

ITEM 2

PUBLIC EXHIBITION OF DRAFT HOUSING AND AFFORDABLE HOUSING OPTIONS PAPER

Council has been progressively reviewing its Housing Strategy over a number of years. On 17 July 2017 Council resolved to exhibit a discussion paper “Housing Our Community” and supporting documents. Council has also responded to changing State legislation, such as the proposed introduction of the Low Rise Medium Density Code and amendments to State Environmental Planning Policy (SEPP) No. 70 – Affordable Housing.

The Illawarra Shoalhaven Regional Plan (2016) estimates that by 2036 the Wollongong LGA population will grow by 33,000 persons, who will require an additional 14,600 dwellings. The Regional Plan requires Council to plan for the increased population growth and housing demand.

A draft Housing and Affordable Housing Options Paper has been prepared, which documents forecast housing supply and demand. The data suggests that Council’s existing planning controls and strategies will cater for the projected demand. However, a greater proportion of smaller dwellings (1-2 bedrooms) is required to address the projected demand for smaller household sizes.

The draft Housing and Affordable Housing Options Paper also provides further evidence for the LGA to be included in SEPP 70 – Affordable Housing. Very low, low and moderate income households cannot afford to buy a house or unit in the LGA and there are few properties available to rent. There is a strong need to increase the number of affordable properties available to rent and purchase.

The draft Housing and Affordable Housing Options Paper presents options to address these and other housing challenges. It is recommended that the draft Housing and Affordable Housing Options Paper be exhibited to enable community and stakeholder input to assist the development of a draft Housing Strategy and draft amendments to the Wollongong Local Environmental Plan 2009 and Wollongong Development Control Plan 2010.

RECOMMENDATION

- 1 The draft Housing and Affordable Housing Options Paper be exhibited to enable community and stakeholder input.
- 2 The comments received be used to assist the development of a draft Housing Strategy and draft amendments to planning controls.
- 3 The inclusion in State Environmental Planning Policy No. 70 Affordable Housing continue to be progressed, through the development of an Affordable Housing Contributions Scheme and Development Feasibility Assessment.
- 4 A letter be sent to the Minister for Planning and Public Spaces objecting to the commencement of the Low Rise Medium Density Code, as the data in the draft Housing and Affordable Housing Options Paper demonstrates that this form of development is not required to address housing demand or affordability, and will not lead to good housing or community outcomes.

REPORT AUTHORISATIONS

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ATTACHMENTS

- 1 Draft Housing and Affordable Housing Options Paper
- 2 Missing Middle Testing Paper

BACKGROUND

In 2005 consultants for Council prepared the Wollongong Housing Study (SGS 2005) which was used to inform the preparation of the draft Wollongong Local Environmental Plan (LEP). The Housing Study examined the current and future population and demographic trends to determine the future housing supply and demand which guided decisions on the draft Wollongong LEP, and the final Wollongong LEP 2009.

In 2013, work commenced on the preparation of a new Housing Study for the City. The first steps being a review of the 2005 Housing Study, a review of development take up in the R3 Medium Density zones, and the preparation of a Residential Density Study. In 2016-17, the draft Housing Our Community Discussion Paper was prepared and reported to Council on 17 July 2017. These documents are discussed later in the report.

Review of 2005 Housing Study

As part of the preparation of a new Housing Study, it is important to review the previous strategy to gauge the success, reflect on shortcomings and lessons learnt.

In 2013, a review of the recommendations of the 2005 Housing Study occurred (Attachment 1). The 2005 Study had 31 actions and the review found that 8 actions had been completed, 10 were underway, 11 were not commenced and the other two were undertaken on a case by case basis. Many of the actions were aspirational and were not easily measurable. It is noted that housing initiatives and actions, such as rezonings and reviewing planning policies, can be spread over a number of years, and don't have to occur in a single year, or a 10 year period.

The review also noted that many of the actions involved a range of stakeholders and were resource intensive.

The 2005 Housing Study also included Council's first detailed population projections to forecast housing demand into the future. The demographic analysis took up a lot of the study and was important at the time. More recently this demographic information been provided by the State and by Informed Decisions (id) through Council's population profile and forecast which is available on Council's website. A future Housing Study does not need to undertake this analysis.

Review of R3 Medium Density residential precincts

There are 1,811 lots located within ten precincts throughout the City that are zoned R3 Medium Density Residential under Wollongong Local Environmental Plan 2009. The boundaries of the precincts originate in the Urban Consolidation precincts that existed under Wollongong LEP 1990 and the Urban Consolidation Policy TP94/3. Following the exhibition of the draft Wollongong LEP 2009, some of the precincts were removed due to community submissions, the boundaries of other precincts were modified to exclude land affected by medium and high flood hazard.

During 2013-14 a review of the built form within the R3 Medium Density Residential precincts occurred. The purpose of the review was to examine the take up of the Medium Density precincts and determine the remaining capacity for additional housing within those precincts.

The review found that there has been limited development in the precincts, with some 78% of lots being single dwelling houses, 2% dual occupancies, 6% town houses, 4% villas and 4% residential flat buildings.

There is a combination of reasons for the low take-up, including medium density development not being financially feasible, bank lending policies, the planning control settings (eg FSR or lot width controls) not encouraging development, the value of improvements in many single dwellings, and existing owners not willing to sell for the amount offered.

The review did not examine the commercial zones, such as within the Wollongong City Centre, where there has been strong growth in mixed use and residential development in recent years.

Residential Density Study

In 2014, Council engaged consultants Hames Sharley to prepare the Wollongong Residential Density Study to examine housing density issues. The study explores the factors including housing types and policies that affect housing density. The study suggests the following six principles to be considered when examining areas that may be suitable for increased residential density:

- 1 Locate close to transport services;
- 2 Provide a mix of densities;
- 3 Encourage diversity of housing types;
- 4 Integrate public and private spaces;
- 5 Implement contextually sensitive site design; and
- 6 Defined boundary and connected to precinct.

The study makes a number of recommendations that can be considered as part of the future stages of the Housing Study, including:

- Continue to focus density around the rail corridor, and other key locations such as around the University of Wollongong;
- Consider reducing minimum lot size subdivision standards, especially in medium and high density residential zones;
- Consider the use of the R4 High Density zone to encourage higher residential densities;
- Consider the removal of the integrated development requirement;
- Increase the density controls in existing medium density zones;
- Prepare design guidelines and review DCP controls to clarify built form expectations;
- Set density targets at precinct scale, ie growth centres and neighbourhoods; and
- Achieve design diversity through a hierarchy of controls.

Importantly the study notes that to ensure the benefits of higher density living is achieved, there needs to be parallel programs to improve walkability, quality of life and public realm amenities.

Housing Our Community Discussion Paper

During 2015, the preparation of the discussion paper “Housing Our Community” commenced. The discussion paper contains facts and information about the population, housing type and structure, employment, transport and the environment of our City.

The discussion paper was the first step in preparing a new Housing Strategy.

The draft Housing Our Community Discussion Paper was presented to a Councillor briefing on 23 November 2015. In December 2015 the State Government’s announced the proposed merger of Wollongong and Shellharbour City Councils. As housing issues have City-wide implications, the project was put on hold in early 2016. In February 2017, the State Government announced the abandonment of the proposed Council merger. Following the announcement, the draft Discussion Paper was updated.

On 17 July 2017 Council considered a report on the discussion paper “Housing Our Community” and supporting documents. Council resolved that:

- 1 *The discussion paper “Our Wollongong – a discussion paper identifying issues for housing our community” and supporting documents be made available on Council’s website for community information and to begin the discussion on the preparation of a new Housing Strategy for the City.*
- 2 *The discussion paper and community feedback inform the preparation of the Housing Strategy options paper.*

- 3 a *A draft Planning Proposal be prepared to introduce an Affordable Housing clause into the Wollongong Local Environmental Plan 2009, based on clause 6.8 of the Willoughby Local Environmental Plan 2012 or a similar provision recommended by the NSW Department of Planning and Environment.*
- b *The report to Council concerning the proposed LEP amendment also include consideration of SEPP70 as the alternative or parallel mechanism to achieve affordable housing outcomes.*
- 4 *The draft Planning Proposal be forwarded to the NSW Department of Planning and Environment for Gateway determination, and if endorsed exhibited for a minimum period of 28 days.*
- 5 *Council advise the NSW Department of Planning and Environment that it is willing to accept Plan making delegation, should the NSW Department of Planning and Environment agree.*

Following the meeting:

- the discussion paper and other supporting documents were published on the Council website for community information
- the discussion paper was updated to reflect the 2016 Census information which was released in mid-2017
- discussions occurred with the NSW Department of Planning and Environment on SEPP 70.

Following discussions with the Department of Planning and Environment, it was clarified that the LGA needed to be listed in SEPP 70 to enable the inclusion of a clause in the Wollongong LEP 2009 for Affordable Housing. Resolutions 3a, 4 and 5 were not able to be progressed as a consequence of resolution 3b which required a further report to Council and the consideration of SEPP 70 as an alternate or parallel mechanism.

On 3 April 2018, Council considered a Notice of Motion and resolved that:

Council staff provide a Briefing or Information Note for Councillors on existing and potential programs to address the housing affordability crisis in Wollongong, including but not limited to -

- 1 *The process for Wollongong to be included in SEPP 70, and what the timeframe and likelihood is for this to occur.*
- 2 *Voluntary Planning Agreements that increase affordable housing stock.*
- 3 *Using Council owned land to build affordable housing or leasing that land to community housing providers.*
- 4 *Any other mechanisms available to Council to address homelessness and housing affordability.*

In July 2018, a submission for inclusion in SEPP 70 was forwarded to the NSW Department of Planning and Environment. The Housing and Affordable Housing Options Paper details the revised process for being included in SEPP 70, noting that the process changed in February 2018. Parts 2, 3 and 4 of the April 2018 resolution were addressed by the Councillor briefings on 10 September and 8 November 2018 and Council's resolution on 10 December 2018.

On 1 July 2018, the Low Rise Medium Density Code commenced in some 78 local government areas. The Code permits dual occupancy, manor homes and terrace houses to be approved as complying development if the development proposal meets specified criteria. The commencement of the Code was deferred for the Wollongong LGA and 47 other LGAs until 30 June 2019. In June 2019 the deferral was extended until 31 October 2019 and subsequently until 1 July 2020.

In 2018 the Department of Planning and Environment released the Local Housing Strategy Guideline, which specifies the requirements for Housing Studies and Strategies.

On 10 September 2018 a Councillor briefing on the Housing study was provided.

On 8 November 2018 a Councillor briefing on Affordable Housing options and the Federal Grant funds was provided.

On 10 December 2018, Council considered a report on the Housing Affordability – Targeting of Federal Funds and resolved that:

- 1 *That the General Manager be delegated authority to prepare a submission to the NSW Department of Planning and Environment supporting the expansion of State Environmental Planning Policy No. 70 – Affordable Housing (Revised Schemes) (SEPP 70) to cover all local government areas.*
- 2 *The NSW Department of Planning and Environment be advised of Council’s intent to prepare an Affordable Housing Contributions Scheme (under SEPP 70).*
 - a *That up to \$50k be expended from the Commonwealth grant to expedite preparation of a Development Feasibility assessment as required to develop an Affordable Housing Contributions Scheme.*
- 3 *That the balance of the Commonwealth grant be committed to two delivery areas, of equal sums being:*
 - a *An expression of interest process whereby not-for-profit organizations are requested to provide affordable housing schemes for consideration of funding.*
 - b *An affordable home-ownership scheme for low to moderate income earners.*
- 4 *That the delivery areas in 3a and 3b be limited to schemes delivering homes in the Wollongong Local Government Area.*
 - a *That schemes exhibiting innovation and new ways of delivering services are encouraged.*
 - b *That schemes targeting, but not limited to single women aged over 50 are encouraged.*
 - c *That schemes constructed so as to return an income stream such that they can be continued or expanded beyond the initial funding, are encouraged.*
- 5 *That the delivery area in 3b be a scheme that combines the Commonwealth grant with Council owned land in the West Dapto land release area to provide new housing.*
 - a *That the new housing described above be designed as energy efficient and sustainable high quality residences.*
 - b *That mechanisms for home ownership include but not be limited to joint ownership models and rent to buy options.*
 - c *That the scheme at 3b include a component for returning an income stream such that it can be continued or expanded beyond the initial funding.*
 - d *That the University of Wollongong be approached as a potential partner to develop the design of energy efficient and sustainable housing.*
- 6 *That the general manager be delegated the authority to formulate, for 3a the details of an expressions of interest process, including assessment including any draft Memorandum of Understandings required to complete the process.*
- 7 *That a Presentation be provided at a Councillor Briefing Session prior to or on 1 April 2019, outlining the specifics of the proposed scheme at 3b.*
- 8 *That final approval for both delivery areas will be by resolution of Council and an update be provided to Council by August 2019.*
- 9 *That the State Environmental Planning Policy 70 submission in point-1:*
 - a *Note that Council has previously supported inclusion in SEPP-70 and most recently lodged a request to be included in SEPP 70 in July 2018.*
 - b *Address any section of the ‘Draft Guidelines for Developing an affordable housing contribution scheme’ that hinders early adoption of such a scheme in Wollongong.*
 - c *Propose that each region has its own median household income rate, rather than being “rest of NSW”, as the median household income rate in the Illawarra is different to other regions, and the policy settings should reflect local conditions.*

- d *Propose that the NSW Department of Planning and Environment apply the requirements to State Significant Development and modifications which seek increased housing yield, such as Calderwood and Tallawarra.*
- e *Request the NSW Department of Planning and Environment to amend the Standard LEP Instrument to include a mandatory Affordable Housing Contributions clause in all LEPs, rather than each Council having to apply through the time consuming process of preparing a draft Planning Proposal to seek the inclusion of the clause. The nomination of sites would still require the preparation of a draft Planning Proposal.*

Following the meeting:

- A letter was sent to the Department of Planning and Environment covering Parts 1, 2 and 9 of the resolution.
- Part 2a will be progressed if Council endorses the Housing Options Paper. An assessment of an Affordable Housing Scheme requires consideration of proposed planning control changes.
- A Working Group was established to progress Parts 3a and 6 of the resolution - Affordable Housing Program. Councillor briefings occurred on 26 March and 29 April 2019, a tender package was released in August 2019 and Council considered the submissions received at its meeting on 9 December 2019 (detailed below).
- A Working Group has been established to progress Part 3b, 5 and 7 of the resolution - Council Lands.

On 16 September 2019 a Councillor briefing on the Housing Study Options Paper occurred.

On 9 December 2019, Council considered a report on T19/25 relating to the Affordable Housing Program detailed in part 3a of the resolution of 10 December 2018. Council resolved that:

- 1 *In accordance with clause 178(1)(a) of the Local Government (General) Regulation 2005, Council accept in principle the tender of the Illawarra Community Housing Trust Ltd trading as Housing Trust for the delivery of affordable housing, in the sum of \$4,340,000 excluding GST.*
- 2 *The General Manager be delegated the power to finalise contract terms with the Illawarra Community Housing Trust Ltd, being terms that are consistent with the items identified in the invitation to tender.*
- 3 *Council be provided with a further report on completion of the contract finalisation process for Council's consideration prior to execution of any contract.*

State Environmental Planning Policy No.70 - Affordable Housing

On 17 July 2017, 3 April 2018 and 10 December 2018 Council made resolutions supporting the introduction of State Environmental Planning Policy No.70 Affordable Housing (Revised Schemes) (SEPP 70) for the City.

SEPP 70 commenced in 2002 and originally applied to the Greater Metropolitan Region, which includes Wollongong. However, Councils had to apply to be included in the SEPP and demonstrate the need for affordable housing in their area.

The amended aims of the policy are:

- (a) *identify that there is a need for affordable housing across the whole of the State, and*
- (b) *describe the kinds of households for which affordable housing may be provided, and*
- (c) *make a requirement with respect to the imposition of conditions relating to the provision of affordable housing.*

The Policy introduced affordable housing provisions for three precincts, the Ultimo-Pyrmont Precinct of City West, the City of Willoughby and Green Square in South Sydney. These provisions have subsequently been removed from the SEPP and are contained on the relevant Council Local Environmental Plan.

The SEPP defines affordable housing to be very low income households, low income households and moderate income households being those whose gross incomes fall within the following ranges of percentages of the median household income for the time being for the Rest of NSW (Greater Capital City Statistical Area) according to the Australian Bureau of Statistics:

Very low income household	less than 50%
Low income household	50 or more but less than 80%
Moderate income household	80–120%

The SEPP contains the following affordable housing principles:

- 1 *Where any of the circumstances described in section 7.32 (1) (a), (b), (c) or (d) of the Act occur, and a State environmental planning policy or local environmental plan authorises an affordable housing condition to be imposed, such a condition should be imposed so that mixed and balanced communities are created.*
- 2 *Affordable housing is to be created and managed so that a socially diverse residential population representative of all income groups is developed and maintained in a locality.*
- 3 *Affordable housing is to be made available to very low, low or moderate income households, or any combination of these.*
- 4 *Affordable housing is to be rented to appropriately qualified tenants and at an appropriate rate of gross household income.*
- 5 *Land provided for affordable housing is to be used for the purpose of the provision of affordable housing.*
- 6 *Buildings provided for affordable housing are to be managed so as to maintain their continued use for affordable housing.*
- 7 *Rental from affordable housing, after deduction of normal landlord’s expenses (including management and maintenance costs and all rates and taxes payable in connection with the dwellings), is generally to be used for the purpose of improving or replacing affordable housing or for providing additional affordable housing.*
- 8 *Affordable housing is to consist of dwellings constructed to a standard that, in the opinion of the consent authority, is consistent with other dwellings in the vicinity.*

Apart from the affordable housing definition and principles, the SEPP does not include any specific provisions for affordable housing. However, section 7.2 of the *Environmental Planning and Assessment Act 1979* requires a Council to be listed in a SEPP, before an affordable housing clause can be included in an LEP and development contributions for affordable housing can be collected.

On 20 April 2018, SEPP 70 was expanded to include five additional Council areas - Randwick, Inner West, Northern Beaches, Ryde and Canada Bay. In July 2018 Council lodged a submission for inclusion in SEPP 70 with the NSW Department of Planning and Environment. The submission was not acknowledgement or feedback provided. In December 2018, a letter was sent to the NSW Department of Planning and Environment advising of Council’s intent to prepare an Affordable Housing Contributions Scheme, in accordance with Council’s resolution. No feedback or acknowledgement has been received.

On 28 February 2019 the SEPP was amended to apply to all of NSW. The State was divided into 2 areas, Sydney and the rest of NSW. Wollongong became part of the rest of NSW. The expansion of the SEPP from the Greater Metropolitan Region to all of NSW, allows all Council’s to prepare Affordable Housing Schemes to be considered and approved by the State. The legislative change removed the first step in a long process. The Department also published Guidelines for Developing an Affordable Housing Contribution Scheme. Step A in the Guideline is to advise the Department of Council’s intention to prepare an Affordable Housing Scheme. A letter was sent to the Department in March 2019, re-confirming Council’s intention. No feedback or acknowledgement has been received.

On 2 March 2020 a Councillor briefing on the Housing Study Options Paper occurred.

PROPOSAL

In 2018, Wollongong had an estimated residential population of 216,071 persons (id community profile) who were housed in over 80,000 dwellings. The Illawarra Shoalhaven Regional Plan (2016) estimates that by 2036 the Wollongong population will grow by 33,000 persons, who will require an additional 14,600 dwellings. The 2019 NSW Population Projections recently issued by the NSW Department of Planning, Industry and Environment indicate that Wollongong is now expected to grow by 45,700 persons by 2036 (257,450 population) who will require an additional 23,800 dwellings. The extra 12,700 persons and 9,200 dwellings is a significant increase from the 2016 data. The Housing and Affordable Housing Options Paper has been prepared using the earlier projections.

Council has limited but important roles to play in the housing market, including -

- Setting the housing policy for the LGA, to implement the State and Regional housing projections.
- Reviewing and amending provisions within the Wollongong LEP 2009, including rezoning land, changing floor space ratio or minimum lot size provisions, which control the density of housing.
- Reviewing and amending the Wollongong DCP 2009, including parking standards, setbacks and landscaping provisions.
- Reviewing and amending the Wollongong City-wide Development Contributions Plan 2016, and West Dapto Development Contributions Plan, to determine development contributions for residential development.
- Assessing Development Applications for subdivision and residential development, and Planning Proposal requests.
- Providing attractive places to live, through infrastructure projects arising from Town and Village Planning, Public Art programs, community facilities, recreation areas and infrastructure projects;
- Encouraging local employment opportunities, through planning controls, economic development programs and encouraging investment;
- Reviewing Council land holdings and identifying surplus land that could be made available for housing; and
- Developing Council's commercial land holdings in accordance with Best Practice principles.

Council does not influence many other factors in the housing supply and demand equation, such as migration policy, taxation policy, stamp duty, bank lending policies, construction costs, developer policies or the provision of State infrastructure investment.

Forecast Housing demand and supply

As noted, the State Government has forecasted that Wollongong's population will increase by 33,000 – 45,700 persons by 2036, who will require an additional 14,600- 23,800 dwellings.

The analysis undertaken as part of the Housing Study – Options Paper, including information provided by the NSW Department of Planning, Industry and Environment indicates that there is sufficient feasible supply capacity to meet the projections forecasted in 2016. The housing supply includes the West Dapto, Calderwood and Tallawarra urban release areas, development in the Wollongong City Centre and other centres, and infill development in the suburbs.

However, the analysis indicates that a greater supply of smaller dwellings is required to meet the increasing demand, as a consequence of the ageing population, lone person households and for very, low, low and moderate income households.

The Housing and Affordable Housing Options Paper addresses the Department's requirements for preparing a Housing Study.

Housing for particular needs

The draft Housing and Affordable Housing Options Paper considers the housing needs of various sectors of the community and Council's role:

Homelessness

Homelessness is a complex problem that can arise from a number of causes, including domestic violence, financial hardship, health issues and limited access to affordable housing options. The NSW Family and Community Services identified that in 2016 there was 816 persons homeless in the Wollongong LGA. The NSW Department of Communities and Justice is the lead NSW Government Department that supports people experiencing homelessness. Effective response to homelessness goes beyond the provision of housing. Council has a supporting role to State agencies and organisations that provide services to persons who are homeless.

Social housing

Social housing is secure and affordable rental housing for people on low incomes with housing needs. It includes public, community and Aboriginal housing. Within the Wollongong LGA there is some 6,731 social housing dwellings (8% of the housing stock) managed by the NSW Land and Housing Corporation. An additional 35 dwellings for Aboriginal Housing.

The development of social housing is permissible under the Affordable Rental Housing SEPP and is undertaken by State Government agencies. Council has a limited role in the provision of Social Housing. Council will continue to work with the NSW Land and Housing Corporation to renew housing stock to meet the changing needs of their tenants.

Student housing

The growth of the University of Wollongong and Innovation Campus means that there is a growing student population that wants to live near the two campuses. The University of Wollongong's Main Campus Master Plan indicates that the University seeks to proportionally increase its student accommodation from 1,976 beds to 4,062 beds by 2036.

Students are currently housed in a mixture of on-campus accommodation, university premises in the surrounding suburbs or through private rentals. This last group can have the greatest impact on the surrounding residential community, though noise, parking and other amenity issues.

The NSW Planning System does not define "student accommodation", and sometimes premises used by students are referred to as 'boarding houses'.

In 2017, SEPP Educational Establishments and Child Care Facilities commenced. The Education SEPP permits student accommodation to occur within school, university and TAFE campuses with development consent. The policy is silent on student accommodation outside the campus.

Until there is State-wide direction on student accommodation, it is difficult for Council to set its own planning policy position.

Seniors housing

The population of Wollongong LGA is ageing. The projected number of residents in Wollongong LGA aged 70 years plus is projected to increase from 25,586 in 2016 to 31,845 by 2026. In 2016, the Illawarra *Aged Care Planning Region* had a total of 5881 total operational aged care places consisting of a mixture of low care, high care, home care, restorative care places. The ratio the Illawarra achieved in 2016 was 104.7 meaning the Illawarra region has a total of 104.7 places for every 1000 people aged 70 years plus. Assuming the current ratio of 104.7 places per 1000 people remains constant through to 2026, there will be a projected shortfall of 656 places in the Wollongong LGA alone, to achieve the Australian Government National target of 125 per 1000 persons.

There are three main approaches to housing and an ageing population.

- *Ageing in Place* enables residents to remain in their home as they age and when their level of care increase. It empowers a resident to make a conscious decision to stay in their house for as long as

they can. Additional supplementary services may facilitate ageing in place e.g. help at home or short-term care which may provide assistance after a hospital visit or respite care.

- *Seniors Housing.* There are many definitions of seniors housing. Such housing is generally aimed at residents aged 55 years and older and offer independent living units. SEPP (Housing for Seniors or People with a Disability) 2004 provides standardised NSW controls for such housing.
- *Aged Care Homes* which include spectrum of housing and assistance e.g. independent living units and/ or nursing home facilities.

The scope for Council to influence change and provide housing for seniors is limited. The Wollongong LEP currently permits seniors housing with consent in all residentially and most business zoned land throughout Wollongong LGA. This enables provision of new additional aged care homes and independent living units. Development controls are contained in the Wollongong DCP 2009 and NSW Apartment Design Guide relating to adaptable housing and liveable housing.

People with a disability

The need for assistance is a measure of the number of people with profound or severe disability, defined as people who need assistance in their day to day lives with any or all of the following core activities: self-care; mobility; or communication because of a disability, long-term health condition or old age. It is applicable to all persons. In 2016, Wollongong LGA had 6.4% of residents needing such assistance.

Data from the Institute of Health and Welfare shows that a significant number of younger people enter aged care each year. In Australia in 2017-18 more than 2,500 younger people under 65 entered aged care. A key reason younger people are entering aged care is the lack of suitable housing. There is a significant gap in the market for highly specialised disability accommodation.

SEPP (Housing for Seniors or People with a Disability) 2004 provides standardised development controls for both seniors housing and people with disability. The term Seniors Housing (as defined under the SEPP) includes residential accommodation that is intended to be used permanently for seniors or people with a disability.

Group Homes are currently permitted with consent in all residentially zoned land throughout Wollongong LGA and by the Affordable Rental Housing SEPP. Adaptable and liveable housing development controls provide scope for Council to regulate change.

Affordable Housing

In 2016, Wollongong was identified as Australia's third most expensive City based on the medium house price. This was due to a combination of factors, including land supply and the overflow demand from the Sydney housing market. It is noted that some other regional areas have higher medium house prices but are not classified as cities (eg Byron Bay). House prices increased by over 30% however wages remained stagnant and less than those being offered in Sydney. This significantly increased the demand for more affordable housing.

The Housing and Affordable Housing Options Paper addresses the need for affordable housing in the LGA and the Department's criteria for preparing an Affordable Housing Scheme. The research found there are no homes available to purchase for households on very low, low or moderate incomes. There was also a limited number of properties available to rent.

Households that require more affordable housing include key workers (emergency services, nurses, teachers), lone person households, students and the aged. Affordable housing is different to Social Housing provided by the Government. Persons requiring affordable housing are workers looking to get into the housing market, or persons that have had a change of family circumstances.

The Housing and Affordable Housing Options Paper addresses the SEPP No.70 requirements detailed by the NSW Department of Planning, Industry and Environment for the introduction of provisions to encourage greater provision of affordable housing. The next step is economic modelling to determine the development contribution that is appropriate. A pilot project is occurring as part of the Wollongong City Centre Planning Review. The results and learnings will then be applied to the rest of the LGA. It is

likely that where there is a greater uplift in planning controls through rezoning proposals, there will be a greater opportunity to collect development contributions to increase the provision of affordable housing. The \$50,000 allocated by Council on 10 December 2018 for Development Feasibility assessment to develop an Affordable Housing Contributions Scheme will be utilised for this purpose.

Housing options

The data for both housing supply and affordable housing point to the need to increase the supply of smaller dwellings (1-2 bedrooms). The draft Housing and Affordable Housing Options Paper presents a number of options for the community and development industry to consider, based around the following three planning priorities for housing:

1. Increase housing stock diversity
 - Encourage the provision of more 1-2 bedroom dwellings
 - Review the location and planning controls for the R3 Medium Density Residential Zone to improve feasibility and take-up.
 - Change the dwelling mix in residential apartments, to increase the number of smaller dwellings from the current 10% requirement, this could include the introduction of incentive provisions, or the decoupling of car parking spaces from each unit.
 - Consider new smaller housing products, such as 'Fonzie Flats'.
2. Plan for future housing growth
 - Ongoing review and monitoring of housing supply, within greenfield development (eg West Dapto, Tallawarra), City Centre housing, town centres and around transport nodes
 - Review the planning controls in the City Centre, around Town Centres and transport nodes to increase housing density
 - Review the planning controls of constrained sites and locations
3. Increase supply of affordable rental housing stock
 - This is the key priority issue found in the options paper, and Council has already commenced a number of initiatives
 - An Affordable Housing Policy should be prepared, exhibited and adopted, and possibly an Affordable Rental Housing target be set
 - The inclusion in SEPP 70 Affordable Housing should continue to be pursued, through the preparation of an Affordable Contributions Housing Scheme, as the next step in the process, this may require an Affordable Housing Contribution to be paid
 - As part of residential up-zonings, an Affordable Housing Contribution will be expected, or a proportion of Affordable Rental dwellings to be provided on-site
 - Council work with NSW Land and Housing Corporation and Community Housing Providers to increase the supply of Affordable Rental Housing.

Low Rise Medium Density Code

The commencement of the Low Rise Medium Density Code has been deferred till 1 July 2020. Council previously objected to the introduction of the Code as:

- it will allow Private Certifiers to assess complex development types (dual occupancy, manor homes and terrace houses),
- there will be no neighbour notification or consultation (except just prior to construction),
- Council is meeting its housing targets,

- the environmental constraints (steep slopes, flooding and bush fire risk) of the LGA means a code assessment is not appropriate,
- is not consistent with the local or desired future character of many suburbs.

Additionally, the housing product being produced is not addressing the demand for smaller, affordable dwellings. Dwellings still contain 3-4 bedrooms, double garages and are not providing a housing mix. The high price of land means that dual occupancy dwellings can be sold for \$0.6 - \$1m each, which is not affordable for low to moderate income households.

Council did support the introduction of the Code in new release areas, where new housing estates can be planned.

Kennedy Associates Architects were engaged to prepare a comparison of dwellings that can be designed under the Code and under Council's LEP and DCP (Attachment 2). A range of zonings, lot sizes, floor space ratios and street frontage (single frontage, corner sites, rear lane) were considered. The analysis found that:

- for dual occupancy the Code's 50% landscaping requirement for each dwelling is the main limiting factor, and if complied with results in smaller dwellings than permissible under Council's existing controls. It appears that this is an error in the Code, and if corrected the permissible dwellings will be larger than those permitted under Council's existing controls.
- for stacked dual occupancy (1 dwelling on top of another) the Code's controls result in undesirable outcomes. The upstairs dwelling does not have access to outdoor space, the majority of the front façade is car parking and construction costs would be higher than side-by-side dual occupancy.
- for manor homes (3-4 dwellings in one building) the Code's controls for corner sites result in undesirable outcome. A large portion of the site is taken up by car parking, minimal compliance with landscaping is achieved, and there is poor amenity outcomes. Manor homes are unlikely to be built on lots with one street frontage, as the lot frontage would need to be 19.5m wide and a site area of 770m². Greater development yield can be provided by other options. Manor homes are more likely to be developed on lots with rear lane access.
- for terrace homes, both Council and the Code controls result in similar acceptable outcomes. A minimum lot width of 21m is required for 3 adjoining dwellings and a driveway, reducing the likelihood of this development form occurring.
- Council's controls for residential flat buildings on R2 Low Density Residential and R3 Medium Density Residential land also needs to be reviewed.
- Council's controls for Multi-dwelling housing on R3 Medium Density Residential land require review as they result in undesirable outcomes, including poor building forms and layouts, and poor amenity outcomes.

It is recommended that Council make a further submission to the Minister for Planning and Public Spaces, seeking exemption from the Code or amendments to require the notification of application and the consideration of submissions. The Housing and Affordable Housing Options Paper includes options to reduce the application of the Code, including:

- introducing minimum lot size areas for dual occupancy and manor homes,
- amending the land use table for the R2 Low Density Residential zone to prohibit dual occupancy, multi-dwelling housing and residential flat buildings,
- Consider alternative zonings for areas identified as having significant constraints. Noting any downzoning may need to be accompanied by increase housing density in other locations, to maintain the overall housing supply.

It is also recommended that as part of the Housing Strategy the permissibility of residential flat building in the R2 Low Density Residential zone be reviewed, and the design controls for residential flat buildings

and multi-dwelling housing be reviewed. Improving the planning controls in the R3 Medium Density Residential zone may result in a greater take-up of sites for medium density development, reducing the pressure on other locations.

CONSULTATION AND COMMUNICATION

It is recommended that the draft Housing and Affordable Housing Options Paper be exhibited for 2 months to enable community and development industry consultation.

Following the exhibition period, and consideration of submissions, a draft Housing Strategy will be prepared. Additionally, a draft Planning Proposal and amendments to the Wollongong Development Control Plan 2009 will be prepared to implement the draft strategy. These draft documents will be reported to Council and then exhibited, if a Gateway determination for the draft Planning Proposal is received.

PLANNING AND POLICY IMPACT

This report contributes to the delivery of Our Wollongong 2028 Goal We have a healthy community in a liveable city. It specifically delivers on the following:

Community Strategic Plan	Delivery Program 2018-2021	Operational Plan 2019-20
Strategy	3 Year Action	Operational Plan Actions
5.3.1 Housing choice in the Wollongong Local Government Area is improved, taking into account population growth, community needs and affordability	5.3.1.1 Prepare a Housing Study and Strategy incorporating Affordable Housing Issues	Continue the preparation of the housing study

The draft Housing and Affordable Housing Options Paper is an input into Council's Local Strategic Planning Statement.

CONCLUSION

The draft Housing and Affordable Housing Options Paper is an important step in the development of an updated Housing Strategy for the LGA. The three planning priorities for housing are:

- 1 Increase housing stock diversity;
- 2 Plan for future housing growth;
- 3 Increase supply of affordable rental housing stock.

The draft Housing and Affordable Housing Options Paper presents a range of options for the community and stakeholders to consider how these priorities could be met.

It is recommended that the draft Housing and Affordable Housing Options Paper be exhibited for community and stakeholder input and the submissions received be used to inform the preparation of the Housing Strategy and amendments to planning controls.

Draft

Housing and Affordable Housing Options paper

March 2020

DRAFT

HOUSING AND AFFORDABLE HOUSING OPTIONS PAPER

Delivering Growth, Diversity and Affordable Housing

March 2020

Wollongong City Council

ACKNOWLEDGEMENT OF COUNTRY

Wollongong City Council would like to show their respect and acknowledge the Traditional Custodians of the Land, of Elders past and present, and extend that respect to other Aboriginal and Torres Strait Islander people.

Executive Summary

This Housing and Affordable Housing Options Paper has been prepared to inform the development of a new Housing Strategy for Wollongong LGA. The purpose of this Paper is to present the key issues and planning priorities for housing, as well as options and key recommendations moving forward. Key findings and recommendations from this Paper will be used to engage the community, to inform development of a new Housing Strategy for Wollongong LGA.

The Wollongong LGA has enough theoretical capacity under existing planning controls to deliver the amount of housing required to meet future housing projections over the next 20 years.

However, there are some key issues for housing to address that relate to:

Performance of Land Use Zones:

- There is little difference between the type of housing that is being developed in the low and medium density residential zones;
- 78% of the housing in medium density zones is single dwelling housing and not the desired medium density form. Overall the established medium density zoned lands are far from capacity;
- Over the past decade there has been a large amount of residential development in business zoned land especially in the Wollongong City Centre. This has diversified housing stock typically taking the form of a mixed use apartment building above a commercial ground level. However, this influx of housing has weakened the intent of business zones, as employment lands are being locked up and transitioned to apartment buildings under strata title.

Housing for Particular Needs:

- The housing needs of different sectors of the community are complex. Different approaches are required to provide choice for residents and to respond to the different levels of assistance required.
- The population of Wollongong LGA is ageing. It has also experienced an increase in the proportion of residents requiring assistance in the daily needs.
- Housing affordability and affordable housing are a large and growing issue for many residents. Affordable housing is an issue for 53% of households throughout Wollongong LGA.

Household size vs Dwelling Size:

- A mis-match between household size and dwelling size is an emerging trend. There has been a shift towards smaller household sizes (lone person and couples) and there is fewer one, two and three bedroom housing stock being developed. There has been a large increase in 4 bedroom stock.

Cost of Housing:

- The cost of housing has increased substantially in the Wollongong LGA over the last decade with median house prices increasing by 84% and median unit prices by 65%. Most of this increase has occurred since 2001.
- There has been a strong decline in the proportion of households in Wollongong LGA who can afford to rent or purchase housing.

- There is a large and growing gap between the number of low income households and private rental housing that is affordable for these households.

Legislation and Land and Environmental constraints:

- Historical development of residential land did not extensively consider and respond to land and environmental constraints.
- Standardisation of the Local Environmental Plans presented challenge for Wollongong, with the current R2 low density residential zone having resulted from a merge of various other zones.
- Legislative reforms and introduction of Statement Environmental Planning Policies has reduced and/or removed Council's ability to assess the impacts of proposed development. This presents challenge for Wollongong into the future.
- New housing built will need to appropriately respond to the various land and environmental constraints which exist. e.g. Flood risk, bushfire risk, riparian corridors, Illawarra Escarpment.

Based on the findings of a needs analysis, and issues and options presented in this paper, three key planning priorities for housing are recommended:

1. Increase housing stock diversity;
2. Plan for future housing growth;
3. Increase the supply of affordable rental housing.

Moving forward it is important that the supply of housing delivers the type of housing residents need as our City grows and changes. A diversity of housing types, sizes and price points will assist in meeting this need. Increasing the supply of housing that is adaptable to resident's changing needs is becoming increasingly important in Wollongong LGA as the population ages.

Key recommendations to address the planning priorities are summarised below:

- Increase the number of studio, 1 and 2 bedroom dwellings, to provide options that better match household sizes.
- Review the role and operation or character statements and in response to introduction of state policies.
- Increase the supply of adaptable housing stock.
- Preparation of development controls in relation to new forms of housing that diversity housing stock e.g. Fonzie flats.
- Define areas for urban growth around medium density residential zoned land. Develop an urban growth strategy for each area to facilitate an appropriate level of growth whilst achieving the desired local character. Such growth will require adequate infrastructure and response to land and environmental constraints.
- Undertake employment and retail lands study to inform development of urban growth areas and business zoned land.
- Support implementation of City Centre Planning and Design Review, West Dapto Vision and West Dapto Contributions Plan.
- Continue to develop and implement an Affordable Housing Contribution Scheme for Wollongong LGA under SEPP 70.

- Adopt and implement an affordable rental housing target for Wollongong LGA.
- Work with Community Housing Providers and the *NSW Land and Housing Corporation* to renew and improve and increase social and affordable rental housing supply in Wollongong LGA.
- Develop and contribute to partnerships that deliver affordable rental housing.
- Monitor projected dwelling needs, housing supply, affordable housing and capacity of the Wollongong LGA to deliver housing.
- Engage the community in relation to a draft Vision for Housing.
- Review permissibility of residential housing types across R2 Low Density, R3 Medium Density, R1 General Residential, and business zoned land.

It is recommended this paper is exhibited to obtain community feedback regarding housing preferences, issues and options. Council will use community feedback to inform the development of a final Housing Strategy for Wollongong LGA.

A housing strategy for Wollongong is being developed to meet the requirements of the *NSW Government Local Housing Strategy Guideline*. This paper is also being used to inform the preparation of Wollongong LGA's *Local Strategic Planning Statement*.

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1. Context

1.1 Introduction

In 2005, Council endorsed the *Wollongong City Housing Study 2005*. This study examined key demographic trends to determine the future housing needs of the Wollongong Local Government Area (LGA). This study informed the preparation of the draft Wollongong Local Environmental Plan 2009 (LEP).

In 2012 Council commenced the development of a new Housing Strategy for Wollongong LGA. The project was delayed due to a number of factors. On 17 July 2017 Council endorsed the *'Housing Our Community discussion paper'*.

The key findings of the *'Housing Our Community discussion paper'* were:

- Wollongong LGA's population is growing;
- The proportion of older residents is increasing;
- Household types are changing and decreasing in size;
- The structure of dwellings has remained consistent and has not responded to of the changing nature of households;
- Housing stress is increasing and is a major issue affecting a large proportion of the population; and
- Employment challenges are affecting where people live.

This Options Paper discusses current issues and future options for housing in Wollongong LGA, including planning for population growth and affordable housing.

Following exhibition of this Options Paper, a Housing Strategy will be developed in line with the *NSW Government Local Housing Strategy Guideline* (Appendix A). A goal of the new Housing Strategy is to establish a link between the community's vision for Wollongong (2028), State and Federal strategic planning policies and legislation, and the capacity of Wollongong LGA to respond effectively to population growth.

Community feedback received in response to this Paper will be used to consolidate the planning priorities, recommendations and to establish a vision for housing.

Figure 1.1 Process to develop Housing Strategy



1.2 Purpose of Options Paper

The purpose of this Options Paper is to present options and key recommendations for housing in Wollongong. This Option Paper:

- Provides housing projections;
- Explores Wollongong LGA’s capacity to meet these housing projections;
- Discusses issues affecting housing and options for change into the future;
- Presents the results of an affordable housing needs analysis;
- Shows the relationship of the Housing Strategy to the rest of Councils work;
- Defines draft planning priorities and key recommendations to meet future housing needs;
- Addresses requirements of *NSW Government Local Housing Strategy Guideline* (Appendix A) and *the Guideline for Developing an Affordable Housing Contribution Scheme* (Appendix B).

1.3 Process for Developing the Options Paper

A range of studies and research have been used to inform this Options Paper including:

- Review of Medium Density Zoned Land (WCC, 2013);
- Wollongong Residential Density Study (Hames Sharley, 2014);
- Our Wollongong – a discussion paper identifying issues for housing our community (WCC 2017), updated 2018;
- West Dapto Vision (WCC, 2018)
- West Dapto Housing Study (SGS, 2019);
- Wollongong City Centre Planning and Design Review (WCC in prep 2017 – 2020); and
- Affordable Housing Needs analysis (WCC, July 2019).

The process for identifying the issues and options for housing presented in this paper reflects the requirements of the *NSW Government Local Housing Strategy Guideline* for analysing the evidence base and determine housing needs (Figure 1.2).

1.4 Council’s Role in Delivering Housing

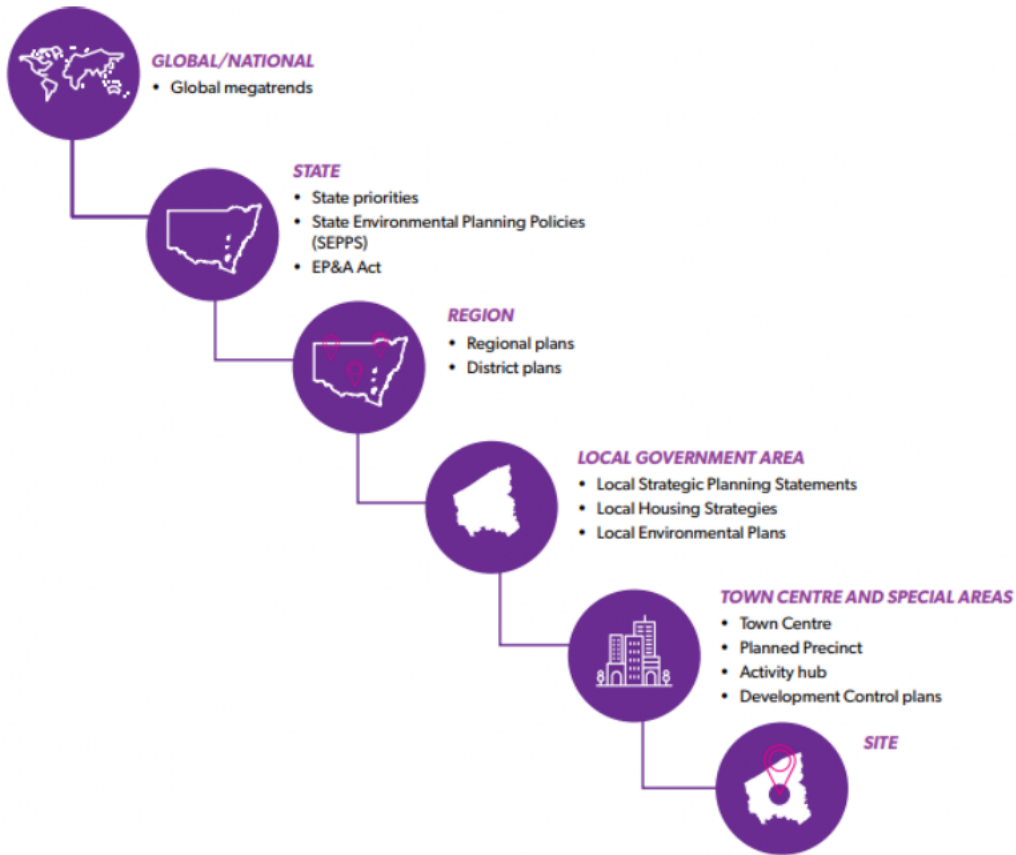
The role of local government in planning and regulating the development of housing is changing. Traditionally, local government held the primary responsibility for developing and administering the land use planning policy which determined what and where different types of housing could be built. The role of Council includes:

- Establishing the planning controls to guide the size, scale, density and location of housing;
- Assessing and approving development applications for housing;
- Regulating development of housing.

Table 1.1 shows the common housing types found throughout Wollongong LGA with reference to the densities to which they relate.

In recent years the role and capacity of local government to influence and control housing has diminished, largely due to the introduction of new State legislation and NSW Government Planning Policies and Codes that standardise development across NSW (Tables 1.2 and 1.3).

Figure 1.2 Context of local Housing Strategy and how this relates to Federal, State and local planning activities.



Source: Department of Planning and Environment – Local Housing Strategy Guideline (2018)

Table 1.1 Housing forms present throughout Wollongong LGA.

Housing Type	Definition	Density	Wollongong LGA
Single detached-large lot	Single dwelling on a lot, relatively large private open space	LOW	
Single detached-small lot	Single dwelling on a lot, smaller private open space	LOW MEDIUM	
Dual Occupancy/ Duplex	On individual lot of land and attached to only one other dwelling	LOW MEDIUM	
Villas	Multiple dwellings in groups on a large block of land	LOW MEDIUM	
Townhouse (detached or semi-attached)	Detached multi-story dwellings, that is, multiple units on one lot of land	MEDIUM HIGH	
Terrace (attached)	Attached dwelling with numerous units on one lot of land	MEDIUM HIGH	
Low-rise apartments (2-3 storeys)	Could include commercial, retail, office on ground floor, may include elevator	MEDIUM HIGH	
Medium-rise apartments (4-6 storeys)	Could include commercial, retail, office, elevator shaft	MEDIUM HIGH	
High-rise apartments (7+ storeys)	Could be mixed use, elevator shaft, typically tower with podium structure	MEDIUM HIGH	

Source: Residential Density Study (Hames Sharley 2014).

Table 1.2 Housing approval pathways

Housing type		Single Dwelling House	Secondary Dwelling	Dual Occupancy	Terraces	Townhouses and Villas	Manor House	Residential Flat Building	Shop Top housing	Boarding Houses	Seniors Housing	Group Homes
Wollongong	LEP & DCP	✓	✓	✓	✓	✓	✓ ¹	✓	✓	✓	✓	✓
State Environmental Planning Policy	Exempt and Complying Development Codes (2008)	✓		✓ ¹	✓ ¹		✓ ¹					
	Design Quality of Residential Apartments Development (SEPP 65)							✓	✓			
	Affordable Rental Housing (2009)		✓					✓ ²		✓ ²		
	Housing for Seniors or People with a Disability (2004)										✓	✓

¹subject to the introduction of the Low Rise Medium Density Housing Code (deferred until 1/7/20).

²Approval granted by Council however standardised provisions and SEPP incentives apply and override Wollongong LEP and DCP.

Table 1.3 Key Legislation and Policy for Housing

Federal Policy
<ul style="list-style-type: none"> • Our Cities, Our Future, A national Urban Policy for a Productive Sustainable, and Liveable Future, May 2011 • Smart Cities plan 2017 • Australian Infrastructure Plan 2016 • Federal budgets • National Affordable Housing Agreement (2009) • National Housing and Homeless Agreement (2018) • National Housing Infrastructure Fund (2018) • National Housing Finance and Investment Corporation 2018 • National Rental Assistance Scheme
State Policy, Legislation and Plans
<ul style="list-style-type: none"> • NSW Premiers Priorities and State Priorities 2017 • NSW State Infrastructure Strategy 2018-2038 • NSW First Home Buyers Assistance and 2017 Budget – Housing Affordability. • NSW Homelessness Strategy 2018-2038 • Future Directions for Social Housing in NSW • State Environmental Planning Policies (SEPP's) <ul style="list-style-type: none"> - SEPP 55 - Remediation of Land - SEPP 65 - Design Quality of Residential Apartment Development & NSW Apartment Design Guide - SEPP (Exempt and Complying Development Codes) 2008 & Low Rise Medium Density Design Guide SEPP 70 – Affordable Housing (Revised Schemes) - SEPP (Affordable Rental Housing) 2009 - SEPP 71 – Coastal Protection - SEPP (Building Sustainability index: BASIX) 2004 - SEPP (Housing for Seniors or People with a Disability) 2004 - SEPP (State and Regional Development) 2001 - SEPP (Sydney Drinking Water Catchment) 2011 - SEPP (Urban Renewal) 2010 - SEPP (Infrastructure) 2007 - SEPP 21 – Caravan Parks - SEPP (Coastal Management) 2018 • Section 9.1 Directions issued by the Minister for Planning • NSW Coastal Management Act 2016 • Biodiversity Conservation Act 2016 • NSW Floodplain Development Manual and Floodprone Land Policy 2005. • Planning for Bush Fire Protection (RFS, 2019) • Aged Care Act 1997 and Aged Care Principles and Determinations • Illawarra Shoalhaven Regional Plan 2015 • Illawarra Employment Lands Guidelines 2008

1.5 Council Planning Policies

Wollongong Local Environment Plan 2009 (LEP)

The Wollongong LEP 2009 provides the legal framework that defines where different types of housing can be built, and includes planning controls which guides the size and scale of development. The controls specify aspects such as heights of buildings, floor space ratios, and minimum lot size.

The LEP zones all land in the Wollongong LGA according to its primary use (or desired use in some cases). All residential zones permit some form of housing whether this take the form of a single dwelling house, or a row of townhouses, or apartments above a commercial ground floor. Table 1.4 shows the different housing forms permissible in the different zones throughout the Wollongong LGA.

Table 1.4 Permissibility of Housing Type by Land Zoning According to Wollongong LEP 2009.

Land Zoning	Single Dwelling House	Secondary Dwelling	Dual Occupancy	Boarding house	Multi-unit dwellings	Residential Flat Buildings	Group Homes	Seniors Housing	Shop top housing
R1 – General Residential	✓	✓	✓	✓	✓	✓	✓	✓	✓
R2 – Low Density Residential	✓	✓	✓	✓	✓	✓	✓	✓	✓
R3 – Medium Density Residential	✓	✓	✓	✓	✓	✓	✓	✓	✓
R4 – High Density Residential	✓	✓		✓	✓	✓	✓	✓	✓
R5 – Large Lot Residential	✓	✓							
B1 – Neighbourhood centre				✓				✓	✓
B2 – Local Centre				✓		✓		✓	✓
B3 – Commercial Core				✓				✓	✓
B4 – Mixed Use				✓	✓	✓			✓
B6 – Enterprise Corridor									✓
E3 – Environmental Management	✓ *	✓ *							
E4 – Environmental Living	✓	✓							

*subject to minimum lot size requirements, typically 40 hectares.

Wollongong Development Control Plan 2009

The Wollongong Development Control Plan (DCP) 2009 details controls to guide housing and all forms of development in the Wollongong LGA. Development controls relate to provisions such as landscaping, car parking, overshadowing, driveway access, private open space and deep soil zones. The DCP also contains specific controls for various precincts, such as the Wollongong City Centre and West Dapto Urban Release Area.

Development Assessment

One of the traditional roles of local government has been in the assessment and determination of development applications. The introduction of complying development has altered the scope of applications being assessed and determined by Council. Development applications which do not conform

to standardised controls, and larger development applications (e.g. mixed-use developments, rows of townhouses, apartment buildings), require assessment by Council and/or Local Planning Panels.

Local Strategic Planning Statements

Wollongong City Council, like all local government areas throughout NSW, is required to prepare a Local Strategic Planning Statement (LSPS) by 1 July 2020 which sets out a 20 year vision for land use throughout Wollongong LGA. The document will indicate the special characteristics which contribute to local identity, shared community values to be maintained and enhanced, and identify how growth and change will be managed into the future. Development of the LSPS for Wollongong will be informed by the findings of this Options Paper, other Council Strategies, the Community Strategic Plan and the Illawarra Shoalhaven Regional Plan 2016.

Town and Village Planning

Wollongong City Council has a program to prepare Town and Village planning studies and master plans for town centres across the Wollongong LGA. Such plans provide strategic direction for future development, infrastructure investment, community programs and policy planning. They provide a variety of revitalisation initiatives to be delivered by Council, as well as other government agencies and community groups, to make our LGA a vibrant and liveable City.

Since 2013, Council has completed town centre plans for Warrawong, Unanderra, Figtree, Corrimal, Dapto, Port Kembla and Wollongong City Centre (named Wollongong, A City for People). Consultation has begun to develop a Town Centre Plan for Helensburgh. Through Council's Delivery and Operational Planning process, new town and village plans are programmed for commencement, and actions and projects resulting from completed plans are resourced.

Complying Development

Complying development is a fast-tracked approval process introduced by the State Government for certain minor development e.g. one or two storey houses, building a swimming pool, demolition of a building. Complying development occurs in accordance with State Environmental Planning Policy (Exempt and Complying Development Codes (2008) and not Council's LEP and DCP. If an application for such works meets specific standardised criteria and the development is a permitted use (with consent) on a subject site, this can be approved by an accredited private certifier or certifier employed by Council. Accredited certifiers are governed by the Building Professionals Board. Council has limited scope to regulate development determined by an accredited private certifier.

In July 2018 the NSW Government introduced another Code for Low Rise Medium Density Housing, namely dual occupancy, manor houses and terrace houses. The impacts of this Code are discussed further in section 5.1.3.

Table 1.3 summaries the different housing types permissible under the Wollongong LEP 2009 or State Environmental Planning Policy throughout Wollongong LGA.

2. Capacity Analysis

2.1 Housing in Wollongong LGA

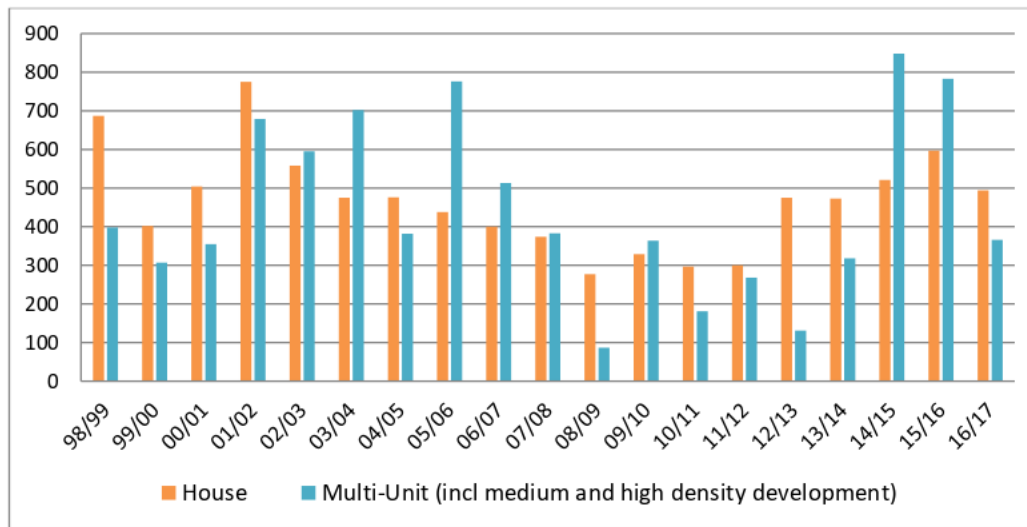
2.1.1 Housing Applications and Approvals

There are 83,913 dwellings located in the Wollongong LGA (ABS 2016 census).

The number of applications and approvals for new dwellings in Wollongong LGA fluctuates annually. During the period 1998-2017, there were 17,288 dwellings approved in the Wollongong LGA, at an average of 909 dwellings per year. Almost half of the new dwellings were multi-unit housing (Figure 2.1 and table 2.1).

The number of multi-unit housing dwellings can be further divided into townhouses and villas, 1-2 storey flats and 3+ storey flats, with 51 percent being for 3+ storey flats and 40 percent being for townhouses and villas (Figure 2.2 and table 2.3).

Figure 2.1 Historic dwelling approvals 1998-2017



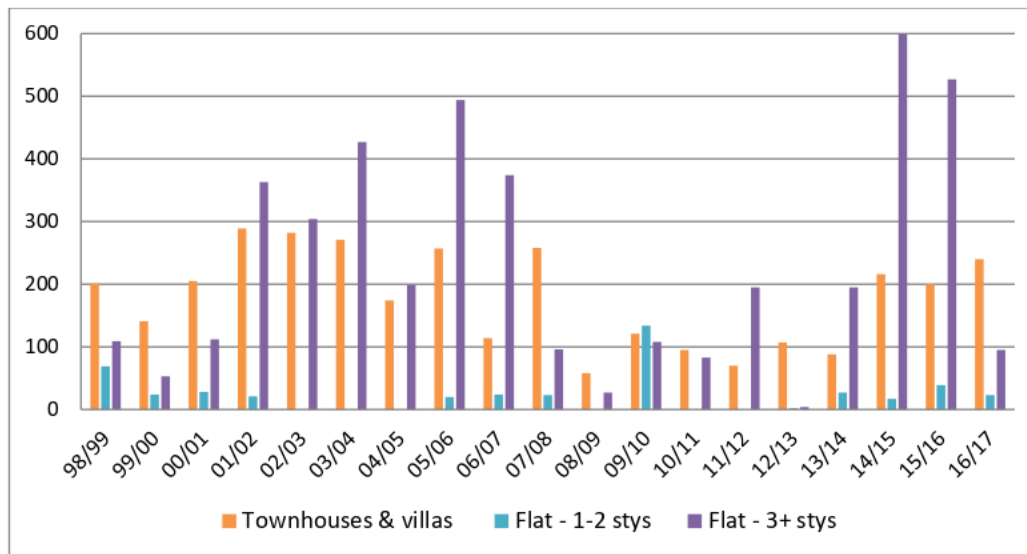
Source: Illawarra Urban Development Program (NSW Department of Planning, Industry and Environment).

Table 2.1 Dwelling approvals summary 1998-2017

	Total	Average/ year	Percentage
House	8,852	465.9	51.2
Multi-Unit (incl medium and high density development)	8,436	444.0	48.8
Total	17,288	909.9	100

Source: Illawarra Urban Development Program (NSW Department of Planning, Industry and Environment).

Figure 2.2 Historic multi-unit housing approvals 1998-2017



Source: Illawarra Urban Development Program (NSW Department of Planning, Industry and Environment).

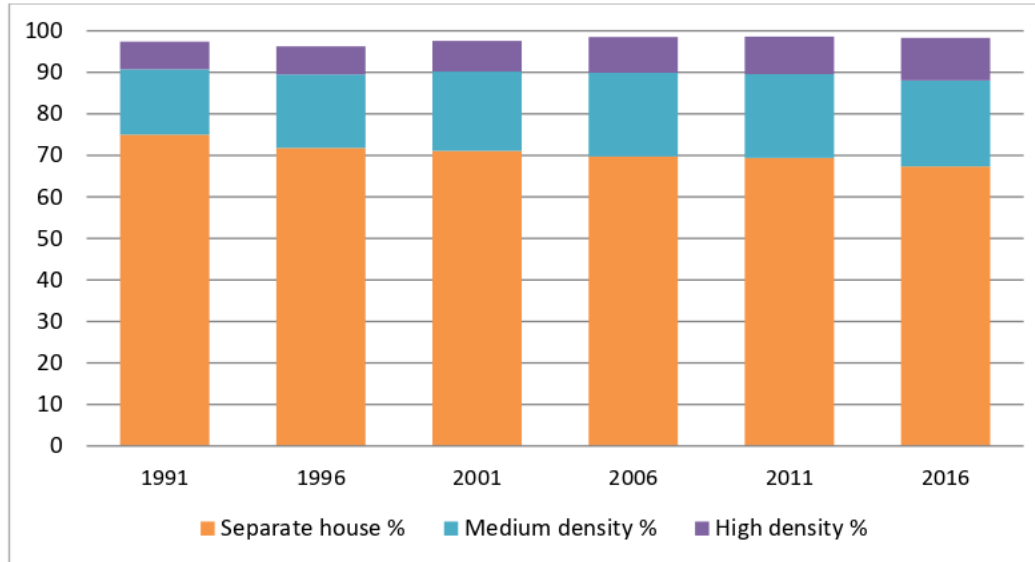
Table 2.2 Multi-unit approvals summary 1998 – 2017

	Total	Average / year	Percentage
Townhouses & villas	3387	178.3	40.1
Flats - 1-2 storeys	451	23.7	5.6
Flats - 3+ storeys	4364	229.7	51.7
Others	234	12.3	2.8
Total	8436	444.0	100

Source: Illawarra Urban Development Program (NSW Department of Planning, Industry and Environment).

This data demonstrates a long-term commitment by Council to provide for and permit a range of dwelling types, and represents a shift from historic approvals which were predominantly for single dwelling houses. However, as the LGA has such a large dwelling base, the percentage shift in dwelling type is slow to change (Figure 2.3).

Figure 2.3 Change in dwelling stock in Wollongong LGA 1991- 2016



Source: Informed Decisions, 2019.

2.1.2 Housing Density

The term ‘density’ refers to the concentration of a defined population or number dwellings across a defined area of land (per hectare).

There is a number of different definitions for residential and housing density and what this looks like. Housing density varies across Wollongong LGA between suburbs, streets, towns and the Wollongong City Centre. Overall the Wollongong LGA has a low housing density of 1.17 dwellings per hectare (83,913 dwellings/714km²). If the large areas of Drinking Water Catchment, National Park and undevelopable land are excluded, the density increases to 3.4 dwellings per hectare (83,913 dwellings/247km²), which is still relatively low. Within individual suburbs, the dwelling density in suburbs is very variable, depending on the size of the suburb, amount of undevelopable land and the number of dwellings. For example, the suburb of Wollongong has a density of 16.3 dwellings per hectare, Bulli 2.98, Warrawong 7.96 and Horsley 4.83 dwellings per hectare (id Community profile). Dwelling density also increases when a smaller area such as a residential street block is considered.

Wollongong LGA has a number of new urban release areas under assessment or in progress. These include West Dapto, Tallawarra lands and a small portion of land in Calderwood. These areas are expected to provide large quantities of single dwelling houses and smaller amounts of dual occupancies, townhouses, villas and terrace housing. Smaller lot sizes together with larger floor areas and immature landscaping often result in the perception that such areas are higher density than adjacent established areas.

Older, more established suburbs throughout Wollongong LGA are experiencing change and becoming denser with older houses being knocked down and replaced by new single houses, single houses with secondary dwellings (i.e. granny flats), dual occupancies, townhouses and villas. This change is not being

experienced equally throughout Wollongong and depends on the economic feasibility of type of housing, age of the housing stock, characteristics of the land and market preferences for different housing types.

High density housing does not always mean higher buildings. The following image shows two examples of same density of housing (100 dwelling unit per hectare) with varying building form and heights.

Figure 2.4 Residential density comparison



Source: Wollongong Residential Density Study (Hames Sharley 2014).

2.2 Future Housing Supply and Demand

2.2.1 Population, Housing and Dwelling Projections

Data and projections from the following sources have been used to inform this Paper:

1. The NSW Department of Planning and Environment *populations, dwellings and households projection 2018* accessed online via Research and Demography projection. (Note: 2020 projections have recently been released)
2. The Illawarra Shoalhaven Regional Plan 2015 provides the strategic policy, planning and framework to guide 20 years of growth for the region. This plan includes Wollongong, Shellharbour, Kiama and Shoalhaven LGA's.
3. Informed Decisions – Wollongong City Council Community Profile, Social Atlas, Population Forecast and Economic Profile (accessed online <https://profile.id.com.au/wollongong/locality-snapshots>).

Population and dwelling projections identify how the community is expected to grow into the future under a defined set of assumptions. It is difficult to forecast with certainty how a population and dwelling needs will change through time. There are many variables, some of which Council has scope to control. It is Council's aim to build resilience, to ensure we can adapt to change.

Projections sourced from Informed Decisions (id), commissioned by Wollongong City Council, are considered the baseline growth scenario for the Wollongong LGA. These are derived from current population, demographic trends and urban development drivers. Further information about the

assumptions and modelling process may be accessed online¹. A summary of population, household and dwelling projections is presented below (Table 2.2). Such projections represent a steady as it goes scenario and does not rely on any major market interventions or policy changes for population growth.

Table 2.3 Population, Dwelling and Housing Projections

	2016	2021	2026	2031	2036	Change 2016-2036	% Change 2016-2036
Population	211,201	222,602	233,141	243,945	254,805	↑ 43,604	↑ 20.6%
Average annual population change		1.06%	0.93%	0.91%	0.87%		
Households	77,584	86,201	90,637	95,205	99,755	↑ 18,226	↑ 23.4%
Dwellings	84,056	90,466	95,150	99,869	104,567	↑ 19,542	↑ 23.2%

Source: Informed Decisions, 2018, accessed online.

The *Greater Illawarra: The Smart Growth Agenda (2015)* explores the value of the Illawarra and discusses what is possible beyond current growth analysis, geographic boundaries and policy restrictions, to unlock the Illawarra regions economic potential (pp 1). This research evaluated a range of policy levers and investment strategies to facilitate population and economic growth for Wollongong LGA and the Greater Illawarra. This research evaluated a number of alternative growth scenarios and provided recommendations relating to policy changes, housing affordability, employment lands, and infrastructure.

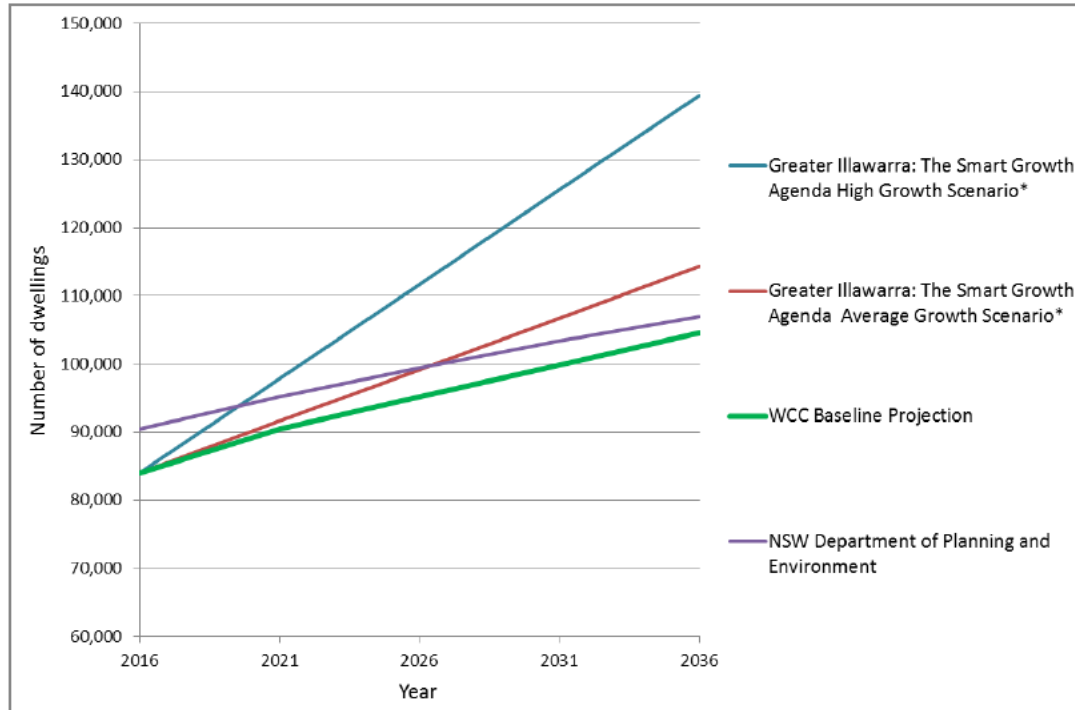
A number of growth scenarios are documented and evaluated in the *Greater Illawarra: The Smart Growth Agenda (2015)*. Two scenarios are included in this Paper for comparison alongside Council's baseline projections, (Figure 2.4). Scenarios include:

1. Average Growth Scenario – identified in the background report as a reasonable aspiration for Wollongong LGA. The background report details assumptions and policy changes which this growth rate relies on e.g. incremental improvements to travel time to Sydney.
2. High Growth Scenario – identified as possible, if coupled with major change for the greater Illawarra region. Examples of change required includes: very fast train or extension of M1 north of Wollongong, significant liberalisation of planning controls and fast tracked rezoning of urban release areas.

Projections from the NSW Department of Planning and Environment are also included for comparison alongside Wollongong's baseline scenario (Figure 2.5).

¹ <https://forecast.id.com.au/wollongong/forecast-modelling-process>

Figure 2.5 Projected dwelling needs for Wollongong LGA assuming various growth scenarios.



Notes: Baseline growth scenario is based on dwelling projections from community .id.

* Growth scenario based on *Greater Illawarra: The Smart Growth Agenda Background Report (2015)*. Note: dwelling projections as represented in the graph above have been recalibrated based on 2016 ABS Census Data, and projections extended to 2036.

2.2.2. Comparison between Growth Scenarios and Projections for Dwelling Needs across Wollongong LGA

Dwelling projections to cater for future population growth are presented in Figure 2.4. All scenarios depict an increase in the number of new dwellings required to house the projected population.

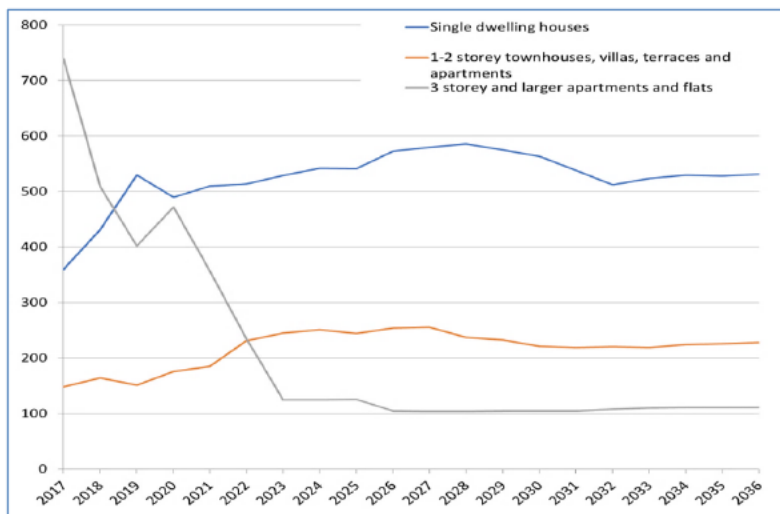
Projections for the types of housing required to house the population under a baseline growth scenario have been developed (Figure 2.4 and Table 2.5). Such projections have been developed using an analysis of demographics, lifecycles of neighbourhoods, and from reviewing how population and housing has evolved. Key findings include:

- 1000-1200 additional dwellings are needed by 2021 at which time the annual dwelling need will reduce and stabilise between 800-1000 until 2036,
- The types of dwellings needed will vary through time however single dwelling houses are expected to dominate new housing stock,
- This additional housing will not be evenly distributed throughout the LGA (Table 2.2.2.c). New dwellings in the form of apartments and higher density living will continue to be developed in

Wollongong City Centre while new release areas will continue to be dominated by single dwelling houses and alternative types of low density housing.

Data included in Figures 2.5, 2.6 and Table 2.3 depict projections in housing types modelled under the baseline scenario. Any change in the baseline scenario (e.g. intervention in the housing market or changes to planning controls) would impact feasibility of different housing types and what is built in the future. These projections do not relate to development and housing which may have been assessed, approved and not yet constructed.

Figure 2.6 Projections by dwelling type needed annually to cater for projected population using baseline growth scenario.



Source: Informed Decisions, 2018.

Table 2.4 15 areas in Wollongong LGA with the largest projected dwelling needs by 2036

Area	Single Dwelling Houses	Terrace, townhouse, villas, 1-2 storey flats & apartments	Flats and apartments, 3 storeys and larger
Wollongong	45	180	3,612
Dombarton – Wongawilli – Huntley	2,052	451	0
Kembla Grange	1,888	414	0
Avondale – Cleveland	1,797	396	0
Horsley	1,275	263	0
Dapto – Brownsville	495	291	80
Corrimal	563	130	93
Marshall Mount – Haywards Bay – Yallah	435	97	0
Bulli	184	295	9
Helensburgh – Lilyvale – Otford	81	370	0
Figtree	286	130	21
Koonawarra	333	24	0
Kanahooka	204	52	0

Woonona – Russell Vale	46	162	23
Berkeley	141	58	28

Source: Informed Decisions, 2018

2.2.3 Supply Capacity Analysis

Urban Feasibility Modelling (modelling) was undertaken by the (then) Department of Planning and Environment (October 2017) to determine how much capacity the Wollongong LGA has to provide additional housing and cater for population growth. The capacity under current planning controls has been investigated, as well as the feasible capacity for development under market conditions at a point in time.

Theoretical Capacity

The first measure used to determine the capacity in the Wollongong LGA is the theoretical capacity. This is a hypothetical measure which provides an indication of what could be delivered if all available land was redeveloped. It is important to note this does not include any indication of what type of development is financially feasible at a point in time.

Modelling undertaken by the NSW Department of Planning and Environment under the 2017 planning controls indicated the Wollongong LGA had widespread capacity to supply new housing and meet projected needs. Note this analysis excluded Urban Release Areas such as West Dapto. Key findings from this analysis include:

- 44% of capacity was for semi- detached, medium density forms of housing (townhouses and villa development);
- 45% of capacity was for higher density apartments (i.e. residential flat buildings);
- 11% of capacity was for dual occupancy development;
- There is a mismatch between the zoning where capacity is available and the land use objectives of the zone as per the Wollongong LEP. This inconsistency is discussed through this Paper and relates primarily to medium density zoned land and business zones.

At the time of this modelling only Stages 1 and 2 of the West Dapto Urban Release Area had land rezoned for urban development, subsequently Stage 5 – Yallah Marshall Mount and part of Stage 3 have also been rezoned.

Feasible Capacity

The second measure used to determine capacity for the Wollongong LGA is the feasible capacity. This is an assessment assuming the highest and best economic use of the land, not the highest yielding residential use. It determines the financially feasible capacity of the Wollongong LGA to deliver additional housing.

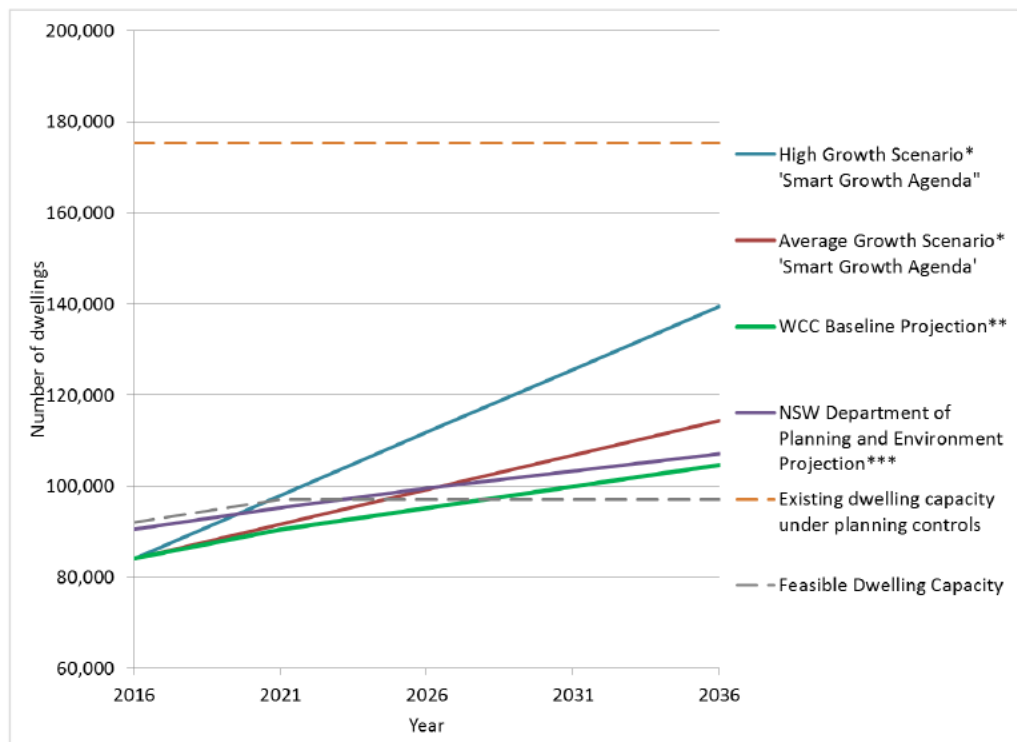
Modelling undertaken by the NSW Department of Planning and Environment to determine feasible capacity for the Wollongong LGA indicated Wollongong had sufficient dwelling capacity to satisfy projected dwelling needs until 2027 (Figure 2.6).

Key findings from this analysis include:

- 34% of capacity was is located in residentially zoned land and consisted of townhouses and apartments up to 4 stories.
- 66% of capacity was for higher density apartments (5-20 stories) on land zoned for business purposes. This housing would be located above a commercial ground floor (i.e. shop top housing).

The theoretical and feasible capacity of the Wollongong LGA (as at 2017) is displayed on Figure 2.7 and compared against dwelling growth scenarios previously discussed. Such comparison indicates the extensive theoretical capacity of the Wollongong LGA to absorb additional dwellings and cater for projected needs. The feasibility of housing will require close monitoring, to ensure sufficient supply of feasible capacity.

Figure 2.7 Dwelling projections compared against the theoretical and feasible capacity of the Wollongong LGA to provide additional housing.



2.2.4 Current housing approach

There are many existing strategies running in parallel which will enable Wollongong to house the projected population over the next 15 to 20 years.

West Dapto Release Area

West Dapto Urban Release Area will continue to operate as Wollongong's largest urban release area. Once fully developed, it is estimated this will provide an additional 19,500 dwellings and have a population of around 56,500 people. To date, Council has rezoned land in stages 1, 2, 5 and parts of stages 3 and 4 of the release area to permit some 12,000 lots. Council has approved Neighbourhood Plans for approximately 4,371 lots; and development applications for the subdivision of approximately 1,840 lots and one residential flat development for 107 apartment dwellings.

West Dapto Urban Release Area is expected to provide a high concentration of new single dwellings, and a smaller proportion of dual occupancies, townhouses, villas and apartments for residents.

The Wollongong LEP, DCP, West Dapto Vision, and West Dapto Contributions Plan guide development of the West Dapto Urban Release Area.

State Significant Development

There are two urban release areas in the Wollongong LGA which have been approved by the NSW State Government, namely Tallawarra Lands and Calderwood Urban Development Project.

In 2013, a concept plan was approved for Tallawarra lands, an area south east of Dapto in Yallah. The approval permits 1000 residential lots, a retirement facility, industrial lands and an enterprise corridor.

Calderwood Urban Development Project is a residential urban release area with land spanning across both Wollongong and Shellharbour City Council areas. Although the majority of this development is in the Shellharbour City Council LGA, approximately 800 lots are proposed within the Wollongong LGA.

Wollongong City Centre

Wollongong's City Centre and surrounding suburbs are expected to deliver a concentration of high density housing. This will include a mix of residential developments (apartments and units) and mixed use development (residential dwellings above a commercial base).

In 2018, the Wollongong City Centre had capacity for 5,500 additional and new dwellings under existing planning controls.

The Wollongong LEP and DCP guide development of the city. *A City for People* sets the Vision and Strategic direction to guide the delivery of Wollongong City Centre as a dynamic and vibrant regional City.

Existing urban areas

Although the West Dapto Urban Release Area and Wollongong City Centre are expected to absorb a large proportion of projected dwellings needs, there will be a shortfall of approximately 3,000 dwellings needed through to 2036. This assumes a population growth rate and projected dwelling needs in line with the baseline projections for Wollongong. Existing areas throughout Wollongong LGA will be required to grow, to cater for projected population growth.

- a. Replacement of existing older housing

It is expected that older dwelling stock will be replaced by newer, alternate forms of housing. This is already being observed with older existing single dwelling houses being replaced with dual occupancies (duplexes), townhouses and villas developments. This trend is expected to continue, driven by development feasibility and the desires of landowners. Under existing planning controls, the Wollongong LEP 2009 permits a range of housing types in all residentially zoned land. This provides flexibility and choice for landowners and residents.

b. Medium density areas

There are 13 precincts zoned for medium density development. Medium density zoned land permits similar types of residential development to low density zoned land but generally permits increased building heights and /or larger permitted floor areas. Medium density zoned land is generally located close to town and village centres, and/ or along major roads or the railway corridor.

The operation and capacity of Wollongong LGA's existing medium density zones has been investigated. Issues and options for these areas are explored in Section 5 of this Paper.

c. Rezoning of key sites

The NSW planning system enables land owners to submit a Planning Proposal requests to Council to rezone land. Council is required to balance a range of factors and issues in determining whether to support a request, including land constraints, desired future land use and community input.

Planning proposal requests for a number of sites are currently under assessment (Table 2.5)

If these Planning Proposals progress, they will contribute to the future dwelling supply. It is anticipated that other Planning Proposal requests will be lodged with Council in the future. Planning Proposals requests are required to demonstrate strategic merit, which refers to consistency with a Council or Regional Policy, for example the West Dapto Release Area Vision, Wollongong City Centre Vision, Corrimal Town Centre Plan or Farmborough Heights to Mt Kembla Concept Plan.

Where there is no strategic merit, Planning Proposals requests are unlikely to be supported. For example, Planning Proposals requests in the Illawarra Escarpment are unlikely to be supported, as they would be inconsistent with the Illawarra Escarpment Strategic Management Plan (2015). Proposals may be considered where there is a significant conservation improvement outcome.

Table 2.5 Current Planning Proposal requests.

Location	Proposal	Possible yield	Status
PP-2013/3 Lady Carrington Estate, Helensburgh	To rezone land from E3 and E2 to R2, E4, RE1, E3 and E2 to permit urban development	300 low density dwellings	Lodged in 2013 and not supported by Council. NSW Department of Planning and Environment upheld Gateway appeal and required the proponent to undertake additional investigations. Preliminary consultation occurred in Dec 19-Jan 20. Assessment on-going. No formal decision by Council
PP-2017/6 Former Corrimal Cokeworks, Corrimal	To rezoned from IN3 and RE2 to R3, E3, RE1 to permit medium density development	750 dwellings	3/4/18 Council resolved to prepare a Planning Proposal and seek a conditional Gateway determination. Additional studies have been undertaken by proponent to refine the proposal. Additional information to be assessed by Council and if supported, exhibited.
PP-2016/3 Former Port Kembla Public School, Port Kembla	To rezoned from B4 to R3 to permit medium density development	110 dwellings	28/5/18 Council resolved to prepare a Planning Proposal. Gateway determination not supported by NSW Department of Planning and Environment. Proponent reviewing proposal
PP-2018/9 – Cleveland Road north and south sides, West Dapto Release Area	To rezone from RU2 to R2, R3, E3, B2 to permit urban development	2000 dwellings	Lodged. Preliminary assessment by Council officers. No formal decision
PP-2019/8 – Cleveland Road west, West Dapto Release Area	To rezone from RU2 to R2, R3, E3, B2 to permit urban development	700 dwellings	Lodged. Preliminary assessment by Council officers. No formal decision by Council
PP-2019/3 – Former Bulli Bowling Club, Bulli	To rezoned from RE2 to R1 to permit a mixed use commercial and residential development	100 dwellings	Lodged. Preliminary assessment by Council officers. No formal decision by Council

3. Housing for Particular Needs

The population and dwelling needs of the Wollongong LGA are projected to increase by over 20% by 2036. Although the Wollongong LGA has enough capacity to cater for projected growth, it is important that the housing needs of the whole community are addressed.

Wollongong is home to a diverse range of residents and where possible, housing should cater for and respond to these needs.

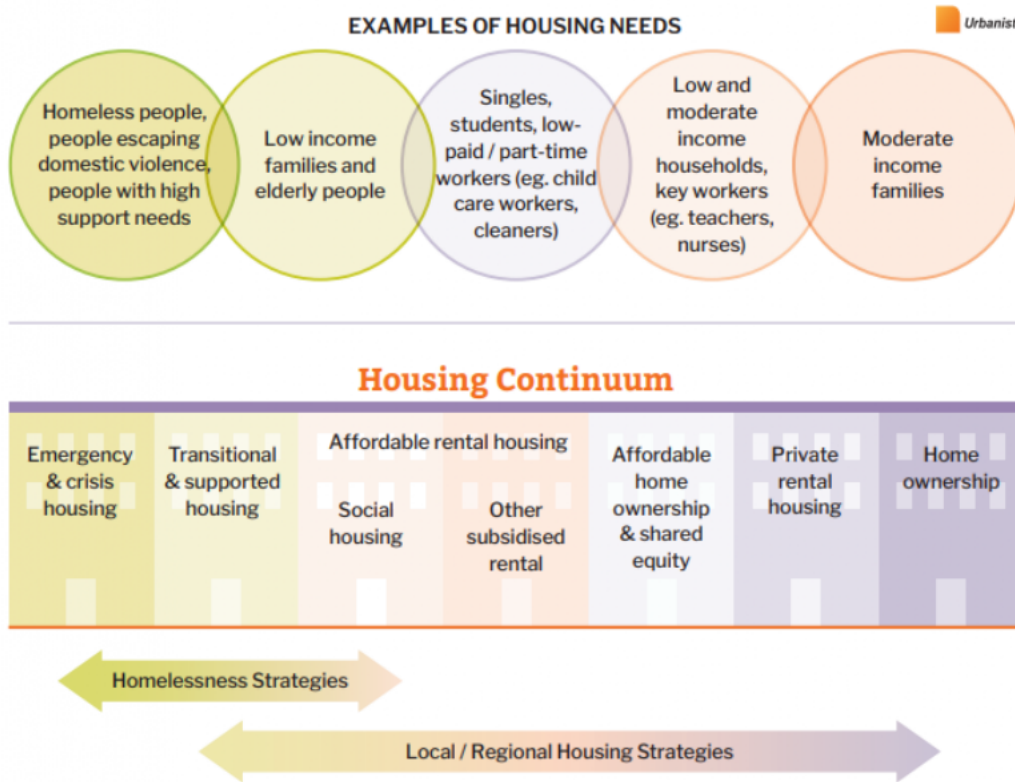
In 2016, Wollongong LGA had:

- 29% of residents (or 58,929) were aged 55 years or older.
- 6.4% of residents (or 13,090) identified as needing assistance in their day to day lives. This proportion had increased from 4.9% in 2006.
- 4% of residents (or 8,049) had arrived in Australia within the 5 years prior to 2016. 80.7% of these recent arrivals spoke a language other than English at home.
- 2.63% of residents (or 5348) identified as being Aboriginal and/ or Torres Strait Islander, an increase of 1,122 residents from the 2011 census.
- Housing affordability and affordable housing are a large and growing issue for many residents. 53% of all households in Wollongong LGA (or 44,853 households) meet the affordable housing income definition. Of these households 49% (or 21,978) experience housing stress. The proportion of these households increased 5% from 2001 and 2016.
- An estimated homeless population of 811 persons. This is almost double the estimated homeless population from 2011 which was 440.

The housing needs of different sectors of the community can be shown in a Housing Continuum. The following continuum of housing (Figure 3.1) prepared by the NSW Department of Communities and Justice (DCJ 2019) illustrates the spectrum of housing options. The level of control that residents have over their housing increases across the spectrum from left to right. The level of housing assistance required corresponding decreases across the spectrum from left to right.

The following section of this paper discussed the housing needs of various groups on the continuum.

Figure 3.1 Housing Continuum



Source: NSW Department of Communities and Justice Local Government Housing Kit 2019

3.1 Homelessness

The ABS defines as a person as homeless where they do not have suitable accommodation alternatives and their current living arrangement:

- Is in a dwelling that is inadequate;
- Has no tenure or their initial tenure is short and not extendable; or
- Does not allow them to have control of and access to space for social relations.

A person is considered homeless when they are living in improvised dwellings, tents, sleeping out, supported accommodation, boarding houses, temporary lodgings, overcrowded dwellings or caravan parks.

Homelessness is a complex problem that can arise from a number of causes, including domestic violence, financial hardship, health issues and limited access to affordable housing options (FACs 2019).

The NSW Family and Community Services identified that in 2016 there was 816 persons homeless in the Wollongong LGA, a slight increase from 211 where 811 persons were identified as homeless.

In February 2019, the IRT Foundation's homeless street count identified 60 people sleeping rough nightly in the Wollongong CBD and surrounding areas. Of those persons, 30% were sleeping in cars, while others were in tents, beneath awnings, on benches /seats or were awake sitting or walking around. Additionally, more than 600 people occupying beds in temporary shelters and homelessness hostels were counted (The Advertiser 29/5/19).

The NSW Department of Communities and Justice is the lead NSW Government Department that supports people experiencing homelessness. Effective responses to homelessness are complex and go beyond the provision of housing.

Some Councils' have prepared strategies and policies to address homelessness in their areas, including the City of Sydney and Tweed Shire Council.

Council does not provide a specific service for people experiencing homelessness, but we recognise that this is an issue that affects many people in our community. Council does support local homelessness service providers.

3.2 Social Housing

Social housing is secure and affordable rental housing for people on low incomes with housing needs. It includes public, community and Aboriginal housing. Public housing is managed by the NSW Department of Communities and Justice (DCJ), while community housing is managed by non-government organisations. Some housing is specifically for Aboriginal people and these properties are managed by DCJ or community housing providers, including Aboriginal community housing providers.

Large areas of the Wollongong LGA (and other parts of the region) were developed by the NSW Government for social housing. Within the Wollongong LGA there is some 6,731 social housing dwellings (8% of the housing stock) managed by the NSW Land and Housing Corporation. An additional 35 dwellings for Aboriginal Housing.

The development of social housing is permissible under the Affordable Rental Housing SEPP and is undertaken by State Government agencies. Council has a limited role in the provision of Social Housing, through the assessment of Development Applications and the preparation of planning controls. Council will continue to work with the NSW Land and Housing Corporation to renew housing stock to meet the changing needs of their tenants. Similar to the rest of the community, there is an increasing demand for smaller dwellings.

3.3 Housing for Students

The University of Wollongong's Main Campus and Innovation Campus are important economic drivers for the City. In 2016 the University of Wollongong published its masterplan for the main Wollongong Campus which indicates that the University will continue to expand from 17,080 students to 20,310 students by 2036. The master Plan indicates that the University seeks to proportionally increase its student accommodation from 1,976 beds to 4,062 beds over the same period.

Students are housed in a mixture of on-campus accommodation, university premises in the surrounding suburbs or through private rentals. This last group can have the greatest impact on the surrounding

residential community. Three and four bedroom houses can be occupied by many students which creates noise, parking and amenity issues for surrounding residents.

The NSW Planning System does not define “student accommodation”. Some community members have suggested that premises being used by students are effectively ‘boarding houses’.

In 2011 the NSW Legislative Assembly Social Policy Committee undertook an Inquiry into International Student Accommodation in NSW. The Inquiry recommended amendments to the NSW Planning System, including defining the use. The NSW Government’s response to the Inquiry indicated that it supported the recommendation in principle and expected to bring forward amendments to the Infrastructure SEPP in the near future (May 2012).

In 2017, SEPP Educational Establishments and Child Care Facilities commenced, replacing the provisions in the Infrastructure SEPP. The Education SEPP permits student accommodation to occur within school, university and TAFE campuses with development consent. The policy is silent on student accommodation outside the campus.

Until there is State-wide direction on student accommodation, it is difficult for Council to set its own planning policy position.

3.4 Housing for Seniors

The population of Wollongong LGA is ageing. The number and proportion of older Australians is projected to be 22% of Australia’s total population by 2057. This is an increase from 15% of the total population in 2017 (Australian Institute of Health and Welfare, 2018).

In 1996, Wollongong had an ‘older person to child ratio’ of 6.4:10. This meant that there were approximately 6.4 people aged 65 years or older for every 10 children (aged 0-14 years). By 2016, this ratio had climbed to 9.7:10. By 2036, this ratio is projected to increase further to 10.9:10 meaning there will be more people aged 65 years or older than children 0-14 years old (Informed Decisions, 2019). As Wollongong LGA experiences this change it is important to make sure residents have options and may access appropriate housing and care facilities.

There are three main approaches to housing and an ageing population.

- *Ageing in Place* enables residents to remain in their home as they age and when their level of care increase. It empowers a resident to make a conscious decision stay in their house for as long as they can. Additional supplementary services may facilitate ageing in place e.g. help at home or short-term care which may provide assistance after a hospital visit or respite care.
- *Seniors Housing*. There are many definitions of seniors housing. Such housing is generally aimed at residents aged 55 years and older and offer independent living units. SEPP (Housing for Seniors or People with a Disability) 2004 provides standardised NSW controls for such housing.
- *Aged Care Homes* which include spectrum of housing and assistance e.g. independent living units and/ or nursing home facilities.

The Australian Government regulates the supply of subsidised residential aged care and home care packages by specifying a national provision target of subsidised operational aged care places. These targets are based on the number of persons for every 1000 people aged 70 years plus. An overall aged

care provision target ratio has progressively increased since its introduction in 1985. The target is for 125 operational places per 1,000 people by 2025 and includes a mix of 45 home care places and 78 residential care places. The remaining 2 places are for a new short term restorative care programme. (Source: Australian Government Aged Care Financing Authority, 2017).

In 2016, the Illawarra *Aged Care Planning Region* had a total of 5881 operational aged care places consisting of a mixture of low care, high care, home care, restorative care places. The ratio the Illawarra achieved in 2016 was 104.7 meaning the Illawarra region has a total of 104.7 places for every 1000 people aged 70 years plus. In 2016 three *Aged Care Planning Regions* (namely Central West, Inner West and Northern Sydney) achieved the target 125 places for every 1000 people. In 2016, NSW had an overall ratio of 113.3 places per 1000 people aged 70 years plus.

The number of residents in Wollongong LGA aged 70 years plus is projected to increase from 25,586 in 2016 to 31,845 by 2026 (Informed Decisions, 2019). Assuming the current ratio of 104.7 places per 1000 people remains constant through to 2026, there will be a projected shortfall of 656 places in the Wollongong LGA alone, to achieve the Australian Government National target of 125 places per 1000 persons.

Anecdotal evidence and preliminary consultation with the Illawarra Shoalhaven Local Health District Aged Care Assessment Team indicates that it is currently difficult to place people with high needs and challenging behaviours; and there is a shortage in dementia specific placements.

Affordable housing is an issue for half the households (approximately 46,000 households) in the Wollongong LGA and includes households experiencing housing stress from rent and purchase. Affordable housing is an issue for residents as they age. In 2016 Wollongong LGA had approximately 2000 households that were:

- Renting,
- Lone person households,
- Occupant aged 55 or above, and
- Experiencing housing stress (i.e. spending more than 30% of their weekly household income on rent).

Section 3.6 of this paper provides in depth analysis in relation to the issue of affordable housing for Wollongong LGA and options to move forward.

The scope for Council to influence change and provide housing for seniors is limited. The Wollongong LEP currently permits seniors housing with consent in all residentially and most business zoned land throughout Wollongong LGA. This enables provision of new additional aged care homes and independent living units.

Development controls are contained in the Wollongong DCP 2009 and NSW Apartment Design Guide relating to adaptable housing and liveable housing. These provisions provide scope for Council to regulate change, diversifying housing stock and increase the supply of housing that can facilitate ageing in place.

3.5 Housing for People with disability

The need for assistance (ABS Census, 2016) is a measure of the number of people with profound or severe disability, defined as people who need assistance in their day to day lives with any or all of the following core activities: self-care; mobility; or communication because of a disability, long-term health condition or old age. It is applicable to all persons. In 2016, Wollongong LGA had 6.4% of residents needing such assistance. Additionally, the Australian Bureau of Statistics reports that the percentage of individuals with disability increases significantly with age (ABS, 2012). Given the ageing population of Wollongong and increase in the proportion of residents identifying as needing assistance in the 10 years since 2006, new housing should ensure it can respond to changes in occupants needs.

SEPP (Housing for Seniors or People with a Disability) 2004 provides standardised development controls for both seniors housing and people with disability. The term Seniors Housing (as defined under the SEPP) includes residential accommodation that is intended to be used permanently for seniors or people with a disability.

Data from the Institute of Health and Welfare shows that a significant number of younger people enter aged care each year. In Australia in 2017-18 more than 2,500 people under 65 entered aged care. A key reason younger people are entering aged care is the lack of suitable housing. There is a significant gap in the market for highly specialised disability accommodation. As at September 2018, the Department of Health reported there were 5905 younger people in Australia aged 65 and under living in aged care. 4000 of these younger people had been deemed eligible for assistance via the National Disability Insurance Scheme (NDIS) and only 32 of these young people had been approved for Supported Disability Accommodation. Supported Disability Accommodation (SDA) is housing for people who require specialist housing to assist with the deliver support to people with very high needs. Improving access to SDA under the NDIS is key to reducing the number of younger people living in aged care. The Australian Government have developed a *Younger People in Residential Aged Care – Action Plan* to improve the existing situation. There is currently a shortfall in the availability of SDA for younger people who required this level of support. The SDA accommodation market is not yet mature, with very limited supply, land for demand data for potential investors, and significant lead-time required for development of new stock.

Social Futures Australia and the Summer Foundation prepared the *Specialist Disability Accommodation in Australia* report released in March 2019. This report indicated that the shortfall in specialist disability accommodation in the Illawarra is 93 places. The SDA housing market is new and is expected to create new dwellings for people with disability over the next few years. There is an opportunity for Council to host/or co-host activities to raise awareness about developing this type of specialist housing.

Group Homes are currently permitted with consent in all residentially zoned land throughout Wollongong LGA.

Adaptable and liveable housing development controls provide scope for Council to regulate change.

3.6 Affordable Housing

3.6.1 Introduction to Affordable Housing

In real terms over the past 20 years house prices in Australia have more than doubled (Figure 3.1). In Wollongong LGA many households who are renting and purchasing housing are facing '*housing affordability*' pressures. The increased cost of housing and decline in '*housing affordability*' has been influenced by many factors including population growth, historically low interest rates, little growth in income levels, attractive tax settings for property investors, tax settings that discourage downsizing and a mismatch between housing supply and demand. In Wollongong LGA other factors contributing to housing affordability challenges include the limited availability of smaller dwellings to meet the growing proportion of small households as well as an increase in residents commuting long distances out of the LGA for work.

In June 2018, Council released the *Our Wollongong 2028 Community Strategic Plan Engagement Report*. In this report residents indicated that the cost of housing in Wollongong LGA was a major issue. The need for affordable housing and to improve '*housing affordability*' featured as a top priority for the City.

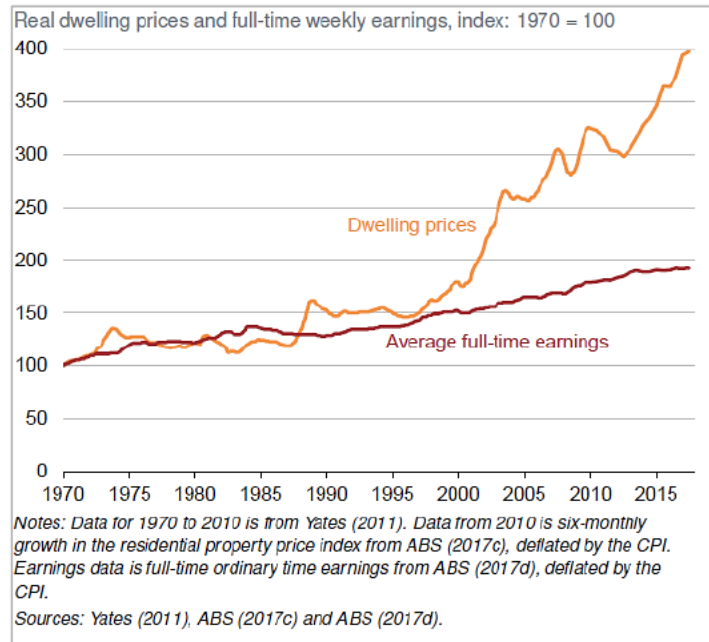
The cost of housing in Wollongong LGA is high. In 2018 the median house price was \$795,000 and for a unit \$586,000, with median prices growing 29% in the previous three years. Median rents have increased 3.5 times since 1990 with almost all of this growth occurring since 2001. Income levels have not increased at the same rate as housing costs across this timeframe. Wollongong LGA has one of the least affordable housing markets in Australia behind Sydney and Melbourne. NSW Family and Community Services (FACs) rate Wollongong LGA as having a high need for affordable housing. Growth in Wollongong's property prices has been largely driven by the Sydney housing market, with many people migrating to the LGA for comparatively lower priced housing and lifestyle reasons.

National data prepared by the Grattan Institute shows the dramatic house price rise since the 1990s, when compared to full-time earnings incomes. The following graph shows the separation of the two indices.

Access to affordable housing is important for the social and economic sustainability of our community. Housing costs influence where people live, with diverse and affordably priced housing enabling people to remain in their communities. High housing costs can force some households to move out of the area to more affordable locations, and make people less likely to relocate into the area to take up new employment opportunities (Gurran et al, 2018).

There are no quick fixes to the current housing affordability situation. Many of the potential solutions to improve the current situation require the collaboration and cooperation of all levels of government and other stakeholders. There are however options for Council to pursue to improve access to affordable housing for residents.

Figure 3.2 House prices have grown much faster than incomes since the mid-1990's.



Source: Daley et al, 2018.

3.6.2 Affordable Housing and Housing Affordability

Figure 3.1 shows different types of housing (crisis, social, community and market housing). This section of the Paper will focus on affordable rental housing rather than housing affordability for purchase. This is where Council has the greatest capacity to influence and where the greatest need is in Wollongong LGA.

The *Environmental Planning and Assessment Act 1979* defines affordable housing as housing for households with 'very low, low and moderate incomes'. Where 'very low income' is less than 50% of the average household income, 'low income' is between 50-80% of the average household income and 'moderate income' is 80 to 120% of the average household income.

'Affordable housing' is priced so that very low, low and moderate income households are able to meet their housing costs and still meet other basic living costs such as food, clothing, transport, medical care and education. Housing is considered affordable to these households if it costs less than 30% of their gross household income.

'Housing affordability' is the broad term used to describe the range of factors that contribute to the relationship between the cost of housing (price, mortgage repayments or rent) compared to income.

Affordability housing benchmarks for rent and purchase for very low, low and moderate income households are based on the average household income of \$1,750 for the Greater Sydney Statistical Area (ABS, 2016, Table 3.1).

Table 3.1 Very low, low and moderate household incomes based on Greater Sydney Statistical Division

	Very low income household	Low income household	Moderate income household
Income benchmark	Less than 50%	50% or more but less than 80%	80-120%
Income range	<\$874 per week	\$875 - \$1399 per week	\$1400 - \$2100 per week
Affordable rental benchmark*	<\$262 per week	\$262 - \$419 per week	\$420 - \$630 per week
Affordable purchase benchmark **	<\$273,750	\$273,751 - \$354,000	\$354,001 - \$532,500
<p>* 30% of the total household income.</p> <p>** Calculated using ANZ loan repayment calculator, at 9 May 2018 interest rate (4.70%), assuming a 20% deposit for a 30 year ANZ Standard Variable Home Loan, utilising a maximum 30% of the total household income as a repayment, and excluding stamp duty requirements.</p>			

Source: ABS, 2016.

Households in the very low, low and moderate income range are described as being in *'housing stress'* if they are spending more than 30% of their gross household income on rent or mortgage costs and in *'severe housing stress'* if spending more than 50% of their gross household income towards housing.

In February 2019 Council was included in SEPP 70 Affordable Housing (SEPP 70). The definition of affordable housing has been amended in SEPP 70 to reflect two geographical areas Greater Sydney and the Rest of NSW. The Wollongong LGA is included as part of the Rest of NSW. In Wollongong LGA the median household income is closer to the Rest of NSW median than Greater Sydney. However the median cost of housing (rent and purchase) is closer to Greater Sydney (Table 3.2). All of the data that is presented in this paper uses the Greater Sydney definition for affordable housing due to the higher comparable cost of housing in Wollongong LGA.

Table 3.2 Median household income comparison.

	Greater Sydney		Wollongong LGA		Rest of NSW	
Median Income (2016)	\$1,750		\$1,335		\$1,168	
Median Purchase all Dwellings (Sept 2018)	Non Strata	Strata	Non Strata	Strata	Non Strata	Strata
	\$745,000	\$765,000	\$735,000	\$683,000	\$345	\$400
Median Rent all Dwellings (March 2019)	\$520		\$445		\$325	

Source: FACs, Rent and Sales Dashboard 2019.

3.6.3 Affordable Housing Stock

- In 2016 subsidised social and community housing represented approximately 8% of the total number of dwellings in the LGA. The proportion of social housing in Wollongong LGA has decreased by 2.7% since 1996.
- Wollongong LGA has a higher proportion of State housing (8%) compared to Regional NSW (4%) and NSW (4.2%) and a comparable proportion of community housing.

Table 3.3 Affordable housing stock in Wollongong LGA.

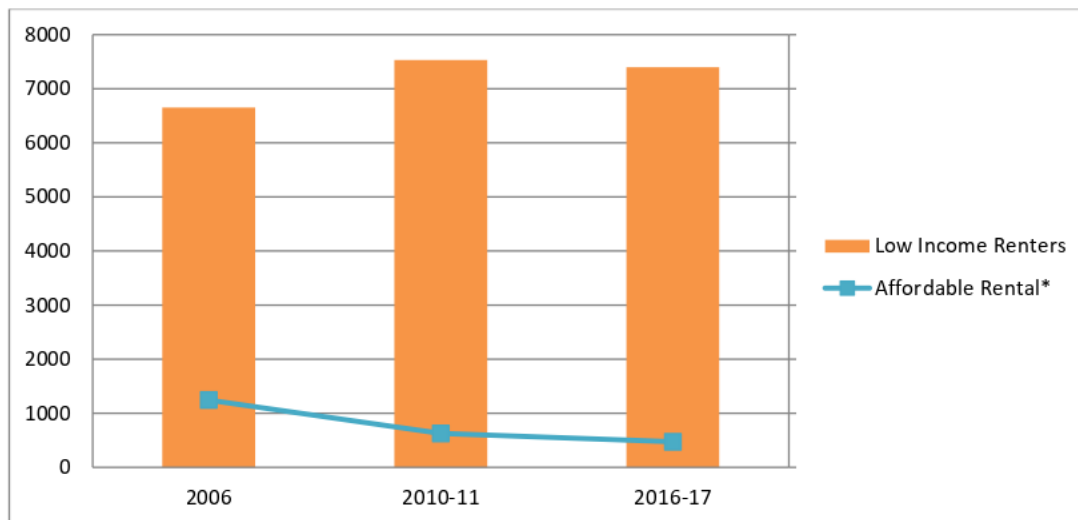
Dwelling Type	Number of dwellings	% of Dwellings
Social Housing (<i>NSW Land and Housing Corporation</i>)	6,731	8%
Aboriginal Housing	35	
Community Housing (<i>Community Housing Providers - Affordable Rental</i>)	613 (<i>Housing Trust data</i>)	
Affordable Rental Housing (<i>delivered via Affordable Rental Housing SEPP 2009 approved since 2009</i>)	229 (<i>Council data</i>)	
Secondary Dwellings (<i>Granny Flats approved since 2009</i>)	186 (<i>Council data</i>)	
Boarding Houses (<i>Private Rental</i>)	24 registered (<i>322 people</i>)	
Permanent onsite Caravan Park	920 (<i>Council data. Most of these dwellings are owned or being purchased rather than rented</i>)	
Budget Pub Top/Hotel Accommodation	9 businesses	
Private Rental (<i>very low, low and moderate incomes</i>) <i>*Rental stress amongst our moderate income households is low. The 3609 moderate income private rental dwellings in this calculation skews the data.</i>	Very low = 575 Low = 2887 Moderate = 3609* Total = 7071	8.4%
TOTAL	15,818	

3.6.4 Affordable Housing Needs Analysis

An affordable housing needs analysis for Wollongong LGA has been undertaken. Key findings of this analysis indicate:

- There is a large and growing gap between the number of low income households and private rental housing that is affordable for these households (Figure 3.2);
- Wollongong LGA is trending towards an increasing mismatch between household size and number of bedrooms per dwelling. Between 2001 and 2016 there has been a decrease in one, two and three bedroom housing stock and a large increase in four bedroom stock;
- The cost of housing has increased substantially in Wollongong LGA over the last decade. Median house prices have increased by 84% and median unit prices have increased by 65% between 2008 and 2017. Median rents have increased 3.5 times since 1990, with most of this increase being since 2001;
- There has been sharp increase in the proportion of households in Wollongong LGA who cannot afford to rent or purchase housing in the LGA.
- The number of full time equivalent jobs in Wollongong LGA has decreased while the number of lower income workers and casualisation of the workforce has increased.

Figure 3.3 Comparison between the number of low income renters and the number of affordable private rental properties.



Source: NSW Local Government Housing Kit, 2019.

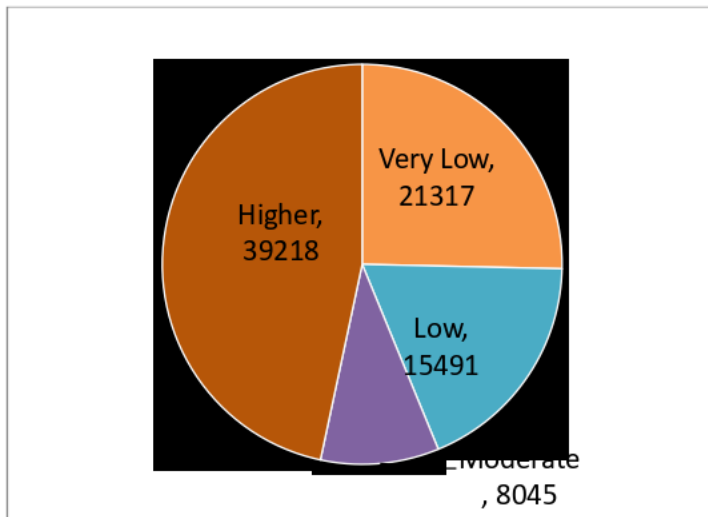
3.6.1.1 Households in the Affordable Housing Income Range in Wollongong LGA

In 2016 more than half of all households in Wollongong LGA 44,853 or (53%) were described as being in the affordable housing income range as defined by the *Environmental Planning and Assessment Act 1979*.

In 2016 in Wollongong LGA:

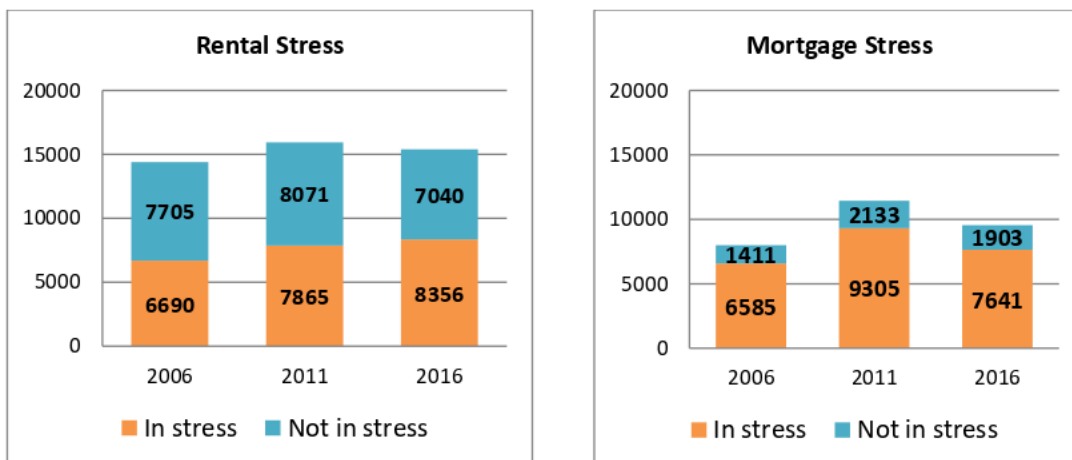
- There were 84,071 households;
- There were 44,853 households in the affordable housing income range, with 21,317 very low, 15,491 low and 8,045 moderate income households (Figure 3.3)
- Of the 44,853 households in the affordable housing income range, 49% were in housing stress.
- The overall proportion of households in housing stress (rental and mortgage) in the LGA in the affordable housing income range increased by 5% between 2006 and 2016 (Figure 3.4);
- 7.4% of existing housing stock comprises social housing and there were long waits of between 2 and 10 years for people to gain access to social housing (Table 3.5). Since 1996 there has been a 2.7% decrease in the proportion of social housing available in Wollongong LGA;
- 496 people were homeless.

Figure 3.4 Wollongong LGA household income brackets 2016



Source: ABS Table Builder, accessed online 2019.

Figure 3.5 Rental and mortgage stress Wollongong LGA 2006, 2011 and 2016



Source: ABS Table Builder, accessed online 2019.

Table 3.4 Expected Social housing wait times

Area	1 bedroom	2 bedroom	3 bedroom	4 bedroom
Wollongong LGA City Zone	2 to 5yrs	10+yrs	5 to 10yrs	5 to 10yrs
Wollongong LGA South Wollongong	2 to 5yrs	5 to 10yrs	5 to 10yrs	5 to 10yrs
Shellharbour LGA	5 to 10yrs	10+yrs	5 to 10yrs	10+yrs

Source: NSW Government Local Government Housing Kit Database on NSW Family and Community Services June 2018.

3.6.5 Employment

Cities need a range of workers living close to town centres and employment to function well.

Research undertaken by id profile, on behalf of Council showed the local economy is not providing enough jobs to give all employed residents in the LGA the opportunity to work locally. This shortfall in jobs has added to the commuter pool overtime, with 33% of residents leaving the LGA for work in 2016. These workers commute long distances and many are highly skilled and are earning higher incomes than people who work in the Wollongong LGA. There is a strong relationship between income, employment opportunities, housing affordability and distance travelled to work. People will travel greater distances to employment for higher incomes and/or to afford the cost of housing.

In the last decade Wollongong has transformed into a service-based economy, largely focussed on delivering household services. This shift is as a result of an estimated 6,000 local job losses in the manufacturing sector between 2001- 2008 and 2017-2018. These manufacturing jobs were higher paid than the jobs emerging in the health and social service and retail industries in Wollongong LGA.

Wollongong LGA also provides employment for 43% of Shellharbour LGA's employees and 23% of Kiama LGA's employees.

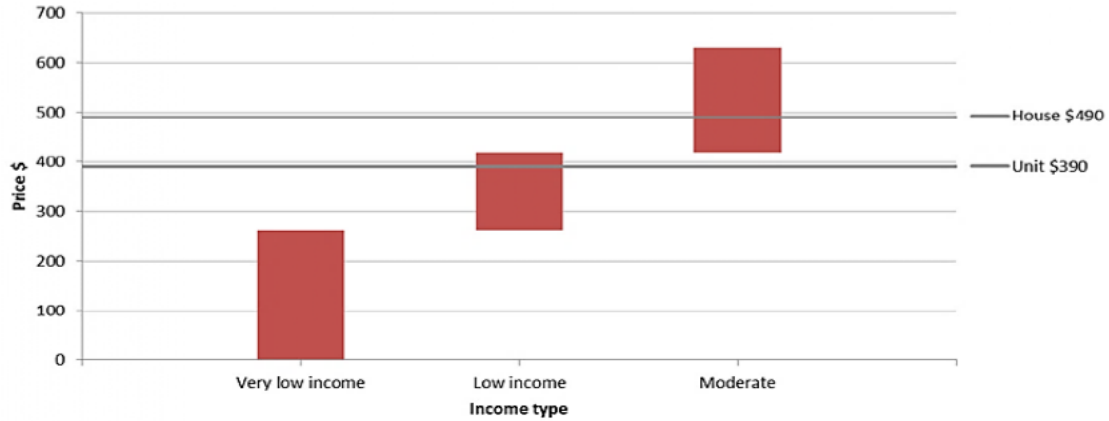
Strategies to increase access to employment in Wollongong LGA will not form part of Council's Housing Strategy. However a key focus of Council's Economic Development Strategy (2019) is to increase the number of higher payed local job opportunities in Wollongong LGA.

3.6.6 Rental Housing Market Analysis

In 2016 only the very upper portion of low income and moderate income households could afford rent housing in the private rental market in Wollongong LGA (Figure 3.5). Of those renting:

- 54% of renting households in the affordable income range were in rental stress in 2016 in Wollongong LGA;
- Rental stress had increased by 8% between 2006 and 2016 amongst households in the affordable housing income range in Wollongong LGA.

Figure 3.6 Housing rental affordability in Wollongong LGA (2018)

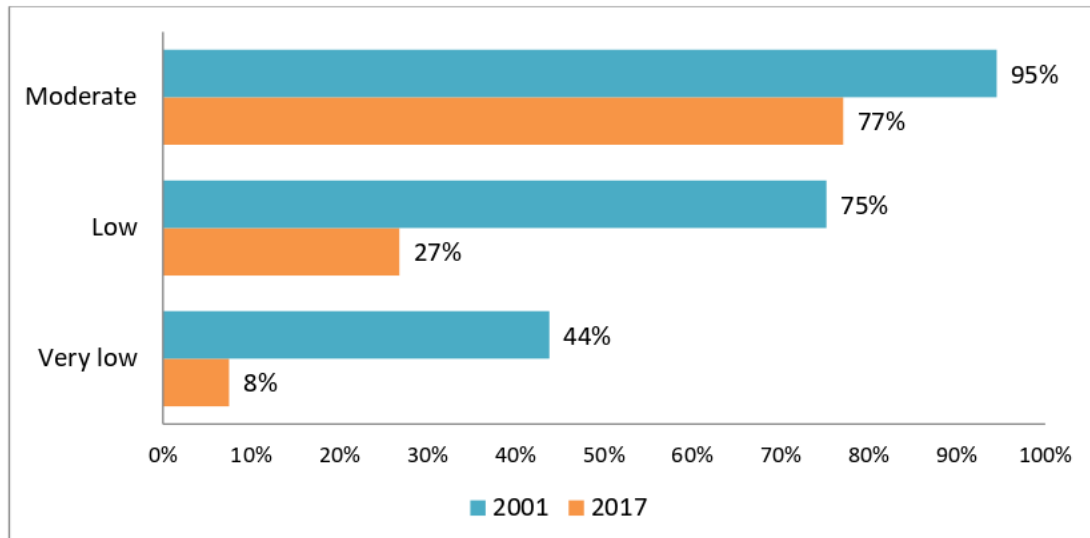


3.6.7 Decline in Rental Affordability

Since 2001 there has been strong decline in the proportion of households in the affordable housing income range who can afford to rent housing in Wollongong LGA.

- In 2001 44% of very low income households could affordably rent housing in the private rental market, compared to 8% in 2017 representing a 36% decline;
- In 2001 75% of low income households could affordably rent housing in the private rental market, compared to 27% in 2017 representing a 48% decline; and
- In 2001 95% of moderate income households could affordably rent housing in the private rental market compared, to 77% in 2017 representing a 17% decline.

Figure 3.7 Change in the proportion of private rental accommodation affordable to very low, low and moderate income households from 2001 -2017.



Source: NSW Local Government Housing Kit, 2019.

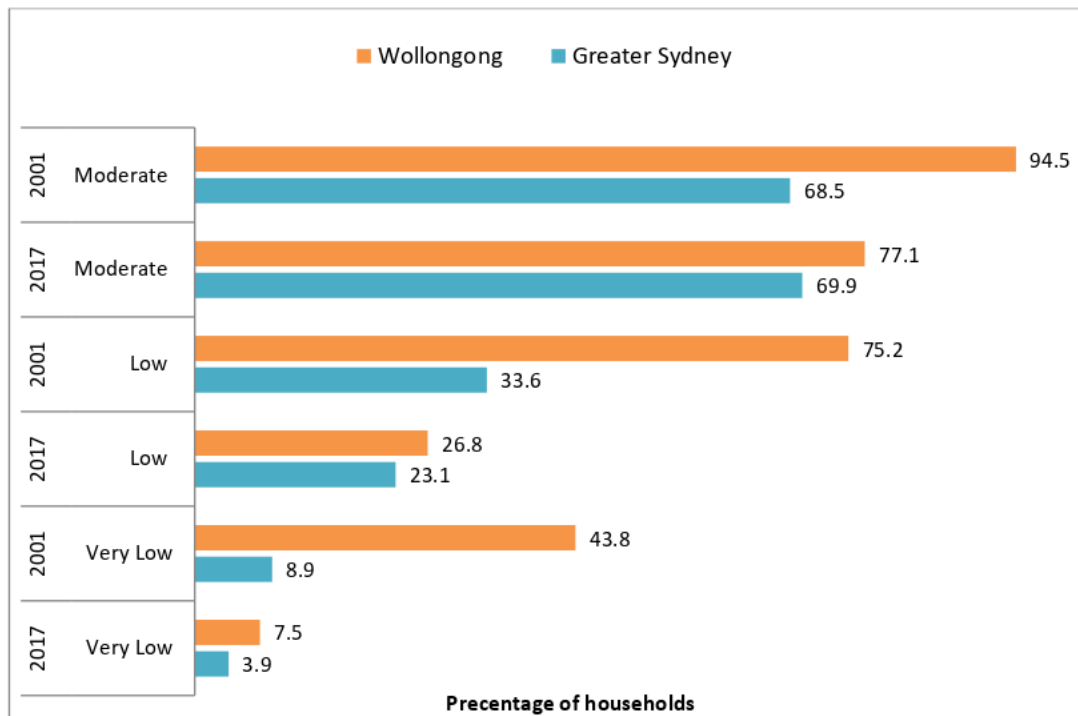
In 2017 80% fewer rental bonds were lodged for affordable private rental housing for low income households in Wollongong LGA (473) compared to 2006 (2,312). This shows a large decrease in affordable private rental housing stock entering the private rental market (Table 3.6).

Table 3.5 Change in the number of rental bonds lodged affordable to low income households.

Area	2006	2010	2013	2017	% change 2006 - 2017
Shellharbour LGA	340	190	113	66	81%
Wollongong LGA	2312	1079	903	473	80%

Source: NSW Local Government Housing Kit, 2019.

Figure 3.8 Comparison between Wollongong and Greater Sydney for proportionate changes in private rents between 2001 and 2017.



Other issues impacting on the affordability of the private rental market include:

- A long term low rental vacancy rate. A vacancy rate of 3% represents a healthy balance between supply and demand. The average vacancy rate for Wollongong LGA between 2015 and 2018 was 1.8%. For almost the entire time there has been an undersupply of private rental accommodation in the LGA which may indicate a gap in supply of private rental accommodation (Figure 3.8).
- Strong increases in rents with median rents increasing 3.5 times since 1990 with almost all of this growth occurring since 2001. The strongest rent increases were for one bedroom properties (Table 3.7). The substantially greater increases in rents for one bedroom dwellings over this time may be as

a result of the high demand for smaller dwellings in the LGA given the high proportion of lone person households in the LGA.

Figure 3.9 Rental Vacancy rate for Wollongong, the Illawarra and Sydney over time, including comparison with 3% benchmark.

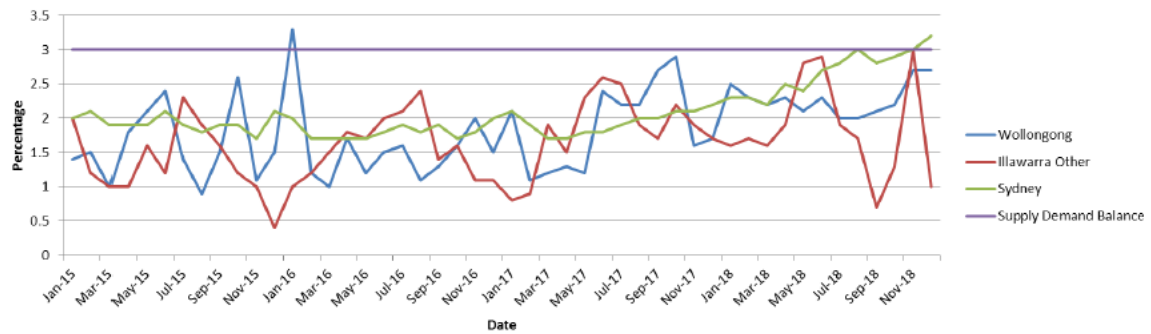


Table 3.6 Percentage change in rent for one, two, three and four or more bedroom dwellings between 2008 -2013 and 2014 -2018.

Wollongong LGA	1 Bed	2 Bed	3 Bed	4 Bed or more
% change 2008 -2013	↑ 46.7	↑ 36.2	↑ 26.6	↑ 25.0

Source: NSW Government Local Government Rent and Sales Dashboard on NSW Family and Community Services, 2019.

Rental stress by household type

Of the households in the affordable income range in rental stress in Wollongong LGA:

- 42% were lone person,
- 25% were one parent and
- 10% were couples with or without children.

25% of lone persons households occupied 1 bedroom dwellings, 50% dwellings with two bedrooms with the remaining 25% living in 3 or more bedroom dwellings.

Affordable rental housing targets in Wollongong LGA

A number of studies have suggested affordable rental targets for Wollongong LGA based on unmet need for affordable rental housing.

Table 3.7 Affordable rental housing targets for Wollongong LGA by 2036.

Affordable rental housing target source		Number of additional affordable rental housing dwellings required by 2036
1	Social Housing as infrastructure: an investment pathway (2018) Report prepared by Australian Housing and Urban Research Institute.	7575
2	Great Illawarra: The Smart Growth Agenda (2015) Report prepared for the Property Council of Australia by Judith Stubbs & Associates.	8241

3.6.1.2 Housing Purchase Market Analysis

Analysis of data relating to purchase prices and household incomes for Wollongong LGA residents indicates that it is virtually impossible for very low and low income households to purchase a property. Data suggests it may be possible for moderate income households however this is extremely constrained.

Mortgage Stress

- 75% of households with a mortgage in the affordable income range were in mortgage stress in 2016.
- Mortgage stress decreased by 4% between 2006 and 2016. The decline in interest rates across this same time frame may have contributed to this decrease in households experiencing mortgage stress.

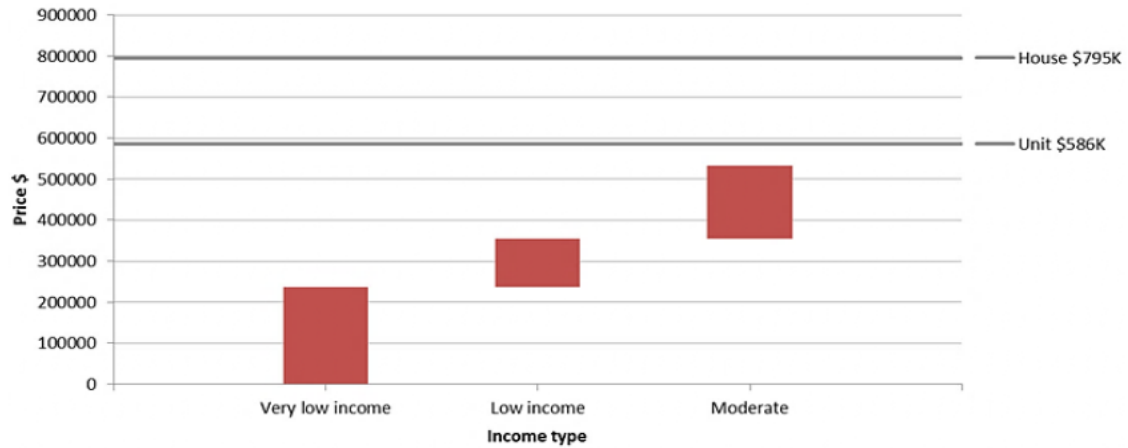
Median house prices have increased substantially in Wollongong LGA over the last decade:

- 84% for houses between 2008 and 2017; and
- 65% for units between 2008 and 2017.

Housing purchase affordability

The following graph shows affordable purchase benchmarks/prices for very low, low and moderate income households in Wollongong LGA compared to median property prices in 2018.

Figure 3.10 Housing purchase affordability in 2018 in Wollongong LGA

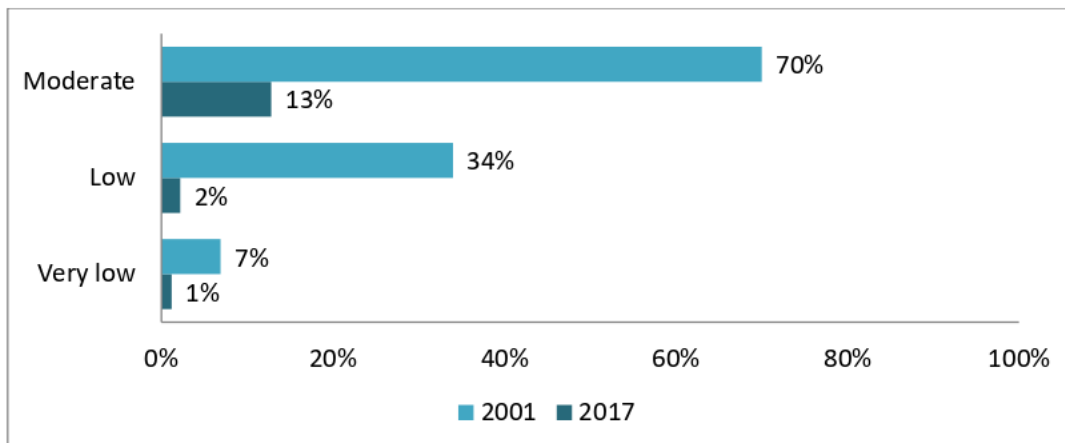


Decline in housing purchase affordability

Since 2001 there has been strong decline in the proportion of households in the affordable housing income range who can afford to purchase housing in the LGA. This decline has been particularly strong for moderate and low income households.

- In 2001 70% of moderate income households could affordably purchase housing, compared to 13% in 2017. This represents a 57% decline;
- In 2001 34% of low income households could affordably purchase housing, compared to 2% in 2017. This represents a 32% decline;
- In 2001 7% of very low income households could affordably purchase housing compared, to 1% in 2017. This represents a 6% decline (Figure 3.10).

Figure 3.11 Change in the proportion of housing affordable to purchase for very low, low and moderate income households from 2001 -2017, Wollongong LGA.

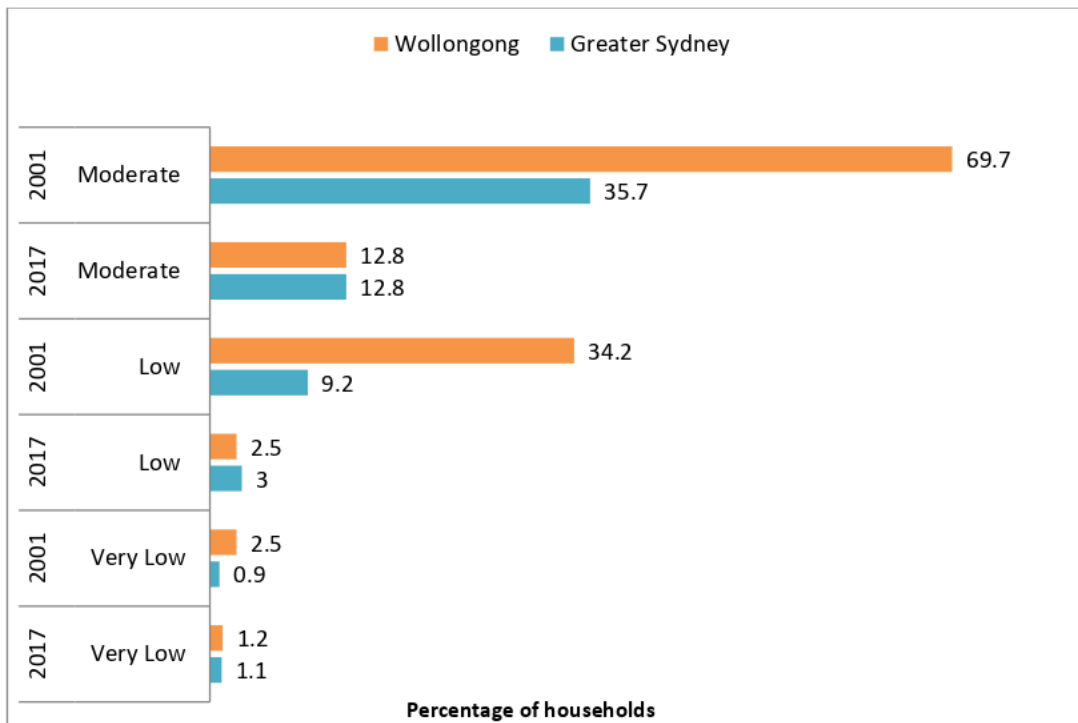


Source: NSW Local Government Housing Kit, 2019.

The decline in the proportion of households who can afford to purchase housing has been far greater in Wollongong LGA compared to Greater Sydney (Figure 3.11). For example in 2001, 70% of moderate income households could afford to purchase housing in Wollongong LGA, compared to 36% in Greater Sydney. By 2017 the proportion of households who could afford to purchase housing in both Wollongong and Greater Sydney had dropped to a comparable 13%.

This decline in housing affordability has pushed housing purchase out of reach of many households in the Wollongong LGA. Most single professional first home buyers including 'key workers' cannot affordably purchase housing in Wollongong LGA. This therefore increasing the need for affordable rental housing.

Figure 3.12 Comparison between Wollongong LGA and Greater Sydney for housing purchase affordability by income level from 2001 to 2017.



Source: NSW Local Government Housing Kit, 2019.

Mortgage stress by household type

Of the households in the affordable income range with a mortgage in mortgage stress:

- 40% were couples with children,
- 23% were lone person households,
- 19% were one parent families.
- Couples with children 764 living in a three bedroom home, and 560 live in a four bedroom home, lone person, of which 497 live in a three bedroom home; one parent families, of which 360 live in a three bedroom house

3.6.1.3 Key Worker Housing

Housing is *'very unaffordable'* for single *'key worker'* first home buyers to purchase in Wollongong LGA.

A *'key worker'* is a worker whose job is essential to the functioning of a City. Often keyworkers include teachers, nurses, ambulance, fire fighters and police. Increasingly these workers are being locked out of home ownership and forced to commute long distances to work due to the rising cost of house prices. In 2018 researchers from the University of Sydney undertook a study to look at housing purchase affordability for key workers in the Greater Sydney Metropolitan Region which included the Wollongong LGA. The study used standard key worker income award data and lending criteria to calculate affordable home purchase price for a range of household types.

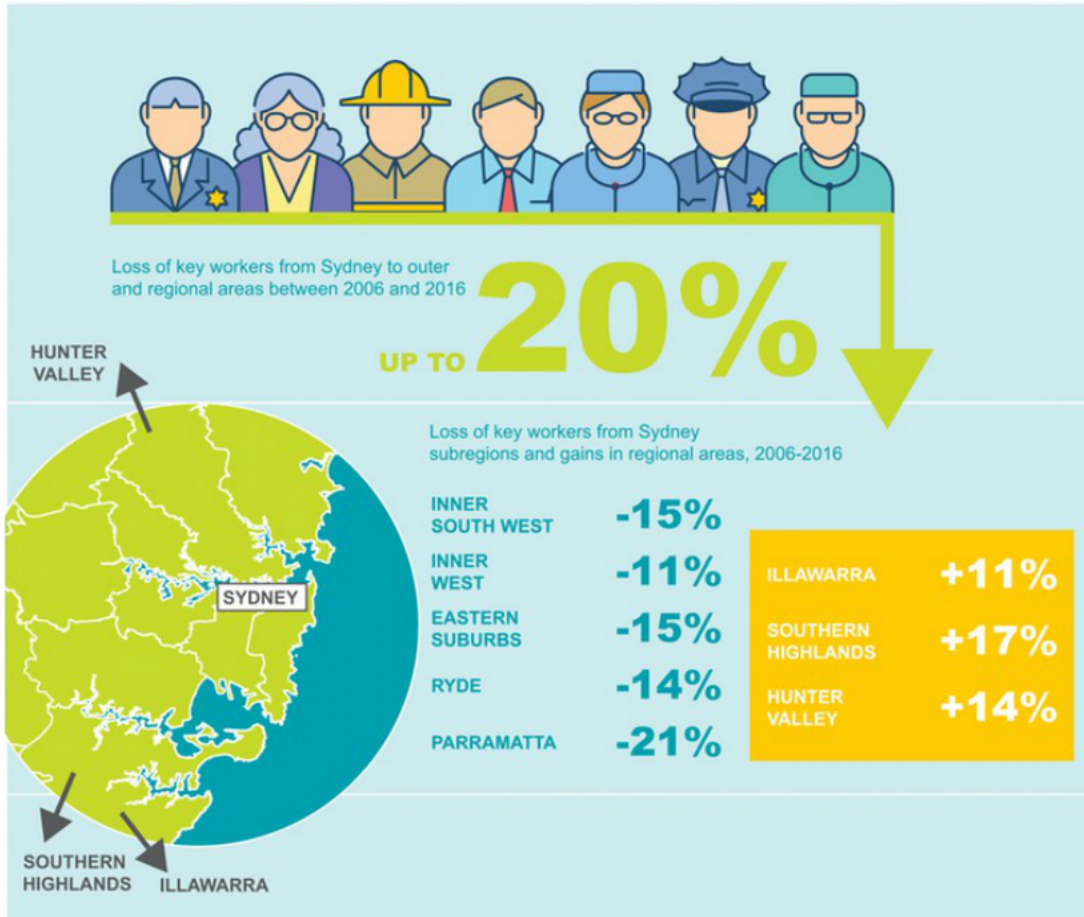
This study found housing purchase for key workers in Wollongong LGA was:

- "Very unaffordable" for single key workers (by more than \$50,000 on the cost of housing purchase)
- "Affordable" for couple households with no dependents
- "Affordable" for a couple household with two dependents.

The approach for determining affordable home purchase prices and benchmarks used in this study can be applied to workers of other occupations to determine their capacity to purchase housing in the LGA.

This study also showed that housing affordability pressures are pushing Sydney's inner city key workers to outer metropolitan areas including Wollongong LGA. Across the decade 2006 to 2016 the inner and middle areas of Sydney lost up to 21.4 % of their key worker populations. Whilst outer suburbs experienced gains of more than 10 percent in their key workers over the same time. Wollongong LGA was rated in the top five LGA's for key workers per 1000 residents in the Greater Sydney Metropolitan Region.

Figure 3.13 Many areas of Sydney have lost their key workers to outer and regional areas.



Source: Gurran et al, 2018.

3.6.8 Council's history with affordable housing

Wollongong City Council has a history of contributing to the development of affordable housing in the LGA. Examples include:

- Council has provided land to community housing providers to support the development of affordable rental housing;
- In 1983 Council and the *Emergency Accommodation Group* assisted with establishing the *Housing Trust* to tackle local affordable housing issues in the community;
- Council has worked in partnership with the NSW Government to develop social housing.
- In July 2018, Council made a submission to the NSW Department of Planning and Environment to request that Wollongong LGA be included in State Environmental Planning Policy No. 70 – Affordable Housing (Revised Schemes) (SEPP 70) to enable Council to develop an Affordable Housing Contribution Scheme for the LGA. In February 2019 the NSW Government announced that this planning policy is now available to all local Councils in NSW. This means Council can proceed with the development of

an Affordable Housing Contribution Scheme for the LGA using the *NSW Government Guideline for Developing an Affordable Housing Contribution Scheme*;

- In 2012, Council received an Australian Government grant through the 'Building Better Regional Cities' program to deliver the *West Dapto Home Deposit Scheme*. This Scheme was not able to be implemented as hoped, because of rapidly rising land prices compared to the statutory personal income limits specified by the grant. In October 2017, Council entered into a memorandum of understanding with the Australian Government to allow the reallocation of these funds, \$10.4 million, to be used to assist with the improvement of affordable housing in the LGA. In December 2018 Council resolved to use this reallocation of funds to establish:
 - a. An expression of interest process whereby not-for-profit organisations are requested to provide affordable housing schemes for consideration of funding. Expressions of interest were sought in August 2019. On 9 December 2019, Council resolved to allocate \$4.34m to the Illawarra Community Housing Trust for the delivery of affordable housing.
 - b. An affordable home-ownership scheme for low to moderate income earners. The implementation of this initiative is currently in progress.

This paper considers options for Council to continue to contribute to the development of Affordable Housing into the future.

Council has also reduced minimum lot sizes over time, although this may benefit housing affordability rather than Affordable Housing. As part of Wollongong LEP 2009 the standard minimum lot size for R2 and R3 land became 449m². Around major proposed town centres in West Dapto a minimum lot size of 300m² has been introduced.

As part of a recent Planning Proposal for part of Stage 3 in West Dapto, Council permitted a minimum lot size of 249m² which will enable the developer to provide a range of housing products from small to large lots.

As part of the draft West Dapto LEP (2008), Council proposed both minimum and maximum density standards through floor space ratios to discourage medium density land being subdivided into standard lots. This maximum density provision was not supported by the (then) Department of Planning as it did not comply with the standard LEP instrument.

3.6.9 Government Policy and Legislation for Affordable Housing

There is a range of Government Policies and Legislation to support the supply and protection of affordable housing that sit across social and land use planning categories. It is important for Council to remain abreast of the current planning policies and incentives for affordable housing to assist with gaining access to resources for affordable housing for the LGA.

A summary of current government social and land use policies for affordable housing and how these apply to Wollongong LGA if applicable follows.

Australian Government

The *National Affordable Housing Agreement (2009)* provides the Commonwealth Government's overarching direction for affordable housing. It contains a range of initiatives to support the development of new affordable housing and improve housing affordability including:

(a) Financial Initiatives

Financial initiatives have been delivered via this agreement including: *First Home Owners Super Saver Scheme* to assist first home buyers to save; people 65 years and over can contribute \$300,000 from their principal residence to their super; strengthening of capital gains tax rules; an annual charge of \$5,000 to foreign investors of unoccupied dwellings that are not rented for a period of six months or more.

(b) National Housing and Homeless Agreement (2018)

\$4.6 billion in Australian Government funding will be provided to the states and territories including \$375 million for homelessness services. Funding for homelessness services will be ongoing and indexed for the first time, to provide certainty to front line services that help people who are homeless or at risk of becoming homeless.

(c) National Housing Infrastructure Fund (2018)

This fund was made available to provide \$1 billion dollars over five years to support local governments to finance critical infrastructure to address infrastructure bottlenecks that impede development and build the infrastructure to speed up the supply of new housing.

(d) National Housing Finance and Investment Corporation (2018)

The Australian Government has set up the *National Housing Finance and Investment Corporation* to provide low cost loans for investment in housing, with a focus on affordable housing. This initiative is a key part of the Australian Government's plan to help reduce pressure on housing affordability and could potentially assist with providing low cost loans to develop affordable housing in Wollongong LGA.

(e) National Rental Assistance Scheme

In 2008 the Australian Government introduced the *National Rental Affordability Scheme (NRAS)* to provide financial incentives to organisations that provide people on low to moderate incomes with private rental accommodation that is delivered at least 20% below market value. NRAS housing is not social housing but rather affordable private rental housing. The aim of this Scheme is to increase the supply of affordable rental housing, reduce rental costs for low to moderate income households and encourage investment in affordable rental housing.

In 2016 in Wollongong LGA there were 13,142 people in receipt of NRAS and 46.7% of these households were in rental stress despite being in receipt of this rental assistance. The proportion of NRAS households in rental stress increased by 5.5% since 2012 in Wollongong LGA (Table 3.9).

Table 3.8 Number and proportion of National Rental Assistance recipients in rental stress

Area	Total NRAS recipients 2012	NRAS recipients in rental stress 2012	% in rental stress 2012	Total NRAS recipients 2016	NRAS recipients in rental stress 2016	% in rental stress 2016
Wollongong LGA	11,956	4,920	41.15%	13,142	6,132	46.7%
Shellharbour LGA	3,632	1,255	34.55%	3,960	1,603	40.48%
Greater Sydney				228,180	115,735	50.7%
Rest of NSW	181,401	58,843	32.44	201,580	70,760	35%

Source: NSW Local Government Housing Kit, 2019.

NSW Government - Land Use Planning Legislation and Policy

(a) NSW Environmental Planning and Environmental Assessment Act 1979

The *NSW Environmental Planning and Environmental Assessment Act 1979* (the Act) includes an objective to promote the delivery and maintenance of affordable housing. The Act enables Council to enter into Voluntary Planning Agreements (VPA) with developers to deliver infrastructure outcomes alongside development proposals. A VPA can include the provision of or monetary contributions for affordable housing. In 2019 the Minister issued a Direction to require Councils to consider a range of matters when negotiating planning agreements with developers for the purposes of affordable housing in connection with a development application. Council's wanting to negotiate a planning agreement for the provision of affordable housing, will need to consider the requirements of the Ministerial Direction and will need to prepare and publish a policy that sets out the circumstances where planning agreements will be sought.

(b) State Environmental Planning Policy No 70—Affordable Housing (Revised Schemes) (SEPP 70)

SEPP 70 is a policy which allows Councils to prepare an affordable housing development contribution scheme. In July 2018 Council submitted a request to be included in SEPP 70 and in February 2019, the NSW Government amended SEPP 70 to apply to all NSW Councils. There is a series of steps Council will need to undertake to implement an affordable housing contribution scheme under SEPP 70. Council will need to set out how, where and at what rate development contributions will be collected for affordable housing and provide evidence that the contribution rate will not affect development feasibility. The development of this scheme would provide the community and developers with greater certainty about how affordable rental housing contributions will be determined, and the contribution rate that will be applied as a condition of development consent.

(c) State Environmental Planning Policy Affordable Rental Housing 2009 (ARH SEPP 2009).

In 2009, the NSW Government introduced the ARH SEPP 2009 aiming to increase the supply of affordable rental housing. Application of this Policy has generally resulted in the delivery of secondary dwellings and new generation boarding houses. The ARH SEPP 2009 provides planning concessions and incentives for developers in exchange for affordable rental housing. The SEPP permits secondary dwellings (granny

flats) boarding houses, supportive accommodation, residential flat buildings and group homes. The definition of affordable housing in the EP&A Act relates to income levels and not development types.

Between July 2013 and June 2018, 225 development applications were approved using this planning policy for Wollongong LGA. 212 of the applications were for secondary dwellings (granny flats). A search of rents for secondary dwellings between November 2018 and March 2019 showed 28 secondary dwellings (granny flats) for rent in Wollongong LGA. The rents ranged from \$195 to \$450 with the median rent being \$322. A rent of \$322 is not affordable for very low income households and 90% of low income households. The success of this Policy in delivering affordable rental housing has been limited.

(d) Regional Plan

The *Illawarra Shoalhaven Regional Plan 2015* is a NSW Government strategy to guide land use planning decisions in the Illawarra over the next 20 years. This Plan highlights the need for affordable housing for rent and purchase for lower income households. The Plan indicates that the “NSW Government is aiming to develop a comprehensive approach to this issue that involves the Government, local Council, and the private and community sectors.” However this Plan does not contain strategies or actions to address housing affordability. There is an opportunity for Council to advocate to the NSW Government to address this gap.

NSW Government - Social Policy

(a) Future Directions for Social Housing

Future Directions for Social Housing provides the NSW Governments ten year plan for social housing and contains a range of initiatives which aim to create better outcomes for social housing tenants. Some of the initiatives being delivered via this plan include:

(a) Management Transfer

FACS is transferring the tenancy management of around 14,000 social housing dwelling to community housing providers across NSW. A few community housing providers operating in Wollongong LGA) have accessed property from FAC’s via this process.

(b) Communities Plus

Communities Plus is a large scale \$22 billion program focused on renewing the NSW Government’s social housing portfolio across NSW. Renewal of social housing under this model will produce mixed tenure development and include private market housing.

At present in Wollongong LGA the *NSW Land and Housing Corporation* is renewing two social housing sites, one in Corrimal and one in the Wollongong City Centre precinct. There is opportunity for Council to work with *NSW Land and Housing Corporation* to renew social housing in Wollongong LGA.

(c) Social and Affordable Housing Fund

The *Social and Affordable Housing Fund (SAHF)* is a \$1.1 billion NSW Government initiative to fund the provision of social housing and related services. The NSW Government is investing money to provide an income stream for up to 25 years to boost social and affordable housing, with homes to be built over four years.

The SAHF could be a potential source of funding to support social housing in Wollongong LGA.

Local Government

(a) Local Environment Plan and Development Control Plan

The Wollongong LEP 2009 and Wollongong DCP 2009 are Council’s two key land use planning documents capable of incorporating mechanisms to support the provision and protection of affordable rental housing in Wollongong LGA. In recent years many NSW Councils have taken steps to improve housing affordability. Examples of initiatives other Councils have undertaken include:

- Developing Affordable Housing Policy’s that include strategies specifically targeted to meet the housing needs of their LGA’s;
- Negotiating Voluntary Planning Agreements with developers to provide affordable rental housing contributions;
- Providing land for affordable housing development;
- Developing affordable housing in partnership with community housing providers.

Council cannot include provisions in the Wollongong LEP 2009 for an Affordable Housing Contribution Scheme under SEPP 70 until it goes through a series of steps required buy NSW Government. As part of two recent planning proposals Council resolved to require 5% affordable rental housing. Council can use the LEP to support housing diversity informed by strategic planning. For example: Council in consultation with the community and in alignment with Local Strategic Planning Statements and the Housing Strategy could develop alternative options to support the delivery of affordable housing.

3.6.10 Current Initiatives in Wollongong LGA

SEPP 70 – Affordable Housing Contributions Scheme

Council is working towards developing an Affordable Housing Contribution Scheme under SEPP 70 for Wollongong LGA and for Wollongong City Centre. Section 3.5 of this paper satisfies Step A in this process Establish the Evidence Base for developing this scheme as described in *NSW Governments Guideline for Developing an Affordable Housing Contribution Scheme*.

Figure 3.14 Process for preparing an affordable housing contribution scheme



There is a large body of work that requires resources to progress the remaining steps to implement an Affordable Housing Contribution Scheme for Wollongong LGA.

Council will need to identify areas for future rezoning throughout the LGA. SEPP 70 affordable housing contributions apply to developments that are facilitated by up-zoning. Contributions are drawn from the increase in land value generated by the rezoning. Council will need to analyse opportunities and

constraints across the LGA to identify areas suitable for growth. Areas identified as suitable for growth may be investigated to determine if an affordable housing contribution scheme can feasibly apply at the same time as any rezoning or change of density being amended in Councils LEP.

Once areas for rezoning have been chosen an appropriate affordable contribution rate will need to be determined. This can be either as a percentage of floor space or a monetary contribution or combination of the two. Council will need to test the affordable housing contribution rate to ensure the proposed rate is viable and will not impact development feasibility.

Council will need to prepare a Planning Proposal to amend the LEP to levy developer contributions and provide evidence that the affordable housing contribution rates are viable.

The affordable housing scheme needs to be prepared using the template provided by NSW Government.

Australian Government Grant for Affordable Housing Initiatives

Council is in the process of delivering two affordable housing initiatives using funds from a \$10 million Australian Government grant. This project will deliver affordable housing for rent and purchase in Wollongong LGA. The grant will deliver two initiatives:

- (a) An expression of interest process whereby not-for-profit organisations are requested to provide affordable housing schemes consideration of funding. Expressions of Interest were sought in August 2019.
- (b) An affordable home-ownership scheme for low to moderate income earners.

This initiative is demonstration of Council's commitment to increasing the supply of affordable rental housing Wollongong LGA.

4. Housing Issues

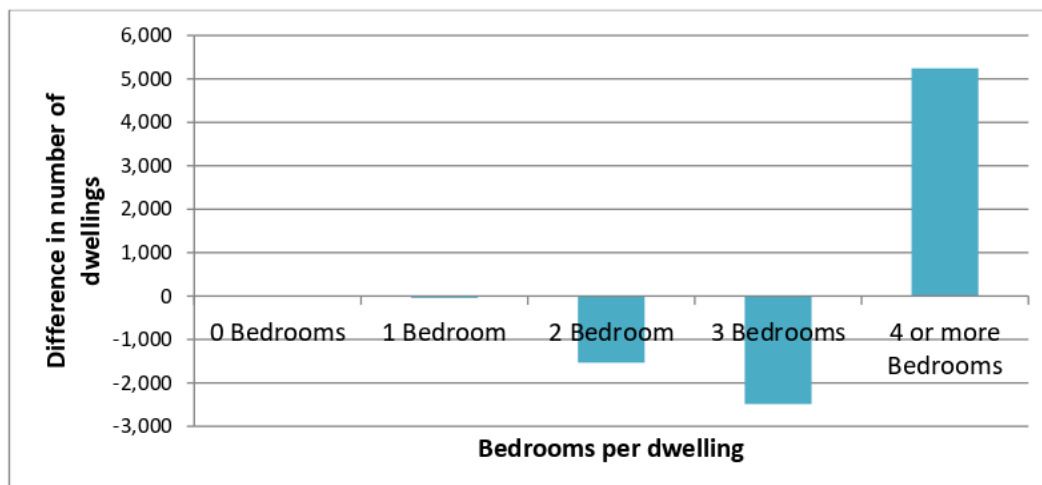
4.1 Diversity of dwellings

Housing stock in Wollongong LGA continues to be dominated by single dwelling houses although the overall proportion of different housing types has changed through time (Figure 2.3). Between 1998 and 2017, 51.2% of development approvals were for single dwelling houses while 48.8% have been for medium and higher density housing types (e.g. villas, townhouses, apartments). Such data suggests medium and higher density housing is feasible, there is market preference for such housing, and current planning controls facilitate this. However single dwelling houses remain the dominant housing type throughout Wollongong LGA.

Analysis of dwelling stock by bedroom number indicates:

- Four bedroom housing stock dominates new release areas and 4 bedroom dwellings were the most common configuration of all dwellings in Wollongong LGA (62% of all stock) while 2 bedroom dwellings comprised 20.9% of stock and one bedroom or studio dwellings 4.8% (ABS, 2016).
- From 2001 to 2016 there has been a dramatic decrease in the number of 1, 2 and 3 bedroom dwellings (regardless of the type or form of housing) (Figure 4.1). This was coupled with an increase in the number of dwellings with four or more bedrooms. Such change included a decrease of 1533 2-bedroom dwellings and 2489 3-bedroom dwellings, and an increase of 5245 4-bedroom plus dwellings.

Figure 4.1 Change in the number of bedrooms in housing stock Wollongong LGA between 2001 and 2016



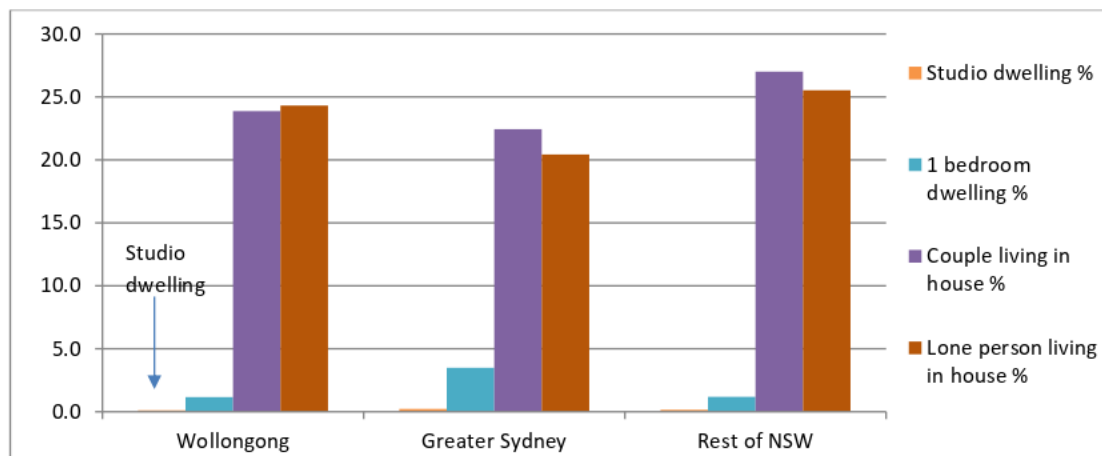
Source: FACS, 2019.

Spatially, housing with 4 + bedrooms dominant in the suburbs that have been subdivided and built from the 1980s until present day e.g. Cordeaux Heights, Farmborough Heights, Edgewood Estate Woonona, West Dapto and Calderwood. Spatially, the location of smaller housing stock (studio, one, two bedroom houses) is declining and unevenly distributed throughout the LGA. Higher concentrations are located

around the City Centre and in suburbs established before 1980's (Profile id, 2019). The dramatic decline in one, two, and three bedroom houses is likely attributed to age of development and renewal of older stock with new, larger dwellings. Such renewal is not an issue in itself. Indeed this is expected to occur and important for Wollongong LGA. Cumulative issues do however arise when large quantities of housing are redeveloped into 4+ bedroom housing e.g. housing affordability, affordable housing, over-housing. Section 3 of this paper discusses affordable housing and housing affordability and presents the results of analysis for the LGA.

The suitability of housing and mismatch between household composition and housing type in the Wollongong LGA also presents a challenge for the future. In 2016, 50% of households were lone person or couples (no children or dependants), with only 1.3% of dwelling stock being studio or one bedroom dwellings. Such challenge is not unique to Wollongong LGA. Similar differences are observed within the Greater Sydney and throughout the Rest of NSW (Figure 4.2)

Figure 4.2 Comparison between household composition and number of bedrooms in Wollongong LGA, Greater Sydney and Rest of NSW



Source: FACS, 2019.

Analysis of housing suitability data in accordance with the ABS 2016 Census highlights the extent of mismatch for different types of housing, tenures and household compositions. Key findings include:

- 52,226 out of a total 84,057 dwellings (or 62.13%) in the LGA had at least one extra bedroom than required in accordance with the ABS housing suitability analysis. More than half of these dwellings had two (or more) extra bedrooms;
- Separate houses were the least suitable housing type throughout Wollongong LGA with:
 - 17,294 (or 20.6% out of all dwellings) having two extra bedrooms and being a separate house;
 - 15,424 (or 18.3% out of all dwellings) having one extra bedroom and being a separate house.
 - 5606 (or 6.6% out of all dwellings) having three bedrooms or more, and being a separate house.
- Tenure type influenced the suitability of housing with housing owned outright being the least suitable to its occupants. 13% of all housing in Wollongong LGA being owned outright and having two or more extra bedrooms.

- 25.8% (or 21,666) dwellings owned outright had at least one extra bedroom than required in accordance with the housing suitability analysis (7257 with one extra bedroom, 10,895 with two extra bedrooms and 3514 with three extra bedrooms).
- 18.0% (or 15,150) dwellings owned with a mortgage had at least one extra bedroom (8426 with one extra bedroom and 6724 with two extra bedrooms)
- 13.3% (or 11,169 dwellings) of households renting had at least one extra bedroom (8433 with one extra bedroom and 2736 with two extra bedrooms).
- 9.2% (or 7838 dwellings) being rented matched the household needs while only 2.8% of houses owned outright and 4.7% of houses owned with a mortgage, were deemed suitable and matched the household needs.
- 16% of all dwellings (or 13,462 dwellings) regardless of tenure in Wollongong LGA has one or two extra bedrooms and were lone person households.

Housing suitability analysis highlights the extent of the mismatch between the type of housing in which Wollongong LGA's residents live and the likely needs of the households. There are many factors which influence where people live and the type of housing that they live in. It also recognised that all households are in a state of change and there is likely to be a proportion of households looking to increase in size in the future, and a proportion which will decrease in size.

4.2 Land and Environmental Constraints

The urban area of Wollongong is located on a coastal plain, bounded by the ocean and Illawarra Escarpment. The Illawarra Escarpment has elevations in the order of 450 to 500 mAHD, elevations and the slopes drop away steeply toward the east and south, with elevations of around 50 mAHD reached within one to two kilometres. In the north of the Wollongong LGA, the Escarpment meets the ocean at Scarborough, Coalcliff and Stanwell Park, whereas in the south it is separated by Lake Illawarra. Such setting creates the beauty and attractiveness of the place, but also introduces a number of constraints to development.

The early agricultural land grants, and subsequent subdivision into smaller lots for housing and towns did not have regard to the constraints of the area. Many towns were located adjacent to watercourses for the supply of water, however it is now known that these creeks flood. The trees on the coastal plain and escarpment were cut down for firewood, forestry or mining. Subdivision and development did not include bushfire protection measures. Climate change and sea level rise were not considered.

The current planning controls have their origins in the 1950s, and reflect the development that existed at the time. The town centres were zoned for commercial development, the housing areas zoned for residential development and the industrial areas for industrial development. Since the 1970s, Council has had a greater regard to land constraints and has changed planning controls to restrict new development on the Illawarra Escarpment, coastal cliffs and flood prone areas. The planning for new release areas, such as West Dapto, now takes into consideration the constraints of the land, as well as having regard to previous land practices that may have contaminated the land.

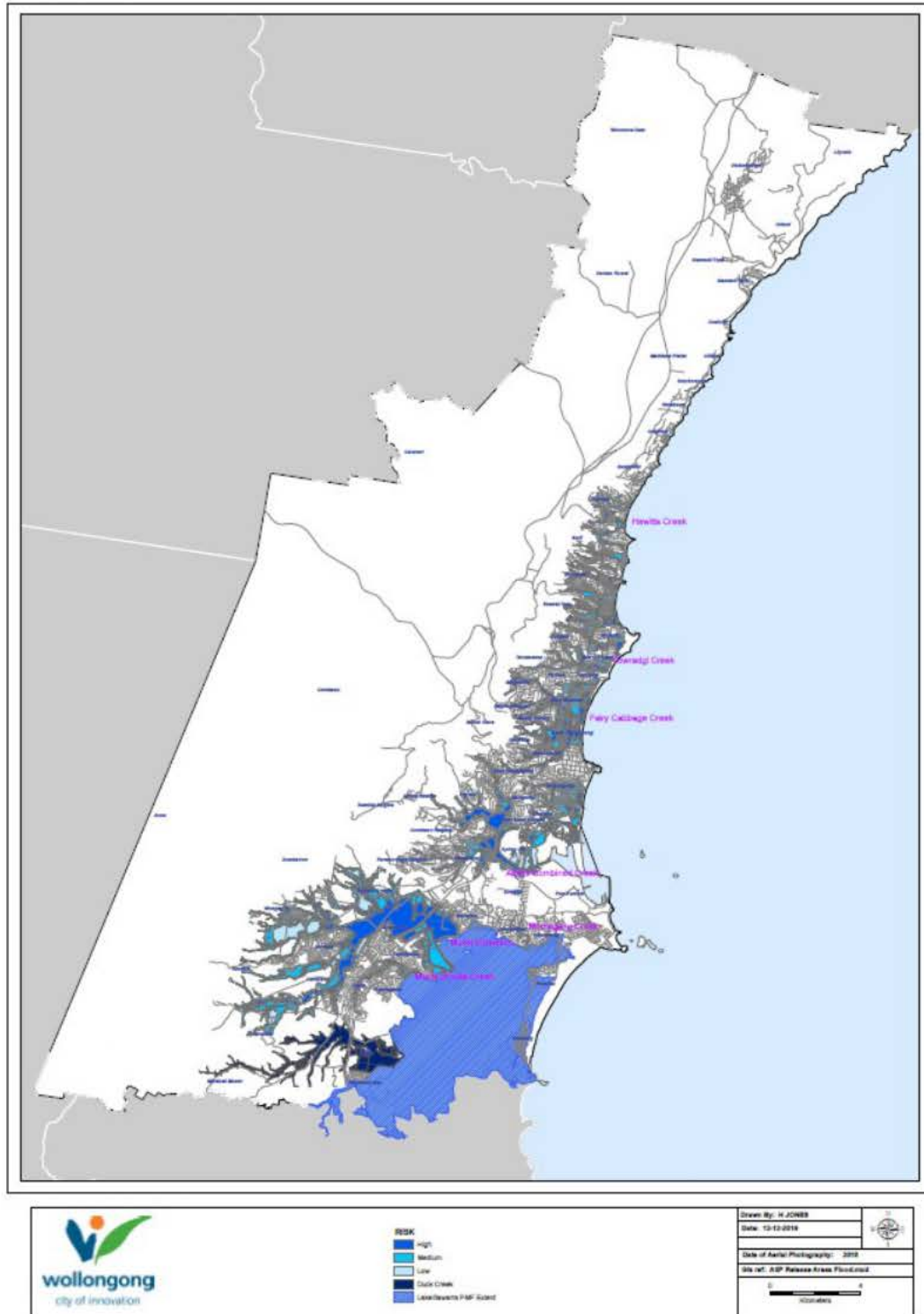
As part of the preparation of the Wollongong Local Environmental Plan 2009, Council was required to review and standardise the planning controls to reflect the State's Standard LEP Instrument. This resulted in an amalgamation of the residential zones. The majority the residential area is zoned R2 Low Density Residential, with some precincts zoned R1 General Residential, R3 Medium Density Residential and E4 Environmental Living.

The generic nature of the R2 Low Density Residential zone requires review so that it better reflects the land constraints.

4.2.1 Flood prone lands

Due to the steep escarpment slopes, narrow coastal plain and orographic rainfall patterns, the Wollongong LGA is prone to flash flooding. The historic development patterns means that many developed areas can be affected. Council has completed recent flood studies for 10 catchments, and is preparing a draft study for another catchment. Council is now preparing draft floodplain risk management studies and plans for 3 catchments and will be preparing draft studies for the other catchments over the coming years. Some more minor catchments have not been studied, but may still contain flood prone land. Figure 4.3 shows the extent of flood prone lands based on the completed Flood Studies.

Figure 4.3 Flood prone lands



Based on the mapping there are some 2,706 lots zoned for residential purposes that are high hazard flood prone, as summarised in Table 4.1. Council’s policy is to not permit the up-zoning or densification of land with a medium or high flood risk (i.e. above the 1% Average Recurrence Interval).

Table 4.1 Land zoned for residential purposes that are flood prone.

Zone	No. lots with Low hazard (>1%ARI – PMF)	No. lots with Medium hazard (up to 1% ARI)	No. lots with High hazard	Total
R1 General Residential	22	38	43	103
R2 Low Density	3,153	6,711	2,637	12,501
R3 Medium Density	71	345	26	442
E4 Environmental Living	unknown	unknown	unknown	
Totals	3,246	7,094	2,706	13,046

The introduction of State policies, such as the Low Rise Medium Density Code (discussed in section 5.1.3 of this paper), permits forms of medium density in areas which have typically been single dwellings, and to be approved by private certifiers who may not have regard to the flood constraints of an area.

In the new release areas, such as West Dapto, the 1% ARI defines the edge of the developable land and the residential zonings. Residential development on land with a low flood risk (above the 1%ARI) is permitted, provided the dwellings have a flood level above the flood planning level plus 0.5m. Whereas in older / established communities, the residential development has occurred on the floodplain, and has resulted in the large number of properties with a medium and high hazard risk.

An option for Council to consider is whether the planning controls should be reviewed to reduce the development opportunities on land with a medium and high hazard risk.

Conversely, some sections of the development industry would like Council to relax the controls on flood prone land, to make more land available for housing. Some of the challenges of this approach would be that in the event of a flood, Council and the community would be left to fund the clean-up. Additionally, householders may not be offered flood insurance due to the flood risk.

4.2.2 Riparian Corridors

Riparian lands form the transition between terrestrial and aquatic environments, i.e. land adjacent to watercourses.. There are a number of definitions. From a geomorphological perspective riparian land as land which adjoins or directly influences a body of water, including:

- land immediately alongside small creeks and rivers including the river banks itself;
- gullies and depressions that sometimes run with surface water;
- areas surrounding lakes; and
- wetlands on river floodplains which interact with the river in times of flood. (DIPNR 2004).

Riparian land is generally the most fertile and productive part of the landscape in terms of primary production and ecosystems and often supports a higher diversity of native flora and fauna species than non-riparian land. Riparian land provides a number of important environmental and other values which can include:

- a diversity of habitat for terrestrial, riparian and aquatic species;
- a food source for a diversity of aquatic and terrestrial fauna (such as organic material, fruiting and flowering plants);
- promotion of the movement and recolonisation of individual species and plant and animal populations;
- shading and temperature regulation;
- conveyance of flood flows;
- settlement of high debris loads;
- reduction of bank and channel erosion through root systems binding the soil;
- water quality maintenance through the trapping of sediment, nutrients and other contaminants;
- an interface between development and waterways;
- visual amenity; and
- a sense of place with green belts or riparian bushland naturally dividing localities and suburbs (DIPNR 2004).

Based on Council’s mapping there are 3,770 lots zoned for residential purposes that contain riparian corridors, as summarised in Table 4.2.

Table 4.2 Lots zoned for residential purposes containing riparian corridors.

Zone	Category 1 Environmental Corridor	Category 2 Terrestrial & aquatic habitat	Category 3 Bank stability & water quality	Total
R1 General Residential	2	0	20	22
R2 Low Density	583	1,483	1,388	3,454
R3 Medium Density	6	6	15	27
E4 Environmental Living	147	78	42	267
Total	738	1,567	1,465	3,770

The riparian corridors can be aligned with the floodplain, be contained within the floodplain or extend beyond the floodplain, depending on the width of the floodplain. For small watercourses, the riparian corridor can extend beyond the floodplain. Whereas on more significant watercourses, lower in the catchment, the riparian corridor is a small part of a wide floodplain.

4.2.3 Illawarra Escarpment and Steep Slopes

The Illawarra Escarpment forms a natural boundary and scenic backdrop to the Wollongong coastal plain. It is one of the most important landscape and cultural features of the Illawarra region and has high aesthetic value to the local community. The escarpment study area covers an area of approximately

9,570ha. In the north, the escarpment joins the coast. Further south, as the coastal plain widens, the escarpment retreats westward following the cliff line and foothills. In the south, the coastal plain broadens to the west of Lake Illawarra. The escarpment and foothills create a dominant landscape unique to the Illawarra.

The Illawarra Escarpment contains approximately 2000 parcels of land in approximately 1300 separate ownerships. The majority of the area is in private ownership, with 40.5% in public ownership. The National Parks and Wildlife Service account for almost 29% of the escarpment area, with all other public land owners combined making up the remaining 11%. (WCC 2015). Table 4.3 summarises the zoning of land within the Illawarra Escarpment Strategic Management Plan area. The Escarpment Plan did not include land zoned for Residential development

Table 4.3 Zones within the Illawarra Escarpment area.

Zone	Area (ha)	Percentage
E1 National Parks and Nature Reserves	2768	27%
E2 Environmental Conservation	3976	39%
E3 Environmental Management	1836	18%
E4 Environmental Living	244	2%
RE1 Public Recreation	52	1%
RE2 Private Recreation	80	1%
RU1 Primary Production	154	2%
RU2 Rural Landscape	638	6%
SP2 Infrastructure	346	4%

There are many lots zoned R2 Low Density Residential from Stanwell Park to Farmborough Heights that are located on the Escarpment and its foothills, but are located outside the Escarpment Strategic Management Plan study area.

The steep slopes of the Illawarra Escarpment and its foothills creates an attractive environment to live. However, it is constrained by the steep slopes, vegetation cover, bush fire risk, geotechnical risk and watercourses that can flood.

In terms of steep slopes, land with a slope of more than 11 degrees (20 percent) is considered to be unsuitable for urban development, while slopes of 8 – 11 degrees (15-20 percent) is marginal for urban development (Department of Planning 1988).

Steep slopes across the Wollongong LGA and the underlying soils and geology create land stability and/or geotechnical risks. The Illawarra Escarpment contains many known areas of landslip, rockfall (such as the bare cliff faces), as well as areas of landslide and mass movement. Sections of the South Coast Rail line are closed, or train speeds reduced, after periods of heavy rain due to the risk of land slip. At Coledale, the Sea Cliff bridge has replaced a section of Lawrence Hargrave Drive which was periodically closed due to rockfall.

Much of the Illawarra Escarpment and its foothills has been mapped as being subject to known or likely geotechnical risk (Figure 4.6)

Figure 4.4 Illawarra Escarpment

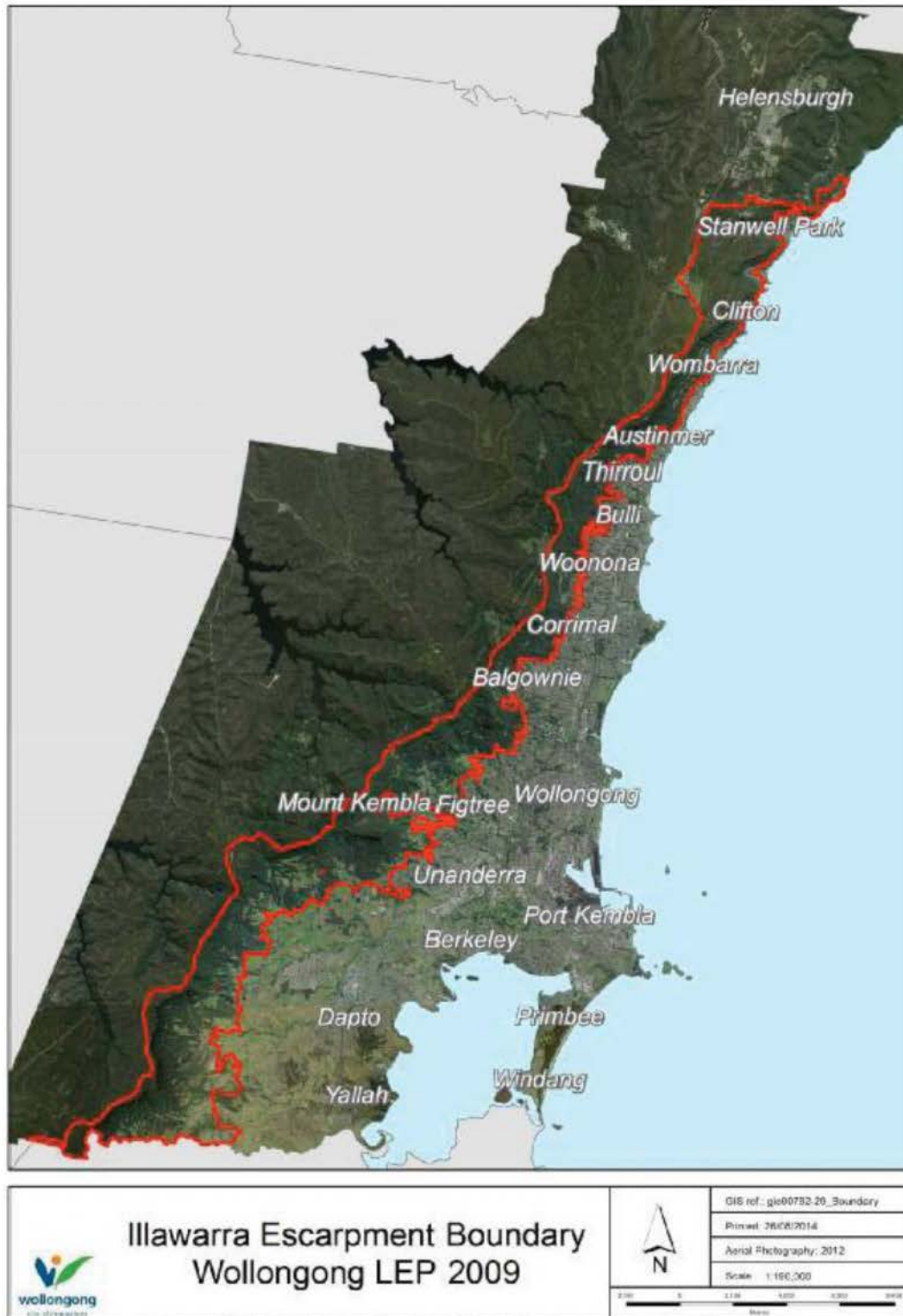
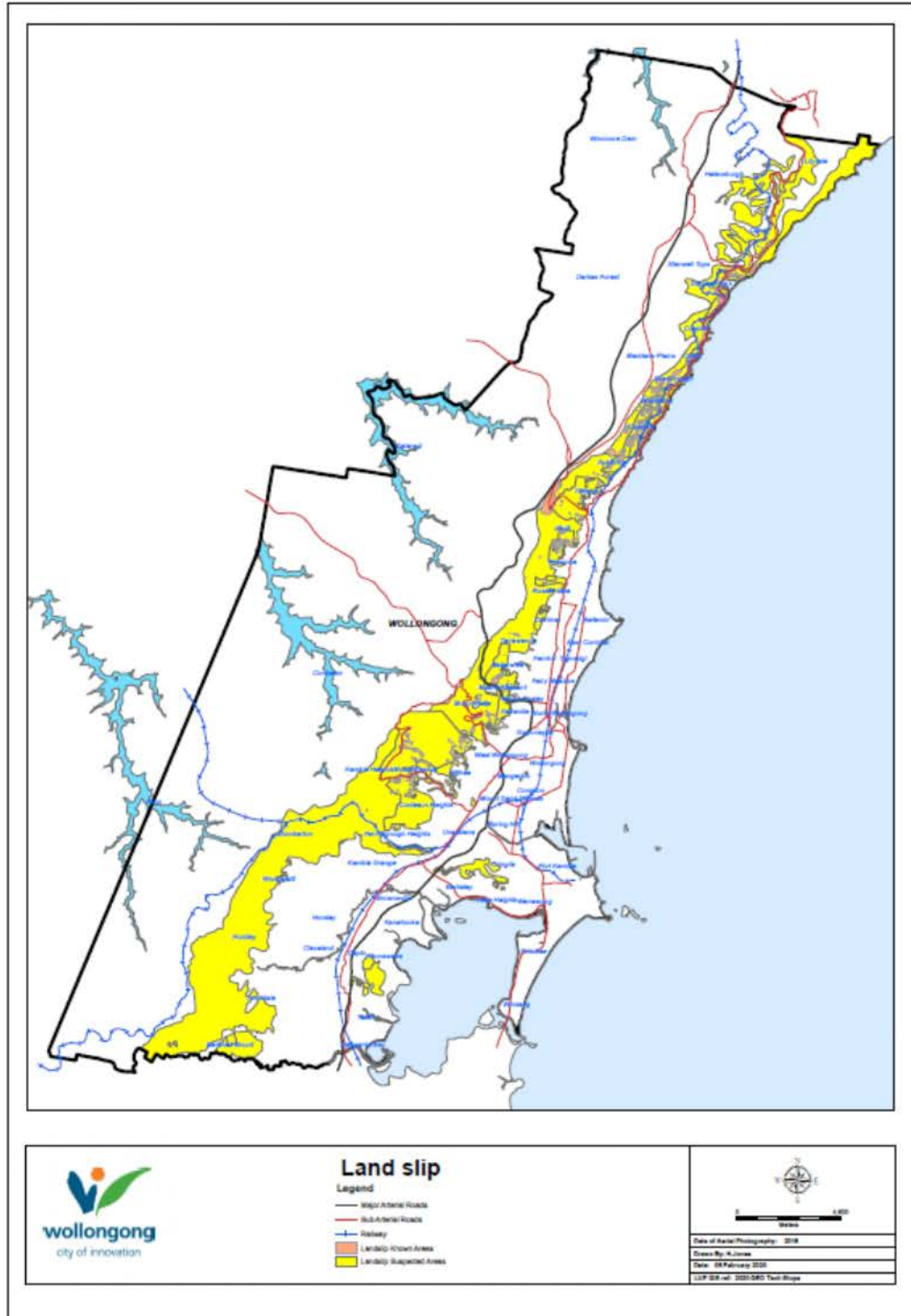


Figure 4.5 Slope class



Figure 4.6 Landslip risk



Soil landscapes have been mapped by the (then) Soil Landscape Service of NSW, and show areas of land that have recognisable and specifiable topographies and soils, that are capable of presentation on maps, and can be described by concise statements (Hazelton and Tille 1990). The Soil Landscape provide an indication of the soil and landscape limitations for development, including whether the particular soil landscape is capable of rural and urban development. It is noted that some existing suburbs have been developed on soil landscapes that are indicated as not being capable of urban developed.

Some of the Soil Landscape not considered suitable for urban development include the Colluvial Soil Landscapes of Hawkesbury, Illawarra Escarpment, the Residual Soil Landscapes of Maddens Plains, and the Marine Soil Landscape of Wollongong.

4.2.4 Bush fire prone lands

The steep slopes, water catchment area and forested nature of the LGA means that many properties have a bush fire risk. Some residents remember the 1968 bush fires along the Illawarra Escarpment, and in 2001 bush fires destroyed buildings in Helensburgh.

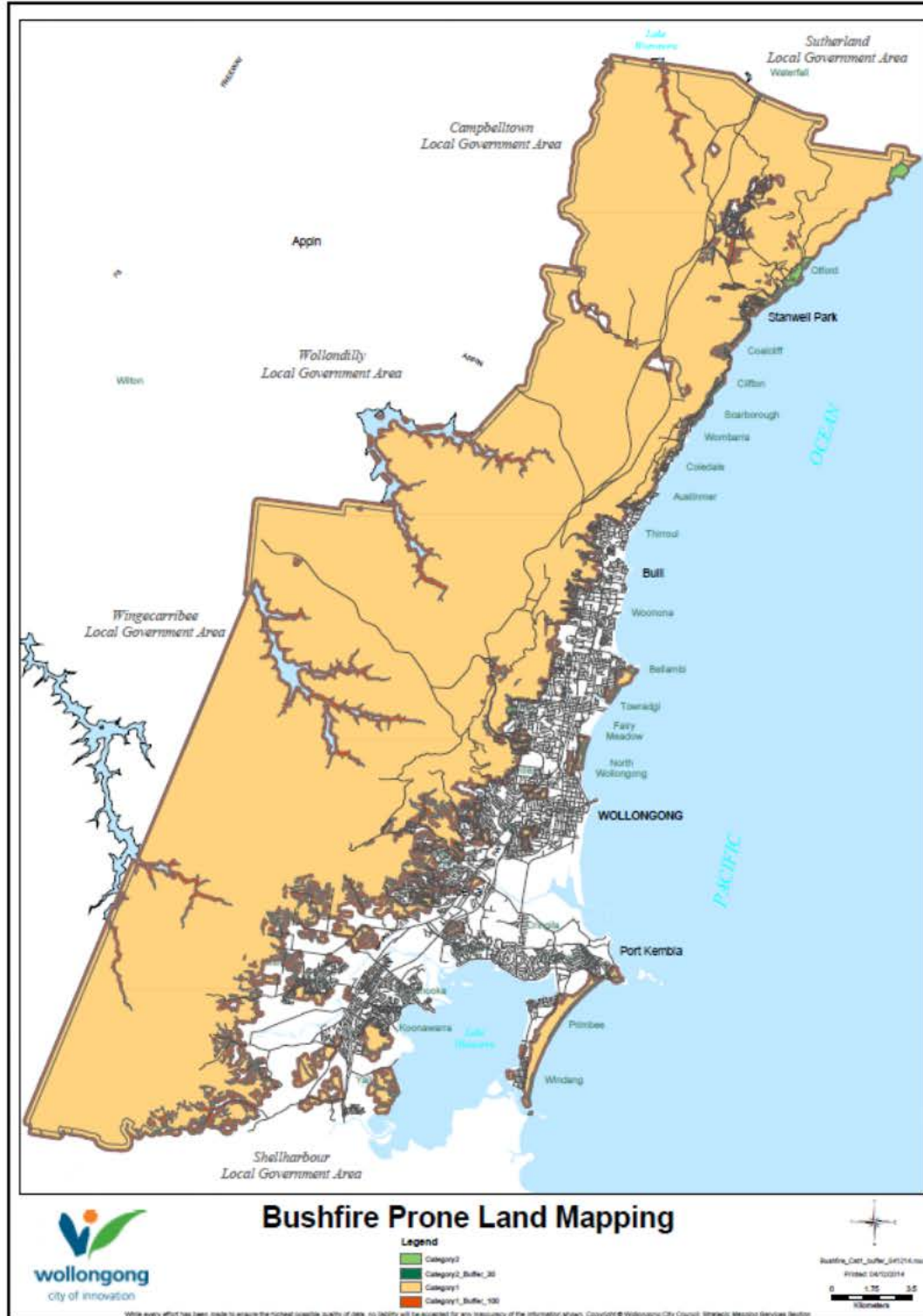
Council is required to map the bush fire hazard based on the Planning for Bush Fire Protection Guidelines (RFS 2019). The current bush fire prone lands map is shown in Figure 4.7. As well as forests, pastures also have a bush fire risk and are required to be mapped. Table 4.4 summaries the number of residential properties affected by moderate and high bush fire risk.

Table 4.4 Lots zoned for residential purposes containing bush fire prone land.

Zone	Category 1 - High	Category 2 - Moderate	Total
R1 General Residential	0	0	0
R2 Low Density	638	30	668
R3 Medium Density	179	0	179
E4 Environmental Living	360	14	374
Total	1,177	44	1,221

As well properties affected by bush fire risk, another important consideration is evacuation routes. Planning for Bush Fire Protection Guidelines requires 2 access routes for new residential development. Many older residential precincts and subdivisions may only have one route of access, and are difficult to retrofit or improve access options.

Figure 4.7 Bush fire prone lands



4.2.5 Sea level rise and coastal inundation

The Coastal Zone Management Plan (BMT WBM Pty Ltd 2017) noted that the Wollongong Coastline is characterised by a series of mostly small pocket beaches north of Port Kembla, and the larger sweeping sandy Perkins Beach extending south from Port Kembla to the Lake Illawarra entrance. The northern section of the Wollongong LGA coastline comprises long sections of headlands and cliffs, with occasional pocket beaches.

The interaction of natural coastal processes and the built environment results in hazards and associated risks along the Wollongong coastline. The Wollongong Coastal Zone Study (Cardno, 2010) identified the coastal hazards and the areas potentially impacted by 2100. Coastal hazards include storm-based beach erosion, longer-term shoreline recession, backwater inundation and overtopping due to elevated sea levels and waves during storms, and instability of cliffs and coastal headlands. Overprinted on these hazards are the potential impacts of future climate change, particularly sea level rise.

Cardno (2010) produced coastal hazard lines (representing the combined effects of erosion, recession and sea level rise) for the years 2010 (immediate timeframe), 2050 and 2100. The hazard assessment adopted the NSW Government's standard sea level rise projections of 0.06m by 2010, 0.4m by 2050 and 0.9m by 2100 above 1990 mean sea level. Although the NSW standard sea level rise benchmarks are now revoked, on 26 August 2013, Wollongong City Council resolved to continue to use the same benchmarks for its planning and development decisions.

The Wollongong Coastal Zone Management Plan used the hazards assessment to identify and evaluate the risks to the Wollongong community associated with on-going coastal processes, and has developed a series of management strategies to manage and treat these risks to an acceptable level.

Giving consideration to both likelihood and consequence, coastal risks along the Wollongong Coastline were defined as 'Low', 'Medium', 'High' or 'Extreme'. Risks were established for immediate, 2050 and 2100 timeframes, highlighting a shift in risk profile with time, as sea levels rise and other climate change impacts begin to manifest. 'Extreme' and 'High' risks were considered to be intolerable. That is, these risks cannot be accepted by the community, and as such, require mitigation or treatment through specific risk management actions.

The Plan identified that there are many private properties along the Wollongong Coastline that are potentially affected by existing and future coastal risks. Coastal inundation was considered to be a relatively low risk, as it is temporary and usually does not occur with destructive impacts.

Storm erosion on the other hand is of much greater consequence, as loss of land or foundation capacity can completely destroy buildings and other assets located within the impact zone. The Plan identified two existing residential dwellings that are at significant risk in the future from storm erosion, one located at Thirroul Beach, and the other located at McCauleys Beach. The Plan found that it was impractical to protect these individual properties without having significant impact on the overall beach amenity. The Plan recommended that in the long-term, when these properties are at risk, they be acquired and made public land.

4.2.6 Ecology, flora and fauna

Some 51,310 hectares (72%) of the Wollongong LGA is covered in natural bushland. Of this area, some 33,257ha (47%) is located in the Water Catchment Area and 6,037ha (8.5%) in National Parks and 1,020 ha (1.4%) is owned by Council, the remainder being on private property or Crown land.

The Illawarra Biodiversity Strategy (WCC 2011) noted that there were 19 Endangered Ecological Communities (EECs), 3 Endangered populations, 69 threatened fauna species, and 31 threatened flora species listed under the (then) NSW Threatened Species Conservation Act 1995 or the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) in the Illawarra. Most of the vegetation on the coastal plain is listed as an EEC. Other EECs also occur on the Illawarra Escarpment, and the Woronora Plateau.

There remains 19 Endangered Ecological Communities (EECs) within the Illawarra, of which 17 occur within the Wollongong LGA. The key changes since publication of the Strategy are:

- Coastal Upland Swamp was in 2011 considered to only equate to the EPBC Act listed 'Temperate Highland Peat Swamps on Sandstone' it is now separately recognised by Biodiversity Conservation Act and Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) determinations as 'Coastal Upland Swamp in the Sydney Basin Bioregion'.
- Some of the previous Threatened Species Conservation Act / Biodiversity Conservation Act listed Threatened Ecological Communities have been elevated to EPBC Act listings from 2011 onwards.

It is important to manage and conserve remnants of all these EECs, however a number of them are critically important to the Illawarra as most of their distribution and therefore management responsibility occurs solely within this region. Based on the Strategy, the Council has adopted the following approach:

1. Retain – conserving existing natural areas
2. Regenerate – bushland that has been degraded or disturbed
3. Replant – only after a site's natural ability to regenerate has been assessed as poor.

In 2018 Council adopted the Urban Greening Strategy. Urban greening seeks to increase the quality and quantity of all vegetation and open green space on all land types in an urban setting. Wollongong's average urban tree canopy cover is well below the national average of 39% (ISF Benchmarking report). Optimal urban canopy cover is estimated at 35-40%.

The Urban Greening Strategy presents a vision for a coordinated approach to managing urban vegetation and outlines the steps required to implement a program of planning and targeted investment in public urban greening. It is a strategic document that will be used to shape the future of urban greening in Wollongong over the next 20 years.

The trend towards smaller residential lot sizes and larger houses has reduced the amount of space that is available for tree planting on individual lots. Consequently, street trees, parks, and natural areas are increasing important for:

- Shade and cooling
- Storing and sequestering carbon
- Reduced sun exposure
- Increased sense of local identity
- Encouraging outdoor activity
- Reconnecting people with nature
- Reduced infrastructure costs
- Increased property values
- Attracting investment

4.2.7 Climate Change and Emissions Reduction Target

Climate change is a global issue that requires action at the local level. Many actions to adapt to and mitigate the impacts of climate change will need to be led by other levels or government, businesses,

industry and our community. We are committed to working in partnership with other local councils, government, businesses and our community to reduce emissions and adapt to climate change.

Council is one of 90 Australian Councils that have declared a state of Climate Emergency.

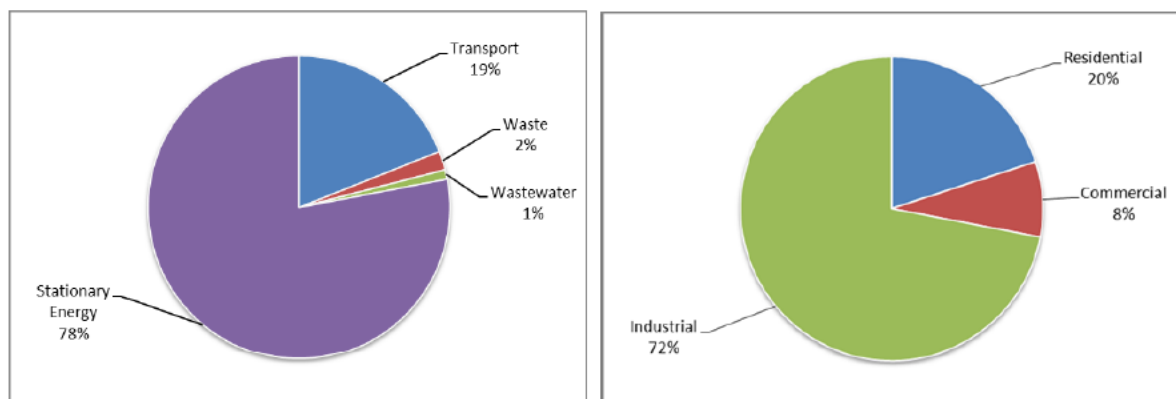
Council is one of 26 Councils in Australia to commit to greenhouse gas reduction through the Global Covenant of Mayors for Climate and Energy (GCoM). As part of the GCoM requirements and our commitments to climate action, Council has set emissions reduction targets for both the community and for Council operations. These targets are:

- Net zero by 2050 for the Wollongong Community
- Net zero by 2030 for Council operations

Residential development contributes 20% of current LGA emissions. Street lighting contributes 6% of Council's emissions (or 0.3% of the LGA emissions).

Figure 4.8 Wollongong emissions

Wollongong emissions by source (below left) and by sector (below right)



A Climate Change Mitigation Action Plan is now being prepared to guide how the targets are going to be achieved. Possible actions suggested by the community during the exhibition period, to reduce emissions from residential development, include:

- Installation of solar panels on residential, government and commercial building.
- Requiring minimum solar power systems for new developments.
- Leveraging the uptake of renewables by the community, schools and businesses, including rebates, subsidies or low interest payment plans.
- Investigating opportunities for the development of green industry and green jobs, including the installation of community batteries.
- Building design controls – such as those being developed by the University of Wollongong's Sustainable Buildings Research Centre.
- Connectivity and better access to wide cycle paths and shareways.
- Providing access and adequate facilities in the central business district (CBD) to complement public and active transport.
- Improvements to public transport access, timetables and infrastructure (including expansion of the Gong Free Shuttle) to reduce cars in the CBD.

- Expand and allocate parking for ride/car share schemes in the City.

4.2.8 Heritage

Wollongong's heritage places include historic buildings, industrial infrastructure, cemeteries, ocean pools and memorials. But our heritage is much more than just architectural forms. Rural lands, mining sites and cultural and natural landscapes of importance to the Aboriginal community are all entwined to form our shared heritage. There are currently over 490 local heritage items and nine Heritage Conservation Areas identified in the Wollongong Local Government Area. Of these, 24 items and one Heritage Conservation Area are identified as being of State significance and are listed on the State Heritage Register.

Additionally, there are thousands of Aboriginal sites and cultural landscapes that are highly significant to the local Aboriginal Community. Iconic landscape features such as the Illawarra Escarpment, Mt Keira, Mt Kembla, the Five Islands and Hill 60 have stories associated with their creation.

Aboriginal sites, heritage items, heritage conservation areas and other significant buildings and cultural landscapes contribute to the character of the LGA. The conservation of Wollongong's heritage provides future generations with important linkages with the past. Our heritage should be conserved and celebrated.

Wollongong Heritage Strategy 2019-2022

On 28 October 2019, Council adopted an updated Heritage Strategy and Action Plan 2019-2022. The Strategy sets out 9 key Heritage Strategies and associated implementation actions. Key actions relevant to housing include:

Strategy 4 – Develop and Implement programs and projects that aim to achieve pro-active heritage management

- **Action 4.9:** Provide Conservation Incentives for appropriate development to heritage properties through the Conservation Incentives clause in the Wollongong Local Environmental Plan 2009;

Strategy 6 – Identify and manage key heritage precincts, streetscapes, cultural and natural landscapes

- **Action 6.4:** Ensure Heritage Conservation is a key consideration in the development of Council's Town and Village Planning studies;

Strategy 9 – Promote Sustainable Development as a tool for heritage management

- **Action 9.2:** Actively encourage the adaptive reuse of heritage sites and offer incentives to this end, including waiver of Development Application & Construction Certificate Fees and Section 94 Contributions and offering free pre lodgement advice for adaptive re-use projects.

Planning Controls

Wollongong LEP 2009

Clause 5.10 of the Wollongong LEP 2009 requires Council to consider the effect of any proposed development on the heritage significance of heritage items, places, Heritage Conservation Areas,

archaeological sites as well as on places of Aboriginal Heritage Significance” and Aboriginal objects before granting development consent. The clause includes a range of provisions including a Conservation Incentives Clause which provides for flexibility of use where this provides for conservation of a heritage site.

Wollongong DCP 2009

Chapter E10: Aboriginal Heritage of the Wollongong DCP 2009 requires a pre-cautionary approach to places of Aboriginal heritage significance and requires appropriate Aboriginal archaeological and cultural heritage assessment to be undertaken for any new land use activity or development on areas known or likely to be culturally significant. Consultation with the Aboriginal Community is an important part of the assessment process and should provide for meaningful cultural input. This should lead to real conservation outcomes.

Chapter E11: Heritage Conservation in the Wollongong DCP 2009 requires any development with respect to or in the vicinity of a heritage site is undertaken in a manner that is sympathetic to the significance of the site as well as prompting innovative design responses to heritage contexts.

Heritage and Housing

A significant proportion of the listed heritage items in the LGA are used for residential purposes or located within residential zones, with 56.8% of all local heritage listings falling within a residential zone. These properties often provide significant contributions to the character of local communities and suburbs and are part of the fabric of local communities. Table 4.5 below provides a snapshot of the number of local heritage items located within the residentially zoned lands in the LGA.

Table 4.5 Lots zoned for residential purposes containing a heritage item (note this is excluding recorded Aboriginal sites)

Zone	Local Heritage Items	State Heritage Items	Total
R1 General Residential	28	1	29
R2 Low Density	149	1	150
R3 Medium Density	12	0	12
E4 Environmental Living	31	0	31
R5 Large Lot Residential	2	0	2
Total	222	2	224

Note: A single heritage listing may span across multiple land use zones.

Whilst the provision of new housing and intensification of development in existing residential areas is important, new development has the potential to impact on the significance of these items, and the local character of our individual communities. It is important to explore creative solutions to this complex problem and to provide opportunities for positive conservation outcomes whilst delivering new housing opportunities. Adaptive reuse of heritage items, as well as sympathetic additions and alterations to existing heritage items and sites can provide positive housing outcomes whilst ensuring long term conservation of heritage sites.

Challenges

Heritage listing is often seen as a constraint to development, as it has the potential to reduce development yields, require the use of more expensive specialists and materials and slow assessment timeframes. There are several key challenges Council faces in the development of Heritage places:

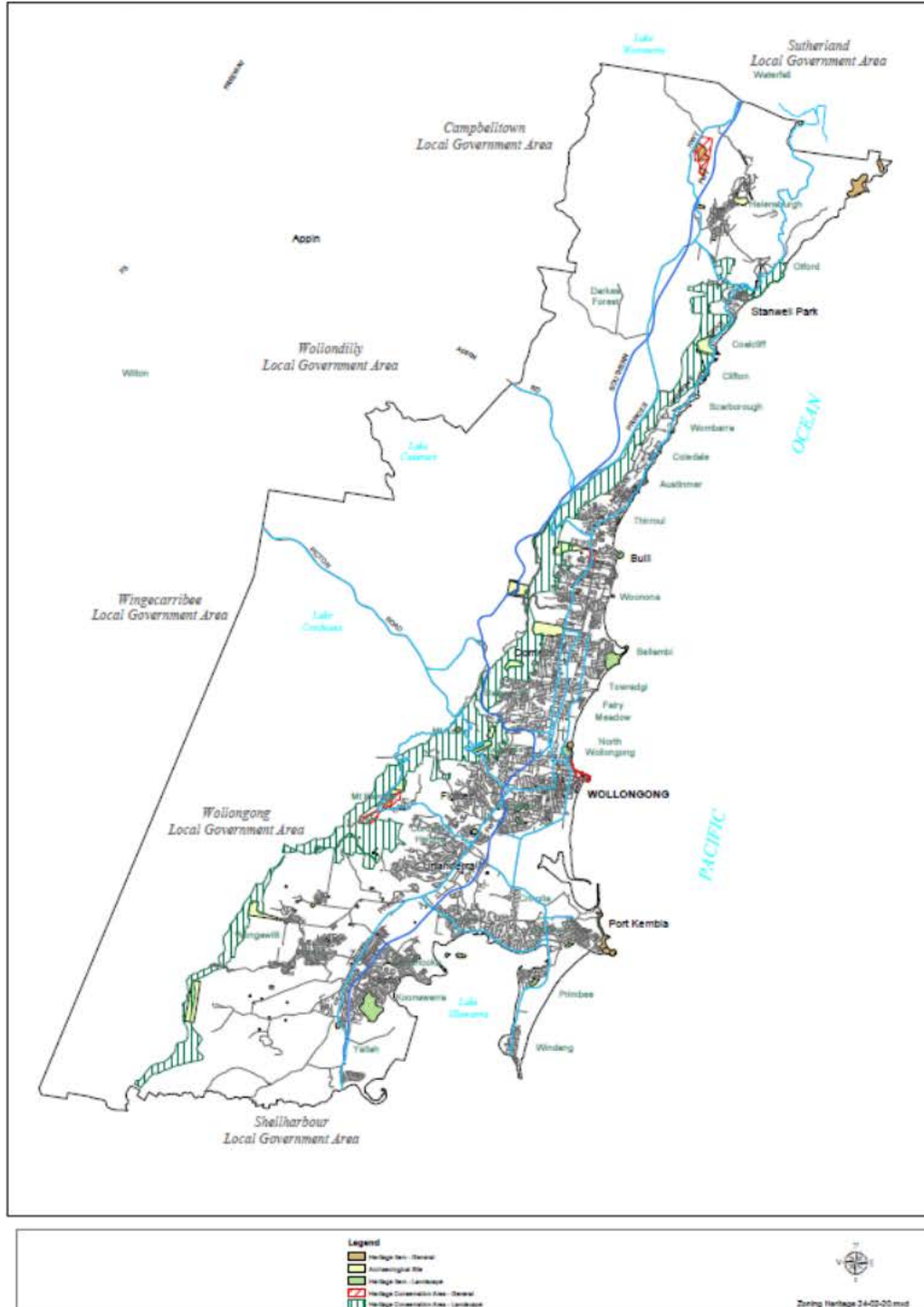
- Subdivision of residential sites can reduce future development opportunities that could fund conservation works to heritage sites;
- Heritage buildings are not always easily adaptable for new uses as demolition of significant fabric can be required to adapt buildings to new use requirements and building standards;
- Alterations and additions or infill development do not always respond well to heritage contexts and can be unsympathetic to heritage items and their settings, eroding the significance of heritage sites and Conservation Areas.

Opportunities

Despite these challenges, Heritage places within the LGA also contribute to a range of positive social, sustainability and urban design outcomes provide opportunities in the context of residential areas and housing needs. Innovative responses to heritage contexts can have flow on effects for not only local communities but also for tourism, the economy and the overall vibrance of the LGA:

- Heritage sites, places and landscapes create a strong sense of place for communities and contribute to local character and identity. Engaging heritage outcomes can contribute to social sustainability and help to build robust and active local communities (Design Guide for Heritage, Government Architects Office, 2019) This is particularly important in areas identified for increased housing density, urban growth and rural greenfield sites with emerging characters.
- Heritage places create the backdrop and context for evolving contemporary places with tangible links to the past. This creates the setting for new additions, infill projects and design projects to respond to and positively contribute to existing urban character (Design Guide for Heritage, Government Architects Office, 2019). This context should guide housing offers and typologies to respond to our diverse local character areas;
- The conservation and ongoing use of heritage places is an important strategy for sustainability in growing towns, cities and places. Adapting heritage places and integrating them into contemporary urban contexts such as identified growth areas or as part of increased residential density through the adaptive reuse of disused or redundant industrial and commercial structures retains embodied energy, reduces waste and the consumption of energy and materials;
- New residential development on heritage sites can be tied to the ongoing maintenance and conservation of at-risk heritage places to provide positive conservation outcomes and opportunities for increased community access and engagement;
- The Incentives Clause of the Wollongong LEP 2009 allows for heritage sites to be adapted as residential offers even where residential development is not permissible in the land use zone. Although this may not be an appropriate outcome in all areas, it allows for increased residential development in places that may be on the fringe of gentrifying industrial or evolving business and commercial zones.

Figure 4.9 Heritage items and Heritage Conservation Areas



4.3 Infrastructure constraints

4.3.1 Transport networks

The linear nature of the LGA has also influenced the transport networks. The South Coast rail line and major roads are all north-south, with limited east-west connections.

The South Coast rail line caters for suburb, interurban (Sydney) and freight rail services. Reports indicate that the rail line is at or near capacity, in terms of the number of trains. The sections of single line track between Clifton and Stanwell Park, and south of Unanderra is a significant limitation on service operations.

The land around the stations provides an opportunity for increased residential development and the encouragement to use the rail service for commuter trips to southern Sydney or Wollongong. However, the timetabling and infrequent services discourage the use of the rail network. Express services to Sydney, typically stop at Wollongong, North Wollongong, Thirroul, Helensburgh. There is a greater commuter parking demand at these stations. The all stations service shuttles between Port Kembla and Waterfall.

The construction of the proposed Maldon – Dombarton freight line, or the South West Illawarra Rail Line (SWIRL) (freight and passenger services) would provide an alternate freight line, free up some capacity on the South Coast line and provide a rail connection to South-West Sydney.

The M1 Motorway traverses the length of the LGA from Waterway to Haywards Bay. The Princes Highway, Appin Road, Picton Road, Lawrence Hargrave Drive and Shellharbour Road provide main road connections to the surrounding LGAs. Bulli Pass, Mt Ousley Road and Lawrence Hargrave Drive between Bald Hill and Stanwell Park, provide the only links from the coast to the top of the Illawarra Escarpment. All three links have geotechnical constraints. Any closure due to accidents or road maintenance causes significant disruptions.

The road network is significantly constrained north of Thirroul. Lawrence Hargrave Drive is highly used by residents and visitors, and in a number of locations the only route choice. An accident or road works can cause major disruptions. For example, the Thirroul rail bridge is the only connection between north and south Thirroul. The planned closure of Lawrence Hargrave Drive between Bald Hill and Stanwell Park for 9 weeks (June – August 2020) to enable road works will cause significant disruption to residents, but will reduce visitor traffic. Increase residential development in the northern suburbs will increase traffic volumes and place additional pressure on Lawrence Hargrave Drive.

The main roads and collector roads provide the opportunity for bus services, and the LGA is well served by bus routes. The Wollongong Free Gong Shuttle provides a frequent bus connection service between the City, Hospital, University and Foreshore. Anecdotally, land and unit prices are higher in locations close to the bus stops. Additionally, persons working in Wollongong are parking near the bus stops and using the bus to access Wollongong.

4.3.2 Noise

The road and rail networks are also a source of noise and vibration which can impact on the amenity of nearby residents. The Infrastructure SEPP requires noise and vibration mitigation measures to be incorporated into new residential buildings in close proximity to the rail line and major roads.

Building design considerations are also required around the Shellharbour City Airport, due to aircraft noise. Residential development is prohibited on land where the Aircraft Noise Exposure Forecast (ANEF) contour exceeds 25. The 20-25 ANEF contours affects the Yallah industrial area, the M1 Princes Motorway and some residential properties at Haywards Bay and Yallah.

Industrial development is important for employment and economic growth but is another source of noise and potential complaints. The IN3 Heavy Industrial area of Port Kembla – Unanderra provides for 24/7 industrial operations. However, night-time noise can impact on the amenity of surrounding residents. The NSW Ports Master Plan for Port Kembla indicates that is proposed to expand to include a container terminal. NSW Ports and the NSW Department of Planning, Industry and Environment are concerned that future residential development around the Port, may limit the future operation of the Port. The NSW Department of Planning, Industry and Environment is considering options to limit increased residential development density in the vicinity of the Port.

4.3.3 Water and Sewer

The majority of existing residential properties are connected to Sydney Water's water and sewerage networks. The systems have expanded to meet the expanding urban footprint. Sydney Water have a Project Approval to provide services to the West Dapto Release Area.

The Illawarra is supplies with water from Water NSW Avon Dam, which is treated at Kembla Grange and distributed around the LGA.

The majority of sewerage effluent is treated at the Wollongong Sewerage Treatment Plan, and the recycled water used by Bluescope in the steel making process. The suburbs of Coledale, Stanwell Park, Stanwell Tops, Otford and Helensburgh are connected to the Cronulla Sewerage Treatment Plant. There are some locations which have service constraints, partially due to the flat coastal plain limiting flow.

5. Vision for Housing and Options for Growth

To inform Council's strategic direction for housing into the future, a vision for housing is recommended. Such vision is consistent with the approach recommended through the DPI&E *Local Housing Strategy Guidelines (2018)*, is a requirement for Local Strategic Planning Statements, and provides a shared goal for our community, and informs Council and stakeholders for the future.

A draft vision for housing is presented below. This sits beneath Our Community Vision as contained in Wollongong 2028, and is informed by the discussion and findings contained in this paper.

Our Community Vision (Wollongong, 2028):

From the mountains to the sea, we value and protect our natural environment and we will be leaders in building an educated, creative and connected community.

Draft Vision for Housing:

- Housing will respond to Wollongong's unique environmental setting and heritage.
- New housing will continue to diversify supply and provide choice for residents. Diversity will be provided through a variety of housing types, sizes, configurations, and features, to cater for a wide range of residential needs and price-points. Focus for diversity will be on affordable, smaller, and/or adaptable housing located throughout the Wollongong LGA to cater for a range of incomes and abilities.
- Wollongong City Centre will deliver a range of higher density housing options. It will be a thriving and unique regional city, delivering a diverse economy and offering a high quality lifestyle. It will be liveable and a place where people will want to live, learn, work and play.
- Urban Release areas such as West Dapto, will deliver the largest proportion of new housing supply and will be adequately serviced with essential infrastructure.
- Town and village centres, and land zoned for medium density residential development will promote their distinctive character, whilst planning for and facilitating growth and high quality design in desired locations.
- Wollongong will strive to increase affordability in the housing market, and to ensure housing provides for a wide range of incomes, people with a disability and for our ageing population.

It is recommended the draft vision for housing is refined through community consultation and engagement.

The remainder Section 5 of this paper presents options for housing for Wollongong. Such options have been developed based on the findings presented in earlier sections. The preferred options are consolidated in section 6 of this paper aligned with draft planning priorities.

5.1 Options to improve housing diversity

Both the housing capacity analysis and housing for particular needs sections of this paper identified the need to provide a greater diversity of housing choice to meet the changing needs of the community. A range of options is available for Council to consider.

5.1.1 Medium Density Zoned Land

The Wollongong LEP 2009 defines 13 precincts for medium density residential development. These areas are located in Helensburgh, Thirroul, Bulli, Woonona, Corrimal, Fairy Meadow, Coniston, Unanderra, Kembla Grange, Dapto, Huntley, Avondale and Warrawong. These can also be termed R3 Medium Density Residential zoned land. Medium density residential housing typically includes townhouses, villas, terraces and smaller apartment buildings.

Medium density zoned land is generally located closer to services, facilities and infrastructure, with access to transport and on less constrained land e.g. minimal or no flood affectation. Some area of the West Dapto Release Area are zoned for medium but are yet to be developed.

The Wollongong LEP 2009 includes the following objectives for Medium Density Residential zoning:

- *To provide for the housing needs of the community within a medium density residential environment;*
- *To provide a variety of housing types within a medium density residential environment;*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*

The types of housing permitted in medium density residential zoned land and low density residential zoned land are the same in Wollongong LEP. The permitted floor space ratios (0.75:1) and building heights (13m+) are larger in the medium density residential zone, to facilitate multiple dwellings (e.g. townhouses). However, there is no discrimination between the types of residential development and the permitted floor space ratios and heights. Thus, new large single dwelling houses may be built in medium density residential zoned land and they are granted the larger floor space ratio and building heights purely due to their location in a medium density residential zone.

A land use survey of Wollongong's established medium density zoned lands was undertaken in 2014. This determined how well these zones were operating and issues affecting development. Key findings:

- Wollongong LGA had approximately 1,800 lots zoned for medium density development, representing 2.8% of the total of 64,000 residentially zoned lots throughout the Wollongong LGA;
- 78% of housing in these medium density zones was single dwelling houses, which is not a desired medium density housing outcome;
- Other types of housing (dual occupancies, townhouses, villas) made up less than 5% each of the total housing stock;
- Although increased heights and permitted floor areas are generally permitted, 77% of existing development were single storey;
- Overall the established areas were far from full and their operation was similar to that of surrounding low density zoned land.

Some of the low take-up may be due to the survey occurring only 4 years after the 2010 commencement of the Wollongong LEP 2009 when new controls were introduced. A review of development applications

approved from 2010 and 2018 for medium density zoned land indicates these areas are still attracting a mix of low density housing types. Approvals for new development indicate:

- 54% were for single dwelling houses, dual occupancies, or alterations and additions and an existing dwelling;
- 14% were for multi dwelling housing (e.g. townhouses, villas);
- 32% were for other approval types e.g. strata subdivision on existing dwelling, alterations and additions to commercial premises.

The review of the R3 Medium Density Residential zoned lands indicated these areas are operating not dissimilar to the R2 Low Density Residentially zoned land, and that there is not the capacity for the desired forms of medium density housing in these areas.

The reasons for the lack of capacity and feasibility are varied and complex. Many of these remain outside Council's scope to influence change. Examples include: bank lending policies, other development types are more financially feasible, market preferences for one type of housing over another. A number of factors are within Council's scope to control change and guide medium density outcomes e.g. minimum lot widths, heights, floor space ratios, permissibility of different residential development types.

Urban Feasibility modelling undertaken by the (then) Department of Planning and Environment (2017) indicated there was minimal feasible capacity for housing in the form of townhouses in existing medium density residential zoned land. This lack of capacity does not appear to be an issue unique to Wollongong LGA. The Department of Planning and Environment highlighted this as an issue throughout NSW in 2016 and used this as rational (in part) for the introduction for the Low Rise Medium Density Housing Code.

Anecdotal evidence from Wollongong's development industry suggests Council's planning controls for such housing needs to be changed to facilitate diversity in housing. The *Greater Illawarra: The Smart Growth Agenda (2015)* suggests changes to planning controls that will facilitate housing that achieves the medium density residential zone objectives.

Preliminary review of land and environmental constraints throughout Wollongong LGA indicates there is opportunity to expand medium density zoned land. This may include expansion of existing medium zoned precincts or the creation of new medium density zoned lands where there is currently low density zoned land. The Wollongong Residential Density Study (2014) nominated some areas suitable for additional medium density housing. The *Illawarra – Shoalhaven Urban Development Program Update 2016* also identifies centres "as having capacity for additional dwellings through higher densities and appropriate zonings" (pp14-15). This includes land in Helensburgh, Thirroul, Woonona, Corrimal, Fairy Meadow, Wollongong, Figtree, Unanderra, Warrawong, and Dapto.

Options

Option 1 – No change

R3 Medium Density Residential zoned land can continue to operate under current planning controls and conditions. This will likely see dwelling houses and dual occupancy housing being developed inconsistent with the zoning objectives.

The review of the current operation and capacity of these areas indicates changes can be made to ensure the desired housing types are built, and density is achieved.

Option 2 – Adjust controls

Review planning controls in existing areas zoned Medium Density Residential with the intent to increase residential density.

Second approach which may be considered is to review and refine planning controls in existing Medium Density Residential zoned land to target density and growth. This may include review of permissibility of single dwelling houses in Medium Density Residential zoned land, or floor space ratios, heights and lot widths for all permissible residential development.

a. Review permissible dwelling types.

As noted in Table 1.4, the R3 Medium Density zone permits all types of dwellings from single detached dwelling houses to residential flat buildings and shop top housing. The analysis showed that single dwelling houses are still being constructed in this zone. The land use table could be amended to remove new dwelling houses as being permitted, which will better encourage land to be redeveloped into two or more dwellings.

b. Review Floor Space Ratios

The R3 Medium Density Residential zone, typically has a floor space ratio of 0.75:1 (floor space can be 75% of the land area). This ratio could be increased to make medium density development more attractive. The R1 General Residential zone and SP1 Wollongong Hospital zone have an FSR of 1.5:1, which has enabled residential developments of up to 6 stories. This ratio is too high for the R3 Medium Density zone. The R3 Medium Density land around the Dapto Town Centre has a FSR of 1.2:1, which may be more appropriate to be applied to other parts of the LGA.

c. Review Maximum Building Height.

The R3 Medium Density Residential zone typically has a maximum building height of 13m. This would enable a 3m a storey and pitched roof, combined with a review of the floor space ratio, a review of the building height could occur. If the floor space ratio is changed, a review of the building height limits should also occur.

d. Review Lot Widths.

The Wollongong DCP currently requires a minimum lot width of 15m for dual occupancies, and Clause 7.14 of the Wollongong LEP 2009 currently requires a minimum lot width of 18m for multi-dwelling housing developments and 24m for residential flat buildings.

Lot widths in older suburbs are typically 12-15m in width, therefore requiring 2 lots to be amalgamated and developed. For developers the acquisition of an adjoining lot can require a premium to be paid. Council has been concerned about the poor streetscape outcomes from the development of narrow lots, creating a series of drive way crossings and gun-barrelled developments. The development of adjoining lots reduces the number of driveways, albeit with each driveway serving more dwellings.

Removing the lot width control would increase the development potential of many properties.

Option 3 – Expand R3 Medium Density Residential Zones

Planning for urban growth in medium density residential areas and in and around town and village centres. This third approach would see include a review and refinement of planning controls in existing Medium Density Residential zoned land, as well as business zones (town or village centres) in the vicinity, and adjacent areas transitioning into the surrounding low density residential zone. As Wollongong LGA has enough capacity to cater for housing needs until 2026, this option aims to plan for density until and past 2036. This approach would aim to:

- Define the appropriate level of density which each precinct / growth area can support taking into consideration preferences of the community, existing character and desired future character, existing infrastructure and planned changes, land and environmental constraints, feasibility of different types of housing (including an affordable housing contribution);
- Undertake an urban design review to test and document the desired built form outcomes across each precinct;
- Amendment of the Wollongong LEP and DCP and any related strategies and plans to permit enable the market to achieve the desired level of residential density.

This option is called planning for growth, or defining urban growth areas. Such review could result in changes to height limits, floor space ratio, minimum lot widths, and/or permissibility of development types, to facilitate a density consistent with the zoning objectives. It may also look to expand to Medium Density Zoned Land.

Preferred Approach – Options 2 and 3

5.1.2 Dwelling Mix

Existing development controls in the Wollongong DCP require a minimum 10% of dwellings in a residential apartment building to be studio or one bedroom). The introduction of the NSW Apartment Design Guide also supports the diversity in the size and type of dwellings.

Option 1 – No change

New housing may continue to be built under current planning controls. This would represent a business usual approach.

Option 2 – Diversity housing stock

Based on data and findings of this Paper, Council could seek additional mechanisms to diversify housing stock. This could include:

- 1 Investigation options to mandate a level of diversity in new housing approved, as well as the scope of control which Council has in this regard. This recommendation acknowledges the role of State Environmental Planning Policies, the legislative role of the LEP and feasibility of smaller dwellings in new release areas.
- 2 Incentives, such as additional floor space, may be able to be offered for the provision of smaller dwellings. The potential impacts additional floor space and dwellings would have on design and built

form would need to be modelled and tested. Car parking requirements, detailed in the Wollongong DCP 2010 could also be reviewed.

- 3 Economic modelling is undertaken to determine the impact on the feasibility of medium density and higher density developments, if Council was to further mandate a minimum number of one, two and/or three bedroom dwellings.
- 4 Extensive community engagement is undertaken to understand reasons for current housing choices, and drivers for housing choice and over housing.

Preferred Approach – Option 2

5.1.3 Low Rise Medium Density Housing Code

The Low Rise Medium Density Housing Code was introduced via SEPP (Exempt and Complying Development Codes (2008) (the Code) in July 2018. Under the Code, one and two-storey dual occupancies, manor houses and terraces could be assessed and approved by a Private Certifier and carried out under a fast track complying development approval. This approval pathway is different to the current development application process and different planning controls would apply.



Source: NSW Department of Planning and Environment, 2018

If introduced in July 2020, the Code will present change for Wollongong LGA. Key points of difference relate to:

- Manor houses (3-4 dwellings in a 2 storey building) will be a new housing type permitted in all residential zoned land.
- Dual occupancies, terraces and manor houses may be approved via development application or complying development via the Code. The built form will look slightly different depending on which approval pathway is used.
- Housing approved under the Code would be assessed and approved by a Private Certifier or Council. Housing approved via development application is assessed and approved by Council.
- Complying development can be approved within 20 days if the proposal complies with all requirements of the Code. Neighbours will not be notified that an application has been lodged or is under assessment and given the opportunity to comment. Neighbours will be notified a minimum two days prior to commencement of works.
- Housing development currently approved via development application process require public exhibition. This provides opportunity for neighbours and the wider community to provide their feedback regarding the proposed housing.

- The Code does not include any requirement for deep soil zones or deep soil planting which is expected to reduce greening (cumulatively) of the Wollongong LGA and is inconsistent with Wollongong’s vision for Urban Greening.
- The Code is expected to result in less on-site car parking for such housing types when compared to current requirements in the Wollongong DCP, and therefore there will be an increase in on-road parking.
- The Code shows little regard for character and how a proposed development will respond to local character. Given there appears to have been little uptake of the Code throughout NSW to date, the relationship between the code and how development will respond to local character is yet to be tested.
- Wollongong LEP and DCP building envelope controls provide flexibility for dual occupancy and terrace housing to respond to individual site needs. The Code provides less flexibility in this regard.

If introduced, there are many expected benefits, shortfalls, risks and possible resolutions for consideration (Table 5.1).

Table 5.1 Benefits, shortfalls, risks and possible resolutions for the Low Rise Medium Density Housing Code

Benefits if Code is introduced	Shortfalls if Code is introduced
Will enable approval of dual occupancy, terrace housing and manor houses throughout residentially zoned land in Wollongong LGA via standardised NSW planning controls.	Approved housing will not require any regard for local planning controls. This will look different to that currently built throughout Wollongong LGA.
Complying development is fast tracked approval process and may be approved within 20 days by a Private Certifier.	There is no scope for neighbour and community feedback resulting from this approval pathway.
Housing that may be built under the Code is restricted by various controls and results in a reduced footprint.	Existing uptake of the Code throughout NSW has been minor. Smaller dwelling sizes may be impacting the feasibility of this housing.
Smaller dwellings built under the Code may provide an option for those seeking to downsize.	Restricted footprint for housing results in double storey dual occupancy and terrace housing. This does not facilitate ageing in place or accessibility for residents. Uptake of the Code also suggest such housing is not feasible and changes may be made.
The Code further diversifies permitted housing types by introducing manor houses.	Terrace housing and dual occupancy development are currently permitted with consent throughout all residentially zoned land in Wollongong LGA.
Risks	Possible resolutions
Uptake of the Code appears to have been minor across NSW. There is risk that State Government will amend the Code based planning controls to facilitate additional housing. If Wollongong LGA has introduced the Code, it will be difficult to argue against changes to the Code, if intended to increase Code uptake.	The Department of Planning, Infrastructure and Environment has commissioned an independent review of the implementation of the Low Rise Medium Density Housing Code. Changes to the Code are expected, to facilitate uptake.

Risks	Possible resolutions
<p>Through the Code, local character is assessed via Design Verification Statement by a Private Certifier. This is assessed against character statements as contained in the Wollongong DCP. It remains uncertain how a development will respond to the character provisions and what this will actually mean in terms of a built form response.</p>	<p>Character statements as contained in the Wollongong DCP 2009 have not been subject to comprehensive review since their introduction in 2010. A comprehensive review of character statements for Wollongong LGA is recommended. This review is recommended to consider:</p> <ul style="list-style-type: none"> - current application of character statements through the development assessment process, <p>application and roll out of the Low Rise Medium Density Housing Code and the scope of influence which character statements have on the built form outcome.</p>
<p>If introduced in Wollongong LGA and the level of uptake was minor, the impact on local character, infrastructure, services and greening would likely to be absorbed. If there was a large uptake of Code based housing (e.g. State Government changes planning controls and increases feasibility of these housing types), there will be adverse impacts on character, infrastructure, services and the greening of the City throughout Wollongong LEP.</p>	<p>The Wollongong LEP 2009 permits a range of housing types (including multi dwelling housing (aka terraces) and dual occupancies) in all residential zones. There may be scope to explore amendment of the Wollongong LEP 2009 to amend permissibility of housing types across residential zones. Any changes would be equal for housing approved under the Code or development application through Council. This would be considered a down zoning and is not expected to be supported by the Department of Planning, Infrastructure and Environment. This would also impact the capacity of the Wollongong LGA to house the growing population.</p>

Council has raised concern in relation to the introduction of the Code for a number of years.

- In 2016 the draft Code was exhibited by the (then) NSW Department of Planning and Environment. Wollongong City Council like many other Councils, raised concern in relation to such introduction and did not support this.
- In mid July 2018, Council was notified of the (then forthcoming) introduction of the Code. Council sought to defer introduction of the Code in Wollongong LGA and was successfully granted a one year deferral.
- On 27 May 2019, Council resolved to request a further 12-month deferral of the commencement date. Like most LGA's, Wollongong LGA was granted an additional three month deferred commencement from the Code until 31 October 2019. Following a review of the Code, the Minister for Planning subsequently announced a further extension until 1 July 2020.

Council has been reviewing the provisions of the Code to determine the likely impact if introduced for Wollongong, and options moving forward. Building envelopes for housing approved under the Code have

been reviewed and compared against the provisions of the Wollongong LEP and DCP. Key highlights include:

Dual occupancy (side by side)

- Code based dual occupancy development (side by side) is restricted by the landscape area calculation. This is likely a large contributing factor to the lack of uptake for this type of housing under the Code throughout NSW. This also presents risk as a change in the NSW SEPP (Exempt and Complying Code) to reduce the landscape area required for this housing type will likely increase feasibility of this type of housing.
- Wollongong LEP and DCP building envelope controls provide larger flexibility than the Code based controls. The Wollongong LEP floor space ratio clause restricts the housing size for housing approved via development application.
- This comparison has highlighted provisions in the Code which may be incorporated into the Wollongong DCP, to achieve better internal amenity for residents and enhance the interface of the dual occupancy with the street. For example: the requirement for a window to a habitable room at ground floor. The review also highlighted inconsistencies in the provisions of the Wollongong DCP planning controls warranting review.

Manor houses (2-4 dwellings)

- Manor houses are a new form of housing which would be introduced for Wollongong LGA if the Code is introduced.
- There appear to be many inconsistencies between the Code and associated design guide which may it difficult to determine the exact built form outcome. Inconsistencies relate to private open space and the requirement to include car parking in the gross floor area calculation which contradicts other definitions.
- For a site with a single frontage (i.e. not a corner lot or no rear lane access), the minimum site area required to achieve a manor house is 770sqm. This site requires a width of 19.5m at the building line, and would result in four dwellings (2 x 1 bedroom and 2 x 2 bedrooms).
- For a corner lot site, the minimum site area required for a Manor house to be built would be 705sqm. Site dimensions would be 16.5m x 42.8m).
- For a site with a rear lane, a manor house is able to be built on a 600sqm site (15m x 40m).

Terrace Housing

- Code based terrace housing in an R2 low density zoned land is restricted by the permitted gross floor area calculation. The minimum lot size and site width for terrace housing to be built under the Code for three torrens title terraces is 675sqm (27m x 22.5m). Strata title lots are slightly less.
- Code based terrace housing in an R3 medium density zoned land results in a larger amount of achievable gross floor area than R2 low density zoned land.
- Wollongong DCP deep soil zone requirements restrict the building envelope for terrace housing. Car parking rates under Wollongong DCP additionally impact the likelihood of this type of housing via development application. Basement parking is likely required to achieve car parking rates and not likely in many areas of the Wollongong LGA for terrace housing.

The comprehensive review of built form and comparison between the Code and Wollongong LEP and DCP is documented in the Missing Middle testing document.

In July 2019 the Minister for Planning and Public Spaces requested an independent review to assess progress of the Code to date. In October 2019 the timeframe for the introduction of the Code for Wollongong was extended to 1 July 2020.

Data and analysis in this Paper indicates the Wollongong LGA has enough capacity available to meet the dwelling demand past 2036 under any growth scenario. Wollongong LGA is however experiencing issues in relation to the diversity of housing and dwelling density in desired locations. Thus this presents opportunity to target the application of the Code, in attempt to diversify housing and provide density in desired locations.

There are a number of options available to Council. These are documented in Table 5.2.

- Option 1 – Seek full exemption from Code
- Option 2 – Limited application of the Code (R3 Medium Density Land and Urban Release Areas)
- Option 3 – Code comes into effect throughout Wollongong LGA.

The NSW Government indicates the Code has been rolled out in 78 LGAs across NSW² and 45 LGA's have received a deferral for the commencement of the Code. Many LGAs have submitted Planning Proposals to the NSW government seeking exemption from the Code, or seeking amendment to limit application of the Code.

Preferred Approach - Option 1 Seek full exemption from the Code

Wollongong LGA has enough capacity to supply housing and cater for population growth. Issues identified through this Paper relate to the need to diversify housing stock and increase medium density housing supply, particularly within R3 Medium Density Residential zoned land.

Additionally, Code does not seem to be addressing the Affordable Housing demand, as the cost of new dwellings in dual occupancy and multi-dwelling developments, are similar to standard dwelling houses. The high price of land limits the opportunity to provide a more affordable product. The benefit to the development industry is a Code assessable development form that removes Council and the community from the assessment and exhibition process.

The preferred approach for Wollongong LGA is to seek full exemption from the Code is Option 1 (as presented in Table 5.2).

Additionally, comparison between the Code based controls and Wollongong LEP and DCP controls highlighted opportunities for Wollongong for strengthen internal amenity of dual occupancy and multi dwelling housing, enhance the interface between housing and the street, and inconsistencies in DCP provisions. A review of Wollongong DCP provisions relating to dual occupancy development and multi dwelling housing is also recommended.

² <https://www.planning.nsw.gov.au/Policy-and-Legislation/Housing/Medium-Density-Housing/The-Low-Rise-Medium-Density-Housing-Code>

Table 5.2 Options for Wollongong LGA and the Low Rise Medium Density Housing Code

Option	Strengths	Challenges	Considerations
Option 1 - Seek full exemption			
<p><i>Option 1</i></p> <p>Seek full exemption from the Code.</p> <p>This would see terraces and dual occupancy would continue to be permitted in R1, R2 and R3 zone land under current planning controls.</p> <p>Manor houses would not be permitted.</p>	<p>Wollongong LGA has sufficient capacity under existing planning controls to absorb additional medium density housing.</p> <p>Opportunity for community feedback for new housing approved via development application is retained.</p> <p>Council, in consultation with the community, can continue to review and refine development controls for Wollongong LGA.</p>	<p>Standardised development controls (via State Policies) are in place for many other forms of residential development. e.g. single houses, granny flats.</p> <p>There may be expectation Council will amend planning controls for the sole purpose of increasing feasibility of medium density development types.</p>	<p>This option would benefit from review of Council's planning controls relating to medium density housing types, where possible, streamlining approvals, removing roadblocks and incentivising such housing in medium density zoned land.</p> <p>This option would also benefit from reviewing land and environmental constraints, infrastructure and services of existing medium zoned lands, with the intent to expand the spatial extent of this zoning.</p>
Option 2 - Limited application of the Code (R3 Medium Density Land and Urban Release Areas)			
<p><i>Option 2</i></p> <p>Introduce code based controls in R3 Medium Density zoned land, within walking distance of town and village centres and in within urban release areas.</p>	<p>Code based assessment would be enabled in R3 Medium Density zoned land.</p> <p>Strategic expansion of Medium Density zoned land would enable such density in well serviced and appropriate locations. This should be completed in line with any review of R3 land planning for urban growth.</p> <p>This will assist with retaining existing character in R2 Low Density zoned land whilst planning for growth in desired locations.</p>	<p>NSW Legislation require any change to planning controls to broaden the choice of permitted housing, and specify any proposed changes must not reduce the permissible residential density of land.</p> <p>Feasibility modelling indicates there is minimal capacity for desire housing types in medium density zoned land.</p>	<p>This option would require Council to apply to the NSW Government for a limited application of the Code for Wollongong LGA, an approach taken by other LGAs.</p> <p>This approach enables urban release areas such as West Dapto, to have infrastructure planned to cater for housing supply. This approach will diversify approval pathways for low rise medium density housing in urban release areas, and contribute to the character of these newly established suburbs.</p>

Option	Strengths	Challenges	Considerations
Option 3 – LRMHDC comes into effect in Wollongong LGA on 1/7/20			
<p><i>Option 3</i></p> <p>Code based housing (dual occupancy (side by side or one on top of another), manor houses and terrace housing) permitted in all R2 low density, R3 medium density and R1 general residential density zoned land throughout Wollongong LGA.</p> <p>Existing development application approval pathways would continue to exist. Housing may be approved via development application or complying development.</p>	<p>The Code provides additional diversity in housing stock permitted and built throughout Wollongong LGA.</p> <p>The Code may provide a more affordable housing product for residents. It may assist some residents looking to exit the rental market and purchase property.</p> <p>Urban release areas will likely benefit from the roll out of the Code. This may reduce the cost to purchase in these areas.</p> <p>The Code provides certainty for those wishing to develop such housing, removing discretion from the assessment process.</p>	<p>The Code changes how terraces and dual occupancies have historically been approved in Wollongong. It also looks to introduce a new form of housing, namely manor houses for Wollongong LGA. This will be a change for residents and Council, as differences in built forms, greening, parking, and consultation result.</p> <p>The Code removes Council’s ability to influence built form outcomes for dual occupancies, terraces and manor houses approved under the Code.</p> <p>All opportunities for community consultation are removed when the Code is applied. Similar to single dwelling houses, where the Code is applied, neighbours are required to be notified as a minimum, two days prior to any demolition or new development occurring.</p> <p>Due to the high cost of land prices throughout Wollongong LGA, Code based housing is expected to remain high and is not expected to assist in housing affordability.</p>	<p>Council is aware of apprehension from the community in relation to increasing density of housing in a certain localities in existing urban areas, with current infrastructure and road networks indicated to be overcapacity. Such apprehension results from a range of development, including medium density housing.</p> <p>Code based development is expected to increase such concern and increase demand on existing infrastructure e.g. roads networks, traffic and congestion.</p>

5.1.4 New Housing Products – Fonzie Flats

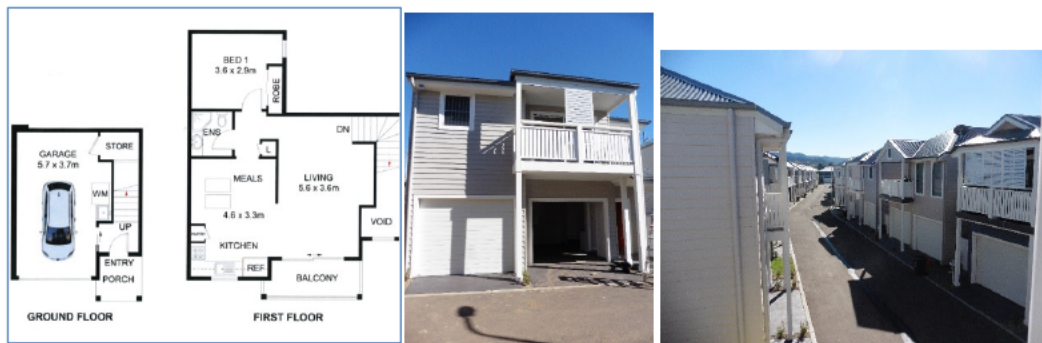
“Fonzie Flats” have proved to be a popular housing type at Tullimbar for single persons. The dwelling is a one bedroom unit above the garage of the main dwelling with a rear lane access. The flat is able to be strata titled.

This type of housing product is not currently considered as part of the Wollongong DCP 2009.

By definition, a Fonzie Flat would be an attached dual occupancy or duplex. As the subdivision involves the subdivision of air space, it can only be strata titled.

The form of development is only suitable where there is rear lane access, and the garages of the main dwelling are also accessed via the lane.

A number of older suburbs in the Wollongong LGA have laneways that may be suitable for this type of product, including Helensburgh and Port Kembla. Additionally, in new release area, the subdivision pattern could include rear lanes to facilitate this form of development.



5.2 Options for housing aged and people with a disability

Current planning controls permit seniors housing and group homes in all residentially zoned land throughout Wollongong.

Options

Option 1

Business as usual. Council can continue to monitor supply of housing for seniors and people with a disability, and new dwellings that achieve the Australian Standard for adaptable housing and Liveable Housing Guidelines.

Option 2

Council could advocate for additional seniors housing in locations close to town and villages centres (taking into consideration land and environmental constraints) in order to close the gap between supply and needs.

Option 3

Council could advocate for purpose built housing for younger persons with a disability. Council could partner with local stakeholders to raise awareness amongst local stakeholders of the current policy directions, funding opportunities to develop this type of housing.

Council may review development controls relating to adaptable and Liveable Housing, with the aim to increase the overall proportion of housing provided into the future. This should look to increase supply of adaptable and liveable dwellings in town and village centres (taking into consideration land and environmental constraints). This increase in adaptable and liveable dwellings will diversify housing stock, assist those wishing to age in place and those needing assistance with daily living.

Preferred Approach – Option 2

5.3 Options to improve housing affordability

The analysis has demonstrated a strong need for the greater provision of Affordable Housing. There are a number of mechanisms available to Council to increase affordable housing supply and advocate for renewal of social housing. It is recommended that Council pursue all options.

Option 1

Implementation of a SEPP 70 Affordable Housing Contributions Scheme for Wollongong LGA. This initiative has commenced and aims to raise funds to support the development of affordable housing by Community Housing providers. As part of the initiative an Affordable Housing Policy should be prepared, exhibited and adopted.

Option 2

As part of Planning Proposals that seek to rezone sites to permit residential development or increase the density provisions, a proportion of the uplift value should be allocated to the provision of Affordable Rental Housing. As part of some recent Planning Proposals, Council has nominated a 5% target. Further work is required to determine the appropriate ratio, which may vary between proposals and locations throughout the LGA>

Option 3

Maintain the needs analysis for affordable housing and update following each census. This data and information could be used to advocate and support future funding applications and initiatives in the LGA/region. Such option would enable Council to track the extent of the affordable housing issue for the Wollongong LGA through time and enable Council to respond proactively to changes the needs of the community.

Option 4

Set and implement an affordable rental housing target for Wollongong LGA. Such initiative would compliment development of SEPP 70 Affordable Housing Contributions Scheme.

In addition, Council may work with local providers of social and community housing to achieve the additional housing required, through the provision of surplus land, the waiving of development contributions, or partnerships.

Option 5

Investigate and integrate planning and policy principles into Council's LEP and DCP, to promote development and protection of affordable rental housing, and improve housing affordability. This will require Council to be listed in SEPP 70.

Option 6

Council work with *NSW Land and Housing Corporation* regarding the renewal and maintenance of social housing to make better use of the land available in Wollongong LGA. For example, in the suburbs that have smaller older style social housing dwellings on large lots. These lots could be amalgamated and redeveloped to provide smaller strata style dwellings. This type of redevelopment could result in dwellings that better meet the needs of the current social housing population in Wollongong LGA. As per the *NSW Land and Housing Corporations Communities Plus* housing model these developments could be mixed tenure and include private market housing.

Option 7

Implement planning incentives and requirements to encourage diversity in housing stock across Wollongong LGA in particular the development of more one and two bedroom dwellings. This is important given that annually the addition of new dwellings represents around 1.08% of the total dwelling stock – so change occurs very slowly. Given the current overwhelming trend to four bedrooms it may require strong incentives/requirements to be put in place to ensure a better balance and more diversity to meet our future housing need.

Option 8

Council may advocate for change, educate and increase awareness.

Council may advocate to other levels of government for key policy changes to improve housing affordability. For example, Council could advocate:

- For NSW and Australian Government tax reform to improve housing affordability;
- For the proportion of social housing in Wollongong LGA provided to be maintained or increased;
- To NSW Department of Planning, Industry and Environment regarding the Illawarra Shoalhaven Regional Plan to develop and implement strategies and actions for affordable housing and to improve housing affordability;
- To the NSW Government to evaluate and review the ARH SEPP 2009 to identify if the Policy is delivering the intended affordable housing outcomes. There are some anomalies in the definitions and exemptions in this policy which make it challenging to provide clarity and certainty when applying this Policy.

Council may raise community awareness about alternate housing development models to create lower cost housing for purchase.

Preferred Approach – Options 1 – 8

5.4 Options to clarify zoning intent

As part of the review of housing controls it has been identified that the intent of some land use zones requires clarification.

5.4.1 R1 General Residential Zoned Land

There are 1,157 lots within four Precincts zoned R1 General Residential located around the Wollongong City Centre (Figure 5.1, Table 5.3). The zone was introduced in 2007 as part of the Wollongong City Centre LEP 2007 and was transitioned into the Wollongong LEP 2009. The largest covering the area north of the Wollongong City Centre. The areas covered by this zoning are diverse, with different maximum heights and floor space ratios permitting different forms of residential development.

The R1 zoned area north of Wollongong City Centre permits development to varying heights (16-32m), with a floor space ratio of 1.5:1. The concentration of housing in this area is approximately 57.5 dwellings per hectare³. Such concentration is characteristic of the top of the medium density housing definition (up to 60 dwellings per hectare) as defined by the *Wollongong Residential Density Study (2014)*. Additional development in this area is anticipated to increase density above 60 dwellings per hectare into the near future.

In contrast, the small area of R1 zoned land on the east side of Foley Street, Gwynneville has a maximum permissible height of 9m. This is the same as R2 Low Density Residential areas. The floor space ratio however is three times larger than the R2 Low Density Residential Zone. This effectively means a development in this area, if approved, may be three times larger than the surrounding low density area but cannot occur due to the 9m height restriction. Review of housing in this area indicates this to be similar to that of the low density surrounds, with a dominance of single dwelling houses and a smaller number of dual occupancy and multi dwelling housing developments.

³ Source: ABS Census Data 2016 and Informed Decisions <https://profile.id.com.au/wollongong>).

Figure 5.1 Location of Existing R1 General Residential Zoned Land



Table 5.3 R1 General Residential zone

Precinct	No. lots	Current FSR	Current Height	Proposed zone
North Wollongong	768	1.5:1	16m, 24m, 32m	R4
Gwynneville (Beaton Park)	21	1.5:1	9m	R2
Hospital Hill	164	1.5:1	16m	R3
- North	17			
- West	79			
- South				
South Wollongong	108	1.5:1	24m	R4
Total	1,157			

Options

Option 1 – No change

The R1 General Residential Density Zone can continue to operate unchanged and development application assessed accordingly. The zone provides diversity in the types of housing permitted (with consent). It does not provide clear direction and drive these density areas.

Development may continue to be approved under current planning controls. Current controls enable diversity in the types of housing built across R1 zoned land. This approach will not correct anomalies in these areas e.g. single dwelling houses and dual occupancy development being approved in areas close to the Wollongong City Centre which may be considered prime position for higher density development.

Option 2 - Review

Review of the operation of land currently zoned R1 General Residential is recommended to investigate the potential to amend the zoning to an alternative residential zone (e.g. R2 Low Density Residential Zone, R3 Medium Density Residential Zone or R4 High Density Residential Zone). Such review is recommended to consider the current operation each area of R1 zoned land, capacity to increase density, character of the locality, provision of infrastructure and services, supporting recreational areas and opinions of the community. This approach would investigate establishment of a R4 High Density Residential immediately north of the Wollongong City Centre.

Preferred Approach – Option 2

5.4.2 SP1 Wollongong Hospital Precinct Zone

Similar to the R1 General Residential Zone, the SP1 Special Activities - Wollongong Hospital Precinct Zone was introduced via the Wollongong City Centre LEP 2007 and has been transitioned to the Wollongong LEP 2009 (Figure 5.2). The zone consists of 154 lots.

The zone has a floor space ratio of 1.5:1 for residential development and 3:1 for non-residential purposes. A maximum building height of 32m applies, 60 for the Wollongong Public Hospital and part of the southern side of Crown Street. There are no specific objectives relating to the Hospital Precinct. The permissible uses can be determined via SEPPs and the Wollongong LEP 2009 (Table 5.4).

Figure 5.2 SP1 Hospital precinct map

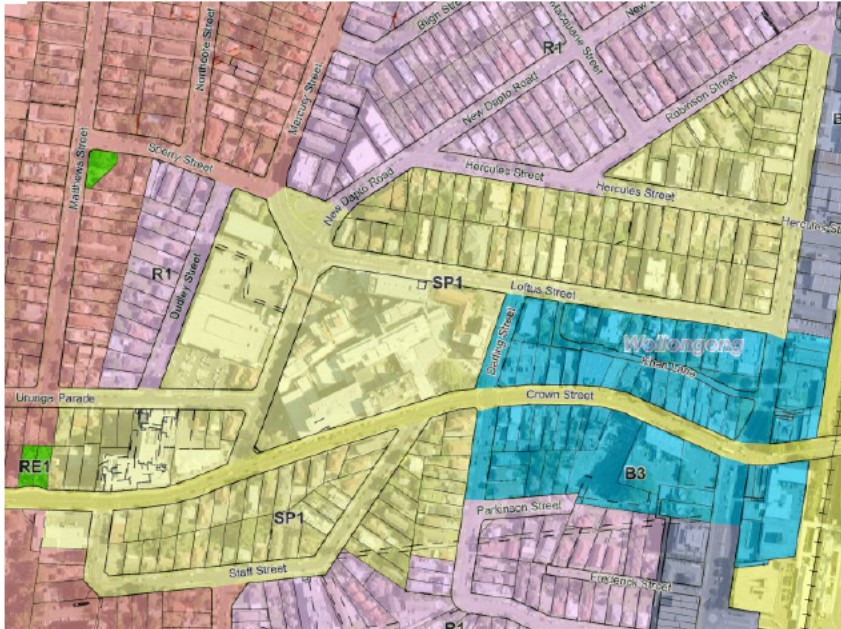


Table 5.4 SP1 zone Land Use table

SEPP Infrastructure	Wollongong LEP 2009	
	Land Use Table – SP1 Special Activities (Note: applies to all SP1 zoned land)	Zoning Map – Wollongong Hospital Precinct
Hospital, Medical centre, Health consulting rooms, Educational establishment	<p>Without consent: Building identification signs; Business identification signs</p> <p>With consent: Advertising structures; Aquaculture; Centre-based child care facilities; Community facilities; Information and education facilities; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres;</p>	Boarding houses, Dwelling houses, Food and drink premises, Helipads, Neighbourhood shops, Funeral chapels, Funeral homes, Hostels, Mortuaries, Multi Dwelling housing, Places of public worship, Residential flat buildings, Seniors housing, Shop top housing

A land use survey of the precinct found that apart from the public and private hospital, the majority of the properties have been developed for housing. There is some commercial development along Crown Street.

- 16 lots (10%) medical – mainly Crown St
- 124 lots (80%) residential development, of which 48 (39%) of which contain more than 1 dwelling

Options

Option 1 No change

Option 2 Review zone boundaries

Properties further away from the Hospitals are being developed for residential flat buildings and have a residential character. The appropriateness of the SP1 Hospital zone in these locations could be reviewed. A residential zone may be more appropriate to guide development. The zone boundary could be reviewed as part of the review of the adjoining R1 General Residential zone. The existing floor space ratio, maximum building height and other controls could be retained.

Preferred Option – Option 2

5.4.3 R2 Low Density Residential zone

The R2 Low Density Residential zone applies to some 58,000 lots throughout the LGA. It was created in 2010 through the requirement to standardise zones by the Standard LEP Instrument, where the previous 2(a) Low Density 2(a1) Special Low Density and 2(b) Medium Density Residential zones merged. The three zones were different in name only, as they had a base floor space ratio of 0.5:1 for single dwelling houses and 0.5:1 - 0.55:1 for medium density development. Additionally, the development standards were overridden by State planning provisions.

The generic nature of the zone was applicable in 2009-10, but with the introduction of State policies such as the Low Rise Medium Density Code and the greater consideration of land development constraints a review is required. Not all lots are the same, constraints such as flooding, bushfire, riparian, coastal, Geotech / slope can limit development potential, however the Code SEPP applies to all lots equally.

If Council reviews the zone, it would need to balance any down zonings with up zonings to the overall housing supply for the LGA.

Options

Option 1 No change

Option 2 Review Land Use Table

The land use table for the R2 Low Density Residential zone could be reviewed to remove Residential Flat Buildings & Multi Dwelling Housing. This would preclude the operation of the Low Rise Medium Density Code, but could be seen to be contrary to need increase the supply of smaller dwellings.

Option 3 Major Review

A major review of the R2 Low Density Residential zone could occur that would consider land constraints (as discussed in section 2.4) and development opportunities (such as proximity to rail stations of town centres). This option is preferred, but will require significant resources.

Preferred Option – Option 3

Table 5.5 Summary of permissible residential uses in urban zones

Land Zoning	Single Dwelling House	Secondary Dwelling	Attached dwelling	Dual Occupancy	Boarding house	Manor House	Multi-unit dwellings	Residential Flat Buildings	Seniors Housing
R1 – General Residential	✓	A	✓	✓	✓ A		✓	✓	✓
R2 – Low Density Residential	✓	A	✓	✓	✓ A	X	X	X	✓
R3 – Medium Density Residential	X	A	✓	✓	✓ A	a	✓	✓	✓
R4 – High Density Residential	X	A	X	X	✓ A	X	X	✓	✓
E4 – Environmental Living	✓	✓	X	X	X	X	X	X	X

Note: A = permitted via Affordable Rental Housing SEPP

5.4.4 Business Zoned Land

Over the past ten years Wollongong LGA has seen a large amount of residential development and population moving into apartments in business zoned land, especially in the Wollongong City Centre, B3 Commercial Core and B4 Mixed Use Zones. This housing has diversified housing stock, typically taking the form of a mixed use building with apartments (shop top housing) located above a commercial ground floor. The Wollongong LEP 2009 defines *shop top housing* as one or more dwellings located above a ground floor retail premises or business premises. Such development is permitted in all business zones including the B1 Neighbourhood Centres, B2 Local Centre, B3 Commercial Core, B4 Mixed Use and B6 Enterprise Corridor zones.

This influx of shop top housing however has weakened the intent of the zones as employment land with land locked up and transitioned to apartment buildings under strata title. This restricts future redevelopment opportunities. Tokenistic ground floor retail/ business have also resulted in many locations, assumed to result from developers seeking to take advantage of density bonuses relating to residential apartments.

As part of the Wollongong City Centre Planning Review it is proposed to remove the universal requirement for ground floor retail in all locations, and only require ground floor non-residential along specified streets. Over time it is expected that Wollongong LEP 2009 clause 7.13 Certain land within Business zones which requires the ground floor non-residential use, will be replaced by clause 7.19 Active street frontage where the requirement for active frontages are mapped.

Results of the Urban Feasibility Modelling indicate a large amount of feasible capacity for housing in existing business zoned land.

5.4.4.1 Wollongong City Centre

Council is currently undertaking a review of the Wollongong City Centre planning controls, to implement the vision A City for People. The City Centre Planning and Design Review (CCPDR) covers two key actions out of 'A City for People: Wollongong Public Spaces Public Life'. The CCPDR looks to test, strengthen and adjust the current City Centre planning controls to bring them into alignment with the Vision as set out in 'A City for People'.

The review is focused on the B3 Commercial Core and B4 Mixed Use Zones of the Wollongong City Centre. A detailed Urban Design Framework has been prepared underpinned by urban design and economic analysis with recommendations likely to seek to improve Land Use, Built Form and Public Domain and Connections outcomes.

The City Centre and its surrounds are an important component of Council's Housing Strategy as it provides that majority of high density housing.

5.4.1.1 Other commercial centres

The Retail Centres Hierarchy for LGA identifies Warrawong and Dapto as regional centres, then Corrimal, Fairy Meadow, Figtree, Unanderra as major towns, followed by the towns of Helensburgh, Port Kembla, Bulli, Thirroul, then the smaller towns and villages. The planning controls for the centres do not reflect this hierarchy beyond the Wollongong City Centre and Dapto. The Floor Space Ratio (FSR) for the B2 Local Centre zone is generally 1.5:1 and the Building Height limit between 12-15m (Figure 5.3).

Within the centres there is the opportunity to encourage additional shop-top housing, provided that commercial floor space is maintained. The primary purpose of the centres being to provide local retail opportunities and business jobs.

Council's Town Centres for Warrawong, Figtree, Unanderra, Dapto and Corrimal all showed that there is development capacity within the centres without rezoning or changing the planning controls. The centres in the Northern Suburbs are currently more financially feasible to develop, due to the higher land values.

Options

Option 1 – No change

Business zones may continue to operate as currently zoned and permitted with the permissibility of shop top housing enabling the market to drive the ratio of commercial and residential floor space in these areas. The higher immediate financial returns for residential development are out competing commercial development.

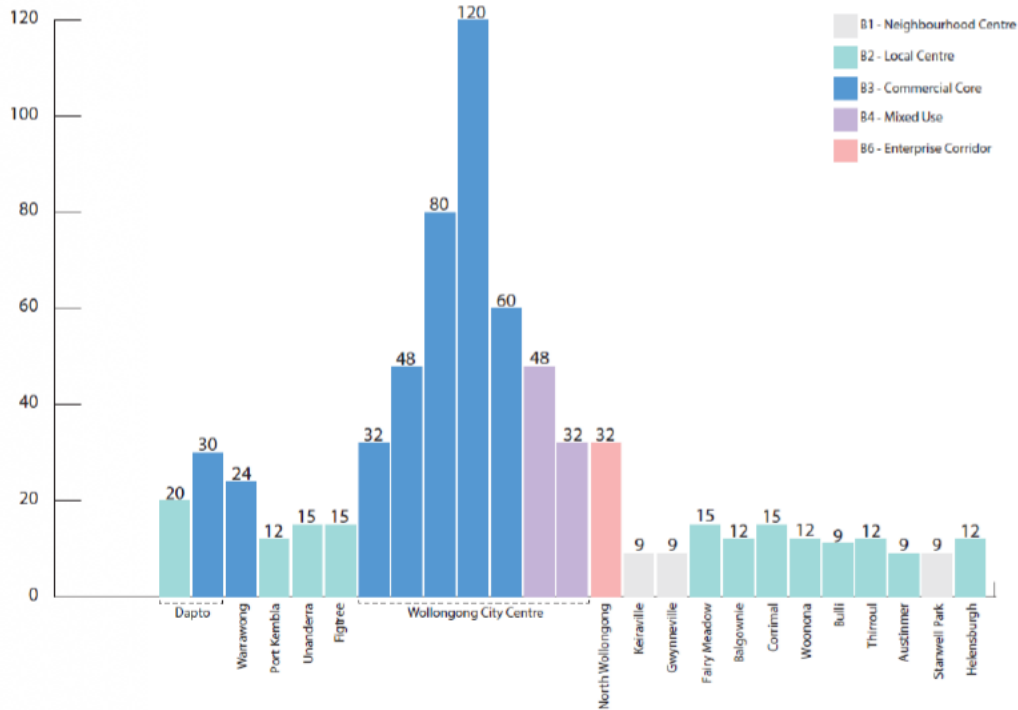
Option 2 - Review

A review planning controls and permissibility for business centres throughout Wollongong LGA is recommended, to ensure the intent of the zone is achieved, and to position these areas to thrive into the future, and provide employment opportunities. This may be included in the scope of an Employment Lands Study and retail land study for the Wollongong LGA.

In 2019 Council exhibited and adopted the Economic Development Strategy which sets an employment target of 10,000 additional jobs.

Preferred Approach - Option 2

Figure 5.3 Commercial Centre building height limits



5.5 Neighbourhood Forum Alliance proposal

In July 2019, the Neighbourhood Forum Alliance (representing Council’s Neighbourhood Forums) submitted a proposal requesting consideration be given to:

- Seeking an exemption from the Low Rise Medium Density Code, provided Council speeds up housing approvals; or
- Limiting the application of the Code in Residential R2 zones to areas within 250m of Business Zones; and
- That neighbours are given time to view all assessments.

The group nominated the following 16 Transition precincts around town centres. The boundaries exclude areas of medium and high flood risk, and have regard to heritage items. The Group also considered other 7 centres such as Dapto and Helensburgh, but did not propose any changes in these locations.

Table 5.6 Transition precincts as nominated by the Neighbourhood Forum Alliance.

<p>Austinmer</p> 	<p>Thirroul</p> 
<p>Bulli</p> 	<p>Woonona</p> 
<p>Woonona East</p> 	<p>Bellambi Station</p> 
<p>Corrimal</p>	<p>East Corrimal</p>



Tarrawanna



Gwynneville



Keiraville

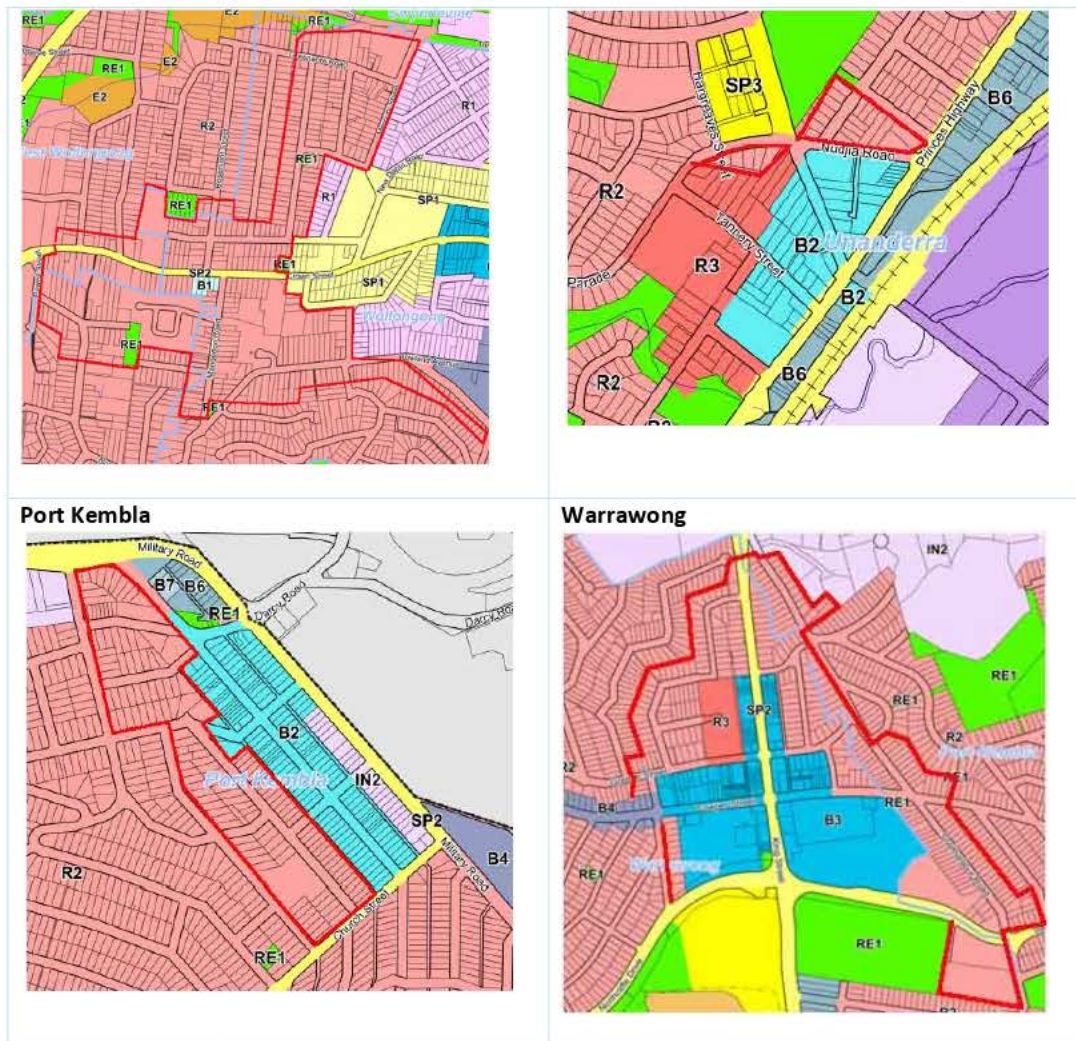


Figtree



Mangerton

Unanderra



The suggestions from the Neighbourhood Forum Alliance are a useful addition to the discussion on future housing options. The paper proposes that Council seek exemption from the Low Rise Medium Density Code.

The nominated precincts are worthy of consideration for low to medium density housing. The Neighbourhood alliance has suggested that the Low Rise Medium Density Code be allowed to apply to these precincts. Due to the proximity to town centres, it may be more appropriate to consider whether the land should be zoned R3 Medium Density Residential to encourage town houses and multi dwelling housing or residential flat buildings.

Preferred approach

Review the nominated precincts as part of the opportunity to provide additional housing supply and mix of dwelling sizes.

6. Planning Priorities and Key Recommendations

Three planning priorities for housing have been identified for Wollongong LGA:

1. Increase housing stock diversity;
2. Plan for future housing growth;
3. Increase supply of affordable rental housing stock.

This table presents a series of preferred options as key recommendations for Council. In addition to the three priority areas, the table also includes sections on monitoring housing supply and improving planning controls.

It is recommended that Council support the planning priorities and key recommendations for public exhibition and consultation with the community. This public exhibition and consultation will shape the development of Council's new Housing Strategy.

Table 6.1 Recommendations

1. INCREASE HOUSING STOCK DIVERSITY					
Number	Recommended Strategy	Responsible Council Division	Resourcing	Priority	Why
1.1	Investigate the feasibility of increasing the regulation of studio, 1 and 2 bedroom dwellings in residential flat buildings, above the existing Wollongong DCP 2009 development controls.	City Strategy	Budget and project delivery resource required	High	To close the gap between the mismatch in household size and dwelling size and increase housing choice.
1.2	Investigate options to increase the proportion of new dwellings being built and smaller in size i.e. studio, 1 and 2 bedrooms.	City Strategy	Budget and project delivery resource required	High	To close the gap between the mismatch in household size and dwelling size and increase housing choice.
1.3	Review role and operation of character local statements in the Wollongong DCP 2009. Resource and commence program to review characters with particular focus to their role if the Code is introduced.	City Strategy	Budget and project delivery resource required	Medium	The Low Rise Medium Density Housing Code requires consideration of character for any new housing approved under the code.
1.4	Increase requirements for the provision of adaptable housing stock through the Wollongong DCP, with a particular focus on growth around town and village centres and Wollongong City	City Strategy	Budget and project delivery resource required		To increase housing choice and supply for Wollongong's diverse population, in particular for the

	Centre. E.g. increase the % of dwellings required, and potential change from % of dwellings to % of GFA. This may also be coupled with review of DCP provisions with particular focus on increasing the supply of 1 and 2 bedroom dwellings.				ageing population and people with disability.
1.5	Prepare draft development controls relating to Manor Houses (if introduced in Wollongong LEP through state policy) to ensure Wollongong is positioned to respond to such housing.	City Strategy	Budget and project delivery resource required	High	Council does not have any existing development controls to assess Manor Houses.
1.6	Prepare development controls relating to Fonzie Flats for integration into the Wollongong DCP.	City Strategy	Budget and project delivery resource required	Low	Fonzie flats are a new housing type which are being developed in neighbouring LGA's and that will diversify housing for the Wollongong LGA.

2. PLAN FOR FUTURE HOUSING GROWTH					
Number	Recommended Strategy	Delivery Stream	Resourcing	Priority	Why
2.1	Define urban growth areas or precincts with capacity to facilitate the development of additional medium density housing. Develop an urban growth strategy for each area/ precinct, draft changes to change planning controls to facilitate such growth and encourage medium density housing development. Such project will be informed by community engagement, constraints analysis, built form analysis and urban design review and feasibility analysis. This approach may include density targets in defined urban growth areas.	City Strategy	Budget and project delivery resource required.	High	To ensure the City can deliver future housing close to services and infrastructure. To increase housing diversity and choice and enable contributions for affordable rental housing to be levied under SEPP 70.
2.2	Support implementation of the West Dapto Vision (2018) and Development Contributions Plan for the West Dapto Urban Release Area.	City Strategy			Current housing growth initiative.
2.3	Support implementation of the City Centre Planning and Design Review.	City Strategy			Current housing growth initiative.
2.4	Ensure development of Wollongong LGA's Local Strategic Planning Statement is informed by this Housing Options paper including the planning priorities and Recommended Strategies.	City Strategy	Existing operational budget	High	The Local Strategic Planning Statement will be key in supporting the goals and implementation of the Housing Strategy.

2. PLAN FOR FUTURE HOUSING GROWTH					
Number	Recommended Strategy	Delivery Stream	Resourcing	Priority	Why
2.5	Develop and undertake an employment and retail lands study to inform planning for urban growth in medium density zones and residential areas of business zones.	City Strategy	Budget and project delivery resource required		

3. INCREASE SUPPLY OF AFFORDABLE RENTAL HOUSING					
Number	Recommended Strategy	Delivery Stream	Resourcing	Priority	Why
3.1	Prepare, exhibit and adopt and Affordable Housing Policy	City Strategy	Existing operational budget	High	
3.2	Continue to develop and implement an affordable housing contribution scheme for affordable rental housing under SEPP 70.	City Strategy	The development and implementation of this scheme will require a large body of work requiring project management and funds to progress.	High	Key policy direction to facilitate the collection of funds to deliver more affordable rental housing.
3.3	Continue to progress the delivery of \$10 million Australian Government grant to deliver affordable housing in Wollongong LGA. (a) An expression of interest process whereby not-for-profit organisations are requested to provide affordable housing schemes consideration of funding; (b) An affordable home-ownership scheme for low to moderate income earners.	City Strategy, Finance Community Cultural and Economic Development	\$10 million Australian Government Grant	High	Current initiative demonstrating Councils commitment for supporting the development of more affordable housing in Wollongong LGA. Completed – Council on 9/12/19 resolved to allocate \$4.34m to the Illawarra Housing Trust for the provision of Affordable Rental

3. INCREASE SUPPLY OF AFFORDABLE RENTAL HOUSING					
Number	Recommended Strategy	Delivery Stream	Resourcing	Priority	Why
					Housing, following the consideration of submissions received during a Tender process
3.4	Investigate opportunities to capture value uplift from site specific planning proposals.	City Strategy		High	Having a mechanism to do this will provide the opportunity for affordable housing contributions to be captured outside for the SEPP 70 process as planning proposals are lodged.
3.5	Work with <i>NSW Land and Housing Corporation</i> to renew social housing provision in Wollongong LGA.	City Strategy		Medium	There is significant opportunity to renew social housing in Wollongong LGA to better meet current social housing need. For example in suburbs where there are smaller older style 3-4 bedroom social housing dwellings that are lone person, not fit for purpose and are located on larger lots. These lots could be amalgamated and redeveloped to provide smaller strata style housing to better meet the housing needs of current social housing tenants and make greater use of the land available.
3.6	Integrate objectives to promote the development and protection of affordable rental housing into Wollongong LEP and DCP.	City Strategy		High	To support Council with protecting existing affordable rental housing and levying contributions for affordable housing that are not via SEPP 70.
3.7	Amend Wollongong LEP 2009 to support Council in collecting contributions for affordable rental housing as part of planning proposals and Voluntary Planning Agreements.	City Strategy		High	To support collection and levying of contributions for affordable rental housing.

3. INCREASE SUPPLY OF AFFORDABLE RENTAL HOUSING					
Number	Recommended Strategy	Delivery Stream	Resourcing	Priority	Why
3.8	Introduce planning incentives for developers of affordable rental housing that is being delivered in perpetuity (i.e. exemption from development contributions and a reduction parking requirements).	City Strategy		High	To promote and support the delivery of more affordable rental housing.
3.9	Identify and contribute Council owned land for affordable rental housing.	Property City Strategy		Medium	Current evidence indicates that land or funding is required to make the development of affordable rental housing feasible.
3.10	Facilitate the development of partnerships between non-government organisations, development industry land owners and the community housing sector to deliver affordable rental housing in Wollongong LGA.	City Strategy Community Development, Property.		High	Providing the opportunity for local stakeholders to come together to explore options and possibilities may lead to partnerships and innovation.
3.11	Advocate to <i>NSW Department of Planning, Industry and Environment</i> regarding the ' <i>Illawarra Shoalhaven Regional Plan</i> ' to develop and implement strategies and actions to deliver affordable rental housing and to improve housing affordability.	City Strategy		Medium	Support the development of a regional approach to the delivery of more affordable rental housing.
3.12	Advocate to NSW Government to evaluate and review the ARH SEPP 2009 to identify if the policy is delivering the intended affordable housing outcomes.	City Strategy		Low	Council has identified some anomalies in the definitions and exemptions which make it challenging to provide clarity and certainty when applying this policy. Amendments to this policy could lead to better house outcomes.
3.13	Facilitate the opportunity for developers of alternate housing models for purchase to present their projects to the local development industry to raise awareness of these types of initiatives.	City Strategy		Low	Increase awareness amongst local development industry of alternate housing models.
3.14	Build community support for affordable rental housing.	Community development and Social Planning	Existing operational budget	Low	Some people view affordable housing as substandard accommodation and have concerns about changes in their

3. INCREASE SUPPLY OF AFFORDABLE RENTAL HOUSING					
Number	Recommended Strategy	Delivery Stream	Resourcing	Priority	Why
					communities. There can be common myths about the 'types of people' who live in affordable housing, or that affordable housing will lower property values. This could cause delays or prevent the development of affordable rental housing.

4. MONITOR HOUSING SUPPLY					
Number	Recommended Strategy	Delivery Stream	Resourcing	Priority	Why
4.1	Monitor projected dwelling needs and the capacity of the LGA, to deliver sufficient housing supply.	City Strategy	Existing operational budget	Low	To ensure there is sufficient housing supply in Wollongong LGA.
4.2	Monitor infrastructure renewal and planned upgrades to ensure adequate supply for existing housing, and planned changes which may increase capacity and facilitate additional housing.	City Strategy			To ensure future housing supply is located close to key infrastructure.
4.3	Maintain the evidence base for affordable housing in Wollongong LGA following each census collection including: key population demographics, affordable housing supply, affordable housing demand and affordable housing gaps.	Community Development and Social Planning	Existing operational budget	Low	To monitor housing stress and measure performance against affordable rental housing target.
4.4	Set an affordable rental housing target for Wollongong LGA and monitor the progress towards this target.	City Strategy	Existing operational budget	Medium	To quantify need and communicate a target for affordable rental housing in Wollongong LGA
4.5	Continue to monitor the housing being delivered via the <i>Affordable Rental SEPP 2009 (ARH SEPP 2009)</i> in Wollongong LGA.		Existing operational budget	Low	As part of monitoring the development of affordable rental housing supply in Wollongong LGA.

5. CONTINUOUS IMPROVEMENT OF PLANNING CONTROLS					
Number	Recommended Strategy	Delivery Stream	Resourcing	Priority	Why
5.1	Undertake community consultation around the Vision for Housing for Wollongong.	City Strategy	Community Engagement	High	
5.2	Prepare a Planning Proposal seeking amendment of existing land zoned R1 General Residential, to alternative residential zoning to which the land most appropriately sits or is strategically placed.	City Strategy	Existing Operational	Low	To clarify the zoning intent
5.3	Prepare a Planning Proposal seeking amendment of existing land zoned SP1 Special Purposes – Hospital located around the Wollongong Hospital, to alternative residential zoning to which the land most appropriately sits or is strategically placed.	City Strategy	Existing Operational	Low	To clarify the zoning intent
5.4	Review Wollongong DCP controls for dual occupancies, terrace and townhouses, and residential apartment buildings in order to remove inconsistencies between current controls, enhance amenity for residents living in such housing and the relationship between housing and the street, and review building envelope controls and their impact on privacy and overshadowing.	City Strategy	Operational	Medium	To remove inconsistencies and to ensure planning controls continue to facilitate desired outcomes as the feasibility of these types of housing increases.
5.5	Review the forms of residential development permitted in the R1, R2 and R3 Residential zones to ensure they meet the zone intent	City Strategy	Operational	Medium	
5.6	Review the permissibility of residential development in the Business zones, to ensure the priority of the zones remains the provision of employment, retail and commercial opportunities, and serving the local community.	City Strategy	Operational	Medium	
5.7	Consider the precincts nominated by the Neighbourhood Forum Alliance as part of a review of medium density housing precincts	City Strategy	Operational	Medium	

7. Next Steps

This Paper and associated Council report recommends placing this options paper on public exhibition and engaging the community and stakeholders. The purpose of this engagement is to raise awareness about the current issues for housing in Wollongong LGA and better understand the community's needs and aspirations for housing. Community feedback will be sought on the planning priorities and key recommendations and for housing in Wollongong LGA.

Following the public exhibition and community engagement, a draft Housing Strategy will be prepared and reported to Council for adoption. The Housing Strategy will be developed consistent with the *NSW Government Local Housing Strategy Guideline*, and will be informed by the community and studies completed to date.

The Strategy will also recommend amendments to the Wollongong Local Environmental Plan 2009 and Wollongong Development Control Plan 2010 to deliver housing growth, diversity and Affordable Housing.

Figure 7.1 Process to develop Housing Strategy



Key Definitions

Accessible House – designed to meet the needs of people requiring higher level access from the outset, usually designed and built with a person.

Adaptable House – adopts ideas similar to that of a liveable house, but in addition is able to be easily adapted to become an accessible if the need should arise. Adaptable housing requires compliance with AS 4200 – Adaptable Housing.

Affordable Rental Housing - is very low cost housing that is usually developed with assistance from the NSW and/or Commonwealth Governments including financial contributions and planning incentives. This housing is usually managed by not for profit community housing providers.

Aged Care Home is accommodation for older people who can no longer live in their home because of the effects of ageing, illness or disability. Aged Care Homes are owned and operated by people and organisations which have the approval of the Australian Government to care for older persons. Two levels of care are provided (low level and high level) for eligible people. All people seeking access to Aged Care Homes require assessment by the Aged Care Assessment Team.

Low level care (previously known as a hostel) enables residents to live independently while receiving assistance with tasks of daily living (e.g. dressing, showering) and access to support services (e.g. cleaning, laundry).

High level care (previously known as a nursing home) enables residents to receive care 24 hr per day. Nursing care is combined with accommodation, support services (cleaning, laundry), personal care services (eating, toileting, bathing), and allied health services (e.g. physiotherapy, occupational therapy).

Community Housing - is affordable rental housing for people on very low to moderate incomes that is generally managed by not for profit community housing organisations.

Community housing sits alongside other parts of the housing system that help people on low incomes, such as social housing managed by the Department of Family and Community Services (FACS) and social housing owned by the Aboriginal Housing Office and also managed by FACS.

Key Worker - A key worker is a worker whose job is essential to the functioning of a City. Often keyworkers include teachers, nurses, ambulance, fire fighters and police.

Liveable Housing – is designed to meet the changing needs of most home occupants throughout their lifetime without the need for specialisation.

Social Housing – is secure affordable rental housing for people on very low and low incomes with housing needs. It includes public, community and Aboriginal housing. Public housing is managed by Family and Community Services while community housing managed by non-government organisations.

Secondary Dwelling – is a self-contained dwelling that is built on the same lot of land as another dwelling (also known as a granny flat).

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Appendix A - Local Housing Strategy Template

The NSW Government have prepared a 'Local Housing Strategy Guideline' that details a step-by-step process for local Council to produce a local housing strategy and includes a Local Housing Strategy Standard Template. The table below shows Councils progress toward meeting the recommendations in the guideline.

SECTION 1 - Introduction	
Requirement	Location/still to do
<p>1.1 Executive Summary</p> <p>1. The executive summary will provide the key findings and recommendations for the LHS.</p> <p>2. The executive Summary will describe the process followed by the council in developing its LHS.</p>	<p><i>Housing and Affordable Housing Options Paper</i></p>
<p>1.2 Planning Policy and Context</p> <p>FROM STEP 1.1 OF THE GUIDELINE</p> <p>This section describes the relevant federal, state and local government legislation, strategies, plans and policies (including SEPPs) that establish the planning and policy context within which the LHS will be developed.</p>	<p><i>Housing and Affordable Housing Options Paper</i></p> <p>Table 1.2 and 1.3</p>
<p>1.3 Local Government Area Snapshot</p> <p>FROM STEP 1.2 OF THE GUIDELINE</p> <p>This section should provide a high-level overview of the area for which the LHS will be developed. It should describe the relevant characteristics of the area including its size, geographical features, major constraints, urban structure, and regional context.</p>	<p><i>'Housing our Community. A discussion paper'</i> identifying issues for our housing future. Our Environment section (pp 11) Map of LGA recommended and still to do.</p>
<p>1.4 Housing Vision</p> <p>FROM STEP 2.1 OF THE GUIDELINE</p> <p>The LHS establishes the council's long term housing vision for the local area. It recognises and responds to evidence about what types of housing will be needed for future populations and where it is best located.</p>	<p><i>Housing and Affordable Housing Options Paper</i></p> <p>Draft vision as per Section 5, for community consultation.</p>

SECTION 2 – The Evidence	
Requirement	Location/Still to do
<p>This section establishes the demographic, housing and affordability context for the Local Government Area. It comprises an overview analysis of data on population, housing, and infrastructure that is required to inform the type of housing that is needed in the area. This section may include maps, graphs and other relevant visual representations. Detailed considerations are provided at Annexure 1.</p>	
<p>2.1 Demographic Overview</p> <p>FROM STEP 1.3.1 OF THE GUIDELINE</p> <p>This section analyses demographic data and information to identify changes and trends within the population, and to understand the housing need of the future population. See Annexure 1 for detail.</p>	<p><i>'Housing our Community. A discussion paper'</i> identifying issues for our housing future (pp 6-15).</p>
<p>2.2 Housing Demand</p> <p>FROM STEP 1.3.2 OF THE GUIDELINE</p> <p>This section analyses the demand for new housing to identify the type and level of housing needed to support the local government area. See Annexure 1 for detail.</p>	<p><i>Housing Options Paper</i> Section 2.2 Future Housing Needs.</p>
<p>2.3 Housing Supply</p> <p>FROM STEP 1.3.3 OF THE GUIDELINE</p> <p>This section analyses the supply of housing, the capacity and feasibility of the existing planning controls, and other sources of new housing. See Annexure 1 for detail.</p>	<p><i>Housing Options Paper</i> Section 2.2.3 Capacity Analysis.</p>
<p>2.4 Land Use Opportunities and Constraints</p> <p>FROM STEP 1.3.4 OF THE GUIDELINE</p>	

SECTION 2 – The Evidence	
<p>This section establishes the demographic, housing and affordability context for the Local Government Area. It comprises an overview analysis of data on population, housing, and infrastructure that is required to inform the type of housing that is needed in the area. This section may include maps, graphs and other relevant visual representations. Detailed considerations are provided at Annexure 1.</p>	
Requirement	Location/Still to do
<p>This section should include identification of opportunities and constraints that are relevant to new housing in the LGA. Land use opportunities and constraints may be best presented with maps.</p>	<p>In progress. Housing and Affordable Housing Options Paper details various land and environmental constraints applicable to the LGA.</p>
<p>2.5 Analysis of the Evidence-Base FROM STEP 1.4 OF THE GUIDELINE This section analyses the data presented in the previous sections to determine what the current housing need is, where the gaps are and where the gaps are likely to be in the future.</p>	<p>Housing and Affordable Housing Options Paper Section 3 and Section 4.</p>
<p>2.5.1 Housing Supply Gaps FROM STEP 1.4.1 OF THE GUIDELINE This section needs to identify any gaps between expected population growth and housing supply trends, and identify types of housing that are required to address particular needs</p>	<p>Housing Options Paper Section 3, 4 and 5.</p>
<p>2.5.2 Identifying areas with development capacity FROM STEP 1.4.2 OF THE GUIDELINE This section should identify areas with development capacity, and areas to be conserved. Local Housing Strategy Guideline A step-by-step process for producing a local housing strategy</p>	<p>Still to do.</p>
SECTION 3 – The Priorities	
<p>The section describes how all of the previous information has been brought together to produce an integrated picture of what the current context is, what the future state should be and what the roadmap is for getting from one to the other.</p>	
Requirement	Location/Still to do
<p>3.1 The Local Housing Strategy Objectives FROM STEP 2.3 OF THE GUIDELINE The LHS Objectives are informed by community and stakeholder consultation and the evidence base analysis.</p>	<p>Still to do</p>
<p>3.2 Land Use Planning Approach FROM STEP 2.4 OF THE GUIDELINE This section should include maps of the proposed housing growth.</p>	<p>Still to do</p>
<p>3.3 Mechanisms to Deliver the Options FROM STEPS 2.4-2.7 OF THE GUIDELINE This section should describe the mechanism/s that will deliver the LHS objectives and explain the reasons for the selection of the various mechanisms.</p>	<p>Housing and Affordable Housing Options Paper. Planning Priorities and Key Recommendations table.</p>
<p>3.4 Evaluation of the Options FROM STEP 2.8 OF THE GUIDELINE The section describes how all of the previous information has been brought together to identify the current situation, what the future housing should look like and what the roadmap should be to get there.</p>	<p>Still to do</p>

SECTION 4 – Actions	
Requirement	Location/Still to do
<p>4.1 Implementation and Delivery Plan FROM STEP 3.1 OF THE GUIDELINE This section is an implementation and delivery plan, which sets out how the mechanisms to deliver the priorities will be operationalised. A structured plan should be undertaken that identifies the actions and timeframes for amending the LEP, DCP or other council documents.</p>	Still to do
<p>4.2 Planning Proposal (if applicable) FROM STEP 3.3 OF THE GUIDELINE</p>	Still to do
<p>4.3 Monitoring and Reviews FROM STEP 4 OF THE GUIDELINE The LHS should include a statement about when monitoring and reviews of the document will occur.</p>	Still to do

Appendix B – Guidelines for Development an Affordable Housing Contribution Scheme

The NSW Government have prepared ‘Guidelines for Development of an Affordable Housing Contributions Scheme’ (February 2019) that details a step-by-step process for Councils to follow to prepare a scheme. The table below shows Councils progress toward meeting the steps in the guideline.

Step 1. Council prepares an affordable housing contributions scheme	
Requirement	Complete/still to do
Council advises the Department that it is preparing an affordable housing contributions scheme	Complete
Council prepares an affordable housing contributions Scheme which is consistent with the Department’s guideline	Complete – this report To form part of Housing Strategy Still to do Still to do Still to do
a. Establish an evidence base	
b. Identify areas for rezoning	
c. Establish an affordable housing contributions rate for the scheme	
d. Produce a scheme using a template.	
e. Prepare a planning proposal to include or refer to the scheme in a local environmental plan.	Still to do

Step 2. Department considers the scheme	
Requirement	Complete/still to do
A proposed affordable housing contribution scheme is assessed by the Department through the planning proposal process.	Still to do

Step 3. Amendment to Council’s local environmental plan	
Requirement	Complete/still to do
If the proposal is consistent with all the relevant requirements, a Gateway is issued, and the planning proposal is publicly exhibited. This requires community and stakeholder engagement.	Still to do
Council’s local environmental plan is amended to include a clause related to the provision of affordable housing.	Still to do

Step 4. Council collects contributions for affordable housing	
Requirement	Complete/still to do
Council may include a condition of consent to applicable development applications in accordance with that area’s affordable housing contribution scheme.	Still to do
Funds collected are allocated in accordance with the affordable housing contribution scheme.	Still to do

Wollongong City Council - Missing Middle Testing

November 2018 - May 2019

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			<small>date</small> 3/6/19	
			<small>client issue</small>	

summary table

Scenario	Typology	EPI	Site Type	Site Zone	Site Width	Site Area	Permissible GFA	Permissible Height	Achievable GFA	Achievable Height	No. Dwellings
Dual Occupancy Scenarios											
1.1 - wcc controls	Dual Occupancy	WLEP & WDCP 2009	Single Frontage	R2 - Low Density Residential	15m	450 sqm	225 sqm	9m	225 sqm	9m / 2 st	2
1.1 - codes sepp	Dual Occupancy	SEPP Codes Part 3B Div 2	Single Frontage	R2 - Low Density Residential	15m	450 sqm	300 sqm	9m	180 sqm	8.5m / 2 st	2
1.2 - wcc controls	Dual Occupancy	WLEP & WDCP 2009	Single Frontage	R2 - Low Density Residential	15m	600 sqm	300 sqm	9m	300 sqm	9m / 2 st	2
1.2 - codes sepp	Dual Occupancy	SEPP Codes Part 3B Div 2	Single Frontage	R2 - Low Density Residential	15m	600 sqm	300 sqm	9m	180 sqm	8.5m / 2 st	2
1.3 - wcc controls	Dual Occupancy	WLEP & WDCP 2009	Single Frontage	R3 - Medium Density Residential	15m	400 sqm	300 sqm	13m	300 sqm	13m / 3 st	2
1.3 - codes sepp	Dual Occupancy	SEPP Codes Part 3B Div 2	Single Frontage	R3 - Medium Density Residential	15m	400 sqm	300 sqm	9m	180 sqm	8.5m / 2 st	2
1.4 - wcc controls	Dual Occupancy	WLEP & WDCP 2009	Corner	R2 - Low Density Residential	15m	450 sqm	225 sqm	9m	225 sqm	9m / 2 st	2
1.4 - codes sepp	Dual Occupancy	SEPP Codes Part 3B Div 2	Corner	R2 - Low Density Residential	15m	450 sqm	300 sqm	9m	215 sqm	8.5m / 2 st	2
1.5 - codes sepp	Dual Occupancy (Stacked)	SEPP Codes Part 3B Div 3	Single Frontage	R2 - Low Density Residential	15m	450 sqm	263 sqm	9m	263 sqm	8.5m / 2 st	2
Manor House + Residential Flat Building Scenarios											
2.1 - wcc controls	Residential Flat Building	WLEP & WDCP 2009	Single Frontage	R2 - Low Density Residential	15m	600 sqm	300 sqm	9m	275 sqm	6.4m / 2 st	3
2.2 - codes sepp	Manor House	SEPP Codes Part 3B Div 3	Corner	R2 - Low Density Residential	15m	600 sqm	300 sqm	9m	300 sqm	8.5m / 2 st	4
2.3 - codes sepp	Manor House - Layout Test	SEPP Codes Part 3B Div 3	Rear Lane	N/A	15m	600 sqm	300 sqm	9m	300 sqm	8.5m / 2 st	4
2.4 - codes sepp	Manor House - Layout Test	SEPP Codes Part 3B Div 3	Single Frontage	N/A	20m	770 sqm	340 sqm	9m	310 sqm	8.5m / 2 st	4
2.5 - codes sepp	Manor House - Layout Test	SEPP Codes Part 3B Div 3	Corner	N/A	17m	705 sqm	325 sqm	9m	310 sqm	8.5m / 2 st	4
2.6 - wcc controls	Residential Flat Building	WLEP & WDCP 2009	Single Frontage	R2 - Low Density Residential	24m	600 sqm	300 sqm	9m	300 sqm	6.4m / 2 st	4
2.7 - wcc controls	Residential Flat Building	WLEP & WDCP 2009 & ADG	Single Frontage	R3 - Medium Density Residential	24m	600 sqm	450 sqm	11m	450 sqm	10.7m / 3 st	6
2.8 - wcc controls	Residential Flat Building	WLEP & WDCP 2009 & ADG	Single Frontage	R3 - Medium Density Residential	15m	600 sqm	450 sqm	13m	450 sqm	10.7m / 3 st	6
2.9 - wcc controls	Residential Flat Building	WLEP & WDCP 2009 & ADG	Single Frontage	R3 - Medium Density Residential	24m	1200 sqm	900 sqm	13m	900 sqm	10.7m / 3 st	12
Terrace + Multi Dwelling Housing Scenarios											
3.1 - wcc controls	Multi Dwelling Housing	WLEP & WDCP 2009	Single Frontage	R2 - Low Density Residential	21m	600 sqm	300 sqm	9m	250 sqm	9m / 2 st	3
3.1 - codes sepp	Terraces	SEPP Codes Part 3B Div 4	Rear Lane	R2 - Low Density Residential	21m	600 sqm	360 sqm	9m	340 sqm	9m / 2 st	3
3.2 - wcc controls	Multi Dwelling Housing	WLEP & WDCP 2009	Single Frontage	R3 - Medium Density Residential	36m	1000 sqm	750 sqm	13m	750 sqm	9.5m / 3 st	5
3.2 - codes sepp	Terraces	SEPP Codes Part 3B Div 4	Single Frontage	R3 - Medium Density Residential	36m	1000 sqm	800 sqm	9m	760 sqm	9m / 2 st	5
3.3 - wcc controls	Multi Dwelling Housing	WLEP & WDCP 2009	Single Frontage	R3 - Medium Density Residential	15m	600 sqm	450 sqm	13m	375 sqm	9.6m / 3 st	4
3.4 - wcc controls	Multi Dwelling Housing	WLEP & WDCP 2009	Single Frontage	R3 - Medium Density Residential	18m	800 sqm	600 sqm	13m	400 sqm	9.6m / 3 st	4

gross floor area calculations

scenarios 1.1 - 1.5

The achievable gross floor area for these scenarios has been calculated based on an efficiency of 85% (building Foot print at all levels x .85 = GFA) Area of garages is excluded from this calculation. This efficiency ratio allows for external wall thicknesses and internal stairs and is based on Kennedy Associates past experience with developments of this typology.

scenarios 2.1, - 2.2, 2.6 - 3.4

The achievable gross floor area for these scenarios has been calculated as per Wollongong LEP definition i.e. to the internal face of external walls, excluding common circulation areas, required car parking, private open spaces and voids.

Although internal layouts of these scenarios have not been tested, an approximate GFA has been measured by subtracting the above (i.e. 30mm for external wall thickness, 6m x 3m for garage) from the 'achievable building footprint' at all levels.

scenarios 2.3 - 2.5

The achievable gross floor area for these scenarios has been calculated as per the Standard LEP Instrument definition i.e. to the internal face of external walls, excluding common circulation areas, required car parking, private open spaces and voids, as outlined on the GFA plans.

achievable building massing / footprint

scenarios 1.1 - 2.2, 2.6 - 3.4

Internal layouts for these scenarios have not been tested. The achievable building footprints and massing volumes are representative of the buildable area / volume left after setbacks, floor space ratio, permissible heights, site coverage, car parking private and / or communal open space, landscaping and / or deep soil requirements are applied to the subject site.

As such, the achievable building footprints and massing volumes do not necessarily correlate with realistic, compliant or rational dwelling layouts, dwelling sizes or room dimensions / areas.

Where the resulting building footprint / massing in a specific scenario appears particularly compromised (e.g. not wide enough to contain a habitable room), this is noted individually.

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introduction

**wollongong city council
missing middle testing**

project number	drawing number
1851	01 A
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commentary: scenarios 1.1 - 1.4 - wcc controls

The Wollongong LEP FSR requirement (0.5 or 0.75:1) is the main limiting factor for dual occupancy development under Council controls. Achieving a compliant FSR significantly reduces the achievable building envelope, allowing for realisation of less than half of the building envelope described by the site coverage, setback and landscaped area controls.

Scenarios 2 + 3 require a second car space (for dwellings greater than 125sqm) this has been provided as a hardstand space in front of the dwelling and would require a variation to Council DCP. Provision of this space in a double or tandem garage would also require variation to a DCP clause.

The minimum setback for garages under Wollongong DCP is 5.5m (0.5m forward of the building line). In Scenarios 2 + 3, where 2 car spaces are required, the garage has been set 1m behind the building line to allow for the provision of a hard stand space within the front setback.

Wollongong LEP and DCP allow for other dwelling arrangements, such as 'one behind the other' on single frontage sites. The maximum building envelopes for Scenarios 1.1 - 1.3 should allow for other arrangements, with adequate space for the required landscape and private open space areas.

commentary: scenarios 1.1 - 1.4 - codes sepp

The SEPP Codes requirement for landscaped area (50% of the site area - 100sqm) for each dwelling is the main limiting factor for dual occupancy development under the SEPP. Achieving compliance with the requirement significantly reduces the achievable building envelope, allowing for realisation of less than half of the site coverage or gross floor area that is otherwise allowed by the code in all scenarios.

The building envelope for Dwelling A in Scenarios 1.1 - 1.3 would not allow for a dwelling capable of complying with the minimum dwelling areas or minimum room sizes / dimensions outlined in the accompanying Low Rise Medium Density Design Guide

The building envelope for Dwelling B in Scenarios 1.1 - 1.3 and Dwellings A & B in Scenario 1.4 should allow for a dwelling that is capable of complying with the minimum dwelling size and minimum room sizes / dimensions outlined in the accompanying Low Rise Medium Density Design Guide (except as noted below)

Clause 21 of the Low Rise Medium Density Design Guide requires that each wall facing a street contain a window to a habitable room at each level. If this clause is required to be complied with, development for the purposes of dual occupancies, through a CDC, would be unachievable on a 15m wide site. There is insufficient site width to accommodate a garage + habitable room + stair for each dwelling across the frontage of a 15m site, whilst the landscape area requirement does not allow for additional building depth. The developability of sites of other widths / areas is also likely to be effected.

The 4.5m front setback (used for these scenarios) applies only where there are no dwellings located on the same side of the road as the subject site within 40m. Otherwise the average setback applies of these dwellings applies. A greater front setback would result in reduced building depth, and is unlikely to allow for building envelopes capable of complying with the minimum dwelling sizes / room dimensions outlined in the Low Rise Medium Density Design Guide. If a front setback greater than 4.5m is required, development for the purpose of dual occupancies, through a CDC, would be unachievable on a 15m wide site. The developability of sites of other widths / areas is also likely to be effected.

SEPP Codes does not allow for 'one behind the other' dual occupancy arrangements on single frontage sites.

The side setback under SEPP Codes is based on a formula, the setback for a wall of the maximum height (8.5m) has been used for the upper levels. A reduced upper level setback may be possible if wall height was reduced.

SEPP Codes provides for 2 storey, 8.5m development regardless of any applicable Council height plane. The is reflected in Scenario 1.3.

The landscape requirement of SEPP Codes effectively results in the same achievable building envelope in Scenarios 1.1 - 1.3 regardless of differing site sizes.

commentary: scenario 1.5 - codes sepp

Generally, this scenario results in an undesirable outcome.

Dwelling 2 is significantly smaller than dwelling 1 and does not have access to the ground floor outdoor space . The majority of the front facade is taken up by car parking. This typology would be significantly more expensive / onerous to construct than a side by side dual occupancy (scenarios 1.1 - 1.4), for no additional yield.

Building Envelope and GFA Relationship

The allowable building envelope is substantially greater than the permissible GFA. The GFA fills approximately 70% of the allowable envelope. A high level of articulation could be accommodated within the building envelope.

Upper Level Setbacks

Upper level setbacks, for the portion of the building 10m or more behind the building line, are dependant on wall height - a higher wall requires a greater side setback.

The overall building height has been reduced to minimise the required side setback and allow for a larger, more viable upper storey footprint.

Front Setback

The 4.5m front setback (used for this scenario) applies only where there are no dwellings located on the same side of the road as the subject site within 40m. Otherwise the average setback applies of these dwellings applies. Requirement for greater setback to the street is likely to reduce achievable building footprint and influence development viability.

Outdoor Space

Significant question raised by SEPP is who has access to outdoor ground level space. Scenario assumes only the ground floor unit has access. the SEPP does not require communal open space for stacked dual occupancy developments.

Layout and Amenity

All upper level windows on the side facing walls would require screening for visual privacy. Although compliant with the SEPP, this may impact on the ability of development to comply with provisions of the Low Rise Medium Density Design Guide, in particular solar access and ventilation. Substantial screening to windows reduces residential amenity and is not a desirable outcome.

The upper level dwelling may not achieve a viable or rational layout, it is significantly smaller than the ground floor dwelling and has an irrationally shaped footprint at both levels.

The site layout is compromised. Situating private open space in side setbacks leads to poor amenity outcomes - either compromised privacy or substantial screening which reduces access to sunlight.

Construction Viability

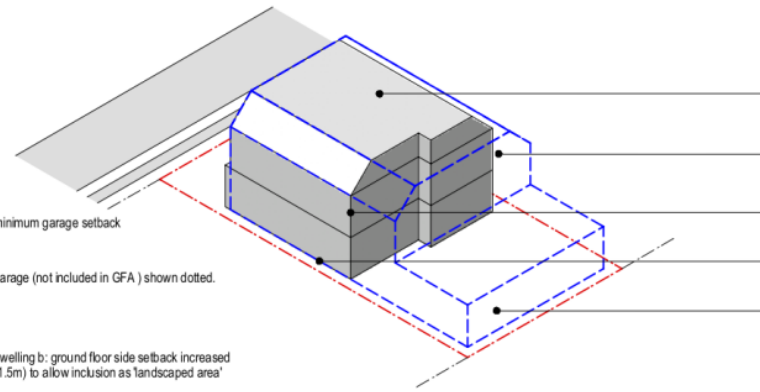
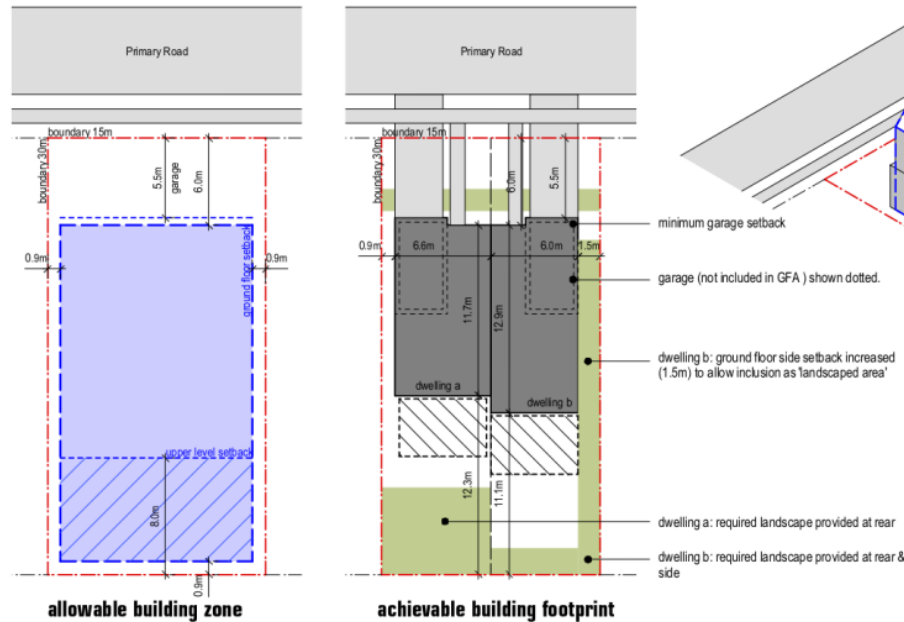
Stacked dual occupancy is a more onerous / expensive construction type than side by side dual occupancy, for no additional yield. Development of this type unlikely to be undertaken under the current controls.

Due to upper level setbacks, the upper and lower dwellings and substantially different sizes and do not 'stack' (i.e walls over walls, services over services). This negates the construction cost savings that may otherwise be achieved with dwellings on top of each other and results in undesirable amenity outcomes, i.e. upper level private open space above lower level living room.

Habitable Room to Street

The Low Rise Medium Density Design Guide requires the provision of a habitable room window in all street facing walls at all levels. Providing 2 garages and entries side by side on a 15m wide site does not allow for compliance with this guide line. If this is required to be complied with as part of a CDC application, development of this type on a site of this size would not be possible.

KENNEDY ASSOCIATES ARCHITECTS level 3 / 1 booth street annandale 2038 nominated architect - stave kennedy - registration no. 5828 p + 61 2 9557 6466 f + 61 2 9557 6477	commentary - dual occupancy	wollongong city council missing middle testing	1 SEP1 A - 1 EXCEPTABLE - 2 WORK	
			project number 1851	drawing number 02 A
			date 3/6/19	client issue



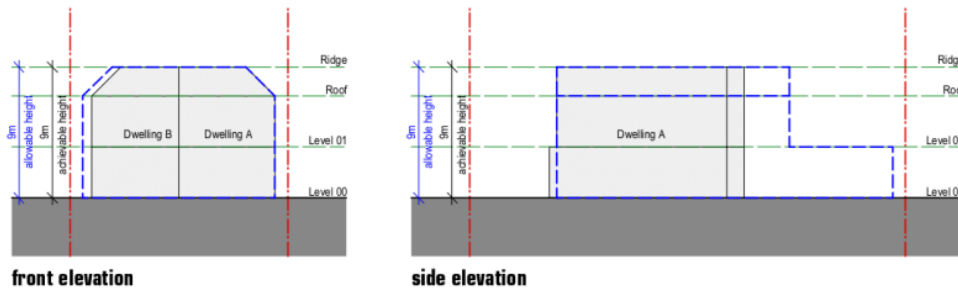
- overall height 9m
- increased side setback (1.5m) for dwelling b to allow setback area to be included as landscape, results in deeper building envelope for dwelling b
- maximum 7m wall height at 0.9m side setback
- minimum side setbacks for dwelling a, results in shallow building envelope
- allowable gross floor area results in reduced achievable building envelopes for both dwellings, setbacks, site coverage and landscaped area requirements would allow for larger dwellings, if FSR was exceeded

allowable + achievable building envelope comparison

scenario 1.1 - wcc controls compliance + comparison table

typology: dual occupancy
zone: r2 - low density residential
lot size: 450 sqm
lot width: 15 m

	Allowable / Required	Dwelling A	Dwelling B	Total	Compliance
Max Height (m)	9.0 m	-	-	9.0 m	Yes
Max Height (st)	2	-	-	2	Yes
Max. FSR	0.5: 1	-	-	0.5: 1	Yes
Max. Gross Floor Area	225 sqm	112 sqm	112 sqm	224 sqm	Yes
Max. Site Coverage (%)	50%	-	-	33%	Yes
Max. Site Coverage (sqm)	225 sqm	70 sqm	79 sqm	149 sqm	Yes
Min. Landscaped Area (%)	20%	-	-	20%	Yes
Min. Landscaped Area (sqm)	90 sqm	45 sqm	45 sqm	90 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	1.5 m	1.5 m	Yes
Min. Landscape in Front Setback	min 1.5m strip	-	-	min 1.5m strip	Yes
Min. Front Setback	6.0 m	6.0 m	6.0 m	-	Yes
Min. Garage Setback	5.5 m	5.5 m	5.5 m	-	Yes
Min. Side Setback - lvl 00	0.9 m	0.9 m	1.5 m	-	Yes
Min. Side Setback - lvl 01	0.9 m	0.9 m	1.5 m	-	Yes
Min. Rear Setback - lvl 00	0.9 m	12.3 m	11.1 m	-	Yes
Min. Rear Setback - lvl 01	8.0 m	12.3 m	11.1 m	-	Yes
Min. Private Open Space Area	24 sqm	24 sqm	24 sqm	-	Yes
Min. Dimension of POS	4.0 m	4.0 m	4.0 m	-	Yes
Min. Car parking	1 space per dwelling <125 sqm	1	1	-	Yes



legend

- primary setback - wcc controls
- secondary setback - wcc controls
- allowable building zone - wcc controls
- single storey zone - wcc controls
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- landscaped area
- private open space
- hard surface area

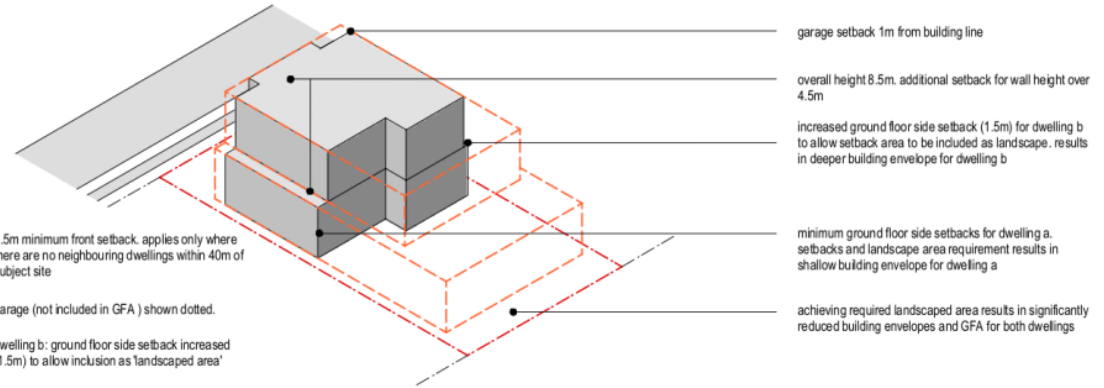
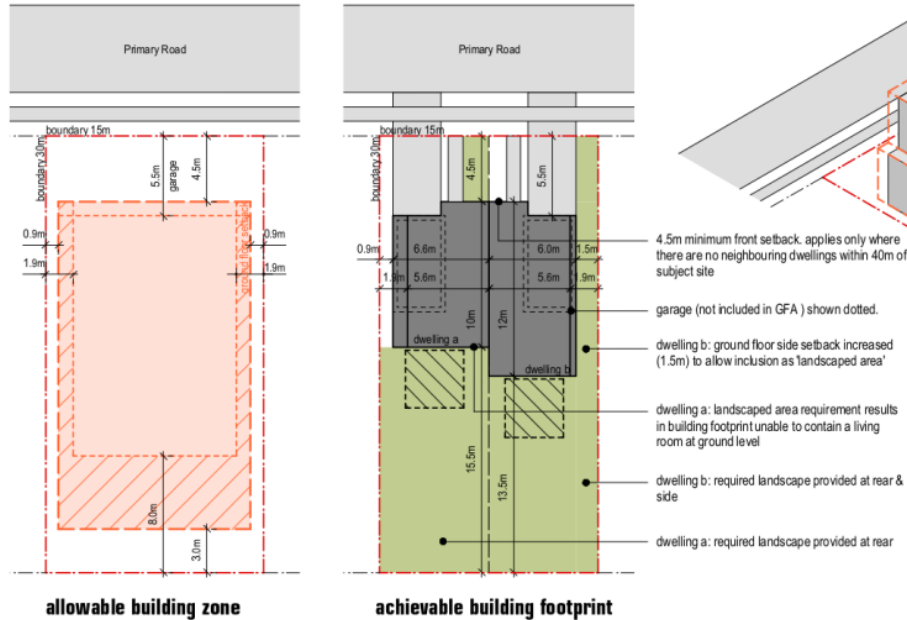
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scenario 1.1 - wcc controls

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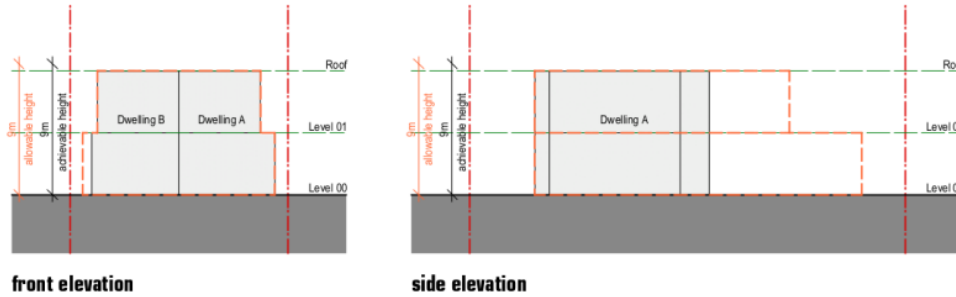


allowable + achievable building envelope comparison

scenario 1.1 - sepp codes compliance + comparison table

typology: dual occupancy
zone: r2 - low density residential
lot size: 450 sqm
lot width: 15 m

	Allowable / Required	Dwelling A	Dwelling B	Total	Compliance
Max. Height (m)	8.5 m	-	-	8.5 m	Yes
Max. Height (st)	2	-	-	2	Yes
Max. Gross Floor Area (Formula)	25% site area + 300			0.39 : 1	Yes
Max. Gross Floor Area (sqm)	300 sqm	81.3 sqm	95.2 sqm	176.5 sqm	Yes
Max. Site Coverage (%)	Not Specified			31%	N/A
Max. Site Coverage (sqm)	Not Specified	72.7 sqm	68.7 sqm	141 sqm	N/A
Min. Landscaped Area (Formula)	50% lot area - 100 *2				Yes
Min. Landscaped Area (sqm)	-200 sqm	125 sqm	125 sqm	250 sqm	Yes
Min. Landscaped Area Dimension	1.5m	1.5 m	1.5 m	1.5 m	Yes
Min. Landscape in Front Setback	25%	-	-	27%	Yes
Min. Front Setback	4.5 m	4.5 m	4.5 m	-	Yes
Min. Garage Setback	5.5 m	5.5 m	5.5 m	-	Yes
Min. Side Setback - lvl 00	0.9 m	0.9 m	1.5 m	-	Yes
Min. Side Setback - lvl 01	1.9 m	1.9 m	1.9 m	-	Yes
Min. Rear Setback - lvl 00	3.0 m	15.5 m	13.5 m	-	Yes
Min. Rear Setback - lvl 01	8.0 m	15.5 m	13.5 m	-	Yes
Min. Private Open Space Area	16 sqm	16 sqm	16 sqm	-	Yes
Min. Dimension of POS	3.0 m	3.0 m	3.0 m	-	Yes
Max. Car Parking	1 space per dwelling	1	1	2	Yes



legend

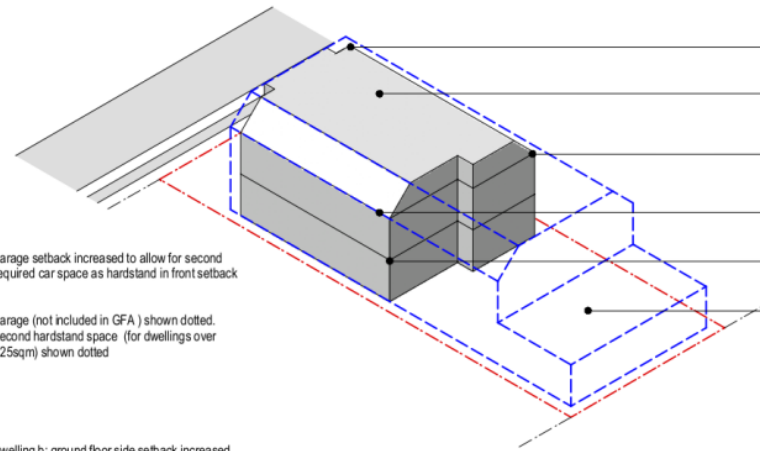
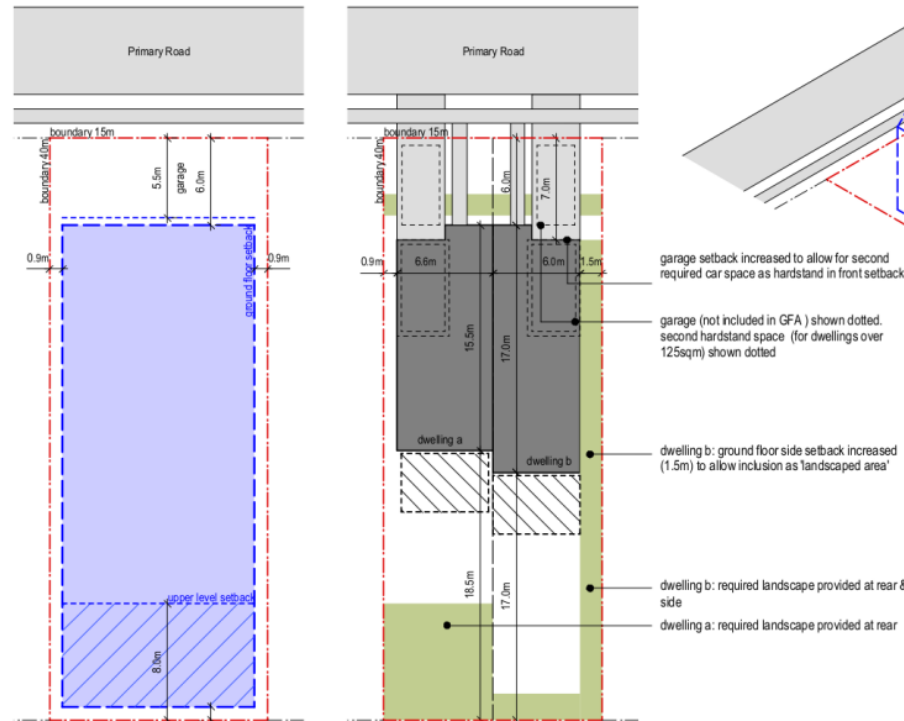
- primary setback - codes sepp
- secondary setback - codes sepp
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building envelope - codes sepp
- achievable building footprint
- achievable building massing
- landscaped area
- private open space
- hard surface area

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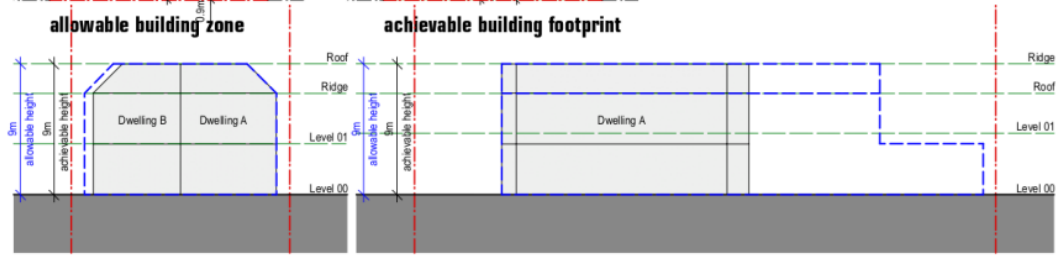
scenario 1.1 - codes sepp

wollongong city council
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project number	drawing number
1851	04 A
date	client issue
3/6/19	



garage setback 1m from building line
overall height 9m
increased side setback (1.5m) for dwelling b to allow setback area to be included as landscape, results in deeper building envelope for dwelling b
maximum 7m wall height at 0.9m side setback
minimum side setbacks for dwelling a, results in shallow building envelope
allowable gross floor area results in reduced achievable building envelopes for both dwellings, setbacks, site coverage and landscaped area requirements would allow for larger dwellings, if FSR was exceeded



- front elevation legend**
- primary setback - wcc controls
 - secondary setback - wcc controls
 - allowable building zone - wcc controls
 - single storey zone - wcc controls
 - allowable building envelope - wcc controls
 - achievable building footprint
 - achievable building massing
 - landscaped area
 - private open space
 - hard surface area

allowable + achievable building envelope comparison

scenario 1.2 - wcc controls compliance + comparison table

typology: dual occupancy
zone: r2 - low density residential
lot size: 600 sqm
lot width: 15 m

	Allowable / Required	Dwelling A	Dwelling B	Total	Compliance
Max. Height (m)	9.0 m	-	-	9.0 m	Yes
Max. Height (st)	2	-	-	2	Yes
Max. FSR	0.5: 1	-	-	-	0.5: 1
Max. Gross Floor Area	300 sqm	150 sqm	150 sqm	300 sqm	300 sqm
Max. Site Coverage (%)	50%	-	-	33%	Yes
Max. Site Coverage (sqm)	300 sqm	99 sqm	98 sqm	197 sqm	Yes
Min. Landscaped Area (Formula)	$120 \text{sqm} + 0.07 \times \text{site area over } 600 \text{sqm}$	-	-	-	Yes
Min. Landscaped Area (sqm)	120 sqm	60 sqm	60 sqm	120 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	1.5 m	1.5 m	Yes
Min landscape in Front Setback	min 1.5m strip	-	-	min 1.5m strip	Yes
Min. Front Setback	6.0 m	6.0 m	6.0 m	-	Yes
Min. Garage Setback	5.5 m	7.0 m	7.0 m	-	Yes
Min. Side Setback - lvl 00	0.9 m	0.9 m	1.5 m	-	Yes
Min. Side Setback - lvl 01	0.9 m	0.9 m	1.5 m	-	Yes
Min. Rear Setback - lvl 00	0.9 m	18.5 m	17.0 m	-	Yes
Min. Rear Setback - lvl 01	8.0 m	18.5 m	17.0 m	-	Yes
Min. Private Open Space Area	24 sqm	24 sqm	24 sqm	-	Yes
Min. Dimension of POS	4.0 m	4.0 m	4.0 m	-	Yes
Max. Car Parking	2 spaces per dwelling > 125sqm	2	2	-	Yes

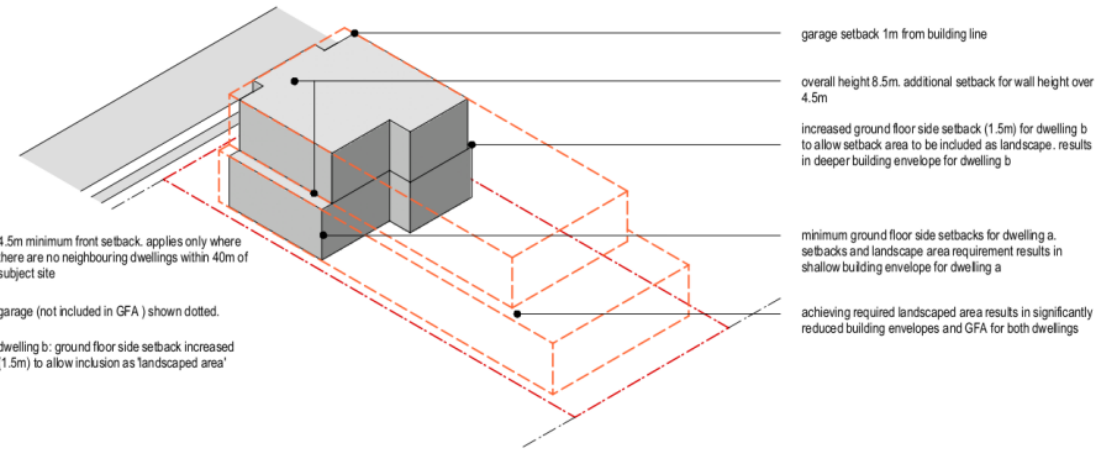
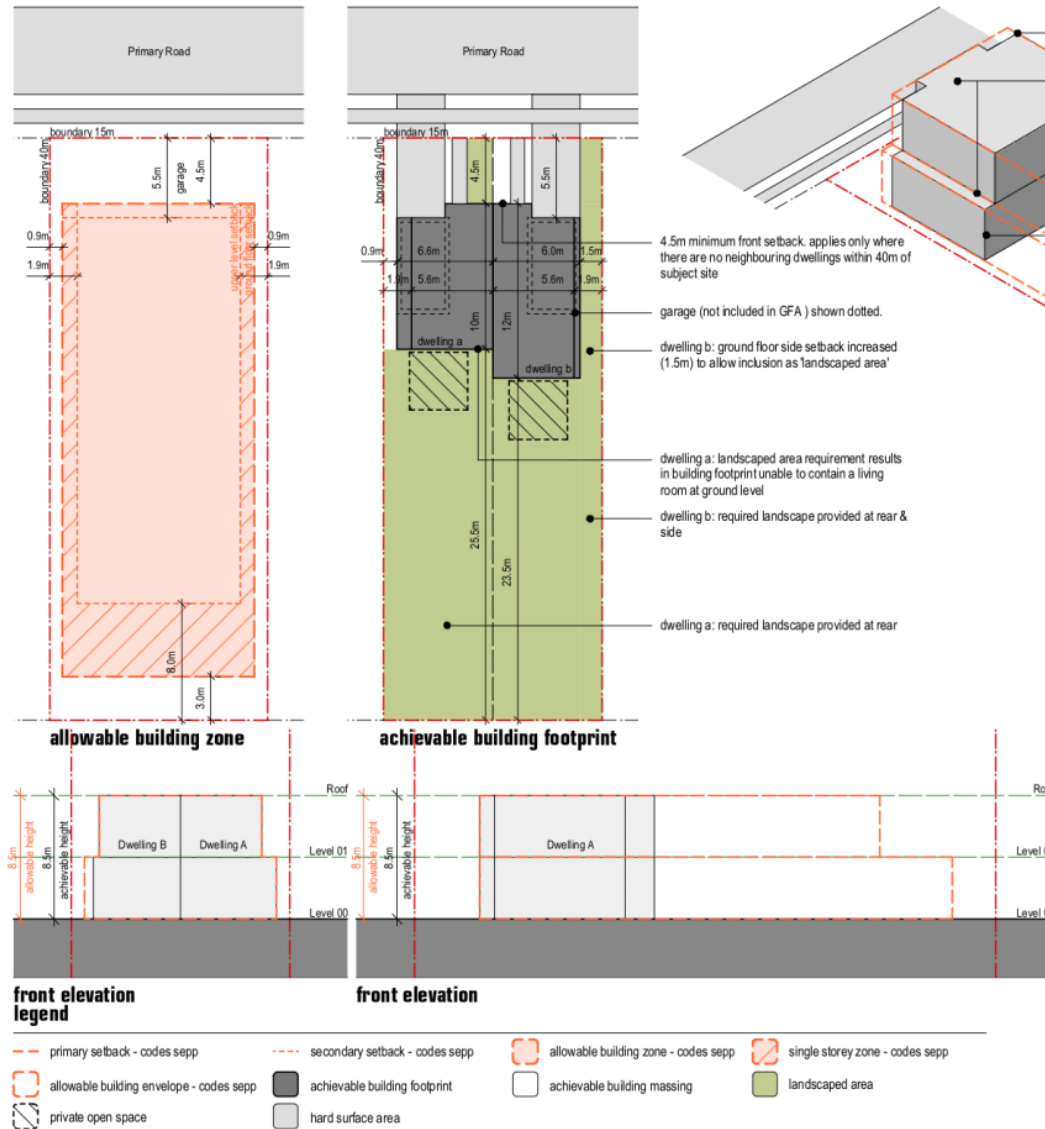
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scenario 1.2 - wcc controls

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project number 1851	drawing number 05 A
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allowable + achievable building envelope comparison

scenario 1.2 - codes sepp compliance + comparison table

typology: dual occupancy
zone: r2 - low density residential
lot size: 600 sqm
lot width: 15 m

	Allowable / Required	Dwelling A	Dwelling B	Total	Envelope
Max. Height (m)	8.5 m	-	-	8.5 m	Yes
Max Height (st)	2	-	-	2	Yes
Max Gross Floor Area (Formula)	25% site area + 300			0.29 : 1	
Max. Gross Floor Area (sqm)	300 sqm	81.3 sqm	95.2 sqm	176.5 sqm	Yes
Max. Site Coverage (%)	Not Specified			22%	N/A
Max. Site Coverage (sqm)	Not Specified	62.7 sqm	68.7 sqm	131.4 sqm	N/A
Min. Landscaped Area (%)	50% lot area - 100 + 2				Yes
Min. Landscaped Area (sqm)	400 sqm	200 sqm	200 sqm	400 sqm	Yes
Min. Landscape Dimension	1.5m	1.5m	1.5m	1.5m	Yes
Min. Landscape in Front Setback	25%			27%	Yes
Min. Front Setback	4.5 m	4.5 m	4.5 m	-	Yes
Min. Garage Setback	5.5 m	5.5 m	5.5 m	-	Yes
Min. Side Setback - lvl 00	0.9 m	0.9 m	1.5 m	-	Yes
Min. Side Setback - lvl 01	1.9 m	1.9 m	1.9 m	-	Yes
Min. Rear Setback - lvl 00	3.0 m	25.5 m	23.5 m	-	Yes
Min. Rear Setback - lvl 01	8.0 m	25.5 m	23.5 m	-	Yes
Min Private Open Space Area	16 sqm	16 sqm	16 sqm	-	Yes
Min. Dimension of POS	3.0 m	3.0 m	3.0 m	-	Yes
Max. Car Parking	1 space per dwelling	1	1	2	Yes

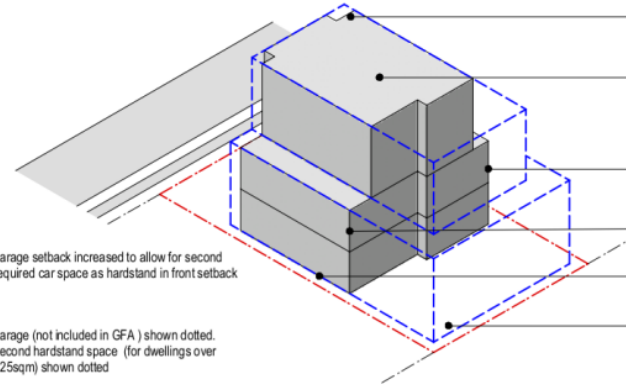
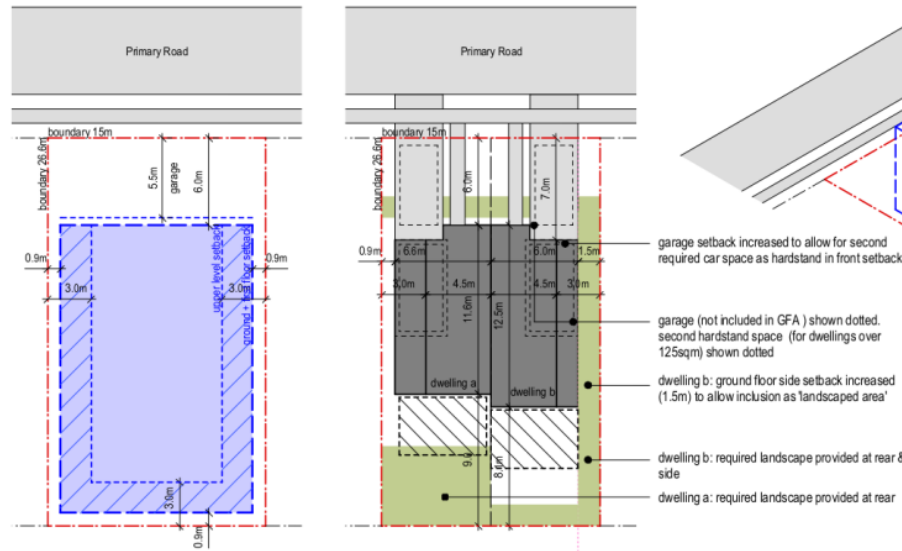
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scenario 1.2 - codes sepp

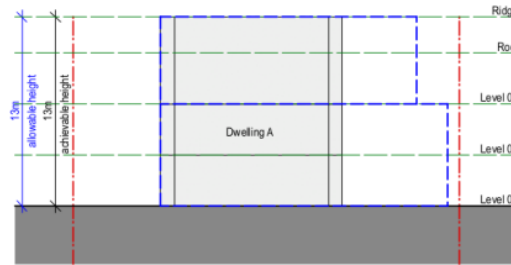
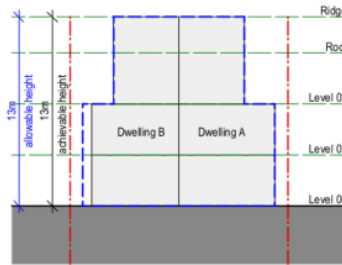
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allowable building zone

achievable building footprint



front elevation

side elevation

legend

- primary setback - wcc controls
- secondary setback - wcc controls
- allowable building zone - wcc controls
- single storey zone - wcc controls
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- landscaped area
- private open space
- hard surface area

allowable + achievable building envelope comparison

scenario 1.3 - wcc controls compliance + comparison table

typology: dual occupancy
zone: r3 - medium density residential
lot size: 400 sqm
lot width: 15 m

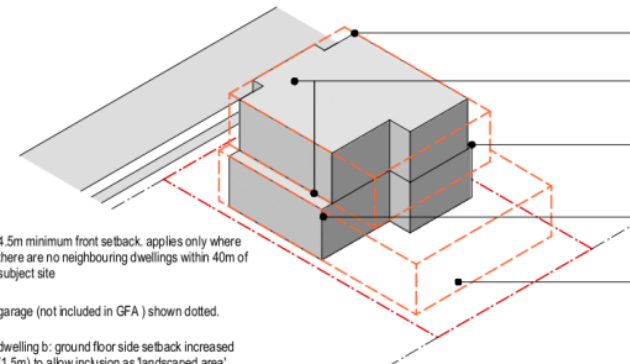
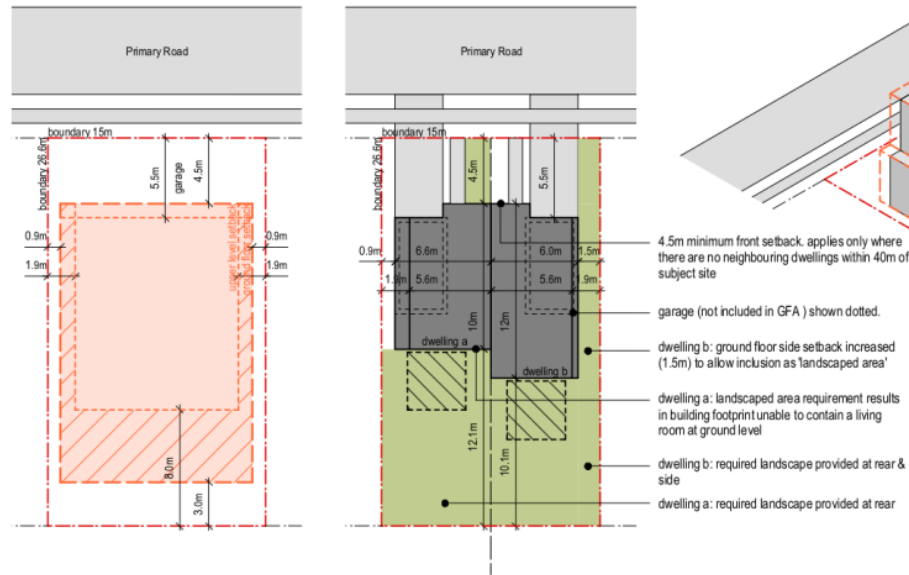
	Allowable / Required	Dwelling A	Dwelling B	Total	Compliance
Max. Height (m)	13.0 m	-	-	13.0 m	Yes
Max. Height (st)	3	-	-	3	Yes
Max. FSR	0.75:1	-	-	0.75:1	Yes
Max. Gross Floor Area	300 sqm	150 sqm	150 sqm	300 sqm	Yes
Max. Site Coverage (%)	55%	-	-	36%	Yes
Max. Site Coverage (sqm)	220 sqm	73 sqm	72 sqm	145 sqm	Yes
Min. Landscaped Area (%)	20%	-	-	20%	Yes
Min. Landscaped Area (sqm)	80 sqm	40 sqm	40 sqm	80 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	1.5 m	1.5 m	Yes
Min. Landscape in Front Setback	min 1.5m strip	-	-	min 1.5m strip	Yes
Min. Front Setback	6.0 m	6.0 m	6.0 m	-	Yes
Min. Garage Setback	5.5 m	7.0 m	7.0 m	-	Yes
Min. Side Setback - lvl 00	0.9 m	0.9 m	1.5 m	-	Yes
Min. Side Setback - lvl 01	0.9 m	0.9 m	1.5 m	-	Yes
Min. Side Setback - lvl 02	3.0 m	3.0 m	3.0 m	-	Yes
Min. Rear Setback - lvl 00	0.9 m	9.0 m	8.1 m	-	Yes
Min. Rear Setback - lvl 01	0.9 m	9.0 m	8.1 m	-	Yes
Min. Rear Setback - lvl 02	3.0 m	9.0 m	8.1 m	-	Yes
Min. Private Open Space Area	24 sqm	24 sqm	24 sqm	-	Yes
Min. Dimension of POS	4.0 m	4.0 m	4.0 m	-	Yes
Max. Car Parking	2 spaces per dwelling > 125sqm	2	2	4	Yes

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scenario 1.3 - wcc controls

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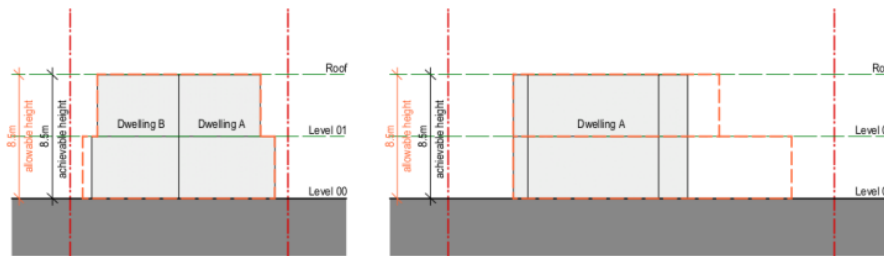
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- garage setback 1m from building line
- overall height 8.5m. additional setback for wall height over 4.5m
- increased ground floor side setback (1.5m) for dwelling b to allow setback area to be included as landscape. results in deeper building envelope for dwelling b
- minimum ground floor side setbacks for dwelling a. setbacks and landscape area requirement results in shallow building envelope for dwelling a
- achieving required landscaped area results in significantly reduced building envelopes and GFA for both dwellings

allowable building zone

achievable building footprint



front elevation

side elevation

legend

- primary setback - codes sepp
- secondary setback - codes sepp
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building envelope - codes sepp
- achievable building footprint
- achievable building massing
- landscaped area
- private open space
- hard surface area

allowable + achievable building envelope comparison

scenario 1.3 - codes sepp compliance + comparison table

typology: dual occupancy lot size: 400 sqm
zone: r3 - medium density residential lot width: 15 m

	Allowable / Required	Dwelling A	Dwelling B	Total	Compliance
Max. Height (m)	8.5 m	-	-	8.5 m	Yes
Max. Height (st)	2	-	-	2	Yes
Max. Gross Floor Area (Formula)	25% site area + 300			0.44 : 1	Yes
Max. Gross Floor Area (sqm)	300 sqm	81.3 sqm	95.2 sqm	176.5 sqm	Yes
Max. Site Coverage (%)	Not Specified			35%	N/A
Max. Site Coverage (sqm)	Not Specified	72.7 sqm	68.7 sqm	141 sqm	N/A
Min. Landscaped Area (Formula)	50% lot area - 100				Yes
Min. Landscaped Area (sqm)	200 sqm	125 sqm	125 sqm	250 sqm	Yes
Min. Landscaped Area Dimension	1.5m	1.5 m	1.5 m	1.5 m	Yes
Min. Landscape in Front Setback	25%	-	-	27%	Yes
Min. Front Setback	4.5 m	4.5 m	4.5 m	-	Yes
Min. Garage Setback	5.5 m	5.5 m	5.5 m	-	Yes
Min. Side Setback - lvl 00	0.9 m	0.9 m	1.5 m	-	Yes
Min. Side Setback - lvl 01	1.9 m	1.9 m	1.9 m	-	Yes
Min. Rear Setback - lvl 00	3.0 m	12.1 m	10.1 m	-	Yes
Min. Rear Setback - lvl 01	8.0 m	12.1 m	10.1 m	-	Yes
Min. Private Open Space Area	16 sqm	16 sqm	16 sqm	-	Yes
Min. Dimension of POS	3.0 m	3.0 m	3.0 m	-	Yes
Max. Car Parking	1 space per dwelling	1	1	2	Yes

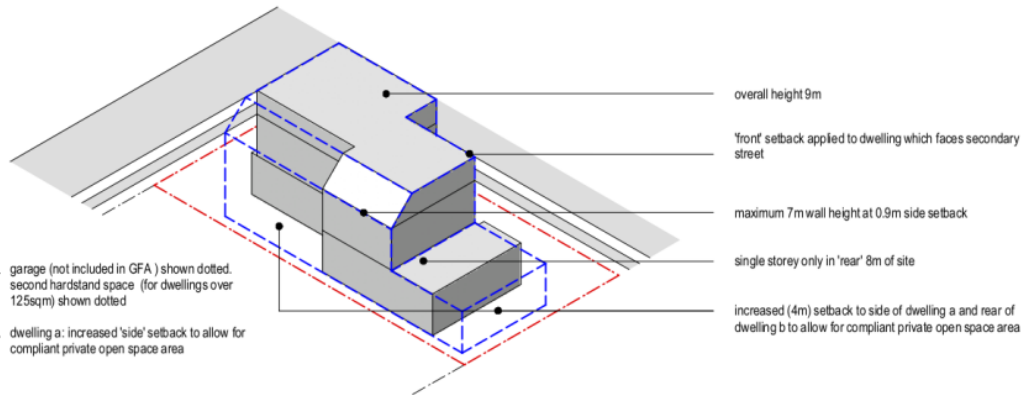
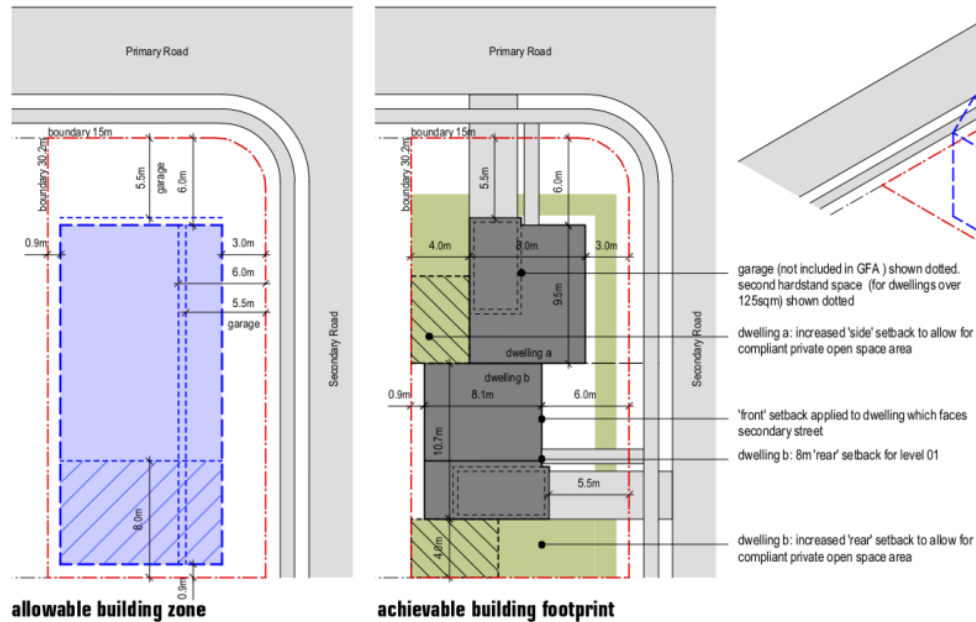
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scenario 1.3 - codes sepp

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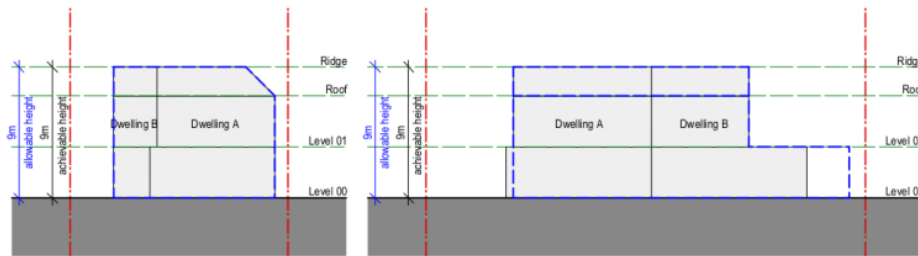


allowable + achievable building envelope comparison

scenario 1.4 - wcc controls compliance + comparison table

typology: dual occupancy lot size: 450 sqm
zone: r2 - low density residential lot width: 15 m

	Allowable / Required	Dwelling A	Dwelling B	Total	Compliance
Max. Height (m)	9.0 m	-	-	9.0 m	Yes
Max. Height (st)	2	-	-	2	Yes
Max. FSR	0.5:1	-	-	0.47:1	Yes
Max. Gross Floor Area	225 sqm	111 sqm	101 sqm	212 sqm	Yes
Max. Site Coverage (%)	50%	-	-	37%	Yes
Max. Site Coverage (sqm)	225 sqm	78 sqm	89 sqm	166 sqm	Yes
Min. Landscaped Area (%)	20%	-	-	20%	Yes
Min. Landscaped Area (sqm)	90 sqm	45 sqm	45 sqm	90 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	1.5 m	1.5 m	Yes
Min landscape in Front Setback	min 1.5m strip	-	-	min 1.5m strip	Yes
Min. Front Setback	6.0 m	6.0 m	-	-	Yes
Min. Garage Setback	5.5 m	5.5 m	5.5 m	-	Yes
Min. Secondary Street (side)	3.0 m	-	-	-	Yes
Min. Secondary Street (front)	6.0 m	-	6.0 m	-	Yes
Min. Side Setback - lvl 00	0.9 m	4.0 m	0.9 m	-	Yes
Min. Side Setback - lvl 01	0.9 m	4.0 m	0.9 m	-	Yes
Min. Rear Setback - lvl 00	0.9 m	-	4.0 m	-	Yes
Min. Rear Setback - lvl 01	8.0 m	-	8.0 m	-	Yes
Min. Private Open Space Area	24 sqm	24 sqm	24 sqm	-	Yes
Min. Dimension of POS	4.0 m	4.0 m	4.0 m	-	Yes
Max. Car Parking	1 spaces per dwelling < 125sqm	1	1	2	Yes



front elevation

side elevation

legend

- primary setback - wcc controls
- secondary setback - wcc controls
- allowable building zone - wcc controls
- single storey zone - wcc controls
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- landscaped area
- private open space
- hard surface area

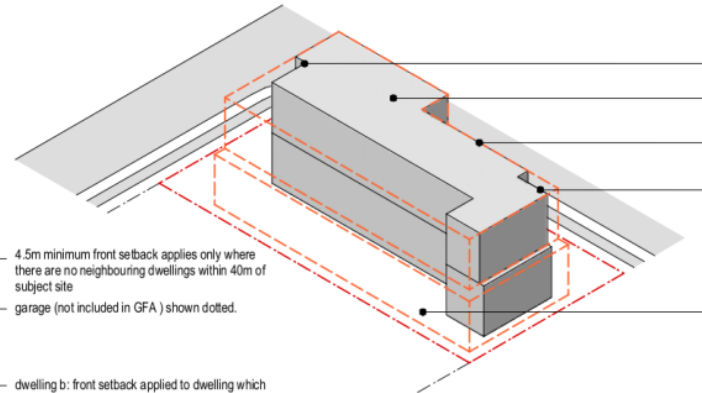
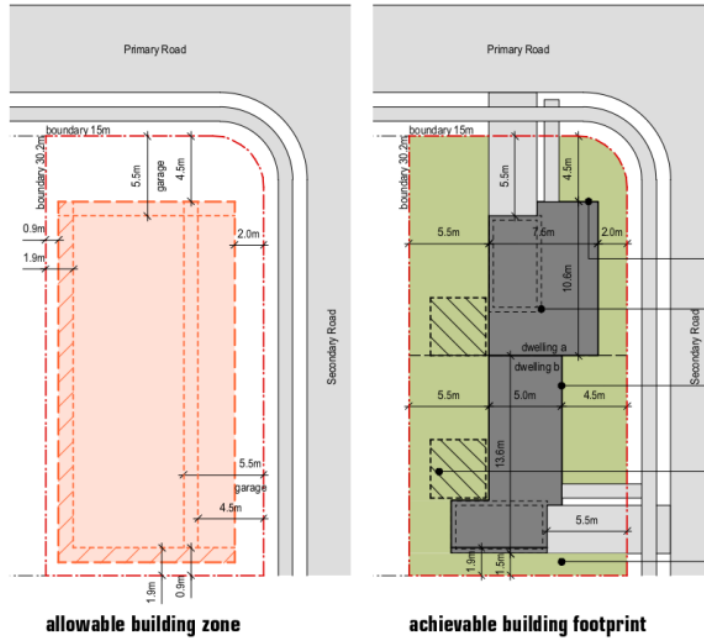
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scenario 1.4 - wcc controls

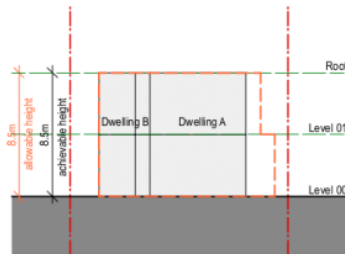
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project number	drawing number
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allowable building zone

achievable building footprint



front elevation
legend



side elevation

- primary setback - codes sepp
- secondary setback - codes sepp
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building envelope - codes sepp
- achievable building footprint
- achievable building massing
- landscaped area
- private open space
- hard surface area

allowable + achievable building envelope comparison

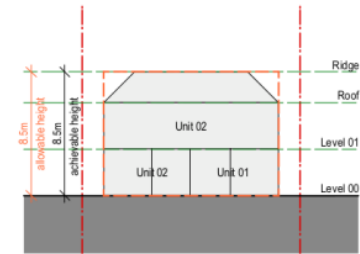
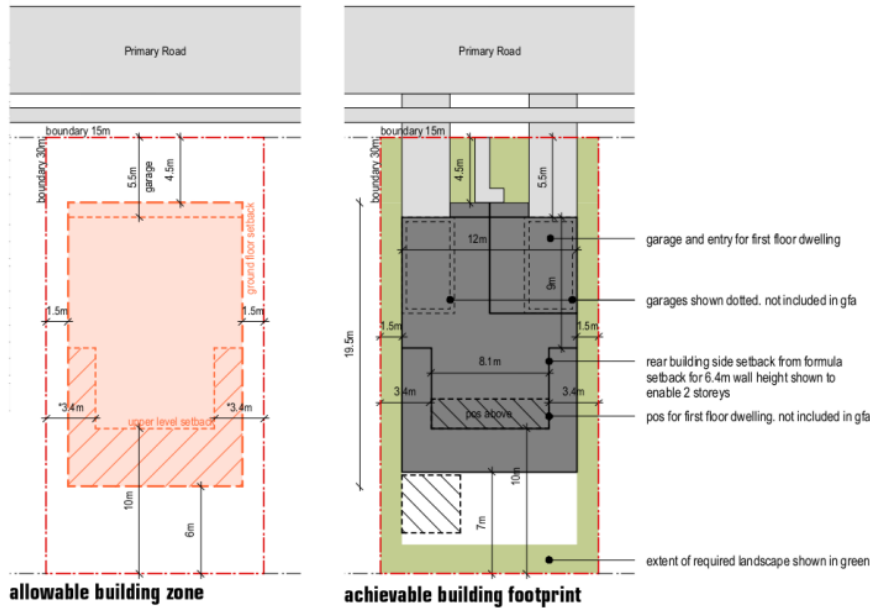
scenario 1.4 - codes sepp compliance + comparison table

typology: dual occupancy lot size: 450 sqm
zone: r2 - low density residential lot width: 15 m

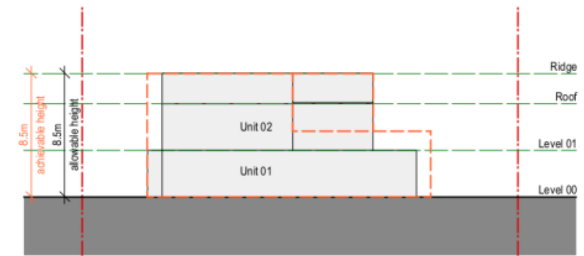
	Allowable / Required	Dwelling A	Dwelling B	Total	Compliance
Max. Height (m)	8.5 m	-	-	8.5 m	Yes
Max. Height (st)	2	-	-	2	Yes
Max. Gross Floor Area (Formula)	25% site area + 300			0.48 : 1	Yes
Max. Gross Floor Area (sqm)	300 sqm	111.4 sqm	102.9 sqm	214.2 sqm	Yes
Max. Site Coverage (%)	Not Specified			33%	N/A
Max. Site Coverage (sqm)	Not Specified	76.2 sqm	74.2 sqm	150 sqm	N/A
Min. Landscaped Area (Formula)	50% lot area - 100 *2				Yes
Min. Landscaped Area (sqm)	250 sqm	125 sqm	125 sqm	250 sqm	Yes
Min. Landscaped Area Dimension	1.5m	1.5 m	1.5 m	1.5 m	Yes
Min. Landscape in Front Setback	25%	-	-	27%	Yes
Min. Front Setback	4.5 m	4.5 m	4.5 m	-	Yes
Min. Garage Setback	5.5 m	5.5 m	5.5 m	-	Yes
Min. Secondary Street (side)	2.0 m	2.0 m	-	-	Yes
Min. Secondary Street (facing)	4.5 m	-	4.5 m	-	Yes
Min. Side Setback 1 - lv100	0.9 m	5.5 m	5.5 m	-	Yes
Min. Side Setback 1 - lv101	1.9 m	5.5 m	5.5 m	-	Yes
Min. Side Setback 2 - lv100	0.9 m	-	1.5 m	-	Yes
Min. Side Setback 2 - lv101	1.9 m	-	1.9 m	-	Yes
Min. Private Open Space Area	16 sqm	16 sqm	16 sqm	-	Yes
Min. Dimension of POS	3.0 m	3.0 m	3.0 m	-	Yes
Max. Car Parking	1 space per dwelling	1	1	2	Yes

scenario 1.5 codes sepp

typology:	dual occupancy - stacked	no. units achieved:	2
epi(s):	sepp codes	unit mix / sizes:	2 x 3 bed
zone:	r2 - low density residential		U 1 = 135sqm
lot size:	450 sqm		U 2 = 124sqm
lot width:	15 m	no car spaces:	2



front elevation



side elevation

legend

- - - primary setback - codes sepp
- - - secondary setback - codes sepp
- - - primary setback - wcc controls
- - - secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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scenario 1.5 - codes sepp

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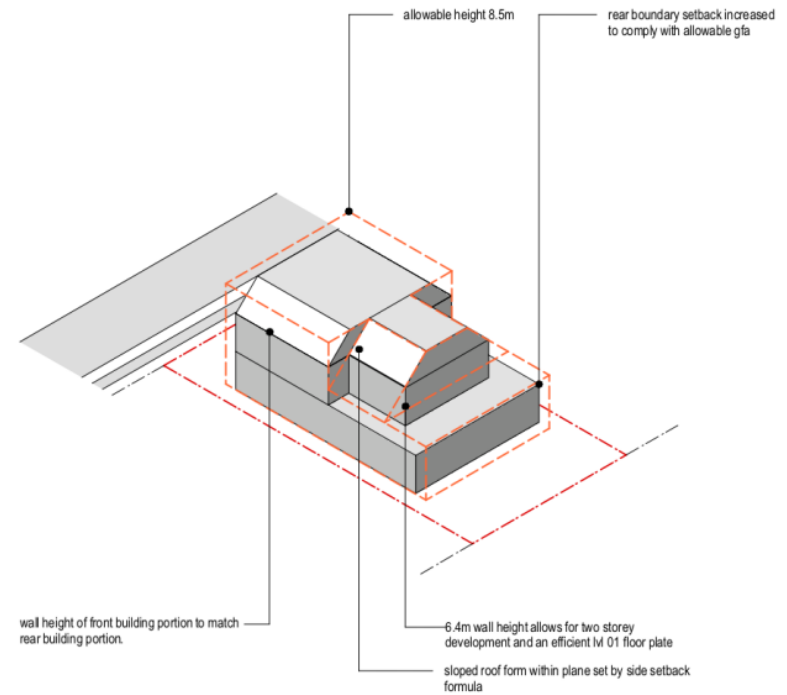
project number	drawing number
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scenario 1.5 codes sepp compliance + comparison table

typology:	dual occupancy - stacked	no. units achieved:	2
epi(s):	sepp codes	unit mix / sizes:	2 x 3 bed
zone:	r2 - low density residential		U 1 = 135sqm
lot size:	450 sqm		U 2 = 124sqm
lot width:	15 m	no car spaces:	2

	Allowable / Required	Proposed	Compliance
Max Height (m)	8.5 m	8.5 m	Yes
Max Height (st)	2	2	Yes
Max. Gross Floor Area (Formula)	25% site area + 150sqm (max 400sqm)	0.6:1	Yes
Max. Gross Floor Area	263 sqm	259 sqm	Yes
Min. Landscaped Area (Formula)	50% site area - 100sqm	30%	Yes
Min Landscaped Area (sqm)	125 sqm	133 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	Yes
Front Setback Min. Landscape	50%	51%	Yes
Min. Front Setback	4.5 m	4.5 m	Yes
Min. Garage Setback	5.5 m	5.5 m	Yes
Min. Side Setback - lvl 00	1.5 m	1.5 m	Yes
Side Setback - lvl 01 (>10m behind building line)	height of wall - 3 m	3.4 m	Yes
Min. Rear Setback - lvl 00	6.0 m	7.0 m	Yes
Min. Rear Setback - lvl 01	10.0 m	10.0 m	Yes
Min. Private Open Space Area			
Ground Floor Units	16 sqm	16 sqm	Yes
1 bed	8 sqm	-	-
2 bed	12 sqm	-	-
3 bed	16 sqm	16 sqm	Yes
Min. Dimension of POS	2.0 m	2.0 m	Yes
Min. Car parking	1 per dwelling	2	Yes

allowable + achievable building envelope comparison



legend

- - - primary setback - codes sepp
- - - secondary setback - codes sepp
- - - primary setback - wcc controls
- - - secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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scenario 1.5 - codes sepp

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commentary: scenario 2.2 - codes sepp

Generally, this scenario results in an undesirable outcome.

A large portion of the site is taken up by car parking, minimum compliance with landscaped area is achieved. Locating private and communal open space in the side / street setback areas results in reduced amenity, while circulation throughout the site is irrational. All upper level side facing windows would require substantial screening, reducing access to light and ventilation. Units are located directly adjacent to car parking with no landscape buffer.

Building Envelope and GFA Relationship

The allowable building envelope is substantially greater than the permissible GFA. The GFA fills approximately 80% of the allowable envelope. A high level of articulation could be accommodated within the building envelope.

Upper Level Setbacks

Upper level setbacks, for the portion of the building 10m or more behind the building line, are dependant on wall height - a higher wall requires a greater side setback.

The overall building height has been reduced to minimise the required side setback and allow for a larger, more viable upper storey footprint.

Front Setback

The 4.5m front setback (used for this scenario) applies only where there are no dwellings located on the same side of the road as the subject site within 40m. Otherwise the average setback applies of these dwellings applies. Requirement for greater setback to the street is likely to reduce the achievable building footprint and influence development viability.

Parking and Site Type

The required amount of parking (including driveway and manoeuvring area) does not allow for manor house development on a single frontage, 15m wide site. A corner site has been provided as an alternative. Scenario 2.4 outlines the minimum site requirements for a manor house development on a single frontage site.

A significant amount of the site is taken up by hard paving for car parking and access, leaving limited room for landscaped area or communal open space and restricting the achievable building foot print.

Layout and Amenity

All upper level windows on the side facing walls would require screening for visual privacy. Although compliant with the SEPP, this may impact on the ability of development to comply with provisions of the Low Rise Medium Density Design Guide, in particular solar access and ventilation. Substantial screening to windows reduces residential amenity and is not a desirable outcome.

The site layout is compromised. Situating private open space in side setbacks leads to poor amenity outcomes - either compromised privacy or substantial screening, reducing solar access. Locating communal open space within the secondary street setback results in a low level of privacy and amenity for users of the space.

Access to common areas, car parking and to / from the street is circuitous.

commentary: scenarios 2.1 & 2.6 - wcc controls

Generally, these scenarios result in undesirable outcomes.

The provision of basement car parking is unlikely to be feasible, however, the alternative (at grade parking with units over) results in a poor streetscape. Scenarios rely on application of non habitable room side setbacks. Private and communal open spaces are poorly located with compromised amenity and privacy concerns. Deep soil areas are in sub optimal locations and / or co-located with private open spaces.

Building Envelope and GFA Relationship

The allowable building envelope is greater than the permissible GFA. The GFA fills approximately 75% of the allowable envelope. A high level of articulation could be accommodated within the building envelope.

Whilst additional height is available within the allowable building envelope, it is not sufficient to permit an additional storey.

Minimum Site Frontage

WDCP requires a minimum site frontage of 24m for residential flat building development. Scenario 2.1 does not comply with this requirement.

Side & Rear Setbacks

WDCP's side and rear setbacks are based on room type - 3.5m for non habitable rooms and 6m for habitable rooms.

Due to sites' limited width, the footprint within the 6m 'habitable room setback' would be too narrow / small to allow for development. As such, the scenarios need to utilise the 3.5m non-habitable room setback, along the side boundaries.

As scenario 2.6 is roughly square, there is sufficient rear and front facade length to place all required habitable room openings at the front or rear. This scenario would be fully compliant with the setbacks controls.

As scenario 2.1 is narrow and deep, there would not be sufficient rear and front facade length to place all required habitable room openings at the front or rear. Some habitable room openings (i.e. bedrooms) would be required on the side walls, and would not strictly comply with the setback controls. These windows may be acceptable if screened, however, this does not address aural privacy and may impact on the ability of development to comply with solar access or ventilation controls.

Parking

The required parking (including driveway and manoeuvring area) takes up over half of the site area, leaving insufficient room for development. As such, basement car parking has been shown, however, this is unlikely to be feasible for these scenarios, due to the low yield (3 and 4 units).

Council's height plane would allow for an alternative parking arrangement, of at grade parking with 2 storeys of units above, however, this is not a desirable outcome as it creates a poor streetscape presentation, limits landscaping opportunities and would require developments to be 'walk-ups'.

For scenario 2.1, the driveway takes up a considerable portion of the frontage, reducing the area available for the front facing units. A single double storey unit is included at the front, as there is insufficient area for two units (one per floor)

For scenario 2.6, the required driveway length (to ramp down to the basement), coupled with the relatively shallow site depth necessitates the provision of deep soil area at the front of the site, which is not preferred by Council.

Layout & Amenity

Site dimensions, application of non-habitable side setbacks and parking requirements (driveway) lead to poor site amenity outcomes. Compromised elements include internal site circulation, access to and from the street, location of private open space (in front or side boundaries), location of communal open space and the overlap of deep soil zones and private open spaces, which is not supported by Council.

commentary: scenarios 2.7 - 2.9 - wcc controls + adg

Generally, these scenarios result in undesirable outcomes.

The provision of basement car parking may effect yield or developability. Scenarios rely on application of non habitable room side setbacks (not 2.9). Private and communal open spaces are poorly located with compromised amenity and privacy concerns. Deep soil areas are in sub optimal locations and / or co-located with private open spaces. Dwelling layouts may be limited and / or inefficient.

Apartment Design Guide

These scenarios are subject to the provisions of the apartment design guide, which overrides certain Council controls. Where applicable, ADG controls have been used and are highlighted in green.

Building Envelope and GFA Relationship

The allowable building envelope is greater than the permissible GFA. The GFA fills approximately 60% of the allowable envelope. A high level of articulation could be accommodated within the building envelope.

For scenarios 2.8 and 2.9, the allowable building height could accommodate an additional storey, however, the GFA does not support this. Different building forms (i.e. part 2 and part 4 storey development) could be accommodated within the building envelope

Minimum Site Frontage

WDCP requires a minimum site frontage of 24m for residential flat building development. Scenario 2.8 does not comply with this requirement.

Side & Rear Setbacks

The ADG's side and rear setbacks are based on room type - 3m for non habitable rooms and 6m for habitable rooms.

Due to the limited width of Scenarios 2.7 & 2.8, the footprint within the 6m 'habitable room setback' would be too narrow / small to allow for development. As such, the scenarios need to utilise the 3.5m non-habitable room setback, along the side boundaries.

As scenario 2.7 is roughly square, there is sufficient rear and front facade length to place all required habitable room openings at the front or rear. This scenario would be fully compliant with the setbacks controls.

As scenario 2.8 is narrow and deep, there would not be sufficient rear and front facade length to place all required habitable room openings at the front or rear. Some habitable room openings (i.e. bedrooms) would be required on the side walls, and would not strictly comply with the setback controls. These windows may be acceptable if screened, however, this does not address aural privacy and may impact on the ability of development to comply with solar access or ventilation controls.

Scenario 2.9 is of a sufficient size to enable development solely within the habitable room setbacks.

Parking

The required parking (including driveway and manoeuvring area) takes up over half of the site area, leaving insufficient room for development. Provision of basement car parking on sites of this size / yield is likely to make development feasibility tight (with the exception of scenario 2.9)

The ADG does not support at grade parking.

For scenario 2.8, the driveway takes up a considerable portion of the frontage, reducing the area available for the front facing units. Due to the depth of the site, the resulting building foot print is of a sufficient size to permit one unit per floor in this location, however, the internal layout of the unit is likely to be compromised / irrational.

For scenario 2.7, the required driveway length (to ramp down to the basement), coupled with the relatively shallow site depth necessitates the provision of deep soil area at the front of the site. The ADG allows for provision of deep soil throughout the site.

Dwelling Width

Scenario 2.7 and 2.9 contain units which are 6m wide. This is an inefficient dwelling width as it insufficient to permit 2 rooms side by side, but is considerably wider than required for a single room.

Layout and Amenity

Site dimensions, application of non-habitable side setbacks and parking requirements (driveway) lead to poor site amenity outcomes. In particular these scenarios have significantly compromised communal open spaces that may comply numerically but do not provide good amenity (such as narrow areas in side setbacks) and are unlikely to be accepted. Locating communal open space on the rooftop may be a more desirable outcome. This would require a breach in the height plane for the lift overrun in scenario 2.7 only.

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commentary - manor house & rfb

**wollongong city council
missing middle testing**

project number	drawing number
1851	13 A
date	
3/6/19	client issue

commentary: scenarios 2.3 - 2.5 - codes sepp

Inconsistencies

There are a number of inconsistencies in the Codes SEPP controls, for example: the amount of private open space required for each dwelling and the maximum allowable upper level private open space or the requirement to include car parking in the GFA - contrary to other definitions.

As this development typology, and the legislation, is yet to be thoroughly tested in the development landscape - due to the deferral of the code in most LGA's - it is likely that these (and other) discrepancies will be 'ironed out' through amendments to the Code and more rational development allowed.

Front Setback

SEPP Codes requires that the primary road setback of a development be 'not less than the average setback from the primary road of the nearest building within 40m of the lot and on the same side of the primary road that are residential accommodation'

As the three test scenarios are hypothetical sites, the average setback cannot be determined. The required front setback for residential accommodation from WDCP - 6m - has been applied as a stand in for this control.

A lesser front setback may allow for development on smaller sites and / or maximisation of available GFA. A greater front setback would likely require the site area for each scenario to be larger than the minimums determined by this exercise.

Upper Level Side Boundary Setbacks

SEPP Codes requires that 'any part of a manor house... that is more than 10m behind the building line and that is more than 4.5m above the ground level (existing) must have a minimum setback from a side boundary of.'

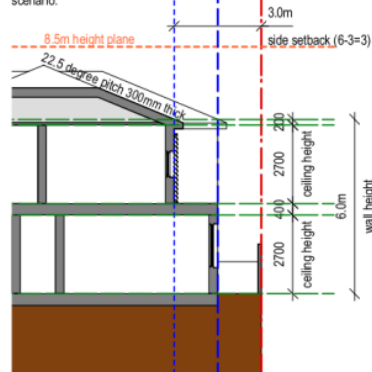
$s = h = 3$

where:

s is the minimum setback in metres
h is the height of the building part in meters

In line with this formula, a side boundary setback of 3m has been applied to the rear portion of the upper storey for each scenario. This is based on a 'height of building part' of 6m, which is considered achievable within typical 2 storey construction methods, whilst also allowing for the 2.7m ceiling heights required by the SEPP, as illustrated below.

A greater 'height of building part' - i.e. through different construction methods, roof pitch or increased ceiling heights - would increase the required side setback and increase the minimum site width required for each scenario.



Height of Building Part Diagram - Upper Side Setbacks

Solar Access

Parts 2.2G + 2.2H of The Low Rise Medium Density Design Guide includes requirements for solar access to both the proposed development and neighbouring development.

As the three test scenarios are hypothetical sites, compliance with the requirements for solar access cannot be determined. Under the guidelines, 75% of the development (or 3 out of 4 units) is required to receive at least 3 hours of direct sunlight to both living rooms and private open spaces at mid winter.

Given the narrow widths of the sites, the requirement to place all principal private open spaces at the rear and the 'stacked' nature of development anticipated by the controls, achieving the design criteria for solar access is likely to be onerous for all but optimally oriented (north to rear) sites.

Detached Development GFA / Garages

SEPP Codes includes development standards for detached development (i.e. sheds, fences, swimming pools and garages) associated with dual occupancy, manor house and terrace developments development under the SEPP.

The code outlines the allowable maximum gross floor area for detached development on a site which, for manor houses, is as follows:

- 45sqm for a site of 600sqm
- 60sqm for a site greater than 600sqm but less than 900sqm
- 100sqm for a site greater than 900 sqm

This GFA provisions (for both sites of 600sqm and up to 900sqm) is insufficient to enable the provision of 4 x detached garages, which would require a minimum GFA of 72sqm. As such, hard stand spaces have been provided for all scenarios.

Individual garages are likely to be desired for this typology, particularly for scenario 2.5 with rear lane access. If SEPP Codes was updated to allow for garages to be excluded from GFA, garages could be accommodated in all scenarios, however, provision of garages may result in the requirement for slightly wider sites, to accommodate the increased width required over hard stand spaces (garage wall thickness and circulation space)

site width & area drivers

Scenario 2.3 - Rear Lane Access Site (600sqm - 15m x 40m)

The minimum developable site width and area for this option is as per the allowable minimum in the Code.

The 15m minimum site width is just sufficient to allow for a two storey, four dwelling development that complies with upper level side setback (3m) and allows for compliant living room widths (4m) for upper level dwellings (with allowance for external and party walls).

Development on a 15m wide site relies on the ability to provide parking / access to parking from a rear lane (as shown) and a wall height at the side setbacks of 6m.

Any additional wall height would increase the minimum site width by 2 x the wall height increase. i.e. a 7m wall height would require a 17m site to both comply with the site setback (4m) and the minimum living room width (4m).

Scenario 2.5 - Corner Access Site (705sqm - 16.5m x 42.8m)

The minimum developable site width and area for this option are greater than the allowable minimums under the Code.

The required site width is a direct result of the 3m setback required to the secondary street frontage. A narrower site would not be able to comply with the required setback and the minimum living room widths (4m) for both upper storey dwellings.

As per Site B, the required driveway and car parking takes up a considerable part of the site (approximately 150sqm), requiring a larger than minimum site area to allow for the required landscaped area. Additionally, the overall length of the site is increased by the need to provide communal open space, with a minimum dimension of 3m, between the dwellings and the car park.

Privacy Screens

SEPP Codes requires 1.5m high privacy screens to upper level windows and balconies in certain conditions.

Based on the floor and ceiling heights outlined in the 'height of building part diagram' the three development scenarios would require screens to:

the sides of balconies, where the balcony edge is within 6m of the side boundary

windows, where the window is within 6m of the side boundary and:

- the window is in a habitable room and
- the window is clear and
- the window has a sill height of less than 1.5m and
- the window is not a bedroom window less than 2sqm in area

Privacy screens are shown in accordance with the above requirements.

Providing the required privacy screening is likely to impact on a development's ability to also comply with the solar access and natural ventilation requirements of the Code. Achieving all amenity provisions is likely to require detailed design consideration and may be onerous.

Upper Level Private Open Space

Part 3B.26 of SEPP Codes states that 'the total floor area of all attached side or rear balconies, decks, patios, terraces and verandahs having a floor level of more than 2m above ground level (existing) must not be more than 12sqm', however, the minimum private open space area required (Part 3B.27) for two bedroom dwellings is 16sqm.

That is, development cannot comply with the provisions of both part 26 and part 27. For the purposes of these scenarios, compliance with part 27 (minimum private open space area) is considered to be more crucial. Although strict compliance with part 26 has therefore not been achieved, our experience with similar contradictory clauses in other development codes suggests that this would be accepted as complying with the code.

Scenario 2.4 Single Frontage Access Site (770sqm - 19.5m x 39.5m)

The minimum developable site width and area for this option are greater than the allowable minimums under the Code.

The required site width and area are a result of:

- providing a driveway from the front to the rear, including landscaped buffers to both sides, that are wide enough to be included in the overall landscaped area count (1.5m)
- the area of hard paving required for the driveway and car parking area (220sqm) which is not landscaped area
- the additional site area required to provide a compliant amount of landscaped area

Providing narrower (under 1.5m) landscape buffers to the driveway would reduce the required site width, however, they would not be able to be counted as landscaped area. Whilst the site width would reduce, the overall site depth would need to increase to offset the lost landscape area.

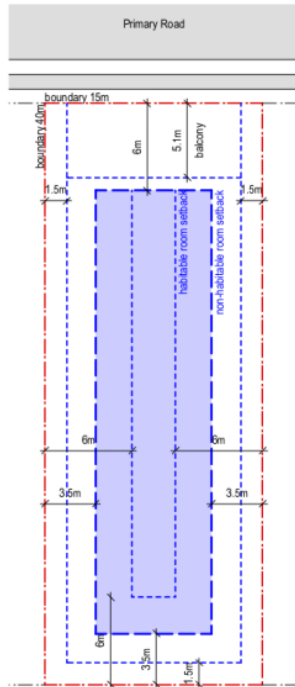
Dwelling Configuration

The dwelling layouts shown are one example of how a Manor House, complying with the Code and Design Guide, may be designed. Other dwelling configurations, including different dwelling sizes and lobby locations, are possible under the code and may be more desirable based on the conditions of a specific site.

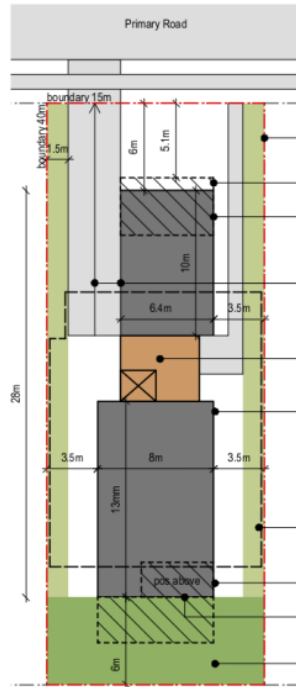
The fundamental configuration, of two stacked dwellings, separated by a lobby providing access to the front and rear of the site is likely to support development on a wide range of site types and sizes, and allow for dwellings of different layouts and types.

scenario 2.1 - wcc controls

typology:	rfb	no. units achieved:	3
epi(s):	wiep + wdcp	unit mix / size:	3 x 3 bed (90 sqm)
zone:	r2 - low density residential		
lot size:	600 sqm		
lot width:	15 m	no. car spaces:	6

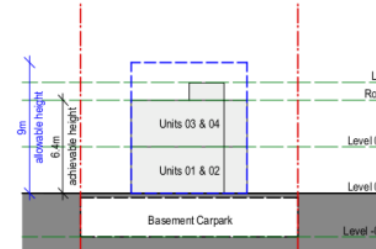


allowable building zone

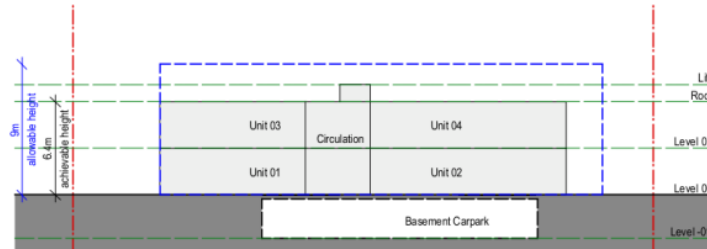


achievable building footprint

- required landscaped area shown in light green. additional landscaped area available
- ground floor pos 0.9m forward of building line
- 1 x two storey dwelling facing street
- driveway to basement along side boundary partial increased side setback to accommodate
- common circulation + foyer. vertical circulation areas excluded from GFA
- 3.5m side setback non-habitable room openings only
- extent of basement shown dotted. 1 x basement level, 6 car spaces
- upper level pos. not included in gfa
- 6m rear setback. habitable room openings permitted
- 6m deep soil zone at rear included in landscape area count



front elevation



side elevation

legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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scenario 2.1 - wcc controls

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project number	drawing number
1851	15 A
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3/6/19	client issue

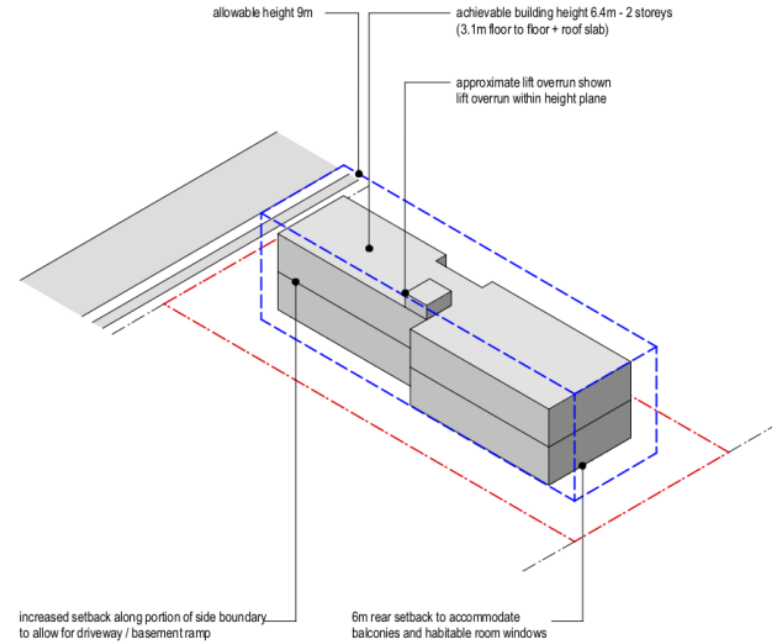
scenario 2.1 - wcc controls

compliance + comparison table

typology:	r1b	no. units achieved:	3
epi(s):	wiep + wdcp	unit mix / size:	3 x 3 bed (90 sqm)
zone:	r2 - low density residential		
lot size:	600 sqm		
lot width:	15 m	no. car spaces:	6

	Allowable / Required	Proposed	Compliance
Max Height (m)	9.0 m	6.4 m	Yes
Max Height (st)	-	2	-
Max. FSR	0.5: 1	0.46: 1	Yes
Max. Gross Floor Area	300 sqm	278 sqm	Yes
Min. Site Width	24.0 m	15.0 m	No
Min. Landscaped Area (%)	30%	32%	Yes
Min. Landscaped Area (sqm)	180 sqm	192 sqm	Yes
Min. Landscaped Area Dimension			
Min. Deep Soil Zone (%)	15%	15%	Yes
Min. Deep Soil Zone (sqm)	90 sqm	90 sqm	Yes
Min. Deep Soil Zone Dimension	6.0 m	6.0 m	Yes
Min. Front Setback	6.0 m	6.0 m	Yes
Min Front Setback POS	5.1 m	5.1 m	Yes
Min Side & Rear Setback - Habitable Rooms	6.0 m	3.5m / 6 m	No (Side Only)
Min Side & Rear Setback - Non Habitable Rooms	3.5 m	3.5 m	Yes
Min Side & Rear Setback - Ground Floor POS + Driveways	1.5 m	1.5 m	Yes
Min. POS Area / Dimension Per Unit Type			
All Ground Floor Units	25 sqm / 2.0 m	25 sqm / 2.0 m	Yes
All Upper Level Units	12 sqm / 2.4 m	12 sqm / 2.4 m	Yes
No. Car Spaces Per Unit Type			
<70sqm	1	-	Yes
70 - 110sqm	1.5	4.5	Yes
>110 sqm	2	-	-
No. Visitor Spaces Per Unit	0.2	0.6	Yes
Total Spaces Required / Proposed	4.5 + 0.6	6	Yes

allowable + achievable building envelope comparison



legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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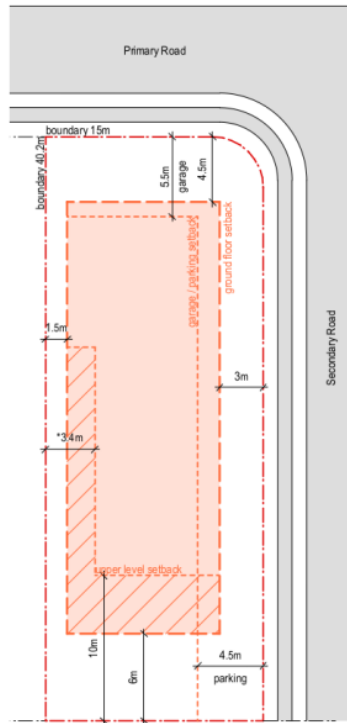
scenario 2.1 - wcc controls

**wollongong city council
missing middle testing**

project number	drawing number
1851	16 A
date	client issue
3/6/19	

scenario 2.2 codes sepp

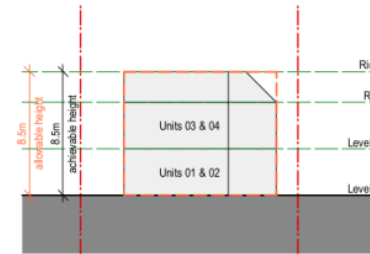
typology:	manor house (3-4 dwellings)	no. units achieved	4
epi(s):	sepp codes	unit mix	1 x 1 bed (57sqm)
zone:	r2 - low density residential		2 x 2 bed (67 / 78sqm)
lot size:	600 sqm		1 x 3 bed (95sqm)
lot width:	15 m	no car spaces:	4



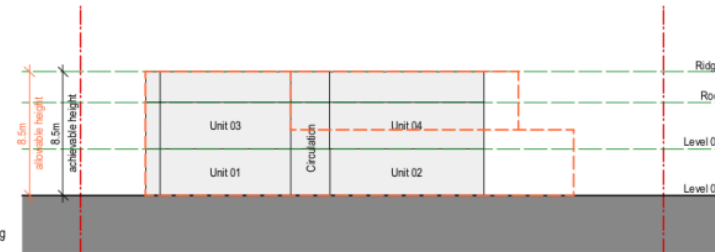
allowable building zone



achievable building footprint



front elevation



side elevation

legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- deep soil area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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scenario 2.2 - codes sepp

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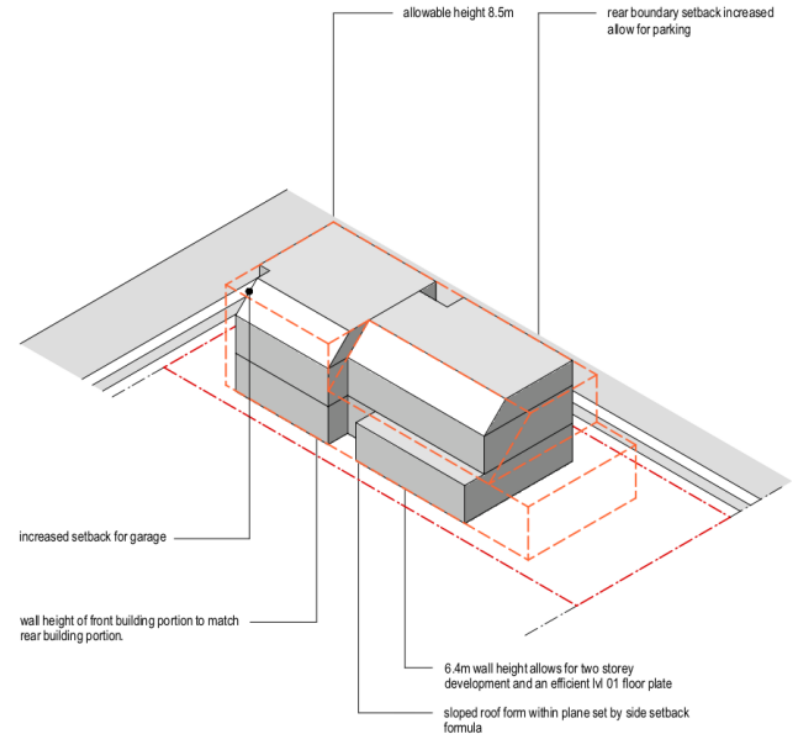
project number	drawing number
1851	17 A
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3/6/19	client issue

scenario 2.2 codes sepp compliance + comparison table

typology:	manor house (3-4 dwellings)	no. units achieved	4
epi(s):	sepp codes	unit mix	1 x 1 bed (57sqm)
zone:	r2 - low density residential		2 x 2 bed (67 / 78sqm)
lot size:	600 sqm		1 x 3 bed (95sqm)
lot width:	15 m	no car spaces:	4

	Allowable / Required	Proposed	Compliance
Max Height (m)	8.5 m	8.5 m	Yes
Max Height (st)	2	2	Yes
Max. Gross Floor Area (Formula)	25% site area + 150sqm (max 400sqm)	0.5:1	Yes
Max. Gross Floor Area	300 sqm	300 sqm	Yes
Min. Landscaped Area (Formula)	50% site area - 100sqm	33%	Yes
Min Landscaped Area (sqm)	200 sqm	201 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	Yes
Front Setback Min. Landscape	50%	77%	Yes
Min. Front Setback	4.5 m	4.5 m	Yes
Min. Garage Setback	5.5 m	5.5 m	Yes
Min Secondary Street Setback	3.0 m	3.0 m	Yes
Min. Parking Setback	4.5 m	5.3 m	Yes
Min. Side Setback - lvi 00	1.5 m	1.5 m	Yes
Side Setback - lvi 01 (>10m behind building line)	height of wall - 3 m	*3.4 m	Yes
Min. Rear Setback - lvi 00	6.0 m	12.4 m	Yes
Min. Rear Setback - lvi 01	10.0 m	12.4 m	Yes
Min. Private Open Space Area			
Ground Floor Units	16 sqm	16 sqm	
1 bed	8 sqm	8 sqm	Yes
2 bed	12 sqm	12 sqm	Yes
3 bed	16 sqm	-	Yes
Min. Dimension of POS	2.0 m	2.0 m	Yes
Min. Car parking	1 per dwelling	4	Yes

allowable + achievable building envelope comparison



legend

- - - primary setback - codes sepp
- - - secondary setback - codes sepp
- - - primary setback - wcc controls
- - - secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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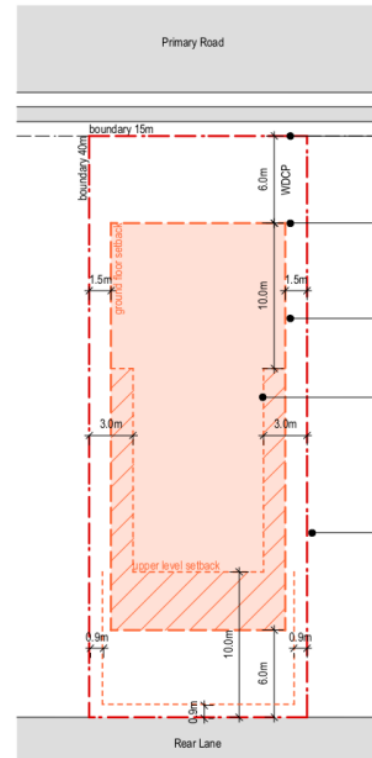
scenario 2.2 - codes sepp

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project number	drawing number
1851	18 A
date	
3/6/19	client issue

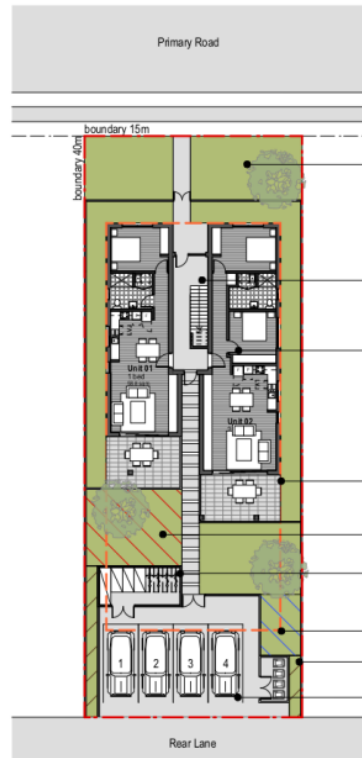
scenario 2.3 - codes sepp

Site Type:	Rear Lane Access	Resulting Site Dimensions:	15m x 40m
Housing Type:	Manor House - 4 Dwellings	Resulting Site Area:	600 sqm



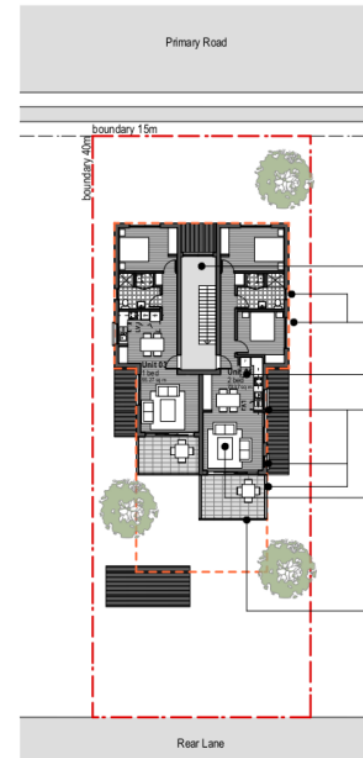
setbacks + site dimensions

- minimum developable site width for manor house is 15m. Refer general notes
- 6m front setback from WDCP used as stand in for average of neighbouring development
- 1.5m upper level side setback from first 10m of building only
- side setback for rear portion of upper level determined by formula based on wall height ($s = h-3$) Refer general notes
- site depth of 40m facilitates a 600sqm site with the minimum developable site width (15m)



lower level

- majority front setback area landscaped
- central vertical circulation and access through site to car parking and communal open space at rear
- internal layouts for units meet all minimum room sizes and areas
- ground floor private open spaces 16sqm with 3m minimum dimension
- communal open space in excess of 5% site area requirement
- covered bicycle and storage 'shed' included in GFA count (detached development)
- clothes drying area
- 0.9m setback area not including in landscaped area count
- hard stand parking accessed off rear lane, allowable GFA for detached development insufficient for 4 x garages. Refer general notes



upper level

- open void over stairway and lower lobby excluded from GFA calculations
- bedroom windows less than 2sqm and obscure glass windows do not require screening
- internal layouts for units meet all minimum room sizes and areas
- clear windows with sill heights less than 1.5m and balcony edges require screening if less than 6m from facing boundary
- width of units and overall site width determined by achieving 4m wide living rooms at the upper level
- required private open space for upper level dwellings is in excess of the 12sqm allowable for balconies to the side and rear (balconies are not permitted in the front setback). Refer general notes

legend

- primary setback
- secondary setback
- allowable building zone
- allowable building zone - ground floor only
- hard surface area
- landscaped area
- private open space area
- landscaped area < 1.5m wide
- communal open space area
- clothes drying area

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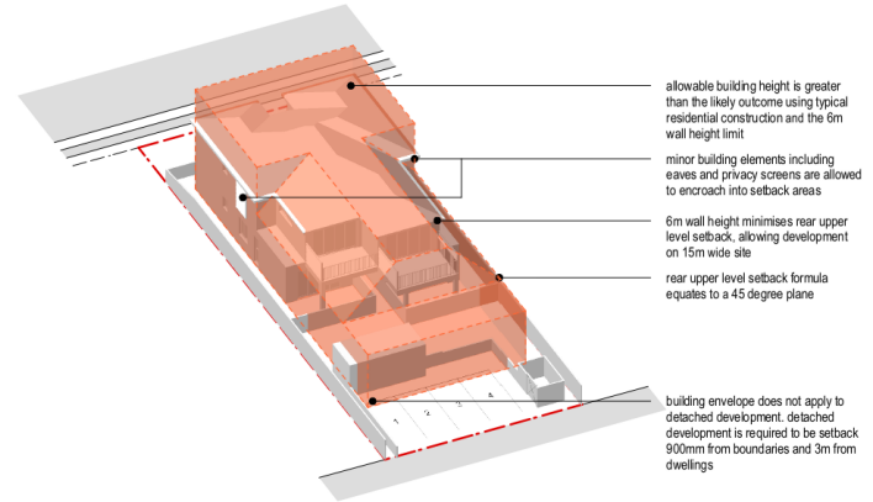
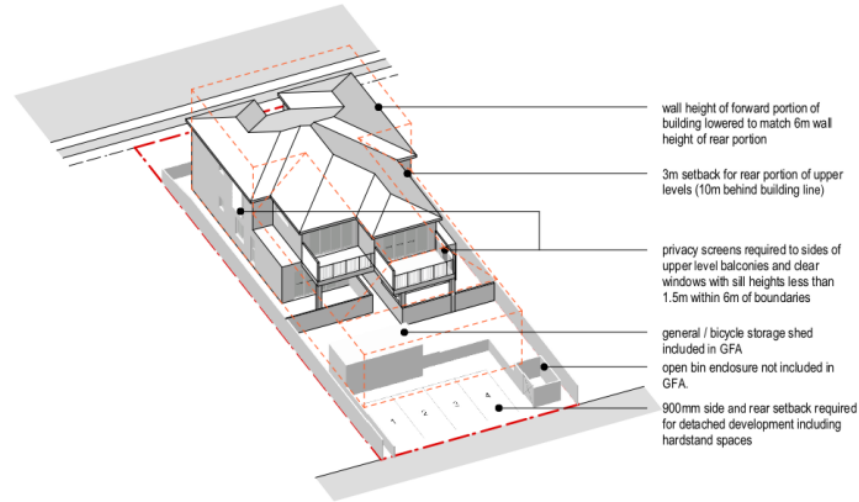
scenario 2.3 - codes sepp

**wollongong city council
missing middle testing**

project number	drawing number
1851	19 A
date	client issue
3/6/19	

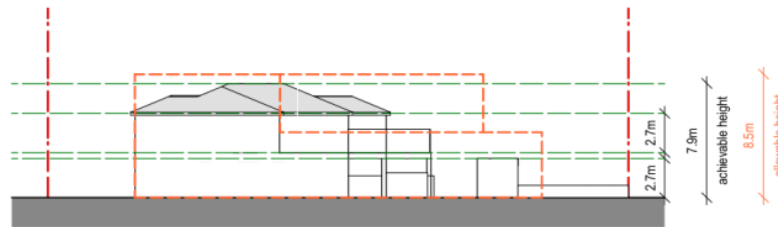
scenario 2.3 - codes sepp

Site Type:	Rear Lane Access	Resulting Site Dimensions:	15m x 40m
Housing Type:	Manor House - 4 Dwellings	Resulting Site Area:	600 sqm

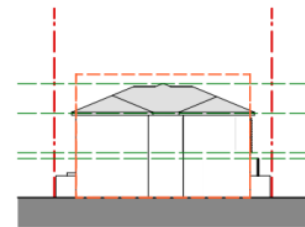


3D view

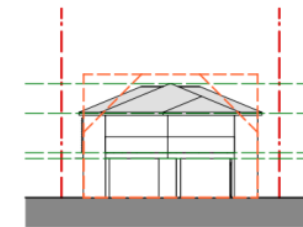
3D view - allowable envelope over



side elevation



front elevation



rear elevation

legend

- allowable building envelope (dashed orange line)
- achievable building massing (solid grey line)
- allowable building envelope (3D) (solid orange block)

KENNEDY ASSOCIATES ARCHITECTS

level 3 / 1 booth street annandale 2038
nominated architect - steve kennedy - registration no. 5828
p + 61 2 9557 6466 f + 61 2 9557 6477



scenario 2.3 - codes sepp

**wollongong city council
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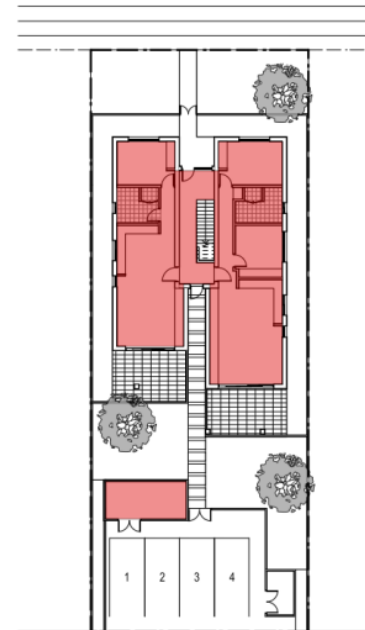
project number	drawing number
1851	20 A
date	
3/6/19	client issue

scenario 2.3 - codes sepp compliance + comparison table

Site Type: Rear Lane Access **Resulting Site Dimensions:** 15m x 40m
Housing Type: Manor House - 4 Dwellings **Resulting Site Area:** 600 sqm

Requirement	Provided	Compliance
Minimum Lot Size:	600sqm	Yes
Minimum Lot Width:	15m	Yes
Maximum Building Height:	6.0m wall height / 7.8m overall height	Yes
Maximum GFA:	25% lot area +150sqm (600 x .25) + 150 = 300	300sqm Yes
Primary Road Setback:	Average of 2 nearest neighbouring dwellings	6m (WDCP requirement) Yes
Side Setback - Lower Level:	1.5m	1.5m Yes
Side Setback - Upper Level: (10m behind building line)	height of wall - 3	3.0m (6.0m wall height - 3) Yes
Rear Setback - Lower Level:	6m	16.7m / 19.3m Yes
Rear Setback - Upper Level:	10m	16.7m / 13.6m Yes
Side + Rear Setback: Detached Development	900mm	900mm Yes
Minimum Landscaped Area:	50% lot area - 100sqm (600 x .5) - 100 = 200	225sqm Yes
Minimum Front Landscaped Area:	50% setback area	92% Yes
Minimum Communal Open Space:	5% site area / 3m wide 600 x .05 = 30	35sqm / 5.2m Yes
Required No. Car Parking:	1 per dwelling	4 Yes
Required No. Bicycle Parking:	1 per dwelling	4 Yes
Street Facing Walls:	to have habitable room window @ each level	Each unit has a bedroom window in the street facing wall Yes
Acry Screens - Windows (+ 1.5m sill)	where floor level >3m and setback to side or rear < 6m	Screens provided to upper level kitchen and living room windows with sill lower than 1.5m. Refer general notes. Yes
Privacy Screens - Balconies	where floor level >2m and setback to side or rear < 6m	Screens provided to upper level balconies, adjacent to side boundaries and between units. Refer general notes. Yes
Maximum Area of Balconies to the side or rear, on upper levels	12sqm	20sqm No

Requirement	Unit 01	Unit 02	Unit 03	Unit 04		
Minimum Dwelling Size:	1 Bed Unit - 50sqm 2 Bed Unit - 70sqm	58.8sqm	77.4sqm	55.3sqm	70.4sqm	Yes
Minimum Private Open Space:	1 Bed Unit - 8sqm / 2m 2 Bed Unit - 12sqm / 2m Ground Unit - 16sqm / 3m	18sqm / 3m	18sqm / 3m	8sqm / 2m	12sqm / 3m	Yes
Minimum Living / Dining Room Area:	1 + 2 Bed Unit - 24sqm	29sqm	27sqm	28sqm	24sqm	Yes
Minimum Living Room Width:	4m	4m	4.4m	4m	4.1m	Yes
Maximum Depth from Window Habitable Room:	8m	4m	4.4m	4m	4.1m	Yes
Maximum Depth from Window Kitchen Bench:	6m	1.8m	2m	1m	1.8m	Yes
Minimum Master Bedroom Area:	10sqm	10.8sqm	12sqm	10.8sqm	12sqm	Yes
Minimum Bedroom Width:	3m	3m	3m	3m	3m	Yes
Minimum Storage Total:	1 Bed Unit - 6 cub m 2 Bed Unit - 8 cub m	9.7 cubm	15.3 cubm	7.4 cubm	11.6 cubm	Yes
Minimum Storage Internal:	1 Bed Unit - 3 cub m 2 Bed Unit - 4 cub m	6.5 cubm	12.1 cubm	3.0 cubm	5.3 cubm	Yes
Minimum Ceiling Height:	2.7m Habitable Rooms	2.7m	2.7m	2.7m	2.7m	Yes

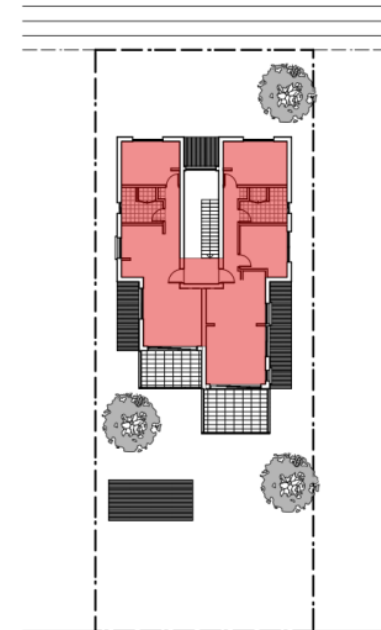


GFA plan - lower level

dwelling - 155sqm
detached - 15sqm

legend

gross floor area



GFA plan - upper level

dwelling - 130sqm

KENNEDY ASSOCIATES ARCHITECTS

level 3 / 1 booth street annandale 2038
nominated architect - steve kennedy - registration no. 5828
p + 61 2 9557 6466 f + 61 2 9557 6477



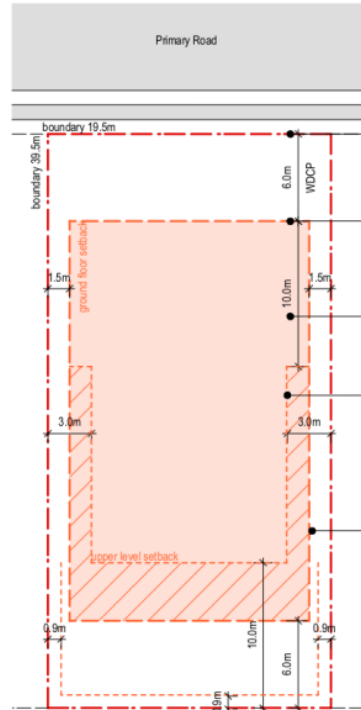
scenario 2.3 - codes sepp

**wollongong city council
missing middle testing**

project number	drawing number
1851	21 A
date	client issue
3/6/19	

scenario 2.4 - codes sepp

Site Type: Single Frontage **Resulting Site Dimensions:** 19.5m x 39.5m
Housing Type: Manor House - 4 Dwellings **Resulting Site Area:** 770sqm



setbacks + site dimensions

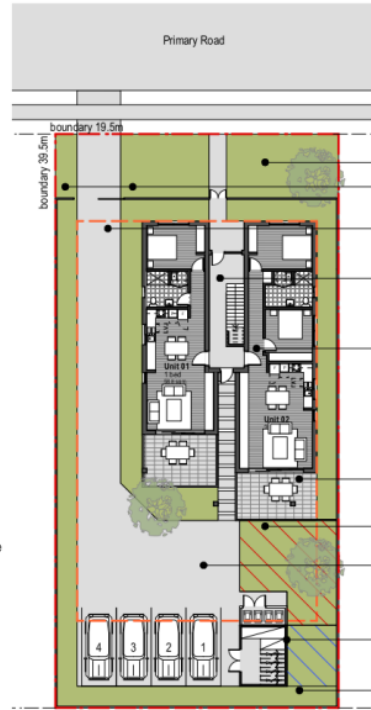
minimum developable site width for manor house with a single frontage is 19.5m

6m front setback from WDCP used as stand in for average of neighbouring development

1.5m upper level side setback from first 10m of building only

side setback for rear portion of upper level determined by formula based on wall height (s = h-3) Refer general notes

site depth of 40m facilitates a 770sqm site with the minimum developable site width (19.5m). Increased site area / depth required to allow for compliant landscaped area, driveway, parking areas and communal open spaces



lower level

majority front setback area landscaped

1.5m wide landscaped strips beside driveway, counted in landscaped area

6m side setback to building, to allow for driveway and landscaping

central vertical circulation and access through site to car parking and communal open space at rear

internal layouts for units meet all minimum room sizes and areas

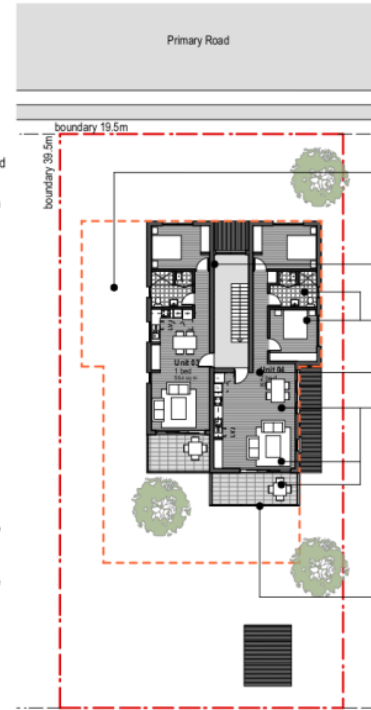
ground floor private open spaces 16sqm with 3m minimum dimension

communal open space meeting of 5% site area requirement

at grade parking / driveway approximately 220sqm, additional site are required to make up landscaped area

covered bicycle and storage 'shed' included in GFA count (detached development)

clothes drying area



upper level

6m side setback due width required for driveway, increased setback to upper level and privacy screens not required to this side

open void over stairway and lower lobby excluded from GFA calculations

bedroom windows less than 2sqm and obscure glass windows do not require screening

internal layouts for units meet all minimum room sizes and areas

clear windows with sill heights less than 1.5m and balcony edges require screening if less than 6m from facing boundary

required private open space for upper level dwellings is in excess of the 12sqm allowable for balconies to the side and rear (balconies are not permitted in the front setback). Refer general notes

legend

- primary setback
- secondary setback
- allowable building zone
- allowable building zone - ground floor only
- hard surface area
- landscaped area
- private open space area
- landscaped area < 1.5m wide
- communal open space area
- clothes drying area

KENNEDY ASSOCIATES ARCHITECTS
 level 3 / 1 booth street annandale 2038
 nominated architect - steve kennedy - registration no. 5828
 p + 61 2 9557 6466 f + 61 2 9557 6477



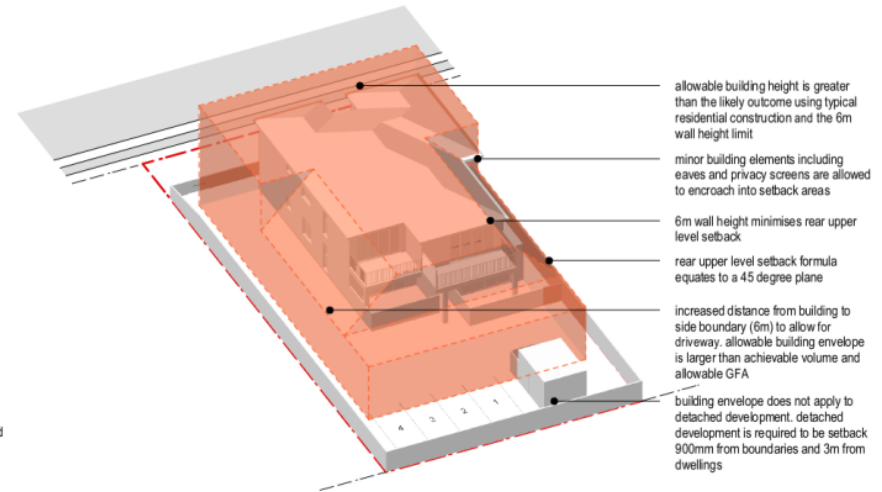
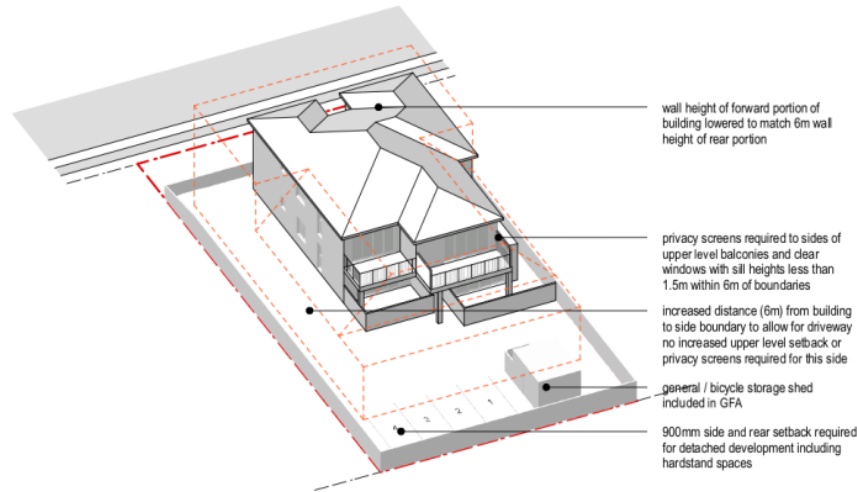
scenario 2.4 - codes sepp

**wollongong city council
missing middle testing**

project number	drawing number
1851	22 A
date	client issue
3/6/19	

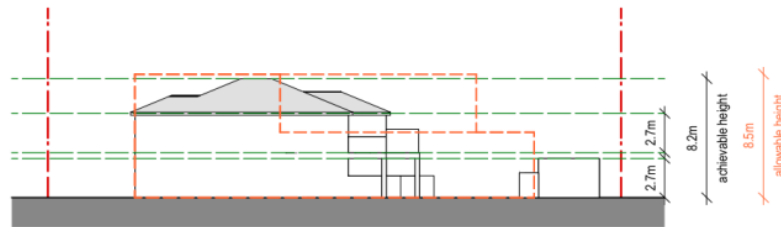
scenario 2.4 - codes sepp

Site Type: Single Frontage **Resulting Site Dimensions:** 19.5m x 39.5m
Housing Type: Manor House - 4 Dwellings **Resulting Site Area:** 770sqm

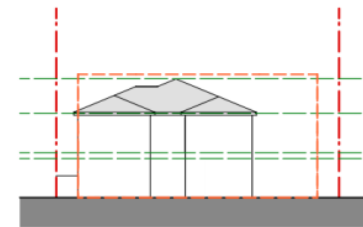


3D view

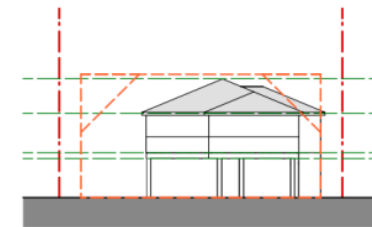
3D view - allowable envelope over



side elevation



front elevation



rear elevation

legend

- allowable building envelope
- achievable building massing
- allowable building envelope (3D)

KENNEDY ASSOCIATES ARCHITECTS

level 3 / 1 booth street annandale 2038
 nominated architect - steve kennedy - registration no. 5828
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scenario 2.4 - codes sepp

**wollongong city council
missing middle testing**

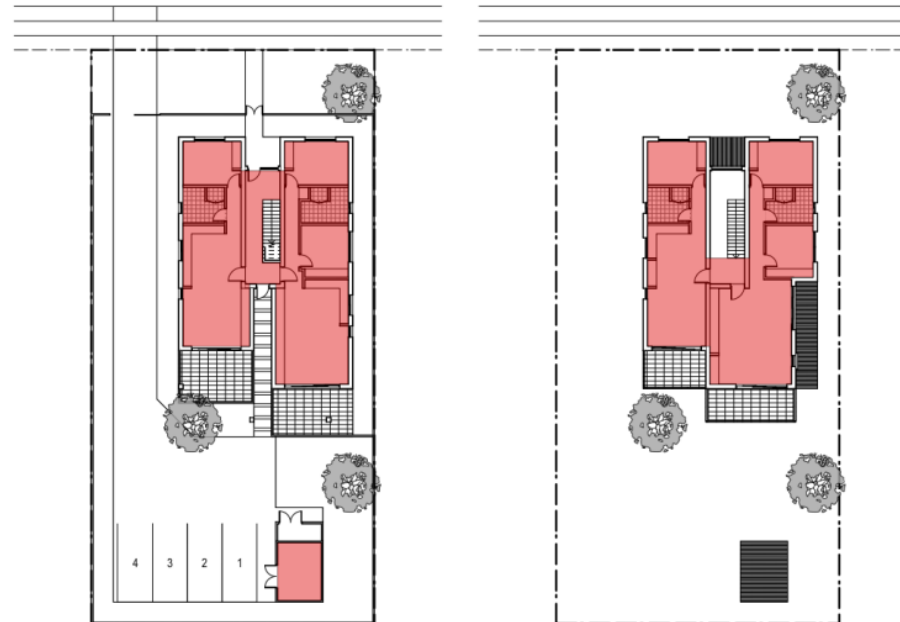
project number	drawing number
1851	23 A
date	
3/6/19	client issue

scenario 2.4 - codes sepp compliance + comparison table

Site Type: Single Frontage **Resulting Site Dimensions:** 19.5m x 39.5m
Housing Type: Manor House - 4 Dwellings **Resulting Site Area:** 770sqm

Requirement	Provided	Compliance	
Minimum Lot Size:	770sqm	Yes	
Minimum Lot Width:	15m	Yes	
Maximum Building Height:	6.0m wall height / 8.2m overall height	Yes	
Maximum GFA:	310sqm	Yes	
Primary Road Setback:	Average of 2 nearest neighbouring dwellings	6m (WDCP requirement)	Yes
Side Setback - Lower Level:	1.5m	1.5m / 6.0m	Yes
Side Setback - Upper Level: (10m behind building line)	height of wall - 3	3.0m (6.0m wall height - 3) / 6.0m	Yes
Rear Setback - Lower Level:	6m	16.2m / 18.8m	Yes
Rear Setback - Upper Level:	10m	13.9m / 16.2m	Yes
Side + Rear Setback: Detached Development	900mm	900mm	Yes
Minimum Landscaped Area:	50% lot area - 100sqm (770 x .5) - 100 = 285	295sqm	Yes
Minimum Front Landscaped Area:	50% setback area	78%	Yes
Minimum Communal Open Space:	5% site area / 3m wide 770 x .05 = 38.5	41sqm / 3m	Yes
Required No. Car Parking:	1 per dwelling	4	Yes
Required No. Bicycle Parking:	1 per dwelling	4	Yes
Street Facing Walls:	to have habitable room window @ each level	Each unit has a bedroom window in the street facing wall	Yes
Acoustic Screens - Windows (+ 1.5m sill)	where floor level >3m and setback to side or rear < 6m	Screens provided to upper level kitchen and living room windows with sill lower than 1.5m. Refer general notes.	Yes
Privacy Screens - Balconies	where floor level >2m and setback to side or rear < 6m	Screens provided to upper level balconies, adjacent to side boundaries and between units. Refer general notes.	Yes
Maximum Area of Balconies to the side or rear, on upper levels	12sqm	20sqm	No

Requirement	Unit 01	Unit 02	Unit 03	Unit 04	Compliance	
Minimum Dwelling Size:	1 Bed Unit - 50sqm 2 Bed Unit - 70sqm	58.8sqm	77.4sqm	56.4sqm	80.3sqm	Yes
Minimum Private Open Space:	1 Bed Unit - 8sqm / 2m 2 Bed Unit - 12sqm / 2m Ground Unit - 16sqm / 3m	18sqm / 3m	18sqm / 3m	8sqm / 2.5m	12sqm / 2m	Yes
Minimum Living / Dining Room Area:	1 + 2 Bed Unit - 24sqm	29sqm	27sqm	28sqm	34sqm	Yes
Minimum Living Room Width:	4m	4m	4.4m	4m	4.1m	Yes
Maximum Depth from Window Habitable Room:	8m	4m	4.4m	4m	5.0m	Yes
Maximum Depth from Window Kitchen Bench:	6m	1.8m	2m	1m	5.6m	Yes
Minimum Master Bedroom Area:	10sqm	10.8sqm	12sqm	10.8sqm	12sqm	Yes
Minimum Bedroom Width:	3m	3m	3m	3m	3m	Yes
Minimum Storage Total:	1 Bed Unit - 6 cub m 2 Bed Unit - 8 cub m	6.5 cubm	12.1 cubm	8.8 cubm	10.4 cubm	Yes
Minimum Storage Internal:	1 Bed Unit - 3 cub m 2 Bed Unit - 4 cub m	6.5 cubm	12.1 cubm	3.0 cubm	4.6 cubm	Yes
Minimum Ceiling Height:	2.7m Habitable Rooms	2.7m	2.7m	2.7m	2.7m	Yes



GFA plan - lower level

dwelling - 155sqm
detached - 10sqm

GFA plan - upper level

dwelling - 145sqm

legend

gross floor area

KENNEDY ASSOCIATES ARCHITECTS

level 3 / 1 booth street annandale 2038
nominated architect - steve kennedy - registration no. 5828
p + 61 2 9557 6466 f + 61 2 9557 6477



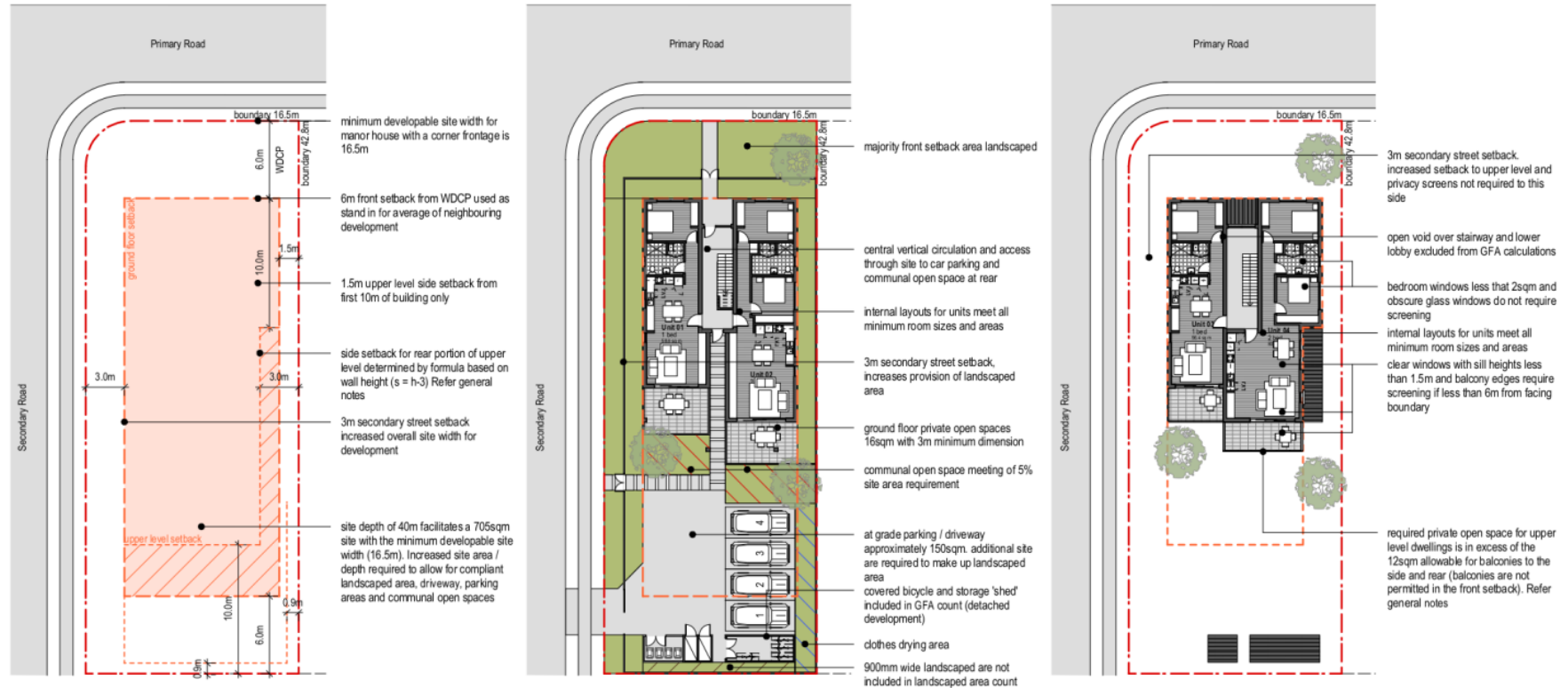
scenario 2.4 - codes sepp

**wollongong city council
missing middle testing**

project number	drawing number
1851	24 A
date	
3/6/19	client issue

scenario 2.5 - codes sepp

Site Type: Corner Site **Resulting Site Dimensions:** 16.5m x 42.8m
Housing Type: Manor House - 4 Dwellings **Resulting Site Area:** 705sqm



setbacks + site dimensions

lower level

upper level

legend

- primary setback
- secondary setback
- allowable building zone
- allowable building zone - ground floor only
- hard surface area
- landscaped area
- private open space area
- landscaped area < 1.5m wide
- communal open space area
- clothes drying area

KENNEDY ASSOCIATES ARCHITECTS

level 3 / 1 booth street annandale 2038
 nominated architect - steve kennedy - registration no. 5828
 p + 61 2 9557 6466 f + 61 2 9557 6477



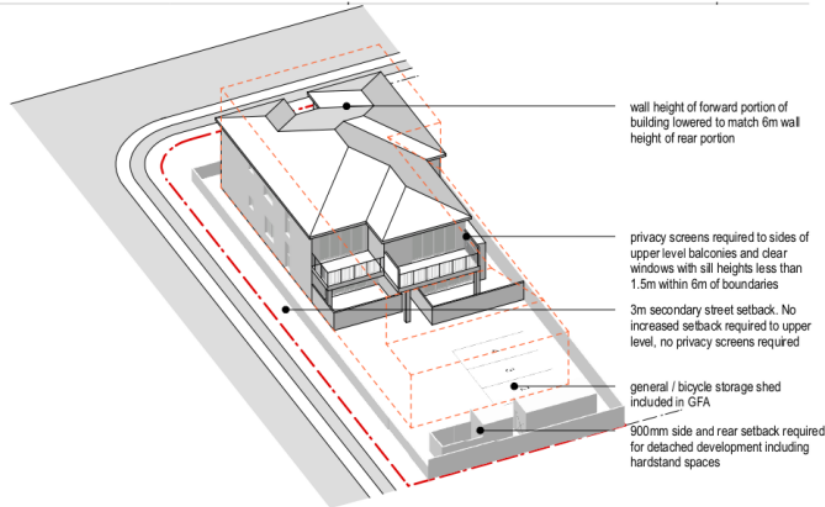
scenario 2.5 - codes sepp

**wollongong city council
missing middle testing**

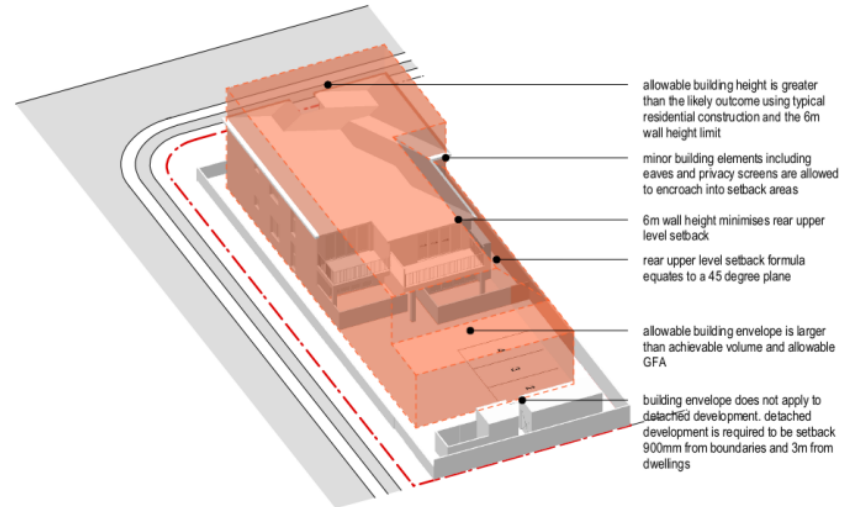
project number	drawing number
1851	25 A
date	
3/6/19	client issue

scenario 2.5 - codes sepp

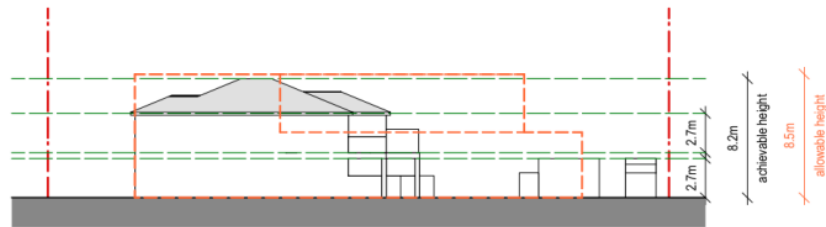
Site Type: Corner Site **Resulting Site Dimensions:** 16.5m x 42.8m
Housing Type: Manor House - 4 Dwellings **Resulting Site Area:** 705sqm



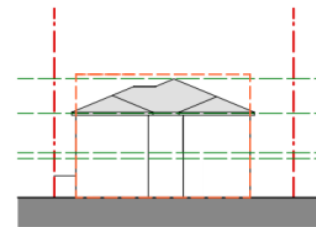
3D view



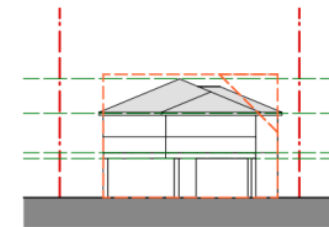
3D view - allowable envelope over



side elevation



front elevation



rear elevation

legend

- allowable building envelope
- achievable building massing
- allowable building envelope (3D)

KENNEDY ASSOCIATES ARCHITECTS
 level 3 / 1 booth street annandale 2038
 nominated architect - steve kennedy - registration no. 5828
 p + 61 2 9557 6466 f + 61 2 9557 6477



scenario 2.5 - codes sepp

**wollongong city council
missing middle testing**

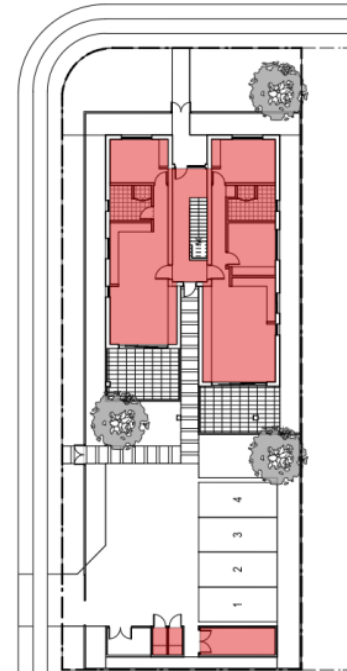
project number	drawing number
1851	26 A
date	
3/6/19	client issue

scenario 2.5 - codes sepp **compliance + comparison table**

Site Type: Corner Site **Resulting Site Dimensions:** 16.5m x 42.8m
Housing Type: Manor House - 4 Dwellings **Resulting Site Area:** 705sqm

Requirement	Provided	Compliance	
Minimum Lot Size:	60sqm	705sqm	Yes
Minimum Lot Width:	15m	15m	Yes
Maximum Building Height:	8.5m	6.0m wall height / 8.2m overall height	Yes
Maximum GFA:	25% lot area + 150sqm (705 x .25) + 150 = 326.25	310sqm	Yes
Primary Road Setback:	Average of 2 nearest neighbouring dwellings	6m (WDCP requirement)	Yes
Secondary Road Setback:	3m	3m	Yes
Side Setback - Lower Level:	1.5m	1.5m	Yes
Side Setback - Upper Level: (10m behind building line)	height of wall - 3	3.0m (6.0m wall height - 3)	Yes
Rear Setback - Lower Level:	6m	19.5m / 22.1m	Yes
Rear Setback - Upper Level:	10m	17.2m / 19.5m	Yes
Side + Rear Setback: Detached Development	900mm	900mm	Yes
Road Setback - Car Spaces	5.5m	9.5m	Yes
Minimum Landscaped Area:	50% lot area - 100sqm (705 x .5) - 100 = 252.5	275sqm	Yes
Minimum Front Landscaped Area:	50% setback area	93%	Yes
Minimum Communal Open Space:	5% site area / 3m wide 705 x .05 = 35.25	37sqm / 3m	Yes
Required No. Car Parking	1 per dwelling	4	Yes
Required No. Bicycle Parking:	1 per dwelling	4	Yes
Street Facing Walls:	to have habitable room window @ each level	Each unit has a bedroom window in the street facing wall	Yes
Privacy Screens - Windows (+ 1.5m sill)	where floor level >3m and setback to side or rear < 6m	Screens provided to upper level kitchen and living room windows with sill lower than 1.5m. Refer general notes.	Yes
Privacy Screens - Balconies	where floor level >2m and setback to side or rear < 6m	Screens provided to upper level balconies, adjacent to side boundaries and between units. Refer general notes.	Yes
Maximum Area of Balconies to the side or rear, on upper levels	12sqm	20sqm	No

Requirement	Unit 01	Unit 02	Unit 03	Unit 04	Compliance	
Minimum Dwelling Size:	1 Bed Unit - 50sqm 2 Bed Unit - 70sqm	58.8sqm	77.4sqm	56.4sqm	80.3sqm	Yes
Minimum Private Open Space:	1 Bed Unit - 8sqm / 2m 2 Bed Unit - 12sqm / 2m Ground Unit - 16sqm / 3m	18sqm / 3m	18sqm / 3m	8sqm / 2.5m	12sqm / 2m	Yes
Minimum Living / Dining Room Area:	1 + 2 Bed Unit - 24sqm	29sqm	27sqm	28sqm	34sqm	Yes
Minimum Living Room Width:	4m	4m	4.4m	4m	4.1m	Yes
Maximum Depth from Window Habitable Room	8m	4m	4.4m	4m	5.0m	Yes
Maximum Depth from Window Kitchen Bench	6m	1.8m	2m	1m	5.6m	Yes
Minimum Master Bedroom Area:	10sqm	10.8sqm	12sqm	10.8sqm	12sqm	Yes
Minimum Bedroom Width:	3m	3m	3m	3m	3m	Yes
Minimum Storage Total:	1 Bed Unit - 6 cub m 2 Bed Unit - 8 cub m	6.5 cubm	12.1 cubm	7.3 cubm	8.9 cubm	Yes
Minimum Storage Internal:	1 Bed Unit - 3 cub m 2 Bed Unit - 4 cub m	6.5 cubm	12.1 cubm	3.0 cubm	4.6 cubm	Yes
Minimum Ceiling Height:	2.7m Habitable Rooms	2.7m	2.7m	2.7m	2.7m	Yes

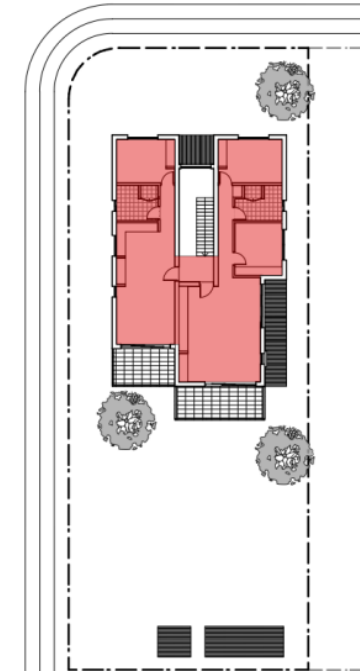


GFA plan - lower level

dwelling - 155sqm
detached - 10sqm

legend

gross floor area



GFA plan - upper level

dwelling - 145sqm

KENNEDY ASSOCIATES ARCHITECTS

level 3 / 1 booth street annandale 2038
nominated architect - steve kennedy - registration no. 5828
p + 61 2 9557 6466 f + 61 2 9557 6477



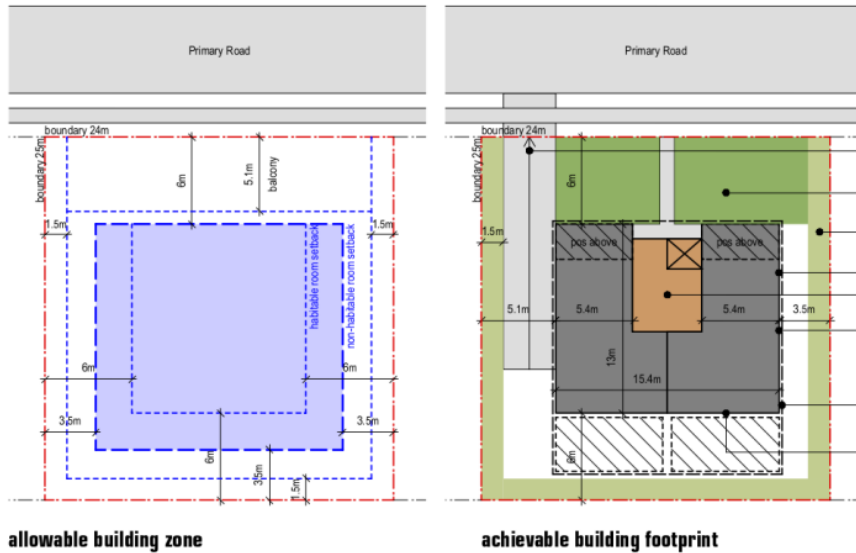
scenario 2.5 - codes sepp

wollongong city council
missing middle testing

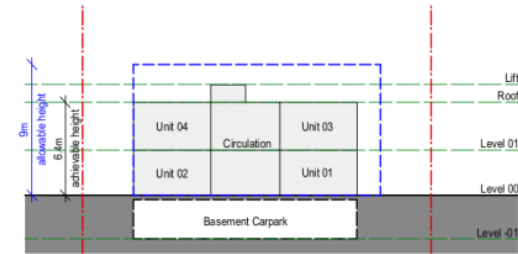
project number	drawing number
1851	27 A
date	
3/6/19	client issue

scenario 2.6 - wcc controls

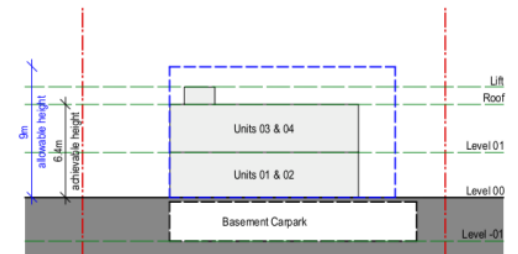
typology:	r1b	no. units achieved:	4
epi(s):	wiep + wdcp	unit mix / size:	2 x 1 bed (60sqm)
zone:	r2 - low density residential		2 x 2 bed (72 sqm)
lot size:	600 sqm		
lot width:	24 m	no. car spaces:	6



- driveway to basement along side boundary increased side setback to accommodate drive
- 6m deep soil zone at front included in landscape area counts additional landscaped area available
- required landscaped area shown in light green. additional landscaped area available
- upper level pos. not included in gfa
- common circulation + foyer vertical circulation areas excluded from GFA
- 3.5m side setback
- non-habitable room openings only
- extent of basement shown dotted. 1 x basement level, 6 spaces
- 6m rear setback
- habitable room openings permitted



front elevation



side elevation

legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

KENNEDY ASSOCIATES ARCHITECTS

level 3 / 1 booth street annandale 2038
nominated architect - steve kennedy - registration no. 5828
p + 61 2 9557 6466 f + 61 2 9557 6477



scenario 2.6 - wcc controls

**wollongong city council
missing middle testing**

project number	drawing number
1851	28 A
date	
3/6/19	client issue

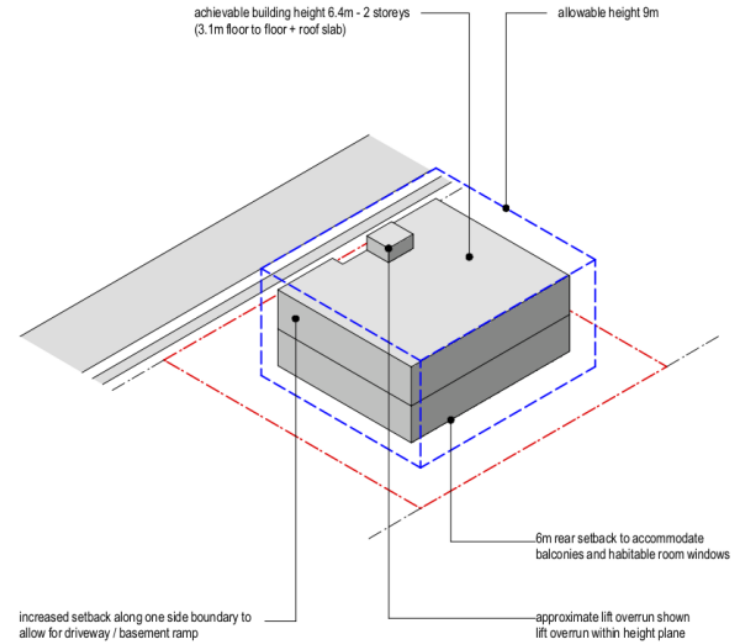
scenario 2.6 - wcc controls

compliance + comparison table

typology:	r1b	no. units achieved:	4
epi(s):	wiep + wdcp	unit mix / size:	2 x 1 bed (60sqm)
zone:	r2 - low density residential		2 x 2 bed (72 sqm)
lot size:	600 sqm		
lot width:	24 m	no. car spaces:	6

	Allowable / Required	Proposed	Compliance
Max Height (m)	9.0 m	6.4 m	Yes
Max Height (st)	-	2	-
Max. FSR	0.5: 1	0.47: 1	Yes
Max. Gross Floor Area	300 sqm	283 sqm	Yes
Min. Landscaped Area (%)	30%	34%	Yes
Min. Landscaped Area (sqm)	180 sqm	205 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	Yes
Min. Deep Soil Zone (%)	15%	16%	Yes
Min. Deep Soil Zone (sqm)	90 sqm	98 sqm	Yes
Min. Deep Soil Zone Dimension	6.0 m	6.0 m	No - Front Deep Soil
Min. Front Setback	6.0 m	6.0 m	Yes
Min Front Setback POS	5.1 m	6.0 m	Yes
Min Side & Rear Setback - Habitable Rooms	6.0 m	6.0 m	Yes
Min Side & Rear Setback - Non Habitable Rooms	3.5 m	3.5 m	Yes
Min. POS Area / Dimension Per Unit Type			
All Ground Floor Units	25 sqm / 2.0 m	25 sqm / 2.0 m	Yes
All Upper Level Units	12 sqm / 2.4 m	12 sqm / 2.4 m	Yes
No. Car Spaces Per Unit Type			
<70sqm	1	2	Yes
70 - 110sqm	1.5	3	Yes
>110 sqm	2	-	-
No. Visitor Spaces Per Unit	0.2	0.8	Yes
No. Spaces Required / Proposed	5 + 0.8	6	Yes

allowable + achievable building envelope comparison



legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

KENNEDY ASSOCIATES ARCHITECTS

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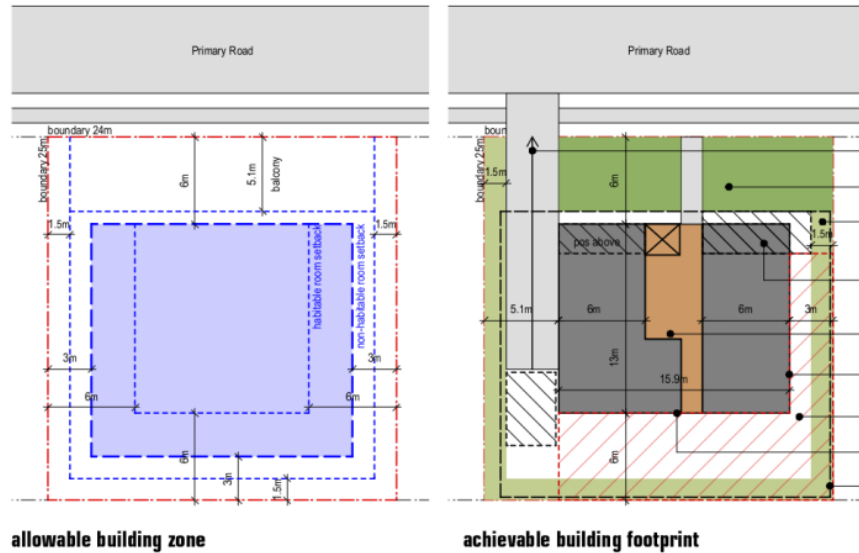
scenario 2.6 - wcc controls

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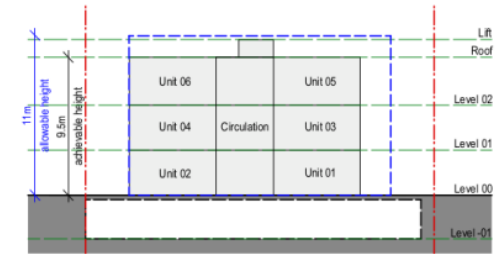
project number	drawing number
1851	29 A
date	
3/6/19	client issue

scenario 2.7 - wcc controls

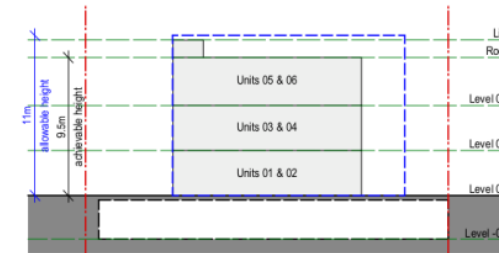
typology:	r/b	no. units achieved:	6
epi(s):	adg (wlep + wdcp)	unit mix / size:	3 x 1 bed (59sqm)
zone:	r3 - medium density residential		1 x 2 bed (71sqm)
lot size:	600 sqm		1 x 2 bed (82 sqm)
lot width:	24 m	no. car spaces:	10



- driveway to basement along side boundary
- increased side setback to accommodate drive
- 6m deep soil zone at front included in landscape area
- required landscaped areas shown in light green. additional landscaped area available
- ground floor pos 0.9m forward of building line
- upper level pos within building footprint
- common circulation + foyer
- vertical circulation areas excluded from GFA
- 3m side setback
- non-habitable room openings only
- required communal open space shown dotted in red
- 6m rear setback
- habitable room openings permitted
- extent of basement shown dotted.
- 1 x basement level, 10 spaces



front elevation



side elevation

legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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scenario 2.7 - wcc controls

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project number	drawing number
1851	30 A
date	
3/6/19	client issue

scenario 2.7 - wcc controls

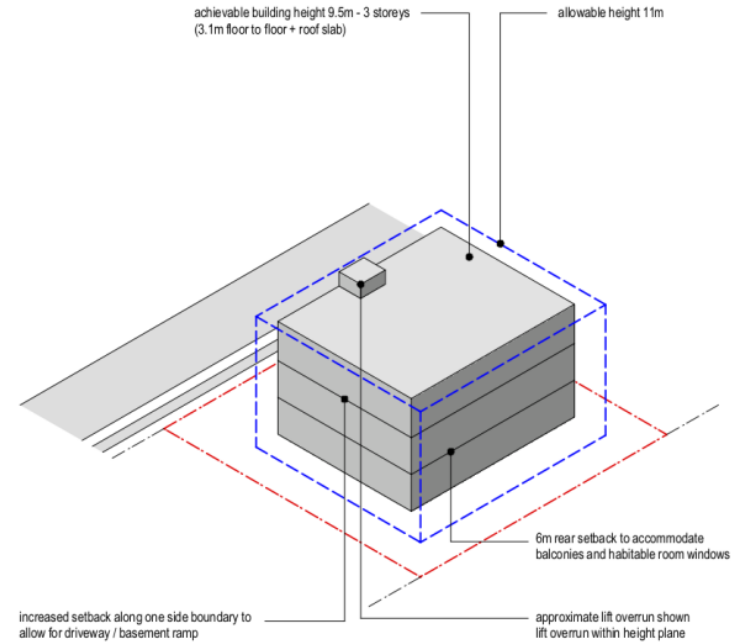
compliance + comparison table

typology:	r1b	no. units achieved:	6
epi(s):	adg (wlep + wdcp)	unit mix / size:	3 x 1 bed (59sqm)
zone:	r3 - medium density residential		1 x 2 bed (71sqm)
lot size:	600 sqm		1 x 2 bed (82 sqm)
lot width:	24 m	no. car spaces:	10

	Allowable / Required	Proposed	Compliance
Max Height (m)	11.0 m	10.7 m	Yes
Max Height (st)	-	3	
Max. FSR	0.75:1	0.74:1	Yes
Max. Gross Floor Area	450 sqm	446 sqm	Yes
Min. Landscaped Area (%)	30%	32%	Yes
Min. Landscaped Area (sqm)	180 sqm	192 sqm	Yes
Min. Landscaped Area Dimension	1.5m	1.5m	Yes
Min. Deep Soil Zone (%)	7%	15%	Yes
Min. Deep Soil Zone (sqm)	42 sqm	89 sqm	Yes
Min. Deep Soil Zone Dimension	3.0 m	3.0 m	
Min. Communal Open Space Area (%)	25%	25%	Yes
Min Communal Open Space Area (sqm)	150 sqm	150 sqm	Yes
Min. Front Setback	6.0 m	6.0 m	Yes
Min Front Setback POS	5.1 m	5.1 m	Yes
Min Side & Rear Setback - Ground Floor POS + Driveways	1.5 m	1.5 m	Yes
Min Side & Rear Setback - Habitable Rooms	6.0 m	6.0 m	Yes
Min Side & Rear Setback - Non Habitable Rooms	3.0 m	3.0 m	Yes
Min. POS Area / Dimension Per Unit Type			
All Ground Floor Units	15 sqm / 3.0 m	15 sqm / 3.0 m	Yes
1 bed	8 sqm / 2.0 m	8 sqm / 2.0 m	Yes
2 bed	10 sqm / 2.0 m	10 sqm / 2.0 m	Yes
3 bed	12 sqm / 2.4 m	-	Yes
No. Car Spaces Per Unit Type			
<70sqm	1	3.0	Yes
70 - 110sqm	2	4.5	Yes
>110 sqm	2	-	-
No. Visitor Spaces Per Unit			
	0.2	1.2	Yes
Total No. Spaces Required / Proposed	7.5 + 1.2	10	Yes

Note: ADG controls shown in green

allowable + achievable building envelope comparison



legend

- - - primary setback - codes sepp
- - - secondary setback - codes sepp
- - - primary setback - wcc controls
- - - secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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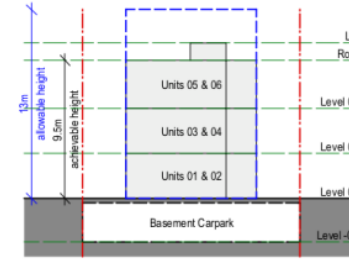
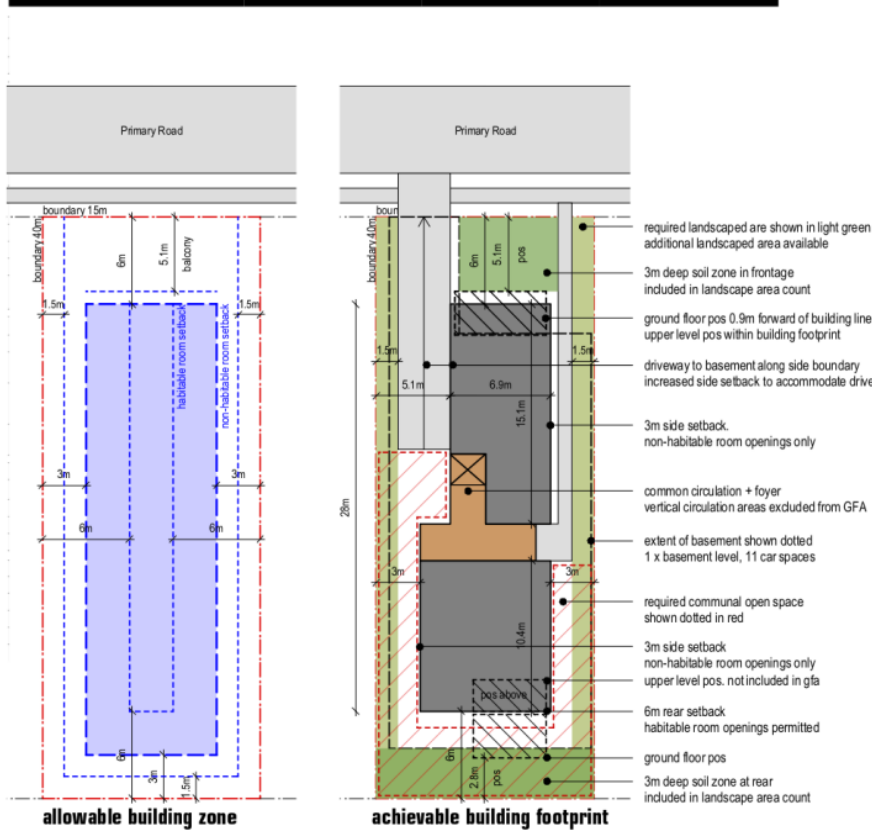
scenario 2.7 - wcc controls

**wollongong city council
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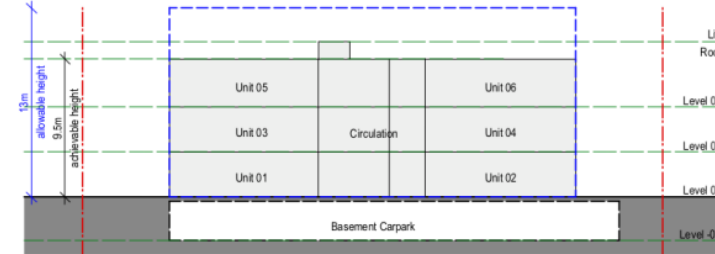
project number	drawing number
1851	31 A
date	client issue
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scenario 2.8 - wcc controls

typology:	r1b	no. units achieved:	6
epi(s):	adg (wlep + wdcp)	unit mix / size :	3 x 2 bed (70 sqm)
zone:	r3 - medium density residential		3 x 2 bed (72 sqm)
lot size:	600 sqm		
lot width:	15 m	no. car spaces:	11



front elevation



side elevation

legend

primary setback - codes sepp	allowable building zone - codes sepp	allowable building envelope - codes sepp
secondary setback - codes sepp	single storey zone - codes sepp	allowable building envelope - wcc controls
primary setback - wcc controls	allowable building zone - wcc controls	achievable building footprint
secondary setback - wcc controls	single storey zone - wcc controls	achievable building massing
landscaped area	deep soil area	communal open space
private open space	common circulation / foyer	hard surface area

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scenario 2.8 - wcc controls

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project number	drawing number
1851	32 A
date	
3/6/19	client issue

scenario 2.8 - wcc controls

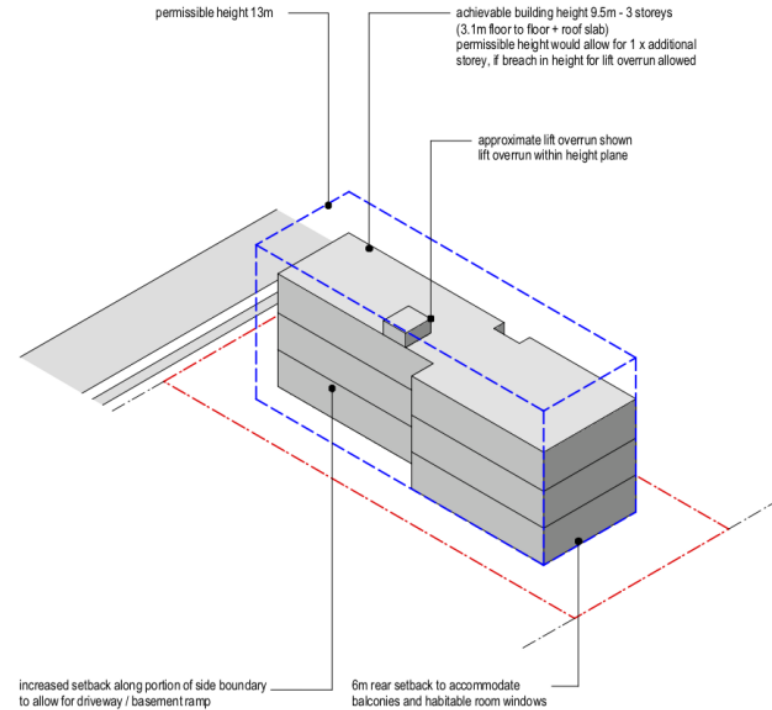
compliance + comparison table

typology:	r/b	no. units achieved:	6
epi(s):	adg (wlep + wdcp)	unit mix / size :	3 x 2 bed (70 sqm)
zone:	r3 - medium density residential		3 x 2 bed (72 sqm)
lot size:	600 sqm		
lot width:	15 m	no: car spaces:	11

	Allowable / Required	Proposed	Compliance
Max Height (m)	13.0 m	10.7 m	No
Max Height (st)	-	3	
Max. FSR	0.75:1	0.73:1	Yes
Max. Gross Floor Area	450 sqm	438 sqm	Yes
Min. Site Width	24.0 m	15.0 m	No
Min. Landscaped Area (%)	30%	27%	No
Min. Landscaped Area (sqm)	180 sqm	162 sqm	No
Min. Landscaped Area Dimension	1.5m	1.5m	Yes
Min. Deep Soil Zone Area (%)	7%	14%	Yes
Min. Deep Soil Zone Area (sqm)	42 sqm	87 sqm	Yes
Min Deep Soil Dimension	3m	3m	Yes
Min. Communal Open Space Area (%)	25%	26%	Yes
Min Communal Open Space Area (sqm)	150 sqm	155 sqm	Yes
Min. Front Setback	6.0 m	6.0 m	Yes
Min Front Setback POS	5.1 m	5.1 m	Yes
Min Side & Rear Setback - Ground Floor POS + Driveways	1.5 m	1.5 m	Yes
Min Side & Rear Setback - Habitable Rooms	6.0 m	3m / 6 m	No (Side Only)
Min Side & Rear Setback - Non Habitable Rooms	3.0 m	3.0 m	Yes
Min. POS Area / Dimension Per Unit Type			
All Ground Floor Units	15 sqm / 3.0 m	15 sqm / 3.0 m	Yes
1 bed	8 sqm / 2.0 m	-	-
2 bed	10 sqm / 2.0 m	10 sqm / 2.0 m	Yes
3 bed	12 sqm / 2.4 m	-	-
No. Car Spaces Per Unit Type			
<70sqm	1	-	Yes
70 - 110sqm	1.5	9	Yes
>110 sqm	2	-	-
No. Visitor Spaces Per Unit	0.2	1.2	Yes
Total No. Spaces Required / Proposed	9 + 1.2	11	Yes

Note: ADG Controls shown in green

allowable + achievable building envelope comparison



legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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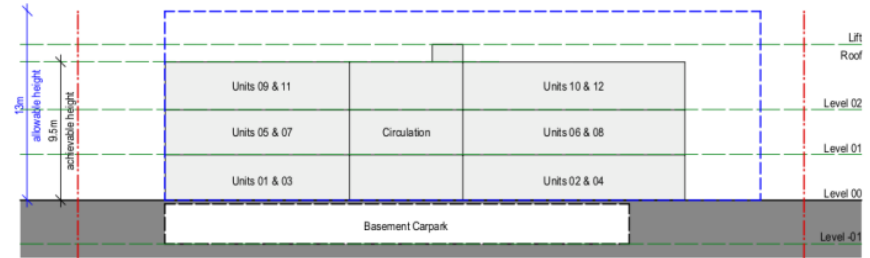
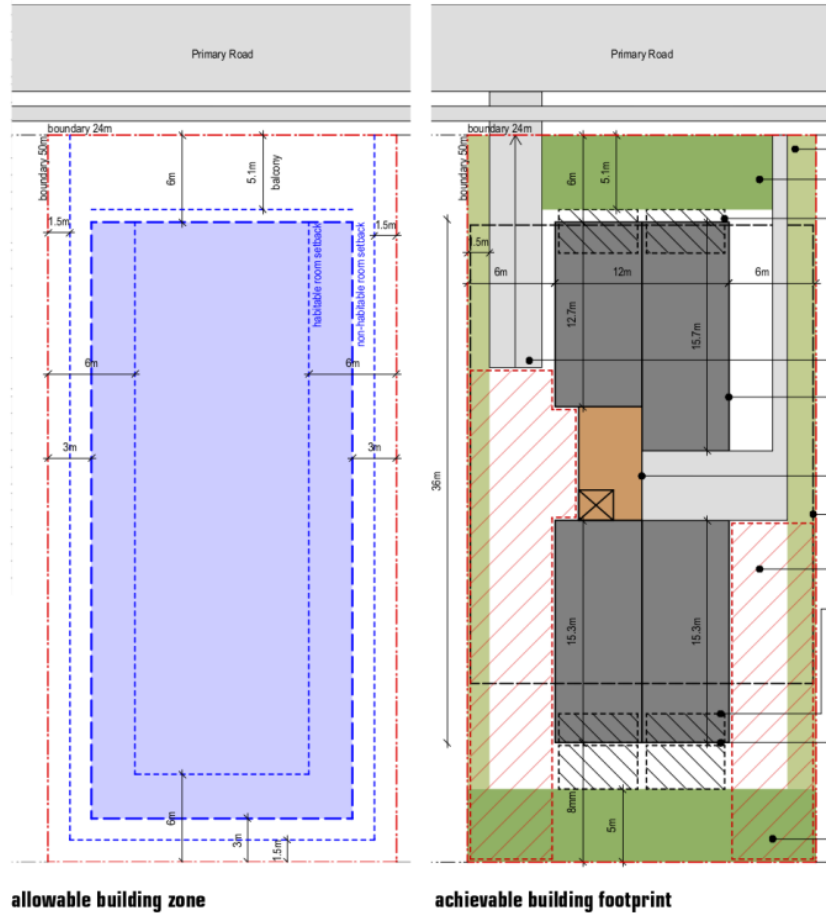
scenario 2.8 - wcc controls

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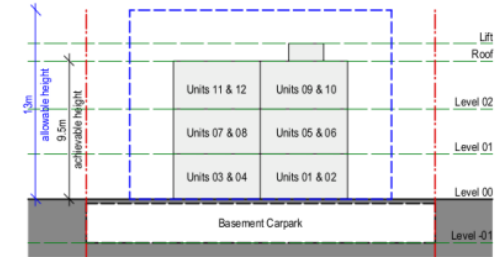
project number	drawing number
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scenario 2.9 - wcc controls

typology:	r1b	no. units achieved:	12
epi(s):	adg (wlep + wdcp)	unit mix / size:	3 x 1 bed (60sqm)
zone:	r3 - medium density residential		6 x 2 bed (74sqm)
lot size:	1200 sqm		3 x 2 Bed (70sqm)
lot width:	24 m	no. car spaces:	18



side elevation



front elevation

- required landscaped area shown in light green
- additional landscaped area available
- 3m deep soil zone in frontage included in landscape area count
- ground floor pos 0.9m forward of building line
- upper level pos within building footprint
- driveway to basement along side boundary
- 6m side setbacks
- habitable room openings permitted
- common circulation + foyer
- vertical circulation areas excluded from GFA
- extent of basement shown dotted
- 1 x basement level, 18 car spaces
- required communal open space shown dotted in red
- upper level pos. not included in gfa
- increased rear setback to comply with GFA
- 3m deep soil zone at rear included in landscape area count

legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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scenario 2.9 - wcc controls

**wollongong city council
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project number	drawing number
1851	34 A
date	
3/6/19	client issue

scenario 2.9 - wcc controls

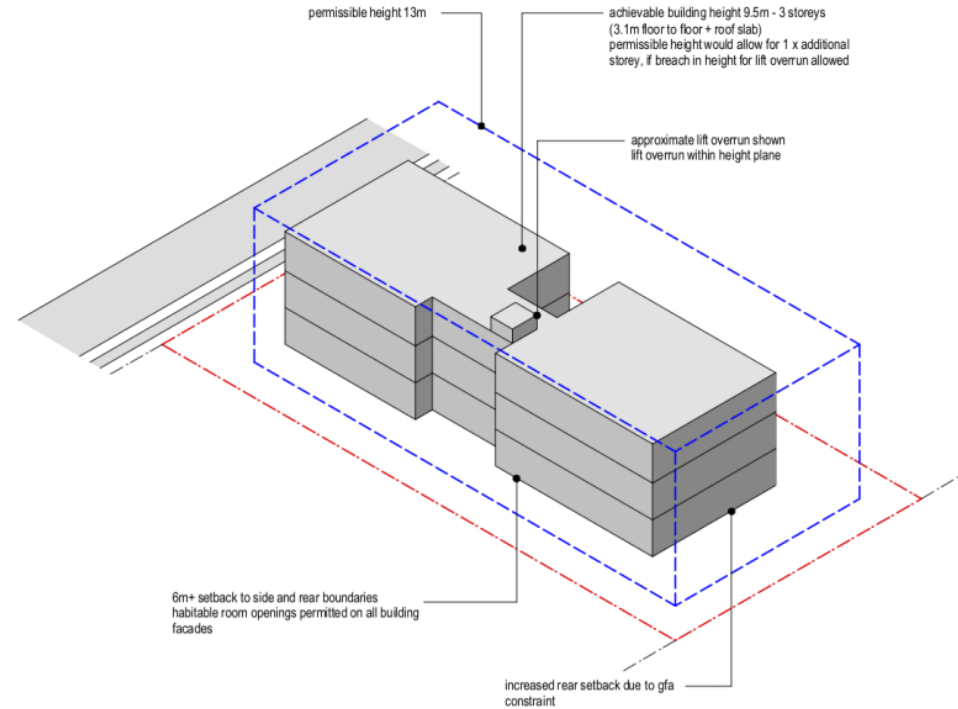
compliance + comparison table

typology:	r/b	no. units achieved:	12
epi(s):	adg (wlep + wdcp)	unit mix / size:	3 x 1 bed (60sqm)
zone:	r3 - medium density residential		6 x 2 bed (74sqm)
lot size:	1200 sqm		3 x 2 Bed (70sqm)
lot width:	24 m	no. car spaces:	18

	Allowable / Required	Proposed	Compliance
Max Height (m)	13.0 m	10.7 m	No
Max Height (st)	-	3	
Max. FSR	0.75:1	0.74:1	Yes
Max. Gross Floor Area	900 sqm	884 sqm	Yes
Min. Landscaped Area (%)	30%	31%	Yes
Min. Landscaped Area (sqm)	360 sqm	374 sqm	Yes
Min. Landscaped Area Dimension	1.5m	1.5m	Yes
Min. Deep Soil Zone (%)	7%	17%	Yes
Min. Deep Soil Zone (sqm)	84 sqm	201 sqm	Yes
Min Deep Soil Dimension	3m	3m	Yes
Min. Communal Open Space Area (%)	25%	27%	Yes
Min Communal Open Space Area (sqm)	300 sqm	330 sqm	Yes
Min. Front Setback	6.0 m	6.0 m	Yes
Min Front Setback POS	5.1 m	5.1 m	Yes
Min Side & Rear Setback - Ground Floor POS + Driveways	1.5 m	1.5 m / 5.0 m	Yes
Min Side & Rear Setback - Habitable Rooms	6.0 m	6.0 m / 8.0 m	Yes
Min Side & Rear Setback - Non Habitable Rooms	3.0 m	3.0 m	Yes
Min. POS Area / Dimension Per Unit Type			
All Ground Floor Units	15 sqm / 3.0 m	15 sqm / 3.0 m	Yes
1 bed	8 sqm / 2.0 m	8 sqm / 2.0 m	Yes
2 bed	10 sqm / 2.0 m	10 sqm / 2.0 m	Yes
3 bed	12 sqm / 2.4 m	-	-
No. Car Spaces Per Unit Type			
<70sqm	1.0	3.0	Yes
70 - 110sqm	1.5	13.5	Yes
>110 sqm	2.0	-	-
No. Visitor Spaces Per Unit			
	0.2	3.6	Yes
Total No. Spaces Required / Proposed	13.5 + 3.8	18	Yes

Note: ADG Controls shown in green

allowable + achievable building envelope comparison



legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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scenario 2.9 - wcc controls

**wollongong city council
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project number	drawing number
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commentary: scenarios 3.1 + 3.2 - wcc controls

Generally, these are robust scenarios, however, basement car parking may impact on development likelihood.

The scenarios are rationally laid out, would allow for rational dwelling layouts and contain sufficient landscaping and deep soil areas. Private open spaces are well located and the street scape presentation attractive, however, the provision of basement car parking for a site of this size, type and yield may not be feasible or desirable.

Building Envelope and GFA Relationship

The achievable GFA is less than the allowable GFA, due to Council's requirements for a 6m wide deep soil area and 4 x 5m private open space.

The allowable building envelope is substantially greater than the achievable GFA. The GFA fills approximately 60% of the allowable envelope. A high level of articulation could be accommodated within the building envelope.

For scenario 3.2, the allowable building height could accommodate an additional storey however, the GFA does not support this.

The achievable GFA is reduced due to Council's requirements for a 6m wide rear deep soil area and 4 x 5m private open space, which cannot overlap. This significantly increases the rear setback and limits the available building depth.

Parking

The required parking (including driveway and manoeuvring area) takes up over half of the site area, leaving insufficient room for development, if parking is provided at grade. Provision of basement car parking on sites of this size / yield may impact development viability and is not preferred in multi dwelling housing developments.

Alternative site scenarios, i.e. rear lane access, may allow for provision of at grade parking.

Individual driveways and garages accessed from the street frontage may result in a better outcome and would allow for maximisation of allowable gross floor area, however, this would require a variation to Council's DCP controls regarding number of driveway crossings.

Council's car parking requirements, of between 1 and 2 spaces per dwelling (depending on size) are quite generous and result in substantial basements (or hard paved areas in other scenarios) which take up a significant portion of the site limiting development opportunities and / or potential and reducing amenity and landscape provision.

commentary: scenarios 3.1 + 3.2 - codes sepp

Generally, these are robust scenarios that work well.

The scenarios result in a rational building form and site layout with adequate landscaping and good streetscape presentation. Although not tested, the achievable building envelopes are likely to allow for generous dwelling layouts.

Building Envelope and GFA Relationship – Scenario 3.1

The allowable building envelope is substantially greater than the permissible GFA. The GFA fills approximately 60% of the allowable envelope. A high level of articulation could be accommodated within the building envelope.

Increased rear setbacks, to both the upper and lower levels, have been applied to reduce the gross floor area to within the maximum allowable. Other building arrangements (such as even lower and upper floor plates) may be more desirable and achieve better internal layouts, within the same GFA provision.

Building Envelope and GFA Relationship – Scenario 3.2

The allowable building envelope is approximately equal to the permissible GFA. The GFA fills approximately 95% of the allowable envelope. Minimal articulation would be provided in the built form

Parking, Access, Frontage & Lot Size

SEPP codes stipulates a minimum site width of 18m, for terrace developments, and a, for terrace developments.

However, the SEPP also requires a minimum dwelling width of 6m and a minimum lot width of 8m, if garages and access are provided from the primary street frontage.

Additionally, the SEPP requires a minimum resulting lot size of 200sqm for torrens title lots and 180sqm for strata title lots.

Accounting for the above requirements, the minimum required site dimensions / areas for terrace development under the SEPP are as follows:

3 x strata title lots - parking at rear
21m x 30m = 630sqm

3 x torrens title lots - parking at rear
21m x 33.4m = 700sqm

3 x strata title lots - front parking
27m x 22.5m = 607sqm

3 x torrens title lots - front parking
27m x 25m = 675sqm

The dimensions of Scenario 3.1 (21m wide, 600sqm area) is not sufficient to allow for torrens title or front access development. As such, a 'rear lane' scenario has been provided as an alternative.

Although achievable, this may not be a common scenario in the LGA and may not be desirable.

The Scenario allows for 6m wide dwellings and 180sqm strata titled lots, however, the middle lot boundary is stepped to ensure it reaches the minimum lot size. A 600sqm site of 24m x 25 m would allow for 3 x 'straight' strata titled lots.

The dimensions of scenario of 3.2 allow for 4 x torrens title lots, with front parking. The allowable GFA is sufficient to theoretically accommodate 5 dwellings, however, 5 dwellings compliant with the 8m frontage requirement is not achievable on the site.

Dwelling Width - Scenario 3.1

Minimum dwelling width (6m) applied to Scenario 3.1, whilst compliant, may not result in viable internal layouts, for example, it does not allow for two bedrooms to be placed side by side. The most desirable / efficient outcome for development of this type is to have living rooms at ground level and bedrooms on upper levels, however, this may not be achievable in this width.

Dwelling Depth - Scenario 3.2

The allowable and achievable dwelling depth is over 19m, which is generally considered too deep for adequate ventilation and light. The footprint of the ground floor would likely be reduced to achieve light and ventilation requirements. This is likely to reduce achievable GFA as the maximum GFA and allowable building volumes are closely related.

commentary: scenarios 3.3 + 3.4 - wcc controls

Generally, these scenarios result in undesirable outcomes.

The scenarios result in an irrational building form and layouts, severely compromised amenity for both residents and neighbours, substantial hard paved areas and limited landscaping opportunities.

Building Envelope and GFA Relationship.

The allowable building envelope is substantially greater than the permissible GFA. The GFA fills approximately 60% of the building envelope.

Notwithstanding the above, the car parking requirements limit the development potential of the sites (see below)

The allowable building envelope could accommodate and entire additional storey, however, the GFA does not support this. Additionally, 4 storey developments of this typology are unlikely.

The development controls, achievable yields and irrational building volumes suggest that development for the purposes of residential flat buildings (potentially with site amalgamations) would be the 'highest and best use' for these scenarios.

Parking and Yield

Required car parking rates, narrow site dimensions and 'bottle axe' typology restricts the number of dwellings that can be achieved on a site. The allowable GFA on both sites could permit additional dwellings (of smaller sizes), however the additional car parking could not be accommodated.

The long driveway adjacent to side boundary results in a poor amenity outcome for neighbours, residents and the streetscape. DCP requires 1m side setback to driveways, however, application of this requirement would make development of this type unfeasible on a 15m wide site as driveway width, manoeuvring width and dwellings could not be accommodated across the limited width.

For Scenario 3.3, 1 additional parking space, in addition to that shown, is required. Complying fully with the required car parking would reduce the development yield to 2 dwellings (a dual occupancy) Three dwellings with non compliant car parking have been shown to illustrate the typology.

For Scenario 3.4, the number of parking spaces required restricts the development potential of the site to 4 dwellings and approximately 75% of the allowable GFA.

Deep Soil and Private Open Space

In both Scenarios, private open spaces overlap with deep soil areas, to some degree. Additionally, some (or all) deep soil are is provided at the rear of the site. This is not supported by Council.

WDOP does allow for half of the required private open space to be provided at an upper level. Whilst this would likely reduce the private open space / deep soil conflict it would result in poor amenity for residents and neighbours, as the upper level private open spaces face the side boundary and would need to be substantially screened.

If the deep soil are was required to be located solely at the rear, the yield for both sites would be reduced to 2 units (a dual occupancy) for 3.3 and 3 units for 3.4.

Layout and Amenity

Amenity of development and neighbouring sites is significantly compromised due to overall site strategy (bottle axe development)

The development type results in: multiple garages at ground floor, irrational dwelling layouts, hard paving across more than 50% of the site area, dwellings facing the side boundaries, living areas facing a driveway, private open spaces along side boundaries, limited landscaping opportunities, deep soil areas at the front of the site and overlap between deep soil and private open space areas.

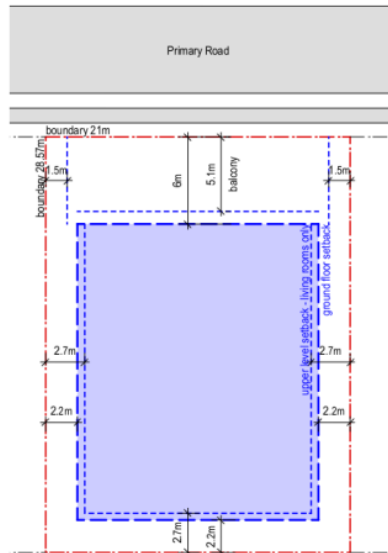
This is a particularly poor outcome in terms of environmental, urban and residential amenity.

High quality / high amenity development on deep narrow sites may be difficult without site amalgamations, however, given the allowable height (13m) and additional available GFA, small 4 storey flat buildings with basement car parking may be possible and might result in better outcomes, given careful design.

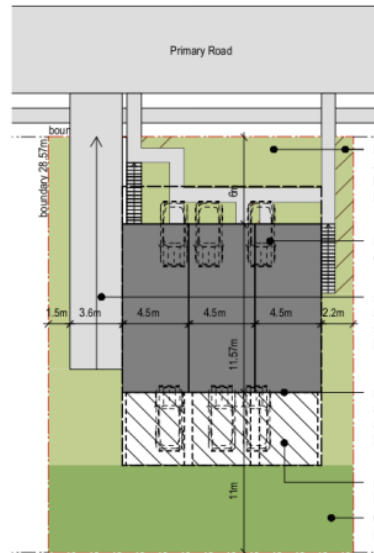
<p>KENNEDY ASSOCIATES ARCHITECTS level 3 / 1 booth street annandale 2038 nominated architect - steve kennedy - registration no. 5828 p + 61 2 9557 6466 f + 61 2 9557 6477</p>	<p>commentary - terrace & mdh</p>	<p>wollongong city council missing middle testing</p>	project number	drawing number
			1851	36 A
			date	client issue
			3/6/19	

scenario 3.1 - wcc controls

typology:	mdh (terrace)	no. units achieved:	3
epi(s):	wlep + wdcp	unit mix / size:	3 x 2 bed (85 sqm)
zone:	r2 - low density residential		
lot size:	600 sqm		
lot width:	21 m	no. car spaces:	6



allowable building zone



achievable building footprint

landscaped area shown in light green. area less than 1.5m not counted in landscaped area compliance (shown hatched)

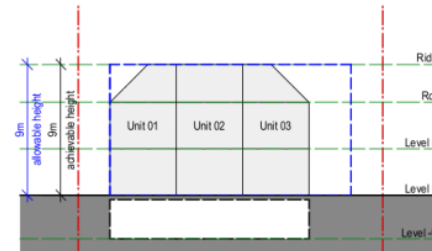
basement car parking under shown dotted

side setback increased to accommodate driveway (3.6m) and setback to driveway (1.5m) required by WDCP

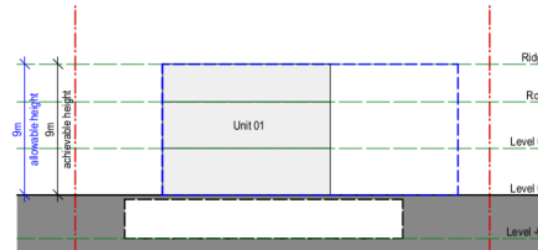
rear setback increased to 11m to accommodate deep soil zone (6m) and pos (5m) separately as required by WDCP

required (5m x 4m) pos shown hatched

6m deep soil zone at rear included in landscape area count



front elevation



side elevation

legend

- - - primary setback - codes sepp	allowable building zone - codes sepp	allowable building envelope - codes sepp
- - - secondary setback - codes sepp	single storey zone - codes sepp	allowable building envelope - wcc controls
- - - primary setback - wcc controls	allowable building zone - wcc controls	achievable building footprint
- - - secondary setback - wcc controls	single storey zone - wcc controls	achievable building massing
landscaped area	deep soil area	communal open space
private open space	common circulation / foyer	hard surface area

KENNEDY ASSOCIATES ARCHITECTS

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scenario 3.1 - wcc controls

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project number	drawing number
1851	37 A
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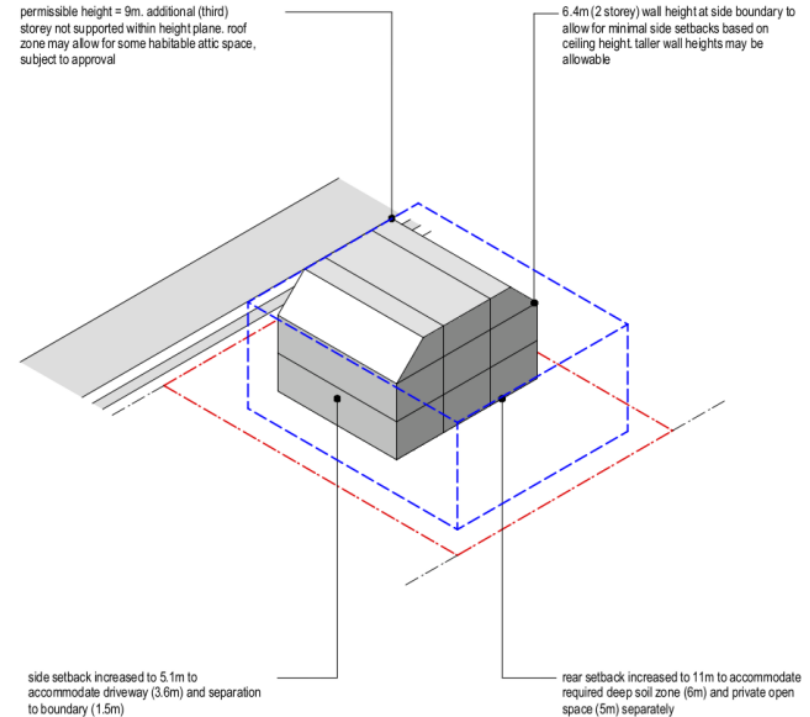
scenario 3.1 - wcc controls

compliance + comparison table

typology:	mdh (terrace)	no. units achieved:	3
epi(s):	wlep + wdcp	unit mix / size:	3 x 2 bed (85 sqm)
zone:	r2 - low density residential		
lot size:	600 sqm		
lot width:	21 m	no. car spaces:	6

	Allowable / Required	Proposed	Compliance
Max Height (m)	9.0 m	9.0 m	Yes
Max Height (st)	-	2	-
Max. FSR	0.5: 1	0.43: 1	Yes
Max. Gross Floor Area	300 sqm	257 sqm	Yes
Min. Landscaped Area (%)	30%	44%	Yes
Min. Landscaped Area (sqm)	180 sqm	261 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	
Min. Deep Soil Zone (%)	15%	21%	Yes
Min. Deep Soil Zone (sqm)	90 sqm	126 sqm	Yes
Min. Deep Soil Zone Dimension	6.0 m	6.0 m	Yes
Min. Front Setback	6.0 m	6.0 m	Yes
Min Front Setback POS	5.1 m	-	Yes
Min Side & Rear Setback (General)	* 2.2 m	2.2 m	Yes
Min Side & Rear Setback - Upper Level Living Rooms	* 2.7 m	-	-
Min Side & Rear Setback - Ground Floor POS + Driveways	1.5 m	2.2 m	Yes
Min POS Area	20 sqm	20 sqm	Yes
Min Pos Dimensions	4.0m x 5.0m	4.0m x 5.0m	Yes
No. Car Spaces Per Unit Type			
<70sqm	1	-	Yes
70 - 110sqm	1.5	4.5	Yes
>110 sqm	2	-	-
No. Visitor Spaces Per Unit	0.2	0.6	Yes
Total Spaces Required / Proposed	4.5 + 0.6	6	Yes

allowable + achievable building envelope comparison



legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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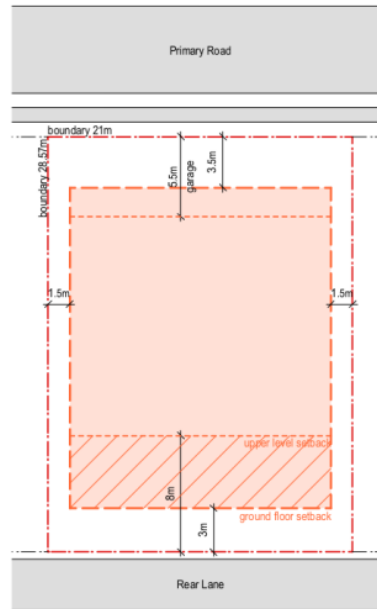
scenario 3.1 - wcc controls

**wollongong city council
missing middle testing**

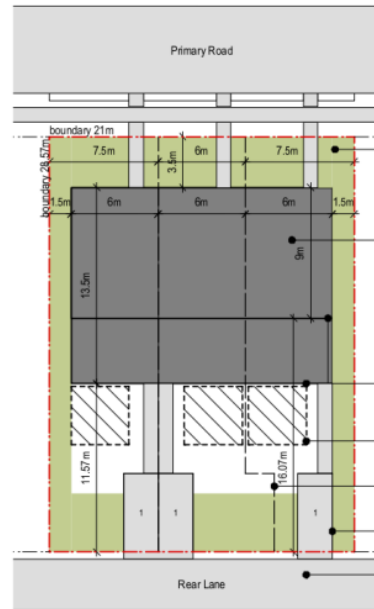
project number	drawing number
1851	38 A
date	
3/6/19	client issue

scenario 3.1 - codes sepp

typology:	terrace	no. dwellings achieved	3
epi(s):	sepp codes	unit mix / size	3 x 3 bed (112sqm)
zone:	r2 - low density residential		
lot size:	600 sqm		
lot width:	21 m	no car spaces:	3



allowable building zone



achievable building footprint

required landscaped area shown in light green
additional landscaped area available

minimum dwelling width (6m) achieved for all lots

ground and upper rear setback increased to reduce building footprint to allowable gfa

required pos shown hatched

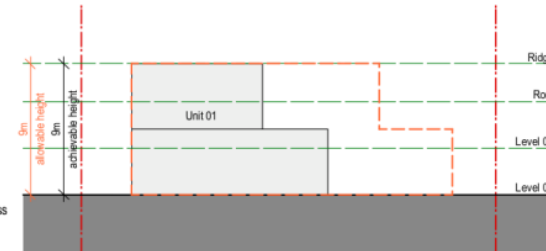
irregular lot boundary required to achieve minimum strata lots size for middle terrace

hardstand parking at rear

sites less than 24m wide require rear lane access (no garage doors permitted to face a street where lot width less than 8m)



front elevation



side elevation

legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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scenario 3.1 - codes sepp

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project number	drawing number
1851	39 A
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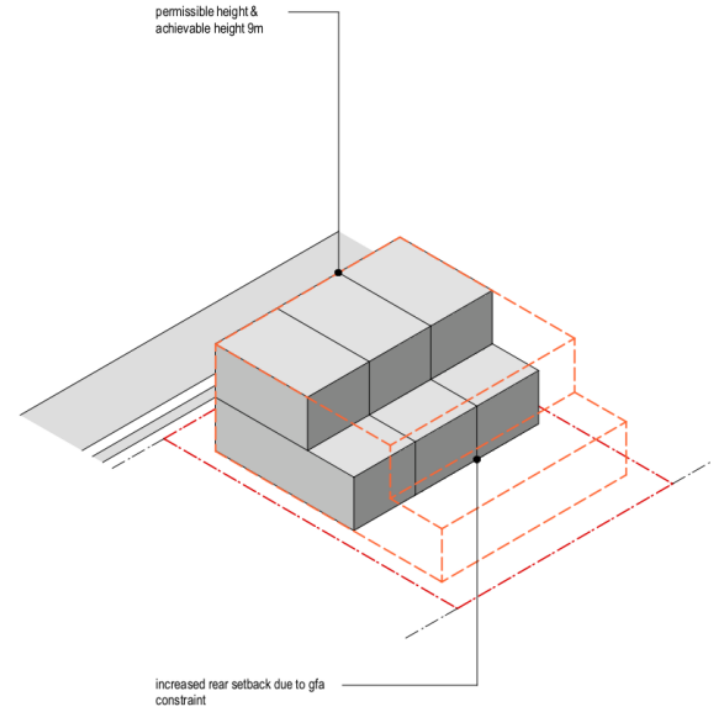
scenario 3.1 - codes sepp

compliance + comparison table

typology:	terrace	no. dwellings achieved	3
epi(s):	sepp codes	unit mix / size	3 x 3 bed (112sqm)
zone:	r2 - low density residential		
lot size:	600 sqm		
lot width:	21 m	no car spaces:	3

	Allowable / Required	Proposed	Compliance
Max Height (m)	9.0 m	9.0 m	Yes
Max Height (st)	-	2	Yes
Max. Gross Floor Area (Formula)	60%	60%	Yes
Max. Gross Floor Area	360 sqm	341 sqm	Yes
Min Dwelling Width	6.0 m	6.0 m	Yes
Min. Landscaped Area %	30%	30%	Yes
Min Landscaped Area (sqm)	180 sqm	181 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	Yes
Min Landscape in Front Setback	25%	84%	Yes
Min. Front Setback	3.5 m	3.5 m	Yes
Min. Garage Setback	5.5 m	-	Yes
Min. Side Setback	1.5 m	1.5 m	Yes
Min. Rear Setback - lvl 00	3.0 m	11.6 m	Yes
Min. Rear Setback - lvl 01	8.0 m	10.1 m	Yes
Min. Private Open Space Area	16 sqm	16 sqm	Yes
Private Open Space Dimension	3.0 m	3.0 m	Yes
Min. Car Parking	1 per dwelling	1 per dwelling	Yes
Min. Lot Width for Garage	8.0 m	-	-
Min. Torrens Lot Size	200 sqm	-	-
Min. Strata Lot Size	180 sqm	180 sqm	Yes

allowable + achievable building envelope comparison



legend

- - - primary setback - codes sepp
- - - secondary setback - codes sepp
- - - primary setback - wcc controls
- - - secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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nominated architect - steve kennedy - registration no. 5828
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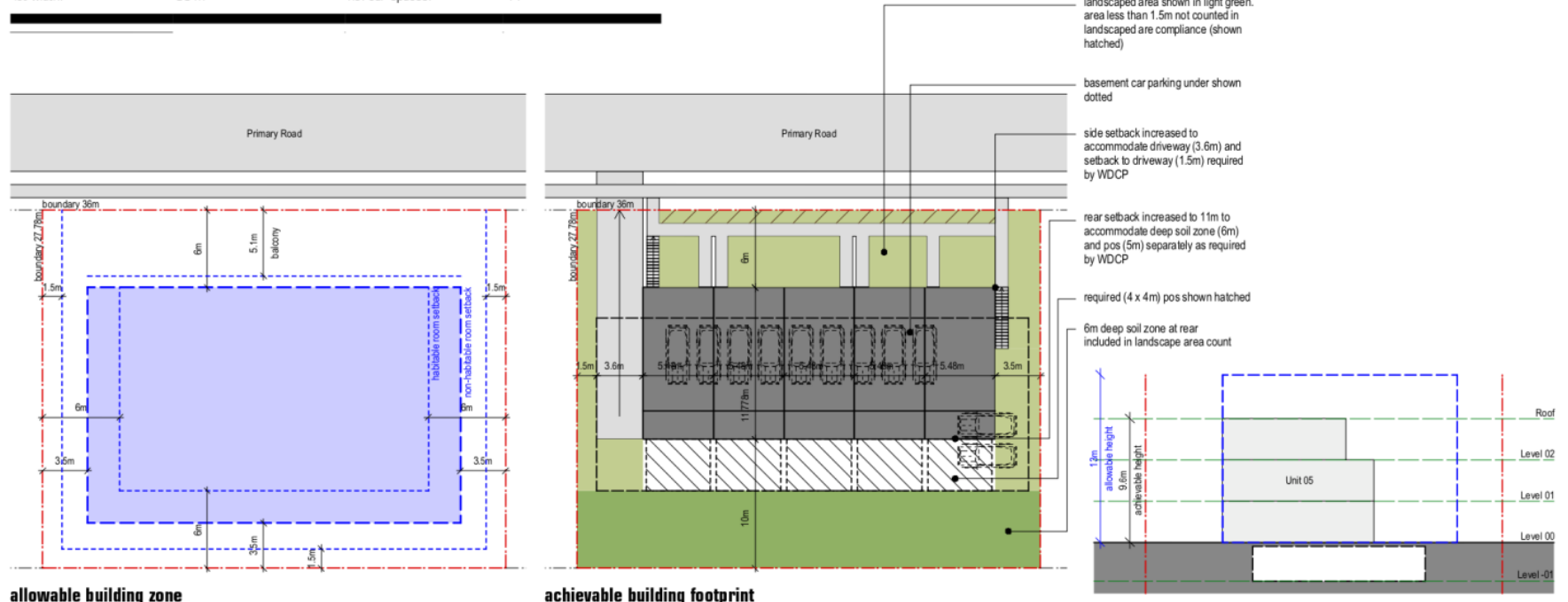
scenario 3.1 - codes sepp

**wollongong city council
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project number	drawing number
1851	40 A
date	
3/6/19	client issue

scenario 3.2 - wcc controls

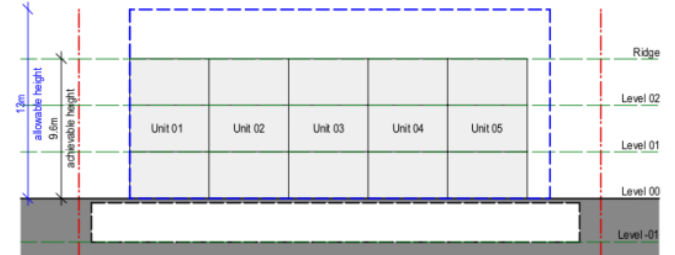
typology:	multi dwelling housing	no. units achieved:	5
epi(s):	wlep + wdcp	unit mix / size:	5 x 3 bed (145 sqm)
zone:	r3 - medium density residential		
lot size:	1000 sqm		
lot width:	36 m	no. car spaces:	11



allowable building zone

achievable building footprint

side elevation



legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- deep soil area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

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scenario 3.2 - wcc controls

**wollongong city council
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project number	drawing number
1851	41 A
date	
3/6/19	client issue

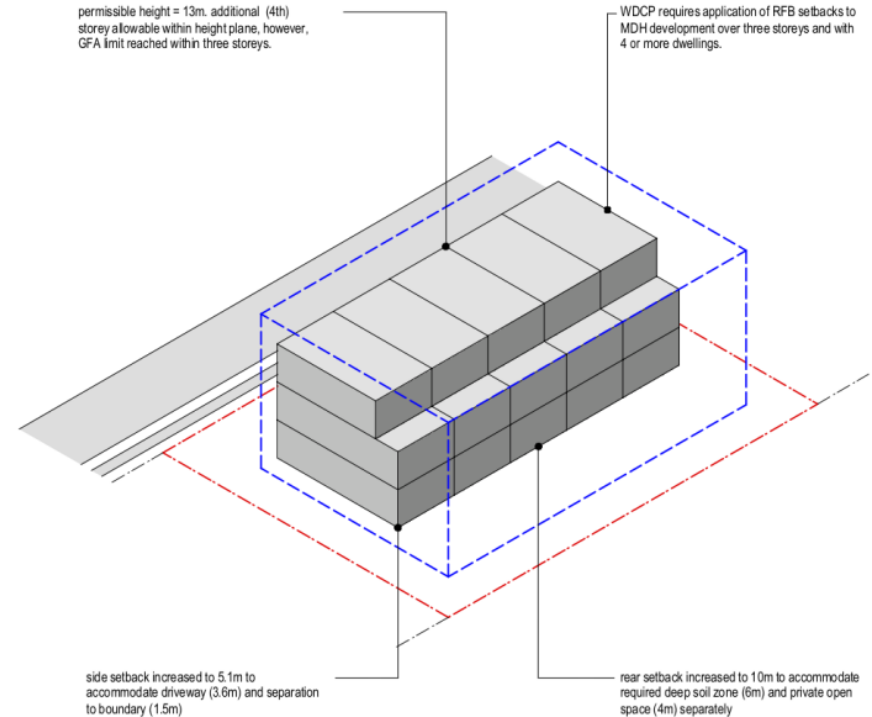
scenario 3.2 - wcc controls

compliance + comparison table

typology:	multi dwelling housing	no. units achieved:	5
epi(s):	wiep + wdcp	unit mix / size:	5 x 3 bed (145 sqm)
zone:	r3 - medium density residential		
lot size:	1000 sqm		
lot width:	36 m	no. car spaces:	11

	Allowable / Required	Proposed	Compliance
Max Height (m)	13.0 m	9.5 m	No
Max Height (st)		3	-
Max. FSR	0.75: 1	0.75: 1	Yes
Max. Gross Floor Area	750 sqm	745 sqm	Yes
Min. Landscaped Area (%)	30%	41%	Yes
Min. Landscaped Area (sqm)	300 sqm	411 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	
Min. Deep Soil Zone (%)	15%	22%	Yes
Min. Deep Soil Zone (sqm)	150 sqm	216 sqm	Yes
Min. Deep Soil Zone Dimension	6.0 m	6.0 m	Yes
Min. Front Setback	6.0 m	6.0 m	Yes
Min Front Setback POS	5.1 m	-	Yes
* Min Side & Rear Setback - Habitable Rooms	6.0 m	-	Yes
* Min Side & Rear Setback - Non Habitable Rooms	3.5 m	5.1 / 3.5 m	Yes
Min Side & Rear Setback - Ground Floor POS + Driveways	1.5 m	6.0 m	No
Min POS Area	20 sqm	20 sqm	Yes
Min Pos Dimensions	4.0m x 5.0m	4.0m x 5.0m	Yes
No. Car Spaces Per Unit Type			
<70sqm	1	-	-
70 - 110sqm	1.5	-	-
>110 sqm	2	10	Yes
No. Visitor Spaces Per Unit	0.2	1	Yes
Total Spaces Required / Proposed	10 + 1	11	Yes

allowable + achievable building envelope comparison



legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- deep soil area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

KENNEDY ASSOCIATES ARCHITECTS

level 3 / 1 booth street annandale 2038
nominated architect - steve kennedy - registration no. 5828
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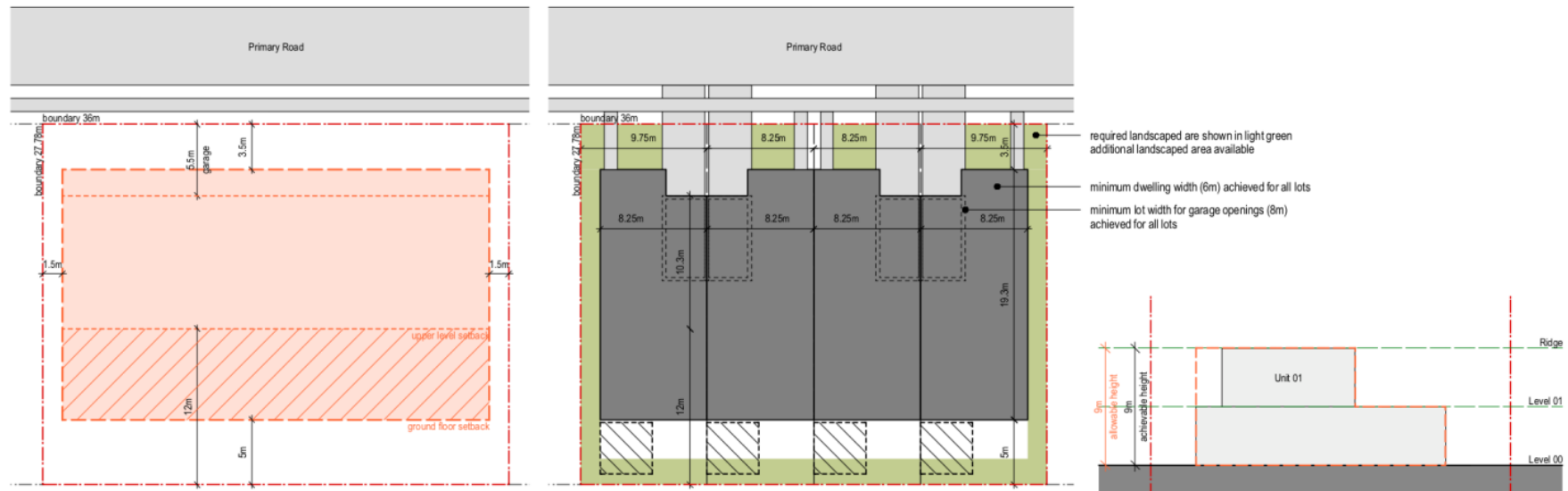
scenario 3.2 - wcc controls

**wollongong city council
missing middle testing**

project number	drawing number
1851	42 A
date	
3/6/19	client issue

scenario 3.2 - codes sepp

typology:	terrace	no. dwellings achieved	4
epi(s):	sepp codes	unit mix / size:	4 x 3 bed (180sqm)
zone:	r3 - medium density residential		
lot size:	1000 sqm		
lot width:	36 m	no car spaces:	4



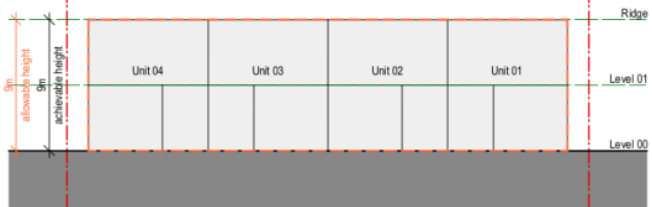
allowable building zone

achievable building footprint

legend

- - - primary setback - codes sepp	allowable building zone - codes sepp	allowable building envelope - codes sepp
- - - secondary setback - codes sepp	single storey zone - codes sepp	allowable building envelope - wcc controls
- - - primary setback - wcc controls	allowable building zone - wcc controls	achievable building footprint
- - - secondary setback - wcc controls	single storey zone - wcc controls	achievable building massing
landscaped area	deep soil area	communal open space
private open space	common circulation / foyer	hard surface area

side elevation



front elevation

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scenario 3.2 - codes sepp

wollongong city council
missing middle testing

project number	drawing number
1851	43 A
date	
3/6/19	client issue

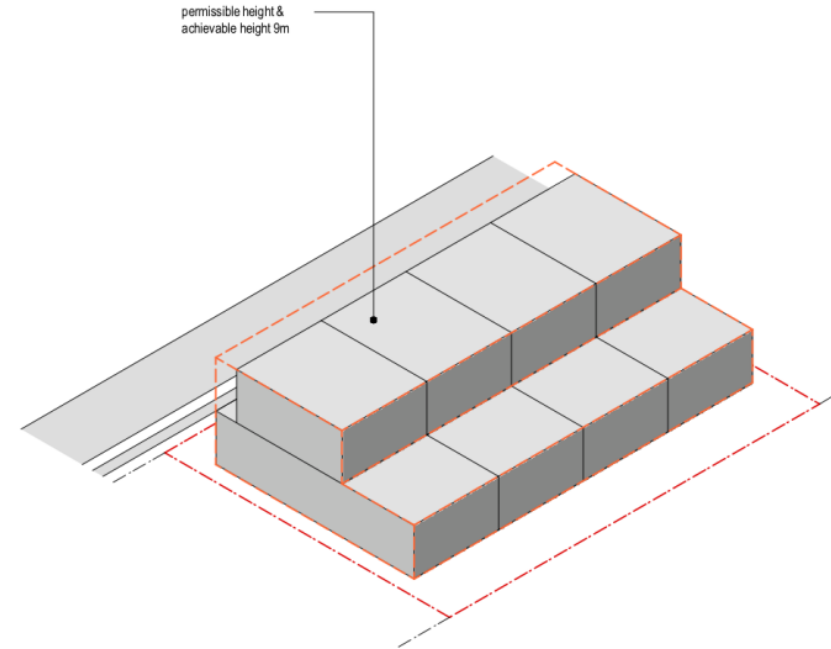
scenario 3.2 - codes sepp

compliance + comparison table

typology:	terrace	no. dwellings achieved	4
epi(s):	sepp codes	unit mix / size:	4 x 3 bed (180sqm)
zone:	r3 - medium density residential		
lot size:	1000 sqm		
lot width:	36 m	no car spaces:	4

	Allowable / Required	Proposed	Compliance
Max Height (m)	9.0 m	9.0 m	Yes
Max Height (st)	-	-	Yes
Max. Gross Floor Area (Formula)	80%	76%	Yes
Max. Gross Floor Area	800 sqm	761 sqm	Yes
Min Dwelling Width	6.0 m	6.0 m	Yes
Min. Landscaped Area %	20%	20%	Yes
Min Landscaped Area (sqm)	200 sqm	203 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	Yes
Min Landscape in Front Setback	25%	48%	Yes
Min. Front Setback	3.5 m	3.5 m	Yes
Min. Garage Setback	5.5 m	5.5 m	Yes
Min. Side Setback	1.5 m	1.5 m	Yes
Min. Rear Setback - Ivl 00	5.0 m	5.0 m	Yes
Min. Rear Setback - Ivl 01	12.0 m	12.0 m	Yes
Min. Private Open Space Area	16 sqm	16 sqm	Yes
Private Open Space Dimension	3.0 m	3.0 m	Yes
Min. Car Parking	1 per dwelling	4	Yes
Min Lot Width for Garage	8.0 m	8.0 m	Yes
Min. Torrens Lot Size	200 sqm	230 sqm +	Yes
Min. Strata Lot Size	180 sqm	-	-

allowable + achievable building envelope comparison



legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

KENNEDY ASSOCIATES ARCHITECTS

level 3 / 1 booth street annandale 2038
nominated architect - steve kennedy - registration no. 5828
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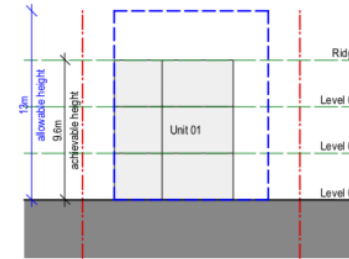
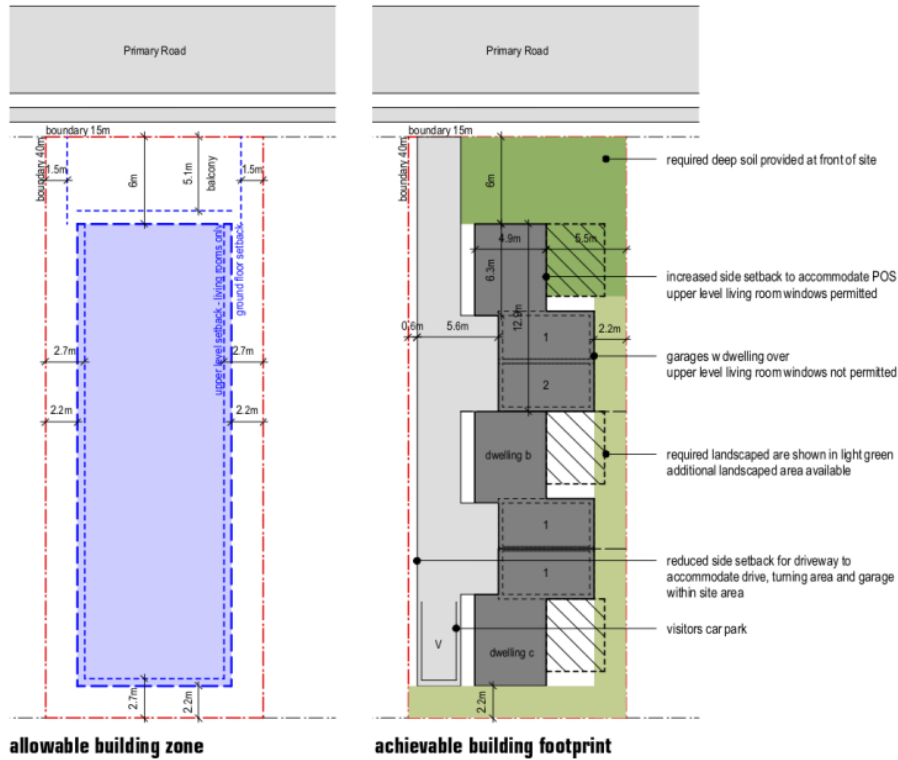
scenario 3.2 - codes sepp

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missing middle testing**

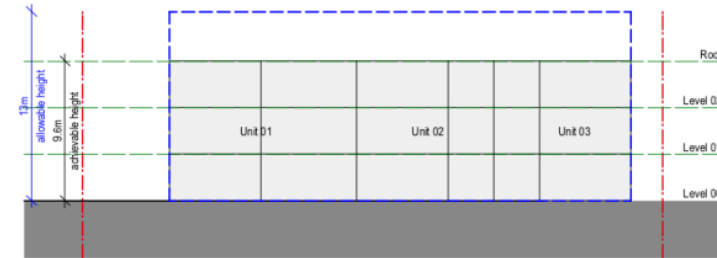
project number	drawing number
1851	44 A
date	
3/6/19	client issue

scenario 3.3 - wcc controls

typology:	mdh (stacked/battle axe)	no. units achieved:	3
epi(s):	wiep + wdcp	unit mix:	2 x 3 bed (110 sqm)
zone:	r3 - medium density residential		1 x 3 bed (150 sqm)
lot size:	600 sqm		
lot width:	15 m	no. car spaces:	5 (non compliant)



front elevation



side elevation

legend

- - - primary setback - codes sepp
- - - secondary setback - codes sepp
- - - primary setback - wcc controls
- - - secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

KENNEDY ASSOCIATES ARCHITECTS
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nominated architect - steve kennedy - registration no. 5828
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scenario 3.3 - wcc controls

wollongong city council
missing middle testing

project number	drawing number
1851	45 A
date	
3/6/19	client issue

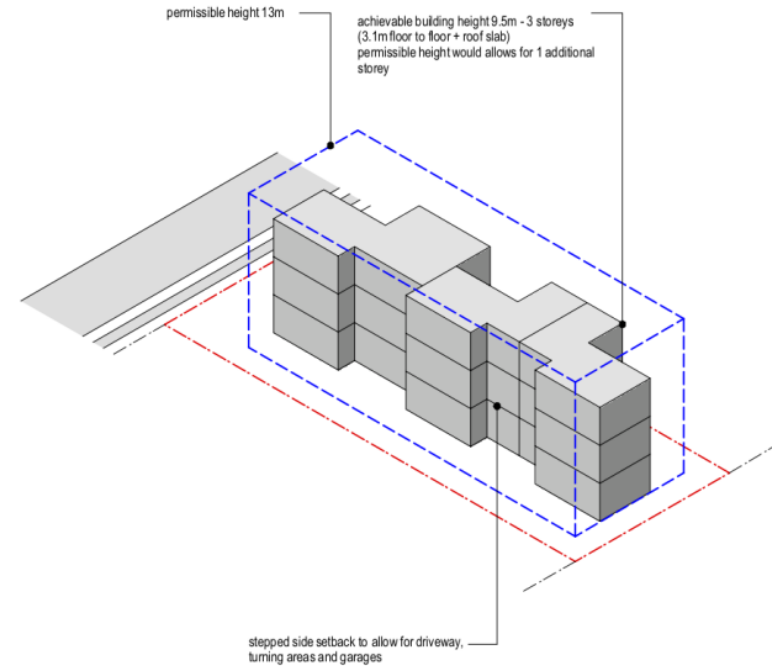
scenario 3.3 - wcc controls

compliance + comparison table

typology:	mdh (stacked/battle axe)	no. units achieved:	3
epi(s):	wlep + wdcp	unit mix:	2 x 3 bed (110 sqm)
zone:	r3 - medium density residential		1 x 3 bed (150 sqm)
lot size:	600 sqm		
lot width:	15 m	no. car spaces:	5 (non compliant)

	Allowable / Required	Proposed	Compliance
Max Height (m)	13.0 m	9.6 m	Yes
Max Height (st)		3	-
Max. FSR	0.75: 1	0.62: 1	Yes
Max. Gross Floor Area	450 sqm	373 sqm	Yes
Min. Landscaped Area (%)	30%	32%	Yes
Min. Landscaped Area (sqm)	180 sqm	193 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	
Min. Deep Soil Zone (%)	15%	16%	Yes
Min. Deep Soil Zone (sqm)	90 sqm	96 sqm	No - Front Deep Soil & POS Overlap
Min. Deep Soil Zone Dimension	6.0 m	6.0 m	Yes
Min. Front Setback	6.0 m	6.0 m	Yes
Min Front Setback POS	5.1 m	-	Yes
Min Side & Rear Setback (General)	* 2.2 m	2.2 m	Yes
Min Side & Rear Setback - Upper Level Living Rooms	* 2.7 m	-	-
Min Side & Rear Setback - Ground Floor POS + Driveways	1.5 m	2.2 m	Yes
Min POS Area	20 sqm	20 sqm	Yes
Min Pos Dimensions	4.0m x 5.0m	4.0m x 5.0m	Yes
No. Car Spaces Per Unit Type			
<70sqm	1	-	Yes
70 - 110sqm	1.5	3	Yes
>110 sqm	2	2	-
No. Visitor Spaces Per Unit	0.2	0.6	Yes
Total Spaces Required / Proposed	5 + 0.6	5	No

allowable + achievable building envelope comparison



legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
- landscaped area
- private open space
- allowable building zone - codes sepp
- single storey zone - codes sepp
- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
- achievable building massing
- communal open space
- hard surface area

KENNEDY ASSOCIATES ARCHITECTS

level 3 / 1 booth street annandale 2038
nominated architect - steve kennedy - registration no. 5828
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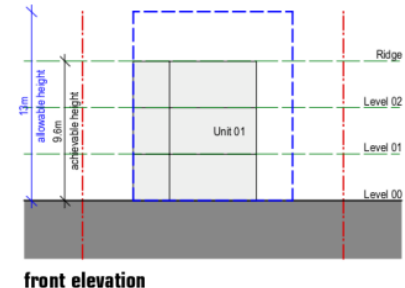
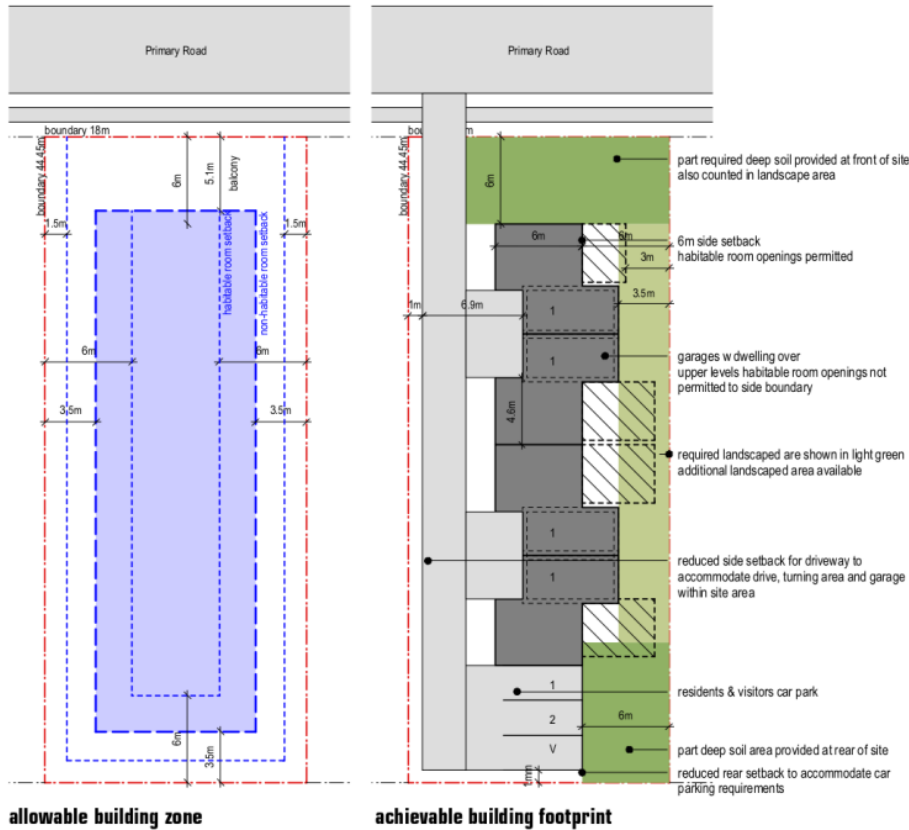
scenario 3.3 - wcc controls

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missing middle testing**

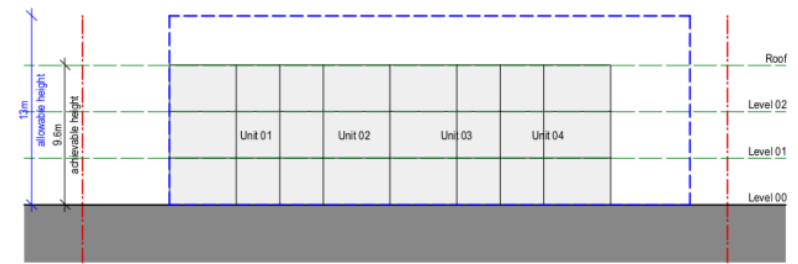
project number	drawing number
1851	46 A
date	client issue
3/6/19	

scenario 3.4 - wcc controls

typology:	mdh (stacked/battle axe)	no. units achieved:	4
epi(s):	wlep + wdcp	unit mix:	4 x 3 bed (101 sqm)
zone:	r3 - medium density residential		
lot size:	800 sqm		
lot width:	18 m	no. car spaces:	7



front elevation



side elevation

legend

- - - primary setback - codes sepp
- - - secondary setback - codes sepp
- - - primary setback - wcc controls
- - - secondary setback - wcc controls
- [light green] landscaped area
- [dark green] deep soil area
- [hatched] private open space
- [orange] allowable building zone - codes sepp
- [red] single storey zone - codes sepp
- [blue] allowable building zone - wcc controls
- [purple] single storey zone - wcc controls
- [green] common circulation / foyer
- [dashed] allowable building envelope - codes sepp
- [dotted] allowable building envelope - wcc controls
- [grey] achievable building footprint
- [white] achievable building massing
- [red hatched] communal open space
- [grey] hard surface area

KENNEDY ASSOCIATES ARCHITECTS
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scenario 3.4 - wcc controls

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project number	drawing number
1851	48 A
date	
3/6/19	client issue

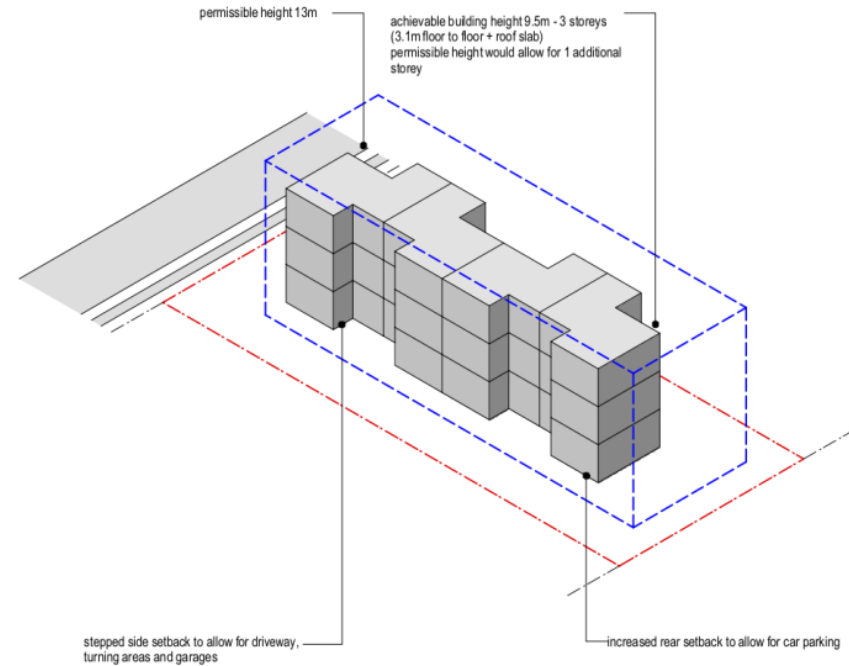
scenario 3.4 - wcc controls

compliance + comparison table

typology:	mdh (stacked/battle axe)	no. units achieved:	4
epi(s):	wlep + wdcp	unit mix:	4 x 3 bed (101 sqm)
zone:	r3 - medium density residential		
lot size:	800 sqm		
lot width:	18 m	no. car spaces:	7

	Allowable / Required	Proposed	Compliance
Max Height (m)	13.0 m	9.6 m	No
Max Height (st)		3	-
Max. FSR	0.75: 1	0.51: 1	Yes
Max. Gross Floor Area	600 sqm	406 sqm	Yes
Min. Landscaped Area (%)	30%	30%	Yes
Min. Landscaped Area (sqm)	240 sqm	243 sqm	Yes
Min. Landscaped Area Dimension	1.5 m	1.5 m	
Min. Deep Soil Zone (%)	15%	18%	Yes
Min. Deep Soil Zone (sqm)	120 sqm	142 sqm	No - Front Deep Soil & POS Overlap
Min. Deep Soil Zone Dimension	6.0 m	6.0 m	Yes
Min. Front Setback	6.0 m	6.0 m	Yes
Min Front Setback POS	5.1 m	-	Yes
* Min Side & Rear Setback - Habitable Rooms	6.0 m	6.0 m	Yes
* Min Side & Rear Setback - Non Habitable Rooms	3.5 m	3.5 m	Yes
Min Side & Rear Setback - Ground Floor POS + Driveways	1.5 m	1.0 m	No
Min POS Area	20 sqm	20 sqm	Yes
Min Pos Dimensions	4.0m x 5.0m	4.0m x 5.0m	Yes
No. Car Spaces Per Unit Type			
<70sqm	1	-	-
70 - 110sqm	1.5	6	Yes
>110 sqm	2	-	-
No. Visitor Spaces Per Unit	0.2	0.8	Yes
Total Spaces Required / Proposed	6+0.8	7	Yes

allowable + achievable building envelope comparison



legend

- primary setback - codes sepp
- secondary setback - codes sepp
- primary setback - wcc controls
- secondary setback - wcc controls
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- allowable building zone - wcc controls
- single storey zone - wcc controls
- deep soil area
- common circulation / foyer
- allowable building envelope - codes sepp
- allowable building envelope - wcc controls
- achievable building footprint
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scenario 3.4 - wcc controls

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project number	drawing number
1851	49 A
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