice model data and preference survey data, similar to Table 20 above).

The results show that households with lower income are more price sensitive than households with higher income. Lower income households also place a higher value on semi-detached property types and living in more affordable locations such as villages and suburban areas. Higher income households are less price sensitive and place a stronger value on detached dwellings and rural living.

The second tables shows that the most important factors for price sensitive households are:

- Provides affordable housing
- Convenient to footpaths, walkways and cycle ways
- Cost and affordability
- Low overall cost of living
- Price/affordability
- Single level / accessible for special needs
- Low maintenance house/property.

TABLE 24 CHOICE VALUE, BY HOUSEHOLD INCOME

		Total	Up to \$80,000	80,000 to \$150,000	More than \$150,000	Unsure/Pr efer not to say
<i>Base</i>		143	39	45	31	28
Home type	House on a separate lot	38	25	45	52	32
	Semi-detached / villa / duplex	8	11	5	10	5
	Flat / unit / apartment	2	2	1	0	3
Geographic zone	Branxton	12	10	12	13	12
	Kurri Kurri	11	14	10	11	10
	Cessnock	16	18	16	13	16
	Southern Area	12	12	14	13	7
Character type	TownCentre	6	8	5	2	8
	Village	9	10	5	12	9
	Suburban	9	12	8	8	8
	Rural	12	8	12	15	12
Home size #1	2 bed 125 sq.m floor	4	6	2	3	6
	3 bed 175 sq.m floor	10	9	11	10	10
	4+ bed 250+ sq.m floor	13	10	16	14	11
Home size #2	1 bed 65 sq.m floor	3	2	1	8	2
	2 bed 125 sq.m floor	9	11	9	10	6
	3 bed 175 sq.m floor	14	11	20	4	18
Non-rural house garden size	Small garden (100 sqm)	5	11	3	4	4
	Medium garden (250 sqm)	11	8	10	12	13
	Large garden (500 sqm)	10	10	11	7	9
	Extra large garden (1000 sqm)	10	4	16	12	7
Rural Lot Size	4,000 sqm (1 acre)	9	12	7	9	6
	20,000 sqm (5 acres)	9	4	9	13	10
	50,000 sqm (12.5 acres)	6	7	5	4	8
Semi-detached garden size	Small courtyard (30 sqm)	13	8	9	20	15
	Large courtyard (75 sqm)	7	6	8	2	11
	Small garden (100 sqm)	13	13	11	23	6
Parking spaces	No carspaces	2	2	3	2	1
	1 car space	8	8	9	7	10
	2 carspaces	13	14	7	12	19
Price	0.7 x median price	13	18	12	4	19
	0.85 x median price	11	15	9	2	18
	1 x median price	10	12	8	2	17
	1.15 x median price	7	9	4	1	17
	1.3 x median price	0	0	0	0	0

Source: Prescience Research, 2019

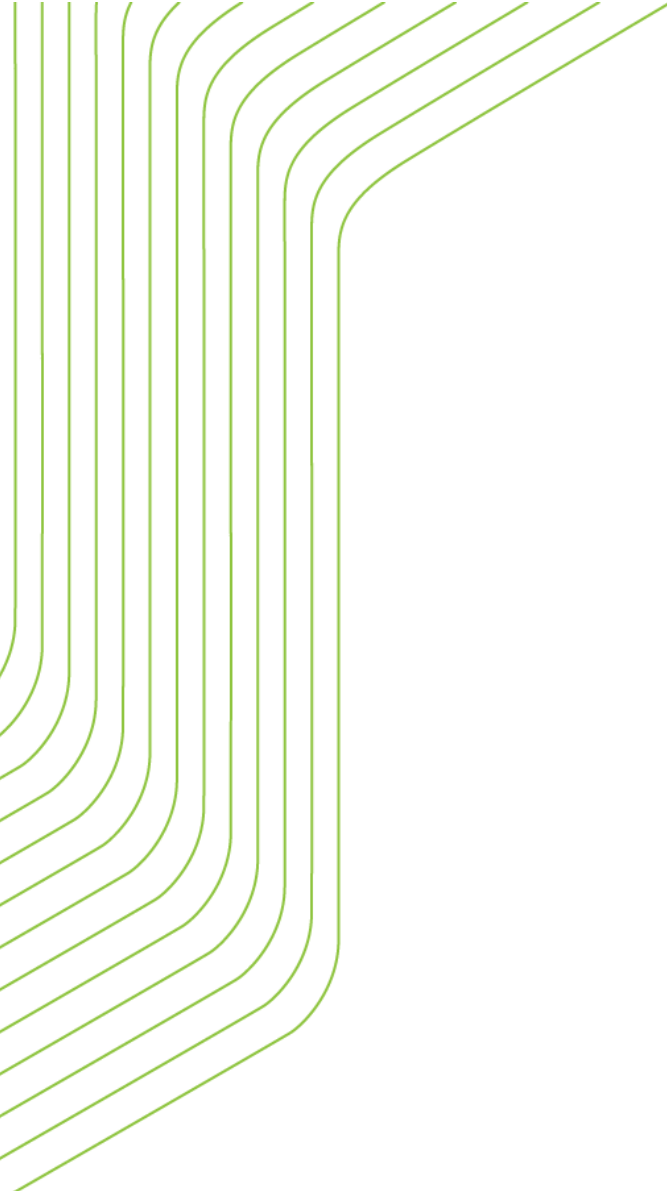
TABLE 25 FACTORS IMPORTANT TO THOSE WHO ARE PRICE SENSITIVE

****The High level [Column] was based on respondents who have a utility score is greater than the Median value for each of these factors.
The factors [Row] of Q7a, Q8b, Q9b in this table are based on respondents who rated code 4 - Important or 5 - Very important for each of these factors.

		Price						
		0.7	0.85	1	1.15	1.3		
		High	High	High	High	High		
Base		143	71	71	71	71		
Q7a Location Choice Factors	Convenient to work	52.4	50.7	59.2	53.5	57.7	50.7	
	Convenient to other family, friends, social network	62.9	63.4	64.8	63.4	66.2	63.4	
	Convenient to public transport	35.7	36.6	33.8	31.0	43.7	38.0	
	Convenient to main roads	48.3	50.7	47.9	49.3	53.5	46.5	
	Convenient to footpaths, walkways and cycle ways	52.4	59.2	62.0	59.2	59.2	45.1	
	Convenient to schools, childcare, other education	36.4	31.0	36.6	36.6	42.3	39.4	
	Convenient to community centres and churches	19.6	22.5	23.9	22.5	26.8	18.3	
	Convenient to shopping centres, cafes, markets	67.8	64.8	63.4	69.0	71.8	69.0	
	Convenient to business services and facilities	49.7	52.1	47.9	50.7	47.9	46.5	
	Convenient to health and medical services	72.7	73.2	74.6	70.4	76.1	71.8	
	Convenient to lake, beaches, bushland	51.0	52.1	50.7	45.1	46.5	52.1	
	Convenient to sporting and recreational facilities	36.4	28.2	33.8	32.4	38.0	43.7	
	Views and general outlook	69.9	64.8	60.6	57.7	60.6	80.3	
	Local character and heritage	40.6	45.1	42.3	42.3	35.2	35.2	
	Community atmosphere	70.6	69.0	69.0	71.8	71.8	74.6	
	Safety and security	90.2	87.3	87.3	91.5	93.0	93.0	
	Cost and affordability	85.3	94.4	93.0	90.1	87.3	80.3	
	Q8b House attribute Importance	Size	36.4	36.6	36.6	36.6	38.0	38.0
		Number of levels	20.3	22.5	18.3	23.9	19.7	21.1
		Number of bedrooms	35.7	29.6	32.4	35.2	36.6	40.8
Single level / accessible for special needs		23.8	26.8	29.6	32.4	29.6	19.7	
Low maintenance house/property		35.7	38.0	39.4	43.7	45.1	33.8	
Privacy		43.4	43.7	43.7	52.1	50.7	45.1	
Energy efficiency		39.9	43.7	40.8	43.7	40.8	39.4	
Size of yard/garden		34.3	35.2	32.4	35.2	33.8	36.6	
Pet friendly		37.1	40.8	39.4	42.3	39.4	35.2	
Storage areas, garage and sheds onsite carparking		43.4	42.3	45.1	50.7	47.9	43.7	
Rural aspect/outlook		30.1	28.2	26.8	26.8	31.0	36.6	
Price/affordability		46.2	49.3	52.1	56.3	53.5	42.3	
Q9b Character Type Importance		Just a few minutes to public transport	33.6	36.6	33.8	29.6	38.0	33.8
		Quick to reach main roads and freeways	60.8	53.5	49.3	60.6	66.2	67.6
		Good access to local walking or cycling	51.7	52.1	52.1	53.5	54.9	50.7
	Just a few minutes to shops, etc.	62.9	64.8	59.2	64.8	63.4	64.8	
	Just a few minutes to business services and facilities	50.3	47.9	42.3	52.1	53.5	52.1	
	Just a few minutes to health and medical services	65.7	67.6	67.6	66.2	67.6	64.8	
	Has a community atmosphere	59.4	59.2	57.7	63.4	62.0	62.0	
	Has attractive local character and heritage	53.8	56.3	47.9	52.1	52.1	52.1	
	Offers peace and quiet	87.4	85.9	85.9	85.9	91.5	90.1	
	Offers views and outlooks	72.0	62.0	57.7	57.7	66.2	88.7	
Offers safety and security	85.3	85.9	84.5	87.3	88.7	83.1		
Provides affordable housing	78.3	85.9	93.0	87.3	81.7	69.0		
Low overall cost of living	75.5	80.3	83.1	83.1	80.3	69.0		

Note: The price attribute (no. 7) was equal to the median property price in Cessnock multiplied by the factor above, ranging from 0.7 to 1.3. This ensured prices were mostly realistic while providing sufficient variation to be able to model the influence of that factor.

Source: Prescience Research, 2019



Contact us

CANBERRA

Level 2, 28-36 Ainslie Place
Canberra ACT 2601
+61 2 6257 4525
sgsact@sgsep.com.au

HOBART

PO Box 123
Franklin TAS 7113
+61 421 372 940
sgstas@sgsep.com.au

MELBOURNE

Level 14, 222 Exhibition St
Melbourne VIC 3000
+61 3 8616 0331
sgsvic@sgsep.com.au

SYDNEY

209/50 Holt St
Surry Hills NSW 2010
+61 2 8307 0121
sgsnsw@sgsep.com.au