

Department of Planning & Environment

Issue Raised	Comment/Design Response
1. Density	
<p>It is difficult to gain an appreciation from the submitted documents where the higher densities will be located, particularly in relation to parks 0.2 ha in size. To allow the Department to undertake a detailed assessment of the proposal, please provide:</p> <ul style="list-style-type: none"> a plan showing all land proposed to accommodate higher densities (i.e. land that satisfies the proposed locational criteria) a plan showing a comparison between the land that can support the smaller lots under the approved Concept Plan with the new areas proposed in MOD 4. 	<p>The revised Urban Design Report prepared by RPS and submitted at Appendix C includes updated illustrative maps for information purposes and areas anticipated to accommodate increased densities are highlighted. As demonstrated, these areas are:</p> <ul style="list-style-type: none"> Within the Town and Village Centres (B4 Mixed Use Zone); Within the 800m walking catching of the Town Centre; or Adjoining or directly opposite a public park with an area of at least 0.2 hectares and where the gradient of the site is less than 1 in 10. <p>In response to issues raised in other submissions, the locational criteria for increased density on sites within 400m of Village Centres has been removed from this application.</p> <p>We note that Condition B6, as approved, already permits higher densities in locations opposite and adjacent to parks with an area of at least 0.3 hectares.</p>
<p>Please clarify where the proximate locations to the town and village centres have been measured from. The submitted map shows a radial distance of 800m or 400m respectively from the centre, but the accompanying wording in the Development Control Strategy (DCS) could be interpreted that the measurement is taken from the boundary of the town or village centre. This interpretation would capture significantly more land, which is unlikely to be supported by the Department.</p>	<p>The 800 metre radius from the town centre is shown in the Urban Design Report prepared by RPS and submitted at Appendix C. The radius is also included in Figure 3 of the DCS to provide greater clarity as to the locations considered proximate to the town and centre. This radius has been taken from centre of the Town Centre core and this has then been adapted to respond to the pedshed analysis undertaken by RPS and illustrated in section 2.1.1 of the RTS.</p> <p>The 400m radius from the village centre has been deleted. An additional criterion has also been added which requires sites adjoining or directly opposite a public park with an area of at least 0.2 hectares with higher density to have a slope less than 1 in 10.</p>
<p>Please provide an indicative layout plan for the areas proposed to accommodate higher densities and demonstrate how they can achieve appropriate levels of residential amenity with regards to orientation, solar access, outlook and privacy.</p>	<p>An indicative layout plan has been included in the Updated Urban Design Report prepared by RPS and submitted at Appendix C in addition to additional information in respect of solar access and private open space.</p> <p>We note that the amenity of future development will be assessed as part of the detailed application process.</p>
2. Flood Impacts	
<p>Please address the issues raised by the NSW Office of Environment and Heritage (OEH) and both local Councils regarding the potential flooding impacts associated with the proposal and demonstrate the proposal would not result in any adverse flooding impacts.</p>	<p>Additional information has been prepared by JWP, providing a detailed response on water management issues raised by SCC and WCC. Refer to Appendix F.</p>

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3. Transport and Accessibility	
Please address the issues raised by Councils and agencies regarding traffic modelling, assumptions, road upgrades and indicative road designs and demonstrate the proposal would not result in adverse traffic impacts.	Additional information has been prepared by Cardno, providing a detailed response to traffic and accessibility issues. Refer to Appendix H . As part of the RTS, a revised Transport and Traffic Assessment has been completed and is submitted at Appendix I .
Concerns are raised about whether the proposed road and intersection upgrades can be accommodated within the existing road reserve corridor. Please provide concept designs for the proposed road and intersection upgrades to demonstrate the upgrades are consistent with relevant policies, including: <ul style="list-style-type: none">Guidelines for Public Transport Capable Infrastructure in Greenfield Sites (TfNSW, 2018)RTA Traffic Signal Design GuidelinesAustroads Guide to Road Design	
Please consider providing a shared path on both sides of the north-south sub-arterial road through the Calderwood Urban Development Project (CUDP) to improve pedestrian and bicycle connectivity.	
Please demonstrate future roads intended for bus services are consistent with Section 4.1 of the Guidelines for Public Transport Capable Infrastructure in Greenfield Sites (TfNSW, 2018).	
4. Public Domain/Open Space	
The submitted Social Infrastructure Yield Review prepared by Eton Consulting indicates the proposal would require a total of 47.4 ha of open space, which includes an additional 14.2 ha of open space triggered by MOD 4. However, it is unclear from the submitted documents how much new passive and active open space is provided, and what the overall totals are. Please demonstrate how the minimum open space areas can be achieved.	Based on the revised application and a maximum of 6,000 principal dwellings, a total of 43.808 hectares of open space is required to be provided as part of the Concept Plan (based on the approved provisions of 2.83 ha/1000 people) . This equates to an additional 10.6 hectares to be provided in this application as required under condition C12 of the concept plan approval. Updated open space diagrams submitted in the updated Calderwood Valley Public Domain Report and Open Space Plan at Appendix J .
Please provide further details regarding the characteristics of the different open space areas, including City Wide, District and Local Parks and outline what facilities would be provided within each. Please note: The Department does not support recreation areas or public spaces which encourage people to congregate within the Electricity Easement.	The updated Calderwood Valley Public Domain Report and Open Space Plan at Appendix J provides an illustrative diagram presenting existing/approved and proposed additional open space. It also addressed the characteristics of the various parks. No modification to the character of the open spaces is proposed as part of this modification. We note that existing/approved public open space is not located within electricity easements and nothing within this modification proposes to alter this.
Some of the proposed open space areas are identified in environmentally sensitive locations and may not be suitable for recreational use. Please demonstrate that the proposed open space areas are suitable for recreational use without detrimentally impacting the environmental qualities of these areas.	The approved concept plan contained open space areas within the environmentally sensitive locations on the site. All of the additional open space proposed is to be provided outside of the environmentally sensitive areas.
The submitted public open space plan indicates rezoning the following land to SP1 Special Activities: <ul style="list-style-type: none">land to the south of the Town Centre Residential East (currently zoned E3 &	This 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

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<p>RE1)</p> <ul style="list-style-type: none"> land in the SE corner of the CUDP (currently zoned RU2) the high school site (currently zoned 84) <p>These changes have not been explained or justified. Please provide an assessment of the changes for the Department's consideration.</p>	<p>been updated to "sports field" to remove any confusion.</p> <p>Updated open space diagrams are submitted at Appendix J.</p>
<p>There are numerous linear parks proposed in this modification. While the Department supports connectivity through the site, concern is raised about whether the linear parks should contribute to the overall calculation of open space. Please confirm how much open space is comprised of linear parks and demonstrate how these spaces reasonably contribute to usable open space.</p>	<p>Linear parks are not required to achieve the minimum area required. The linear parks have been removed from the open space diagrams submitted in the updated Calderwood open space plans and public domain report at Appendix J to avoid confusion. However, we note the importance of these spaces in providing green links within the CUDP.</p>
<p>Any linear paths provided over Marshall Mount Creek and Macquarie Rivulet should be accompanied by conceptual bridge designs and an assessment of any impacts on the riparian corridors, including flooding and vegetation impacts.</p>	<p>The linear paths across the rivulet are already approved and no changes are proposed as part of this modification application. Additional assessment is therefore not warranted. The detailed design of these crossings will be provided in the detailed application for the construction of the crossings. Refer also to Section 3.9.2 and Figure 13 of the Consolidated Concept Plan (JBA, March 2011).</p>
5. Development Control Strategy (DCS) Amendments	
<p>The amended DCS makes changes to the March 2011 document, not the more recent March 2018 document. Please provide a revised DCS that modifies the most recently approved document.</p>	<p>The revised DCS is provided at Appendix D. This version contains the March 2018 amendments.</p>
<p>There are several amendments to the DCS that have not been justified in the submitted documents. Please include a table outlining the proposed amendments and a clear rationale and justification for each change.</p>	<p>A summary of DCS changes is tabulated at Appendix E.</p>
<p>The Department is not yet satisfied that the proposed Built Form Typologies (Appendix C of the DCS) for small lots would result in dwellings that provide adequate levels of amenity for future occupants.</p> <p>To allow further consideration of these lots, please demonstrate that future dwellings can:</p> <ul style="list-style-type: none"> achieve satisfactory levels of amenity for future residents including solar access and privacy accommodate separate private open space and landscaped areas, suitable parking and access arrangements. 	<p>Additional provisions have also been inserted into the DCS to ensure that the dwellings are designed to a suitable urban design outcome. 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). It is further noted that Council will have the ability to review the detailed development applications for the higher density applications to ensure that a suitable level of amenity is achieved.</p>
<p>It is noted some of the smaller lots have frontages as narrow as 5 metres. The Department considers rear lane access should be provided for small lots to reduce the dominance of garages in the streetscape.</p>	<p>Additional controls have been included in the amended DCS in respect of location of vehicular crossing and positioning of garages.</p>
<p>The Department considers additional street trees should be provided in higher density areas to improve the visual amenity of these areas.</p>	<p>A requirement for additional street planting for integrated housing has been included in the DCS. Refer to Appendix D.</p>
<p>It is noted Table 1 - Street Types within the proposed Development Control Strategy is inconsistent with table 4.10 provided in the Traffic and Transport Assessment Report prepared by Cardno. Please provide a revised set of consistent documents.</p>	<p>The updated Traffic and Transport Assessment, prepared by Cardno and submitted at Appendix I maintains consistency with the street types identified in Table 1 of the DCS.</p>

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6. Biodiversity	
Concern is raised about the proposed deletion of Commitment 35 given it specifies the detail to be addressed in the Vegetation Management Plans. In addition, the submitted Biodiversity Assessment Report recommends compliance with Commitment 35.	Commitment 35 to be reinstated. See Updated Statement of Commitments at Appendix L .
The <i>Biodiversity Conservation Act 2016</i> has come into effect since the Concept Plan approval. The Department of the Environment and Energy should be contacted to determine whether the proposal constitutes a Controlled Action.	We believe that the Department is referring to the EPBC Act here where it refers to a "Controlled Action". The SEARs do not require consideration or assessment of EPBC Act listed matters as it is a separate jurisdiction under the Commonwealth. As such, it will be separately addressed if required. It is noted that the Biodiversity Report (Appendix N of the EAR) addressed the <i>Biodiversity Conservation Act 2016</i> in detail.
7. Contributions	
MOD 4 will trigger amendments to the existing Local and State VPA's. Please commence negotiations with both Shellharbour and Wollongong Councils and OPE on Local and State VPA amendments and provide endorsed letters of offer outlining the VPA amendments.	Revised letters to DPIE and SHCC addressing contributions are being prepared by Lendlease and will be submitted under separate cover. No amendments are required to the WCC VPA.
Please clearly outline any additional contributions and infrastructure required to support the proposal, as well as any changes to the current timing of contributions.	Contributions are detailed in Section 2.1.7 of the RTS document prepared by Ethos Urban.
Please provide an overall plan showing all infrastructure upgrades/changes resulting from MOD 4.	A plan showing the location of the additional infrastructure is provided at Appendix M .
8. Non-core Land	
Please clearly outline any proposed changes on non-core lands and assess any potential impacts on those lands as well as implications for lodged and /or determined DA's. Please note: owner's consent should be provided for any proposed changes within the non-core lands.	Changes to road layouts and park locations have been proposed, consistent with the development applications that have been lodged by the various non-core landowners. In respect of landowners' consent it is noted that Lendlease has obtained a clause 8F designation and as such landowners' consent is not required for the proposed changes.
9. Water Quality	
In accordance with the EPA and Shellharbour Council's recommendations, please provide an assessment of the proposal against the requirements of the <i>Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions</i> .	Additional information has been prepared by JWP, providing a detailed response on water management issues raised. Refer to Appendix F . The Risk Based Framework also addressed in Section 2.1.9 of the RTS report. Water Cycle and Flood Management (WCFM) Post-Exhibition Report has been prepared by JWP and is submitted at Appendix F . This assessment has been peer reviewed by Cardno as presented at Appendix G .
10. Retail Floor Space	
Please demonstrate how the proposed additional retail floor space can be accommodated within the Town Centre using the existing height and density controls.	An indicative layout has been provided within the updated Calderwood Valley Urban Design Study at Appendix C . The plan demonstrates that the floorspace can be accommodated without the need to amend the existing height and density controls applying to the town centre.

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11. Green Star Rating	
Please demonstrate how future development, particularly within the town centre and employment precincts, can achieve the proposed 5/6-star green rating and deliver appropriate sustainability outcomes.	Calderwood Valley has achieved a 6 star Green Star Communities rating. A copy of the Green Star certificate is submitted at Appendix O .
12. Cut and Fill	
The submitted cut and fill plan indicates earthworks across the CUDP (including already developed areas). It is unclear which earthworks have already been approved/developed and which are proposed under MOD 4. Please clarify on a plan, including locations and depths of the proposed cut and fill and provide an assessment of the proposed changes.	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 consent. The flood mitigation concept plan is the only approved plan which provides this detail which has been updated as part of this modification application.
13. Stream Reach 15	
MOD 4 proposes to remove Stream Reach 15. The submitted documents refer to Figure 5 of the Concept Plan, but those streams are not numbered. Please provide an amended plan showing the stream locations to enable a proper assessment.	The streams are shown in Figure 8 of the RTS. The location of stream reach 15 was also illustrated in Figure 11 of the EAR (page 37).

Wollongong City Council

Issue Raised	Comment/Design Response
Land Use Planning	
Council is seeking clarification from the Department regarding the status previous clause 3B(2)(f) of Schedule 6A of the EP&A Act given the amendments to the Act to give effect to the Concept Plan in the event of any inconsistency between the Concept Plan and an EPI.	Clause 3B(2)(f) of Schedule 2 of the EP&A (Savings, Transitional and Other Provisions) Regulation 2017 provides that the concept plan prevails to the extent of any inconsistency between the concept plan and an environmental planning instrument.
Council requests that the Department amend State Environmental Planning Policy (State Significant Precincts) 2005 where there are inconsistencies between the provisions of the Concept approval as modified and the SEPP	Not required.
Comparison with the Concept Plan Approval (MP 09_0082)	
In view of the following assessment of Key SEARS issues including in particular items 5, 6, 7, 8, 11, 12 and 21, it is considered the Environmental Assessment (EA) has not satisfactorily addressed environmental impacts beyond those already assessed for the Concept Plan Approval.	The DPE concluded that the EA as submitted fulfilled the SEARs. The RTS Report, including further technical studies, provides additional environmental assessment in relation to density, urban design, ESD, water cycle management, biodiversity and transport.
Transport & Accessibility	
It is difficult to understand the inclusions of the updated Cardno 2036 Tracks models as there are no model network plots or land use zone tables attached to the report. This is especially so for the modelling done to assess the impacts of the proposed yield increase in the 'ultimate' West Dapto development scenario (section 4.3.4 of the report). This clarity should be provided.	Refer to detailed response provided by Cardno at Appendix I .
It is noted that Cardno recommends changing the 2010 TMAP arrangements for the road connection from Calderwood Urban Development Project (CUDP) to the Wollongong Council area (Marshall Mount). Whilst it is acknowledged that the recommended T-intersections would provide priority for the Escarpment Drive/Marshall Mount Road traffic, it appears the two proposed intersections are closely spaced and there may be operational issues under the ultimate development scenario. The Cardno/WCC agreed ultimate development Tracks modelling that was used to inform VPA negotiations shows a daily volume of 27,500vpd on Marshall Mount Rd/Escarpment Dr at this location. At this volume level it is likely there would be interactions between the two intersections (queuing etc.) and consideration should be given to performance of the recommended arrangements under these demands to ensure satisfactory long-term operations	
Section 4.3.4 states 6000 dwellings were modelled for CUDP as part of the VPA work. Assumptions modelled by Council for the Lend Lease development area were 4,800 dwellings, and 7,700 for the whole Calderwood Valley. Council recommends the Department seek clarification of what was modelled for Cardno's analysis in section 4.3.4. No details of model inclusions (land use zone tables etc.) are provided.	
There is minimal explanation provided in Section 4.3.4 regarding modelling done to determine impacts at ultimate development. The peak period volume differences shown in Table 4-8 do not show the percentage increase in Calderwood traffic on Yallah Marshall Mount roads, only numerical increases. There is no LOS analysis documented for this assessment – the "relatively minor" increase in volumes	

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<p>may push LOS into an unacceptable category, requiring infrastructure upgrades to address. When considered as percentage, it is found that there are notable increases, for example, Marshall Mount Road (west) of +8%. Further information should be provided regarding the impact of this change on road infrastructure requirements</p>	
<p>The ultimate (i.e. full West Dapto development) scenario context should be considered by the applicant for internal road planning, especially for the roads in the north of the CUDP. The June 2018 rezoning to allow urban development at Yallah-Marshall Mount (Stage 5 of West Dapto Urban Release Area (URA)) is expected to result in circa 4,000 new dwellings, whereas the Cardno 2036 analysis (on which their network performance analysis is based) only considers circa 2,000 dwellings in Stage 5. As an example, Wollongong City Council Tracks modelling shows that the full West Dapto development scenario results in a 29% increase in daily traffic on Escarpment Drive south of Marshall Mount Road, when compared to the 2036 scenario. This would have implications for road type/cross section and intersection requirements and should be considered. The Cardno report recommends priority “T” intersections for Marshall Mount Road/Escarpment Drive and North Marshall Mount Road/Escarpment Drive – this may be acceptable under 2036 demands but the ultimate demands would require intersection upgrades, (signals or roundabouts). The consideration of ultimate Urban Release Area development and its implications for the transport network should be considered. The importance of this is highlighted by Cardno in the SEARs Traffic & Transport Report in section 4.4.2 when referring to Calderwood Road: “Consideration should be given to the ultimate road infrastructure requirements in this area to avoid expensive reconstruction works”.</p>	
<p>It is noted that the modified street typology for CUDP (Table 4-10 in Cardno report) allows for a 2.5m shared path on a number of road types including Sub-Arterials and Type B3 (major collector adjacent rural lands). This change is supported as it will better allow for active transport connectivity and continuity between the West Dapto and Calderwood release areas. In order to further strengthen the attractiveness of this linkage and active transport in general, it is suggested that consideration be given to allowing for a shared path on both sides of the main north-south sub-arterial road through the CUDP. This would then provide seamless connectivity with West Dapto release area, as Marshall Mount Road is proposed to have a 2.5m wide shared path on both sides of the road. It is also noted that the verge widths for all Sub-Arterial roads as shown in Table 4-10 are capable of accommodating a shared path on both sides. In relation to Marshall Mount Road to the north-west of the CUDP, it is agreed that a shared path on one side only (i.e. as per Type B3) is appropriate given the rural lands on the west side of the road.</p>	
<p>The 2010 TMAP included a 10% shift away from private car. It is unclear if the updated 2036 modelling undertaken by Cardno for MOD4 retains this mode shift as the report does not give any details. The applicant should also clarify what mode shift was included for West Dapto development at 2036. If it is 15%, then it is likely underestimating traffic generation, as the 15% mode shift target is long term and based on the final development scenario for West Dapto (circa 2060).</p>	
<p>The proposed road types B1, B2, C2, D1, D3 (major/minor collectors & village centre roads with bus services) in Table 4-10 have parking lanes of 2.5m width. TfNSW “Guidelines for Public Transport Capable Infrastructure in Greenfield Sites” specify a minimum parking lane width of 3m to allow for bus stops and to allow the bus to move out of the through lane.</p>	

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<p>Proposed Penrose Station – the reference to this station in 4.6.6, included as part of the Long Term Public Transport Plan Figure 4-28 of the Cardno EAR report is incorrect. The concept of a station at this location was abandoned in 2008 following feedback from RailCorp/Transport for NSW and through Council planning which recognised the constraints to delivering efficient land use outcomes around a station at this location. It is not reflected in any of Council's current planning documents pertaining to West Dapto, including the draft West Dapto Vision & Structure Plan (2018). The long term bus strategy shown in Fig 4-27 would therefore need to be modified, however ultimately this is subject to planning/negotiation with Transport for NSW. Council recommends the Department seek comment from Transport for NSW in that regard</p>	
Community Facilities & Public Domain	
<p>It is not clear from the EA how the increase in dwellings and additional population of 4,750 specifically affects community facilities, open space and public domain needs in the Wollongong LGA component of the Concept Plan.</p>	<p>The additional population is only for 1,200 principal dwellings and that the majority of these will be located within the Shellharbour LGA.</p> <p>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 has been distributed in accordance with the approved concept plan and is not apportioned between each LGA.</p>
<p>Section 4.6.1, specifically proposes modification to Condition C12 – Local Infrastructure Contributions but does not provide clarity of proposed changes in the Wollongong LGA. Similarly Section 6.8 Community Facilities and Open Space does not provide clarity on the implications of the increased population on the Wollongong LGA</p>	<p>As the additional population will be primarily concentrated in Shellharbour LGA, it is appropriate that any changes to community facilities will be primarily focused around the Town Centre which is in Shellharbour LGA.</p> <p>In respect of open space, additional open space is proposed in both the WCC and SCC areas. Lendlease commits to work with WCC at the appropriate time when it comes to designing the open space areas that are located in the Wollongong LGA and are to be dedicated to WCC.</p>
<p>The EA should clarify what the impact of the proposed increase and dwellings and population is expected in the Wollongong LGA component of the Concept Plan and the resulting local infrastructure demand implications. If it is identified that additional active open space is required to service the Wollongong population the EA should demonstrate the useability of the area identified for those active open space outcomes.</p>	<p>As shown on the proposed open space plan at Appendix J, a proportion of the additional open space provided as part of this modification is provided within the Wollongong LGA.</p>
Biodiversity	
<p>The Ecological (2018) desktop assessment of threatened ecological communities has failed to identify MU13 Moist Box-Red Gum Foothills Forest by NPWS (2002) as part of the EPBC Act listed critically endangered ecological community Illawarra and South Coast Lowland Forest and Woodland as described in Section 2.7 of the Environment Protection Biodiversity Conservation (EPBC) Act Approved Conservation Advice (incorporating listing advice) for the Illawarra and South Coast Lowland Forest and Woodland Ecological Community (TSSC 2016).</p>	<p>Additional detailed response has been prepared by Ecological and is submitted at Appendix K.</p>
<p>Based on the vegetation condition assessment (Section 3.1.3), Fig 5 of Ecological (2018) where all areas of MU13 adjoin or are close to MU23 or MU24, and the absence of detailed assessment including</p>	

Issue Raised	Comment/Design Response
<p>field surveys according to Section 2.6 of the Approved Conservation Advice (TSSC 2016), a precautionary approach requires the inclusion of all MU13 in the study area as EPBC Act Illawarra and South Coast Lowland Forest and Woodland in addition to all MU23 and MU24.</p>	
<p>The suggestion by Ecological (2018) that 'Significant impacts on Illawarra and South Coast Lowland Forest and Woodland are unlikely' are based on general discussion points rather than detailed impact assessment according to EPBC Act MNES Significant Impact Guidelines (DotE 2013) and Section 2.6.5 of the Approved Conservation Advice for the critically endangered ecological community (TSSC 2016). The absence of full surveys and detailed impact assessment, according to the Approved Conservation Advice (TSSC 2016) and legislated process is a failure of the Ecological (2018) report.</p>	
<p>The Lowland Dry-Subtropical Rainforest (MU4) noted in Tables 3 and 7 likely equates to the soon to be EPBC Act listed Illawarra-Shoalhaven subtropical rainforest ecological community.</p>	
<p>The Ecological (2018) report has misinterpreted the definition of an Action under the EPBC Act [see EPBC Act Policy Statement Definition of 'action' DSEWPaC (2013)]. In addition, Ecological (2018) have overlooked the requirement to assess the likely impacts to EPBC Act listed threatened entities prior to an EPBC Act Action commencing (including series of activities in a project) regardless of, and subsequent to, the previous 2010 EPBC Act Referral for the 'Calderwood Urban Development Project' (CUDP). The statement in Section 4.2 that 'The activity to be carried out pursuant to the proposed modification is generally consistent with the action referred to the Commonwealth on 2 March 2010 (EPBC 2010/5381) in terms of area and impacts on the listed matters.' is false as the Action will impact on an additional MNES that have not been previously assessed and are identified in the project site. The Actions associated with the existing approved DA's where no clearing of the CEEC has yet commenced and current proposed modification is considered a 'new or increased impact' as defined by the Department of Environment and Energy (2017) in Guidance on 'new or increased impact' relating to changes to approved management plans under EPBC Act environmental approvals.</p>	
<p>Recent EPBC Act impact assessments of Illawarra and South Coast Lowland Forest and Woodland CEEC in the locality including the Albion Park Rail Bypass (EPBC Referral No's 2018/8192, 2017/8048 and 2017/7909) which will directly impact areas of much less than that of the of the 'Calderwood Urban Development Project' (CUDP) (see EPBC Referral No 2018/8192), have been found to result in significant impacts and have accordingly been determined by the Department of Environment and Energy as 'Controlled Actions'</p>	
<p>Based on recent assessments, its considered that direct impacts (and not accounting for indirect impacts) to close to 11 ha of vegetation equating to EPBC Act Illawarra and South Coast Lowland Forest and Woodland, comprising approximately 36% of all Illawarra and South Coast Lowland Forest and Woodland within the project site, would be assessed by the Department of Environment and Energy as triggering a Controlled Action.</p>	
<p>In view of Council's comments, and as part of the stakeholder agency consultation, it is recommended that the Department of Planning and Environment invite the Commonwealth Department of Environment and Energy to review and comment on the direct impact to over 10ha of an EPBC Act listed critically endangered ecological community as part of the CUDP.</p>	
<p>Ecological (2018) has failed to take into account the need for further specialist studies to assess the</p>	

Issue Raised	Comment/Design Response
<p>impact to groundwater and GDE's (expressing as aquatic ecosystems) from increased hardstand and impervious surfaces and cut any fill on the alluvial floodplains from the proposed project modification and future development applications. (JWP 2018, Douglas Partners 2010 & 2018, Cardno 2010 and Ethos Urban 2018).</p>	
<p>The EA by Ethos Urban (2018) states that 'Flows to and from terrestrial groundwater dependent ecosystems are expected to be maintained'. This statement does not appear to have basis as the EA also notes that the detailed impact assessments on groundwater and therefore GDE's (such as the aquatic ecosystems of Marshall Mount Creek, Macquarie Rivulet and Lake Illawarra) have not been completed.</p>	
<p>The conclusion 'Below RL 20 or in localised low lying areas adjacent to creek-lines, groundwater may present itself as a moderate constraint due to its proximity to the ground surface. This will require further assessment in the subsequent development stages.'</p>	
<p>Local groundwater present in 'shallow aquifers' generally 'contained in the alluvial deposits of Marshall Mount Creek and Macquarie Rivulet' and 'limited by the underlying bedrock' (Douglas Partners, 2010) are considered likely to be providing base flow into both waterways (i.e. base flow stream ecosystem). This hydrological connectivity is considered to form an important functional element in the maintenance of the aquatic biodiversity values and services and the persistence of the Marshall Mount Creek and Macquarie Rivulet GDE's. It's clear from the preliminary geotechnical investigations that there is a very high probability of alteration of spatial and temporal flows into the shallow aquifers and GDE's these are expected to support.</p>	
<p>There is no mention or assessment of potential impacts to DPI mapped Key fish habitat of Marshall Mount Creek, Macquarie Rivulet and Lake Illawarra in accordance with the Policy and guidelines for fish habitat - conservation and management (DPI, 2013) in the Ecological (2018) report.</p>	
<p>It is clear that Marshall Mount Creek, Macquarie Rivulet and Lake Illawarra are important aquatic habitats and significant and ecologically sensitive areas. Consistent with Actions of the Illawarra-South Coast Regional Plan (I-SRP, DPE 2015), although the SEAR's require inclusion of Lake Illawarra in the impact assessment, the study area of the aquatic ecology impact assessment has generally overlooked Lake Illawarra. The statement by Ecological (2018) that 'The lake [Lake Illawarra] is an important ecological and recreational feature in the region and some of the fringing wetlands are unlikely to be influenced by flows from this site.' presents a vague impact assessment and needs clarification e.g. identify (by mapping) what CM Act Coastal wetlands, Key fish habitat and DPI (2009) mapped seagrass beds in Lake Illawarra are likely to be impacted and what would be the severity and timeframe for the impacts.</p>	
<p>In view of the significant limitations of BoM Groundwater Dependent Ecosystems Atlas geospatial database 'potential' GDE mapping of 'Aquatic Ecosystems' for the Sydney Basin Bioregion, the Ecological (2018) two paragraph discussion on GDE's is unsatisfactory and not considered to be 'a detailed assessment of the potential impacts of the proposal'</p>	
<p>Further surveys and impact assessments are required by specialist aquatic ecologists who are experienced in impact assessment of the full range of ecosystems that fall into the definition of GDE's either as part of the current investigation or to accompany future investigations as Statement of</p>	

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<p>Commitment (SoC) requirement. Given the scale of the project modification it is not unreasonable that the same level of detail for impacts on GDE's be investigated and assessed as required in the SEAR's for the Albion Park Rail Bypass (SSI 6878).</p> <p>Given the Directions and Actions of the I-SRP (DPE 2015) and current priority Actions that relate to Lake Illawarra, the revised aquatic ecosystems impact assessments need to have significantly more content on the probable construction and in perpetuity impacts of the project on Lake Illawarra that incorporates the impacts of Albion Park Rail Bypass as part of the cumulative impact assessment.</p> <p>The Modification to Calderwood Part 3A Concept Plan Biodiversity Assessment (Ecological, 2018) states it will outline any consultation with relevant government stakeholders including WCC. It is noted that there is no discussion of consultation on biodiversity and riparian matters with WCC in the Ecological (2018) report as none has occurred.</p>	
Riparian Impacts	
<p>In the absence of demonstrating consistency with objects and provisions of the Coastal Management Act 2016 detailed impact assessment on the mapped Coastal Wetlands and buffers will be required for future DA's.</p> <p>At minimum all relevant studies in the EA should have reviewed and incorporated consideration and discussion of the Risk-based framework for considering waterway health outcomes in strategic land-use planning decisions (OEH 2017) to provide consistency with Directions 5.1 and 5.4 of the Illawarra Shoalhaven Regional Plan (DPE, 2015).</p> <p>The Ecological (2018) and JWP (2018) reports have entirely overlooked the Illawarra Water Quality and River Flow Objectives for the Illawarra catchments including but not limited to the Water Quality Objectives for protection of, aquatic ecosystems and secondary and primary recreation contact and River Flow Objectives for maintaining 'natural rates of change in water levels' through measures to, 'Maintain natural flow variability' and 'Manage groundwater for ecosystems' amongst other things.</p> <p>Given the incompleteness of the GDE impact assessment and other issues highlighted above, the riparian impacts assessment is considered to be equally incomplete and further impact assessments are required either as part of the current investigation or to accompany future investigations as SoC requirements.</p>	Additional detailed response has been prepared by Ecological and is submitted at Appendix K .
Drainage, Water Quality and Flooding	
<p>The report states (page 34) that the Calderwood Urban Development Project (CUDP) is consistent with the controls by Wollongong City Council. However upon viewing the flood maps provided, it is clear that the development is inconsistent with Wollongong City Council Local Environmental Plan (LEP), 2009 and Wollongong Development Control Plan (DCP), 2009 controls. From an LEP perspective, the development has not demonstrated: (i) suitable evacuation from the land, (ii) maintaining the existing flood regime and flow conveyance capacity, and (iii) avoiding significant adverse impacts on flood behaviour and affectation of other properties. From a DCP perspective (Chapter D16), the development has not demonstrated: (i) the creation of all new residential lots to be above the 1% AEP plus 0.5m freeboard, (ii) no net removal of floodplain storage capacity.</p>	Wollongong LEP does not apply. See Clause 5 of the State Significant Precinct SEPP.

Issue Raised	Comment/Design Response
<p>The report states (page 32) that flood free access in the local Probable Maximum Flood (PMF) event for emergency services will be achieved to the north portion of the CUDP within the Wollongong LGA. However, the strategy for flood access has not been determined for the Yallah/Marshall Mount area. There is no current flood free access route from Yallah-Marshall Mount to the CUDP. Council has not seen a design for the Escarpment Drive Bridge over Marshall Mount Creek. Thus it is unclear how a substantially new development area (CUDP) can rely on a flood access strategy through Wollongong LGA that has not yet been determined. This outcome typically results in additional ongoing pressure on the Emergency Services to assist in times of flood</p>	<p>Additional detailed response has been prepared by JWP and is submitted at Appendix F.</p>
<p>The report is silent on the potential loss of flood storage for any storm event and also the potential cumulative impacts associated with the proposed land form. These considerations are required as part of undertaking floodplain risk management studies for catchment areas according to the NSW Floodplain Development Manual (2005)</p>	
<p>It is unclear how the effects of climate change, as required by item 11 of the SEARS, were modelled and implemented across the proposed landform for this modification.</p>	
<p>Figure 3 of the report indicate areas of proposed cut and fill across the site, however does not indicate the maximum depths of cut/fill. In this respect, it is unclear whether the proposal satisfies item 9 of the SEARS relating to potential visual impacts associated with the amount of cut/fill proposed.</p>	
<p>Figure 7 of the report indicates significant flood affectation in the 1% AEP (Annual Exceedance Probability) in Stage 5 south. Apart from being a poor outcome for a greenfield site, no evidence has been provided on how the flood risk to future development will be managed and whether the flood planning level (i.e. 1%AEP + 0.5m) will be achieved</p>	
<p>Figure 8 of the report indicates significant flood affectation in the 1% AEP over a road in Stage 5 north. It is unclear how future residents in this location will achieve 1% AEP flood free access during this storm event and compliance with item 41 of the statement of commitments</p>	
<p>Figures 8 and 13 of the report indicate significant increased flood affectation (>0.4m) downslope of the CUDP for both the 1% AEP and PMF events, with no explanation on how these impacts will be managed. This is contrary to item 11 of the SEARS</p>	
<p>Figure 12 shows between 0.5-1.0m of flood affectation in the PMF to the town centre (east) and residential areas Stage 7A, town centre and stages 4, 8, 9. It is unclear how the flood risk to future development will be managed for this event.</p>	
<p>Figure 13 shows significant increased flood impacts in the PMF (>0.4m) within the Wollongong LGA, school site, retirement site and town centre east when compared to the existing scenario. It is unclear how flood risk to future development in these areas will be managed for this event. Also it is unclear what the maximum increase in flood levels are within the affected areas</p>	
<p>Figure 14 shows significant increased flood impacts in the PMF, however it is unclear what the maximum increase in flood levels are for the affected areas</p>	
<p>A map should be provided indicating the differences between the 1% AEP and PMF events for the CUDP to identify the potential flood affectation beyond the flood planning level of 1% AEP + 0.5m</p>	

Issue Raised	Comment/Design Response
There is no information in the report on the assumptions made for Manning's roughness and % imperviousness for the proposed development. This information is critical in the assessment of flood reports	
Statement of Commitments	
As highlighted in comments and recommendations for Item 7 Biodiversity (GDE's and Aquatic Ecosystems) Item 8 Riparian Impacts the revised SoC's are considered unsatisfactory.	The proposed modifications to the SoCs have been amended as part of this RTS and no longer seek to delete Commitment 35 and Commitment 37. Refer to Appendix L .

Shellharbour City Council

Covering Letter

Issue Raised	Comment/Design Response
Land Use Planning	
<p>It is considered that there is no planning justification for the proposed modification. It is not required to meet identified housing supply shortages or deficiencies in housing mix within the local government area or region.</p>	<p>Several justifications for the increased density are included in both the EAR and the Social and Economic Impact Assessment.</p> <p>Based on 2016 Census data, the average rental paid for a 3-bedroom house increased by 25% between 2011 and 2016 (for both LGAs). Even more concerning, NSW Government data indicates that rental growth for 2-bed units continued at 6% in both LGAs during 2017. This modification can also assist the local housing market by providing forms of housing that are more affordable, thereby reducing pressure on rental accommodation. The proposed amendment would allow for a larger number of properties that are attractive to investors, in the form of small lot detached homes and apartments, with density located close to the town centre.</p> <p>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. The proposed increase in dwelling 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>
<p>The proposed modification to the Concept Plan Approval further moves the project away from the State Significant Precincts State Environmental Planning Policy (SEPP) under which the land was zoned for urban development. There will be inconsistencies between the concept plan and the SEPP which will create confusion and derogate the zonings and planning provisions in the SEPP.</p>	<p>Clause 3B(2)(a) and (f) of Schedule 2 of the EP&A (Savings, Transitional and Other Provisions) Regulation 2017 give effect to the approved concept plan. This provision provides that the concept plan prevails over any inconsistency between the concept plan and an environmental planning instrument.</p>
<p>The proposed modification creates uncertainty in the assessment of major development applications currently before Council for subdivisions in Calderwood. These include development applications for subdivision on land not controlled by Lendlease but are affected by the proposed changes.</p>	<p>No impact to current DAs. Mod 4 to the Concept Plan has no status or effect until determined. The Concept Plan is proposed to be amended to reflect the DAs that have been lodged by the non-core landowners.</p>
Traffic and Transport	
<p>Some fundamental assumptions and outputs of the traffic modelling are questioned and it is considered that the impacts of the proposed modification on the road network are considerably understated.</p>	<p>Refer to the traffic response prepared by Cardno at Appendix I.</p>
<p>The timing and funding of significant road upgrades is a major concern</p>	

Issue Raised	Comment/Design Response
The impacts on major transport upgrades such as the design of the Albion Park Bypass (Tripoli Way) is a major concern	
Open Space Provision	
The proposed quantum, type, location and quality of additional open space and sporting facilities in its current form is unacceptable	<p>Lendlease has met with Council in respect of the proposed open space and has incorporated a number of amendments into the proposed open space plan to address Council's concerns, including the relocation of the local park (L14) in Stage 5 to make this park more central and accessible. The proposed additional sports fields in the south have also been removed in response to Council's concerns. The majority of the proposed open space and sporting facilities are consistent with the approved Concept Plan.</p> <p>The revised open space plans are provided at Appendix J.</p>
Environment	
The Proponent for the proposed modification has not appropriately addressed the environmental impacts of the proposed changes, especially riparian corridors, threatened endangered communities, and threatened flora and fauna.	Eco Logical undertook an assessment of the 2010 lot layout and the new 2018 lot layout to determine whether any additional impacts on threatened ecological values would be likely. The assessment determined that there would be no additional impacts on riparian corridors, threatened endangered communities, and threatened flora and fauna due to the increase in yield. This was based on examining the change in footprint, the likely indirect impacts and assessing against any mapped riparian corridors, threatened endangered communities and threatened flora and fauna.
The Proponent has still not identified a clear pathway for the appropriate ongoing sustainable ownership and management of environmental lands	Lendlease is still working to find a suitable solution to the ongoing ownership and management of environmental lands. The solution will be presented to Council in due course.
It is considered that the proposal requires referral to the Commonwealth under the Environmental Protection and Biodiversity Conservation Act.	Commonwealth matters are a separate jurisdiction and Lendlease is making its own assessment consistent with the guidelines.
Water Cycle and Flood Management Strategy	
The proposed modification has potential flooding impacts for areas already subdivided within the project area (roads and private property) as well as land downstream from the project area.	There are no additional flood impacts as a result of Mod 4. Refer to the JWP report at Appendix F .
Some fundamental assumptions contained in the flood modelling are questioned including impervious to non-impervious ratios, which may have an impact on flooding behaviour.	Refer to detailed response letter prepared by JWP at Appendix F . It is noted that Cardno has peer reviewed the flood assessment and concurs with its conclusions and recommendations (see Appendix G).
Changes to road infrastructure, such as bridges, have not been assessed for their potential flooding impacts.	Changes have been assessed as part of the revised WCFM report refer to Appendix F .
The proposed modification will result in a substantial increase in storm water treatment devices that Council will be required to manage and maintain.	Proposed MOD 4 results in 28 stormwater treatment devices which is a decrease from 31 devices approved as part of the Original Concept Plan.

Issue Raised	Comment/Design Response
Assets and Maintenance	
The maintenance by Council of the additional infrastructure required as a result of the modification may be financially unsustainable.	The additional population will pay additional rates which will contribute towards the ongoing maintenance of the open space provided. Development applications will be lodged for the new parks and Council will be able to have input into the embellishment of the parks such that they are able to influence the ongoing maintenance requirements of such spaces.
The apportionment of costs for the development of the additional infrastructure outside of the project area is unresolved and in its current form is unacceptable.	Any additional infrastructure required as a result of the proposed modification is either provided for in the modification application or will be addressed separately in VPA negotiations. Lendlease is satisfied that adequate provision will be made for any additional infrastructure.
Voluntary Planning Agreement	
The existing voluntary planning agreement between Council and Lendlease does not contemplate the magnitude of the proposed changes.	A letter proposing entering into a new VPA in respect of additional contributions as a result of the modification application will be submitted to Council under separate cover.
While Lendlease have indicated their willingness to review the current voluntary planning agreement, Council is currently uncertain as to whether the appropriate type and level of community infrastructure required will be provided for.	Refer to Section 2.1.7 and Appendix M of the RTS/PPR report.
Statement of Commitments	
The proposed modifications to Lendlease's Statement of Commitments cannot be supported in their current form.	The majority of the proposed modifications seek to update the reference to the revised documents but do not seek to change the intention of the commitment.

Detailed Attachment

Issue Raised	Comment/Design Response
<p>Land Use Planning</p> <p>1.1 Justification Council does not consider that the proposed modifications are justifiable on planning grounds. The application is supported by an Environmental Assessment Report (EA) prepared by Ethos Planning.</p> <p>Council Officers have reviewed this report and would like to make the following comments: a) The EA supporting the application states: <i>There are two main reasons for Lendlease proposing to modify the Approved Concept Plan. The first is to enable the delivery of more housing to meet strong demand for new housing in the Wollongong and Shellharbour council areas. The second is to enable Lendlease to continue to deliver more diverse housing types and houses on a greater range of lot sizes, to respond to changing homebuyer preferences and assist with easing housing affordability pressures that are particularly acute in the Illawarra. The increased residential capacity will also ensure that the existing area of urban zoned land at Calderwood is efficiently used for the continued supply of a range of housing types.</i></p> <p>With regards to enabling the delivery of more housing to meet strong demand for new housing in the Wollongong and Shellharbour council areas. Council does not believe that the increase in dwellings is necessary to meet the demand for housing from a strategic regional planning perspective. This is supported by the Illawarra/Shoalhaven Regional Plan which states: <i>"The major regional release areas of West Lake Illawarra and Nowra-Bomaderry will continue to be the long term focus for Greenfield housing in the region. Other established and smaller release areas will add to the diversity of supply such as Shell Cove, Tullimbar, Haywards Bay, South Kiama, West Culburra, Vincentia, Sussex Inlet, Manyana and Milton-Ulladulla. West Lake Illawarra and Nowra-Bomaderry alone have a combined capacity of 37,600 lots, representing a 30- to 40-year supply of housing. This means that Wollongong, Shellharbour and Shoalhaven Councils have the capacity to meet their projected housing needs for Greenfield land supply well beyond 2036."</i></p> <p>The EA also states that: <i>the shortages of housing supply across the Illawarra region remain in place, 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 undersupply 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.</i></p> <p>Council does not agree with this position.</p> <p>The Illawarra-Shoalhaven 2017 Monitoring Report, 813 Greenfield dwellings were approved in the 2016-17 year and 2,482 dwellings were supplied in the 2016/17 year. Greenfield housing supply has increased every year over the last five years. As new developments come online in West Dapto, Tullimbar, Shell Cove, Haywards Bay, South Kiama, West Culburra, Vincentia, Sussex Inlet, Manyana and Milton-Ulladulla this is likely to far exceed the requirements for housing. The Implementation plan,</p>	<p>The EAR as submitted has adequately addressed the Illawarra/Shoalhaven Regional Plan. Calderwood is identified within the plan as one of the key opportunities for new homes within the Illawarra. The outlook for the next ten years is not expected to be as strong and, as the property cycle weakens, supply is expected to drop well below the target average of 1,200 dwellings per annum for the combined Shellharbour and Wollongong region. The proposed increase in project yield will be critical to achieving the Strategy target in the next ten-fifteen years.</p>

Issue Raised	Comment/Design Response
<p>when discussing West Dapto, states that “an additional 2,496 lots are now zoned and service ready for development”.</p>	
<p>Shellharbour City Council's LEP provides flexibility in the residential zones in the existing parts of the LGA that have suitable infrastructure and facilities which are well established. The R2 Low Density Residential zone within the Shellharbour LEP 2013 permits both dual occupancies and multi-dwelling housing developments. As a result of the flexible zoning and large residential blocks in established residential areas, which are close to facilities including rail transport to Sydney, there have been a large number of dual occupancies, secondary dwellings and multi-dwelling housing developments constructed in recent years. This increase is already providing a range of housing types and lot sizes to meet market demand.</p>	<p>The proposed modification to the approved Concept Plan is consistent with these principles and establishes locational requirements to ensure that additional density will achieve a high level of residential amenity and be provided in walking distance to key services.</p>
<p>Shellharbour City Council's current population is predicted to grow from 70,511 (2016) to 87,200 (2036) and 50% of the working population work outside of our Local Government Area. Increasing the population in an area which is poorly serviced by public transport will place an unreasonable impact on the local and regional road network as people will need to travel to their place of employment. The Proponent is proposing an increase in the maximum amount of retail floor space but it has been in ongoing discussions with Council about the provision of mixed use or retail space within the village centre. The Proponent has not proposed any mixed use development within the currently approved village centre, which was to be developed at an early stage, and continues to provide residential development (only) within this space.</p> <p>The village centre was to incorporate a range of “retail, commercial, business, light industrial, education, entertainment, civic, community, recreation, residential, tourist and visitor accommodation and mixed use employment”. The environmental arguments that formed part of the concept plan were that “the project makes special provision for home based businesses and working from home this will reduce car dependency and trip generation rates”. The village centre was to be “located in an early stage of the project to provide a ready supply of local retail and basic temporary community needs”.</p> <p>The concern from Council's point of view is that Lendlease appear to be diluting the character and range of uses within the village centre. Council is concerned that, to date, Council has not been presented with an up-to-date plan for the village centre and over time with each approval, there will ultimately be a reduction in the opportunities to provide a village centre. Council is concerned that the village centre will end up being a small-scale supermarket surrounded by residential uses. However, the Proponent is putting forward an argument for increased density based on the presumption that people will be able to work from home or be within walking distance of a range of facilities and uses.</p> <p>However, the Proponent is proposing to remove these live/work options around the village centre. The DAs that are being lodged or pre-DA meetings being lodged with Council are not matching the concept plan.</p>	<p>The proposed modification does not change the approved Concept Plan requirement that the Village Centre will contain a maximum 5,000sqm of retail floor space and approximately 1,000sqm of mixed use floor space.</p> <p>The detailed use of both the town and village centres will be the subject of separate future development consent. We anticipate that the village centre will contain:</p> <ul style="list-style-type: none"> • A supermarket • Child care centre • Specialty shops and services <p>It is noted that a critical mass of residential development is required before retail becomes viable in the village centre.</p> <p>We note that in response to issues raised in other submissions, the locational criteria for increased density on sites within 400m of the Village Centres has been removed from this application such that increased density is no longer proposed on land within 400m of the Village Centre.</p> <p>Lendlease has also delivered adjacent to the village centre the 37 home display village, the temporary community facility and the Sprout and part of the 3.8 hectare district park (D4).</p>

Issue Raised	Comment/Design Response
<p>b) The EA supporting the application states:</p> <p><i>“There is no change proposed to the minimum lot sizes prescribed by the SSP SEPP, Condition B6 and as already prescribed by the DCS.”</i></p> <p>This is not correct. The proposal seeks to amend the criteria for integrated and small lot housing. Condition B6 of the concept plan approval states:</p> <p><i>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 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:</i></p> <p><i>a) public parks at least 0.3ha in size, or</i></p> <p><i>b) the Town and Village Centres.</i></p> <p><i>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.</i></p> <p>The proposed modification seeks to make integrated and small lot housing permissible on land being within 800m of the Town Centre and 400m of the Village Centre and also to reduce the public park component to 0.2ha. Therefore, small lot housing may be proposed on a lot 400m away from what may end up being just a small scale supermarket. This proposed change to the minimum lot sizes should be rejected.</p>	<p>The minimum lot size is not proposed to be changed. This remains at 300m² in the general residential locations.</p> <p>The modification has been amended and the locational criteria for increased density on sites within 400m of the Village Centres has been removed from this application.</p> <p>The proposed modifications to Condition B6 are detailed in Section 3.3 of the Response to Submissions Report. The amendments proposed in respect of the subdivision of integrated housing are consistent with those occurring within the Sydney Growth Centres.</p>
<p>c) The EA supporting the application states:</p> <p><i>“The proposed amendment would allow for a larger number of properties that are attractive to investors, in the form of small lot detached homes and apartments, with density located close to the town centre. This housing would be ideal as a mode for rental properties, to meet the needs of tenants who qualify for rental assistance under FACS social housing programs.”</i></p> <p>Council’s concern, as raised earlier, is that the Proponent has been diluting the village centre and may do the same with the town centre, whenever this comes on-line. Currently there is no identified timeline for the establishment of the town centre. The potential for dense low rental housing in an area with potentially limited or non-existent retail or community facilities is a major concern for Council.</p>	<p>No modifications to the village centre are proposed as part of this application.</p> <p>It is noted that an Expression of Interest for the Village Centre was released in late 2018 and a due diligence period is underway with a preferred tenderer. Development applications will be lodged in due course for this development.</p>
<p>d) The EA supporting the application states:</p> <p><i>“No changes are proposed that would directly affect lots that have already been subdivided and sold, or those stages with current subdivision development applications (either under assessment by Council or approved).”</i></p> <p>It is unclear how the Proponent has made this assumption. The modified concept plan seeks to create</p>	<p>On reflection this statement should have been made in respect of the lots being delivered by Lendlease.</p> <p>The Concept Plan has been updated to reflect the subdivision layouts as proposed by the non-core landowners.</p> <p>The locational criteria in respect of the village centre is no longer part of the</p>

Issue Raised	Comment/Design Response
new housing options, smaller lots within 400m walking distance to the village centre and also to create different open space requirements within areas which have already been considered by Council.	modification application.
<p>e) The EA supporting the application states: “</p> <p><i>No substantive changes are proposed to the Approved Concept Plan in respect of approved land uses, the urban structure of the development, the road and pedestrian network within the site, the overall range of minimum lot sizes/dwelling types/lot types to be provided, nor the scope of environmental protection outcomes for the land including the quantum and configuration of riparian and environmental corridor and environmental reserve lands.”</i></p> <p>Council disagrees with this conclusion. The proposal seeks to create new “land use” concepts such as “village centre – residential” and “town centre – residential”. In essence, what is proposed is a change from the B4 Mixed Use zone to an R3 Medium Density Residential zone. The proposal no longer seeks to create a mix of land use types in these areas, but rather a higher density of residential accommodation. The proposal includes circles on a map to show a 400m radius (village centre) and 800m radius (town centre) walking distance. However, no consideration has been given to the topography in these areas.</p>	<p>MOD 4 does not incorporate any proposed zoning amendments. B4 Mixed Use zone permits low to medium density residential that ensures vibrant and accessible Town and Village Centres. The Calderwood Valley Urban Design Study demonstrates the potential Town Centre development options as the central focus of Calderwood Valley. A radius of 800m is generally accepted as being within ten-minutes walking distance of the centre and 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.</p> <p>Land within the 800m radius of the Town Centre is generally flat and not impacted by significant barriers to pedestrian movement. RPS has undertaken a pedshed analysis which has demonstrated areas within 800m walking distance to the Town Centre. This is presented in the Updated Urban Design Report at Appendix C.</p> <p>The 400m radius has been deleted from the village centre.</p>
<p>f) The proposal seeks to increase the size of the community facility and provide this in the town centre on a site “that is accessible and visually prominent”. This is supported by Council. However, given that there is no timing around the delivery of the town centre and the community facility will need to be delivered when the 3000th dwelling has a construction certificate or 12 months after the issue of a subdivision certificate (whichever comes first). The community facility may be delivered on an isolated site which is not a good community outcome. Greater clarity and commitment must be given on the timing and delivery by the town centre.</p>	<p>The timing for the delivery of the Community Centre remains consistent with the original approval of the Concept Plan.</p> <p>Lendlease has relocated the community centre to the corner site at the intersection with Escarpment Drive and Calderwood Road near the education precinct, as discussed with Council.</p> <p>At this stage, the town centre is likely to be delivered around 2025.</p>
<p>g) It is unclear how the Department of Education has agreed to the reduction in the school site from 3ha to 2ha and also how the timing being delayed will impact upon traffic during peak hours as people will be travelling outside of the precinct for drop off/pick up. Careful consideration needs to be given to the reduction in space for the school to ensure that this reduction is not reliant on other space within the precinct to provide satisfactory services (e.g. public open space areas, etc.).</p>	<p>The submission made by the Department of Education, in relation to MOD 4 supports this proposed modification, and states:</p> <p><i>“The department requests that the delivery of land for the schools remain linked to the number of residential allotments released, and not be tied to a specific year. It is acknowledged that in previous discussions with the proponent it was indicated that the new high school may be delivered in or near 2031, however our more recent assessment suggests that it is more prudent to retain the “trigger” based on the number of lots released, but to revise the milestone for school land dedication to 4,500 allotments. This approach allows the site to be acquired with sufficient time for planning and delivery of the high school in response to population growth and demand for government high school teaching space in the wider locality.”</i></p>
<p>1.2 Conditions of Approval</p> <p>The following comments specifically relate to the proposed and suggested amendments to the</p>	

Issue Raised	Comment/Design Response
<p>conditions of the Concept Plan Approval.</p> <p>a) The Proponent is seeking to amend Condition A1 of the Concept Plan approval (on pages 38 and 39 of the Environmental Assessment report) to ensure that residential land uses are identified in the range of permissible uses in the mixed use areas. It is clearly acknowledged by Council that the residential uses are permissible in the mixed use areas. What is not clear is that the Proponent intends to use mixed use areas for increased residential density without providing other uses within these areas. It is not clear how an increase in residential density, at the expense of other land uses (e.g. retail, commercial, etc.) is to be supported without placing pressure on other infrastructure (e.g. road network, community facilities, etc.).</p>	<p>Proposed modifications to Condition A1 (b) are to clearly articulate that mixed use areas can contain a mix of uses and are not exclusive to employment uses. This is consistent with the land uses permissible and the objectives of the B4 Mixed Use Zone.</p>
<p>b) The Proponent is not proposing to amend Condition A2 (3) of the concept plan approval which requires any approval given by Council under Part 4 of the Act "must be consistent with that concept plan". This should be changed given that this is not a requirement of the Act which only specifies that "a consent authority must not grant consent under Part 4 for the development unless it is satisfied that the development is generally consistent with the terms of the approval of the concept plan". The suggested amendment is made in order to reduce confusion.</p>	<p>This condition is now proposed to be amended as suggested.</p>
<p>c) Condition A4 will need to be amended but has not been referred to by the Proponent. An updated concept plan will be required which takes into consideration all of the amendments proposed under MOD 4.</p>	<p>Not required. This condition has been satisfied previously. All amendments made in MOD 4 are consolidated within the application.</p>
<p>d) No changes are proposed to Condition A5 of the concept plan approval. This condition should be modified to refer to the Landscape Master Plan prepared by Taylor Brammer as this is the further agreement that was arranged after the concept plan was approved.</p>	<p>Not required, Condition A5 relates to the approval authority for documentation required to be prepared and approved in the Statement of Commitments.</p>
<p>e) The reasoning for the amendment to Condition B6, as stated on page 40 of the EA:</p> <p><i>i. "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 agreement 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."</i></p> <p>It is unclear why Council should consider a subdivision certificate before the dwellings are complete. There is no justification provided for this change or why increased density should be considered within 400 metres of a village centre and 800 metres of a town centre. It is unclear where those distances have come from or where they are measured from as the Proponent is proposing parts of the village centre and parts of the town centre only include exclusively residential development.</p>	<p>The early release of the subdivision certificate assists in reducing the construction costs of the dwellings and therefore increases housing affordability.</p> <p>There is criteria contained within condition B6 which gives certainty to Council that an acceptable amenity and urban design outcome will be achieved notwithstanding the early release of the subdivision certificate. It is noted that the Council is still able to apply discretion in the application of this element of the draft condition.</p>
<p>f) The Proponent proposes the deletion of the words in Condition B6 which currently states:</p> <p><i>i. "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."</i></p>	<p>It is not considered appropriate to modify the SEPP in this instance.</p> <p>If a development proposal satisfies the criteria contained within condition B6 then it is considered a waiver under SEPP 1 is not required. The proposed amendment seeks to clarify this.</p>

Issue Raised	Comment/Design Response
<p>It is acknowledged that Clause 3B(2)(f) of Schedule 2 of the Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017 states:</p> <p><i>ii. "the provisions of any environmental planning instrument or any development control plan do not have effect to the extent to which they are inconsistent with the terms of the approval of the concept plan",</i></p> <p>However, it is not in the community's best interests to create a situation where the control in a State Environmental Planning Policy no longer continues to apply because a Concept Plan contains separate controls, this only creates confusion. The SEPP should be modified to remove this inconsistency.</p>	
<p>g) No changes are proposed by the Proponent in relation to secondary dwellings, with Condition B6(10) stating:</p> <p><i>10) Design controls shall be prepared for secondary dwellings and submitted to the Department of Planning for approval</i></p> <p>The controls relating to secondary dwellings need to be carefully considered and controlled. An example of what could happen is provided below. In Stage 3B South, the majority of which is within 400m of the village centre (a part of this stage is within the village centre but is proposed to only be used for residential purposes), the average lot size proposed is 412m². Twenty-eight (28) of the 102 residential allotments have an area of between 400 and 500 metres². Pursuant to the amended Condition B6, each of these 28 lots could be further subdivided for the purposes of integrated housing or a dual occupancy. Using a conservative measure of 2 dwellings on each of the 28 lots, the dwelling density could go from 28 dwellings to 56 dwellings, just on the 400 to 500 metres² lots within Stage 3B South. If each of the lots above the 400m² have dual occupancy proposed, this would increase the project dwelling total from 42 dwellings (one on each lot) to 84 dwellings. Combined with the 60 dwellings on the lots 300 to 400m² this is already 144 dwellings. Then there is the super lot which has an area of 1,626.4m² and then the B4 zoned lot which has an area of 18,249.8m². It is likely that the 156 anticipated dwellings will be far exceeded under the proposed controls.</p> <p>Secondary dwellings and the possibility of further subdivision of lots within the approved/proposed subdivisions requires careful consideration as it is likely that with the change in controls the anticipated dwellings numbers are incorrect.</p>	<p>The DCS has been amended such that secondary dwellings are now only permitted on lots greater than 450m², this is consistent with the Affordable Rental Housing SEPP.</p>
<p>h) It is questioned whether Condition C12(c) needs to still require consultation with the Department of Planning. Voluntary Planning Agreements (with each Council and the State Government) will need to be in place for the provision of local roads. If VPAs are in place is there a continuing need to consult with the Department?</p>	<p>Given the history of negotiations between Lendlease and Council on this site, it is preferred that the Department continues to be involved in these discussions.</p>
<p>1.3 Statement of Commitments</p> <p>The following comments specifically relate to the proposed amendments to the Statement of Commitments of the Concept Plan Approval.</p> <p>a) General comment – the appendices referenced in the tracked changes document in the modification application need to be checked as some of them appear to be incorrect;</p>	<p>Revised Statement of Commitments is submitted at Appendix L of the RTS which contain updated references.</p>

Issue Raised	Comment/Design Response
<p>b) Commitment 2 – Council have not agreed to take ownership of the Johnston’s Spur Area. Therefore this matter remains unresolved. However, an alternate wording for Commitment 2 is as follows:</p> <p><i>The Proponent will dedicate that part of the Johnston’s Spur conservation area identified as Item E2 06 on the Land Ownership Options Plan included at Appendix H of the Consolidated Concept Plan prepared by JBA dated March 2011 (previously referenced as Appendix I of the Preferred Project Report prepared by JBA Urban Planning Consultants Pty Ltd dated August 2010) to the Department of Lands or relevant local council and “under reserve” on a stage by stage basis, subject to the negotiation and agreement of the Department of Lands or relevant Council to take ownership of this land.</i></p> <p><i>If the Department of Lands or Council does not agree to take ownership of this land, the Proponent will identify a suitable alternative public or private land ownership option at the relevant subdivision stage. Any land to be transferred into public ownership in accordance with this commitment will be subject to an identified management regime. The land will only be transferred upon completion of any agreed implementation of a Vegetation Management Plan or other embellishment and a suitable period of maintenance (eg 5 years).</i></p>	<p>Lendlease is still working to find a suitable solution to the ongoing ownership and management of environmental lands. The solution will be presented to Council in due course.</p>
<p>c) Commitment 3 – A new land ownership map should be prepared to accompany MOD 4. The ownership map should only show land that is proposed to be dedicated back to Council and the remainder should be private ownership (i.e. all of the riparian corridors should be shown as purple and not orange or light blue). Also, the colours used should be easier to identify between Shellharbour City Council and Wollongong City Council. These lands will stay in private ownership until or unless agreements are made so the ownership map should show purple (private) unless it relates to a park or a wetland which is required for local drainage.</p> <p>Council have not agreed to take ownership of environmental reserves. Therefore this matter remains unresolved. However an alternative wording for Commitment 3 is as follows:</p> <p><i>The Proponent will dedicate the environmental reserves identified as Items E2 04 and E2 05 on the Land Ownership Options Plan included at Appendix H of the Consolidated Concept Plan prepared by JBA dated March 2011 (previously referenced as Appendix I of the Preferred Project Report prepared by JBA Urban Planning Consultants Pty Ltd dated August 2010) to the Department of Lands or the relevant local council and “under reserve” on a stage by stage basis, subject to the negotiation and agreement of the Department of Lands or relevant Council to take ownership of this land.</i></p> <p><i>If the Department of Lands or Council does not agree to take ownership of this land, the Proponent will identify a suitable alternative public or private land ownership option at the relevant subdivision stage. Any land to be transferred into public ownership in accordance with this commitment will be subject to an identified management regime. The land will only be transferred upon completion of any agreed implementation of a Vegetation Management Plan or other embellishment and a suitable period of maintenance (eg 5 years).</i></p>	<p>Not required. The proposed modifications to this commitment only allows for the potential future transfer of this land to Council in addition to the Department of Lands as currently approved.</p>

Issue Raised	Comment/Design Response
<p>d) Commitment 4 – As per the comment above – this should remain purple as the Proponent has had 8 years to arrange a separate ownership arrangement and this should stay purple (private) until such an agreement is in place. Council have not agreed to take ownership of riparian corridors. However an alternative wording for Commitment 4 is as follows:</p> <p><i>The Proponent will dedicate the riparian corridor and adjoining open space/drainage lands identified as Items E2 01, 02 and E2 03, and RE1 01-02, RE1 04, RE1 09, RE1 12, RE1 15, RE1 22 and RE1 28 on the Land Ownership Options Plan included at Appendix H of the Consolidated Concept Plan prepared by JBA dated March 2011 (previously referenced as Appendix I of the Preferred Project Report prepared by JBA Urban Planning Consultants Pty Ltd dated August 2010) prepared by JBA Urban Planning Consultants Pty Ltd dated August 2010 to the Department of Lands or relevant local council and “under reserve” on a stage by stage basis, subject to the negotiation and agreement of the Department of Lands or relevant Council to take ownership of this land.</i></p> <p><i>If the Department of Lands or relevant local council does not agree to take ownership of this land, subject to the underlying land use zone, the Proponent will identify a suitable alternative public or private land ownership option at the relevant subdivision stage. Any land to be transferred into public ownership in accordance with this commitment will be subject to an identified management regime. The land will only be transferred upon completion of any agreed implementation of a Vegetation Management Plan or other embellishment and a suitable period of maintenance (eg 5 years).</i></p>	<p>Not required. The proposed modifications to this commitment only allows for the potential future transfer of this land to Council in addition to the Department of Lands as currently approved.</p>
<p>e) Commitment 5 – The proposed changes to the commitment are not accepted by Council as they are part of a wider unresolved issue relating to the application of the VPA and the appropriate provision of community infrastructure. The Department should not determine the application until this issue is resolved to the satisfaction of Council.</p>	<p>The proposed amendments to Commitment 5 only relate to the inclusion of non-core landowners.</p>
<p>f) Commitment 6 – Council is currently not in a position to agree with Appendix J as it relates to unsettled issues of open space provisions, embellishment and delivery. The Department should not determine the application until this issue is resolved to the satisfaction of Council.</p> <p>g) Commitment 7 – Council is currently not in a position to agree with Appendix J as it relates to unsettled issues relating to the provision of community infrastructure.</p> <p>h) Commitment 8 – Council is currently not in a position to agree with Appendix J as it relates to unsettled issues relating to the provision of community infrastructure.</p> <p>i) Commitment 9 – Council is currently not in a position to agree with Appendix J as it relates to unsettled issues relating to the provision of community infrastructure.</p> <p>j) Commitment 19 – The proposed changes to the commitment cannot be accepted as Council has not approved the modified DCS.</p> <p>k) Commitment 20 – The proposed changes to the commitment cannot be accepted as Council has not approved the modified DCS.</p> <p>l) Commitment 21 – The proposed changes to the commitment cannot be accepted as Council has not approved the modified DCS.</p>	<p>The proposed modification to this commitment only relates to the update of documentation associated with the Concept Plan and the inclusion of non-core landowners. These changes are administrative in nature only.</p>
<p>m) Commitment 23 – These measures should be consolidated so readers of the document don't need to</p>	<p>The proposed modification to this commitment only relates to the update of</p>

Issue Raised	Comment/Design Response
look through the old documents to find what the Proponent is required to do.	documentation associated with the Concept Plan. These changes are administrative in nature only.
n) Commitment 24 – It is unclear how this be achieved. It is also unclear what “community” this will this apply to. The Proponent has provided a list of initiatives they will be “investigating” but there is no specificity in regards to outcomes. It is also unclear as to whether the star rating applies to the entire precinct or just that part which is constructed after the MOD 4 application is determined.	<p>The Calderwood Valley has achieved a 6-star Green Star Communities Rating and the certificate is appended at Appendix O.</p> <p>All commitments and obligations made in respect of the GreenStar ratings have been made by Lendlease 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.</p>
o) Commitment 27 – It is unclear whether best practice measures include the adoption of technologies to reduce the demand or need for servicing.	This is not required as the project has achieved certification as 6-star Green Star Communities Rating.
p) Commitment 28 – Proposed to be deleted. This commitment must remain as it refers specifically to Environmentally Significant Lands, which are not referred to in the Condition C3 of the Concept Plan.	Commitment is not proposed to be deleted. The proposed modification to this commitment only relates to the update of documentation associated with the Concept Plan. These changes are administrative in nature only.
q) Commitment 35 – Proposed to be deleted. This commitment must remain as it refers specifically to Environmentally Significant Lands, which are not referred to in the Condition C3 of the Concept Plan.	<p>The revised statement of commitment proposes to retain Commitment 35 following commentary from agencies including Shellharbour Council. The revised commitment states that vegetation management plans shall be submitted at each relevant application stage for lands identified on the Special Subdivision Area map (SSA map) (Lendlease 2017). The SSA map is generally consistent with the areas of ESL originally mapped within the approved concept plan. The SSA map is largely consistent with the riparian corridor network within the approved concept plan</p> <p>.</p>
r) Commitment 37 – Refers to surveying for the Illawarra Greenhood Orchid which is proposed to be deleted as surveys have been conducted. As the project spans 20 years, surveys conducted at the start of the project are no longer valid. Surveys must be conducted as required at each stage of the development and the commitment must remain.	<p>Eco Logical Australia has conducted full surveys of all areas of potential habitat for <i>Pterostylis gibbosa</i>. Surveys were undertaken when the species was known to be in flower. Survey effort is as follows:</p> <ul style="list-style-type: none"> • September 2012 across all patches of good quality Illawarra and South Coast Lowland Forest and Woodland consistent with the SoC • October 2016 across all boundaries of ESL Land • December 2016 across all patches of potential habitat within Stage 3C. <p>The remaining stages that have not been developed do not contain potential habitat for this species and would not require survey consistent with Statement of Commitment 37. This commitment has been fully adhered to and does not require further action.</p>

Issue Raised	Comment/Design Response
<p>The following comments relate to existing statement of commitments that are not proposed to be amended by the proposed modification but should be considered by the Department:</p> <ul style="list-style-type: none"> Commitment 25 – This should be expanded as it is difficult to measure at the subdivision stage as it is difficult to measure compliance with this commitment; Commitment 26 – Dwellings can be subject to CDCs – BASIX is not relevant at the subdivision stage – is this commitment really necessary? Commitments 29 and 30 – The commitments should detail what a “riparian corridor” actually means – it should be provided in accordance with the relevant guidelines produced by NRAR. This includes planting. Commitment 47 – is this required at the DA stage or CC stage? 	No modifications required or proposed.
Water cycle and Flood Management Strategy	
<p>a) A new flood model – as part of this Mod 4, Lendlease has engaged a new flood consultant to review the flood modelling undertaken as part of the previous approvals. This new modelling is based on Council's Flood Study (adopted in 2017). Lendlease's consultant J. Windum Prince has incorporated as-constructed aspects of the Calderwood development into the model. It is evident from the model results that various points in the statement of commitments are now shown to be inconsistent with respect to flood risk and management of that risk.(e.g. Commitment 41). Specifically, the bridge over the rivulet built as part of stage 1 was intended to be designed such that it would provide flood free access. However, the new modelling indicates that this is not the case (see image below).</p>	A detailed response to these items has been provided by JPW at Appendix F .
<p>Council believes that Lendlease must address this issue and provide details regarding what remedial works they propose to undertake in the floodplain to ensure that the flood free access can be met and that all commitments in the statement of commitments are being satisfied. Furthermore, Council is now examining what notations it should be placing on planning certificates whilst this issue is being resolved. This may include placing a notation on those properties that are now identified as flood prone that under the original Flood Management Strategy were not flood affected.</p>	
<p>b) Flood Impacts – It is evident from the flood maps that there may be significant and far reaching flood impacts in some areas downstream of the development.</p>	
<p>c) The Rienco Flood Model – The MOD 4 application proposes to be informed by the new flood modelling (which is based on Council's Adopted Flood Study model). Council is unclear about what this means for the developers within the non-core lands that are currently seeking DA approval for applications that are based on the previous Rienco/Cardno modelling. Are these developers expected to abort all work done using the Rienco model and use only the new JW Prince model that is based on Council adopted flood study? The possible implications of developments currently being assessed should be addressed prior to the determination of the modification to the Concept Plan approval.</p>	
<p>d) The Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-Use Planning Decisions is referenced in the Watercycle and Flood Management Strategy and has been recommended by EPA/OEH. The report incorrectly states that</p> <p><i>“Neither Shellharbour City nor Wollongong City Councils indicated that this work had already been</i></p>	

Issue Raised	Comment/Design Response
<p><i>performed for the Lake Illawarra catchment and did not indicate expectations that the proponent would develop or apply such a framework to the CUDP."</i></p> <p>Shellharbour and Wollongong Council are working together with OEH to have the Risk based Framework implemented as part of the Draft Lake Illawarra Coastal Management Program (CMP). The Department needs to consider how the Risk Based Framework will be enforced when the Lake Illawarra CMP is approved by the Minister.</p>	
<p>e) It's unclear whether Council can reasonably manage the large increase in Stormwater treatment devices that will be handed over to Council as a result of the MOD4. (proposed total of 27 wetlands which is an increase of 15 wetlands compared to the existing approval) It is likely to have a large impact on Council ability to be Fit For the Future. Comments from the EPA suggest options for ongoing maintenance of stormwater improvement measures should be investigated, however the report provides no suggested solutions other than Council to manage.</p>	
<p>f) The assumed fraction impervious for residential areas appears to be too low (50-60%) Councils experience in Calderwood is that Residential areas typically have a fraction impervious of 70-80%. This would impact the Stormwater Quality Modelling performed as part of this report.</p>	
<p>g) Although Council has licenced our adopted Macquarie Rivulet Flood Model to JW Prince for the purpose of undertaking this exercise, Council has had no assurance that there has been any quality assurance checks as to the updates made and any changes made to the model to support this application. It is suggested that a quality assurance check be performed by a peer reviewer to ensure that any changes made to the model are in accordance with industry standards and the TUFLOW user manual and guidelines.</p>	
<p>h) The flood modelling submitted with the MOD4 does not include any changes to Calderwood Road in terms of alignment (Horizontal and vertical) and form. However, other documentation within the MOD4 indicates that Calderwood road is required to be upgraded to accommodate the new development intensity. Council's knowledge of flooding and the floodplain attributes within Macquarie Rivulet means we have significant concern regarding the impacts detrimental upstream flood impacts that would occur if this road was required to be modified. As a large length of the road currently acts as a significant hydraulic structure, any raising of the road would have a significant and widespread backwater effect and impact on properties outside of the CUDP. This impact must be quantified and additional information can demonstrate how or if those impacts can be managed prior to any determination of this application.</p>	
<p>i) There is little detail in the report about how flood risk above the 1% AEP will be managed and how risk to life is to be mitigated. In this regard, the question arises, will dwellings be subject to unacceptable flood hazard in extreme events and, will they</p>	
<p>j) There appears to be a real opportunity to incorporate Stormwater Harvesting and reuse within the development area, as there are a number of nearby potential users of harvested stormwater for irrigation (eg. Sports fields, schools etc.) This would result in a significant reduction in nutrient load and have a positive impact on the receiving waters including Lake Illawarra.</p>	
Traffic and Transport	
<p>a) The Traffic and Transport Report (T&TR) for Mod 4 uses land use projections for the TRACKS</p>	<p>A detailed response to these items has been prepared by Cardno at Appendix</p>

Issue Raised	Comment/Design Response
<p>modelling which is consistent with the agreed residential and employment forecasts used in the Albion Park Rail Bypass – Addendum Traffic and Transport Assessment Report September 2017.</p>	H.
<p>It is noted that the T&TR is using vehicle trip generation rates that are consistent with those previously used by Cardno in their modelling for other stages in Calderwood. The T&TR indicates that an additional 1645 trips will be generated in the peak hour of which 1316 will be by vehicles. However the actual trips generated in the AM and PM peaks is well below what is expected for an additional 1700 dwellings. Figure 4-10 and Figure 4-11 in the T&TR show that in the AM peak only an additional 525 vehicles are added to the external road network and in the PM peak only an additional 614 vehicles. This is in stark contrast to the Traffic Report submitted with the Stage 1 application (Cardno – 4 March 2010) which indicates that the proposed 442 dwellings would result in an additional 497 vehicles in the AM peak and 519 vehicles in the PM peak on the external road network. On that basis more than half of the claimed vehicle trips are missing from the traffic modelling projections in the T&TR.</p>	
<p>The traffic modelling results appear erroneous and should be reviewed and rerun. One of the most questionable claims of the traffic modelling results shown in Figure 4-11 is that in the AM peak the proposed development of an additional 1700 dwellings will only result in an additional 40 vehicle using the M1, north of Fowlers Road Dapto which is roughly only 3% of the total trips generated. This is contrary to the, Census Journey to Work data provided in the Traffic Impact Assessment Report (Cardno 11 April 2017) submitted with Calderwood Stage 3C which indicated that 40.2% of trips generated using the external road network should be using this section of the M1. Additionally that report indicates 57.8% of external trips would use the Princes Highway south of Tongarra Road (or Albion Park Rail Bypass when completed) yet Figure 4-11 shows only an additional 34 vehicles using this route which represents again only about 3% of the total trips generated. These results question the credibility of the traffic modelling conducted for the T&TR.</p>	
<p>b) The T&TR indicates that the only necessary network upgrades required are the provision of 4 travelling lanes on Calderwood Road and the installation of traffic signals at the intersection of Calderwood Road and Tripoli Way in place of a roundabout. Again this is in stark contrast the Traffic Impact Assessment Report (Cardno 11 April 2017) submitted with Calderwood Stage 3C which identified that the intersection of Tongarra Road, Calderwood Road and Macquarie Street needed to be upgraded. The report draws the following conclusion.</p> <p><i>The Illawarra Highway / Calderwood Road / Macquarie Street will require optimisation of its existing phasing sequence and upgrades to the intersection configuration to accommodate the additional traffic generated by the CUDP Stage 3C development.</i></p>	
<p>c) The T&TR also indicates that an upgrade of the Illawarra Highway, Yellow Rock and Escarpment Drive intersection is not required. Again this is in stark contrast to Traffic Report (prepared by Cardno 12 July 2018) in support of a proposal for the development of an additional 275 lots in Tullimbar which indicated.</p> <p><i>By 2026 and with all the Tullimbar development in place, the intersections of Illawarra Highway / Yellow Rock Road and Tongarra Road / Broughton Avenue will fail. SIDRA results indicate that both intersections will be overcapacity and oversaturated, operating at a level of service of F in both peak periods.</i></p>	

Issue Raised	Comment/Design Response
<p>d) Whilst not directly related to the T&TR, Mod 4 does not propose alternative access arrangements in place of the existing Illawarra Highway and North Macquarie Road intersection. A recent assessment in conjunction with a development application for non-core land in the CDUP identified that the existing junction could not be upgraded to meet the necessary AUSTROAD alignment and sight distance design criteria. In the assessment of Mod 4 an alternative the Illawarra Highway and North Macquarie access point needs to be investigated and an alternative solution found.</p> <p>e) Council is of the opinion that details of the required upgrade of the following intersections must be provided prior to any determination of the application</p> <p>i) Tongarra Road, Calderwood Road and Macquarie Street intersection ii) The Illawarra Highway, Yellow Rock and Escarpment Drive intersection.</p> <p>f) The illustrated additional collector road between the Broughton Avenue and Escarpment Drive roundabouts has not been mentioned in any document.</p> <p>g) There is also no mention of the required North Macquarie Road / Illawarra Highway intersection upgrade, which has been determined during the assessment of current development applications.</p>	
Environment	
<p>4.1 General Comments:</p> <p>a) The Biodiversity Report prepared by Ecological states that 'Significant impacts on Illawarra and South Coast Lowland Forest and Woodland are unlikely'. Full surveys detailing the extent of EPBC Act listed matters are required to support this statement and to Council's knowledge they have not been conducted.</p> <p>It is proposed to remove over 11 hectares of potential Illawarra and South Coast Lowland Forest and Woodland and cause habitat disturbance to both The Australian Painted Snipe and Swift Parrot. Referral to the Commonwealth regarding EPBC is required as these species have been listed since the original concept plan. EPBC listing is retrospective and impacts on Matters of National Environmental Significance must be considered prior to any works commencing.</p> <p>b) An assessment of the impact of the proposal on DPI Fisheries mapped key fish habitat of Marshall Mount Creek, Macquarie Rivulet and Lake Illawarra is required in accordance with the Policy and guidelines for fish habitat - conservation and management (DPI, 2013) in the Ecological (2018) report.</p> <p>c) A number of Statements of Commitment are proposed to be changed which will have negative impacts on the long term management of significant biodiversity at the site. Details on changes and their impacts are provided earlier in this submission.</p> <p>d) Impacts on Riparian corridors and ESL by the increasing of flood mitigation has not been adequately assessed. Areas proposed for regrading- decreased elevation, adjacent to ESL require further assessment for impacts on ESL and biodiversity of Riparian River Oak Forest.</p> <p>The removal of Stream Reach 15 has not been addressed. The Proponent states that there is no modification to the Concept Plan Approval Riparian Corridor Network. This is incorrect. The removal of Stream Reach 15 must be included in the Riparian Corridor Network and an updated Riparian</p>	<p>A detailed response to these items has been prepared by Ecological and is submitted at Appendix K.</p> <p>Additional information, including explanatory diagrams, is submitted in the updated Calderwood Valley Public Domain Report and Open Space Plan at Appendix J.</p> <p>Changes to commitments 35 and 37 are no longer proposed.</p> <p>Removal of stream reach 15 has been considered by Ecological. Refer Appendix K.</p>

Issue Raised	Comment/Design Response
Consistency Report is required.	
e) Public Domain Report, New Open Space areas. Figure 4 Calderwood Open Space Design Analysis (MOD 4):	e) The relocation of Citywide Park 3 has been endorsed by Shellharbour City Council and the new location has been included in the updated Landscape Masterplan as part of the SHCC VPA, and is reflected in the Public Domain Report Appendix J.
CW3- has been moved into Citywide Bushland (from the 2011 Landscape Masterplan), this area is unsuitable for Open Space- Passive due to the steepness of the terrain	
CW3- extension- Part of Johnson's Spur is proposed to be changed to open space from ESL and E2, E3 to passive open space. This is conflicts with the objectives of ESL and the zoning. The altered management regime to accommodate passive open space requires environmental assessment. The SOC's require Vegetation Management Plans (VMP's) to regenerate these areas, the objectives of which would be inconsistent should the area be passive open space. Additionally, a number of areas have approved VMP's, which are currently being implemented. A change in land use would conflict with the objectives of the VMP's.	CW3 Park was 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.
D4- Non-core Land. This District Park is located in a Riparian Corridor, Evidence as to how this land use aligns to riparian corridor objectives is required.	D4 is not located on non-core land, it is located just north of the Village Centre.
CW2 is located in a water body (see Figure 6- Watercycle Management), which is not consistent with the requirements of passive open space.	Linear park links are not incorporated into open space calculations.
Link D4 to L11- this is a steep embankment leading to flood runners and unsuitable for passive open space.	
No areas of ESL should be utilised as public open space. Further assessment is required for any proposed creek/rivulet crossings.	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 proposed to move Local Park 12 slightly north as part of MOD 4, to be located outside the environmentally sensitive lands.
It is recommended that further consultation on suitable passive open space locations be undertaken with Council	
f) Water Cycle and Flood Management Strategy – further detail is required on the level of cut and fill that is required in order to make a full assessment of the impacts on both Groundwater Dependent Ecosystems and wider biodiversity.	Lendlease has undertaken consultation with SHCC and provide a modified response to alleviate council's concerns in the Public Domain Report in Appendix J.
Water quality targets outlined in the Risk Based Framework for Water Quality issued by the Office of Environment and Heritage, as included in the Illawarra Shoalhaven Regional Plan must be addressed. Not all ESL has been included in Figure 3 of the Water Cycle and Flood Management Strategy prepared by J Wydham Prince. This figure states it is for Marshall Mount Creek, however it covers the whole of the Concept Plan area including Macquarie Rivulet so all ESL should be illustrated.	JWP has prepared cut and fill details.
g) Concept Plan: <ul style="list-style-type: none"> The proposal intends to remove the green corridor along North Macquarie Road between the Clover Hill development and Stage 3B south. No justification as to the removal is provided in documentation. The proposal increases the width of Calderwood Road from 2 to 4 lanes. No environmental 	A detailed response to these items has been prepared by Ecological and is submitted at Appendix K . Calderwood will now remain at 2 lanes. No additional environmental

Issue Raised	Comment/Design Response
<p>assessment on the impact of this has been conducted.</p> <ul style="list-style-type: none"> Sports fields & Detention basin – Stage 1. Conflicting land uses are illustrated on various plans. Clarification is sought on the exact proposal in this location. Riparian Corridor SP1 south of Town Centre – School/Residential East. Concept Plan does not illustrate a riparian corridor to the north of proposed sports fields. It is not clear how sports fields can be accommodated in this area. The riparian corridor will be required to be regenerated in accordance with SOC requirements. The riparian corridor must be illustrated on all Concept Plans. 	<p>assessment is required.</p> <p>Additional information, including explanatory diagrams, is submitted in the updated Calderwood Valley Public Domain Report and Open Space Plan at Appendix J.</p> <p>Sportsfields and Detention Basin: Lendlease has met with Council in respect of the proposed open space and has incorporated amendments to the proposed open space plan to address Council's concerns. The proposed additional sports fields in the south near stage 1A have also been removed in response to Council's concerns. The majority of the proposed open space and sporting facilities are consistent with the approved Concept Plan including the Sports Fields SP1.</p> <p>The revised open space plans are provided at Appendix J.</p>
<p>h) Development Control Strategy:</p> <ul style="list-style-type: none"> Bush Edge Buffer - Proposed to delete Benching is to be minimised with homes built with consideration of the terrain and alter the minimum lot size amendments. Benching in the bush edge buffer will deteriorate the intention of the buffer and lead to poor biodiversity outcomes. A reduction in lot size in E3 & E2 land will deteriorate the intention of the zoning. Green Star Rating - The SOC is proposed to be amended to remove reference to a Solar Farm and Co/tri generation, with the proposal now to achieve a 5/6 star green star rating. Comprehensive information should be included as to how the town centre will achieve this rating. 	<p>The provisions relating to benching are proposed to be retained in the DCS and addition design provisions are included in Section 1.6 of the document.</p> <p>Refer to Section 2.1.11 and Appendix O of the RTS for information on the Green Star rating.</p>
<p>i) Comparison of the proposed modification to existing concept plans is difficult as lines on maps do not match up – new concept plans cover different areas and are not the same scale as old plans. It is difficult to make comparisons where in discrepancies occur. Maps also have various colours missing or incorrect keys.</p>	<p>A comparison between the approved and proposed concept plans is provided at Appendix B of the RTS.</p>
<p>j) It is not clear how non-core land impacts have been considered in the amended proposal.</p>	<p>Refer to Section 2.1.8 of the RtS Report by Ethos Urban.</p>
Open Space Provision	
<p>5.1 General Comments:</p> <p>a) The proposal modification generates the requirement to provide additional open space. There is a concern that the Proponent has not adequately demonstrated how an additional 14.2ha of both active and passive open space should be and could be incorporated into zones that are zoned for other uses such as environmental and rural zones. In its current form, the modification application appears to be proposing more open space than is needed and is not designated RE1 zoned land. This will place an additional burden on Shellharbour Council with the potential uptake of additional land identified for active and open space, particularly if it were to be located on E3 Environmental Zoned land.</p> <p>b) The Calderwood Development Lands have been zoned in accordance with studies that demonstrated justification for those appropriate zones as part of the original application. While there may be circumstances where environmental zones and rural zones may be suitable for recreational uses, to</p>	<p>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.</p> <p>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</p>

Issue Raised	Comment/Design Response
place the whole required amount of open space for the proposal in lands not zoned for recreation is not considered best practice. It has also not been adequately demonstrated by the Proponent that it is appropriate in this specific circumstance.	the overall provision requirement of open space from 33.2ha in the concept plan approval (condition C12) up to a total of 43.81ha.
c) As per the Shellharbour Open space, Recreation and Community Facilities Needs Study Report (2010). Council generally does not count environmental reserves, ancillary reserves (ie, Linear Links) towards the provision of open space as it may not provide any recreational value.	
d) The Calderwood Site zoning layer in the SEPP should be updated to adequately identify the open space allocation, the Proponent should also demonstrate that the additional 14.2ha of suggested additional land contains an acceptable level of purpose for recreational users or standards of provision. In this regard, it is considered that the provision of open space could be in a less environmental significant zone such as Residential. The existing Landscape master plan should be reviewed and indicate suitable embellishment.	We disagree. As the location of open space may change during the detailed subdivision design we believe that it is better to leave the controls as they are currently drafted such that a flexible outcome can be achieved at the DA stage over the life of the project. The Landscape Masterplan will be updated to reflect MOD4 proposed open space structure.
e) There is an additional 0.4173ha of additional passive open space identified to be provided in Local Park 11 and Local Park 8. These parks have already been delivered. The Proponent should be required to demonstrate how these parks can be increased in size when they already take up the land that was required for open space. The Proponent should also address what implications this may have in regards to the existing VPA between Council and Lendlease.	A plan demonstrating the location of delivered and approved open space, in relation to the proposed additional open space is included in the Open Space Plans at Appendix J. Section 2.1.4 of the RTS provides further detail.
f) Proposed additional open space that is located within the non-core lands (Local Park 13, Local Park 7, District Park 2 and District Park 5). The proponent should be required to demonstrate how they can provide certainty with regards to the provision of the land on the non-core land site, particularly when the increase in lot yield is proposed on the Lendlease land.	The open space shown on the non-core lands is consistent with that proposed in the various development applications by the non-cores..
g) The location of the parks listed below vary between the existing approved concept plan and the proposed MOD 4. The Modification is also inconsistent with following current development applications being assessed by Council. a. Local Park 7 – DA No 290/2018 b. Local Park 12 – DA No 167/2017 (Stage 3C) c. Local Park 13 – DA No 577/2017 d. District Park 2 – DA 290/2018 e. District Park 5 – DA 577/2017 The proponent should be required to explain why some of the locations of parks have been slightly moved and how this actually benefits the development and the land it has been moved to.	Local parks 7, 13, 2 and 5 are all proposed on non-core land. The areas shown on the modified concept plan are consistent with the development applications that have been lodged. The park in stage 3C was relocated to move it outside of ESL.
h) Comparison of approved Concept Plan and proposed modified Concept Plan Pg 6 Indicative Open Space Network. Typo – refers to CW Park 4 when it should be CW Park 3.	Refer to updated plans at Appendix J .
5.2 Existing Sports Ground SP1 and proposed Sports Ground SP2 The application proposes additional active open space in the existing SP1 Sports Fields by encroaching into the land zoned E3 to the west. This poses the question about suitability of land for a district sporting field, as is would appear that the proposed SP2 is insufficient in area for a sports field in accordance with the requirements of the Open Space, Recreation and Community Needs study 2010 (the study) of 1.7ha per 1000 people. Further, Council taking on the future management of E3 land is not supported.	There is no change to the current sports fields noted as SP1. The SHCC VPA notes facilities to include that ornamental and water quality lakes, retention of vegetation where appropriate, landscaping and tree planting. Land noted as E3 zone to the west of the proposed sporting fields is not included in open space calculations.
The study also requires that sports fields require appropriate design, solar orientation, wind protection,	

Issue Raised	Comment/Design Response
<p>desire lines and safety/traffic implications, useability, and maintenance. Other considerations include parking, amenities, all-inclusive, gradient, flooding requirements. The Proponent must demonstrate the reasoning and benefits of including E3 zones land in a sports field site, as well as how the proposed sports fields in SP2 can meet the requirements ie, flooding. The current bulk earth works DA being assessed by Council indicated a detention basin in the location of the proposed additional sports fields, The Proponent should be required to demonstrate that these use are co compatible</p>	<p>The previously proposed additional sports fields near Stage 1A have now been removed.</p> <p>The VPA states that this park will contain sports fields, playground and other appropriate supporting infrastructure as well as ornamental and water quality lakes, retention of existing vegetation where appropriate, landscaping and tree planting where appropriate so as to respond to the different characteristics of the park.</p>
<p>5.5 Calculations Based on an additional population of 4,350 persons equating to 12.3105ha of Open Space (2.83ha per 1000 people).</p> <p>Current split of active = 15.84ha Current split of passive = 17.36ha</p> <p>45.5ha / 2 = 22.75ha</p> <p>Therefore using the 50/50 would mean 6.91ha active open space 5.39 for passive open space</p> <p>The mod is proposing 6.7707ha for the sporting field (active) The mod is proposing 7.445ha for passive open space</p> <p>This seems under the requirement for active and over the requirement for passive open Space.</p>	<p>The calculations, are based on a dwelling density of 2.58 persons per dwelling. This equates to an additional population of approximately 3,100 people, not 4,350 people. 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.</p> <p>Sections 2.1.4 and 2.1.7 of the RTS provide further detail.</p>
<p>Areas required under the Shellharbour Open space, Recreation and Community Facilities needs study are: 2.83 ha per 1000 people for open space equating to;</p> <p>0.33 ha per 1000 people for local parks = 1.44ha 0.5 ha per 1000 people for district parks = 2.175ha 0.3 ha per 1000 people for city wide = 1.31ha 1.7 ha per 1000 people for sporting grounds = 7.395ha</p> <p>Given the inconsistencies shown above the Proponent should be required to confirm the methods used to determine the areas specified within the application.</p>	<p>Refer to Appendix M of the RTS/PPR. The formulas have been provided in the Elton Consulting Reports at Appendix S to the EAR.</p>
Assets and Maintenance	
<p>6.1 Necessary Additional Road Upgrades Required Based on the revised traffic modelling, the following additional road upgrades are considered necessary to mitigate the impacts of the CUDP Yield Review:</p> <ul style="list-style-type: none"> - Widen Calderwood Road from two lanes to four lanes between Tripoli Way and the eastern boundary of the CUDP. It is recommended that the Calderwood Road upgrade is completed on 	<p>Only the intersection upgrades are required. With the reduction of additional dwellings (ie only a total of 6,000 principal dwellings) Calderwood Road is able to remain at a two lane two way road width. See Appendix H.</p>

Issue Raised	Comment/Design Response
<p>the opening of the town centre (retail) and completion of the Tripoli Way bypass, which is anticipated to occur around 2026-2028.</p> <ul style="list-style-type: none"> - Upgrade Illawarra Highway / Broughton Avenue from roundabout to signalised intersection. - Upgrade Calderwood Road / Tripoli Way from roundabout to signalised intersection.(Cardno, 2018) 	
<p>Further to these upgrades, Council believe that the following are as a result of the yield increase, and disagree with some of the findings of the modification. Council would like to work with the Department as well as Lendlease to ensure that all requirements as a result of the modification are fully met, and that fairness is ensured to all parties including the residents of Shellharbour. Noted within the EA is that Lendlease will negotiate with Council in good faith, Council believes given the above discrepancies, these negotiations must be completed and agreed to prior to any approval of the modification.</p>	Noted.
<p>a) Calderwood Road The need to upgrade to four lane is more than just widening of the road within the confines of the existing road reserve and will require realignment and land acquisitions. This is especially pertinent at the location of the bridge over the Macquarie Rivulet. As the bridge needs to be widened, to reinstate on the current angle would create an unsafe bend immediately South of the bridge. As a flow-on effect, the intersection with Tripoli Way may need to be relocated westward, and require signalisation of the Calderwood Road and Tripoli Way intersection earlier than both adopted and draft Council concepts designs. This is especially problematic as it will require further multiple land acquisitions and costly redesign of Tripoli Way. These changes are not recognised within the findings of the Traffic and Transport assessment undertaken, or the Environmental Assessment (EA) for the modification.</p>	See previous comment, Calderwood Road is no longer required to be widened to a four lane road, and as such the bridge over the Macquarie Rivulet is not required to be widened. Refer to Cardno's response at Appendix H .
<p>b) Tripoli Way Tripoli Way will require four lanes for the full length by 2026-28 based on the Traffic and Transport Report. It is unclear whether, if this assumption was not made, could suitable performance of the local traffic network be achieved. This is different to the original TMAP with regards to timing, as well as previous Council concept designs. The statement "the design of Tripoli Way (Albion Park bypass) is consistent with Council's current preferred configuration" is incorrect. The original 2007 Albion Park Traffic Study assumed one lane in each direction, and since that time, Council has not endorsed any concept to the contrary. Council can provide a timeline of the Tripoli Way Design if required. The latest concept plans currently being developed in conjunction with Cardno, also only cater for four lanes East of Calderwood road, yet the four lane requirement were only identified due to updated modelling from Cardno, for both Calderwood Concept Approval and the SPIR model, in lieu of widening Tongarra Rd identified within the APTS. Prior to this, endorsed plans from Council were for two lanes only.</p>	Refer to Detailed response to submissions – Traffic and Transport at Appendix H .
<p>Based on the most recent draft concept plans developed for Council by Cardno in 2017, Tripoli Way only required two lanes (one each way) for the section between the Illawarra Highway and Calderwood Road. Contained within the Traffic and Transport Report is the assumption of four lanes for this section. This has major implications for possible land acquisitions, land contributions, and the construction cost of Tripoli Way. Council is willing to share these models with the Department to confirm the discrepancy.</p>	Refer to Detailed response to submissions – Traffic and Transport at Appendix H.
<p>To construct four lanes on this section would materially alter the alignment and width of the proposed land to be contributed as part of the existing VPA. Currently a 50m corridor has been nominated, however this may be need to be widened in the order of 10-20m to accommodate the extra width.</p>	Calderwood Road is no longer required to be widened to a four lane road. Refer to Detailed response to submissions – Traffic and Transport at Appendix H.

Issue Raised	Comment/Design Response
Furthermore, it requires compulsory land acquisitions of private land to Lot: 1 DP: 559819. It is unclear as to how this would be enabled and whether it would add further costs to Council to undertake.	
<p>c) Update of the Voluntary Planning Agreement</p> <p>In general, Lendlease propose to update the VPA, and Council support this to achieve a fair and equitable outcome. Though in the Environmental Assessment it is undefined as to the exact changes that will happen, simply that “Lendlease will negotiate in good faith with Shellharbour Council to deliver these works to coincide with opening of retail component of the Calderwood Town Centre and Tripoli Way works” – Appendix J – Updated Schedule of Local Contributions.</p>	A letter proposing entering into a new VPA in respect of additional contributions as a result of the modification application will be submitted to Council under separate cover.
<p>The current VPA determined a contribution amount for Tripoli Way. This was based on the findings of the Stage One court approval, and apportionment within the TMAP. Council believe contributions should be calculated and determined prior to the approval to specify the true contributions required as a result of the modification. This should include provisions for widening of Tripoli Way to four lanes, relocation of the Tripoli Way and Calderwood Road intersections, and costs associated with extra widening into private lands.</p>	Noted. Lendlease has made provision for road upgrades in the modification application where appropriate. A letter proposing entering into a new VPA in respect of additional contributions as a result of the modification application will be submitted to Council under separate cover.
<p>d) Contribution towards maintenance costs:</p> <p>Any proposed revised or new VPA must contain provisions for maintenance of the surrounding local road network as a result of the increase. An agreement outside of the VPA was previously reached with Lendlease regarding the maintenance of Calderwood Road from the development to the intersection with Tripoli Way, this has now ceased. Until such time as Calderwood Road is widened and Tripoli Way is constructed, Council believe that the developers of the land should contribute to the local road maintenance associated with the increase in traffic and particularly additional truck movements. This is also true for the extra open spaces, reserves, wetlands and stormwater infrastructure associated with the modification.</p>	Lendlease has made provision for road upgrades in the modification application where appropriate. A letter proposing entering into a new VPA in respect of additional contributions as a result of the modification application will be submitted to Council under separate cover.
<p>e) Greater Certainty Required on the Design of Calderwood Road and Tripoli Way as a result of the Modification Yield Increase</p> <p>Council believes that there needs to be certainty of the design of Calderwood Road and Tripoli Way to better assess the impacts of the modification. This would enable Council to progress further with the design of Tripoli Way and avoid costly redesign. Council has already spent significant amounts of public funds on the design of Tripoli Way, as well as previously engaged in land acquisitions that may now be inadequate and require further negotiations as a result of the modification. Furthermore, the delays to the project as a result of the modification and redesigns caused by the upgrades required are future costs not recognised within the EA.</p>	Refer to Detailed response to submissions – Traffic and Transport at Appendix H.
<p>f) Proposed Mechanisms for Land Acquisitions</p> <p>Council would like to see greater certainty of the proposed mechanism for land acquisition for the required upgrades. It is well established within the EA and Traffic and Transport Report that land acquisitions are required:</p> <p><i>“It is recommended to upgrade Calderwood Road section between Tripoli Way and eastern boundary to a four-lane road, two in each direction. The profile and crosssection of this road is yet to be determined. It may be desirable to reduce the overall carriageway width on the widened section of Calderwood Road to limit third party land acquisition.”</i> (Cardno, 2018)</p>	Calderwood Road is no longer required to be widened to a four lane road.

Issue Raised	Comment/Design Response
Council questions the mechanisms for undertaking this. Should negotiations with adjoining landowners fail, Lendlease will be unable to undertake the required upgrades. Council have previously commence negotiations with adjoining landowners who have been reluctant to provide land. It is assumed that Council must undertake the land acquisitions as its role as the Local Roads Authority, therefore Council would requires recognition of all associated costs. These costs must be identified, and an agreement with Council in place prior to any approval, and must borne by the developers of the land. How this will be achieved must also be addressed prior to determination of the modification application.	Calderwood Road is no longer required to be widened to a four lane road. Refer to Detailed response to submissions – Traffic and Transport at Appendix H .
<p>6.2 Suitability and Maintenance of proposed dedicated lands:</p> <p>a) It is understood that the additional proposed sports field adjacent to Stage 1A will be dual purpose, for use as infrastructure and as active open space. This area is currently under DA assessment for use as a water detention basin. Council is concerned about numerous issues associated with the dual purpose use such as:</p> <ul style="list-style-type: none"> i. Flood immunity ii. Damage caused by flooding events iii. Ongoing clean-up maintenance following significant flooding events <p>The additional proposed area adjacent to the original sports field is not considered appropriate for use as active open space due to a high embankment, steep slopes, flood affectation, intense landscaping requirements and substantial maintenance costs.</p>	The sports fields in Stage 1 are now deleted and the active open space is now provided elsewhere in the precinct.
b) The future land ownership proposal for the CW 3 extension, new linear parks and link between D4 and L11 is unclear. There are issues such as flooding and intense vegetation management associated with these parks which may lead to high maintenance costs for either Council if they were to become the future owners.	The linear connections have now been deleted and no extension is proposed to CW3.
c) The proposed linear parks may have implications relating to flooding through the riparian lands due to obstruction and decreased roughness factors.	The linear parks have been deleted.
d) The extension of SP1 adjacent to Stage 2C was formerly classified as an E3 zone and may not be appropriate for use as passive open space.	SP1 was already approved as being partially located within the E3 zone. The additional open space is proposed outside of the E3 zone. The VPA states that this park will contain ornamental and water quality lakes, retention of existing vegetation where appropriate, landscaping and tree planting where appropriate so as to respond to the different characteristics of the park.
e) Although located within the WCC LGA, residents of the SCC LGA have voiced concerned about parks being located underneath powerlines due to potential health risks. The re-location of District Park 1 and Local Park 3 to within the overhead powerline easement requires further assessment	None of the proposed open space is located under the powerlines.
Voluntary Planning Agreement	
<p>7.1 General comments</p> <p>The proposed modification involves a significant intensification of the development, which can only be supported if there is sufficient assurance that the extra dwellings are accompanied by appropriate local infrastructure. At this stage, Council does not have this assurance. Whilst the assessment report submitted by Lendlease includes a number of recommendations to amend the Planning Agreement with Council, these have not been discussed or presented to Council and therefore Council cannot advise that it is satisfied that the proposed additional infrastructure will be adequate.</p>	A letter proposing entering into a new VPA in respect of additional contributions as a result of the modification application will be submitted to Council under separate cover

Issue Raised	Comment/Design Response
<p>Therefore, Council is of the opinion that if the Department were of a mind to approve the proposed modification that any approval for the modification be withheld pending further discussions with Lendlease about the matters to be included in the VPA. In particular it is recommended that approval should not be granted until either a Deed of Variation to the VPA has been exhibited or a formal Letter of Offer has been submitted and agreed to by Council and has been exhibited to seek community feedback.</p>	<p>A letter proposing entering into a new VPA in respect of additional contributions as a result of the modification application will be submitted to Council under separate cover</p>
<p>7.2 The Need for a Formal letter of Offer</p> <p>As noted above the proposed modification involves a significant intensification of the development to which the executed VPA applies. A Deed of Variation (DoV) to the existing VPA will be needed. The EA states (pge 71) that a letter of offer will be provided and which would detail the amendments to be made to the VPA. It is however important that the letter and any amendments to the Draft VPA be fully resolved and agreed to before any approval is given to the modification. Whilst the EA includes an Appendix (Appendix J – Updated Schedule of local Contributions) which provides some information about the additional local infrastructure that will be provided, this needs to be filled out with a lot more detail before it can form the basis of a Letter of Offer for the DoV. This will require significant negotiations with Lendlease to resolve the infrastructure that is needed to support the development.</p>	<p>A letter proposing entering into a new VPA in respect of additional contributions as a result of the modification application will be submitted to Council under separate cover</p>
<p>7.4 Open Space Additional open space will be required for the development. It is essential that the land provided be unencumbered and fit for purpose. A revision of the Landscape Masterplan, which currently forms part of the existing VPA between Council and Lendlease, must be included in any letter of offer to amend the VPA. The revised Landscape Masterplan must demonstrate how the proposed areas are fit for purpose.</p>	<p>A letter proposing entering into a new VPA in respect of additional contributions as a result of the modification application will be submitted to Council under separate cover.</p>
<p>a) The proposed additional open space is largely made up of 'linear parks' that provide linkages across riparian corridors. Some of these cross through identified environmentally sensitive lands. Lendlease should be required to demonstrate the facilities they will be providing in these areas and how they can be achieved based on the constraints on the land.</p>	<p>All the linkages across the riparian corridors have been removed, with the exception of those across the Mount Marshall Creek which are already approved in the Concept Plan. Refer to Section 3.9.2 of the consolidated concept plan and figure 13.</p>
<p>b) There is a significant expansion of City-Wide Park 3 (CW3), which is located at Johnson's Spur. In accordance with the Better Outcomes Clause contained in the existing VPA, Lendlease and Council agreed to a reduction of facilities to be provided at this City Wide Park and a transfer of funds that were allocated for those facilities to the more central and accessible District Park 4. It was agreed that due to the remote location, this park would be embellished to a lower level than other citywide parks as it would not receive the same level of use. It is also noted that the area into which it will be extended has substantial tree cover and has been identified as environmentally sensitive – Lendlease would need to demonstrate what they intend doing with this area and how this will provide acceptable recreation opportunities whilst protecting the environment.</p>	<p>Lendlease is no longer proposing to expand CW3.</p>
<p>c) The proposed additional sports field has limited useability as it is remote from current approved sports fields and may be significantly affected by flooding. It will also require its own amenities and car parking which is an ongoing maintenance liability.</p>	<p>The additional sports field has been relocated from the Stage 1A area.</p>
<p>d) It is also noted that car parking has been removed from the list of embellishment for district parks. This is not acceptable due to the catchment of such a facility.</p>	<p>This was not proposed to be modified and is still contained within the requirements of the Shellharbour VPA.</p>
<p>7.5 Social Infrastructure</p>	<p>A letter proposing entering into a new VPA in respect of additional contributions</p>

Issue Raised	Comment/Design Response
<p>Additional social infrastructure will be required for the development. The extent of what is required is set out in Appendix S. The works proposed include an expansion of the onsite multipurpose community facility and a further increase of the floor space for Albion Park Library. As both these will be Council assets it is important that the extent of what is being proposed and whether it can be contained within existing sites etc should be discussed with Council. To date, no such discussions have taken place.</p>	<p>as a result of the modification application will be submitted to Council under separate cover.</p>
<p>7.6 Road and Traffic Upgrades: An updated traffic assessment of the increase dwelling yield prepared by Cardno finds that the following additional road upgrades will be required as an outcome of the increased yields from the development:</p> <ul style="list-style-type: none"> a) Widening of Calderwood Rd from two lanes to four lanes between Tripoli way and the eastern boundary of the CUDP b) Upgrade the Illawarra highway/Broughton Ave from roundabout to a signalised intersection c) Upgrade Calderwood Rd/Tripoli Way from roundabout to a signalised intersection including upgrade of the bridge over Macquarie Rivulet 	<p>Calderwood Road is no longer required to be widened to a four lane road. In relation to other road upgrades which are required as a result of the proposed modification, Lendlease has made adequate provision for this in the modification application and a letter of offer to amend the current VPA or to enter into a new VPA will be submitted to Council under separate cover to address these items.</p>
<p>It is also understood that some of the road upgrades will occur on land located outside the existing road alignment and may require acquisition. This should be at the expense of Lendlease and the lands required for acquisition should be identified and included in the VPA.</p> <p>It is understood that Lendlease will construct the roadworks. However, the timing of all roadworks needs to be resolved as presently it is only vaguely specified. The roadworks need to be done before the nominated stage of the development has been completed.</p>	<p>Calderwood Road is no longer required to be widened to a four lane road. . A letter proposing entering into a new VPA in respect of additional contributions as a result of the modification application will be submitted to Council under separate cover</p>
<p>7.7 Drainage Water Quality and Flooding Clarification is needed whether the water management strategy (quantity and quality) involves dedication to Council of any structures or the land on which they are located. If so they need to be identified and included in the VPA.</p> <p>If there are any such structures to be dedicated then as was mentioned in the previous section, they will impose a long-term maintenance liability on Council. The inclusion of a maintenance contribution in the VPA must be considered.</p>	<p>Water quality measures will continue to be addressed and managed at the detailed development application stage. There is no need to include these facilities in the VPA.</p>
<p>7.8 Non-Core Lands Currently there is ambiguity about how the non-core landowners are able to contribute to the local infrastructure requirements. This is a major issue and must be resolved prior to any determination of the application to modify the Concept Plan Approval.</p>	<p>Agreed. Lendlease considers that all non-core landowners should enter into VPAs with the appropriate consent authorities to contribute to the delivery of local and state infrastructure.</p>

Agency Submissions

Issue Raised	Comment/Design Response
Civil Aviation Safety Authority	
Any development within the area should be referred to Shellharbour City Council as the aerodrome operator, to assess if there is any impact on future upgrades to the east-west runway.	Noted. The application was referred to SCC. Future detailed development applications will also be referred to SCC for assessment and determination.
Any external lighting is to comply with regulation 94 of the Civil Aviation Regulations 1988 Dangerous Lights and section 9.21 of Manual of Standards Part 139 Lighting in the Vicinity of Aerodromes.	Noted. Future development consents to comply.
The potential for the development to introduce bird and wildlife hazards that may affect aviation safety should be considered.	The development would be unlikely to introduce new bird and wildlife hazards. The development would include landscaping of street trees and parklands. In some areas wetlands and detention basins would be constructed. These features would likely attract birdlife to the locality. However, these features are currently present within the approved concept plan.
Any proposed structures and cranes if used in construction should be referred to the procedure design organisation/s responsible for the maintenance of instrument flight procedures at the Aerodrome.	No works proposed as part of the Concept Plan. Any structures or cranes will be the subject of separate future planning applications.
Any aerodrome developments to aviation facilities associated with the planning proposal need to be consistent with the requirements of Civil Aviation Safety Regulations 1998 Part 139 and the associated Manual of Standards.	Noted. Future development consents to comply.
<p>Consultation should also be undertaken with the aerodromes operational management team to manage the following issues with developments adjacent to any aerodromes:</p> <ul style="list-style-type: none"> • Airport master planning: Council should ensure that the proposal does not affect any future development or upgrades planned by the aerodrome's operational management. • Obstacle limitation surfaces (OLS) and Procedures for Air Navigation Services – Aircraft Operations: Prior to construction, the development and crane activity should be reviewed by the aerodrome's management team for the protection of these surfaces. • Wildlife hazard management plan: Consideration needs to be given to the final heights and bird attractions of landscaping provisions which potentially may cause a risk to aviation activities. • Obstacle lighting: The building and any construction cranes would need to be marked to comply with CASR 139 and associated MOS, paying particular attention to the quantity, type, luminescence and whether day and/or night marking is required. • Lighting in the vicinity of an aerodrome: Any proposed non-aeronautical ground light in the vicinity of an aerodrome may by reason of its intensity, configuration or colour, cause confusion or glare to pilots and therefore might endanger the safety of aircraft. • Gaseous plume: Exhaust plumes can originate from a number of sources and aviation 	<p>The Landscape and Open Space Masterplan does not provide detailed lists of species to be planted. However, given there are currently large trees present across most of the existing elevations, there are unlikely to be any future plantings that would exceed the existing tree heights.</p> <p>A risk-based approach to managing any wildlife would be undertaken. It is not likely that any landscaping would attract birds to the extent that they would cause a hazard.</p> <p>The remaining issues are matters to be addressed in the detailed development applications.</p>

Issue Raised	Comment/Design Response
<p>authorities have established that an exhaust plume with a vertical gust in excess of 4.3 metres/second may cause damage to an aircraft airframe, or upset an aircraft when flying at low levels.</p> <ul style="list-style-type: none"> Control of dust: During any construction the emission of airborne particulate may be generated which could impair the visual conditions 	
Department of Industry (Lands and Water Division)	
<p>Appendix N of the Biodiversity Assessment Report identifies the mitigation measures for riparian land as (section 4.4.3 point 1) 'all lands covered by the ESL overlay or forming part of a riparian corridor would be managed consistent with the current Statement of Commitment 35 (SOC). The modified SOC proposes to remove commitment 35 as Vegetation Management Plans are required in accordance with Condition C3 of the Approved Concept Plan. It is recommended that the modification to the SOC maintains commitment 35 and include recommendations outlined in section 6 of the Biodiversity Assessment report prepared by ecological Australia (July 2018).</p>	<p>Commitment 35 is now proposed to be reinstated. Refer to the revised Statement of Commitments at Appendix L.</p>
<p>The stormwater treatment trains proposed to be installed should be maintained over time to ensure ongoing and effective treatment of stormwater.</p>	<p>This is directed by Commitment 10, which states that the relevant landowner or applicant will maintain any open space and drainage works that are to be dedicated to a public authority for a period of 3 years from the date of practical completion of the works, unless otherwise agreed by the Proponent and the relevant authority.</p>
Office of Environment and Heritage	
<p>The proposed modification has addressed the SEARs requirement to consider likely offsetting implications under the NSW Biodiversity Conservation Act 2016. We recommend avoiding impacts to Illawarra Lowlands Grassy Woodland threatened ecological community in particular, insofar as possible for future development stages.</p>	<p>The proposed increase in yield has been designed and undergone numerous iterations to avoid impacts on patches of Illawarra Lowlands Grassy Woodland in good condition. Impacts on this community have been minimised by concentrating the proposed lot yield increase in areas where the patches of the community are isolated and in poor condition.</p>
<p>The proposed modification outlines that, consistent with the approved Concept Plan, Aboriginal Heritage Impact Permits (AHIPs) will be required in future development areas where harm to Aboriginal objects cannot be avoided. We support the conservation of Aboriginal heritage sites within proposed open space, along with a strategic approach promoting Aboriginal heritage conservation in these areas.</p>	<p>Noted. Future development consents to comply.</p>
<p>It is suggested that you seek further clarity on flooding impacts on the safety of future occupants, including emergency services accessibility, across the full range of flood events up to the probable maximum flood (PMF) and inclusive of climate change.</p>	<p>Refer to the response prepared by JWP at Appendix F.</p>
<p>The proposed reduction in flood protection for significant development areas should also be carefully considered, notably in the development stages north of Marshall Mount Creek. This is particularly the case given the proposed increased density and the existing approved concept plan, which maintains flood-free development areas up to the PMF (hence allowing for climate change).</p>	
<p>We suggest the proponent consult with Shellharbour City Council as to how water quality objectives and targets for the proposed development will be achieved, consistent with the NSW</p>	

Issue Raised	Comment/Design Response
Government's Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions, coastal management and regional planning frameworks applicable to the Calderwood site.	
Roads and Maritime Services	
Intersection Upgrade Works: RMS notes that the above Traffic Assessment and associated modelling indicate upgrade works will be required at the intersections of the Illawarra Highway/Broughton Avenue and Calderwood Road/Tripoli Way. Both intersections to be upgraded to signals. RMS also notes that minimal detail on these proposed upgrade works has been provided as part of this current application. RMS requires a greater level of detail in relation to the design of the proposed intersection upgrade works (i.e. a strategic/concept design). This information is required so as to demonstrate that a compliant design can be constructed within land available/within the legally defined road reserve boundaries and to allow RMS to undertake a preliminary assessment of the works proposed.	Cardno has provided a detailed response to the RMS submission at Appendix H .
Illawarra Highway / Escarpment Drive Intersection: RMS notes that the assessment provided as part of this modification does not propose to change the existing intersection treatment of a roundabout at the Illawarra Highway/Escarpment Drive intersection as a consequence of the increased densities that are being proposed. While RMS notes the trip containment estimates provided it is also noted that modelling that has been undertaken for the Tullimbar development to the south of the Illawarra Highway shows that by 2026 the intersection of Illawarra Highway/Escarpment Drive/Yellow Rock Road is failing (i.e. intersection is shown to be overcapacity and oversaturated, operating at a level of service of F in the peak periods). Noting that the proposed intensification of development as is currently proposed is contributing to the need to upgrade the existing intersection of Illawarra Highway/Escarpment Drive/Yellow Rock Road. Should works be need RMS requires details of the works including the provision of strategic/concept design plans as detailed in the dot point above to ensure that a compliant design can be constructed within land available/within the legally defined road reserve boundaries and/or identify what additional land is required	
With the increase in dwellings that are proposed RMS believes that it is critical to maximise the opportunities for walking, cycling and public transport so as to minimise vehicle trips. As such, RMS supports: <ul style="list-style-type: none">• The developers working with Transport for NSW, Shellharbour City Council and DPE to identify additional opportunities for public transport provision to reduce car dependence and car trip generation; and• The provision of walking and cycling infrastructure early so it enables walking and cycling to be used for short trips within the development area	
NSW Rural Fire Service	
The NSW Rural First Service has reviewed the proposed modification and does not object in principle to the proposed changes.	Noted.

Issue Raised	Comment/Design Response
Transport for NSW	
<p>The existing further assessment requirement C6: 'The 'Bus Service' map in Appendix L of the PPR is indicative only. The bus routes shall be determined in consultation with Transport NSW and bus service providers.' should be retained and revised to reflect the latest indicative bus routes proposed by the Applicant. Given that the new roads and subdivisions would be delivered through staged project applications, the Applicant should consult with the local bus operator regarding potential routes and bus stops as part of the design development for subsequent stages. It should be noted that the final bus network would be dependent on demand, funding availability and the relevant stage of development. The Applicant has been previously advised that TfNSW currently cannot commit to funding or timing of specific bus network enhancements</p>	Noted.
<p>The proposed modification to the Consolidated Development Control Strategy (CDCS) 1.1 Street Types: 'Cycle paths are to be provided per the Pedestrian and Cycle Network Plan and may be on street or off road. On street cycle lane 1m wide each direction. Off road share hike and bike 2.5m wide path within total road reserve'...should be revised to reflect Table 1 of the CDCS, which does not include any on street cycle lanes for any of the street types. The preferred street layout would be for separated cycle paths from general vehicular traffic</p>	The DCS has been updated.
<p>The proposed carriageway and lane widths, as shown in Table 1 of the CDCS, for roads intended for bus services must be consistent with Section 4.1 of the Guidelines for Public Transport Capable Infrastructure in Greenfield Sites (TfNSW, Jul 2018). In particular, roads intended for bus services should generally not consist of a central median and if so must be mountable to allow for buses to continue providing services in the event of a vehicle being inappropriately parked.</p>	Refer to Cardno's response at Appendix H .
<p>The urban design principles for the town centre (refer to Section 1.8 of the CDCS) should include a principle (under Principle 3) to "apply the Movement and Place framework to create successful places". The intent of this principle is to guide road planning to ensure the needs of different customer groups (pedestrians, cyclists, public transport users and private vehicle drivers) are appropriately prioritised within the context of the surrounding land uses – refer to Future Transport 2056 Strategy (pg.83).</p>	The DCS already contains principles in this regard.
Housing Trust, Wollongong NSW	
<p>The Housing Trust is concerned that a 35% increase in the number dwellings, as proposed in the modification application, is excessive. This may result in adverse community and environmental outcomes.</p>	<p>The environmental assessment submitted with the Mod 4 application has demonstrated that the additional density can be accommodated without adverse environmental impact. New community infrastructure is proposed which will service the additional residents. Notwithstanding the above, the density has now been reduced down from 6,500 principal dwellings to 6,000 principal dwellings.</p>
<p>We are otherwise supportive of the Calderwood Concept Plan on the condition that the residential development includes a 15% allocation for affordable rental housing. Contemporary best practice and inclusionary zoning would deliver a 'salt-and-pepper' mixed use development with approximately 5% of the dwellings dedicated to social housing tenants and 10% dedicated to affordable housing tenants.</p>	<p>No affordable rental housing is proposed. The provision of a range of housing types, including small lot housing is expected to result in a range of affordable housing types being delivered in the development.</p> <p>The provision of social housing is considered to be more appropriately located in existing</p>

Issue Raised	Comment/Design Response
	centres where there is better access to public transport and other facilities and services. This is addressed in the ESIA Report submitted at Appendix Q of the EAR.
The Housing Trust also considers the site provides an innovative and much-needed opportunity for a shared equity housing solution. This would provide purchasing opportunities for moderate income key workers and other first home buyers.	Noted.
It is not necessary or desirable for the whole site to be developed as single residential lots. The optimal urban design outcome would include single lot single dwellings, townhouses or terraces, and low rise medium density unit blocks. Such diversity in the built form facilitates the success of inclusionary zoning and creates safe, diverse and engaging communities.	Noted, this modification specifically seeks to increase the diversity of dwelling types provided within the CUDP, particularly to encourage a greater number of smaller dwellings within accessible locations.
Once tenanted a proven model of integrated support services would deliver the outcomes required in the Government's Future Directions for Social Housing framework.	This is outside the realms of the proposed modification.
Department of Education	
The Department requests that the delivery of land for the schools remain linked to the number of residential allotments released, and not be tied to a specific year. It is acknowledged that in previous discussions with the proponent it was indicated that the new high school may be delivered in or near 2031, however our more recent assessment suggests that it is more prudent to retain the "trigger" based on the number of lots released, but to revise the milestone for school land dedication to 4,500 allotments. This approach allows the site to be acquired with sufficient time for planning and delivery of the high school in response to population growth and demand for government high school teaching space in the wider locality.	Noted. Lendlease will write to the Department in relation to amending the State VPA to reflect the revised timing suggested by the DoE.
No objection is raised in relation to the proposal to reduce the size of the second primary school site from 3ha to 2ha. The department also remains supportive of objectives for possible provision of shared spaces such as recreation facilities, car parking and community space and we look forward to further communication with the proponent to finalise the location and configuration of school sites at the appropriate time	Noted.
In relation to general matters we request that all proposed roads be of appropriate width and design geometry, particularly roads adjacent to and providing access to the proposed schools. We also request that the location and design of open spaces, pathways and recreation areas include consideration of access and use by school age children.	Noted. This will be considered in future applications for the detailed design of the relevant facilities.
NSW Environment Protection Authority	
The Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions (the Framework) has been developed to provide a structured approach to considering the potential impacts of land use change on a waterway and to identify appropriate management responses to ensure that desired uses of a waterway can be met. The framework brings together existing policy and guidelines in the National Water Quality Management Strategy in a risk based framework. By using the framework, practitioners can identify least-cost management responses across all sources of waterway impacts to meet specified water quality and river health outcomes in a robust, evidence-based decision making framework.	<p>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. 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.</p> <p>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</p>

Issue Raised	Comment/Design Response
<p>The Framework is recognised in the Illawarra Shoalhaven Regional Plan, Greater Sydney Regional Plan and supporting District Plans. It was published in May 2017.</p> <p>This framework should be used to help inform water management decisions in relation to the Calderwood modification especially as the proposal is within the Lake Illawarra catchment. The proponent should provide an assessment under this framework for consideration by OEH and EPA.</p>	<p>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.</p> <p>Refer to the response prepared by JWP at Appendix F.</p>

Public Submissions

Issue Raised	No. Submissions	Comment/Design Response
Dwelling Yield and Density		
To increase the 4,800 lots to 6,000-7,000 lots is going to put a large strain on the water of Lake Illawarra, increase the existing traffic problems, increase noise problems, increase pollution problems.	13	The Environmental Assessment Report has proposed several mitigation measures so as to ensure that there are no adverse impacts generated by the additional population proposed. We note that the PPR seeks to reduce the number of total principal dwellings to 6,000.
We object to the dwelling lot size down to 125 square metres	1	Smaller lots are already permissible under the existing concept plan. On land zoned B4, no minimum lot size applies. The DCS sets out a range of design parameters to ensure that dwellings on smaller lots achieve a high quality urban design and residential amenity outcome.
Support increasing the retail, community centre and open spaces, and the development of aged care facilities.	4	Noted. We agree that this will be a positive impact for the existing dwellings already approved in the CUDP.
Shopping centre is required to be upgraded	1	An additional 5,000m ² of retail space is proposed in the Town Centre to accommodate the additional population.
35% dwelling density increase is not acceptable	5	The number of additional dwellings has been reduced and can be accommodated with an appropriate level of community infrastructure, as discussed above.
The number of dwellings needs to be scaled back, not increased by 1700 dwellings.	1	The number dwellings have been reduced by 500 in the revised proposal.

Issue Raised	No. Submissions	Comment/Design Response
Decreased lot sizes will put more pressure on open space	1	Additional open space is proposed to cater for the additional population. The same ratio of open space per person is proposed as that already approved in the Concept Plan being 2.38 hectares per 1,000 people.
Objection to increase of high rise development	2	There is no change proposed to the height controls applying to the CUDP.
Water Cycle Management		
The proposal to shift the wetland serving Clover Hill Estate from the Macquarie Rivulet floodplain to a problematic location within Clover Hill Estate itself. Locating additional wetlands or other stormwater quality treatment devices within Clover Hill Estate is undesirable, as it would be inconsistent with the Approved Concept Plan which favours centralised facilities serving multiple sub-catchments rather than a 'distributed' system involving multiple wetlands serving each sub-catchment	1	The device of concern is located within the Stage 3 of the Lendlease development and not within Clover Hill Estate. It has already been constructed. The plate with device locations in the original report has been revised to better indicate device locations. Refer to the revised report at Appendix F .
Stormwater discharge and increased runoff requires additional water quality treatment measures. large pollution traps must be installed and maintained by the developer at any storm water pipe system entering into Lake Illawarra.	2	Water Quality treatment devices proposed have been adopted to manage stormwater runoff from uplift in lot density and maintain stormwater controls. Refer to JWP report at Appendix F .
Increased runoff from reduced lot size	5	Watercycle and Flood Management Strategy report clearly demonstrates that the runoff characteristics from the increased density will have minimal impact on flood affectation, see Appendix F .
Not rely on Macquarie rivulet to be the only way for storm to escape the western area of Albion Park and Calderwood	1	Refer to JWP report at Appendix F .
Restoration work needs to be carried out to remove silt from the river and revegetation work to restore the river banks and reduce any further erosion and sediment in the river and its banks	1	It is proposed for the riparian zones will be replanted consistent with the landscape masterplan for CUDP.
Flooding		
Flood level increase impacts in the PMF event at No 23 Calderwood Road (and many other nearby properties) have been considerably increased from what has been previously indicated in both the Approved Concept Plan and the outcomes of the 2012-13 court case.	1	The PMF Flood depth at No. 23 Calderwood has decreased in comparison to the Approved Concept Plan. WCFM assessment indicates 100mm depth at subject site. This increase in flood depth is also consistent with the 2012-13 court approval which allowed up to 300mm impacts. Refer to JWP report at Appendix F .
The flood modelling does not appear to consider 128 North Macquarie Rd in its 'Proposed Development' format, noting that the balance of the Lend Lease (core lands) urban footprint appears to be considered. We seek consultation and confirmation that the removal of this fill area from the CCP does not cause adverse impacts or impediment on the development of 128 North Macquarie Rd.	1	Subsequent to MOD 4 exhibition, the developer has provided with 'Proposed Development' surfaces which have been incorporated into the model with relevant cut/fill for the site. Refer to JWP report at Appendix F .
Increased flooding risk to dwellings outside of Calderwood Valley	1	MOD 4 flood impacts are consistent with the Approved Concept Plan.
Given the increased uncertainty of extreme weather events due to climate change, flood levels and assessment of impacts taken after the June 2016 Sth Coast Low	1	The JWP flood model is built upon the best available information and data including consideration of PMF (Potential Maximum Flood).

Issue Raised	No. Submissions	Comment/Design Response
must be used as a bench mark when considering the Calderwood proposed modification.		
Traffic & Transport		
The developer must contribute to the upgrade of existing road network outside of the development.	2	Contributions are proposed towards the upgrade of roads outside of the development through the VPAs executed with both WCC and the DPE.
Relocate the entrance/exit of Escarpment Road to another area along Marshall Mount Road where it will not have such a huge impact on another household.	1	The proposed intersection location is located further away from the existing dwellings in this location when compared to the approved concept plan. Refer to the Cardno Report at Appendix I .
Increased traffic congestion in Albion Park	4	Cardno has provided a response to these submissions at Appendix H .
Road infrastructure upgrades must be completed prior to the sale of lots	3	
Increased pressure on on-street parking due to increased density	1	
Road upgrades cannot compromise habitat or have a detrimental impact on wildlife or vegetation corridors.	1	The detailed design of road upgrades has not yet been completed. At the DA stage, there will be a requirement to demonstrate avoidance, then minimisation and mitigation of any impacts on native vegetation and habitat. Road safety is likely to be a key driver of any road upgrades, so while avoidance of habitat and vegetation is desirable, it may not always be achievable.
ESD		
Deletion of solar farm in favour of 5-6 star Green Star Communities is unacceptable	7	Lendlease is now proposing a Green Star Communities rating in lieu of the solar farm. It is considered that this will provide a more holistic approach to sustainability than the previous solar farm. Lendlease has also come to an agreement with an energy provider which provides for residents to access subsidies for the installation of solar panels on their homes.
Opportunities for tree canopy needs to be maintained	1	Street trees are proposed and each dwelling will be required to provide tree planting within the front garden.
Services and Utilities		
Sewer overflows into Lake Illawarra is already a major problem for the water quality of lake Illawarra. The developer must put into place controls to stop any extra strain on an existing system and contribute to the upgrade of the existing system outside of the development.	1	Infrastructure upgrades are being delivered as part of the development to accommodate the additional density.
Schools		
Primary school already over capacity	1	The development will provide land for two primary schools. The timing of the delivery of the schools is at the discretion of the DoE and out of the hands of Lendlease.
Delivery of the high school delayed to 2031 is not acceptable	20	The milestone for the high school land dedication has been revised to 4,500

Issue Raised	No. Submissions	Comment/Design Response
		allotments at the request of the DoE.
Do not support decreasing the area of the primary school.	14	Again this change has been made at the request of the DoE.
Open Space		
Decrease in open space not supported	2	There is no decrease in open space. Rather, additional open space is proposed.
Heritage		
Heritage significance of The Old School House in Marshall Mount has not been adequately addressed.	1	A Heritage Impact Statement was prepared by a qualified heritage specialist in accordance with the relevant guidelines. This heritage item is outside of the Concept Plan and the Heritage Impact statement confirms that the proposed modification will not impact on this item.
Non-Core Landowners		
Given the relative insignificance of the non-core landholding yields when assessed against the scale of the core landholding it is considered appropriate that the development of the non-core lands be excluded from the development staging requirements of the Concept Plan. This would permit these landholdings to be assessed and developed independent of Lendlease and to not be tied to Lendlease's infrastructure delivery program.	Leussink	Lendlease disagree. Infrastructure is to be delivered on a co-ordinated basis and all landowners should be contributing. Linking the delivery to a yields basis is a way to ensure that this occurs.
MOD4 seeks amendments that allow certain obligations to be passed to the relevant landholders rather than resting with the Proponent (Lendlease). No objection is raised to this logical separation and acknowledgement of the commercial realities of the multiple ownership of land within the CUDP subject to the reconsideration of the matter of the development staging.	Leussink	Noted.
It may be appropriate to apportion the yield attributable to each of the landholdings now to avoid a first-in approach to the achievement of dwelling yield as the development of the CUDP progresses. This will ensure an equitable allocation of yield as envisaged for the non-core lands in the context of the yield across all land under original Concept Plan approval. This will also ensure orderly development.	Leussink	Lendlease supports this approach. An indicative dwelling yield by landowner has been provided as part of this RTS. Refer to Section 2.1.1 of the RTS report. The proposed additional dwelling yield, subject to MOD 4, is wholly located within Lendlease land.
The Utility Services Review prepared by Cardno for the Proponent indicates that there can be appropriate servicing of water supply, sewer and electricity in the future for the ultimate development yield. The review does not however include the Anticipated CUDP Stage Dwelling Delivery Timeframe for the 1,165 dwellings attributed to the non-core lands. The development staging of the broader CUDP will operate independently of Lendlease. The non-core landowners have now all lodged Development Applications to progress development of these sites in the short term. This will mean the dwelling yield of the non-core lands is likely to be delivered over the next 1-3 years' horizon. This presents a significant departure from the servicing assumptions.	Leussink	A plan for the orderly extension of services would be expected to be submitted to the relevant consent authority by the non-core landowners in accordance with the requirement of Condition C1 of the Concept Plan.
It is assumed that the management of potential additional stormwater created by an	Leussink	The proposed increase in density is located downstream of 347 Calderwood

Issue Raised	No. Submissions	Comment/Design Response
increase in impervious area because of the proposed increased density will be managed on the core landholding or at least outside of the Site.		Road. As indicated by the flood maps in the Watercycle and Flood Management report, there is minimal to no impacts at this site. Refer to Appendix F .
MOD4 seeks the deletion of the requirement for a solar farm or co (or tri)-generation plant in favour of targeting a Six Star Green Star Communities Rating. This approach delegates the achievement of the sustainability targets to individual homes. Whilst some of the measures flagged by Lendlease could be adopted by the non-core developers, it isn't possible or commercially feasible for smaller developments to commit to, and submit to the assessment process for a Six Star Green Star Communities Rating.	Leussink	The Green Star Communities rating only places obligations onto Lendlease not 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. The residents residing within the non-core landholdings will however benefit from the initiatives that Lendlease is undertaking/providing.
The flood modelling does not appear to consider 128 North Macquarie Rd in its 'Proposed Development' format, noting that the balance of the Lend Lease (core lands) urban footprint appears to be considered. We seek consultation and confirmation that the removal of this fill area from the CCP does not cause adverse impacts or impediment on the development of 128 North Macquarie Rd.	Fortnum	Subsequent to MOD 4 exhibition, the developer has provided JWP with 'Proposed Development' surfaces which have been incorporated into the model with relevant cut/fill for the site. Refer to the revised Watercycle Management Strategy report at Appendix F .
It is noted that Flood Mitigation Plan (Mod 4) appears to remove an area of fill within DA577/2017 Stage 3 (South of the rivulet), which is detailed in the current CCP. This fill will be constructed and is included in the submitted DA. We seek consultation and confirmation that the removal of this fill area from the CCP does not cause adverse impacts or impediment on the development of 128 North Macquarie Rd	Fortnum	See above.
<p>We do not agree with the proposal to shift the wetland serving Clover Hill Estate from the Macquarie Rivulet floodplain to a problematic location within Clover Hill Estate itself (i.e., at device location 3d on Wyndham Prince Plate 7-4).</p> <p>The approved Water Cycle Management Study calls for stormwater runoff from the Clover Hill development site to be treated by the wetland downstream of Lendlease's Calderwood Stage 1C development area. Locating additional wetlands or other stormwater quality treatment devices within Clover Hill Estate is undesirable, as it would be inconsistent with the Approved Concept Plan which favours centralised facilities serving multiple sub-catchments rather than a 'distributed' system involving multiple wetlands serving each sub-catchment.</p> <p>A distributed approach is not considered best practice due to:</p> <ul style="list-style-type: none"> • Higher maintenance costs for Council having scattered small facilities to maintain. • Less visual benefit associated with small wetlands compared to a large wetland facility. • Reduced wetland viability given increased susceptibility of small water bodies/wetlands to shock loadings. • Water level persistence problems in dry periods, which is more difficult to manage with small wetlands. 	Clover Hill	The device of concern is located within the Lendlease stage 3 and not within Clover Hill Estate. The plate with device locations in the original report has been revised to better indicate device locations. Refer to the revised report at Appendix F .

Issue Raised	No. Submissions	Comment/Design Response
<p>The proposed location of a new 'device' within Clover Hill Estate is also impracticable being located on the Strahler Drainage Line 25, whereas most of the Clover Hill Estate drains to Strahler Line 26. It will be difficult therefore to design a stormwater drainage network draining to the wetland location proposed under Mod 4, as it would need to divert flow cross natural catchment boundaries. It will also mean the entire stormwater drainage network already designed for Clover Hill Estate will be abortive and will cause considerable cost and delay for RBWI to re-work the engineering drawings that were submitted to Shellharbour City Council on 22 November 2017 in support of DA0569-2017 for subdivision of Clover Hill Estate.</p>		
<p>The above concern notwithstanding, the Wyndham Prince report also lack clarity regarding the following points on stormwater quality management:</p> <ul style="list-style-type: none"> • There is a lack of consistency between the natural drainage sub-catchment boundaries shown on Plate 7.1 and the MUSIC catchments shown on Plate 7.3. For example, only a small part of Lend Lease's Stage 3B North drains through Clover Hill Estate (as shown on Plate 7.1), but this natural drainage catchment boundary is omitted from Plate 7.3 with respect to MUSIC sub-catchment 3E. • The wetlands/water bodies in the Approved Concept Plan are referred to as 'Devices' in the Wyndham Prince report. Generalised descriptions are given for various devices in Appendix C. Only scant recommendations however are made as to which type of device suits which location and why. • Table 7.5 indicates that the size of the proposed 'device' for MUSIC catchment 3C (which contains Clover Hill Estate) is 'consistent with those already sized/approved', which is at odds with the proposal to install a completely new stormwater quality treatment 'device' within Clover Hill Estate which has not been sized or approved. 		<p>Refer to the detailed response provided in the JWP report at Appendix F.</p>