



NORTH ELLENBROOK (WEST) DISTRICT STRUCTURE PLAN RESIDENTIAL NEEDS STUDY

Prepared for Parcel Property
March 2020



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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

North Ellenbrook is identified as a future urban growth area located in Perth's North East Corridor. Urbis was engaged by Parcel Property to assess the opportunity for North Ellenbrook to help meet future housing needs.

The analysis in this report demonstrates that there is strong justification to rezone North Ellenbrook to deliver much needed housing supply and diversity to the North East Corridor and ensure future population forecasts are accommodated for.

Strong Future Greenfield Housing Needs

There is expected to be strong population growth and housing need in the North East Corridor over the coming decades and the vast majority of this growth is expected to be accommodated within the greenfield areas between Dayton and Bullsbrook (referred to as the 'Sub-Region').

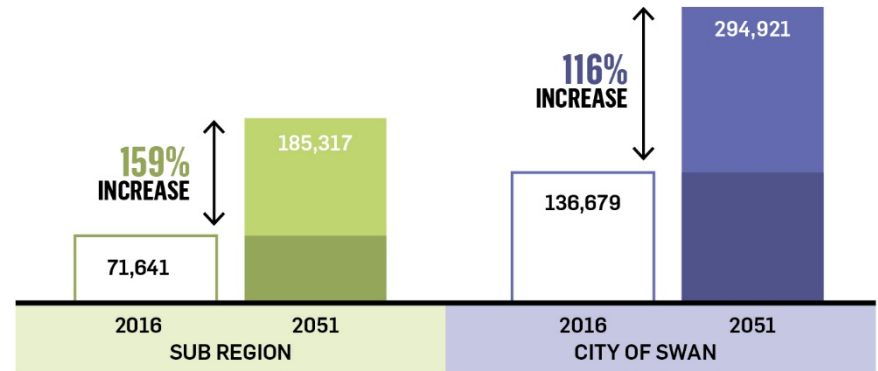
Based on population forecasts developed for Perth and Peel @3.5million (note, forecasts published for the City of Swan demonstrate significantly higher growth over the long term), the Sub-Region's population is expected to increase by approximately 113,700 residents over the 2016-51 period; with the Sub-Region accommodating more than 70% of future population growth in the City of Swan over this period.

Greenfield dwelling supply will continue to be critical to accommodating future housing needs and ensuring housing affordability and choice. In addition to achieving the State Government's high infill dwelling targets, there is a need to accommodate approximately 43,000 dwellings within greenfield areas in the City of Swan over the next three decades.

The Sub-Region will play a critical role in meeting these greenfield housing needs given the limited greenfield development opportunities in the rest of the North East Corridor. Greenfield areas outside the Sub-Region in the City of Swan are anticipated to be limited to Gidgegannup, Bushmead, Caversham, Jane Brook and Whiteman – areas which are either already under development or contain significant constraints.

POPULATION GROWTH

2016–2051



DWELLING NEED

2016–2051

GREENFIELD 43,184 DWELLINGS



INFILL 22,159 DWELLINGS



EXECUTIVE SUMMARY

Need for Adequate Supply Pipeline and Housing Diversity

Whilst land may be appropriately zoned for development, there are numerous constraints that can impact the timely delivery of this supply to the market. Overall, the constraints illustrated to the right are expected to limit the timely availability of land supply in a number of Urban and Urban Deferred areas such as Henley Brook, Dayton, West Ellenbrook and Bennett Springs (as well as areas outside the Sub-Region such as Whiteman).

As such, there should be a short-term stock of at least 8 years of supply in the Sub-Region (equivalent to approximately 9,000 lots on average over the period to 2051) to ensure supply can adequately respond to housing needs.

Furthermore, the level of Urban and Urban Deferred land at any point in time should be adequate to ensure this short-term supply can be maintained. Based on estimates of historical approval and sales activity, this should equate to at least twice the short-term supply benchmark (i.e. minimum 18,000 lots in the Sub-Region).

Furthermore, the report demonstrates that there is a need to provide housing choice. Housing choice extends to more than the built form and includes attributes such as affordability, character, amenities and accessibility, amongst others.

The need for locational diversity is particularly important for the greenfield market in the North East Corridor given the relative lack of diversity of land prices. Whilst further development in Bullsbrook will provide more product at the affordable end of spectrum, the risk is that relying predominantly on central and north Bullsbrook to provide medium- and long-term land supply would limit housing choice. This could constrain the desirability of living in the North East Corridor and impact negatively on the ability to support economic initiatives in the corridor such as the expansive industrial precincts in Bullsbrook and Muchea.

LAND AVAILABILITY CONSTRAINTS



**FRAGMENTED
LAND
OWNERSHIP**



**LANDOWNER
SALE PRICE
EXPECTATIONS**



**EXISTING
LAND
USES**



**ENVIRONMENTAL
ISSUES**



**UPFRONT
INFRASTRUCTURE
COSTS**



**PLANNING
TIMEFRAMES**

EXECUTIVE SUMMARY

Supply Gap Forecast

Based on a review of existing and future lot supply, the level of supply within active development areas as of the end of 2021 is forecast at approximately 8,700 lots. This is considered to be relatively low compared to historical levels and other growth areas.

Furthermore, based on population and dwelling forecasts and in the absence of the timely development of North Ellenbrook, the stock of urban zoned land is forecast to decline below adequate minimum levels over the next three years. There are forecast to be approximately 13,400 lots within Urban and Urban Deferred areas by 2026 (based on the critical assumption that planning and development will have advanced for West Ellenbrook by this time which may not occur due to basic raw material extraction constraints) compared to 19,300 lots as of 2018 and the minimum benchmark of 18,000 lots.

Of concern to affordability, choice and social development, the level and diversity of lot supply is forecast to decline rapidly from 2026. Lot supply is expected to be limited to less than 8,000 lots across four suburbs by 2031 and land supply will be depleted by 2039.

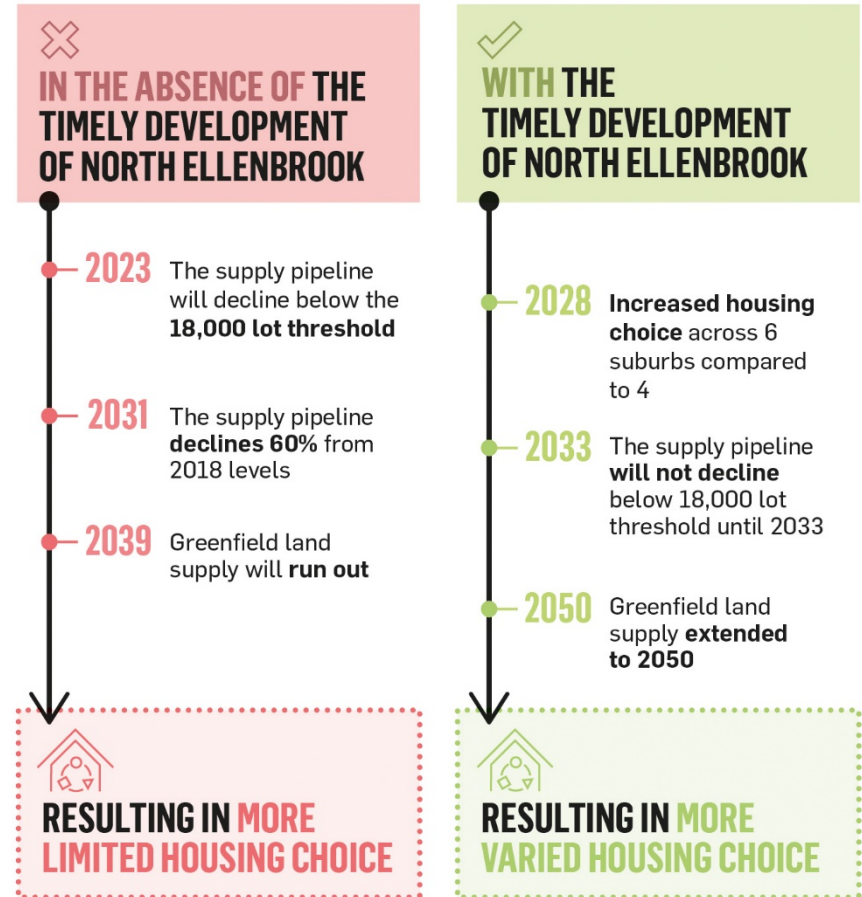
Given the lack of greenfield development within the rest of the North East Corridor, land availability constraints and strong population forecasts for Perth and this region, long term housing needs (and population forecasts) will not be met without additional and varied land supply.

Role for North Ellenbrook

The analysis demonstrates that North Ellenbrook can help alleviate the aforementioned short-term housing supply and diversity issues. In particular, the rezoning of North Ellenbrook will:

- Ensure there is an adequate supply pipeline over the next decade; and
- Deliver required diversity of housing choice.

LOT SUPPLY REQUIREMENTS



INTRODUCTION

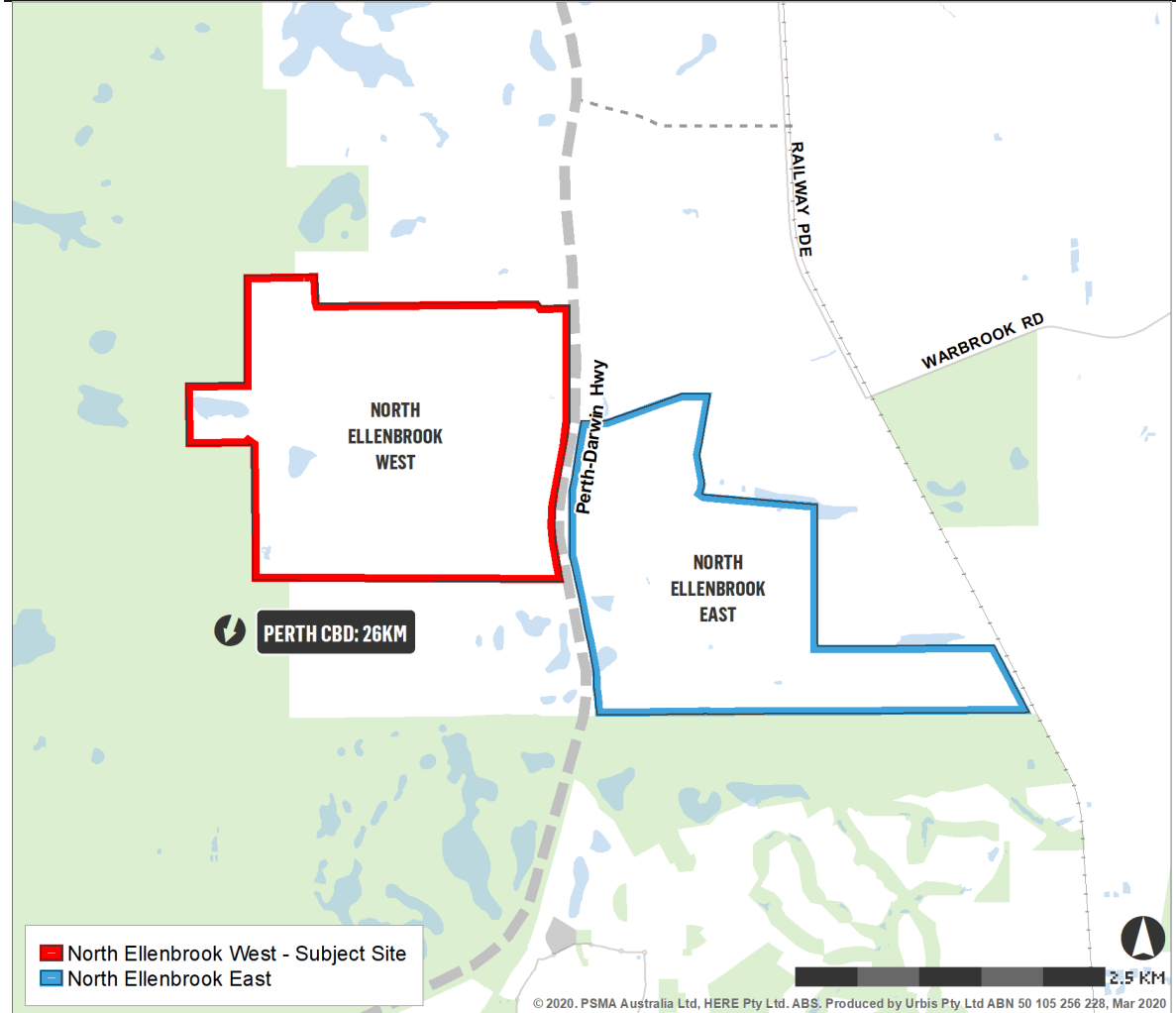
STUDY PURPOSE AND APPROACH

STUDY BACKGROUND AND PURPOSE

PURPOSE

- North Ellenbrook is identified as a future urban growth area located in Perth's North East Corridor. Parcel Property and Lend Lease are preparing district structure plans for the western and eastern sites, respectively.
- Urbis was engaged by Parcel Property as part of its development of a district structure plan for North Ellenbrook West (the subject site) to assist with understanding:
 - The need for residential uses within the locality; and
 - The opportunity to accommodate this need in the subject site.
- This assessment is intended to provide guidance to Parcel Property and stakeholders as to residential demand, housing diversity needs and the optimal role for the subject site.

SUBJECT SITE LOCATION



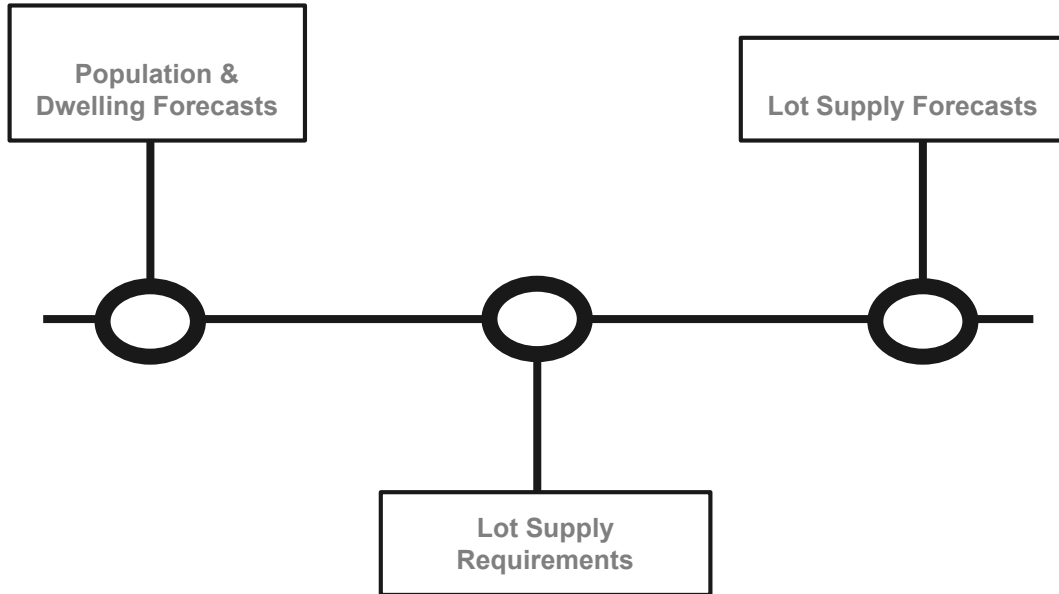
Source: Urbis

STUDY APPROACH

APPROACH

- This study was based on a comprehensive understanding of the Perth housing market, landowner / developer intentions and purchaser trends in order to understand housing needs and the opportunity for this site to meet forecast needs.
- The level of need for housing in the region was informed by and aligned to population and housing forecasts developed as part of the Perth and Peel @3.5million strategic planning documents.
- This study included the following tasks.
 - **Population and dwelling forecasts** – assessment of the future population growth and changing demographics in the region.
 - **Lot supply requirements** – assessment of the required supply of residential lots to meet dwelling needs.
 - **Lot supply forecasts** – assessment of the existing and forecast future land supply in the region to determine the impact of including (or excluding) North Ellenbrook from the supply pipeline.

STUDY TASKS

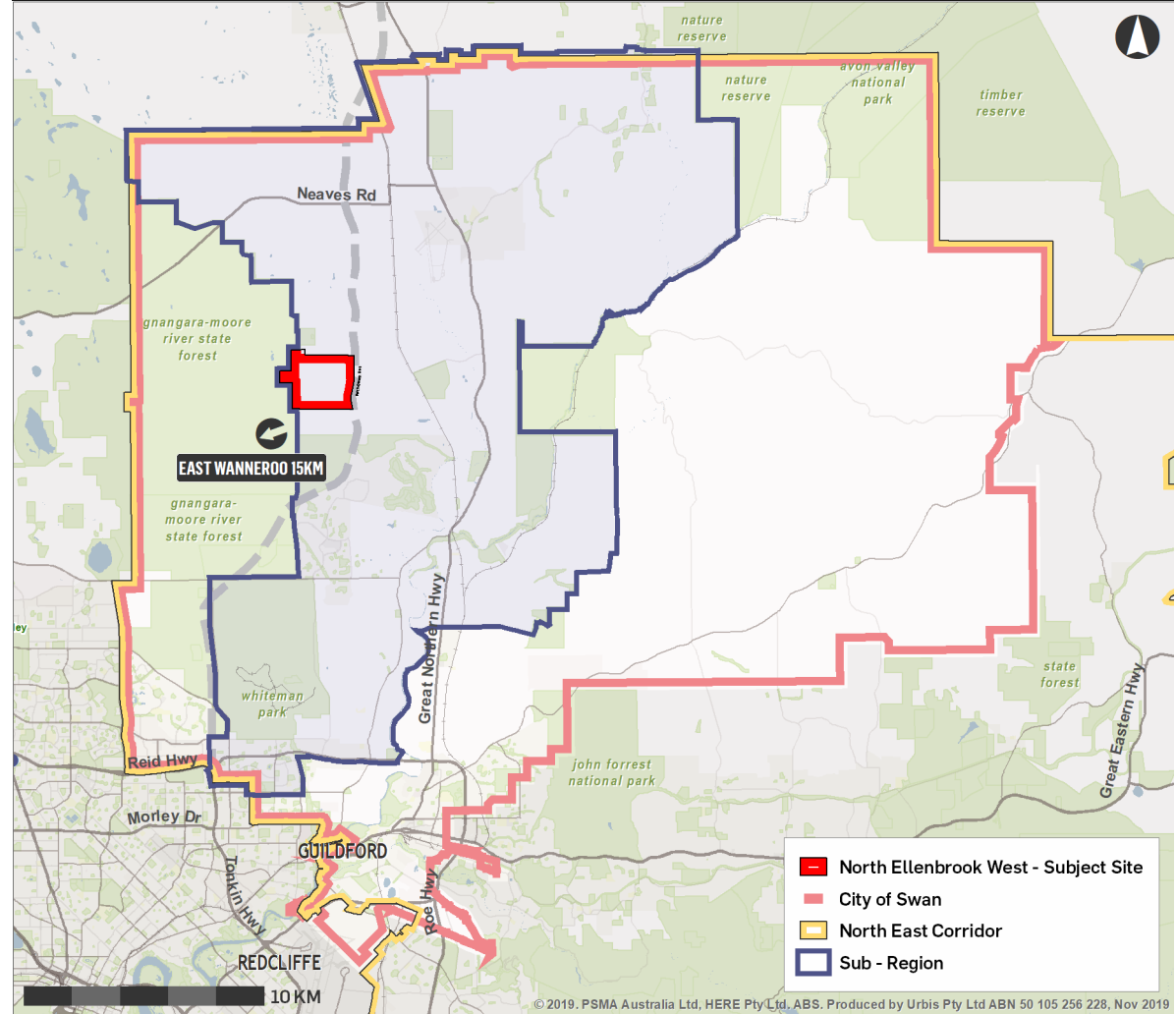


STUDY AREAS

STUDY AREAS

- A range of study areas were defined in order to understand housing needs across the broader area.
- Of relevance, a sub-region was defined to include the urban growth areas from Dayton / Bennett Springs in the south to Bullsbrook in the north. Greenfield housing development (i.e. non-infill new housing development) in Perth's North East Corridor is primarily limited to this sub-region.

LOCATION OF STUDY AREAS



Source: Urbis

SECTION ONE

POPULATION AND DWELLING FORECASTS

HISTORICAL POPULATION GROWTH

KEY INSIGHTS

- The Sub-Region is an important growth area that accommodates Perth's population growth and housing needs. It accommodated the vast majority of population growth in the North East Corridor over the 2006 to 2016 period.
- The Sub-Region accommodates the housing needs of both new residents to Perth and existing residents within the North East Corridor and broader metropolitan area. It also caters to a wide variety of households though larger homes support high levels of family households.

HISTORICAL POPULATION GROWTH, 2006-2016

	2006	2011	2016	Annual Growth (2006-16)	
				No.	%
Greater Perth	1,589,686	1,832,114	2,022,044	43,236	2.4%
North East Corridor	184,372	207,632	235,516	5,114	2.5%
City of Swan	96,479	113,397	136,679	4,020	3.5%
Sub-Region	36,463	50,721	71,641	3,518	7.0%

Source: ABS Estimated Resident Population; Urbis

EXISTING POPULATION PROJECTIONS (2016-2031)

KEY INSIGHTS

- Published population projections and forecasts illustrate substantial future population growth in the Sub-Region over the next decade.
- The State Government's WA Tomorrow population projections include five 'bands' which show low and high projection scenarios. The mid-range scenario (Band C) estimates annual growth of approximately 5,500 residents per annum over the 2016 to 2031 period. Infill areas in the City of Swan are expected to cater to the vast majority of the remaining growth of approximately 720 persons per annum over this same period.
- A private forecasting organisation (.id Consulting) develops forecasts for the City of Swan and small area forecasts (SAFi) for private organisations. The forecasts differ due to varied methodologies and geographical boundaries (SAFi data are available for Sub-Region though forecast.id data are not). An important constraint to both forecasting methodologies however is that they are based on and influenced by land supply assumptions which may not accurately reflect future zoning changes, site constraints and developer intentions.
- Overall, the projections and forecasts suggest that the North East Corridor, City of Swan and Sub-Region will experience considerable population growth over the period to 2031.

POPULATION PROJECTIONS, 2016-2031

	2016	2021	2026	2031	Annual Growth (2016-31)	
					No.	%
<u>WA Tomorrow (Band C)</u>						
Greater Perth	2,022,044					
North East Corridor	235,516	263,070	298,790	334,620	6,607	2.4%
City of Swan	136,679	164,020	198,100	231,800	6,341	3.6%
Sub-Region	71,641	96,320	125,835	155,065	5,562	5.3%
<u>forecast.id</u>						
City of Swan	136,679	162,072	189,112	215,138	5,231	3.1%
Sub-Region**	56,698	75,727	95,156	114,378	3,845	4.8%
<u>SAFi</u>						
Greater Perth	2,022,044					
North East Corridor	235,516	264,258	289,916	314,743	5,282	2.0%
City of Swan	136,679	159,949	178,645	196,790	4,007	2.5%
Sub-Region	71,641	87,718	102,095	115,537	2,926	3.2%

Source: ABS Estimated Resident Population; DPLH WA Tomorrow (Band C); .id Consulting; Urbis

** forecast.id estimates are not available for the Sub-Region. These estimates represent the Bullsbrook, Ellenbrook, Upper Swan and Urban Growth Corridor defined areas.

N.b. forecast.id estimates are not available for the North East Corridor.

EXISTING POPULATION PROJECTIONS (2016-2051)

KEY INSIGHTS

- Population projections developed for the City of Swan are available for the period to 2051. These forecasts illustrate continued growth in the Sub-Region over the long-term, with considerable growth expected in the area north of Ellenbrook (including North Ellenbrook and Bullsbrook).
- The forecasts – developed for the City of Swan local government authority – illustrate that the Sub-Region is expected to cater to approximately 140,600 additional residents over the 2016 to 2051 period (equivalent to 82% of future population growth forecast for the City of Swan).
- Accommodating this degree of growth in a timely manner whilst providing a diverse range of affordable housing options will require an ongoing pipeline of available lots.

POPULATION PROJECTIONS (FORECAST.ID), 2016-2051

	2016	2031	2041	2051	Annual Growth (2031-51)	
					No.	%
Bullsbrook	5,246	13,628	42,557	85,216	3,579	9.6%
Ellenbrook	40,669	64,718	71,325	70,089	269	0.4%
Upper Swan	1,583	2,523	2,724	2,908	19	0.7%
Urban Growth Corridor	9,200	33,509	39,824	39,078	278	0.8%
Sub-Region**	56,698	114,378	156,430	197,291	4,146	2.8%
City of Swan	137,554	215,138	264,171	309,788	4,733	1.8%

Source: ABS Estimated Resident Population; ;id Consulting; Urbis

** forecast.id estimates are not available for the Sub-Region. These estimates represent the Bullsbrook, Ellenbrook, Upper Swan and Urban Growth Corridor defined areas.

EXISTING POPULATION PROJECTIONS (2016-2050)

KEY INSIGHTS

- As part of the suite of documents for the Perth and Peel @3.5million strategic plan, population and dwelling estimates were developed for each local government area for 2050. These estimates are informing long-term land zoning and infrastructure decisions.
- According to the North East Sub-Regional Planning Framework, the resident population in the City of Swan is expected to increase significantly, albeit below forecast.id estimates.
- The State Government strategic document expects the number of dwellings to increase by approximately 63,500 over the 2016 to 2050 period. Of these, the State Government set a target of 21,690 additional infill dwellings over this period. As such, there is a need to accommodate approximately 42,000 dwellings in new urban areas in the City of Swan over the 2016 to 2050 period.
- In order to provide a diversity of housing choice and support affordability, there will thus be a need for a supply pipeline which is substantially larger than 42,000 dwellings.

POPULATION PROJECTIONS (SUB-REGIONAL FRAMEWORK), 2016-2050

	2016	2050	Annual Growth (2016-50)	
			No.	%
<u>Population</u>				
City of Swan	136,679	290,400	4,521	2.2%
Shire of Mundaring	39,217	56,920	521	1.1%
City of Kalamunda	59,201	103,260	1,296	1.6%
North East Corridor	235,097	450,580	6,338	1.9%
<u>Dwellings</u>				
City of Swan	51,417	114,970	1,869	2.4%
Shire of Mundaring	14,651	21,920	214	1.2%
City of Kalamunda	22,786	42,220	572	1.8%
North East Corridor	88,854	179,110	2,655	2.1%

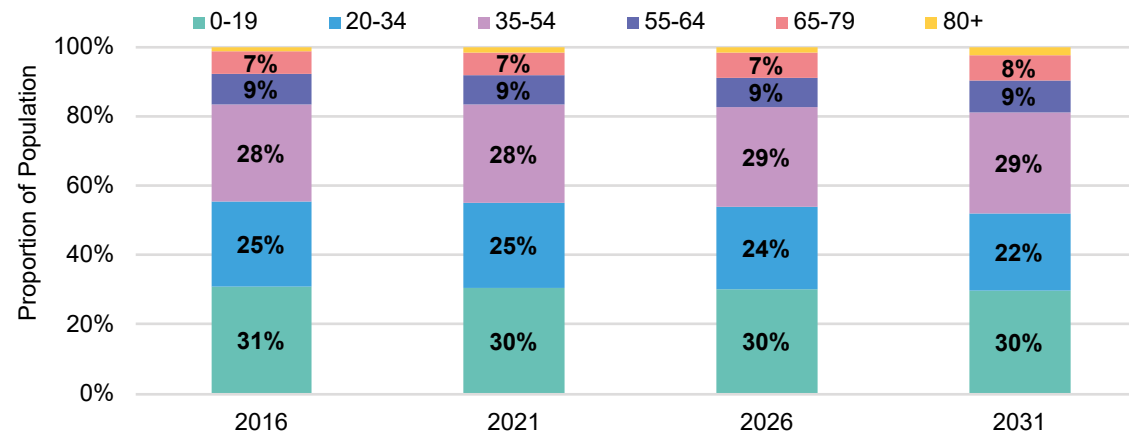
Source: ABS Estimated Resident Population; ABS Census of Population and Housing; DPLH North East Sub-Regional Planning Framework; Urbis

DEMOGRAPHIC CONSIDERATIONS

KEY INSIGHTS

- Whilst Australia's population is expected to experience significant population ageing, on average, over the coming decades, migration to Perth is expected to support a relatively slower rate of ageing according to the State Government's WA Tomorrow projections.
- Within the Sub-Region, population ageing is expected to be limited and the area is expected to continue to attract a large number of family households.
- This has implications for the type of housing need in the Sub-Region and implies that there will be a need for family house and land options. In other words, there is a limited opportunity to accommodate a significant share of future population growth within small dwelling options without significant changes to household preferences.
- Further to above, it is important to recognise that there is significant household diversity in the Sub-Region which needs to be catered for in the future through diverse housing options.

RESIDENT DEMOGRAPHIC PROJECTIONS, SUB-REGION, 2016-2031



Source: ABS; DPLH WA Tomorrow (Band C); Urbis

ADOPTED POPULATION FORECASTS

KEY INSIGHTS

- In order to determine the expected need for housing in the Sub-Region, this report adopted a set of forecasts which were informed by the array of aforementioned information.
- This report adopted the following assumptions.
 - Forecasts adopted the long-term projections illustrated in the North East Sub-Regional Planning Framework for the City of Swan. That is, the forecasts assume the population of the City of Swan at 2050 is approximately 290,400.
 - The growth profile (i.e. the growth rate) over the period to 2050 is aligned to the forecast.id estimates developed by .id Consulting for the City of Swan. The exception to this is the 2031 to 2051 period whereby a lower growth rate was adopted to align with slower growth over this period forecast by the sub-regional planning frameworks.
 - Population forecasts for the Sub-Region align with forecast.id population growth estimates (i.e. the additional population growth adopted is equal to the forecast.id additional population growth for the Sub-Region) though the 2031 to 2051 period growth is expected to be moderately lower (in with the sub-regional frameworks). Of note, the adopted population estimates are well below the State Government's WA Tomorrow projections for the Sub-Region.
- In summary, the Sub-Region is forecast to continue to experience high population growth over the coming decades. Over the 2016 to 2051 period, the Sub-Region's population is expected to increase by approximately 113,700 residents.

POPULATION FORECASTS, 2016-2051

	2016	2021	2026	2031	2041	2051
<u>Sub-Region</u>						
WA Tomorrow	71,641	96,320	125,835	155,065	-	-
forecast.id**	56,698	75,727	95,156	114,378	156,430	197,291
SAFi	71,641	87,718	102,095	115,537	-	-
Adopted Forecasts	71,641	90,670	110,099	129,321	158,757	185,317
Average Annual Growth	4,184	3,806	3,886	3,844	2,944	2,656
<u>City of Swan</u>						
WA Tomorrow	136,679	164,020	198,100	231,800	-	-
forecast.id	136,679	162,072	189,112	215,138	264,171	309,788
SAFi	136,679	159,949	178,645	196,790	-	-
Planning Framework^	136,679	-	-	-	-	294,921
Adopted Forecasts	136,679	162,072	189,112	215,138	255,030	294,921
Average Annual Growth	4,656	5,079	5,408	5,205	3,989	3,989

Source: ABS Estimated Resident Population; ABS Census of Population and Housing; DPLH North East Sub-Regional Planning Framework; .id Consulting; Urbis

** forecast.id estimates are not available for the Sub-Region. These estimates represent the Bullsbrook, Ellenbrook, Upper Swan and Urban Growth Corridor defined areas.

^ Forecast for 2051 equates to forecast for 2050 plus average annual growth rate for one year.

ADOPTED DWELLING FORECASTS

KEY INSIGHTS

- The aforementioned population forecasts were converted into dwelling requirements in order to inform land supply requirements.
- This report adopted the following assumptions.
 - The forecast average number of residents per dwelling in the City of Swan align with the forecasts within the North East Sub-Regional Planning Framework for the City of Swan which assume that dwelling sizes will decline moderately over the next three decades.
 - The average number of residents per dwelling in the Sub-Region was forecast to decline with an equivalent growth profile to that of the City of Swan as a whole.
- The Sub-Region is expected to cater to, on average, an additional 1,238 dwellings per annum over the 2016 to 2051 period.

DWELLING FORECASTS, 2016-2051

	2016	2021	2026	2031	2041	2051
<u>Average Persons per Dwelling</u>						
Sub-Region	2.85	2.83	2.81	2.79	2.75	2.71
City of Swan	2.66	2.64	2.62	2.60	2.56	2.53
<u>Estimated Dwellings</u>						
Sub-Region	25,158	32,074	39,232	46,418	57,822	68,488
City of Swan	51,417	61,416	72,188	82,724	99,504	116,760
<u>Annual Growth in Dwellings</u>						
Sub-Region	-	1,383	1,432	1,437	1,140	1,067
City of Swan	-	2,000	2,154	2,107	1,678	1,726

Source: ABS Estimated Resident Population; ABS Census of Population and Housing; DPLH North East Sub-Regional Planning Framework; Urbis

INFILL AND GREENFIELD DWELLING FORECASTS

KEY INSIGHTS

- In line with the objectives of Perth and Peel @3.5million, this report explored the level of future supply in terms of both greenfield and infill dwellings. According to the DPLH infill definition (defined with the Urban Growth Monitor), infill areas are those with gross densities above those defined by the infill model.
- Whilst a comprehensive review of the infill model was not possible for this report, areas deemed infill within the sub-region are assumed to be limited to the Ellenbrook Town Centre, the Brabham train station precinct and the established areas of Beechboro and (part of) Bennett Springs. Greenfield areas outside the Sub-Region in the City of Swan are anticipated to be limited to Gidgegannup, Bushmead, Caversham, Jane Brook and Whiteman.
- Drawing on forecast.id estimates for the Ellenbrook Town Centre and greenfield areas, density assumptions for the Brabham Station Precinct and the adopted dwelling forecasts, greenfield and infill dwelling forecasts were developed for the Sub-Region and City of Swan.
- As noted in the population and dwelling forecast assumptions, the expected level of infill dwellings are aligned with the forecasts included in the North East Sub-Regional Planning Framework (the estimated 22,159 additional dwellings over the 2016-51 period are equivalent to 21,690 additional dwellings over the 2016-50 period which is in line with the estimates in the planning framework).

DWELLING ADDITION FORECASTS BY TYPE, 2016-2051

	Average Annual Increase in Dwellings					Total Increase (2016-51)
	2016-21	2021-26	2026-31	2031-41	2041-51	
<u>Infill</u>						
Ellenbrook Town Centre	58	122	90	29	0	1,644
Brabham Station Precinct	0	20	40	40	0	700
Rest of Sub-Region	20	30	30	50	60	1,500
Sub-Region Total	78	172	160	119	60	3,844
Rest of City of Swan	519	623	569	428	548	18,315
City of Swan Total	597	795	729	547	608	22,159
<u>Greenfield</u>						
Sub-Region	1,305	1,260	1,277	1,021	1,007	39,486
Rest of City of Swan	98	100	101	110	111	3,698
City of Swan Total	1,402	1,359	1,379	1,131	1,117	43,184

Source: ABS Estimated Resident Population; ABS Census of Population and Housing; DPLH North East Sub-Regional Planning Framework; .id Consulting; Urbis

SECTION TWO

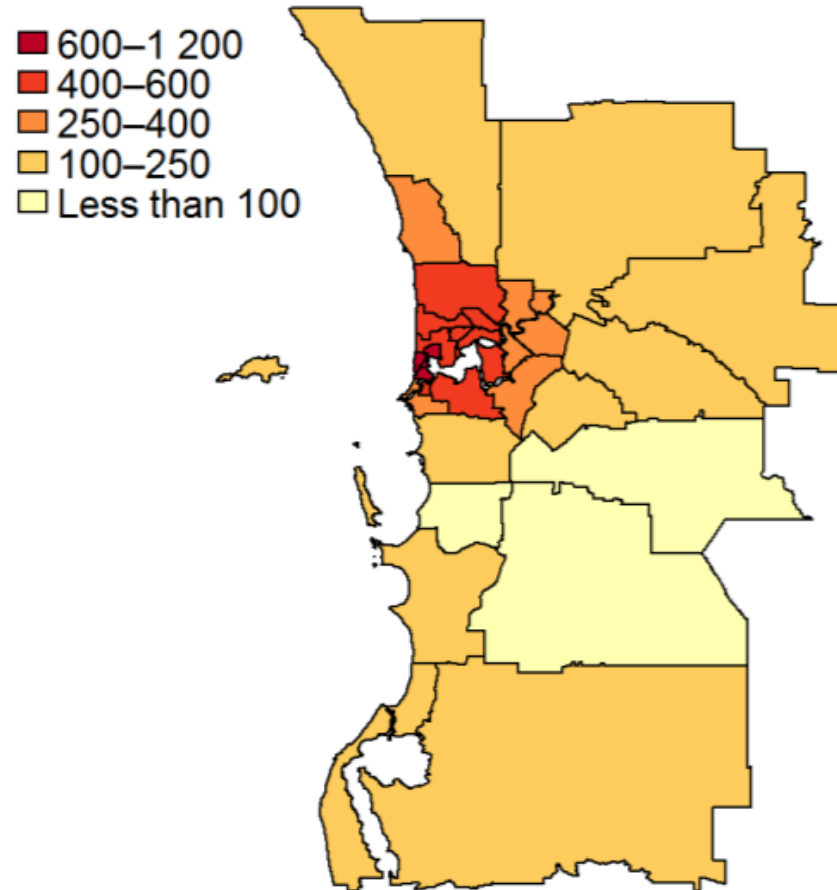
LOT SUPPLY REQUIREMENTS

LAND SUPPLY CONSIDERATIONS

KEY INSIGHTS

- A 2018 study prepared by the Reserve Bank of Australia (RBA) found that "...as of 2016, zoning raised detached house prices 73 per cent above marginal costs in Sydney, 69 per cent in Melbourne, 42 per cent in Brisbane and 54 per cent in Perth." Furthermore, the study concludes that "[t]he effect of zoning has increased dramatically over the past two decades, likely due to existing restrictions binding more tightly as demand has risen."
- Within the Perth context, the RBA study estimated that zoning restrictions in outer metropolitan growth areas was substantial, with the effect estimated at greater than \$100,000 per dwelling in the City of Swan.
- Numerous literature demonstrates conclusively that zoning restricts land supply and increases dwelling prices; thus, worsening affordability, housing stress and homelessness. These government, academic and private sector studies have pointed to restrictive zoning as being an important factor in Australia's high and rising housing prices. These include OECD (2010); Kulish et al (2011); Productivity Commission (2011, 2017); HSAR Working Party (2012); RBA (2014, 2018); Senate Economics References Committee (2015); CEDA (2017); Stevens (2017) and Daley, Coates and Wiltshire (2018), among others (see appendix for bibliography).

PERTH DWELLING PRICE ZONING EFFECT BY LOCAL GOVERNMENT AREA (\$'000), 2016



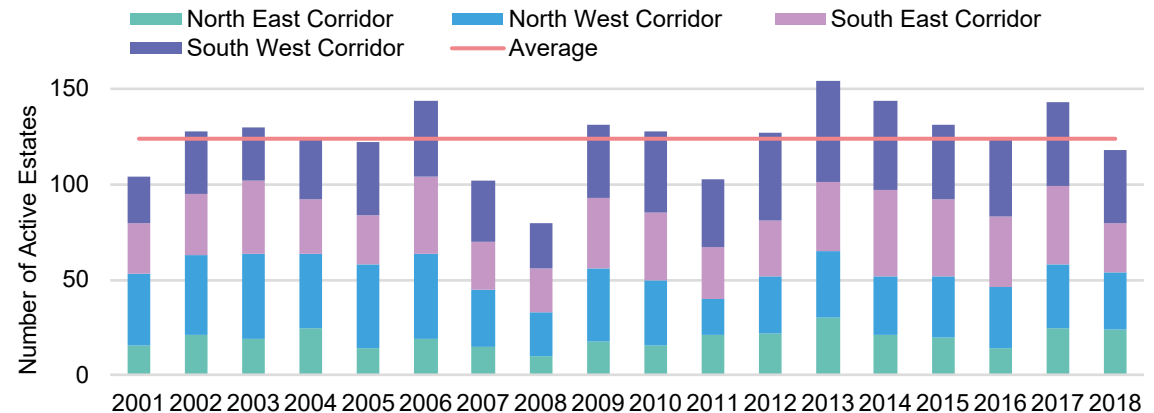
Source: RBA (2018) "The effect of zoning on housing prices"

LAND SUPPLY CONSIDERATIONS

KEY INSIGHTS

- Whilst constrained land supply has been conclusively found to lead to poor affordability and flow on social impacts, there has been limited research focusing on what level of land supply is adequate.
- Drawing on Urbis' databases and information published by Landgate, this study found that there has been a consistent supply of estates and development areas (i.e. suburbs) within Perth's growth corridors.
- There were, on average, approximately 124 active estates in the growth corridors over the 2001 to 2018 period. Within the North East Corridor, there were an average of 20 active estates over this period. Furthermore, there were approximately 60 suburbs with estates selling lots, on average, over the 2001 to 2018 period in the growth corridors (including an average of 11 suburbs in the North East Corridor).
- The notable periods of relatively lower supply coincided with high price growth (i.e. 2007-08 and 2011-12) which suggests that lower land supply can lead to lot price inflation. Research from the Urban Development Institute (WA Division) further emphasises this relationship, with low levels of lots on the market found to coincide with high price growth.
- Forecast population growth in the greenfield markets is estimated to be relatively equivalent to historical averages which suggests that an equivalent future level of supply should be supported.

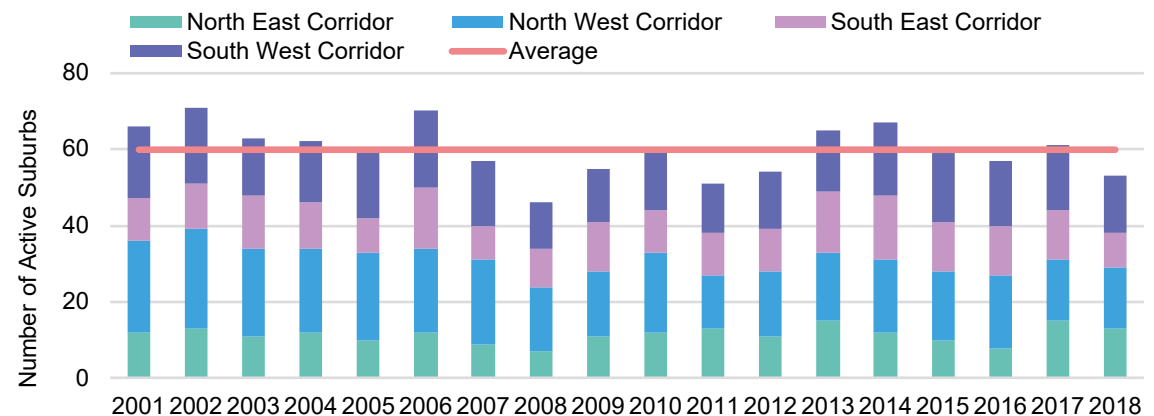
ACTIVE ESTATES BY CORRIDOR, METROPOLITAN PERTH, 2001-18



Source: Landgate; Urbis

Note: Active estates are classified as those with 10 or more sales per annum.

ACTIVE SUBURBS BY CORRIDOR, METROPOLITAN PERTH, 2001-18



Source: Landgate; Urbis

Note: Active suburbs are classified as those with 10 or more sales per annum.

LAND SUPPLY CONSIDERATIONS

KEY INSIGHTS

- In addition to current and short term supply, there is historically significant supply in the approval pipeline to support housing needs and to quickly respond to fast-changing market conditions.
- According to data published by the Department of Planning, Lands and Heritage (DPLH), there was the equivalent of 10.1 years of conditionally approved lots as December 2018 (based on sales for the 2018/19 period).
- Given the Sub-Region is estimated to cater to more than 90% of greenfield dwelling growth in the City of Swan, there should be a short-term stock of at least 8 years of supply in the Sub-Region (equivalent to approximately 9,000 lots on average over the period to 2051) to ensure supply can adequately respond to housing needs.
- The level of Urban and Urban Deferred land at any point in time should be adequate to ensure this short-term supply can be maintained. This should equate to at least twice the short-term supply benchmark (i.e. minimum 18,000 lots).
- Furthermore, conditional approvals lapse due to a number of reasons such as landowner intentions and development viability. There is thus a need to have a diverse and ongoing supply of lots to cater for future needs.

STOCK OF CONDITIONALLY APPROVED LOTS, METROPOLITAN PERTH, 2016-18

	Dec-16	Dec-17	Dec-18	Average
North East Corridor	8,551	8,238	7,841	8,210
North West Corridor	14,021	12,822	11,584	12,809
South East Corridor	10,736	10,638	8,648	10,007
South West Corridor	17,112	15,688	14,461	15,754
Growth Corridors Total	50,420	47,386	42,534	46,780
Estimated Stock** (years)	8.9	8.1	10.1	8.9

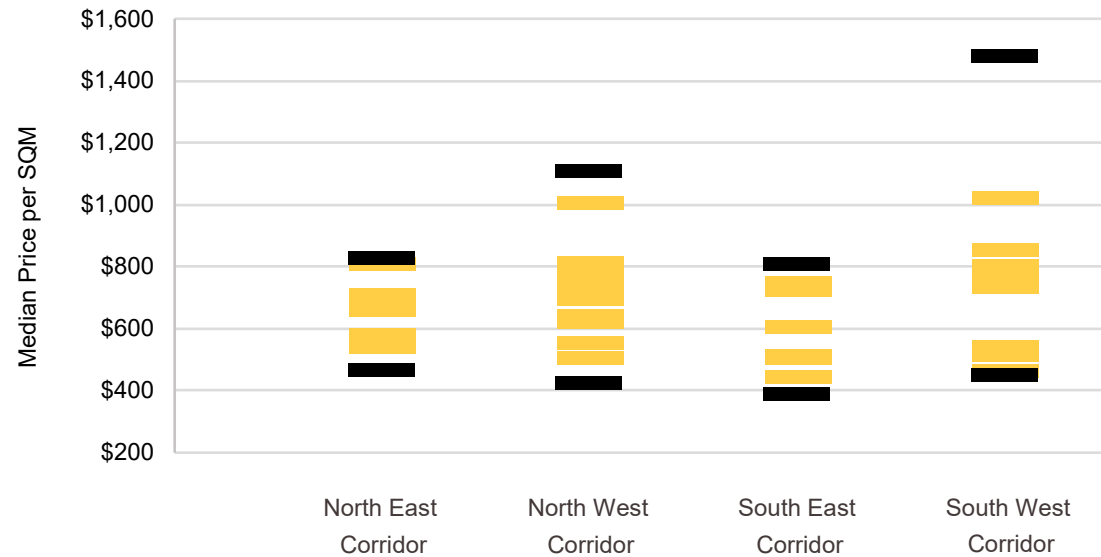
Source: DPLH; Landgate; Urbis
 ** based on annual lot sales

LOT SUPPLY CONSIDERATIONS

KEY INSIGHTS

- Whilst it is recognised that there is a need to provide an adequate quantum of ongoing housing supply, there is a need to provide housing choice. Housing choice extends to more than the built form and includes attributes such as affordability, character, amenities and accessibility, amongst others.
- This report explored the median purchase price of lots sold in metropolitan Perth in order to understand the possible future implications for housing choice in the North East Corridor. Key findings are noted below.
- **Price Variability Evident:** Corridors around Perth typically feature a variety of different developments at different price points to cater for a number of buyer groups.
- **Except in the NE Corridor:** The clear exception to this trend is the North East Corridor which had minimal price differences for like-to-like products (i.e. on a price per square metre basis) in 2018 (the latest year of complete settled sales).
- Whilst further development in Bullsbrook will provide more product at the affordable end of spectrum, the risk is that relying predominantly on central and north Bullsbrook to provide medium- and long-term land supply would limit housing choice. This could constrain the desirability of living in the North East Corridor and impact negatively on the ability to support economic initiatives in the corridor such as the expansive industrial precincts in Bullsbrook and Muchea.

MEDIAN LOT PRICING BY SUBURB AND CORRIDOR, METROPOLITAN PERTH, 2018



Source: Landgate; Urbis
 Note: Excludes suburbs with less than 15 sales

LOT SUPPLY CONSIDERATIONS

KEY INSIGHTS

- Whilst land may be appropriately zoned for development, there are numerous constraints which can impact on the timely delivery of this land to the market.
- In the context of North East Corridor, there are numerous constraints, including:
 - Fragmented land ownership;
 - Landowner sale price expectations;
 - Existing land use/s;
 - Environmental issues;
 - Upfront infrastructure costs; and
 - Planning timeframes.
- Overall, the combination of these above constraints are expected to constrain the timely availability of land supply in a number of Urban and Urban Deferred areas such as Henley Brook, Dayton, West Ellenbrook and Bennett Springs (as well as areas outside the Sub-Region such as Whiteman).

LAND AVAILABILITY CONSTRAINTS

Constraint	Description
Fragmented Land Ownership	Fragmented land holdings (i.e. many small land holdings) can constrain the delivery of housing in urban zoned areas. Fragmentation increases development and acquisition costs and negatively impacts development viability.
Landowner Sale Price Expectations	Vendor price expectations are a common inhibitor to housing supply in both the greenfield and infill markets. Following a rezoning, a land owner may expect a considerable premium for its site.
Existing Land Uses	Land may be appropriately zoned however it is not able to provide housing supply due to the continuation of the existing land use or conflict with existing uses in adjacent areas.
Environmental Issues	Water, vegetation, species habitats and many other environmental constraints can limit the ability to provide housing supply in zoned areas; impacting on development yields and viability.
Upfront Infrastructure Costs	The cost of upfront infrastructure may be prohibitive for a development to proceed until market conditions change (e.g. price growth). An area zoned for development therefore may not proceed for many years or decades until market conditions are appropriate.
Planning Timeframes	<p>The timeframes to acquire approval for development can limit the viability of developments and the timeliness of housing supply. Furthermore, expectations regarding the complexity and timeframes of planning requirements will impact on developer appetite for a site and englobe land purchase price estimates.</p> <p>According to research from the Australian Housing and Urban Research Institute (AHURI)¹, “[w]hile development contributions and other planning related costs are high, developers are more concerned about non-financial barriers such as planning system complexity, uncertain time frames and changing requirements.” Further, “[s]maller developers experience greater difficulties in absorbing unforeseen costs, which reduces the viability of these enterprises.”</p>

Source: Urbis

SECTION THREE

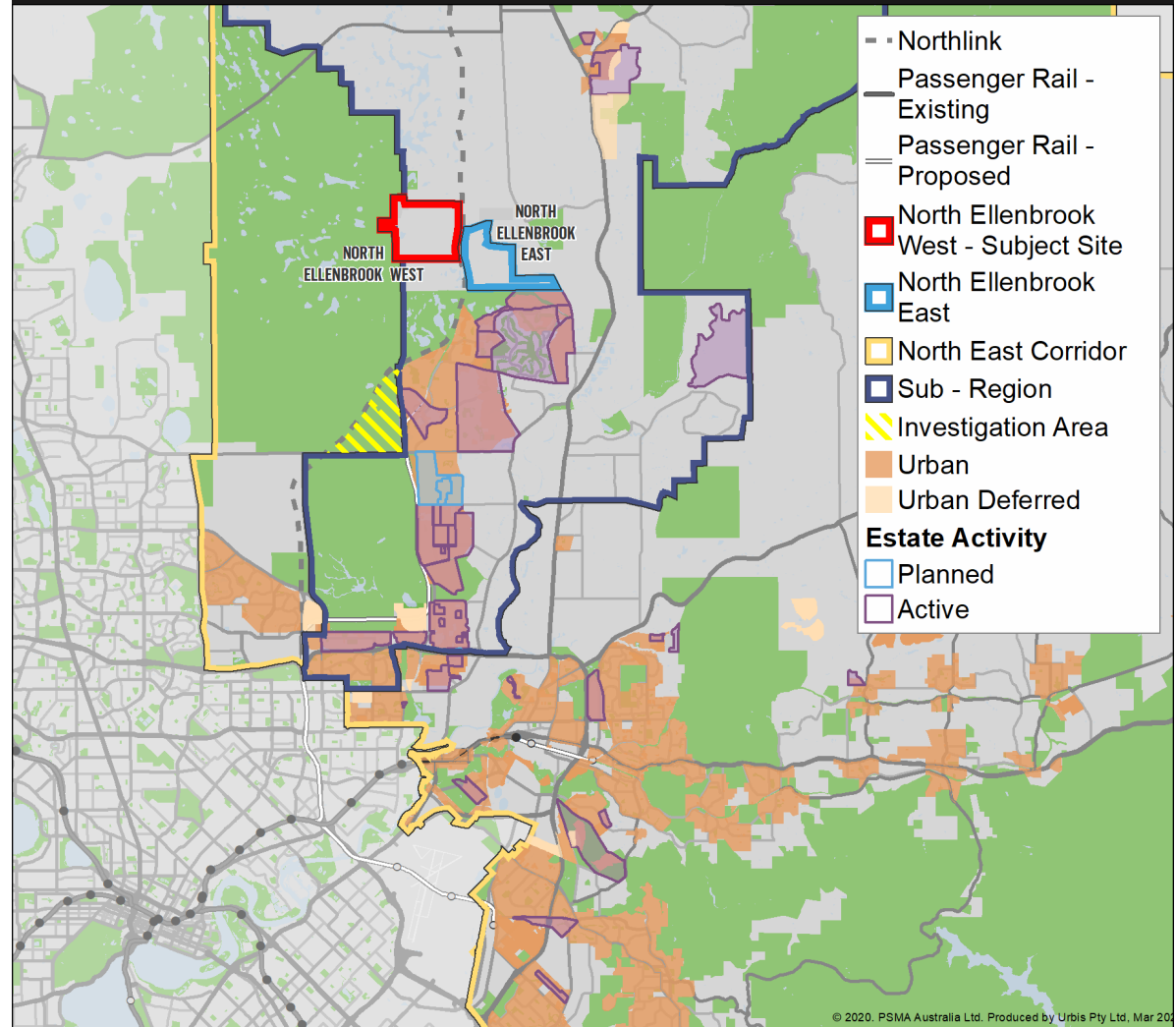
LOT SUPPLY FORECASTS

RESIDENTIAL DEVELOPMENT AREAS

KEY INSIGHTS

- The North-East Corridor is home to several large development areas, with the majority of estates surrounding Brabham, Ellenbrook and Dayton in the City of Swan.
- Several infill residential land developments have commenced in recent years in the corridor, such as Movida in Midvale, Rosehill Waters in South Guildford and Satterley's The Hales in Forrestdale.
- The Sub-Region has the following active development areas.
 - **Bennett Springs / Dayton:** Currently Mirvac's Illuma estate is the only available residential land supply in Bennett Springs with future development limited by 'Urban Deferred' zoning. There are numerous small-scale developments in Dayton and fragmented land ownership which limits the timeliness of lot supply in this area.
 - **Brabham:** Estates within this suburb are nearing completion except for the 'Brabham' estate which is a joint venture with the Department of Housing and Peet / Perron Group (this 3,000-lot estate is expected to deliver titled lots in 2020).
 - **Bullsbrook:** Currently, the Kingsford estate is the only notable development.
 - **Ellenbrook / Aveley / The Vines / Upper Swan:** This long-term development area has minimal greenfield lot supply remaining except in Upper Swan which is Satterley's recently launched Clementine estate.

RESIDENTIAL LAND SUPPLY, NORTH EAST CORRIDOR



Source: Urbis

ESTIMATED LOT SUPPLY

KEY INSIGHTS

- A review of active and short-term lot supply was undertaken in order to understand the level of land supply in the short- and medium-term pipeline.
- Based on estimates from structure plans and settled sales records, the level of remaining yield was approximated for estates within the Sub-Region for June 2018. Sales for the 2019 to 2021 period were then forecast based on historical market shares and sales rates. Overall, sales were forecast to moderately increase given improved macroeconomic and property market conditions experienced in Perth over the past 18 months.
- In addition to the active development areas noted above, Mirvac is assumed to launch its estate in Henley Brook over this forecast period. A recent rezoning and structure planning will support further lot supply in Henley Brook however the degree of lots available will be limited by fragmentation (the area includes 110 individual lots and it is understood that consolidated holdings are currently limited to Mirvac's future estate and Progress Development's future estate/s).
- Overall, the level of supply within active development areas as of the end of 2021 is estimated at approximately 8,700 lots. This is considered to be relatively low compared to historical levels and other growth areas (for instance, active estates in the North West Corridor were estimated to have approximately 24,000 lots remaining).

RESIDENTIAL LOT SUPPLY, ACTIVE ESTATES, SUB-REGION

	Developer	Total Yield (est.)	Yield Remaining (est.)		Lot Sales	
			June 2018	June 2021	2015/16-17/18	2018/19-20/21 (est.)
<u>Ellenbrook / Aveley / The Vines / Upper Swan</u>						
Ellenbrook / The Vines*	LWP	8,000	300	0	300	300
Vale Aveley	Stockland	3,000	600	0	817	600
Clementine	Satterley	1,700	1,700	1,580	0	120
<u>Bennett Springs / Dayton</u>						
Illuma^	Mirvac	600	502	322	98	180
St Leonards / Parkside / The Rise	Progress Developments	1,500	740	500	217	240
Golden Vines Estate	GM Property Group	200	120	40	80	80
Dolina	Private	52	33	0	19	33
Mataro	Private	280	220	130	60	90
<u>Bullsbrook</u>						
Kingsford	Okeland	2,800	2,800	2,680	0	120
Bullsbrook Landing	DJ MacCormick	380	50	0	51	50
<u>Brabham</u>						
Brabham*	Peet	2,500	2,500	2,350	0	150
Whiteman Edge*	Stockland	2,160	600	0	562	600
Ariella	Cedar Woods	860	576	276	284	300
Imogen Private Estate^	GM Property Group	66	50	0	16	50
Avonlee	Terranovis	600	320	230	95	90
Flamewood^	Parcel Property	309	258	138	51	120
<u>Henley Brook</u>						
To be confirmed	Mirvac	500	500	470	0	30
TOTAL		25,507	11,869	8,716	2,650	3,153

Source: Landgate; Urbis; structure plans

* Excludes town centre lots

^Estate launched during 2015/16-17/18 period

Note: Yields are estimates and subject to change due to market factors and development decisions

ESTIMATED LOT SUPPLY

KEY INSIGHTS

- In addition to the active development areas, there are several areas in the Sub-Region which are identified for future residential development (estimated to yield approximately 20,000 to 21,000 dwellings). These areas are summarised below.
- **North Ellenbrook:** The two areas of North Ellenbrook which are preparing district structure plans are expected to accommodate approximately 12,000 dwellings.
- **Bullsbrook (North):** The State Government recently announced that a third proposal to rezone approximately 63 hectares in Bullsbrook (North) will not be progressed at this time due to an adequate urban land supply in Bullsbrook, concerns from affected landowners and further consideration of the Bullsbrook wastewater treatment plant buffer.
- **Bullsbrook (South):** The 210 hectare area directly south of the Kingsford estate was recently rezoned to Urban. It is understood that these sites continue to be used for rural purposes and that structure planning is required before progressing development activity.
- **West Ellenbrook:** Whilst an Improvement Plan was prepared in 2019 for this consolidated State Government site of approximately 370 hectares, the site is identified as a basic raw materials priority site and resource extraction could delay the supply potential in this area.
- **Bennett Springs (North):** The approximately 100 hectare area north of Marshall Road is predominantly zoned Urban Deferred. The area currently consists of approximately 43 rural residential lots.

RESIDENTIAL LOT SUPPLY, FUTURE DEVELOPMENT AREAS, SUB-REGION

	Status	Area (ha)	Yield (est.)	Timing
North Ellenbrook	District structure planning underway. MRS Amendments lodged.	1,097	12,000	2025+
Bullsbrook (North)	MRS Amendment and district structure planning required.	63	800	2030+
Bullsbrook (South)	Urban zoned. Structure planning required. Developer acquisition required.	210	3,000	2025+
West Ellenbrook	Improvement Plan approved. Improvement Scheme underway.	370	3,500	2023+
Bennett Springs (North)*	MRS Amendment, district structure planning and land consolidation required.	100	1,500	2023+
TOTAL		1,840	20,800	-

Source: Landgate; Urbis; structure plans

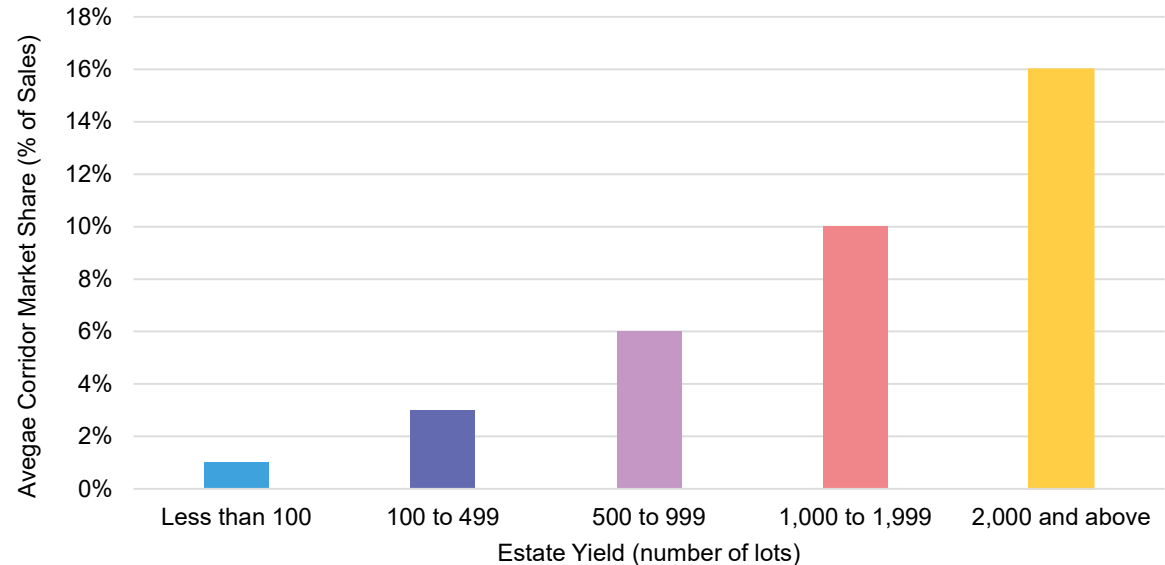
* Based on density proposed within Henley Brook Structure Plan area

FORECAST MARKET SHARES

KEY INSIGHTS

- The degree to which a development area produces lots for sale is influenced by a range of factors. In addition to the aforementioned lot supply constraints, influencing factors include:
 - Developer intent and capacity (e.g. the developer's branding, appeal, financial and organisational capacity etc.); and
 - Estate attributes and appeal (e.g. pricing, product mix, amenities, competitor context, size, location etc.).
- Research of the Perth greenfield market demonstrates that larger estates (and development areas with consolidated land holdings) typically have the capacity to produce a larger number of lots per annum than smaller estates (and areas with fragmented land ownership). For instance, market shares were, on average, 16% for estates with 2,000+ lots compared to 3% for estates with 100 to 499 lots.

MARKET SHARE BY ESTATE SIZE, METROPOLITAN PERTH, 2006-18



Source: Landgate; Urbis

FORECAST MARKET SHARES

KEY INSIGHTS

- A review of the existing and future development areas was undertaken in order to determine appropriate market share ranges for two scenarios.
 - Scenario one – without North Ellenbrook.
 - Scenario two – with North Ellenbrook.
- The market share ranges informed the subsequent lot supply forecasts and represent the expected distribution of lot supply to meet the population forecasts. That is, the market shares may not be achievable if there are supply constraints (such as fragmentation).
- In line with the Perth-wide research, this analysis found that lot sales rates varied across development areas in the Sub-Region. The large master planned communities of Ellenbrook, Whiteman Edge and The Vale represented a significant share of sales in the Sub-Region over the past decade. Areas with fragmented land ownership such as Dayton experienced relatively lower sales rates.
- Looking forward, the larger development areas are assumed to experience higher market shares compared to smaller development areas with fragmented land.

MARKET SHARE FORECASTS BY SCENARIO AND DEVELOPMENT AREA, SUB-REGION

	Historical Lot Sales Activity (2012/13-17/18)			Market Share Forecast (average)	
	Yield Remaining (June 2021)	Average Sales Rate (p.a.)	Historical Market Share (% of Sub-Region)	Scenario One	Scenario Two
Upper Swan	1,580	-	-	12%	9%
Dayton	670	176	14%	11%	11%
Bennett Springs	322	22	2%	5%	5%
Bullsbrook	2,680	38	3%	15%	12%
Brabham	2,994	319	25%	24%	24%
Henley Brook	3,470	-	-	17%	12%
North Ellenbrook	12,000	-	-	0%	27%
Bullsbrook (North)	800	-	-	10%	5%
Bullsbrook (South)	3,000	-	-	15%	13%
West Ellenbrook	3,500	-	-	17%	13%
Bennett Springs (North)	1,500	-	-	7%	5%
Sub-Region	32,516		43%		

Source: Landgate; Urbis

FORECAST LOT SUPPLY (WITHOUT NORTH ELLENBROOK)

KEY INSIGHTS

- In the absence of the timely development of North Ellenbrook, the residential land supply is forecast to be depleted by 2038/39.
- Moreover, the stock of urban zoned land is forecast to decline well below adequate levels by 2026. There are estimated to be approximately 13,400 lots within Urban and Urban Deferred areas by 2026 (based on assumptions that planning and development will have advanced for West Ellenbrook by this time) compared to 19,300 lots as of 2018 and the minimum benchmark of 18,000 lots.
- Of concern to affordability, choice and social issues, the level and diversity of lot supply is forecast to decline rapidly from 2026. By 2031, lot supply is expected to be limited to less than 8,000 lots across four suburbs:
 - Bullsbrook – approximately 2-3 large master planned communities and smaller estate/s in northern Bullsbrook;
 - Henley Brook – approximately 3-4 small estates;
 - West Ellenbrook – one large master planned community; and
 - Bennett Springs – approximately 1-2 small estates.
- Given the lack of greenfield development within the rest of the North East Corridor and strong population forecasts for Perth and this region, long term housing needs (and sub-regional population forecasts) will not be met without additional land supply.

FORECAST YIELD REMAINING BY DEVELOPMENT AREA, SCENARIO ONE, SUB-REGION

	2021	2026	2031	2036	2041	2046	2051
Upper Swan	1,580	909	0	0	0	0	0
Dayton	670	0	0	0	0	0	0
Bennett Springs	322	0	0	0	0	0	0
Bullsbrook	2,680	1,722	622	0	0	0	0
Brabham	2,994	1,078	0	0	0	0	0
Henley Brook	3,470	2,895	2,235	1,420	0	0	0
North Ellenbrook	0	0	0	0	0	0	0
Bullsbrook (North)	800	800	800	392	0	0	0
Bullsbrook (South)	3,000	2,635	1,535	176	0	0	0
West Ellenbrook	3,500	2,913	1,813	454	0	0	0
Bennett Springs (North)	1,500	1,265	825	282	0	0	0
Sub-Region	20,516	14,217	7,830	2,725	0	0	0
Supply Pipeline*	19,716	13,417	7,830	2,725	0	0	0
Active Development Suburbs	6	6	4	4	0	0	0

Source: Landgate; Urbis

* Includes Urban and Urban Deferred Areas

FORECAST LOT SUPPLY (WITH NORTH ELLENBROOK)

KEY INSIGHTS

- In order to determine the potential role for North Ellenbrook to provide additional housing supply and choice to meet forecast housing needs, this scenario forecast land supply with the inclusion of the subject site and North Ellenbrook (East). The sites are expected to start to deliver lots from 2028 and 2025, respectively.
- The analysis demonstrates that North Ellenbrook can help alleviate the aforementioned short-term housing supply and diversity issues. In particular, the rezoning of North Ellenbrook will:
 - Ensure there is an adequate supply pipeline over the next decade; and
 - Deliver required diversity of housing choice.
- As a result of the inclusion of North Ellenbrook in the supply pipeline, the level of stock in the Sub-Region is expected to be depleted by 2049/50 rather than 2038/39.

FORECAST YIELD REMAINING BY DEVELOPMENT AREA, SCENARIO TWO, SUB-REGION

	2021	2026	2031	2036	2041	2046	2051
Upper Swan	1,580	974	368	0	0	0	0
Dayton	670	0	0	0	0	0	0
Bennett Springs	322	0	0	0	0	0	0
Bullsbrook	2,680	1,814	949	165	0	0	0
Brabham	2,994	1,262	0	0	0	0	0
Henley Brook	3,470	2,950	2,431	1,767	1,144	0	0
North Ellenbrook	12,000	11,551	10,493	9,318	7,758	4,587	0
Bullsbrook (North)	800	800	800	565	253	0	0
Bullsbrook (South)	3,000	2,638	1,773	989	0	0	0
West Ellenbrook	3,500	2,949	2,084	1,300	260	0	0
Bennett Springs (North)	1,500	1,280	933	620	204	0	0
Sub-Region	32,516	26,217	19,830	14,725	9,620	4,587	0
Supply Pipeline*	19,716	25,417	19,830	14,725	9,620	4,587	0
Active Development Suburbs	6	7	6	5	5	1	0

Source: Landgate; Urbis

* Includes Urban and Urban Deferred Areas

APPENDIX

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