

CONTACT

Jennie Buchanan	Director	jbuchanan@ethosurban.com	9409 4944
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This document has been prepared by:

This document has been reviewed by:



Samantha Miller & Jennie Buchanan

30 May 2019

Paul Altree-Williams

30 May 2019

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VERSION NO.

DATE OF ISSUE

REVISION BY

APPROVED BY

Ethos Urban Pty Ltd
ABN 13 615 087 931.
www.ethosurban.com
173 Sussex Street, Sydney
NSW 2000 t 61 2 9956 6952

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1.0 Introduction

This Response to Submissions (RTS) has been prepared by Ethos Urban on behalf of Lendlease Communities in respect of a Section 75W modification application (MOD 4) to the approved Calderwood Valley Concept Plan (MP09_0082). The modification seeks to allow for increased and more diverse housing supply at the Calderwood Urban Development Project (CUDP). Specifically, the modification application, as lodged sought to increase the number of principal dwellings permitted from approximately 4,800 principal dwellings to approximately 6,500 principal dwellings. The increase in housing supply is proposed to ensure that the existing area of urban zoned land in the CUDP is efficiently used for the continued supply of a range of housing types and lot sizes that both meet market demand and will assist in addressing housing affordability pressures in the Illawarra region.

The Section 75W modification application was placed on public exhibition between 13 September 2018 and 11 October 2018. A total of 74 public submissions were received (including community groups). Of the submissions received, 64 were general public submissions (57 objections and 7 submissions). A total of eight submissions were received from Government agencies, none of which objected to the proposed modification. Submissions were also received from both Wollongong and Shellharbour City Councils, with Shellharbour City Council objecting to the proposed modifications. In response to the issues raised by Councils and the community, Lendlease has reduced the proposed principal residential dwelling yield from 6,500 dwellings to 6,000 as part of this RTS.

This RTS is submitted to the Department of Planning, Industry and Environment (the Department) in accordance with former section 75H(6)(a) of the *Environmental Planning and Assessment Act 1979* (the Act) and clause 3E(1)(a) of Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017* (the Savings and Transitional Regulation). This RTS provides a response to the key issues raised in the public submissions and those outlined in the letter from the Department of Planning, Industry and Environment (DPIE). A detailed response to the submissions is provided at **Appendix A**. Further detailed responses provided by the relevant technical consultants are also submitted (see Table of Contents).

As part of this RTS, a Preferred Project Report (PPR) is submitted in accordance with former section 75H(6)(b) of the Act and clause 3E(1)(b) of Schedule 2 of the Savings and Transitional Regulation. The PPR is detailed at **Section 3** and the following amendments to the modification application have been made:

- Reduction in the total dwelling yield under the Concept Plan from 6,500 dwellings to 6,000 dwellings;
- Consequential reduction in additional open space based on revised dwelling yield;
- Consequential reduction in additional community infrastructure (community centre and library contributions) based on the revised dwelling yield;
- Retention of the approved Calderwood Road configuration, provided as two lanes from Tripoli Way to the eastern boundary of the CUDP; and
- Revisions to the Development Control Strategy to address submissions.

Revised Concept Plan drawings have been prepared by Taylor Brammer and are provided at **Appendix B**.

The assessment undertaken by the specialist consultant team has concluded that there are no unacceptable direct, indirect or cumulative environmental impacts as a result of the proposed modification. Our assessment has also found that the development as approved and proposed to be modified is consistent with the principles of Ecologically Sustainable Development. The application is recommended for approval.

2.0 Summary of Submissions and Responses

This section provides a summary of the key issues raised by the submissions received during the public exhibition of the Section 75W modification. A total of 74 submissions were received being:

- Submission from Wollongong City Council;
- Objection from Shellharbour City Council;
- 8 submissions from Government Agencies (no objections);
- 2 submissions and one objection from local community groups; and
- 5 public submissions and 56 public objections.

In addition to the above, a letter requesting further information was also received from the DPIE.

A detailed response to all submissions from Government agencies and the general public is provided at **Appendix A**. A response to key issues raised by the DPIE is provided in **Section 2.1**, issues raised by the Wollongong City Council (WCC) are addressed in **Section 2.2**, and the issues raised by Shellharbour City Council (SCC) are addressed in **Section 2.3**.

2.1 Department of Planning, Industry and Environment

The DPIE provided a written request, dated 8 February 2019, detailing issues to be addressed in the RTS and additional information to be provided in support of the Section 75W application. A detailed response to all issues raised is provided at **Appendix A** and the key issues are addressed below.

2.1.1 Density

Location of additional Density

The DPIE requested additional information to understand the location of the additional density proposed as part of Modification 4 to the Concept Plan. The revised Urban Design Report prepared by RPS and submitted at **Appendix C** includes updated illustrative maps for information purposes. The additional density is only proposed in areas within 800m walking distance of the Town Centre and in areas opposite or adjacent to local parks with an area greater than 0.2ha (consistent with the Shellharbour VPA) and where the gradient is less than 1 in 10 as shown in pink and hatched black in **Figure 1**. Higher density was already permissible within the B4 Mixed Use Zones of the Town and Village Centres (coloured brown in **Figure 1**) and on land opposite or adjacent to local parks with a minimum area of 0.3ha or located directly opposite the town and village centres pursuant to Condition B6 of the Concept Plan. In response to issues raised in other submissions, the locational criteria for increased density on sites within 400m of the Village Centre has been removed from this application such that increased density is no longer proposed on land within 400m of the Village Centre, except as provided by Condition B6.

Placing additional density within walking distance of a Town Centre is a well established urban design principle. A walkable neighbourhood encourages healthy, active lifestyles and is more likely to result in higher levels of use of sustainable (active) forms of transport such as walking, cycling and use of public transport. The Department of Infrastructure and Transport document '*Walking, Riding and Access to Public Transport*', dated 2013, outlines the following benefits of use of active transport:

- reduced environmental impacts,
- increased capacity, and reduced congestion, in the overall transport network,
- improved public health and reduced healthcare costs
- improved community wellbeing and social cohesion

A radius of 800m is generally accepted as being within ten-minutes walking distance of the centre. RPS has undertaken a pedshed analysis which has demonstrated that the areas shaded pink at **Figure 1** are within ten minutes walking distance when walking along local roads and pedestrian paths.

The additional dwelling yield proposed as part of Modification 4 to the approved concept plan is wholly contained within areas to be developed by Lendlease Communities. No additional density on the non-core land is proposed as a result of this modification. An approximate breakdown of principal dwelling yield by landowner (based on DAs lodged, approved or delivered) is presented in **Table 1**.

Table 1 **Distribution of Principal Dwellings within the CUDP**

Landowner	Approximate Number of Principal Dwellings
Lendlease	4,870
Non-core landowners	915
Landowners with agreements with Lendlease	215
Total	6,000

Source: Lendlease/RPS

Amenity of additional dwellings

In order to provide greater certainty to the Department in respect of the location and amenity of the higher density dwellings, further amendments are proposed to Condition B6 such that higher density will only be permitted in the following locations:

- Within the Town and Village Centres (B4 Mixed Use Zone); or
- Within the 800m walking catchment of the Town Centre; or
- Areas adjoining or directly opposite a public park with an area of at least 0.2 hectares (minimum proposed local park size) and where the gradient of the site is less than 1 in 10 (to encourage walkability and to minimise retaining and benching on smaller lots).

Additional provisions have also been included in the Development Control Strategy (DCS) to further ensure that dwellings on smaller lots will achieve an appropriate urban design outcome and internal amenity. A diagram (refer **Figure 4** of the DCS) designating areas that achieve the location criteria has been included within the DCS to provide a greater level of clarity as to where these criteria are achieved and where the 800m walking catchment is applied. A revised version of the DCS is provided at **Appendix D**. These changes are explained further at **Section 2.1.5** and in the table at **Appendix E**.

An indicative layout plan for the CUDP is provided in the revised Urban Design Report (**Appendix B**), however this layout will be subject to separate future development consent. The detailed dwellings layout and design of built form will be subject of future DAs or CDCs and, in the case of DAs, will involve a detailed assessment, including addressing residential amenity, in such an application.

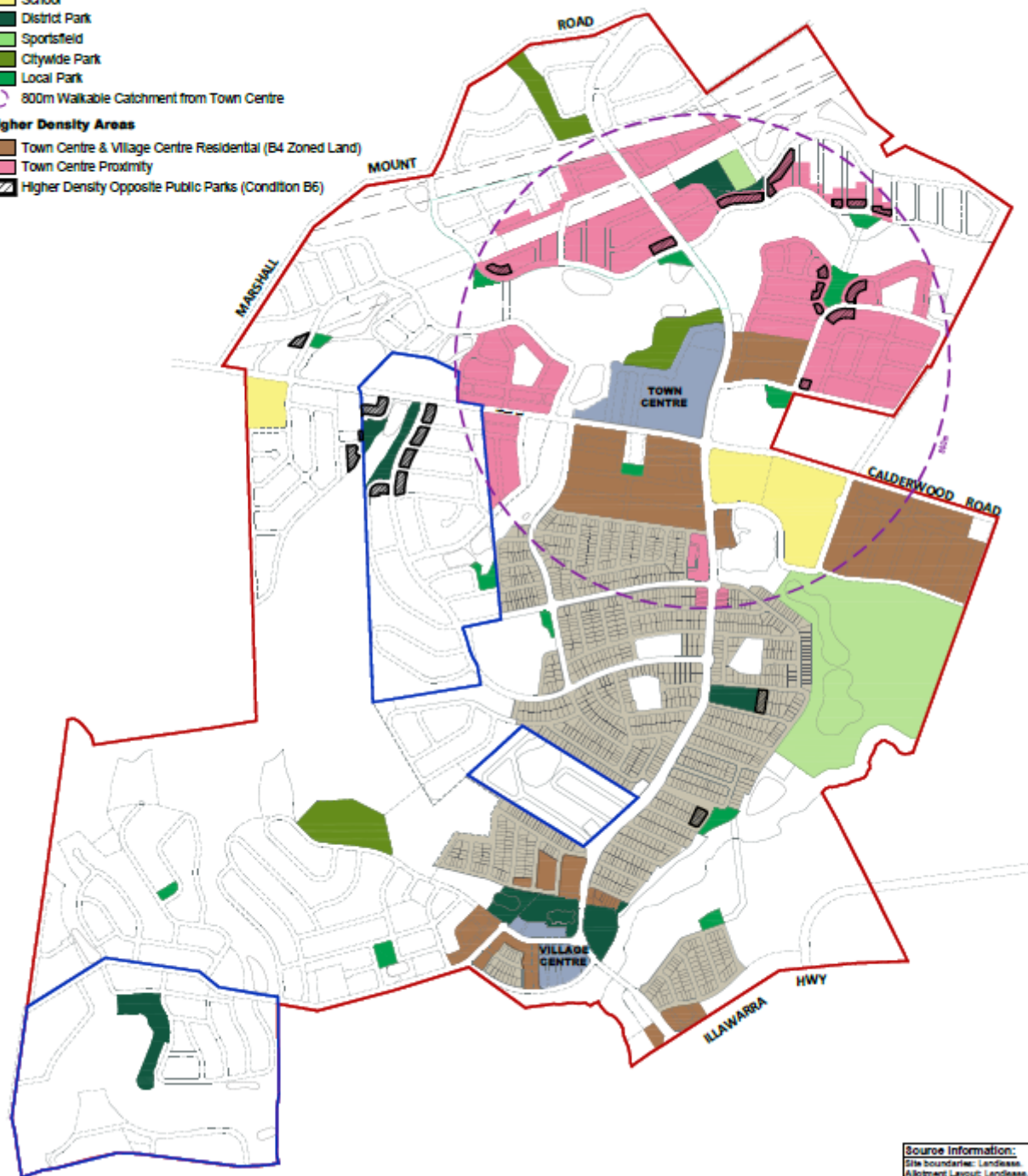
It is noted that the location of the seniors dwellings is no longer identified on the indicative layout plan. This is to enable a more flexible approach such that they can be delivered within either the residential zone or within the Town or Village Centres. Lendlease is committed to delivering the 270 seniors dwellings and these have been accounted for in the total 6,000 principal dwellings, refer to Section 2.3. An aged care facility (up to 144 beds) will also likely be developed within the CUDP.

Legend

- Site Boundary
- Non-Core Lands
- Constructed / Approved Residential
- Town Centre and Village Centre Mixed Use (Including Residential)
- School
- District Park
- Sportsfield
- Citywide Park
- Local Park
- 800m Walkable Catchment from Town Centre

Higher Density Areas

- Town Centre & Village Centre Residential (B4 Zoned Land)
- Town Centre Proximity
- Higher Density Opposite Public Parks (Condition B6)



Source Information:
Site boundaries: Landlease.
Allotment Layout: Landlease.
Yield / Dwellings: Landlease.

Figure 1 Areas satisfying locational criteria for additional density

Source Updated Urban Design Report (RPS), 2019

2.1.2 Flood Impacts and Water Quality

The Department requested that the detailed issues raised in the WCC and SCC submissions in relation to flooding be addressed in the RTS. Accordingly, a detailed response has been prepared by JWP and is included in the Water Cycle and Flood Management (WCFM) Post-Exhibition Report, submitted at **Appendix F**. A summary of the key issues raised and the response is outlined below. No changes to the application are required or made in response to submissions in relation to Water Cycle Management as proposed by JWP. The proposed modification will not generate any adverse flooding impacts beyond that considered as part of the original Concept Plan. In response to the SCC submission, Cardno was engaged to undertake a peer review of JWP's report and assessment. Cardno, see **Appendix G**, concluded the following:

- that the impact of flooding on the development with the proposed modification is consistent with the impact assessed under the original concept plan as the proposed lots will be constructed above the flood planning level and access will be available up to the PMF,
- that the impact of the development on flooding upstream and downstream of the development is also consistent with the impact assessed under the original concept plan such that the conditions of approval in the current concept plan remain applicable, and
- Regarding the water quality treatment proposed, Cardno considers that the proposed modification is an improvement on the water quality in the CUDP as the design has now accounted for higher treatment targets and has also considered the EPA/OEH Risk Based Framework for considering waterway health outcomes which was published after the concept approval was granted.

Impact on downstream areas

Flood impacts for the CUDP and downstream are consistent with the impacts assessed in the 2010 approved Concept Plan in regard to the 1% AEP event, and are consistent with Condition B26.1 of the NSW Land and Environment Court Order for the Stage 1 Project (MP09 0083), as amended. It is recommended that all DAs approved and currently under assessment proceed with the previous modelling used for the current concept plan as they are consistent with the concept approval relevant at the time.

Since the assessment of the flood impacts in 2010, SCC has adopted an updated flood model (in 2017) and this model has been used to establish the updated 'existing' conditions from those used in the approved Concept Plan. It is noted that the SCC flood model did not allow for the CUDP thus a new 'base' condition which includes all approved development has also been determined. The revised WCFM strategy remains consistent in philosophy with the original 2010 concept approval. This approach has formed the basis of all assessments within Water Cycle and Flood Management Post-Exhibition Report, submitted at **Appendix F**.

It is recommended that the revised modelling provided as part of this modification be utilised for all DAs that are approved after this application has been approved. The final flood model including all updates will be provided to SCC and WCC for further use as development in the CUDP is delivered.

1% AEP and PMF events

As indicated in the flood mapping, parts of the precinct are inundated by mainstream flows during the PMF event. The flood assessment completed as part of Modification 4 also complies with Statement of Commitment 41 of the approved Concept Plan. The PMF flood impacts are consistent with the Flood Impacts included in the approved Concept Plan being:

- Minimum 0.5m freeboard will be provided to flood affected properties in the 1% AEP event.
- Provision of safe evacuation routes during the 1% AEP flood event have been provided for the development located within the PMF.
- Bridge decks for the approved Macquarie Rivulet bridge and proposed Escarpment Drive bridge (across Marshall Mount Creek) have been designed above the 1% AEP flood level to allow uninterrupted road traffic throughout the development during events up to and including the 1% AEP flood, and
- Design and location of all major spine roads (i.e. Escarpment Drive) within the CUDP development are currently at or above the PMF level.

Due to the short duration of the PMF event, the evacuation strategy for CUDP is for all residents to “shelter in place” therefore there is no need to determine a flood evacuation strategy for CUDP or Yallah-Marshall Mount area in order to support this modification. CUDP also does not need to rely on any flood evacuation strategy from the adjacent catchment. The original FPRMS (Cardno, 2010) required that vehicle access to CUDP is required in a PMF event across both the Macquarie Rivulet and Marshall Mount Creeks. The Macquarie Rivulet bridge approved in Stage 1 and the proposed bridge across Marshall Mount Creek (i.e. Escarpment Drive bridge) deliver this requirement. The design and location of Escarpment Drive ensures that the bridge provides safe evacuation routes during the PMF event.

Upgrades to road infrastructure and flood impact

There were some specific concerns raised with the potential flood impacts surrounding Stage 1 of CUDP and the associated Stage 1 bridge across the Macquarie Rivulet. The Stage 1 bridge was granted a series of both development and construction approvals from various authorities before the construction of the bridge in 2016. The construction certificate approval was granted by SCC and the Subdivision certificate approval was also granted by SCC in 2016, demonstrating that at that time, SCC was of the view that the bridge was constructed at the levels with the approved documentation.

A detailed review of modelling parameters affecting the Stage 1 bridge has been undertaken and detailed at Section 9.1 of the WCFM Post Exhibition Report and further refinements including refining the modelling of the Stage 1 bridge based on Work As Executed information has been completed (demonstrated in **Figure 2** below). The flooding impact within Stage 1 area has been managed by the inclusion of a blade wall on the southern side of Escarpment Drive between the Stage 1 bridge and Brushgrove Circuit. The height of the wall varies across its length with a maximum height of 620 mm. This wall eliminates flooding within Stage 1 lots during the PMF event. This wall will form part of a future development application for SCC approval.

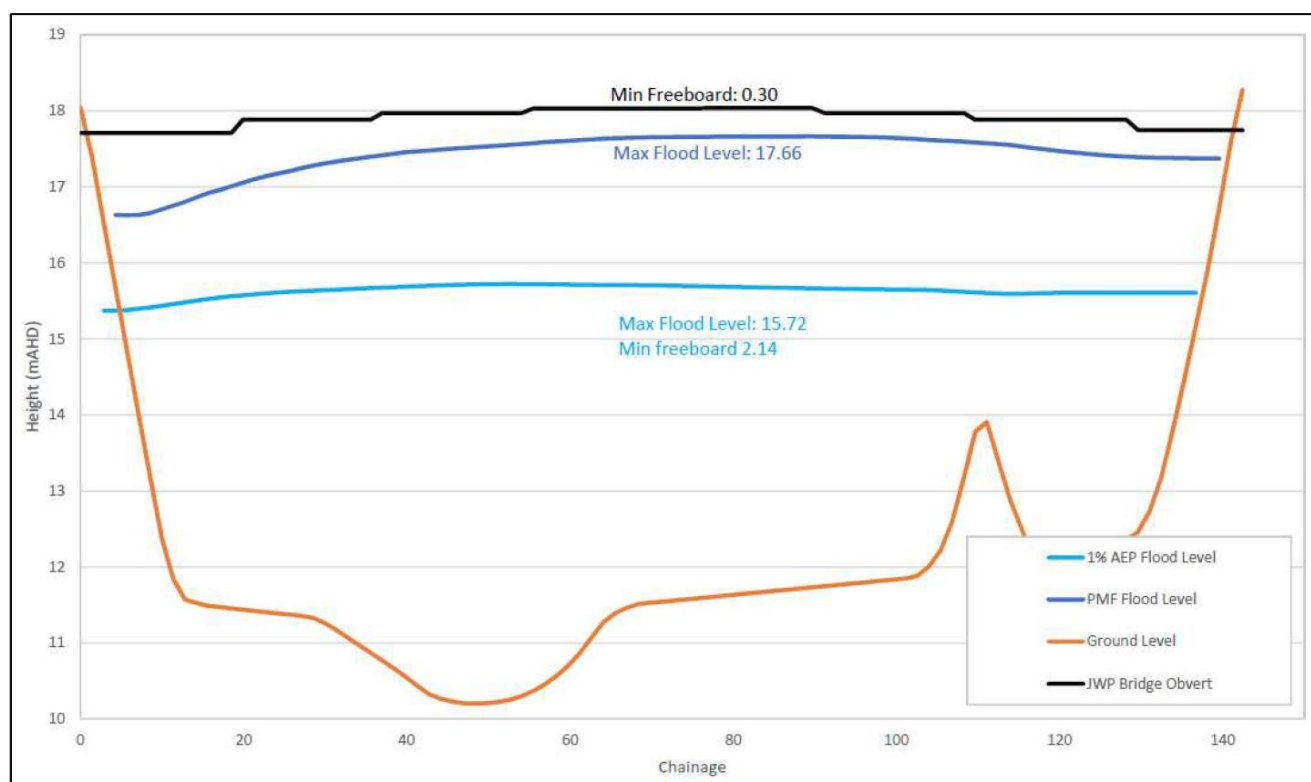


Figure 2 Flood levels in relation to Stage 1 Bridge

Source: JWP, 2019

2.1.3 Transport and Accessibility

The Department requested additional information to address the transport and accessibility issues raised in the RMS, WCC and SCC submissions. Additional information has been prepared by Cardno, providing a detailed response to traffic and accessibility issues and submitted at **Appendix H**.

Intersection Designs

Concept designs of the proposed road infrastructure have been designed in accordance with “Guidelines for Public Transport Capable Infrastructure in Greenfield Sites (TfNSW, 2018)” and “Austroads Guide to Road Design: Part 3 Geometric Road Design”. Only the horizontal alignment of the intersections have been designed at this stage and are submitted as part of the updated Transport and Traffic Report at **Appendix I**. This information demonstrates that all approved and proposed infrastructure can be accommodated within the road reserves provided.

Provision of Shared Path

The shared path on the eastern side of Escarpment Drive is proposed for consistency with the current approved layout which is built and already in place, south of Calderwood Road (see **Figure 3**). Having a pedestrian footpath on one side and a shared path on the opposite side is considered appropriate and sufficient for this location. It provides pedestrians the choice to walk on one side of the road or the other and helps clearly direct cyclists to the designated shared path route and provides a safe pedestrian only route.

Having a shared path on the western side of the north-south sub-arterial (Escarpment Drive) would result in cyclists travelling south along this corridor having to cross the road at the intersection with Calderwood Road, given there is no shared path on the western side of the road past this point. Having shared paths that don't follow logical routes and force cyclists to do multiple crossings generates safety risks for all users, especially more vulnerable groups such as children riding to/from school.

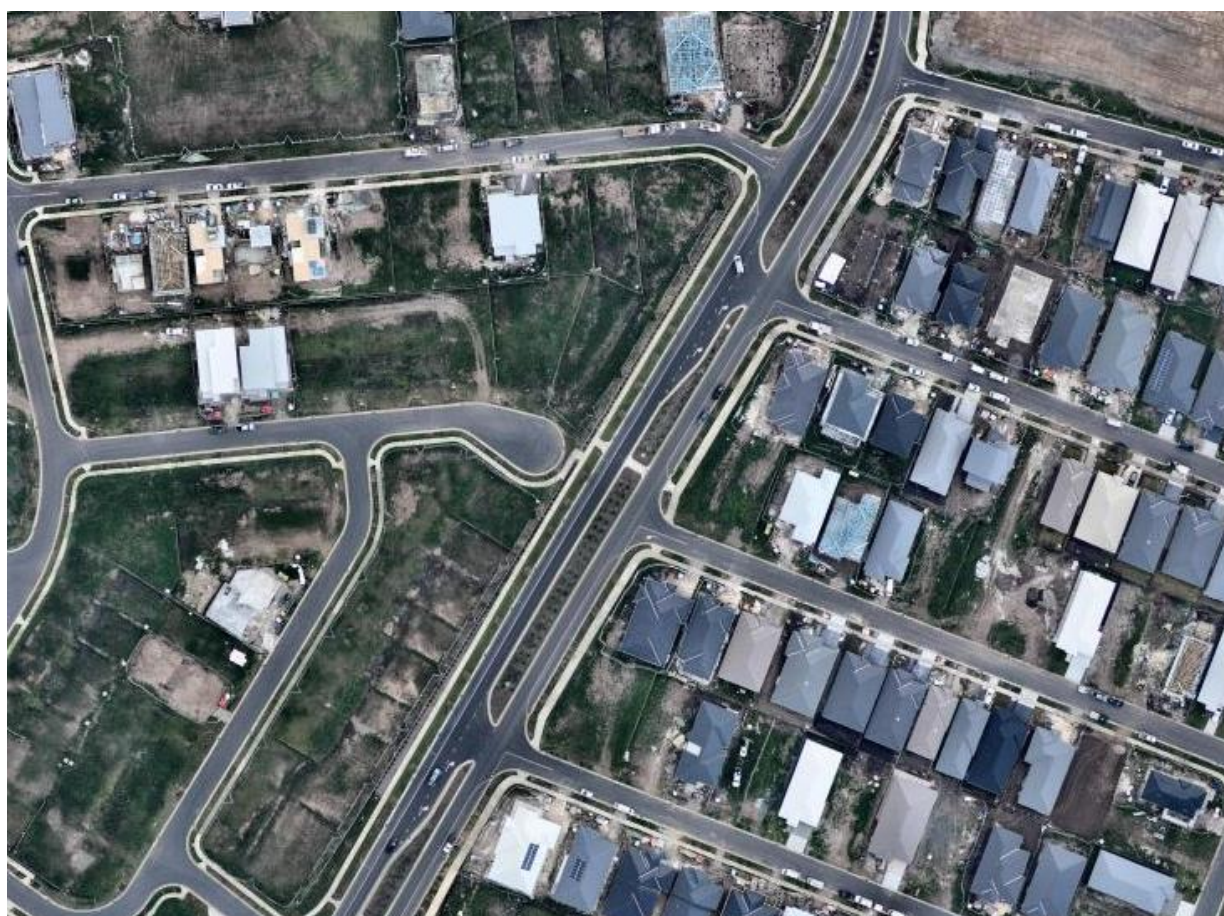


Figure 3 Completed sections of Escarpment Drive with shared path on eastern side only

Source: Nearmap, March 2019

Design of Bus Stops and Road Width

In respect of the proposed bus routes Cardno has confirmed that these are consistent with Section 4.1 of the 'Guidelines for Public Transport Capable Infrastructure in Greenfield Sites'. Refer to **Appendix H**. On roads where bus routes are proposed, the 2.5m parking lane will be widened to 3m at localised points where bus stops are proposed.

Key Findings of Revised Traffic Assessment

In response to the submissions, the total dwelling yield proposed in this application has been reduced to 6,000 principal dwellings from 6,500 (see **Section 3** for Proposed Project Report). An updated Traffic and Transport Assessment, prepared based on the PPR detailed in **Section 3**, is submitted at **Appendix I**. The key findings of the traffic and transport assessment are as follows:

- Based on traffic modelling and analysis undertaken by Cardno, the proposed CUDP yield increase results in increased peak hour traffic flows in the ultimate CUDP development scenario (2036). Roads impacted the most are Calderwood Road to the east of the project boundary and Escarpment Drive south of Calderwood Road.
- Based on the revised traffic modelling, the following additional road upgrades are considered necessary to mitigate the impacts of the CUDP yield increase:
 - Upgrade Illawarra Highway / Broughton Avenue from roundabout to traffic signals (State Road).
 - Upgrade Calderwood Road / Tripoli Way from roundabout to traffic signals (Local Road).

It is anticipated that these upgrades will be addressed via new VPAs or amendments to the applicable VPAs.

- In the traffic and transport assessment prepared as part of the EA lodged, Calderwood Road was recommended to be upgraded to four lanes instead of two. That was based on a yield of 6,500 principal dwellings which has now been revised down to 6,000 principal dwellings. The need for this upgrade was reassessed as well as other key CUDP access roads such as Escarpment Drive and Marshall Mount Road. The model results indicate that Calderwood Road would operate satisfactorily under a two lane, two way configuration under the ultimate development scenario (2036) and that the upgrade to four lanes is no longer required.
- Further upgrades are not required above and beyond those the subject of the VPA with Wollongong City Council.
- Based on a sensitivity analysis, it was found that local employment within the CUDP has a net positive impact on vehicle kilometres travelled in the road network.
- An assessment of Sustainability Measures pertaining to transport, as identified in the TMAP, revealed that the transport measures are being delivered in accordance with the original approval. Where applicable, these measures have been reinforced or strengthened as part of the CUDP yield increase, including:
 - Review of the pedestrian and cycling network to encourage active travel to, through and within the CUDP:
 - Refresh the short and longer term bus network planning for the CUDP, building on the Route 75 Shellharbour to Calderwood service which commenced in 2017.

Based on the above assessment, it is demonstrated that the traffic impacts of the proposed modifications to the approved Calderwood Valley Concept Plan can be adequately managed and the CUDP can accommodate the proposed increase in dwelling yield.

2.1.4 Public Domain and Open Space

Clarification on location of additional open space

Additional information, including explanatory diagrams, is submitted in the updated Calderwood Valley Public Domain Report and Open Space Plan at **Appendix J**. These diagrams will assist in delineating between approved/delivered open space and the proposed additional areas of open space to be provided as part of MOD 4. The proposed modification, with the reduced yield, requires the provision of an additional 10.61 ha of additional open space (split approximately 50/50 for active and passive). This will increase the overall provision requirement of open space from 33.2ha approved (condition C12) in the original concept plan up to a total of 43.81ha.

The provision of open space on the site is summarised in **Table 2**.

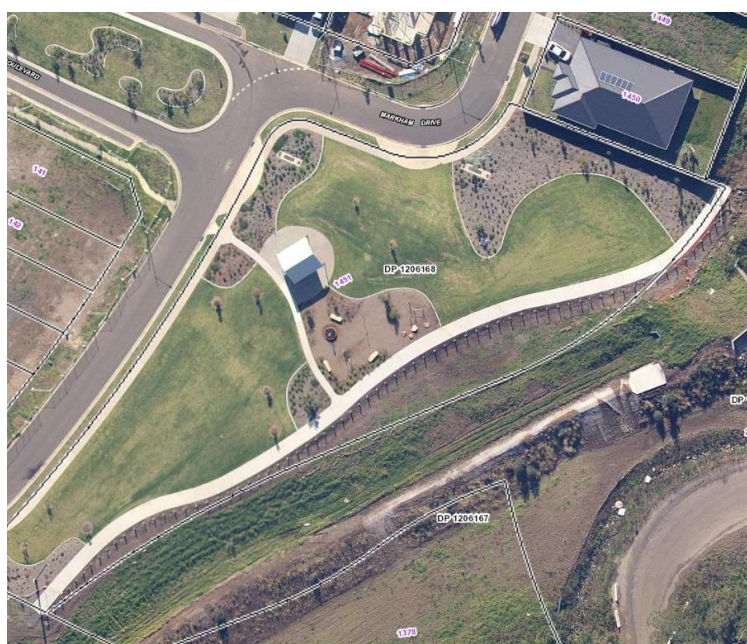
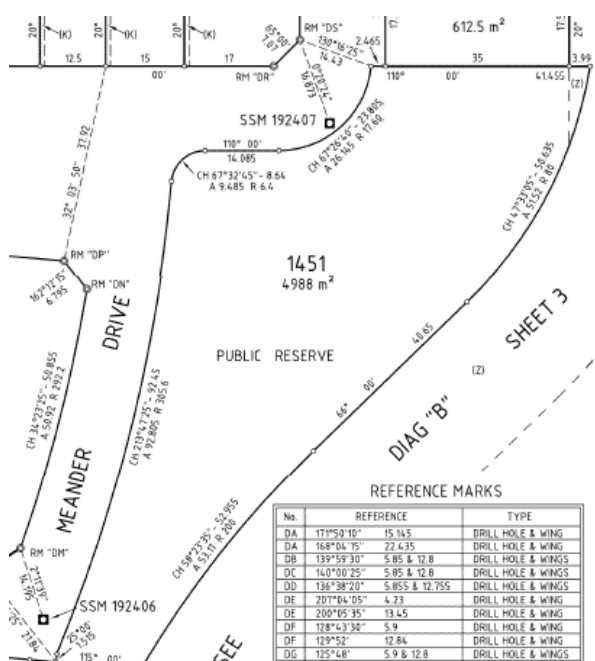
Table 2 Open Space Requirements and Provision

Heading	Approved Concept Plan	Additional Density in Mod	Total
Open Space Required	33.2ha	10.61ha	43.81ha
Open Space Provided	33.67ha (as mapped in SHCC VPA and shown for WCC LGA in Concept Plan)	10.138ha	43.81ha
Difference	+0.47ha	-0.47ha	0ha

None of the proposed additional open space is located within environmentally sensitive lands, the proposed parks have been sited where they will provide a high level of amenity to residents with good accessibility.

In respect of existing approved open space, it is noted that there are two parks which are located within environmentally sensitive lands. These are Citywide Park 3 and Local Park 12. It is noted that Citywide Park 3 has already been relocated in recognition that the original approved location of the park was inappropriate due to the sensitive nature of that part of the site, and the fact that it was remote from residential areas with poor accessibility. The Citywide Park 3 desired character and embellishment as defined in the approved Calderwood Valley Landscape Masterplan is focussed on environmental values, rehabilitation and a passive recreation trail head that better suits the new location as agreed with Shellharbour City Council. It is proposed to move Local Park 12 slightly north as part of MOD 4, to be located outside the environmentally sensitive lands.

Further it is noted that the first two parks constructed in Stage 1 (Local parks 8 and 11) exceed the minimum requirement in the VPA with Shellharbour Council of 0.2ha. As shown in **Figure 4**, Local Park 11 has been delivered with an overall area of 0.4988ha.

**Figure 4 Local Park 11 delivered in Stage 1**

Source: Lendlease

Characteristics of Hierarchy of Parks

The characteristics of the different areas of open space are summarised in **Table 3** below. The VPA with Shellharbour also further details the infrastructure that is to be delivered with each park. It is noted that none of the local parks or district parks are located within the electricity easement.

Table 3 Characteristics of Parks within Calderwood

Park Type	Characteristics
Citywide Park	Provide a large strategically located park which due to its unique setting and/or physical attributes provides a unique recreational resource for the entire LGA and potentially the surrounding region. Citywide parks typically have high levels of visitation and offer significant tourism opportunities.
District Park	Provide a larger public open space with more advanced embellishments to provide for wide range of recreational activities on a district user catchment basis.
Local Park	Provide public open space which primarily serves a local neighbourhood, being highly accessible for pedestrians within a local catchment with an appropriate level of embellishment suited to the local population.

Notation of Parks

We note that the modification application does not seek to rezone any land. The identification of public spaces as “SP 1” and “SP 2” was in reference to sporting grounds providing active open space and did not have any relationship to special use land use zones. The map identification of these spaces has been updated to “sports fields” to remove any confusion.

2.1.5 Development Control Strategy Amendments

As noted previously, additional amendments are proposed to the DCS to provide greater certainty to both the Department and Council that a suitable urban design and internal amenity outcome will be achievable under the higher density scenario. A tracked changes version of the DCS is provided at **Appendix D** and a table listing all of the proposed changes and the reason/justification for those changes is provided at **Appendix E**.

Some of the key changes include:

- Road and Street Sections amended to reflect established infrastructure delivered within the CUDP with approval from Shellharbour City Council;
- Changes to the locational criteria for small lot housing – ensuring that this type of development occurs in suitable locations that can accommodate this form of development;
- Additional design provisions in respect of the layout and design of laneways to improve the safety and surveillance;
- The positioning and design of garages, particularly in respect of smaller integrated dwellings. The controls now provide more detail as to the lot width and setback requirements for garages;
- Storage of waste ensuring that a designated storage area is integrated within the dwelling design;
- Introduction of solar design guide providing lot orientation suggestions to maximise solar access to private open space; and
- Introduction of parking rates for the Town Centre.

In addition to the above amendments to the DCS, RPS has provided further information in respect of the design of the proposed small lot housing which illustrates how these dwelling types will be able to provide future occupants a high level of internal amenity (refer **Appendix C**).

2.1.6 Biodiversity

Statement of Commitments

Ecological has prepared a detailed response to the issues raised in respect of Biodiversity (**Attachment K**). In respect of commitment 35, this is now proposed to be retained as is included in the revised Statement of Commitments at **Appendix L**.

Biodiversity Conservation Act 2016

In respect of the *Biodiversity Conservation Act 2016*, it is noted that this is State level legislation. Subsequent development applications will be subject to further detailed assessments.. Ecological has undertaken an initial assessment to see what the likely impacts of this legislation are on the Development. Referral under this legislation to the Department of the Environment and Energy is not required.

Groundwater Dependent Ecosystems

Additional assessment has been provided in relation to groundwater dependent ecosystems within the Detailed Response to Submissions – Biodiversity at **Appendix K**. Groundwater infiltration of Marshall Mount Creek at the upstream extent of the project boundary, is shown as being groundwater dependent (see **Figure 5**) and this was confirmed by a site visit on 3 April 2019 by Dr Peter Hancock (Groundwater Ecologist). There will be no increase in impermeable surface area adjacent to this reach, nor in the upstream part of the floodplain, so groundwater recharge will not be affected. Likewise, the reaches of Macquarie Rivulet that are indicated as being groundwater dependent are located adjacent to areas where groundwater infiltration of the shallow alluvial aquifer will be either unaffected or only minimally affected by an increase in impermeable surfaces. One terrestrial GDE is mapped as occurring on the site (see **Figure 5**). A site inspection found that the vegetation community here is unlikely to depend on groundwater. This area is an environmental reserve (ER4) zoned E3 Environmental Management, and the vegetation retained in its current condition.

Further, Statement of Commitment 69 is included to specifically address future development below RL 20 as follows:

Future detailed applications will include a commitment, that where cuts greater than 2 metres in depth are proposed in areas located below RL 20, during detailed design and construction activities a suitably qualified PCA will certify that wetland base levels are appropriately positioned relative to the level of the ground water table, lining of wetlands has been provided if necessary, and, should the base of the wetlands intercept the groundwater table, then the groundwater table will be temporarily lowered to facilitate construction.

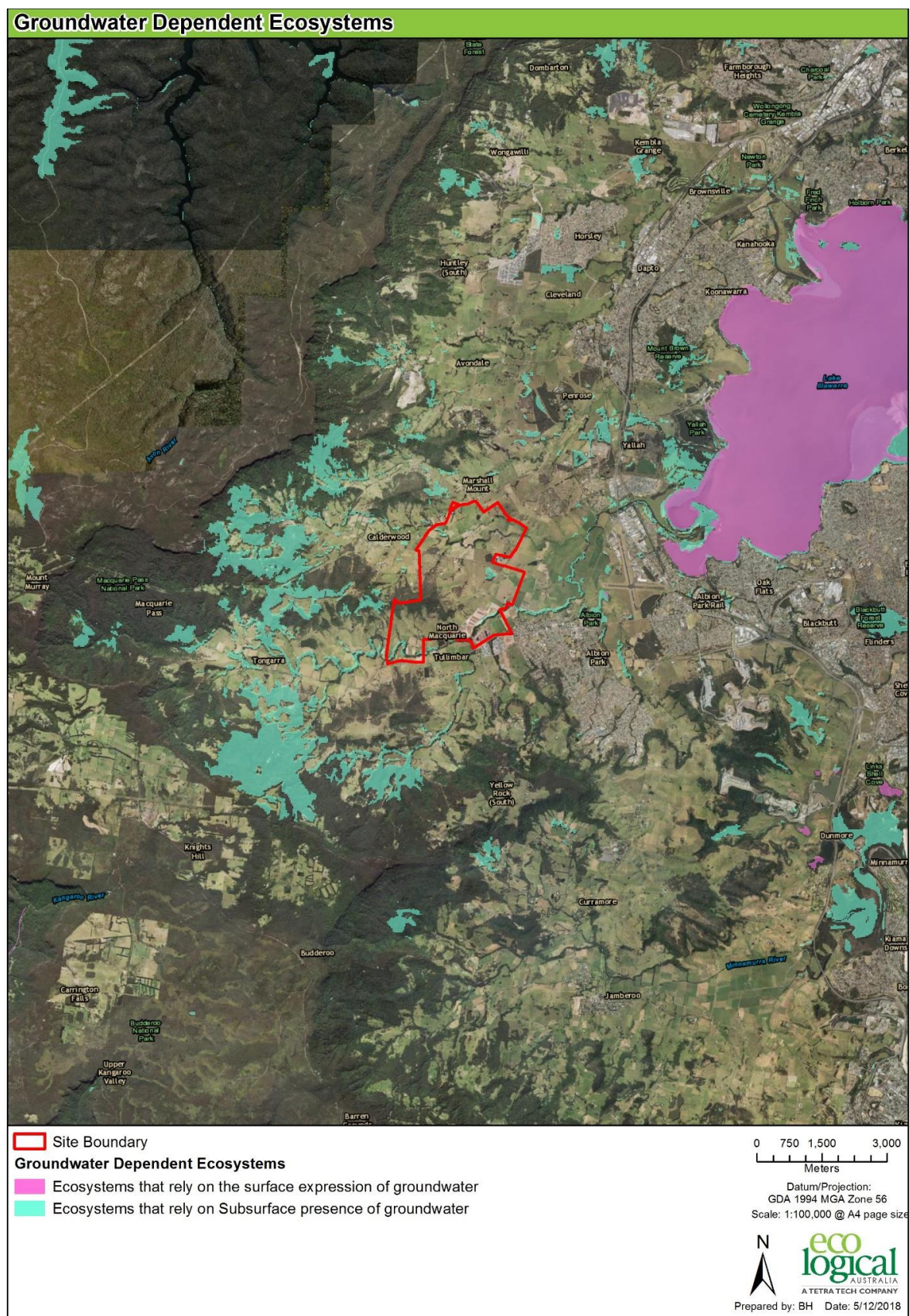


Figure 5 Groundwater dependent ecosystems

Source: Ecological

2.1.7 Contributions

Lendlease has met with both WCC and SCC to discuss the contributions to be made in respect of the additional density proposed under Mod 4. Letters will be provided by Lendlease under separate cover to either amend existing VPAs or to enter into new VPAs in relation to Mod 4 with both the Shellharbour City Council and the Minister for Planning. No amendments are required to the WCC VPA.

Local Contributions

We have calculated that the following additional local infrastructure contributions are required for the additional 1,200 principal dwellings, based on an average dwelling occupancy of 2.58 persons (refer to Elton Consulting Report at Appendix S of EAR dated August 2018) (total 6,000 principal dwellings):

- 10.61 ha of additional open space (split approximately 50/50 for active and passive (33.2ha up to total 43.81ha);
- Additional 220sqm of community space (900sqm to 1,120sqm);
- Additional monetary contributions towards the library (i.e. additional 155sqm equivalent floor space in monetary contributions, 625sqm to 780sqm).
- Upgrades to Road Infrastructure, including:
 - Upgrade of Illawarra Highway/Broughton Avenue and Calderwood Road/Tripoli Way intersections from roundabouts to signalised intersections
 (collectively, the Additional Contributions).

It is noted that Calderwood Road is no longer required to be upgraded from a two-lane two way road to a four lane road. The two lane, two direction road is sufficient to service the needs of the 6,000 principal dwellings proposed and as such the road infrastructure already approved under the Concept Plan remains sufficient in this regard and no further contributions are required in respect of this road infrastructure.

Principal Dwellings

A plan showing the location of the infrastructure upgrades resulting from Mod 4 has been prepared by Taylor Brammer and is also provided at **Appendix M**. It is noted that the above additional contributions are based on a yield of 1,200 additional principal dwellings. If the number of dwellings approved is reduced to less than 1,200 additional principal dwellings it is proposed that the Additional Contributions would be reduced proportionately.

All of the above contributions will likely be captured in amended or new VPAs as appropriate.

State Contributions – Department of Planning and Environment

Lendlease is proposing the following further modifications to the State VPA:

- Reduce the area of land for the second primary school site to 2ha as recommended by the Department of Education (DoE) and delay the timing of provision of the land for the second primary school to prior to the issue of Subdivision Certificate for the 5,000th principal dwelling; and
- Change the timing of when the land for the high school is required to be delivered. It is currently required prior to the Subdivision Certificate for the 1,500th principal dwelling. DoE has requested that this be changed to prior to the subdivision of the 4,500th residential allotment.

The above amendments to the VPA are not a direct result of the yield increase but have evolved from ongoing discussions with the DoE and the submissions they have made in respect of the proposed modification.

The current approved 4,800 dwellings and proposed total of 6,000 dwellings relates to principal dwellings only. As detailed in the Elton report (Appendix R of the Consolidated Concept Plan), the proposed dwelling mix within the CUDP did not comprise secondary dwellings, see the relevant extract of the report in **Figure 7**.

For the avoidance of doubt, it is proposed to amend the description of the development and also the relevant conditions of consent as part of this modification. If Council wishes to levy contributions for secondary dwellings, it

would be able to do so via a Section 7.11 contributions plan at the time the relevant landowner seeks approval for that dwelling via either a development application or Complying Development Certificate.

4.1 Dwelling mix and yield	
According to the IRS, the Calderwood Urban Release Area is understood to have capacity for about 8,000 dwellings.	
Within the Release Area as a whole, it is proposed that the Calderwood Urban Development Project will contain approximately 4,800 dwellings. The proposed dwelling mix and yield is as follows:	
Table 4: Proposed dwelling mix and yield	
Dwelling type	Yield
Large parkland lots	155
Detached traditional lot dwellings	1363
Detached Village / Executive dwellings	2671
Attached townhouses / terraces	183
Apartments	153
Retirement self-care units	280
Total (approx)	4805

Figure 6 Proposed dwelling mix and yield as reported in the Approved Concept Plan

Source: Elton Consulting

2.1.8 Non-Core Land

Consistency with Concept Plan

The modified Concept Plan incorporates the layouts of development on the non-core lands as proposed in the development applications that have been lodged with Shellharbour City Council. If Mod 4 is not approved then it is questionable as to whether or not Council can approve the non-core applications due to inconsistencies with the current concept plan. In respect of this issue we note that none of the non-core landowners have objected to the proposed modifications to the layout of the concept plan as it applies to their properties.

Landowners Consent

In respect of landowner's consent, Lendlease has obtained a Clause 8F designation for CUDP (see **Appendix N**).

2.1.9 Water Quality

Water quality and stormwater management for Lake Illawarra Catchment

The Risk-Based Framework for Considering Waterway Health Outcomes in Strategic Land-Use Planning Decisions (EPA, 2017) was developed by EPA/OEH to provide management outcomes for the impacts of various land-use activities. The purpose of this framework is to:

- Identify waterway objectives that support the community's environmental values and uses
- Identify waterway areas/zones that require protection
- Distinguish catchment areas where cost-effective management responses reduce the impacts of land-use activities on waterways
- Achieve sustainable, practical, socially and economically viable environmental performance levels by supporting management of land-use developments.

The CUDP is located within the Lake Illawarra Catchment area identified to 'maintain or improve' stormwater controls and as a minimum to achieve the load reduction targets of the relevant Council (see **Figure 8**). Design and implementation plans for Lake Illawarra were not developed as part of the case study but are currently being discussed by relevant stakeholders involved in managing Lake Illawarra.

Given that there are no specific water quality or river flow objectives currently established for the Lake Illawarra, the water quality management for CUDP will be consistent with the documented water quality objectives for both WCC and SCC, being a traditional water quality treatment that delivers post-development flows that achieved an 85% reduction in Total Suspended Solid (TSS), 60% reduction in Total Phosphorous (TP) and 45 % reduction in Total Nitrogen (TN). The proposed water quality treatment system proposed as part of this application comfortably exceeds the minimum load reduction targets required to maintain the health of Lake Illawarra. Therefore, the water quality assessment and management approach proposed as part of Modification 4 not only maintain the load reduction required by Wollongong City Council, but the treatment devices exceed the targets. It is noted that CUDP is a State Significant Project and is not subject to local government development and planning controls. The Water Quality assessment of Modification 4 complies and duly considers the Risk-Based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions and Council's Water Quality objectives as they have been defined at present.

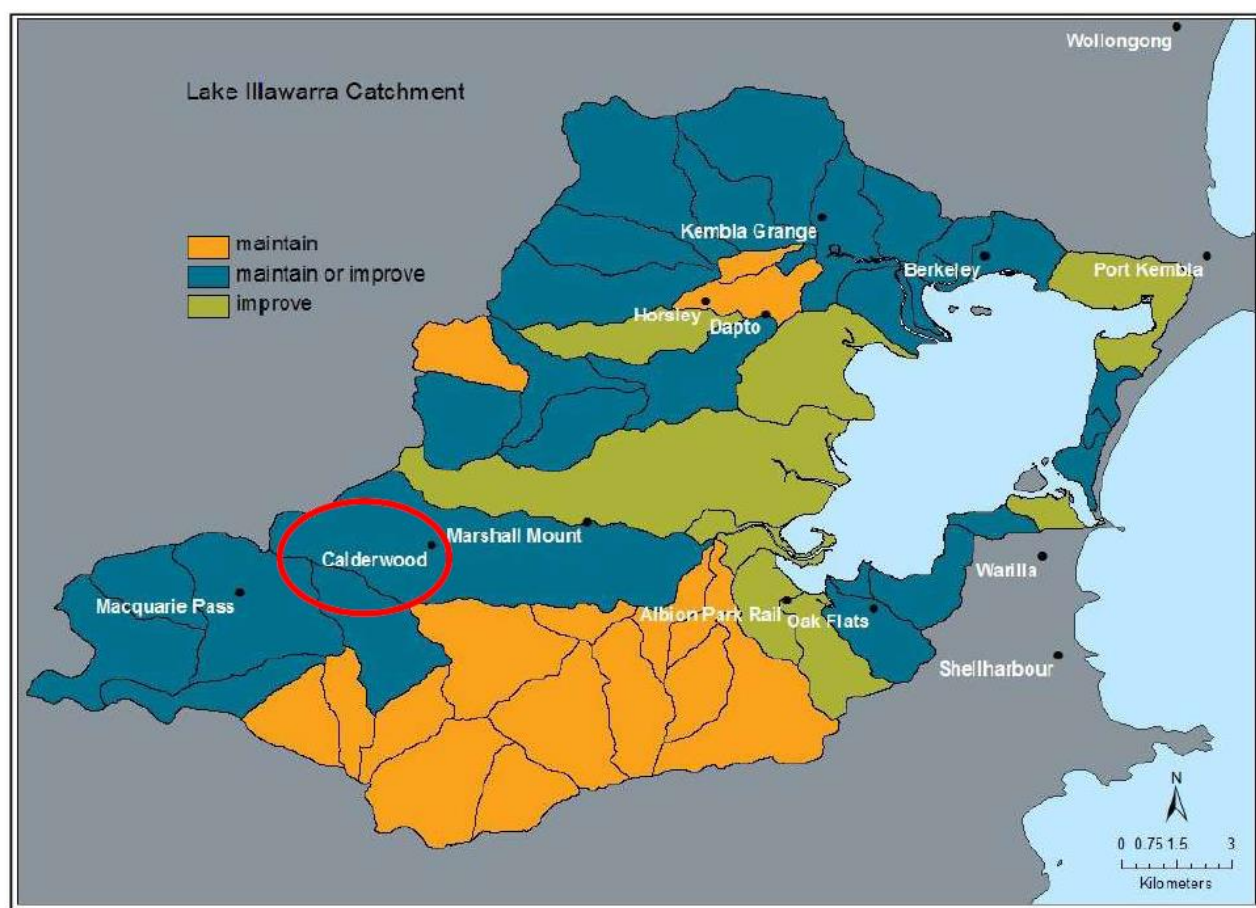


Figure 7 Stormwater management response requirements for the Lake Illawarra Catchment

Source: JWP

2.1.10 Retail floor space

A series of indicative layouts for the proposed Town Centre have been provided within the updated Calderwood Valley Urban Design Study at **Appendix C**. The plans demonstrate that the floorspace can be accommodated, delivering a walkable, accessible, safe and activated Town Centre Precinct balancing retail, commercial, residential and community land uses and associated service provision including public transport and private carparking, without the need to amend the existing height and density controls applying to the town centre.

2.1.11 Green star

The Calderwood Valley Project has satisfied and exceeded the minimum evidence based requirements for accreditation in each of the required categories of Governance, Design, Liveability, Economic Prosperity, Environment & Innovation to achieve a 6 Star Green Star Communities rating. The award of 6 Star Green Star is classified as world leadership. The Green Star Certificate is submitted at **Appendix O**. The Green Star Commitments to be recertified in 2024 are as follows:

- 60% of waste from construction and demolition has and will be reused or recycled.
- Public transport will be adapted as appropriate to service the needs of the community as it develops.
- LED lighting will be used in all public areas and street lighting to assist in the reduction of greenhouse gas emissions.
- A range of alternative water sources will be implemented to responsibly manage the quantum of potable water delivered in open spaces and commercial and residential buildings.
- Future water sensitive urban design and hydraulic modelling will cater for reduced peak discharge.
- 'The Exchange' will be designed to identify ways to leverage the work force and create development opportunities, whilst advancing the economic and social outcomes within the community.
- Ultra Low power flood sensors will be installed to inform better planning decisions for future developments, improve emergency response times and minimise damage to assets.
- Smart initiatives will be designed to benefit the community through decreasing water consumption, increasing safety and hygiene levels of public facilities and monitoring public spaces. The data is to be collected and extrapolated to provide alerts and to inform future planning decisions.
- A number of green initiatives to determine best practice in reducing heat island effect will be implemented and monitored in the Town Centre. These include: non-typical road surfaces and footpath materials, increased tree planting densities, combinations of building densities and cool parking solutions.

Accordingly, the project is capable of achieving a minimum 5 Star Green Star rating, as sought as part of Modification 4. This green star rating is considered to be an evidence-based and quantifiable approach to sustainability across the CDUP.

In respect of the non-core landowners we note that all of the commitments and obligations made in respect of the GreenStar ratings have been made and imposed on Lendlease Communities land. There is no obligation placed on any of the non-core landowners, although it is assumed in the Green Star submissions that Concept Plan sustainability, liveability and urban design requirements are being met by each landowner/developer. We note that the residents who reside within the non-core landholdings will benefit from the initiatives delivered through the environmental rating tool.

2.1.12 Cut and fill

JWP has prepared an indicative cut and fill plan as requested (**Appendix F**). However, we note that the Concept Plan as approved does not provide detailed cut and fill plans and this detail will be subject to separate future development applications. The flood mitigation concept plan is the only approved plan which provides this detail which has been updated as part of this modification application.

2.1.13 Stream reach 15

The streams were identified in Ecological's Riparian Consistency Report which forms Appendix Q of the Consolidated Concept Plan (replicated in **Figure 8**). The former location of stream reach 15 was also illustrated in Figure 11 of the EAR (page 37).

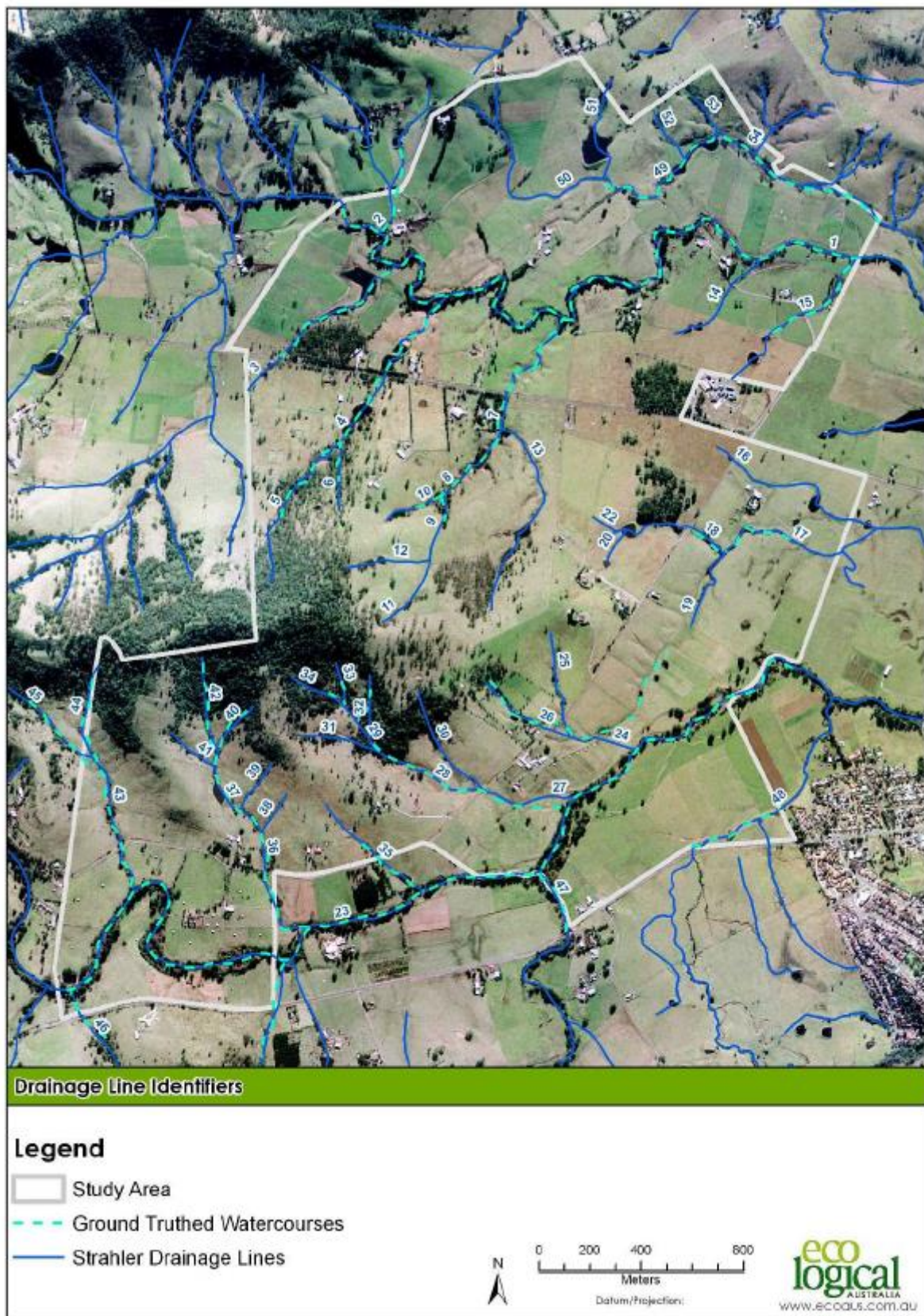


Figure 8 Watercourse Labels

Source Ecological

2.1.14 Summary

The EAR prepared for this application presented a complete assessment of the impacts of the proposed modification as required by the Secretary's Environmental Assessment Requirements and concluded that the Concept Plan, inclusive of the proposed modification would not result in any unacceptable direct, indirect or cumulative environmental impacts.

As presented above, in response to submissions, the modification application has been amended to reduce the environmental impact and additional information has been submitted to provide further additional environmental assessment of the proposed modification (as amended), including:

- Additional information and clarification on the location of additional density as sought by this modification in response to submissions;
- Additional environmental assessment of the flood impacts and water cycle management strategy to respond to submissions;
- An updated assessment of the required transport infrastructure as required by the modification and further information in relation to road layouts within the CUDP;
- Additional clarification on the provision of open space as required by the Concept Plan, including the locations of additional open space to meet the needs of the proposed dwelling increase;
- Further information regarding the proposed modifications to the DCS, including a schedule of modifications and justifications at **Appendix E**;
- Additional assessment of Groundwater Dependent Ecosystems and clarification regarding the relevant legislative framework of biodiversity assessment applicable to this modification;
- Further information on proposed state and local contributions;
- Clarification of the impact of the proposed modification on non-core landowners;
- Additional assessment of Water quality and stormwater management for Lake Illawarra Catchment using the risk-based framework;
- Clarification of the proposed retail floor space within the Town Centre;
- Confirmation that Calderwood Valley has achieved a 6-star Green Star sustainability rating;
- Cut and fill plans; and
- Additional clarification in respect of stream reach 15.

In the above assessment, each environmental issue has been addressed by a suitably qualified and experienced specialised consultant team and demonstrates that sufficient mitigation measures are enforced by the Concept Plan to ensure that there are no unacceptable direct, indirect or cumulative environmental impacts as a result of the proposed modification. **Section 4** of this Report provides a further assessment of the Concept Plan, as proposed to be modified, and demonstrates that the Concept Plan achieves the principles of ecologically sustainable development.

2.2 Wollongong City Council

WCC provided a written submission, dated 5 November 2018, detailing a number of issues in relation to the proposed modification. A detailed response to all issues raised is provided at **Appendix A** and summarised in **Table 44** below. We note that WCC did not specifically object to the application.

Table 4 Issues raised by WCC

Issue	Response
Land use planning	Clause 3B(2)(a) and (f) of Schedule 2 of the EP&A (Savings, Transitional and Other Provisions) Regulation 2017 gives effect to the approved concept plan. These provision provides that the concept plan prevails over any inconsistency between the concept plan and an environmental planning instrument.
Transport and accessibility	Additional detailed response has been prepared by Cardno and is submitted at Appendix H .

Issue	Response
Community facilities and public domain	Additional information within the updated Calderwood Valley Public Domain Report and Open Space Plan at Appendix J provides a delineation between open space areas of WCC and SCC. Community facilities and open space has been distributed in accordance with the approved concept plan and is not apportioned between each LGA.
Biodiversity and Riparian Impacts	Additional detailed response has been prepared by Ecological and is submitted at Appendix K .
Drainage, Water Quality and Flooding	A detailed response has been prepared by JWP and is submitted at Appendix F .
Statement of Commitments	Administrative amendments are proposed to Commitment 7 and Commitment 8 of the SOC. However, we note these commitments do not relate to groundwater and aquatic biodiversity.

2.3 Shellharbour City Council

SCC provided a written submission, dated 8 November 2018, detailing a number of issues in relation to the proposed modification. A detailed response to all issues raised is provided at **Appendix A** and summarised in **Table 55** below. We note that SCC object to the application.

Table 5 Issues raised by SCC

Issue	Response
Land use planning	<p>Calderwood Valley plays a fundamental role in the provision of affordable land and housing across the Illawarra-Shoalhaven region. Across greenfield projects, Calderwood building approvals have accounted for approximately 40% of additional supply of new detached houses when stock is available. It will continue to play a vital role in the provision of housing in satisfaction of the estimated demand of 1,200 dwellings per year required in the Wollongong and Shellharbour Local Government Areas as outlined in the Illawarra-Shoalhaven Regional Strategy.</p> <p>Notwithstanding the above, shortages of housing supply across the Illawarra region remain, particularly for new small lot detached houses that represent affordable price points. The proposed amendment in project yield will contribute to long-term relief from persistent under-supply of greenfield and infill housing supply. This is particularly true in the next ten – fifteen years where additional density can be delivered in the CUDP whilst other major projects in the West Dapto Urban Release Area seek the relevant planning approvals and implement the infrastructure required to service that development.</p>
Traffic and transport	Additional detailed response has been prepared by Cardno and is submitted at Appendix H .
Open space provision	<p>A revised open space plan is submitted as part of the Calderwood Valley Public Domain Report and Open Space Plan at Appendix J. The total quantity of open space has been provided consistent with the ratios required as part of the original Concept Plan.</p> <p>Lendlease met with SHCC on 1 April to discuss the open space plan and delivery. Local park 14 in Stage 5 has moved in response to comments raised by Council. It is centralised and more accessible. The additional sports fields adjacent Stage 1A as originally proposed have been removed.</p>
Environment	Additional detailed response has been prepared by Ecological and is submitted at Appendix K .
Water cycle and flood management strategy	<p>Additional detailed response has been prepared by JWP and is submitted at Appendix F.</p> <p>Lendlease and JWP also met with SHCC on 4 April to discuss the issues raised by Council in respect of this particular issue.</p>
Assets and maintenance	The provision of infrastructure and required contributions are addressed in the EAR. An updated schedule of contributions has been prepared as part of this RTS and is submitted at Appendix M .

Issue	Response
	Commitments 10 and 11 addresses issues of ongoing maintenance.
Voluntary planning agreement	Noted. This will be addressed by Lendlease under separate cover.
Statement of commitments	An updated proposed Statement of Commitments is provided at Appendix L .

3.0 Preferred Project Report

3.1 Key Changes to Application in Response to Submissions

In response to submissions and to address key issues raised, the following amendments are made to the modification application:

- A reduction in the proposed number of principal dwellings from 6,500 to a total of 6,000 principal dwellings;
- Retention of Calderwood Road as a two-lane two-way road as upgrade to four lanes is no longer required based on the proposed 6,000 principal dwellings;
- Commensurate reduction in the proposed additional open space and community facilities based on a total of 6,000 principal dwellings;
- Amendments to the Development Control Strategy in respect of dwelling typologies, design criteria and road design;
- Removal of a defined location for the 270 seniors housing dwellings to allow a more flexible outcome that responds to the housing demand in the area; and
- Amendments to the conditions of approval to reflect the above changes to the application.

3.2 Revised Description of the Modification

Incorporating the above changes to the application, the following modifications are proposed to the Approved Concept Plan:

- Increase in total number of principal dwellings from approximately 4,800 to approximately 6,000;
- Additional 5,000m² retail GFA in the town centre (total 25,000m²);
- Additional 10.6 hectares recreation area/open space to be provided (total 43.8 hectares);
- Expanded community centre – additional 220m² (total 1,120m²);
- Additional contributions towards library facilities in Shellharbour – equivalent to an additional 155m² (total 780m² of library facilities);
- New housing typologies introduced into the DCS;
- Additional locational criteria where integrated and small lot housing will be permissible;
- Modified upgrades to Road Infrastructure, including:
 - Upgrade of Illawarra Highway/Broughton Avenue and Calderwood Road/Tripoli Way intersections from roundabouts to signalised intersections; and
 - Other minor network changes reflecting the continuous alignment of Calderwood Road through the CUDP and the proposed road alignments of the non-core landowners.
- Updated Water Management Strategy, including minor amendments to areas of cut and fill across the site;
- Reduction in the size of the second primary school from 3ha down to 2ha; and
- A new holistic ESD Strategy seeking to achieve a minimum of 5-Star Green Star Communities rating rather than provision of a solar farm and/or tri generation.

3.3 Revised Modifications to Conditions of Approval

The following conditions are modified as part of this PPR. All other proposed modifications to conditions remain consistent with the EAR submitted with Modification 4. Deletions are shown in ~~bold strike through~~ and additions in ***bold italics***. The reason for each change is also provided under each condition.

Schedule 1 – Part A Project

Approval in summary for: Concept Plan for a development on approximately 700 hectares for approximately ~~4,800~~ **6,000 principal** dwellings, 50 hectares of mixed use land, open space and land for environmental protections, and associated infrastructure.

Reason: To reflect the proposed increase in dwellings.

Schedule 2 – Part A – Administrative Terms of Approval

Condition A1 – Development Description

(1) Except as modified by this approval, Concept Plan approval is granted only to the carrying out of development solely within the Concept Plan area as described in the document titled “State Significant Site Study and Environmental Assessment Report – Calderwood Urban Development Project” dated March 2010, as amended by the “Preferred Project Report – Calderwood Urban Development Project” dated August 2010, prepared by JBA Urban Planning Consultants and **Calderwood Concept Plan Environmental Assessment Report prepared by Ethos Urban dated July 2018, as amended by the “Response to Submissions and Preferred Project Report – Calderwood Urban Development Project” dated May 2019**, to facilitate the following development:

- a) Approximately ~~4,800~~ **6,000 principal** residential dwellings
- b) Approximately 50 hectares of mixed use land ~~for~~ **including** a range of retail, commercial, **residential, education, community** and light industrial uses
- c) Open space and protection for environmentally significant lands
- d) Internal roads, service infrastructure and community facilities

Reason: To refer to the updated EAR and PPR, and to reflect the proposed increase in dwellings. The modification also seeks to make abundantly clear the range of uses permitted in the mixed use land which were described and described and approved in:

- Section 3.4 of the Consolidated Concept Plan Environmental Assessment Report,
- Sections 3 and 5.8 of the Director-General’s Assessment Report, and
- Condition B6 of the Notice of Determination, and
- are permissible with development consent in the B4 Mixed Use Zone.

The additional uses listed include residential, educational and community uses.

Condition A2 – Development in Accordance with Plans and Documentation

(1) The development shall generally be in accordance with the following plans and documentation (including any appendices therein):

“State Significant Site Study and Environmental Assessment Report – Calderwood Urban Development Project” dated March 2010, as amended by the “Preferred Project Report – Calderwood Urban Development Project” dated August 2010, prepared by JBA Urban Planning Consultants, Except ~~for~~ **as** otherwise provided by the Department’s modifications of approval set out in Schedule 2, Part B and further assessment requirements set out in Schedule 2, Part C **and as modified by the Environmental Assessment Report prepared by Ethos Urban dated July 2018, as amended by the “Response to Submissions and Preferred Project Report – Calderwood Urban Development Project” dated May 2019**.

(2) ...

(3) In accordance with Section 75P(2)(a) of the EP&A Act, where there is an approved Concept Plan, any approval given under Part 4 of the Act by Council, must be **generally** consistent with that Concept Plan.

Reason: To refer to the updated EAR and PPR.

Condition B6 Urban Design

- (8) Residential lots less than 300m² in area are permitted within the General Residential Area (as outlined in the controls for 'Integrated Housing' in the Residential Development Controls table in ***the Development Control Strategy Appendix G of the PPR***) but only where subdivision of these lots occurs after the construction of dwellings and are located where the dwellings directly adjoin or are located directly opposite the following:
- (a) public parks at least 0.3ha ***0.2ha*** in size ***and where the gradient of the site is less than 1 in 10***, or
 - (b) the Town and Village Centres ***in the B4 mixed use zone, or***
 - (c) ***where the dwellings are within the 800m walking catchment of the Town Centre.***

~~The minimum allotment size can be varied for the subdivision of 'Integrated Housing' under the Exceptions to Development Standards – Other Development clause in the Major Development SEPP.~~

The consent authority may consider issuing a development consent for integrated housing which allows for the issue of a Subdivision Certificate before the construction of the dwellings is complete, subject to the following criteria being imposed as a condition of consent allowing the early release of the subdivision certificate:

1. *The completion of all civil/ subdivision works to the satisfaction of Council's Construction Engineer.*
2. *The submission of a valid Section 73 Compliance Certificate issued under the Sydney Water Act 1994 confirming satisfactory arrangements have been made for the provision of water and sewer services.*
3. *The submission of a valid notification of arrangement certificate from Endeavour Energy or other energy provider confirming satisfactory arrangements have been made for the provision of electrical services.*
4. *The submission of a valid telecommunications infrastructure provisioning confirmation certificate from the relevant telecommunications provider authorised under the Telecommunications Act confirming satisfactory arrangements have been made for the provision of telecommunication services.*
5. *If required by a condition of consent; written confirmation from the relevant consent authority confirming that all applicable developer contributions have been paid.*
6. *The creation of a restriction on the title of all incomplete lots/ dwellings prohibiting development aside from the completion of the dwellings in accordance with the issued development consent. Separate development applications for dwellings on the lots created will not be accepted.*
7. *Where the dwellings have been partially constructed; the submission of a survey plan prepared by a Registered Surveyor confirming the location of the dwellings in relation to the proposed boundaries demonstrating compliance with the issued development consent.*
8. *The payment of a security bond to guarantee the completion of building works. The bond amount will be determined as part of Council's consideration of the early release application (above).*
9. *The payment of all outstanding Council fees associated with the subdivision component of the development, including a security bond application fee.'*

Reason: To provide increased densities (integrated housing and small lot housing on lots less than 300m²) in appropriate/strategic locations and to allow for subdivision certificates to be issued before the completion of dwellings. The amendment to the minimum park size is proposed to reflect the executed VPA with SCC. To make clear that the development standard in respect of minimum lot size is contained in the Concept Plan and a variation request is not required in respect of the minimum lot size control if the development application complies with the development standard contained in condition B6.

Condition C15 – Traffic Assessment

- (1) A detailed traffic assessment for each Stage is to be submitted with the relevant application for subdivision and infrastructure works, with regard to:
 - (a) Identification of the traffic generated by that particular stage of the development, having regard to the ***RTA Guide to Traffic Generating Developments the most recent revision of the WOLSH Tracks model including the revised development yield and corresponding Aimsun microsimulation model (incorporating transport demands extracted from Tracks)***.
 - (b) Existing capacity of surrounding road network and its ability to accommodate the development proposed within the Stage, including consideration of timing of the construction of the F6 extension and Tripoli Way Bypass.
 - (c) Identification of upgrades to the local roads required to accommodate that Stage.

Reason: The modelling of the road network is based on this model and it makes sense to model development applications in a consistent manner. Modelling on the basis of the APRB TRACKS trip generation rates better reflects the likely trip generation rates and traffic impacts as it is based on relevant data within the locality as opposed to the generic RTA trip generation rates which apply across all of NSW.

Condition C12 – Local Infrastructure Contributions

The requirements for local infrastructure ***for all development carried out pursuant to this Concept Plan approval*** shall be generally in accordance with the following ***or as otherwise agreed with the relevant Council principles***:

- a) Community facilities – the following community facilities ~~as identified Appendix K of the Preferred Project Report~~ are to be provided:
 - a. A temporary community centre (approximately 120-150m²)
 - b. A permanent community centre (approximately **1,120m²** ~~900m²~~), including the dedication of 4,000m² land; and
 - c. ***Monetary contributions towards library facilities, equivalent to 780m² floor space. Branch Library (approximately 626m²) adjoining the community centre.***
- b) Open Space – the following open space areas are to be provided:
 - a. A total of approximately **21.84ha** ~~17.36ha~~ of open space (made up of local parks, district parks and city-wide parks); and
 - b. Sports fields/active open space of approximately **21.96ha** ~~15.84ha~~,

Note: the area identified as Johnson's Spur and the ancillary open space areas (made up of drainage reserves and open space corridors reserves) are not to be included in the open space contributions.

- c) Local Roads – contribution towards the following road works are supported. The total cost, apportionment and timing of these works shall be determined in consultation with the Department of Planning, ***Industry and Environment***:
 - a. Upgrade of Marshall Mount Road (referred to in the TMAP as 22, 23 & 24);
 - b. Upgrade of Yallah Road from Marshall Mount Road to Haywards Bay Drive (referred to in the TMAP as 25);
 - c. Upgrade to the intersection of Marshall Mount Road and Yallah Road (referred to in the TMAP as 36);
 - d. Construction of the Tripoli Way extension (referred to in the TMAP as 14, 15 & 16);
 - e. The construction of the intersection of Tripoli Way with the Illawarra Highway (referred to in the TMAP 30);
- d) Other Road Works – the following road works are needed to directly access to site and are therefore not to be included in the ***S94 s 7.11*** framework. These will be required as per conditions of approval and the timing will be determined as part of future subdivision approval.
 - a. The upgrade of Calderwood Road from the site boundary to Tripoli Way extension (referred to in the TMAP as 32) ***to be delivered with the Town Centre Retail***;
 - b. Construction of the internal north-south sub arterial road (referred to in the TMAP as 33, 34 & 35);
 - c. Upgrade of the intersection of the Illawarra Highway and Yellow Rock Road to provide site access (referred to in the TMAP as 37).

Reason: To reflect the additional local contributions to be provided as part of the modified development.

3.4 Revised Modifications to Statements of Commitments

This PPR no longer seeks to delete Commitment 35 and Commitment 37. A Revised Statement of Commitments is submitted at **Appendix L**.

4.0 Ecologically Sustainable Development

The four principles of ecologically sustainable development have been considered in this project, namely:

- The precautionary principle;
- Intergenerational equity;
- Conservation of biological diversity and ecological integrity; and
- Improved valuation and pricing of environmental resources.

An analysis of these principles follows.

Precautionary Principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

The EAR and additional information provided in this RTS set out the evaluation of environmental impacts of the proposal, providing an assessment based on scientific data and accepted standards and assessment criteria. The EAR submitted and this RTS have not identified any serious threat of irreversible damage to the environment due to a lack of scientific certainty and therefore the proposal is consistent with the precautionary principle.

Intergenerational Equity

Inter-generational equity is concerned with ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. The proposal has been designed to benefit both the existing and future generations by:

- Increasing housing supply and the diversity of this housing supply in order to meet the housing needs of both the current population but also to allow for flexible housing options to enable aging in place and maintaining a sense of community whilst residents age and their needs change.
- Designing an integrated and coordinated planned residential community that enables the coordinated delivery of infrastructure that can cater for the needs of the local and regional population as that population increases over time.

The modification has integrated short and long-term social, financial and environmental considerations in a cumulative manner so that any foreseeable impacts are not left to be addressed by future generations. The proposal is therefore consistent with the principal of intergenerational equity.

Conservation of biological diversity and ecological integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration. As demonstrated in the EAR, and **Section 2.1.6** and **Appendix K** of this RTS, the proposed modifications will ensure the conservation of flora and fauna communities. The preservation of the major riparian corridors assists in the protection and long term viability of biological diversity within the CUDP. The proposal promotes the conservation of biological diversity and ecological integrity.

Improved valuation, pricing and incentive mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. Mitigation measures for avoiding, reusing, recycling and managing waste during construction and operation would be implemented to ensure resources are used responsibly in the first instance.

Additional measures will be implemented to ensure no environmental resources in the locality are adversely impacted during the construction or operational phases. The proposal promotes improved valuation and pricing of environmental resources.

4.1 Suitability of the Site

The original assessment and determination of MP09_00082 found that the site was suitable for the development envisaged under the Concept Plan. The proposed modifications to the Approved Concept Plan are also considered suitable for the site in that:

- The proposed increase in dwelling yield is in response to market demand for diverse housing types through the delivered stages of the project and will not result in any additional land for urban development;
- The proposed development, with a high level of services and infrastructure implemented, can address housing supply issues in the Illawarra region;
- The modifications to the Approved Concept Plan include increased infrastructure provision where appropriate to ensure that the current and future needs of the local and regional community can be met;
- Environmental impacts both short and long term can be effectively managed to minimise risk to the community and ensure the protection of the physical environment; and
- No changes are required to the existing planning controls in terms of land use zoning, the location or size of environmental zones and the development footprint remains the same as that already approved.

4.2 The Public Interest

The proposed modification to the Approved Concept Plan is considered to be in the public interest as it will:

- Facilitate increased housing supply within the Wollongong and Shellharbour LGAs;
- Enable a greater range of housing types to be delivered within the CUDP;
- Provide additional retail floor space to cater for the future population needs;
- Directly respond to the market demand for new dwellings within the CUDP;
- Ensure that infrastructure will be delivered meeting the requirements of the new population; and
- Ensure that all environmental impacts can be adequately managed and/or mitigated.

5.0 Conclusion

This RTS addresses the issues raised and additional information requested during the public exhibition of Modification 4 to the approved Calderwood Valley Concept Plan. A detailed response to submissions is provided at **Appendix A** with further detailed technical advice provided in the relevant technical report.

In response to the issues raised, the PPR (see **Section 3**) seeks to amend the application to reduce the total proposed dwelling yield from 6,500 to 6,000 principal dwellings, being an increase of 1,200 principal dwellings above that of the approved Concept Plan. The PPR sets out the revised infrastructure provision required to service the total of 6,000 principal dwellings and provides a breakdown of dwelling yield between landowners within the CUDP.

Allowing for increased housing supply will support the delivery of more integrated and small lot housing product in appropriate locations within the CUDP, including greater diversity in housing product. The increase in housing supply for the CUDP is proposed without any expansion of the footprint of urban zoned land (residential and mixed use zoned land) and without any change to the minimum lot sizes permitted under State Environmental Planning Policy (State Significant Precincts) 2005 (State Significant Precincts SEPP). It is also proposed without any change to the areas of land already approved for residential and other urban development under the existing Concept Plan Approval.

Overall, it is considered that the proposed modifications of the Concept Plan have limited environmental consequences beyond those which have been the subject of assessment under the Approved Concept Plan. In summary, the Concept Plan as proposed to be modified has considered the principles of ecologically sustainable development and the cumulative impact of carrying out development under the Concept Plan. Importantly, any limited environmental consequences or impacts associated with the proposed modifications can be appropriately managed and mitigated. The modification application is recommended for approval.