Illawarra Shoalhaven Urban Development Program Update 2018

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Background

The Illawarra-Shoalhaven Urban Development Program (UDP) is the State Government's program for managing land and housing supply in the Illawarra and accompanies the Sydney Housing and Monitor program, which manages land and housing supply for the Sydney Metropolitan Region. The UDP monitors the planning, servicing and development for new urban areas in Wollongong, Shellharbour, Kiama and Shoalhaven as well as the provision of housing in existing urban areas.

Originally established in 1982, the UDP has provided an ongoing and robust evidence base, critical to informing regional land and housing policy. Most recently, assisting with the development and implementation of the Illawarra-Shoalhaven Regional Plan.

The Department of Planning, Industry and Environment (the Department) produces an Update Report on land and housing supply for the Illawarra-Shoalhaven Region with input from State service agencies, councils and industry. This report enables the Department to:

- Monitor take up rates, land supply and dwelling production
- Coordinate release and rezoning of land; and
- Strategically plan to ensure the sustainable supply of housing to meet the Region's needs.

This Update Report is based on information gathered during the annual developer forum held in 2016 and 2017, which was attended by Sydney Water, Councils, and relevant developers to discuss historical housing supply and forecast lot production. It provides the estimates of land supply as at the end of financial year 2016/17 and short-term forecasts until 2021/22. Forecasts are reviewed and updated annually through the industry forums and are reflected in each Update Report.

The Department released revised population and dwelling projections in 2016 which have informed the greenfield land supply benchmark in this Update Report.

Whilst this report is a stand-alone document, it can also be read in conjunction with the Illawarra-Shoalhaven Regional Plan. The Regional Plan provides the background and context for regional housing and land supply.

Contents

Part 1- Summary

Overview

The focus on overcoming development impediments in recent years through coordinated infrastructure planning and delivery and initiatives like the Housing Acceleration Fund have resulted in strong growth in greenfield housing supply and forecast releases.

Infill and redevelopment

Looking at the data from the last 10 years, 2009/10 seems to mark the turning point in terms of overall dwelling supply, increasing from 486 dwellings in 2009/10 to 769 dwellings in 2010/11. Since 2009/10 infill and redevelopment has contributed to at least 55% of total dwellings, and more recently since 2014/15 infill and redevelopment has accounted for at least 65% of total dwelling supply in the region.

Whilst the quantum of dwellings supplied has significantly increased from 2009/10 across both greenfield and infill areas, the amount and proportion of dwellings contributed from infill and redevelopment has increased more. The marked increase in dwellings from infill and redevelopment, in particular over the past three years, since 2014/15, can be directly attributed to building activity in Wollongong LGA which has accounted for at least 50% infill and redevelopment in the region.

Greenfield development

The region continues to have a positive outlook in terms of greenfield development, building on the steady growth in greenfield dwelling supply from 2010/11. In 2016/17 there were 815 dwellings supplied through greenfield development, a ten-year high. Looking ahead, forecasts indicate there will be a total of 11,141 greenfield dwellings supplied over the next five years to 2021/22. This equates to an average of approximately 2,230 dwellings per year over the next five years.

Estimated capacity and housing yield is reviewed on an annual basis. Factors which can influence anticipated yields include subdivision design and detailed assessment of environmental and hazard issues.

In terms of the distribution of greenfield development across the region over the next five-year period, Wollongong LGA is expected to account for 48%, Shoalhaven 26%, Shellharbour 25% and Kiama 1% respectively. For Wollongong LGA, the main supply of greenfield development will be from West Dapto as Stages 1 and 2 continue to provide multiple development fronts. Calderwood will account for the majority of Shellharbour's forecast greenfield development, whereas Shoalhaven's greenfield development is forecast from several Nowra Bomaderry Urban Release Areas, namely Moss Vale Road, North and South, as well as smaller release areas towards the south of Nowra, Vincentia (Bayswood) and Sussex Inlet (Badgee Lagoon).

The significant progress in the planning and delivery of infrastructure, coupled with ten neighbourhood plans that are now approved for West Dapto is being reflected through the continued strengthening of the regional greenfield housing market.

Land supply

Analysis of the current regional land supply indicates that the Illawarra-Shoalhaven region is well placed and has the capacity to meet future housing requirements. The region meets the benchmark for the 'Zoned and serviced' category with 10,046 lots mainly as a result of significant progress made in infrastructure delivery in West Dapto, and the large supply available in Shoalhaven LGA.

Sydney Water's planning and service delivery in parallel with Wollongong City Council's local planning has been pivotal to the current status of West Dapto Stages 1 and 2, adding at least

3,130 lots which are now service ready. To further unlock lots identified for greenfield development in Nowra-Bomaderry and the West Dapto urban release areas the coordination and delivery of infrastructure continues to be a priority.

Table 1 Illawarra-Shoalhaven Benchmarks

Land supply category	Benchmark	As of July 2017
Lots identified for Greenfield development for the next 15 years. (in relevant region plan or endorsed local strategies)	15,135 lots	44,764
Lots zoned	8,072 lots	23,988
Lots zoned and service ready	7,366 lots	10,046

Wollongong LGA

Building approval and dwelling completion activity indicate a positive outlook for the short term for both greenfield land releases and development in existing areas. The timely delivery of water and waste water infrastructure is critical given three of the seven release areas within this LGA (Bulli Bricks, Sandon Point, and Redgum Ridge) anticipated to be completed by 2018/19. The remaining release areas (West Dapto (Stages 1 and 2), Tallawarra and a portion of Calderwood) are heavily reliant on the delivery of the recently approved water and waste water infrastructure.

This LGA has experienced two record high years for building approvals (2014/15 and 2015/16), while completions were at a 10 year high in 2016/17. This suggests Wollongong LGA will likely continue to experience high dwelling completion numbers for 2017/18. Looking ahead to the next five years, the Redgum Ridge release area is expected to be complete by 2018/19 which leave Tallawarra and West Dapto as the remaining greenfield release areas in this LGA. West Dapto has already started contributing to housing supply, and Tallawarra is expected to start producing lots by 2021/22.

The development industry has maintained their positive outlook for greenfield development as shown in the forecast releases for West Dapto in the short term, which equates to an average of 850 lots per year over the next five years.

Shellharbour LGA

Building approvals and dwelling completion activity indicate a positive outlook for the short and medium term in Shellharbour LGA particularly for greenfield development. The ten-year high building approvals recorded in 2016/17 (633) for this LGA suggest there will be further increases in dwelling completions over the next two years. The focus for Shell Cove will gradually move towards delivering a combination of single detached dwellings and multi- unit dwellings in and around The Waterfront (Shell Cove Marina), with Calderwood expected to increase its share of the greenfield housing market.

Kiama LGA

During 2016/17 Kiama Council investigated various sites identified in the Kiama Urban Strategy that could contribute to housing supply. These sites have now been added to the UDP contributing approximately 100 lots in the short term and form part of Kiama’s housing supply for the short term. West of Elambra is a long-standing area on the UDP that has been revised down to have a potential up to 350 lots for Council to consider if additional greenfield land supply is needed. The ongoing operation of the Bombo Quarry means Spring Creek's 163 lot potential cannot yet be fully realised.

Whilst the 10-year average for building approvals is 115 dwellings, 128 approvals were recorded for 2015/16 and 187 for 2016/17. This suggests dwelling completions will continue to increase for at least another one to two years.

Shoalhaven LGA

The UDP was expanded in 2015 to include the Shoalhaven LGA. Since that time, data on dwelling completions and greenfield potential for this LGA has become available. Shoalhaven LGA is demonstrating a strong housing market with an average of 540 dwellings per year since 2014/15 and building approvals consistently above 450 dwellings per year over the past 10 years.

The majority of future land supply is contained within the seven Nowra Bomaderry Urban Release Areas, expected to yield approximately 9,800 lots, with approximately 2,800 lots to be supplied from the remainder of the LGA. As Mundamia (510 lots) is the only urban release area within Nowra Bomaderry currently zoned and service ready the focus is now on progressing the other release areas. Shoalhaven Council has responded by reviewing the staging of the Urban Release Areas and is now looking at the two urban release areas, Moss Vale Road South and North, at the same time.

Part 2 - Regional Overview

2.1 Dwelling Supply

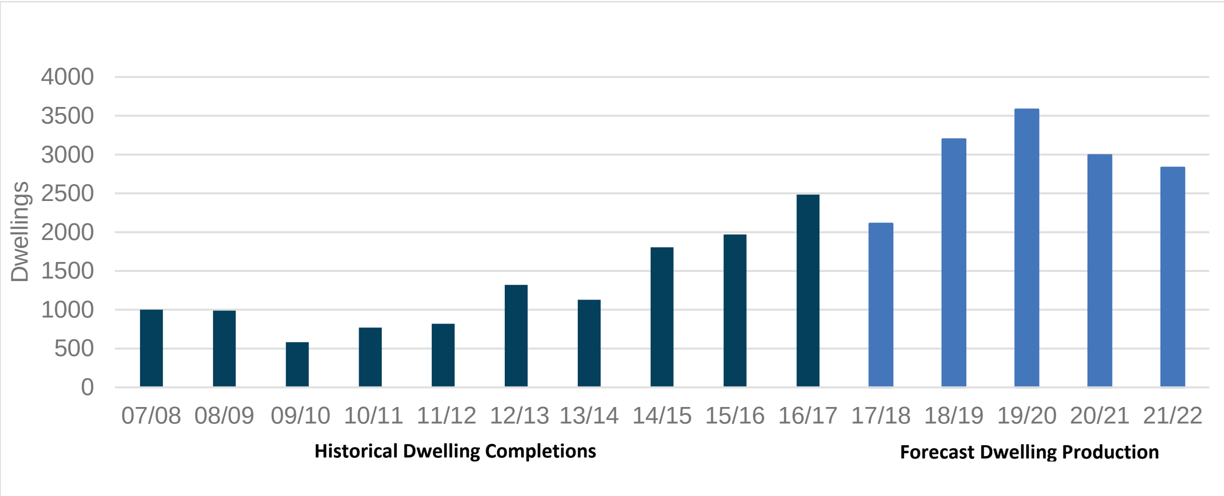
Total Dwelling Supply

Historical dwelling completions (10 years) and dwelling forecasts for the next five years, are set out in figure 2.1a. Consultations with the development industry and Councils have informed these dwelling supply forecasts. There are three components to the forecast dwelling numbers: dwellings forecast from development within key housing centres, infill areas and greenfield areas.

The Region's average annual dwelling supply over the past 10 years has been approximately 1,287 dwellings. This has ranged from a minimum of 583 in 2009/10 to a maximum of 2,484 in 2016/17. (Figure 2.1a).

The forecast lot production shows a projected decrease from 2,484 actual dwellings completed in 2016/17 to 2,109 dwellings forecast for 2017/18. This is projected to increase again to 3,197 dwellings for 2018/19. Of the 2,484 dwellings forecast for 2017/18, it is anticipated that Wollongong LGA will account for 43% (906), Shellharbour 28% (583), Shoalhaven 25% (532), and Kiama 4% (88). Based on the consultation with industry, there is an acceptance that these figures are achievable.

Figure 2.1(a) Illawarra Region Total Dwelling Supply: Historical and Forecast[1]



Key points from this graph:

- The annual historical and forecast dwelling production introduces supply from Shoalhaven from 2014/15 onwards.
- The Shoalhaven forecast projections include an average housing supply of 594 dwellings per annum over the next 5 years.
- The highest annual number of dwellings completed in this 10-year period was 2,484 in 2016/17 while the lowest number of dwellings completed was 583 in 2009/10.
- There has been an upward trend in dwelling completions since 2007/08.
- The development industry is optimistic about the next 5 years, projecting an average of 2,942 dwellings per year from 2017/18 to 2021/22.

[1] Shoalhaven dwelling completion data available from 2014/15.

Greenfield Dwelling Supply

The greenfield housing market has continued to strengthen over the past 10 years. Although Shoalhaven was incorporated into the UDP from 2014/15, the total greenfield dwelling supply for Wollongong, Shellharbour and, Kiama since that time has also continued to increase. This means that in 2016/17, Wollongong, Shellharbour and Kiama collectively would have supplied a total of 670 dwellings, compared to 813 dwellings including Shoalhaven. This is significantly more than the 566 greenfield dwellings Wollongong, Shellharbour and Kiama supplied in 2013/14.

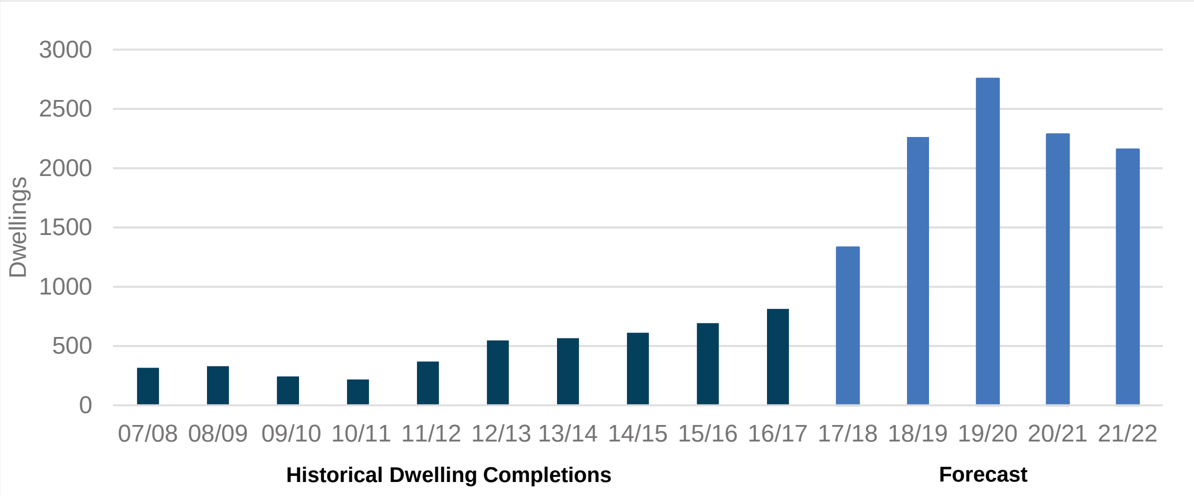
When comparing the forecast supply of greenfield lots across the Region for the next five years, Wollongong LGA is expected to contribute the greatest share (48%), followed by Shoalhaven (26%), Shellharbour (25%), and Kiama LGA (1%).

The development industry provides forecasts for each of the major release areas through the annual industry forums. These forecasts indicate how many greenfield lots each developer is planning to release for development over the short term (5 years), medium term (next 5 years) and long term (following 5 years). The Department of Planning, Industry and Environment seeks industry advice annually and revises the forecasts on this basis.

The UDP dwelling production forecasts are not a demand forecast but an indication of what is expected to be constructed based upon current circumstance. This includes interpretation of economic conditions and demand by the development industry as shown in production schedules, current dwellings under construction, development approval activity, ownership details and zoning and servicing timetables. These circumstances change from year to year resulting in revised annual forecasts.

The forecasts are used by infrastructure and service agencies such as Roads and Maritime Services, NSW Health, Transport for New South Wales, Sydney Water, Shoalhaven Water, Endeavour Energy and the Department of Education and Communities to assist in their planning for delivery of services and infrastructure.

Figure 2.1(b) Greenfield Dwelling Supply[2]



Key points from this graph:

- The annual historical and forecast greenfield dwelling supply introduces data from Shoalhaven from 2014/15 onwards.

[2] Shoalhaven dwelling completion data available from 2014/15. Shoalhaven data included in forecasts 2017/18 to 2021/22.

- Shoalhaven forecast projections include an average greenfield supply of 595 dwellings per annum over the next 5-year period.
- There was a gradual decrease in the greenfield dwelling supply up to 2010/11 before increasing to 2016/17.
- The number of greenfield dwellings completed has increased for the sixth consecutive year, the first time in the past ten years.
- The average number of dwellings from greenfield areas over the last 10 years is 470 per annum.
- The average number of greenfield lots forecast annually over the next five years is 2,228.

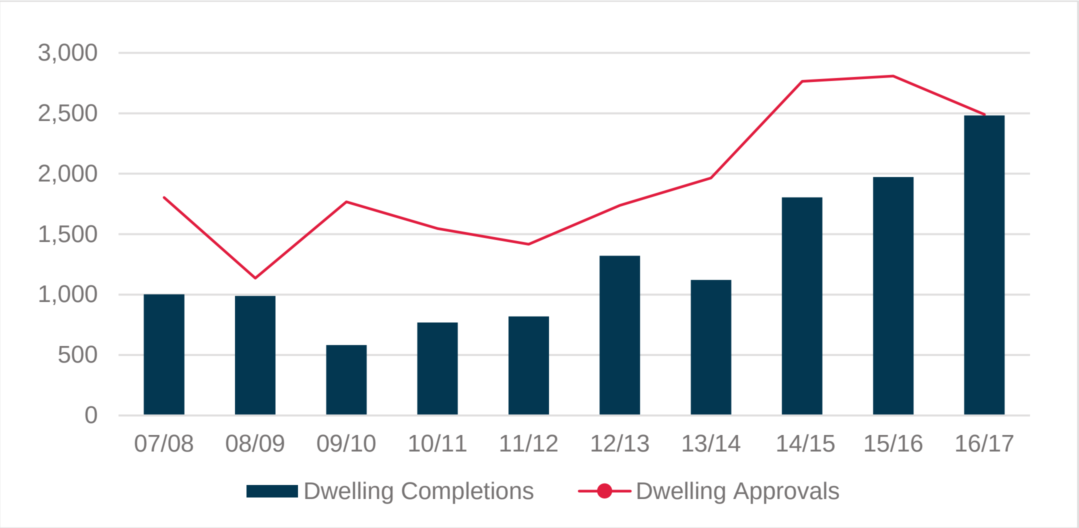
2.2 Dwelling Supply Cycle and Typology

Completions and Approvals

Comparing dwelling completions with approvals can provide an indication of how many approvals translate to dwelling completions and the construction lag that may exist (see figure 2.2a). Periods where dwelling completions exceed approvals demonstrate a lag in the construction of developments some-time after approval. The general increase in the number of building approvals from 2008/09 is consistent with the increase in dwelling completions from 2009/10.

There were a total of 2,484 dwellings completed for 2016/17. This includes 502 dwellings from Shoalhaven and 1,982 dwellings from Wollongong, Shellharbour and Kiama collectively. This means Wollongong, Shellharbour and Kiama combined have continued to record an increase in dwelling completions from 2013/14, which is before Shoalhaven was incorporated into the UDP.

Figure 2.2(a) Region Dwelling Completions and Building Approvals[3]

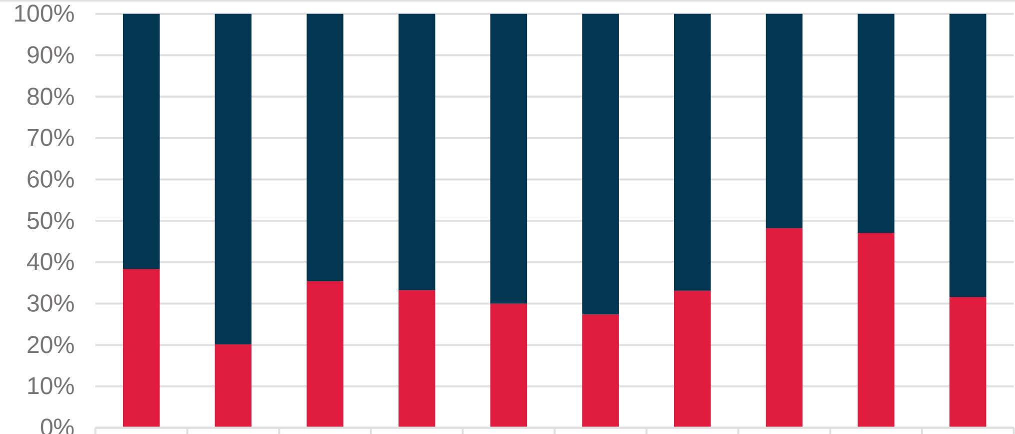


Key points this figure shows

- Generally, there is a one to two-year delay from building approval to construction.
- Not all approvals translate to dwelling completions.
- There has been an upward trend in dwelling completions since 2009/10.

[3] Shoalhaven completion data available from 2014/15, Shoalhaven building approvals data available from 2005/06.

Figure 2.2(b) Region Approvals by Housing Type[4]

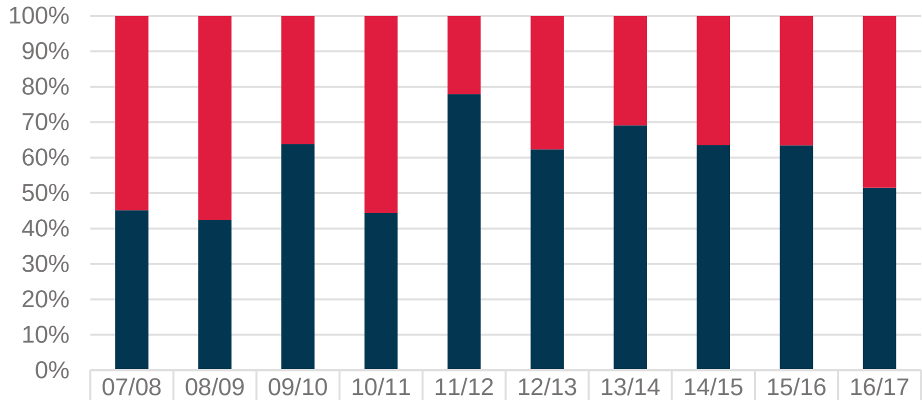


	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
Detached dwelling approvals	1111	908	1163	1055	1012	1275	1364	1449	1487	1704
Multi - unit approvals	692	229	638	526	433	481	675	1348	1322	787

Key points this graph shows

- Approvals for multi-unit dwellings decreased from 47% (1,322) in 2015/16 to 32% (787) in 2016/17.
- Approvals for detached dwellings increased from 53% (1,487) in 2015/16 to 67% (1,704) in 2016/17.
- In 2008/09, 18% of approvals were for multi-unit dwelling, the lowest in the 10 years.
- The proportion of multi-unit and detached approvals fluctuates from year to year.
- The 5-year average of approvals for detached dwellings is 61% (1,459), and 39% for multi-unit approvals (923).
- The 10-year average of approvals for detached dwellings is 64% (1,253), and 36% for multi-unit dwellings (713).

Figure 2.2(c) Region Dwelling Completions by Housing Type[5]



	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
Multi - unit	550	569	211	428	181	498	349	658	721	1248
Detached dwelling	452	420	372	341	639	823	780	1147	1252	1327

[4] Shoalhaven approvals data available from 2005/06.
[5] Shoalhaven dwelling completion data available from 2014/15.

Key points this graph shows:

- In 2016/17 the new dwelling splits were 52:48 that is for multi-unit dwellings and 52% for detached dwellings and 48% for multi-unit dwellings.
- Over the past ten years, the new dwelling splits have ranged from 78:22 in 2011/12, to 43:57 in 2008/09.

Illawarra-Shoalhaven Region Dwelling Supply Locations

The Urban Development Program describes the nature and location of growth in the region. The typology of centres, infill areas and greenfield release areas used to describe where growth has occurred is identified in Table 2.2(a). The location of greenfield release areas, centres and infill (established) areas can be found in Appendix A.

Table 2.2(a) Illawarra-Shoalhaven Urban Development Program Typology

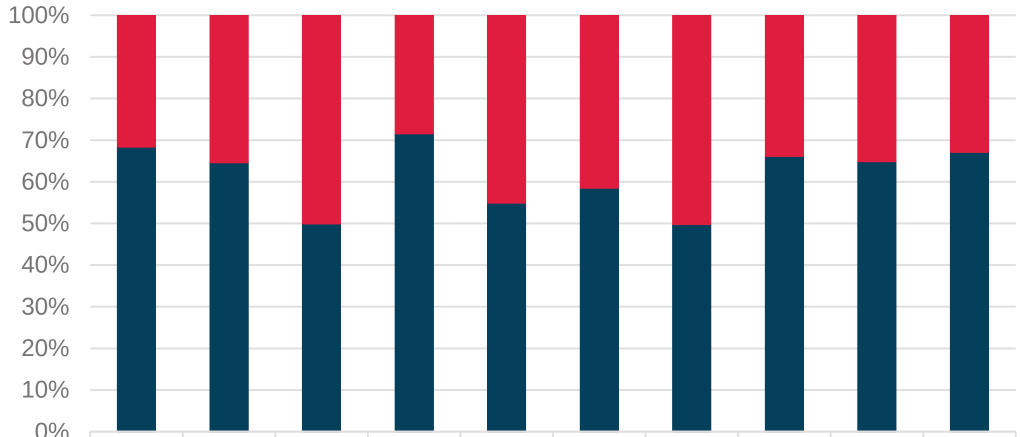
Land supply category	Benchmark
Centres	27 Centres (Wollongong, Shellharbour, Kiama and Shoalhaven LGAs). Generally walkable catchment of an economic centre and or transport node such as rail station (identified on maps in Appendix A). Identified as having capacity for additional dwellings through higher densities and appropriate zonings.
Infill	The remainder of the existing urban area located outside centres
Greenfield Release Areas	46 release areas (Wollongong, Shellharbour, Kiama and Shoalhaven LGAs) Areas released by the State Government for residential development. These areas are listed on the Illawarra-Shoalhaven Urban Development Program.

Table 2.2(b) lists the centres identified either through the Illawarra-Shoalhaven Regional Plan's network of centres or councils' own centres hierarchy. Generally, these centres are a walkable catchment of an economic centre and or transport node, identified as having capacity for additional dwellings through higher densities and appropriate zonings.

Table 2.2 (b) Illawarra-Shoalhaven Centres

Wollongong LGA	Shellharbour LGA	Kiama LGA	Shoalhaven LGA
Helensburgh Thirroul Woonona Corrimal Fairy Meadow Wollongong Figtree Unanderra Warrawong Dapto	Albion Park Oak Flats Shellharbour City Centre Warilla Shell Cove (emerging)	Kiama Gerringong	Bomaderry North Nowra Nowra Culburra Beach Huskisson Vincentia St Georges Basin Sussex Inlet Milton

Figure 2.2(d) Historical dwelling supply by location: Greenfield Release Areas and Infill / Centres[6]



	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
Greenfield	316	330	243	218	369	547	566	610	691	815
Infill / Centres	686	604	243	551	451	774	563	1,195	1,280	1,669

Key points from this graph

- Over the past 10 years, the proportion of dwellings supplied from centres and infill areas compared to greenfield areas has fluctuated from year to year.
- Over the past 10 years, greenfield areas have provided 4,693 dwellings (37%) and 8,016 dwellings (63%) have been provided through infill and redevelopment.

Dwelling Supply and Forecast Typology

Figure 2.2(e) shows historical dwelling completion data and forecast dwellings for established areas (infill and centres) as well as greenfield release areas. Dwellings are shown as actual numbers and as a proportion (%).

Forecast information for infill and centres is based on known approved development applications. For centres, where there is no current planned development activity, forecasts are based on historical trends.

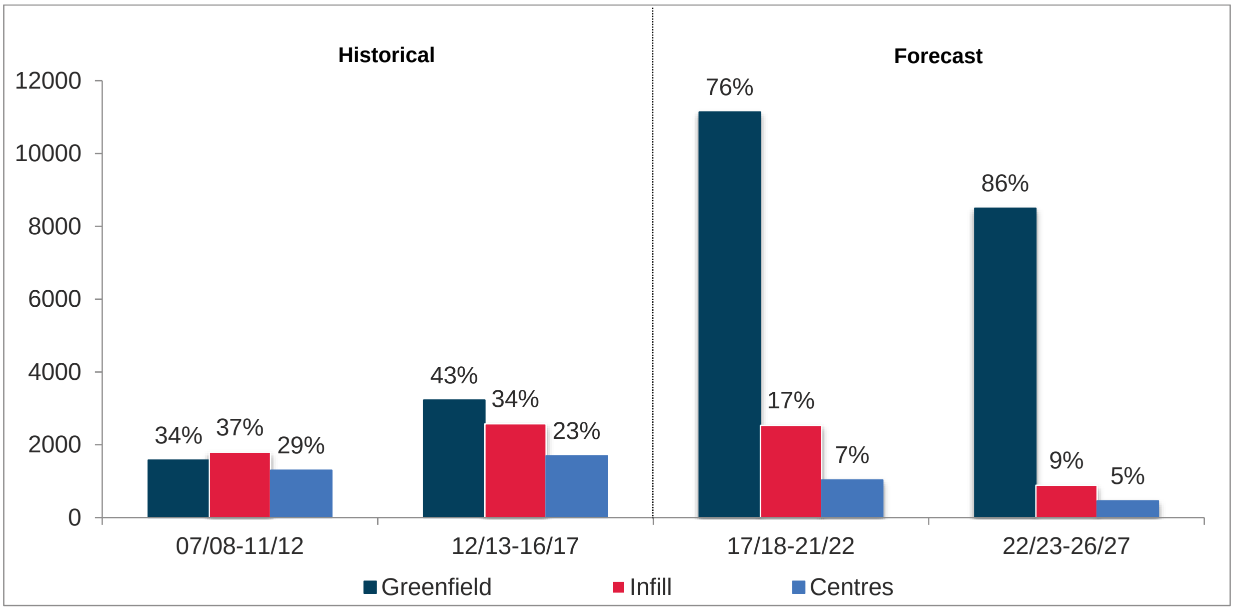
The number of dwellings forecast from greenfield areas is expected to nearly triple from 3,227 dwellings over the last five years to 11,141 dwellings for the short term. Dwellings from greenfield areas are then forecast to decrease slightly to 8,498 for the medium term.

The forecast for infill areas indicates the supply of dwellings through infill should remain relatively constant from the past five years (2,576) through the short term (2,534) and then decrease in the medium term (889). Noting there is less certainty about forecasts in the medium term than short term.

The number of dwellings for centres is forecast to slightly decrease from the past five years (1,696) to the short term (1,034) and decrease again in the medium term (461).

[6] Shoalhaven dwelling completions included from 2014/15.

Figure 2.2(e) Regional dwelling production location (number and %) (2007/08 – 2025/26)[7]



Key points from this graph

- Greenfield release areas contributed nearly double the amount of dwellings (3,227) in the past five years (2012/13 – 2016/17) compared to 1577 the first five-year period (2007/08 – 2011/12).
- The greenfield areas will continue to provide the main supply of housing in the region
- Over the short term (2017/18 to 2021/22) and medium term (2022/23 – 2026/27) forecasts, greenfield areas are expected to contribute a greater amount of dwellings to the regional housing supply.
- In the short term (2017/18- 2021/2), there will be a slight shift away from infill dwelling supply to greenfield areas, whilst supply from centres will remain relatively stable around 22%.
- In the short and medium term, the supply from infill and centres is forecast to slightly decrease.

[7] Shoalhaven LGA data included from 2014/15.

2.3 Greenfield capacity

Land Supply

One of the important functions of the UDP is to guide decision making to provide adequate stocks at the different steps of the greenfield land supply process, especially the early stages where government has the major responsibility.

The UDP measures the process of delivering land for new housing on greenfield areas in five key steps:

Step 1 **Identification / release**	**Step 2** **Rezoning**	**Step 3** **Zoned and service ready land**	**Step 4** **Subdivision approval**	**Step 5** **Lot and dwelling production**
Decision to release and urbanise land. Area included in the Illawarra-Shoalhaven Regional Plan, UDP or endorsed local strategy.	Detailed local planning leading to rezoning of area.	Extension of trunk network or water and sewer infrastructure.	Approval of development application for subdivision.	Construction of subdivision works, the registration and dwelling production.
NSW Government	Department of Planning, Industry and Environment / Councils	Utility and developers	Councils and developers	Developers

Table 2.3(a) provides an explanation of the five key steps in the land supply process from the initial identification to rezoning and servicing, subdivision by developers and final sale as home sites. These benchmarks are used to ensure that there is an adequate supply of land at different stages of the land planning and production process. As the housing market is highly cyclical, the benchmarks assist in ensuring that there is an adequate supply of land to cater for the population's needs in the future. The steps are described in more detail below.

The Department released revised population projections in 2016, which also include household and dwelling projections[8]. The number of benchmark lots has been updated to reflect these revised dwelling demand projections.

There is a strong correlation between detached dwellings and greenfield lots across the Region. The number of benchmark lots is based on the dwelling type projections that informed the Illawarra-Shoalhaven Regional Plan (2015), an additional 35,400 dwellings which is based on a balanced approach of 57% detached and 43% multi-unit dwellings for the region as a whole. This translates to 20,178 greenfield lots over the next 20 years.

[8] NSW Population Projections data (2016) http://www.planning.nsw.gov.au/Research-and-Demography/Demography/Population-projections

Table 2.3 (a) Benchmarks and key steps in the land supply process

Step	Step 1 Identification / Release	Step 2 Rezoning	Step 3 Zoned and Service ready
Supply year benchmark	15 years	8 years	23,988 lots
Lot Benchmark	15,135 lots	8,072 lots	7,366 lots
Status as at July 2017	44,764 lots	23,988 lots	10,046 lots

Infrastructure Servicing and Delivery

Sydney Water (Wollongong, Shellharbour and Kiama LGAs)

Sydney Water has developed a servicing strategy to support development at West Dapto, Calderwood and other adjacent areas (Tallawarra, Tullimbar and Huntley Heritage) to 2048. It is delivering trunk infrastructure in stages/packages as land is rezoned/development occurs.

To accelerate the servicing of land ahead of Sydney Water's Growth Servicing Plan, a developer can enter into a Commercial Agreement with Sydney Water. The Developer is then responsible for the construction of the trunk infrastructure and may be refunded for the reasonable and efficient costs of this infrastructure. Refer to Sydney Water's Growth Servicing Plan (GSP 2017-22) for more information[9].

In recent years Sydney Water obtained:

- Project approval for the delivery of trunk infrastructure to Stages 1 and 2 (West Dapto)
- Concept approval for other stages of the West Dapto new release area and adjacent growth areas of Calderwood, Tallawarra, Tullimbar Village and Huntley Heritage (DPE considers Huntley as part of West Dapto Stage 4 – Avondale).

As land use planning progresses, land is rezoned, and provided there is a demonstrated demand for Sydney Water's servicing, the necessary trunk infrastructure will be delivered by Sydney Water in Stages/Packages of works.

Sydney Water's Growth Servicing Plan 2014 – 19 outlines the completed infrastructure works delivered for the West Dapto release area (Package 1 and Package 1A Lead ins) as:

- Water and wastewater lead in mains to West Horsley (Brooks Reach development) (early release lead ins 2013)
- Trunk water distribution main (Shone Avenue), and upsizing of existing mains at and around Shone Avenue, Irredel Road (December 2015)
- West Dapto Road trunk wastewater main (December 2015)
- Darkes Road trunk sewer main (December 2015)
- West Dapto Road and Sheaffes Road water lead in mains (March 2016)
- Wastewater lead in main from West Dapto Road to Smiths Lane, Wongawilli (2016)

Sydney Water has completed detailed planning for the delivery of Package 2 trunk works for the Kembla Grange industrial area, including SPS, rising main, wastewater gravity main. The Package

[9] *Sydney Water Growth Servicing Plan July 2017 to June 2022*

2 trunk works also includes the extension of the West Dapto Road gravity sewer main to Shone Avenue (South) and further west to service remaining areas in West Horsley. The delivery of Package 2 is scheduled to complete in early 2020. In addition, the sewer carriers and storage capacity upgrade at Horsley SPS 1012 is anticipated to service future development in Cleveland, subject to rezoning of the area.

The draft detailed planning and concept design has been completed for Yallah – Marshall Mount (Stage 5 West Dapto). With the recent rezoning of this area, Sydney Water will now need to plan for the delivery of infrastructure works.

Initially, existing infrastructure provided for up to 350 lots to be serviced in Calderwood. From mid-2018 there is an additional 2,000 lots (Stages 1 – 3) that are now serviced through the delivery of Package 1 trunk works. This includes SPS, rising main and gravity sewer carrier. Package 2 works (Sydney Water's system renewal works) includes upgrade of existing SPS and pipelines is nearly complete. This will support future growth in Calderwood.

Planning for Package 3 works has commenced which includes servicing future areas, educational precinct and town centres.

Generally, it has been the responsibility of the developer to plan, gain approval and fund the delivery of lead-in mains (usually less than 300mm in diameter) and local/site reticulation works to connect to existing Sydney Water trunk infrastructure. Sydney Water may also deliver some lead ins on a case-by case basis where site information is available to complete design, and this could assist areas where there is fragmented ownership.

Table 2.3 (b) Trunk and Lead-in mains

Trunk or Headworks infrastructure	Refers to Sydney Water (Trunk) and Shoalhaven Water (Headworks) major infrastructure and is associated with the construction of permanent storage reservoirs, treatment plants, pumping station and trunk mains (usually 300mm diameter and above size mains for Sydney Water, and 225mm diameter and above size main for Shoalhaven Water). The availability of trunk/headworks capacity refers to adequate spare system capacity which may be available in this infrastructure including (bulk water capacity) in storage / service reservoirs, trunk system networks, pumping stations and treatment plants to service future growth and development. These are generally provided in stages and funded by Sydney Water for Wollongong, Shellharbour and Kiama LGAS, and Shoalhaven Water for Shoalhaven LGA.
Lead - in mains	This is the section of water, recycled water or wastewater main from where it connects to the existing mains system to where the minimum reticulation mains for the development starts (For Sydney Water, usually less than 300mm diameter, and for Shoalhaven Water, usually less than 225mm diameter). Developers are generally required to construct lead-in mains to connect their development to Sydney Water's trunk systems or Shoalhaven Water's Headworks systems. Sydney Water will fund lead in mains and upsizing of pipe costs (reimbursed to developers) in accordance with its Funding Infrastructure to Service Growth Policy (November 2015).

Shoalhaven Water (Shoalhaven LGA)

Shoalhaven Water developed Water Supply and Sewerage Servicing Strategies in 2012 to support development Citywide to 2042. Work has commenced on revising the strategies based on current growth projections, which will inform the proposed updated Development Servicing Plans. The headworks identified in the Servicing Strategies have also been the basis behind the development of Shoalhaven Water's 20 year capital works program and feeds into its long term financial plan.

Longer term growth in the Nowra/Bomaderry catchments rely primarily on major upgrades to Nowra and Bomaderry sewage treatment plants (STP's). These upgrades along with connecting pipelines to the existing REMS 1A (Council's Reclaimed Water Management Scheme) comprise the REMS 1B project. Construction of REMS 1B and works are approximately 70% completed and currently scheduled for completion in mid 2019.

Shoalhaven Water has recently completed the following infrastructure works which will assist in servicing new residential areas:

- A new Pumping Station at Vincentia to service Bayswood Development area.
- A new 6km sewer trunk main from Milton to Ulladulla to support development in the Milton and Mollymook areas.

A number of other headworks projects (pumping stations and trunk mains) identified in the Strategies are also in progress, which will support future development. Some of these projects include:

- Upgrade to two major pumping stations in Nowra (designs completed).
- Upgrade to the North Nowra Surcharge Main across the Shoalhaven River bridge (design completed).

Endeavour Energy

Endeavour Energy's Growth Servicing Plan 2018 sets out high level plans for 'trunk' network infrastructure to service urban growth to a horizon of around 10 years, with greater certainty on timing of major projects to the period to 2024/25 based on lot delivery numbers indicated through developer firm applications for load and the UDP reporting process.

As a first step, Endeavour Energy considers the capability of existing nearby assets for supplying initial development in growth areas. Major projects such as zone substations and sub-transmission lines typically require a lead time of three years if a site or corridor is available.

A site for a new zone substation in West Dapto Stages 1 and 2 has been secured and Endeavour Energy (subject to regulatory investment tests) plans to deliver a new West Dapto zone substation in 2024/25. Negotiations for a new zone substation site in the Calderwood precinct are being finalised and Endeavour Energy (subject to regulatory investment tests) plans to deliver a new Calderwood zone substation in 2021/22.

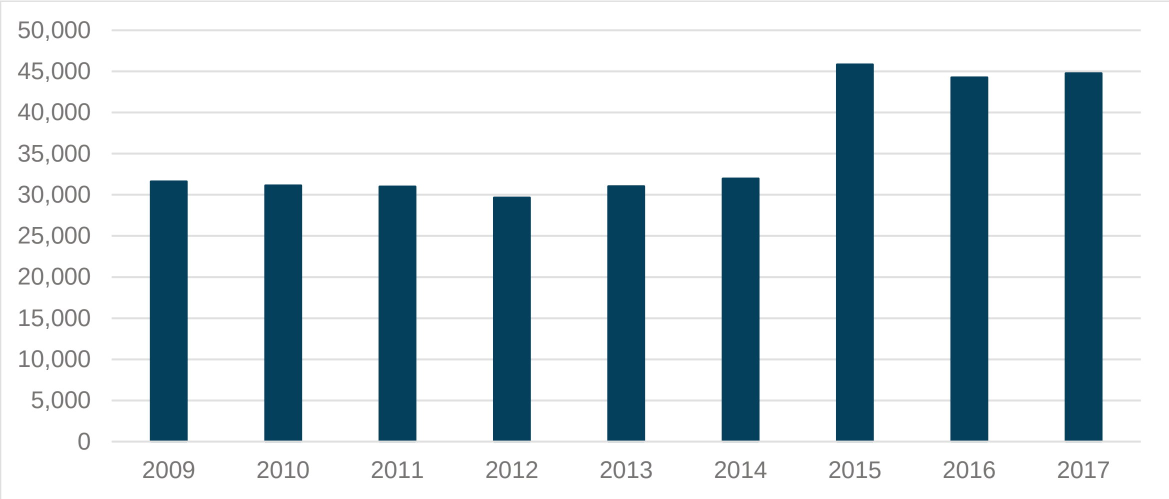
Endeavour Energy generally prefers to undertake concurrent development for major projects in concert with the development. This is especially so where some capacity may be available from existing electricity infrastructure within the network. Further information on the serviceability status of individual greenfield release areas is found in the Council profile section of this report.

Historical Greenfield Land Supply Stocks: Identified, Zoned, Zoned and Service Ready

The Region has substantial capacity for growth based on adequate supplies of land strategically identified for housing. The Region also has significant development opportunities through its supply of zoned land. To maintain housing starts in response to the ongoing demand for new dwellings in the region, the focus needs to continue to be ensuring zoned lands are serviced and development ready.

The following graphs show the historic stock levels in the first three key steps in the land supply process.

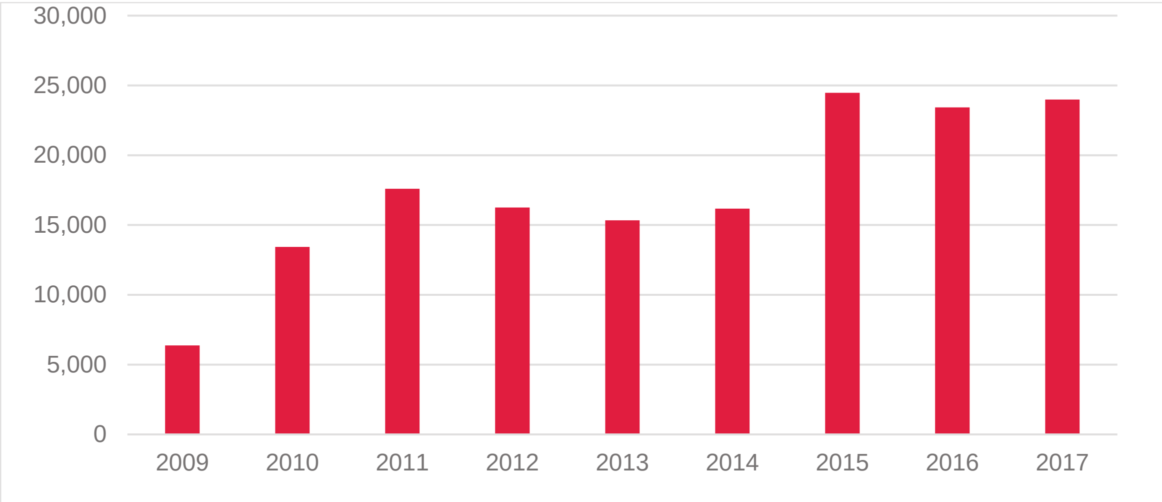
Figure 2.3 (a) Step 1: Total Stock Identified for Greenfield Development



Key points from this graph

- The slight decrease in stocks from 2011 to 2012 can be attributed to the reclassification of Shellharbour City Centre from a greenfield release area to a major site in an infill area.
- The slight increase in stocks from 2012 to 2013 is due to the revised masterplan for Yallah Marshall Mount which is now forecasting an additional 2,260 lots to that originally exhibited as a part of the West Dapto Master Plan (3,860 up from 1,600).
- The large increase in stocks from 2014 to 2015 is attributed to Shoalhaven joining the UDP, contributing an additional 12,600 lots.

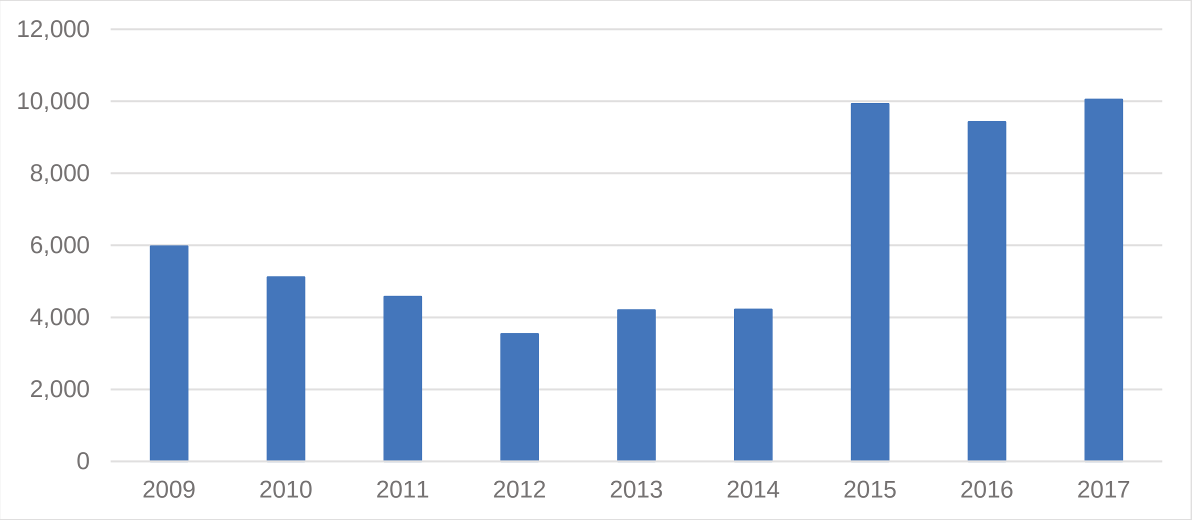
Figure 2.3(b) Total Stock Zoned for Greenfield Development



Key points from this graph

- The total amount of land zoned for greenfield development increased substantially in 2010 (West Dapto Stages 1 and 2, and Tallawarra rezoned) and again in 2011 (Calderwood mostly rezoned).
- The increase from 2014 to 2015 is attributed to Shoalhaven joining the UDP, contributing an additional 8,150 zoned lots.
- Note, this graph does not include the rezoning of the Yallah-Marshall Mount area, which was rezoned in June 2018.

Figure 2.3(c) Total Stock Zoned and Service Ready for Greenfield Development



Key points from this graph

- The supply of land that is zoned and service ready has gradually decreased from 2009 to 2012 as serviced land was developed.
- The slight decrease from 2011 to 2013 is due to lots moving through the land supply steps and also the decrease in the remaining lot potential of existing zoned areas as lots are subdivided, registered and sold as new home sites.
- The increase in total stock of zoned and service ready lots from 2014 to 2015 is attributed to Shoalhaven joining the UDP, contributing an additional 2,844, and infrastructure works delivered by Sydney Water which contributed an additional 2,496 lots.

Part 3 – Council Overview: Year Ending 16/17

3.1 Wollongong LGA

Figure 3.1(a) Dwelling supply medium term

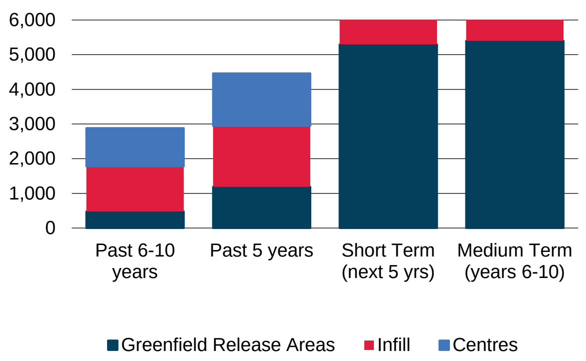


Figure 3.1(b) Dwelling approvals and completions

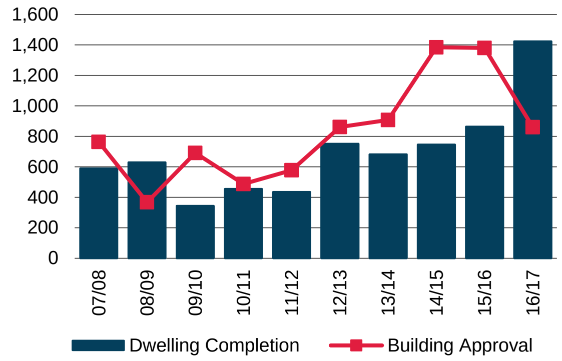


Table 3.1(a) Wollongong LGA: Dwelling Completions – Release areas and infill / centres

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 yr total 07/08 to 11/12	5 yr total 12/13 to 16/17
Infill / centres	494	519	286	413	349	581	410	568	665	1,053	2,061	3,277
Release areas	95	110	57	42	86	170	271	177	198	370	390	1,186
Total	**589**	**629**	**343**	**455**	**435**	**751**	**681**	**681**	**863**	**1,423**	**2,451**	**4,463**

Key points from this table and above figures

- Total dwelling completions were at their highest in 2016/17 than any other period in the last ten years.
- There was a significant spike in the total number of dwelling completions in 2016/17 following a peak in the issuing of development approvals in 2014/15 and 2015/16.
- This illustrates a two-year timeframe for dwelling construction.
- It is anticipated that dwelling completions rate for 2017/18 will remain steady around the 2016/17 rate.
- Dwelling completions from infill / centres account for the majority of the dwelling completions in 2016/17 – 74% of completions compared to 26% from release areas.
- There was an 58% increase in dwelling completions in infill / centres from 2015/16 to 2016/17 however dwelling completions in release areas increased by 87% over the same period.

Table 3.1(b) Wollongong LGA: Dwelling Completions – Detached and Multi Unit

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 year total 07/08 to 11/12	5 year total 12/13 to 16/17
Multi - unit	350	443	161	295	150	385	252	410	424	917	1,399	2,388
Detached	239	186	182	160	285	366	429	335	439	506	1,052	2,075
Total	**589**	**629**	**343**	**455**	**435**	**751**	**681**	**745**	**863**	**1,423**	**2,451**	**4,463**

Key points from this table:

- Dwelling completions for Wollongong LGA in 2016/17 significantly exceed any other year over the past ten years.
- Multi-unit completions experienced the greatest increase in 2016/17, more than double (917) from 2015/16 (424).
- The number of detached dwellings has been steadily increasing from 2010/11.
- Multi-unit dwelling completions nearly doubled from the first five years (1,399) to the last five years (2,388).
- Detached dwelling completions nearly doubled from the first five years (1,052) to the last five years (2,075).
- The dwelling density split for the first 5 years is 46:54 (46% detached and 54% multi-unit) and has remained at 46:54 for the last five years.

Table 3.1(c) Wollongong LGA: Dwelling Approval

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 year total 07/08 to 11/12	5 year total 12/13 to 16/17
Detached	371	279	329	301	307	467	502	528	597	494	1,587	2,588
Multi - unit	392	88	362	186	271	394	405	856	783	366	1,299	2,804
Medium density	265	58	119	99	72	111	116	220	200	240	613	887
Flat 1-2 stys	23	0	134	0	0	17	27	17	39	23	157	123
Flat 3+ stys	96	27	108	83	195	250	227	599	527	95	509	1,698

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 year total 07/08 to 11/12	5 year total 12/13 to 16/17
Others	8	3	1	4	4	16	35	20	17	8	20	96
Total	**763**	**367**	**691**	**487**	**578**	**861**	**907**	**1,384**	**1,380**	**860**	**2,886**	**5,392**

Key points from this table:

- Having reached a high in 2014/15 and 2015/16, dwelling approvals have dropped back to 2012/13 and 2013/14 levels for 2016/17.
- Detached dwelling approvals in 2016/17 were significantly above the ten year average of 418 but below the five year average of 517.
- In 2015/16 multi-unit approvals accounted for 57% of the total dwelling approvals with detached dwelling approvals on 43%. This proportion has reversed in 2016/17 with detached dwelling approval accounting for 57% of total approvals.
- Approvals for medium density remain the highest in 2014/15 and 2015/16, flats of 3+ storeys being the main contributor.

Table 3.1(d) Wollongong LGA: Greenfield Dwelling Subdivision Potential

Release Area	Zoned and serviced	Zoned and Serviced (next 5 yrs)	Zoned and Serviced (beyond 5 yrs)	Total
Tallawarra	0	1,400	0	1,400
West Dapto	4,409	7,385	7,141	18,935
Redgum Ridge	46	0	0	46
Calderwood[10]	0	800	0	800
Total	**4,455**	**9,585**	**7,141**	**21,181**

[10] This portion of Calderwood is within the Wollongong LGA.

Table 3.1(e) Wollongong LGA: Zoning and Servicing Timetable

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Redgum Ridge	46	✓	✓	There is some capacity in the adjacent network for servicing over the short term. Developers need to apply for and deliver “Lead-in” distribution works to service individual developments within the release area.
Tallawarra	1,400	✓	Staged delivery as development happens, initial development by developer delivered lead- ins[11].	Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works.
Calderwood	800	✓	Infrastructure to be delivered in stages as development happens, south to north.	Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works.
West Dapto	18,935	Partial	Staged delivery from 2015	See below for detail on Stages 1 to 5.
Stage 1 Neighbourhood Plan Areas	3,180	✓	Partially and remaining works are in progress.	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works. A site for a new zone substation in West Dapto Stages 1 and 2 has been secured and Endeavour Energy (subject to regulatory investment tests) plans to deliver a new West Dapto zone substation in 2024/25.
West Dapto Rd / Sheaffes Rd (Sth)	726	✓	✓	Refer to above

[11] Initial development can be serviced by the developer through local pipework.

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Wongawilli Rd (Nth)	504	✓	✓	Refer to above
Sheaffes Rd (Nth)	411	✓	✓	Refer to above
Darkes Rd (SW)	471	✓	✓	Refer to above
Shone Ave / West Dapto Rd	385	✓	✓	Refer to above
Stage 1 remainder	683	✓	Partially	Refer to above
Stage 2 Neighbourhood Plan Areas	2,606	✓	Partially	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver "lead-in" distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works. A site for a new zone substation in West Dapto Stages 1 and 2 has been secured and Endeavour Energy (subject to regulatory investment tests) plans to deliver a new West Dapto zone substation in 2024/25
Bong Bong Rd (East and Nth)	160	✓	✓	Refer to above
Shone Ave (Sth)	32	✓	✓	Refer to above
Iredell Rd (W)	443	✓	✓	Refer to above
Hayes Lane (Nth)	335	✓	×	Refer to above

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Wongawilli Road (Sth)[12]	1,182	✓	×	Refer to above
Stage 2 remainder	1,182	✓		Refer to above
Stage 3 Neighbourhood Plan Areas	4,710	×	×	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works. In the long term, major Endeavour funded upstream works will be needed including the possible construction or augmentation of zone substations and/or sub-transmission lines.’
Bong Bong Rd (Sth)	1,400	×	×	Refer to above
Stage 3 remainder	3,310	×	×	Refer to above
Stage 4 Neighbourhood Plan Areas	4,391	Partially	See below	Refer to above
Avondale Rd (Nth)[13]	1,140	✓	To be determined[14]	Refer to above
Stage 4 remainder	3,251	×	×	Refer to above
Stage 5 Neighbourhood Plan Areas	4,048	×	×	Refer to above

[12] Includes portion quarantined due to Wongawilli colliery existing operations.
[13] The Avondale Road (Nth) neighbourhood plan area includes Huntley which has been rezoned out of sequence with potential of approximately 490 lots.
[14] Huntley is an out of sequence development. Developer needs to plan and extend lead-in water and sewer mains and the developer’s servicing strategy needs to be endorsed by Sydney Water.

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Yallah-Marshall Mount	2,000	× [15]	×	Refer to above
Stage 5 remainder	2,048	×	×	Refer to above

[15] Yallah-Marshall Mount was rezoned in June 2018 and does not form part of the rezoned lot numbers in this report.

Table 3.1(f) Wollongong LGA: Greenfield Dwelling Production and Forecast

Release area	Remaining Potential	17/18	18/19	19/20	20/21	21/22	5 year total	Remaining capacity beyond 5 years
Tallawarra	1,400	-	250	250	250	250	1,000	400
Calderwood	800	-	-	-	-	-	-	800
Redgum Ridge	46	16	30	-	-	-	46	0
West Dapto	18,935	334	736	1,424	963	796	4,253	14,682
Stage 1 Neighbourhood Plan Areas	3,180	174	592	557	288	185	1,796	1,384
West Dapto Rd / Sheaffes Rd (South)	726	-	90	90	90	80	350	376
Wongawilli Rd (North)	504	84	206	114	50	50	504	0
Sheaffes Rd (North)	411	53	75	75	80	55	338	73
Darkes Rd (South West)	471	-	200	204	-	-	404	67
Shone Ave / West Dapto Rd	385	37	21	74	68	-	200	185
Remainder	683	-	-	-	-	-	-	683
Stage 2 Neighbourhood Plan Areas	2,606	160	40	537	355	328	1,420	1,186
Bong Bong Rd (East and North)	160	160	-	-	-	-	160	0
Shone Ave (South)	32	-	-	32	-	-	32	0
Iredell Rd (West)	443	-	-	150	150	143	443	0
Hayes Lane (North)	335	-	40	205	55	35	335	0
Wongawilli Rd (South)[16]	1,182	-	-	150	150	150	450	732
Remainder	454	-	-	-	-	-	-	454

[16] Includes portion quarantined due to Wongawilli Colliery existing operations.

Release area	Remaining Potential	17/18	18/19	19/20	20/21	21/22	5 year total	Remaining capacity beyond 5 years
Stage 3 Neighbourhood Plan Areas	4,710	-	-	100	100	100	300	4,410
Bong Bong Rd (South)	1,400	-	-	100	100	100	300	1,100
Remainder	3,310	-	-	-	-	-	-	3,310
Stage 4 Neighbourhood Plan Areas	4,391	-	104	130	120	83	437	3,954
Avondale Rd (North)	1,140	-	104	35	-	-	139	1,001
Remainder	3,251	-	-	95	120	83	298	2,953
Stage 5 Neighbourhood Plan Areas	4,048	-	-	100	100	100	300	3,748
Yallah-Marshall Mount	2,000	-	-	100	100	100	300	1,700
Remainder	2,048	-	-	-	-	-	-	2,048
Total - Greenfield Release Areas	**21,181**	**350**	**1,016**	**1,674**	**1,213**	**1,046**	**5,299**	**15,882**

Discussion and Conclusion – Wollongong

There are adequate supplies of land strategically identified for housing in the Wollongong LGA. There has been an increase in lots anticipated to be zoned and serviced within the next 5 years, which demonstrates the progress of Sydney Water's infrastructure planning and delivery.

Work continues on new development fronts e.g. supporting continued development of Stage 1 and 2 at West Dapto, in particular the following neighbourhood plan areas:

- West Dapto Road / Sheaffes Road (South)
- Wongawilli Road (North)
- Sheaffes Road (North)
- Darkes Road (South West)
- Bong Bong Road (East and North)
- Shone Avenue (South)
- Avondale Road (North)
- Shone Ave / West Dapto Road
- Iredell Road (West)
- Hayes Lane (North)

Changes since the last UDP Update Report include the Sandon Point and Bulli Bricks release areas are now complete. Redgum Ridge is expected to be complete by 2019/20.

Achieving more housing starts at West Dapto will continue to rely on a shared responsibility between the Department (on behalf of the State Government) and Wollongong City Council, particularly in the delivery of services and infrastructure.

3.2 Shellharbour LGA

Figure 3.2(a) Dwelling supply medium term

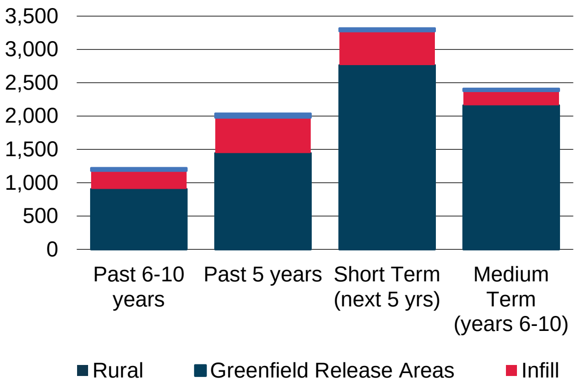


Figure 3.2(b) Dwelling approvals and completions

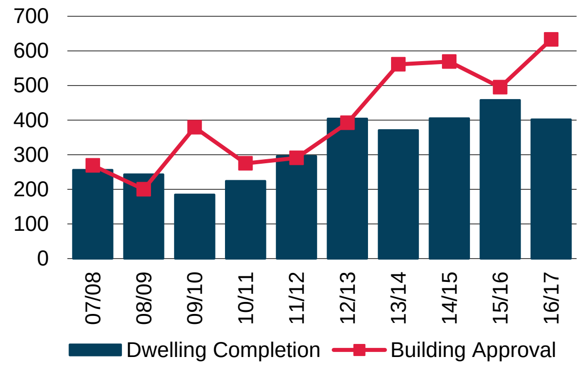


Table 3.2(a) Shellharbour LGA: Dwelling Completion – Release areas and infill /centres

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 year total 07/08 to 11/12	5 year total 12/13 to 16/17
Infill / centres	57	75	42	89	56	116	94	111	150	123	319	594
Release areas	199	168	143	135	240	288	277	294	308	279	885	1,446
Total	**256**	**243**	**185**	**224**	**296**	**404**	**371**	**405**	**458**	**402**	**1,204**	**2,040**

Key points from this table

- There continues to be an upward trend in the total number of dwellings completed since 2009/10.
- The highest number of total dwellings completed over the last ten years occurred in 2015/16 (458). This year also recorded the highest amount from release areas and established areas through infill.

- More dwellings were completed in the last three years, 2014/15 to 2016/17 than any other period over the last ten years.
- Dwelling completions in Shellharbour is based on a strong greenfield housing market. Dwelling completions from release areas in the first five years, or the last five years account for approximately 70% of all dwellings.

Table 3.2(b) Shellharbour LGA: Dwelling Completions – Detached and Multi Unit

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 yr total 07/08 to 11/12	5 yr total 12/13 to 16/17
Multi - unit	76	54	41	103	16	65	64	39	118	107	290	393
Detached	180	189	144	121	280	339	307	366	340	295	914	1,647
Total	**256**	**243**	**185**	**224**	**296**	**404**	**371**	**405**	**458**	**402**	**1,204**	**2,040**

Key points from this table:

- Since 2009/10 there continues to be an upward trend in the total number of dwellings completed
- The highest number of total dwellings completed over the last ten years occurred in 2015/16 (458).
- The highest number of detached dwellings completed in the last ten years occurred in 2012/13 (366).
- The importance of new detached dwellings has increased over the last ten years. Detached dwellings accounted for 76% of new dwellings in the first 5 years (2007/08 – 2011/12) compared to 81% of new dwellings in the last 5 years (2012/13 – 2016/17).
- The dwelling density split for the first 5 years (2007/08 to 2011/12) is 76:24 (76% detached and 24% multi-unit).
- The dwelling density split for the last 5 years (2012/13 to 2016/17) is 83:17 (81% detached and 19% multi-unit).

Table 3.2(c) Shellharbour LGA: Dwelling Approval

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 yr total 07/08 to 11/12	5 yr total 12/13 to 16/17
Detached	218	158	237	200	204	236	282	241	173	375	1,017	1,307
Multi-unit	51	42	142	75	87	156	279	328	322	258	397	1,343
Medium density	34	42	112	73	80	155	186	206	307	251	341	1,105
Flat 1-2 stys	10	0	30	2	6	0	0	116	0	4	48	120
Flat 3+ stys	6	0	0	0	0	0	71	0	10	0	6	81
Others	1	0	0	0	1	1	22	6	5	3	2	37
Total	**269**	**200**	**379**	**275**	**291**	**392**	**561**	**569**	**495**	**633**	**1,414**	**2,650**

Key points from this table

- There were 633 dwelling approvals for 2016/17 which is the highest in ten years.
- In terms of approvals for detached dwellings, the highest amount recorded is for 2016/17 with 375 detached dwelling approvals.
- In terms of approvals for multi-unit dwellings, the highest amount recorded is for 2014/15 with 328 multi-unit dwelling approvals. Medium density (206) and flat 1-2 storey (116) buildings account for the majority of these approvals.
- The proportion of approvals for detached dwellings have decreased accounting for 72% of all approvals in the first five years (2007/08 – 2011/12) to 49% in the last five years (2012/13 – 2016/17).
- Conversely, the proportion of approvals for multi-unit dwellings have increased accounting for 28% of all approvals in the first 5 years (2007/08 to 2011/12) and 51% in the last five years (2012/13 to 2016/17).

Table 3.2(d) Shellharbour LGA: Greenfield Subdivision Potential

Release Area	Zoned and serviced	Zoned and Serviced (next 5 years)	Zoned and Serviced (beyond 5 years)	Total
Albion Park South	0	306	0	306
Calderwood[17]	350	3,650	2,900	6,900[18]
Shell Cove	1,253	0	0	1,253
Shell Heights (Dunmore)	100	300	0	400
Tullimbar Village	1,270	159	0	1,429
Council Total	**2,973**	**4,415**	**2,900**	**10,288**

Key points from this table

- 100 lots in the northern part of Shell Heights have been serviced and are now available for development.
- All lots within Calderwood have been zoned for residential and are awaiting the progressive rollout of water and waste water trunk infrastructure.

[17] Calderwood in included in Sydney Water's Growth Servicing Plan (GSP 2017-22). Trunk works (Package 1) to service up to 2000 lots were delivered mid-2018, which will be reflected in future Update Reports.

[18] Calderwood has an estimated overall dwelling potential of 7,700. This figure has been adjusted to 6,900 to reflect the 800- dwelling potential which is within Wollongong LGA. The developer has advised Sydney Water that total dwellings in the rezoned area of Calderwood is likely to increase from 4,800 to 6,600 dwellings (application lodged for amendment to Concept Plan). Sydney Water is planning for 6,500 dwellings in the rezoned area.

Table 3.2(e) Zoning and Servicing Timetable

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Albion Park South	306	Partially	Partially	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works.
Shell Cove (Boat Harbour Precinct)	1,253	✓	Staged delivery from October 2016[19]	As above
Shell Heights (Dunmore)[20]	400	✓	Partially, trunk works to be delivered by early 2020. Developer to deliver local lead ins	As above
Tullimbar Village[21]	1,429	✓	Not required	As above

[19] Future SPS to be delivered in early 2020 as development occurs in the future.
[20] Initial development in the northern part of Dunmore serviced by lead ins, southern part to be serviced with trunk works (SPS, rising main, sewer carrier) by early 2020.
[21] Servicing investigation confirmed trunk capacity is available for Tullimbar, developer(s) are to deliver local reticulation mains at development stage to connect to Sydney Water trunk infrastructure.

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Calderwood[22]	6,900	Partially	Capacity to service 350 lots from existing infrastructure. Staged delivery of trunk infrastructure from 2018. Further Trunk works to be delivered to service future stages	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works. Negotiations for a new zone substation site in the Calderwood precinct are being finalised and Endeavour Energy (subject to regulatory investment tests) plans to deliver a new Calderwood zone substation in 2021/22.

[22] Calderwood as a release area has an overall dwelling potential of 7,700. This figure has been adjusted to reflect the portion of Calderwood (800 dwellings) which is within Wollongong LGA. Only 4,800 potential lots are zoned for development (likely to increase to 6,600 dwellings). Up to 2,000 lots are being serviced through the delivery of Package 1 trunk works in 2018. Remainder will be serviced in stages based on actual service demand. Planning for future works commenced.

Table 3.2(f) Greenfield Dwelling Production and Forecast

Release area	Potential	17/18	18/19	19/20	20/21	21/22	5 yr total	Remaining capacity beyond 5 yrs
Albion Park South	306	-	-	-	-	-	0	306
Calderwood[23]	6,900	221	375	250	200	200	1,246	5,654
Shell Cove	1,253	150	150	150	150	150	750	503
Shell Heights[24]	400	-	-	-	-	-	0	400
Tullimbar Village	1,429	100	130	180	180	180	770	659
Total	**10,288**	**471**	**655**	**580**	**530**	**530**	**2,766**	**7,522**

Discussion and Conclusion – Shellharbour

The Shellharbour area has maintained high dwelling approvals in the past five years including a ten year high in 2016/17 (633). This suggests Shellharbour will continue to experience strong growth its housing market.

Short to medium term housing supply is primarily supported by ongoing greenfield development at Calderwood and Tullimbar. It is anticipated that Calderwood and Tullimbar will provide a significant supply of single detached dwellings whilst the focus for Shell Cove will move towards multi-unit dwellings.

[23] Calderwood as a release area has an overall dwelling potential of 7,700. This figure has been adjusted to reflect the portion of Calderwood (800 dwellings) which is within Wollongong LGA.
[24] Dunmore is being serviced, lead in sewers delivered, trunk works to complete in early 2020 to service southern part and existing unsewered areas.

3.3 Kiama LGA

Figure 3.3(a) Dwelling supply medium term

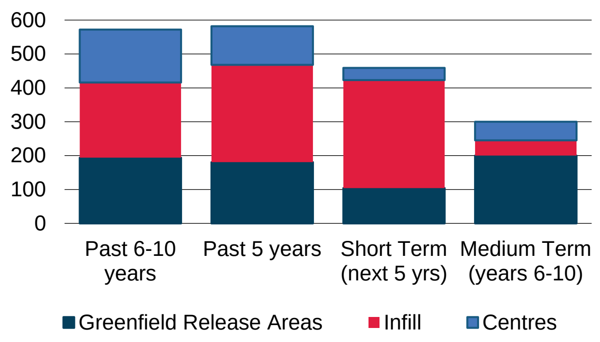


Figure 3.3(b) Dwelling approvals and completions

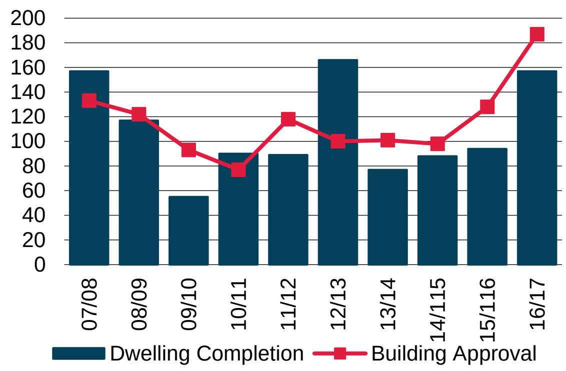


Table 3.3(a) Kiama LGA: Dwelling Completions – Release areas and infill / centres.

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 yr total 07/08 to 11/12	5 yr total 12/13 to 16/17
Infill / centres	135	78	12	49	46	77	59	66	63	136	320	401
Release areas	22	39	43	41	43	89	18	22	31	21	188	181
Total	**157**	**117**	**55**	**90**	**89**	**166**	**77**	**88**	**94**	**157**	**508**	**582**

Key points from the above figures:

- Both the total number of dwelling approvals and completions spiked in 2016/17. Dwelling approvals continued a four-year trend of outnumbering dwelling completions.
- In fill / centres continued to account for the majority of completed dwellings. In 2016/17 87% of completions were in infill / centres compared to 13% in release areas.
- There was a 115% increase in dwelling completions in infill / centres from 2015/16 to 2016/17. However dwelling completions in release areas decreased by 33% from 2015/16 to 2016/17.

Table 3.3(b) Kiama LGA: Dwelling Completions – Detached and Multi Unit

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 yr total 07/08 to 11/12	5 yr total 12/13 to 16/17
Multi - unit	124	72	9	30	15	48	33	39	26	58	250	204
Detached	33	45	46	60	74	118	44	49	68	99	258	378
Total	**157**	**117**	**55**	**90**	**89**	**166**	**77**	**88**	**94**	**157**	**508**	**582**

Key points from this table:

- The total number of dwellings have increased for the fourth consecutive year since 2013/14 period.
- Detached dwellings accounted for 63% of dwellings completed in 2014/15, whilst multi-unit dwellings accounted for 37%.
- In the first 5 years (2007/08 to 2011/12) Kiama had a dwelling density split of 57:43 (57% detached and 43% multi-unit dwellings) for new dwellings.
- In the last 5 years (2012/13 to 2016/17) Kiama has had a dwelling density split of 58:42 (58% detached and 42% multi-unit).

Table 3.3(c) Kiama LGA: Dwelling Approval[25].

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 yr total 07/08 to 11/12	5 yr total 12/13 to 16/17
Detached	85	95	93	72	109	70	85	79	111	158	454	503
Multi-unit	48	29	1	3	20	99	28	41	99	43	101	310
Medium density	34	10	0	3	6	28	24	12	19	29	53	112
Flat 1-2 stys	0	3	1	0	0	3	1	0	1	3	4	8
Flat 3+ stys	14	16	0	0	14	68	3	29	79	11	44	190
Others	0	0	0	0	0	0	0	0	0	0	0	0

[25] Data sourced from Kiama Municipal Council.

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 yr total 07/08 to 11/12	5 yr total 12/13 to 16/17
Total	**133**	**124**	**94**	**75**	**129**	**169**	**113**	**120**	**210**	**201**	**555**	**813**

Key points from this table:

- Dwelling approvals reached a ten year high in 2015/16 with 210 approvals.
- The proportion of multi-unit approvals has increased over the last ten years, accounting for 18% in the first five years to 2011/12 then increasing to 38% of all approvals for the last 5 years (2012/13 to 2016/17).

Table 3.3(d) Kiama LGA: Greenfield Subdivision Potential

Release Area	Zoned and serviced	Zoned and Serviced (next 5 yrs)	Zoned and Serviced (beyond 5 yrs)	Total
Drualla Road (Jamberoo)	0	15	0	15
Golden Valley Road (Jamberoo)	0	47	0	47
Henry Parkes Drive (Kiama Downs)	0	25	0	25
Iluka (Kiama Downs)	0	9	0	9
West of Elambra Estate	0	0	350	350
South Kiama Drive	8	0	0	8
Spring Creek	163	0	0	163
Council Total	**171**	**96**	**350**	**617**

Key points from this table:

- The greenfield dwelling potential in Elambra Estate, Drualla Road, Chapel Hill Jamberoo and Cedar Grove Stage 2 was exhausted in 2016/17 with the construction of the final subdivision stages and registration of lots.
- South Kiama Drive is expected to be completed in 2017/18.
- Drualla Road Jamberoo, Golden Valley Road Jamberoo and Iluka (Kiama Downs) are anticipated to be rezoned in 2017/18. All three sites are serviced

Table 3.3 (e) Kiama LGA: Zoning and Servicing Timetable

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Drualla Road (Jamberoo)	15	x	Trunk infrastructure available. Developer may need to augment the existing to deliver local reticulation at development stage.	There is some capacity in the adjacent network to service these release areas for the short term. Developers need to apply for and deliver "lead-in" distribution works to service individual developments within the release area.
Golden Valley Road (Jamberoo)	47	x	As above	As above
Henry Parkes Drive (Kiama Downs)	25	x	As above	As above
Iluka (Kiama Downs)	9	x	As above	As above
West of Elambra Estate[26]	Up to 350 dwellings	To be determined	Trunk infrastructure available. Developer to deliver local reticulation at development stage.	There is some capacity in the adjacent network to service these release areas for the short term. Developers need to apply for and deliver "lead-in" distribution works to service individual developments within the release areas. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works.

[26] This is a longstanding area on the UDP that has been revised down to have a potential for up to 350 dwelling, for Council to consider if additional greenfield land supply is required.

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
South Kiama Drive	8	✓	✓	As above
Spring Creek	163	✓	✓	As above

Table 3.3(f) Kiama LGA: Greenfield Dwelling Production and Forecast

Release area	Potential	17/18	18/19	19/20	20/21	21/22	5 yr total	Remaining capacity beyond 5 yrs
Drualla Road (Jamberoo)	15	-	15	-	-	-	15	0
Golden Valley Road (Jamberoo)	47	-	-	47	-	-	47	0
Henry Parkes Drive (Kiama Downs)	25	-	-	25	-	-	25	0
Iluka (Kiama Downs)	9	-	9	-	-	-	9	0
West of Elambra Estate	350	-	-	-	-	-	0	350
South Kiama Drive	8	8	-	-	-	-	8	0
Spring Creek[27]	163	-	-	-	-	-	0	163
Total	**617**	**8**	**24**	**72**	**0**	**0**	**104**	**513**

Discussion and Conclusion – Kiama

Dwelling completions in 2016/17 (157) met the 20-year average annual dwelling projection for Kiama (143). Combined with the record high for approvals in 2015/16, this is an indication of a strong local housing market. The emphasis on infill dwellings is both a reflection of the limited capacity for greenfield housing and the high number of multi-dwelling developments that have been a characteristic of Kiama's development in recent years.

Short to medium term housing supply will be supported by continued infill development and some limited greenfield housing opportunities. Kiama Council advises it continues to pursue the unlocking of the Spring Creek area and has commenced the preparation of a master plan for the area. Council is also assessing a proponent led rezoning proposal for 410 lots on land identified

[27] Any lot production forecast for Spring Creek will be subject to confirmation of impact and timing from continuation of adjacent Bombo Quarry.

under the Kiama Urban Strategy at West Kiama. Land to the west of the Elambra Estate at Gerringong has capacity within the water and waste water system as well as electricity network for servicing and presents an additional housing opportunity if required.

A significant housing and employment lands opportunity will be presented through the post extractive development of the Bombo Quarry site however the process for planning and remediation of this site will make this a long-term opportunity.

3.4 Shoalhaven LGA

Figure 3.4(a) Dwelling supply medium term

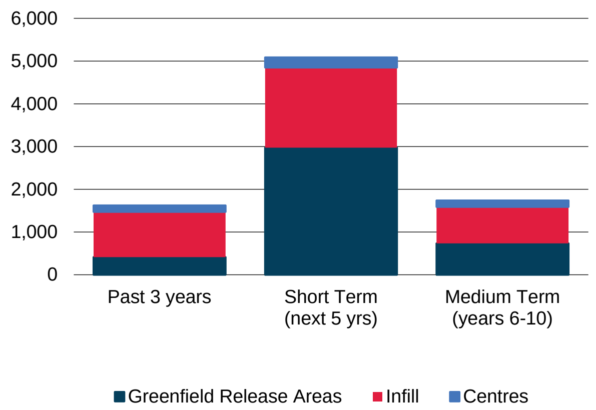


Figure 3.4(b) Dwelling approvals and completions

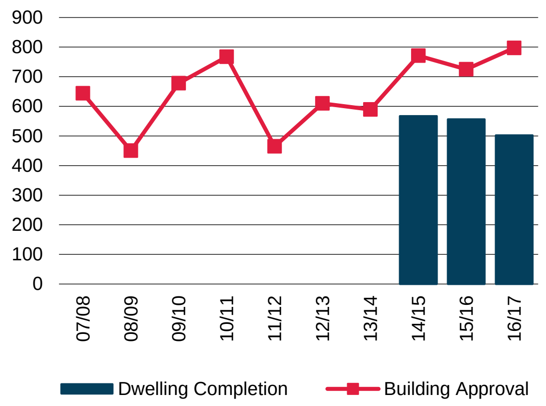


Table 3.4(a) Shoalhaven LGA: Dwelling Completions – Release areas and infill / centres[28]

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 year total 07/08 to 11/12	5 year total 12/13 to 16/17
Infill / centre	-	-	-	-	-	-	-	450	402	357	-	1,209
Release area								117	154	145	-	416
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**567**	**556**	**502**	**-**	**1,625**

[28] Dwelling completion data only available from 2014/15

Key points from the figures above:

- Dwelling completions from established areas (infill and centres) have accounted for 74% of development since 2014/15.
- Most recently in 2016/17 established areas supplied 71% of dwelling completions.

Table 3.4(b) Shoalhaven LGA: Dwelling Completions – Detached and Multi Unit[29]

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 year total 07/08 to 11/12	5 year total 12/13 to 16/17
Multi – unit	-	-	-	-	-	-	-	170	151	111	-	432
Detached	-	-	-	-	-	-	-	397	405	391	-	1,193
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**567**	**556**	**502**	**-**	**1,625**

Key points from this table:

- Dwelling splits for dwelling completions since 2014/15 are 73% detached and 27% multi-unit.
- Most recently dwelling splits for dwelling completions in 2016/17 were 78% detached and 22% multi-unit dwellings.
- There is a strong correlation between detached dwellings and dwelling completions in release areas.

Table 3.4(c) Shoalhaven LGA Dwelling Approval

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 year total 07/08 to 11/12	5 year total 12/13 to 16/17
Detached	433	379	505	486	399	496	526	609	610	677	2,202	2,918
Multi-unit	211	71	173	281	66	114	63	162	115	120	802	574
Medium density	157	63	84	242	62	30	45	136	86	106	608	403

[29] Dwelling completion data only available from 2014/15

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	5 year total 07/08 to 11/12	5 year total 12/13 to 16/17
Flat 1-2 stys	20	0	82	28	0	49	2	0	22	0	130	73
Flat 3+ stys	34	0	0	4	0	27	0	13	0	8	38	48
Others	0	8	7	7	4	8	16	13	7	6	26	50
Total	**644**	**450**	**678**	**767**	**465**	**610**	**589**	**771**	**725**	**797**	**3,004**	**3,492**

Key points from this table:

- In the last 10 years, approvals for detached dwellings were highest in 2016/17 (677).
- In the last 10 years, approvals for multi-unit dwellings were highest in 2010/11 (281).
- In terms of total dwelling approvals, there were approximately 400 more dwellings approved in the last five years (2012/13 – 2016/17) compared to the first five years (2007/08 – 2011/12).

Table 3.4(d) Greenfield Subdivision Dwelling Potential

Release area	Zoned and serviced	Zoned and Serviced (next 5 yrs)	Zoned and Serviced (beyond 5 yrs)	Total
Badgee Lagoon, Sussex Inlet	0	730	0	730
Bamarang investigation area	0	0	2,453	2,453
Bayswood, Vincentia	150	0	0	150
Bishop Drive – eastern, Mollymook	59	0	0	59
Bishop Drive – south eastern, Mollymook	30	0	0	30
Bishop Drive – western, Mollymook	75	0	0	75
Cabbage Tree Lane	0	0	1,650	1,650

Release area	Zoned and serviced	Zoned and Serviced (next 5 yrs)	Zoned and Serviced (beyond 5 yrs)	Total
Callala Bay (investigation area)	0	0	TBC	TBC
Carrington Heights, South Nowra	102	0	0	102
Corks Lane, Milton	73	0	0	73
Crams Road, North Nowra	0	0	165	165
Crams Road (investigation area), Bangalee	0	0	150	150
Culburra Beach (investigation area)	0	0	TBC	TBC
Endeavour Estate, South Nowra	100	0	0	100
Green Orchid Estate, South Nowra	130	0	0	130
Green Street, Ulladulla	31	0	0	31
Hillcrest Avenue, South Nowra	25	0	0	25
Huntingdale Park, Berry	144	0	0	144
Leo Drive, Narrawallee	136	0	0	136
Maisie Williams Drive, Mollymook	22	0	0	22
Manyana (Cnr Berringer and Cunjurong)	180	0	0	180
Manyana (Kylor)	0	300	0	300
Meroo Meadow (Emerald Drive)	39	0	0	39
Meroo Meadow (investigation area)	0	0	2,403	2,403
Moss Vale Road North, Cambewarra	0	350	1,190	1,540

Release area	Zoned and serviced	Zoned and Serviced (next 5 yrs)	Zoned and Serviced (beyond 5 yrs)	Total
Moss Vale Road South, Cambewarra	0	840	0	840
Mundamia (Jemalong)	0	320	0	320
Mundamia (NLALC)	0	190	0	190
Princes Highway, Ulladulla	100	0	0	100
Royal Mantle Drive, Ulladulla	36	0	0	36
Seaside, Dolphin Point	90	0	0	90
Seaspray Street, Narrawallee	40	0	0	40
The Lakes, Dolphin Point	102	0	0	102
Twin Waters Estate, South Nowra	71	0	0	71
West Culburra (investigation area)	0	0	0	0
White Gum Road, Ulladulla	31	0	0	31
Worrigee	0	156	0	156
Yarrawonga Drive, Mollymook	15	0	0	15
Council Total	**1,781**	**2,886**	**8,011**	**12,678**

Table 3.4 (e) Zoning and Servicing Timetable - Shoalhaven

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Badgee Lagoon, Sussex Inlet	730	✓	Water available, sewer in the next 5 years	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works.
Bamarang (investigation area)	2,453	×	× Major sewerage infrastructure to be constructed and extended to existing Nowra WwTP	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works. In the long term, major Endeavour funded upstream works will be needed including the possible construction or augmentation of zone substations and/or sub-transmission lines
Bayswood, Vincentia	150	✓	✓	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works.
Bishop Drive – eastern, Mollymook	33	✓	✓	As above

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Bishop Drive – south eastern, Mollymook	30	✓	✓	As above
Bishop Drive – western, Mollymook	75	✓	✓	As above
Cabbage Tree Lane	1,650	✓	✗ Major sewerage infrastructure to be constructed and extended to existing Nowra WwTP	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works. In the long term, major Endeavour funded upstream works will be needed including the possible construction or augmentation of zone substations and/or sub-transmission lines.
Callala Bay (investigation area)	TBD	✗	✗ Sewerage infrastructure to be constructed.	As above
Carrington Heights, South Nowra	102	✓	✓	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Corks Lane, Milton	73	✓	× Upgrade to existing Corks Lane Water Pumping Station is required to provide adequate service to elevated lots.	.As above
Crams Road, North Nowra	165	✓	Water available, sewer servicing next 5 years	As above
Crams Road (investigation area), Bangalee	150	×	Water available, sewer servicing next 10 years	As above
Culburra Beach Investigation Area	TBD	Partially	×	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works. In the long term, major Endeavour funded upstream works will be needed including the possible construction or augmentation of zone substations and/or sub-transmission lines.
Endeavour Estate, South Nowra	100	✓	✓	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works.

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Green Orchid Estate, South Nowra	130	✓	✓	As above
Green Street, Ulladulla	31	✓	✓	As above
Hillcrest Avenue, South Nowra	25	✓	✓	As above
Huntingdale Park, Berry	144	✓	✓	As above
Leo Drive, Narrawallee	136	✓	✓	As above
Maisie Williams Drive, Mollymook	22	✓	✓	As above
Manyana (Cnr Berringer and Cunjurong)	180	✓	✓	As above
Manyana (Kylor)	300	✓	Water and sewer available next 10 years	As above
Meroo Meadow (Emerald Drive)	39	✓	✓	As above

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Meroo Meadow (investigation area)	2,403	To be determined	×	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works. A site for a new zone substation in the Cambewarra area will need to be secured and Endeavour Energy (subject to regulatory investment tests) plans to deliver a new Cambewarra zone substation in 2024/25.
Moss Vale Road North, Cambewarra	1,540	✓	Water and sewer next 5 years	As above
Moss Vale Road South, Cambewarra	840	✓	Water and sewer next 5 years	As above
Mundamia (Jemalong)	320	✓	Water available, sewer servicing available next 5 years	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works.
Mundamia (NLALC)	190	✓	Water available, sewer servicing available next 5 years	As above
Princes Highway, Ulladulla	100	✓	✓	As above
Royal Mantle Drive, Ulladulla	36	✓	✓	As above

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Seaside, Dolphin Point	90	✓	✓	As above
Seaspray Street, Narrawallee	40	✓	✓	As above
The Lakes, Dolphin Point	102	✓	✓	As above
Twin Waters Estate, South Nowra	71	✓	✓	As above
West Culburra (investigation area)	TBD	Partially	×	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works. In the long term, major Endeavour funded upstream works will be needed including the possible construction or augmentation of zone substations and/or sub-transmission lines.
White Gum Road, Ulladulla	31	✓	✓	There is some capacity in the adjacent network to service this release area for the short term. Developers need to apply for and deliver “lead-in” distribution works to service individual developments within the release area. Over the medium term, Endeavour Energy will monitor the need to upgrade upstream infrastructure and, depending on connection rates and demand, initiate upstream works.
Worrigee	156	✓	Water available, sewer servicing available next 5 years	As above

Release area	Dwelling potential	Zoned	Zoned with Sydney Water trunk infrastructure	Electricity
Yarrawonga Drive, Mollymook	15	✓	✓	As above

Table 3.4(f) Shoalhaven LGA: Greenfield Dwelling Production and Forecast

Release area	Potential	17/18	18/19	19/20	20/21	21/22	5 yr total	Remaining capacity beyond 5 yrs
Badgee Lagoon	730	31	48	30	50	159	318	412
Bamarang investigation area	2,453	-	-	-	-	-	0	2,453
Bayswood, Vincentia	150	50	30	35	35	150	-	0
Bishop Drive-eastern, Mollymook	593	-	20	13	-	-	33	26
Bishop Drive – south eastern, Mollymook	30	-	-	15	15	-	30	0
Bishop Drive – western, Mollymook	75	-	25	25	25	-	75	0
Cabbage Tree Lane investigation area	1,650	-	-	-	-	-	0	1,650
Callala Bay investigation area	TBD	-	-	-	-	-	-	TBD
Carrington Heights, South Nowra	102	47	32	23	-	-	102	0
Corks Lane, Milton	73	29	22	22	-	-	73	0
Crams Road, North Nowra	165	-	-	-	-	-	0	165
Crams Road, Bangalee investigation area	150	-	-	-	-	-	0	150
Culburra Beach investigation area	TBD	-	-	-	-	-	-	TBD
Endeavour Estate, South Nowra	100	36	64	-	-	-	100	0
Green Orchid Estate, South Nowra	130	70	60	64	28	-	130	0
Green Street, Ulladulla	31	-	-	-	-	-	0	31
Hillcrest Avenue, South Nowra	25	-	25	-	-	-	25	0

Release area	Potential	17/18	18/19	19/20	20/21	21/22	5 yr total	Remaining capacity beyond 5 yrs
Huntingdale Park, Berry	144	117	27	-	-	-	144	0
Leo Drive, Mollymook	136	30	40	22	22	22	136	0
Maisie Williams Drive, Mollymook	22	-	22	-	-	-	22	0
Manyana (Cnr Berringer & Cunjurong)	180	-	-	-	-	-	0	180
Manyana (Kylor)	350	-	-	-	-	-	0	350
Emerald Drive, Meroo Meadow	39	-	39	-	-	-	39	0
Meroo Meadow investigation area	2,403	-	-	-	-	-	0	2,403
Moss Vale Road North, (Cambewarra)	1,540	-	-	50	150	150	350	1,190
Moss Vale Road South, (Cambewarra)	840	-	100	150	150	150	550	290
Mundamia (Jemalong)	320	-	-	-	50	75	125	195
Mundamia	190	-	-	-	-	-	0	190
Princes Highway, Ulladulla	100	-	-	-	-	-	0	100
Royal Mantle Drive, Ulladulla	36	11	16	9	-	-	36	0
Seaside, Dolphin Point	90	20	35	35	-	-	90	0
Seaspray Street, Narrawallee	40	-	-	-	-	-	0	40
The Lakes, Dolphin Point	102	20	40	21	21	-	102	0
Twin Waters Estate, South Nowra	71	71	-	-	-	-	71	0
White Gum Road, Ulladulla	31	-	20	11	-	-	31	0

Release area	Potential	17/18	18/19	19/20	20/21	21/22	5 yr total	Remaining capacity beyond 5 yrs
Worrigee	156	-	-	30	30	30	90	66
Yarrawonga Drive, Mollymook	15	-	-	-	-	-	0	15
Total	**12,678**	**532**	**665**	**491**	**548**	**586**	**2,822**	**9,856**

Discussion and conclusion: Shoalhaven

There is approximately 12,678 lots identified for residential development in the Shoalhaven. Approximately 76% (9,711) of these lots are within the Nowra Bomaderry Structure Plan area whilst the remaining 24% (2,967) is distributed mostly towards the southern part of Shoalhaven between Milton and Ulladulla, refer to Appendix A maps 7 to 14.

Of the total lots greenfield identified (12,678), approximately 2,447 lots (19%) are currently zoned and service ready (water, sewer and electricity). Of those 2,447 lots, 938 lots (38%) are zoned and service ready within proximity to Nowra (Carrington Heights, Twin Waters, Green Orchid Estate, Hillcrest Avenue, Endeavour Estate). These release areas are expected to be completed by 2020/21, which highlights the need to focus on progressing the servicing of the Nowra Bomaderry Urban Release Areas (URAs).

Within the Nowra Bomaderry URAs, it is anticipated that Mundamia (Jemalong) (510 lots), Moss Vale Road South (840 lots) and Worrigee (156 lots) will start contributing to housing supply first. These areas are zoned, water and sewer is or will be available within 5 years, and there is existing capacity for electricity services. Development applications (DAs) have been lodged and are currently being assessed by Council (Moss Vale Road South and Worrigee) and the Department (Mundamia – as a major project).

Council has brought forward Moss Vale Road North, which was initially in Phase 5 of the Nowra Bomaderry Structure Plan. This will allow for a coordinated and consistent approach to developing land around Moss Vale Road and will bring lots online sooner in the northern part of the Shoalhaven.

A number of planning processes are currently proceeding for the Culburra Beach and Callala Bay investigation areas, that will once finalised, resolve appropriate land use yields.

Estimated yields and timing for development is reviewed on an annual basis. Factors which may impede timely development completions across Shoalhaven include infrastructure and servicing, biodiversity and other environmental issues, as well as land owner interest and expectations in developing their land holdings.

Appendices

Appendix A – Maps: Illawarra-Shoalhaven Region – Urban Development Program Areas

The Illawarra-Shoalhaven Urban Development Program covers the local government areas of Wollongong, Shellharbour, Kiama, and Shoalhaven as of 2016/17.

To request a copy of the maps for Illawarra-Shoalhaven Region – Urban Development Program Areas, please contact the project team by email of phone:

Wollongong Regional Office

Tel: (02) 4247 1800

Email: wollongong@planning.nsw.gov.au

Appendix B – Map: West Dapto Neighbourhood Plan Areas

To request a copy of the maps for Illawarra-Shoalhaven Region – Urban Development Program Areas, please contact the project team by email of phone:

Wollongong Regional Office

Tel: (02) 4247 1800

Email: wollongong@planning.nsw.gov.au

Appendix C – Information and Data Sources.

Information and Data Sources

Dwelling completion data is sourced from Sydney Water and dwelling approval data is sourced from the Australia Bureau of Statistics. Servicing information is sourced from Sydney Water and Endeavour Energy for Wollongong, Shellharbour and Kiama LGAs. For this Update Report dwelling approval data for Kiama LGA has been provided by Kiama Municipal Council and is in the process of being verified by the Australia Bureau of Statistics.

Dwelling completion data for the Shoalhaven LGA is sourced from Shoalhaven City Council. Servicing information for Shoalhaven LGA is sourced from Shoalhaven Water and Endeavour Energy.

The Greenfield Dwelling Forecast Data is derived from information gathered as part of the Illawarra-Shoalhaven Urban Development Program Annual Stakeholders Forum. It is based on individual developments (expected lot or dwelling delivery) as indicated by the developer and therefore certain assumptions (i.e. re-zonings, approvals, etc.) have been made.

A number of these release areas are currently being assessed through rezoning processes and therefore may not be available for lot production as indicated at the forum. If this occurs, additional lot production may need to be secured through increased yields in other release areas.

The information sources for different periods are

Period	Sources
Past 6-10 years 2007/08 – 20011/12	Sydney Water and Sydney Housing and Monitor Program
Past 5 years 20012/13 – 2016/17	Sydney Water and Sydney Housing and Monitor Program, Shoalhaven City Council
Short Term 2017/18 – 2021/22	Developments under construction
Medium Term 2022/23 - 2026/27	DAs approved