

Memo

Ref 096-16

To:	Department of Planning & Environment
From:	Colliers International Engineering & Design
Date:	12 th December 2023
Subject:	Re: Planning Proposal – Patyegarang Morgan Rd Belrose – Sydney Water response

In response to letter by Sydney Water dated 22 November 2023 to the Dept of Planning & Environment in relation to Planning Proposal at Morgan Rd Belrose know as Patyegarang we provide the following advice in relation to the matters raised by Sydney Water as follows;

Sydney Water Statement

Sydney Water cannot support this planning proposal at this time as it is outside our wastewater servicing catchment. We advise the proponent to engage with Sydney Water to discuss alternative servicing solutions for the site.

Sydney Water supports government-backed growth initiatives within our area of operations and endeavour to provide services in a timely and prudent manner that delivers cost effective water and wastewater infrastructure whilst not impacting our current customer base economically, environmentally, or unduly impacting current service levels.

In order to fully support all growth and developments and to fully assess proposed developments, we require the ultimate and annual growth data for this development as noted in the attached appendix, be fully populated and returned to Sydney Water.

- Sydney Water acknowledges that timescales and final growth numbers may alter however, to provide robust servicing advice and to investigate the potential for staged servicing to meet timescales, we require a realistic indication of demand and timescales. Failure to provide this may result in Sydney Water being unable to formulate proper planning requirements.
- The growth data should be completed and provided via the WSC feasibility process referencing the case(s) above.

About Colliers International

Colliers International (NASDAQ, TSX: CIGI) is a leading global real estate services and investment management company. With operations in 68 countries, our 14,000 enterprising people work collaboratively to provide expert advice and services to maximise the value of property for real estate occupiers, owners and investors. For more than 20 years, our experienced leadership team, owning approximately 40% of our equity, have delivered industry-leading investment returns for shareholders. In 2018, corporate revenues were \$2.8 billion (\$3.3 billion including affiliates), with more than \$26 billion of assets under management. Learn more about how we accelerate success at corporate.colliers.com, Twitter @Colliers or LinkedIn.

- Sydney Water requests that all future proposals are formally lodged via the NSW Planning Portal or, where not feasible, direct all enquiries via UrbanGrowth@sydneywater.com.au to ensure that we can track and respond to all enquiries in a timely manner.

Wastewater Servicing

Sydney Water

The proposed development is outside Sydney Waters' catchment. Whilst there is a pumping main located nearby, along the Morgan Rd, Sydney Water currently has no plans to provide wastewater services for this area.

- The proposed development is close to the Sydney water Warriewood and West Middle Harbour wastewater servicing catchments.
- Should the proponent wish to connect to the Sydney Water catchment they would be required to undertake an options assessment to identify a preferred servicing strategy and enter into an agreement with Sydney Water for the delivery of services out-with our catchment.

Colliers Response

Colliers via its agent Metro Water Management as the WSC for the proposal have engaged with Sydney Water on the Morgan Rd project since 2017 when an initial feasibility application was lodged under Case 160354 and a second application in 2020 under Case 186126.

Prior advice provided by Sydney Water indicates that the Warriewood Wastewater Treatment Plant has capacity to service the Pateygarang project.

Existing Sewer Pumping Stations SPS 999 & SPS 0941 are located nearby and service the local area. These pumps have limited capacity to service the location and detailed hydraulic analysis of the pumping stations is required.

It is intended to upgrade the existing SPS or construct an additional SPS to meet the demand of the project and convey the wastewater to the Warriewood treatment plant.

With appropriate upgrade of existing & proposed new waste water systems the development can be provided with waste water systems to meet the targeted 450 dwellings proposed for the site.

Water Servicing

Sydney Water

The proposed development is primarily outside the existing water supply zones. The closest water supply zone to this development is the Belrose water supply zone.

Preliminary assessment suggests that the trunk system may have capacity to service this development. Augmentation or extension may be required for the local reticulation. This will be further assessed during the S73 application and any associated relevant commercial requirements.

Colliers Response

Colliers via its agent Metro Water Management as the WSC for the proposal have engaged with Sydney Water on the Morgan Rd project since 2017 when an initial feasibility application was lodged under Case 160354 and a second application in 2020 under Case 186126.

There is an existing 100mm water main in Morgan Rd that services the existing land. This main does not have sufficient capacity to service the proposed 450 dwellings on the site.

There is an existing 500mm water supply main in Forest Rd. In 2017 Sydney Water advised that this main has sufficient capacity to service the proposed development.

The project will require a detailed hydraulic analysis to confirm the sizes of new mains to be provided along Morgan Rd and within the development for drinking water & fire fighting purposes.

Summary

A new feasibility application has been lodged with Sydney Water under Case 210514 and upon the receipt of updated advice in relation to supply of wastewater and water to the project information will be updated to confirm availability of supply to the project.

Yours truly,

A handwritten signature in black ink, appearing to read "A. Halmarick", with a stylized flourish at the end.

Andrew Halmarick
NSW State Director CED

Andrew.halmarick@colliers.com

22 December 2023

Monica Gibson, Deputy Secretary
Department of Planning and Environment
4 Parramatta Square, 12 Darcy St,
Parramatta NSW 2150

Attn. Brendan Metcalfe

Dear Monica,

**Response to Key Submissions – Patyegarang Planning Proposal
PP-2022-3802 – Post-exhibition**

We are pleased to provide this supplementary material on behalf of the Metropolitan Local Aboriginal Land Council. The project team has thoroughly considered the matters raised by Northern Beaches Council and key State Agencies during the exhibition period from 26 September to 7 November 2023.

The attached table provides detailed responses to the comments received from:

- Northern Beaches Council
- Environmental and Heritage Group (2023 and 2022)
- Heritage NSW
- Transport for NSW
- Rural Fire Service
- Department of Planning and Environment – Crown Lands and Public Spaces
- Sydney Water
- SES

In addition to the table of responses, please find attached:

- Updated Transport Assessment to address comments received from TfNSW and RFS
- Revised indicative design for proposed slip lane which does not rely on land acquisition
- Updated Site Specific DCP to address Northern Beaches Council comments
- Updated Response to Local Planning Directions.

The following additional reports will be provided to DPE in January 2024:

- Updated Strategic Bushfire Assessment to address comments received from RFS
- Updated BDAR including the results of additional fieldwork
- Additional flood modelling by Colliers Engineering & Design

Finally, we have also commissioned:

- Financial viability assessment to support the affordable housing commitments, as required by the gateway determination; and
- ACHAR, which will be completed and provided to DPE in March 2024 given the necessary statutory consultation times.

We trust the amended reports, details and explanation provided addresses the issues raised and we look forward to a favourable finalisation outcome for the planning proposal. Should you wish to discuss the contents of this letter, please do not hesitate to contact myself on julietg@gyde.com.au or phone 9071 1889.

Yours sincerely



Juliet Grant
Executive Director

Encl:

Response to submissions table

Attachment 1: Site Specific DCP December 2023

Attachment 2: Transport Assessment December 2023

Attachment 3: Alternative Slip Lane Indicative Design and Location

Attachment 4: Detailed response to EHG Comments prepared by Hayes Environmental 22 December 2024

Northern Beaches Council	Response
Planning Proposal Council considers the PP to fail to consider State Environmental Planning Policies noting the Planning Proposal provided simple Yes/No answers to compliance against SEPPs, contrary to State Government LEP making guidelines. Disproportionate weight given to the Development Delivery Plan (DDP) noting that the DDP contains no detailed analysis of environmental issues and mostly outlines MLALCs strategic interests in land (not the community's interests) and must only be "taken into account" by the Planning Proposal Authority. i.e. it is not the determining matter for consideration in the assessment of the Planning Proposal, being only one matter amongst many in law that the Planning Proposal Authority must consider. Proposed LEP provisions to cap dwelling numbers in R2 zone inadequate – Provisions in the Housing SEPP and Codes SEPP do not require reference to Council's LEPs before a complying development certificate can be issued for dual occupancy or secondary dwelling development. There is a strong likelihood that approvals will be granted for development over and above the 450 dwelling cap based on Council's experience elsewhere (Warriewood Valley). The revised Planning Proposal still does not provide sufficient information or evidence to support the proposed re-zoning, particularly regarding bushfire mitigation and management, urban design, water detention and stormwater management. The R2 zone under Warringah LEP 2011 also permits a range of uses in addition to seniors housing that are vulnerable to hazards such as bushfire, including bed and breakfast accommodation; Centre-based child care facilities; Community facilities; Educational establishments; Places of public worship; and Respite day care centres. It is not clear if these uses will	SEPP Consistency The main body of the planning proposal includes yes/no answers to the SEPP, however Appendix 3 includes a full assessment of the PP against the SEPPs as per the LEP making guidelines. Weighting of the DDP The DDP guides the delivery of this planning proposal as it is directly relevant to the strategic context and merit of the site. The DDP contains no detailed analysis of environmental issues as it is a precinct wide analysis of which was approved by the Minister for Planning, to set out the objectives for identified land owned by MLALC. In approving the DDP, the Minister has established the strategic merit for the site. This PP provides detail solely for the Patyegarang site and addresses all other matters as per the LEP making guidelines, and all other relevant policies. The detail provided in the PP can be sufficiently relied upon by the Planning Proposal Authority to assess all factors on the merit. Dwelling Cap Inadequacy The application of a dwelling cap is a common control within the NSW planning system and will be provided as a site-specific clause within the LEP, modelled on similar provisions relating to other sites with the Northern Beaches LGA. Any future subdivision DA is intend to apply to the entirety of the site and can be included in the site-specific LEP clause, as such an adequate condition can be placed on any approval to enforce the dwelling cap. Any future development application or complying certificates would need to comply with this condition.. In addition to the condition of consent, it is envisaged that appropriate controls through the Community Title Management Statement would be included to ensure compliance with the dwelling cap. Information Provision Details on the bushfire mitigation have been detailed in the Bushfire Protection Assessment and Strategic Bushfire Study, which the Planning for Bushfire Protection deems as satisfactory. Notwithstanding that approach the RFS have recently requested the approach be enhanced and aligned to a national risk management protocol. We have chosen NERAG which is a ISO3100 protocol and which Northern Beach Council consultant Meridian Urban used in 2021. Any detailed design for mitigation will be undertaken at DA Stage. Similarly, detailed urban design, water detention and stormwater management will be addressed at DA Stage at a level that is not required to be addressed in

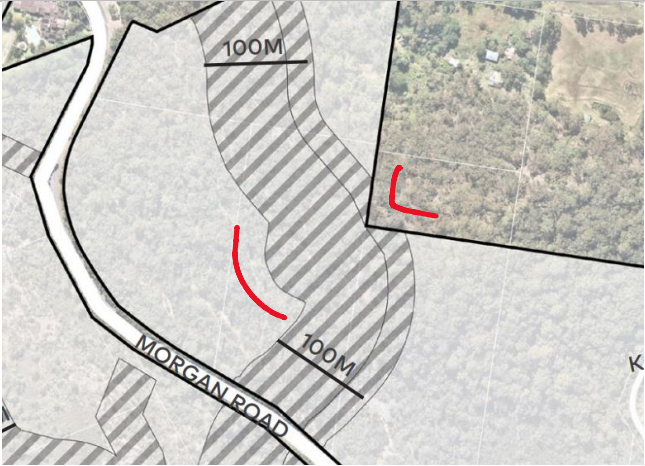
Northern Beaches Council	Response
be prohibited. The revised Planning Proposal specifies and maps minimum lot sizes. Council staff have significant concerns regarding potential biodiversity loss resulting from the location of bushfire Asset Protections Zones (APZs), underestimation of impacts on water quality and on-site detention, and visual impacts/ loss of landscaping resulting from APZs being located along any roads, including Morgan Road.	a PP. Zoning Provisions The R2 zone will be implemented as per the Warringah LEP 2011 (or equivalent if/when comprehensive LEP is made). Any DA that includes vulnerable uses such as community facilities will address the risks and mitigation measures at DA Stage and be assessed appropriately. Minimum Lot Sizes The developable area, including the APZs, are not located on biodiversity values, see Hayes Environmental attachment responding to adequacy of assessment and report for a detailed assessment of the impacts. Regional and District Plan Consistency: Though GSC considers the Planning Proposal is broadly consistent with relevant Objectives in the Greater Sydney Region Plan and associated Planning Priorities in the North District Plan. Please see the response to Council's specific concerns below: <i>Obj 2 Infrastructure</i> – The infrastructure demand will be increased, this has been addressed in the Traffic Impact Assessment and the proposed consultation with agencies as detailed in the section below. <i>Obj 5 Communication</i> – Council states no communication was undertaken prior to lodgement. In October 2022 an offer of an officer level briefing with consultants was offered to Council, March 2022 a written briefing note was provided to the Councillors on the DDP proposal. See Appendix 5 for additional communications. <i>Obj 10 Housing Supply</i> – As above, the infrastructure needs have and will be addressed to provide for the expected demand on the site. <i>Obj 11 Affordable Housing</i> – Further details of the intended affordable housing provision and proposed scheme will be provided in 2024. <i>Obj 12 Great Places</i> – The site will provide community open space contributions, defined and enhanced walking tracks to reduce unwanted and unmanaged biodiversity impacts, and high-quality designed places and public domain as per the DCP. <i>Obj 14 Heritage</i> – Further details on Aboriginal sites management and protection will be provided at DA stage. <i>Obj 25 Waterways</i> – The proposal intends to improve the waterway and ongoingly protect the riparian areas. Detail design and management of this will be provided at DA stage. <i>Obj 27 Biodiversity</i> – Biodiversity impact have been addressed in the Hayes Environmental Preliminary BDAR, further details will be provided at DA Stage. <i>Obj 28 Scenic Landscapes</i> – The proposed structure plan ensures open space that allows for

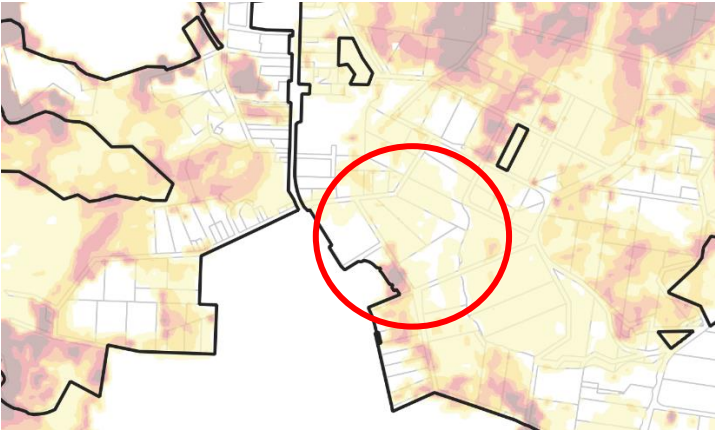
Northern Beaches Council	Response
	enjoyment of vistas and improved sight lines over conserved areas. <i>Obj 29 Environmental, social, economic values</i> – The scheme provides a structure that reflects the low-density and suburban neighbourhood of the surrounding character and uses, it further provides a development cap that limits the development to the relevant scale. <i>Obj 30 Canopy Cover</i> – Areas identified for conservation where biodiversity values are located will maintain their canopy coverage, developable areas include controls in the DCP ensuring high level of canopy cover throughout the site. <i>Obj 33 Low Carbon City</i> – Details relating to specific ESD outcomes, carbon emissions will be undertaken at DA stage. <i>Obj 37 Hazard Exposure</i> – The hazards are sufficiently addressed in the relevant consultant reports and mitigate potential impacts. Further specific mitigation factors will be identified at DA stage. The comments North District Plan comments are of the same vein and have been answered in this letter or in consultant reports. Metropolitan Rural Area Though the site has not been identified in an Urban Investigation Area, it is identified in the DDP which was put forward after the creation of the GSRP. The DDP undertakes a strategic investigation of the area that identifies it as a key location for residential uses with close connection to cultural landscapes, and a bushland setting as per the GRSP. As per the GCC agency submission, there is an acknowledgment that that the MRA is also <i>‘parts of the urban-rural fringe are owned by Local Aboriginal Land Councils. Future planning of these areas may be more flexible in order to balance rural values with greater economic participation, and community and cultural uses by Aboriginal people’</i>. As this PP intends to introduce increased economic participation alongside community and cultural uses, the PP is consistent with the objective for MRAs. SEPP Consistency Appendix 3 determines how the scheme will not contain provisions that will contradict or would hinder application of each SEPP and provides further detail where necessary. Local Planning and Strategic Directions An updated response to the relevant Local Planning Directions is provided at Attachment 1. Local Housing Strategy This PP is not an “ad hoc” approach as the DDP provides a strategic vision set out for the MLALC owned land. The proposed subdivision layout reflects the local character and assists Council in reaching their

Northern Beaches Council	Response
	housing targets. Further it is a scheme that directly address the constraints of the site and works to mitigate these and will also allow for improved road and walking infrastructure. Inconsistency with the C-Zone Review Council's recommendation of a conservation zone over the entirety of the site is a blanket recommendation that does not reflect an in-depth analysis of the constraints on each lot. While the studies mentioned by Council are recognised, they reflect precinct and LGA wide studies which did not include any physical fieldwork on the site and do not reflect the detailed assessment of a site-specific analysis and assessment that was undertaken as a part of this proposal. In addition, the review has been on exhibition and does not reflect the finalised outcomes of Council's examination. A submission was undertaken for the site and given to Council during the exhibition period that requested the site be left out of the review in preparation for the planning proposals lodgement. Site Specific Merit Aboriginal Heritage – The Aboriginal sites are invaluable to the MLALC, and leaving the site as it is and unmanaged leaves it open for graffiti and vandalism, with an existing BMX track causing scratches to the carving, and is not a sustainable option for their protection. It is understood that AHO recognises incorporating the heritage items into a protected open space and the focus of protection will aid in it's ongoing management and protection. However, the heritage report cannot produce details on site-specific protection until DA stage when layouts and detailed design is undertaken. Conservation Management Plans are required under the National Parks and Wildlife Act and AHIP requirements and can be undertaken post-finalisation. In addition, the approval of the planning proposal does not negate the need for a AHIP and ACHAR at DA stage. This will still need to be satisfied to procure a development approval from the consent authority at DA stage.
DCP • The provisions of the SEPPs, and National Construction Code (NCC) will override any DCP controls, resulting in larger developments that do not comply with the DCP intent. • The requirement for clearing of land in Bushfire Asset Protection Zones is inconsistent with and will override requirements in the DCP to retain existing bushland and significant trees.	SEPP and NCC This is the case with any DCP, the relevant SEPPs and NCC will apply to the site but would not enable the LEP provisions relating to permissible uses, minimum lot sizes or the dwelling cap to be overridden. The DCP is intended to outline high level principles for development form across the site and will be supplemented by Design Guidelines prepared alongside any subdivision application. APZ inconsistencies Whilst it is acknowledged the APZ zones may reduce bushland, all APZs are included within the

Northern Beaches Council	Response
• References to proposed timber construction to “fit” with the local environment are unlikely to meet bushfire requirements. • No design options are provided for the 200 sqm allotments within the site, yet these are the most likely to impact the existing environmental quality and character of the area. • The Planning Proposal and DCP makes no mention of ESD principles in its overall objectives (Planning Proposal page 25) this despite the explicit requirements of Council’s LSPS Towards 2040 for large scale developments and planning proposals. • The DCP refers to Biodiversity Certification which does not form part of the current planning proposal. • The biodiversity and vegetation management chapter of the DCP appears to have limited practical application beyond the subdivision application. The emphasis appears to be on areas such as the C2 zone and residential interface including open space areas and riparian corridors. These areas would not be subject to DA’s beyond subdivision. • The content within Appendix 1 of the DCP should be incorporated into each relevant section rather than as an appendix. • The biodiversity and vegetation management chapter of the DCP does not make adequate declaration or define what constitutes ‘Vegetation’ (including native vegetation) or trees (other than ‘significant trees’). Section 2.9 of the Biodiversity and Conservation SEPP applies to vegetation declared in a DCP. If not declared in a DCP then permit requirements for tree or vegetation removal are subject to doubt. • There are differences between the wording of the Design Principles in the GYDE report and the Urban Design Report. • It is unclear how the APZ will be able to manifest on land not in the ownership of the MLALC.	proposed R2 zone. The retention of bushland and significant trees relates to the protection in conservation zones where biodiversity values are to be maintained, or relate to canopy cover over proposed open spaces which do not relate to the APZs. Timber Construction Construction elements including timber is inconsequential to the bushfire implications to the site. The only reference to timber within the DCP relates to decking and not materials for the primary dwellings. Further, some construction to fit with the environment may also use timber imitation materials which are not flammable. In any case all forms of construction will need to comply with the relevant Planning for Bushfire standards at Construction Certificate and Occupation Certificate stages. The DCP does not override this statutory requirement. Design Options for minimum 200sqm allotments The DCP has been revised to include options for allotments of 200 – 350sqm as per other typology diagrams. This includes options for constrained and unconstrained lots and maintains principles to ensure consistency through the precinct regardless of lots. ESD Principles ESD Principles have been drafted and added into the DCP while considering minimum requirements. These principles provide guidance for future development, however do not provide metric based controls or detailed requirements as a detailed ESD principle vision has not been decided upon. Further, detailed ESD principles will be undertaken at DA stage once advice is received on the best principles to be undertaken to address detailed site needs and reflect detailed consultant feedback, eg. Stormwater, biodiversity, landscaping and water sensitive urban design. Biodiversity Biodiversity Certification may be undertaken, however undertaking certification or alternate biodiversity management will be undertaken at a later stage as this follows the standard statutory process and requirements. The Biodiversity and Vegetation section relates to the outcomes for the C2 zone, of which has been identified to be retained and managed as a regional biodiversity corridor. Controls relating to vegetation permit requirements revert to the relevant controls in the Warrigah DCP. Further, it identifies management of future residential interfaces, lighting, walking tracks, and protection outcomes, which will be relevant to guiding future DA’s on the R2 zone and beyond the existing subdivision. The content in Appendix 1 will remain in the appendix to improve readability and structure of the

Northern Beaches Council	Response
	document. Definitions of vegetation and trees has remained silent on the definitions as it reverts back to the definitions under E2 Prescribed Vegetation of the Warringah DCP 2011 to avoid conflicting definitions and ensure consistent application for permit requirements. Requirement 1 (d) will capture any future tree removal and will require a permit. When the definitions included in the consolidated Northern Beaches DCP is released, those definitions will be reverted to. Differentiating Wording The differentiating wording within the Design Principles in the DCP and Urban Design Report are purposeful as the documents have different intents. The DCP provides more control and explanation for these controls, whereas the Urban Design report provides guidance of the design outcomes. The principles in the urban design report are not written for the same audience or with the same intent as the DCP. Therefore, the wording of the principles will not be the same, though they maintain key similarities in establishing a cohesive vision. APZ Boundary in Eastern Corner Council raises concern with how the APZ boundary will expand beyond the site boundary within the Eastern corner of the site. However, the APZ zone does not extend beyond the site as the zone setback has been measured from the boundary. Therefore, the site still preserves an adequate APZ setback without extending onto land not owned by MLALC.

Northern Beaches Council	Response
	
Bushfire Issues Traffic The proposal's Transport Assessment has not demonstrated that the development achieves the access and egress assessment considerations of Section 4 of PBP (2019). Sydney Water Sydney Water must confirm that the potential future augmentation accounts for water capacity and pumping requirements necessary for fire-fighting purposes. Codes SEPP Codes SEPP does not require consideration of other clauses in an LEP, in this case the quantity of dwellings permitted on this land. This has the potential to inflate the population of an at-risk community beyond what was planned and modelled, thus potentially affecting to the evacuation of the community. Independent Review - Meridian Urban States inappropriateness of the proposed scale, density and	Traffic An updated Strategic Bushfire Assessment will be provided in January 2024. The cumulative impact of egress and evacuation across the wider network will and needs to be considered under a separate process which we understand will be led by the PDU in partnership with RFS as it relates to precinct wide assessment that this PP cannot address. Sydney Water There is an existing 500mm water supply main in Forest Rd. In 2017 Sydney Water advised that this main has sufficient capacity to service the proposed development. At DA Stage, the project will require a detailed hydraulic analysis to confirm the sizes of new mains to be provided along Morgan Rd and within the development for drinking water & fire fighting purposes. Codes SEPP As noted above, any complying certificate must comply with an appropriate condition of consent which can be applied to the subdivision approval. Independent Review – Meridian Urban (2021 and 2023) In 2021, Meridian's outcome of their assessment was the production of fire line intensity mapping which seeks to advise on how a site is affected by nearby fire-runs and through the display of those modelled intensities.

Northern Beaches Council	Response
urban design of the site, and highlighted significant inadequacies, omissions and wrongful assumptions. • The risk of bushfires for the site is significantly underestimated • The BFSS takes an adhoc approach to hazard management, which ignores strategic aspects of bushfire management and namely as related to the proposed density, landscape (within and surrounding the proposed development), urban design and infrastructure provision • The BFSS fails to adequately consider safe evacuation of future residents and adjoining communities, and especially the overreliance on Morgan Road and the (compulsory) acquisition of Council land for a slip lane onto Forest Way • Some statements are not underpinned by detailed information or evidence, bringing into question their accuracy Mere compliance with bush fire protection measures does not address the nature of matters outlined by Chapter 4 of PBP. • The BFSS does not make assessment of land use in terms of appropriateness of density, settlement pattern and land use type, as required by Chapter 4 of PBP. • Concerns raised by both Council and the Blackash review regarding the draft planning proposal in relation to evacuation do not appear to have been addressed. Should the proposed arrangements turn out not to be viable, there is the potential for a sub-optimal outcome to occur. It was considered that even after bushfire mitigation measures are put in place, future residents and properties would be exposed to residual risks for which they may not be able to	Their mapping, particularly, Figure 14 and replicated in Appendix A showed that 95% of the site is only affected by the classification 4,000 to 20,000 k/Wm when assessed against an FFDI of 100. This is equivalent to a catastrophic weather event. The light-yellow colour, in their legend (see below), shows that the site is not in close proximity to their mapped high intensity fire scenarios. Travers Bushfire & Ecology do note a small area of steep forest in the southeast sector of the site.  The map displays a fire risk assessment area. A red circle highlights the 'Subject Area'. The map is color-coded according to the FFDI 100 legend, showing different levels of fire risk. The legend includes categories for 'Deferred Lands', 'Subject Area', 'FFDI 100' (4,000-20,000, 20,000-30,000, 30,000-40,000, 40,000-60,000, >60,000), and 'Cadastral'. Travers Bushfire & Ecology note that Meridian appears to refute the comprehensive science surrounding the PBP bushfire behaviour APZ tables that are based on comprehensive fuel investigations undertaken by the RFS. It is Travers Bushfire & Ecology's strong opinion that the varying suggestions by Meridian Urban that vigorously challenge PBP fire behaviour is without foundation and has not been quantitatively assessed by them nor proven by them. Travers Bushfire and Ecology readily acknowledge that evacuation is a key driver of this site and the project team have ensured that the Morgan Rd slip lane was a significant element of the design. In addition, the recommended connection to Oates Place provides a second evacuation route onto Forest Way to the west if required. Whilst they acknowledge that turning right along Morgan Rd is an evacuation route it is unlikely to be used due to bushland pinch points along the road.

Northern Beaches Council	Response
obtain insurances. Independent Assessment BlackAsh - The proposal has been developed on the premise of evacuation being provided by Morgan Road and a new slip lane on to Forest Way and a new emergency access on to Oates Place. The availability and utility of both of these key aspects has not been demonstrated, yet these are fundamental enabling provisions for the proposal. If one or both of these options are not available, the planning proposal will need to rethink the design response to activation of the site. This is a fundamental issue to be resolved. - In its current form, the proposed development presents an unacceptable and, in some cases, a catastrophic risk to future residents. - Concern is also raised about the accuracy of weather conditions data referenced in the planning proposal RFS documentation, and limitations in regard to its assessment of the proposal against infrastructure, particularly water, electricity and gas. Further information is required	In 2023, Meridian emphasised the proximity of the higher fire line intensities as having an affectation upon the Patyegarang site. However, the Figure above shows that the proximity of any nearby mapped high fire intensity levels is a significant distance away. In conclusion the Meridian report provided no quantitative reasoning nor subjective opposition to the residential development of the Patyegarang Site. Meridian Urban then addressed the 2022 Blackash Report by dissecting their recommendations and creating a series of critical elements which they deemed as needing to be sorted before a planning proposal could proceed. Whilst they replicated points made by Blackash they (Meridian Urban) failed to undertake their own field assessment to determine that most of those points were either in error or were amended in subsequent reporting. Given the PBP 2019 remains the sole policy document on strategic bushfire assessment in NSW and Travers believe that any suggestion of a higher strategic assessment method being used would be outside the realm of both Ministerial Direction 4.3 and PBP section 4. PBP Chapter 4 is the basis of strategic assessment studies as defined by Ministerial Direction 4.3; and PBP itself. Travers Bushfire & Ecology prepared a strategic bushfire study (October 2022) and this fully responds to the matters required by both Ministerial Direction 4.3 and PBP Chapter 4. Notwithstanding that approach the RFS have recently requested the approach be enhanced and aligned to a national risk management protocol. We have chosen NERAG which is a ISO3100 protocol and which Northern Beach Council consultant Meridian Urban used in 2021. The concept of density in a bushfire prone landscape has been fully addressed through the implementation of a 100m wide APZ on the boundaries where hazardous landscapes have potentially threatening downslope vegetation assemblages. This has been identified as the southern and southern aspects. The remaining aspects all have upslopes mostly with Tall Heath vegetation such that the potential impact is demonstrably less. Independent Review – Blackash In 2022, Blackash advised that emergency egress design was not proven as the land was owned by Council and that Council had not issued their consent. Blackash's report indicated the only concern is the procurement of the slip lane as the technical document provides a "<i>coherent, evidence based assessment</i>" and should be "<i>commended in the balanced and sympathetic approach that has been taken for a balanced utilisation and conservation of the site</i>". Travers Bushfires advises that this has been proven through design by Craig & Rhodes and their most recent design undertaken in collaboration with the traffic consultants JMT Consulting. This revised

Northern Beaches Council	Response
	design provides for a slip lane that does not rely on land owned by Northern Beaches Council. Evacuation & Morgan Road Site evacuation is possible from at least two directions both going to the west onto Forest Way. Traffic modelling indicates there are no impediments in the provision of an efficient evacuation from the site. Travers Bushfire readily acknowledge that evacuation is a key driver of this site and made sure that the Morgan Rd slip lane was a significant element of the development design. In addition, they recommended the connection to Oates Place to create a second evacuation route onto Forest Way to the west. Whilst they acknowledge that Morgan Rd is an evacuation route it is unlikely to be used due to bushland pinch points along the road. The future residents will be capable of three evacuation routes in the days before a fire event and on the day of the event, should that occur, then two evacuation routes to the west, onto Forest Way, will be safe to use – excluding the Morgan Rd / Oxford Falls Rd option due to pinch points. The revised strategic bushfire study will address the accuracy of weather conditions.
Biodiversity	See Hayes Environmental detailed response for further details.
Other Waterways The proposal discusses potential water quality management measures for stormwater runoff for when the site is developed however, does not provide a 'Waterway Impact Statement' that is required for any development works located within waterways and riparian lands, Slope Stability Insufficient Public Engagement – No engagement activities have been scheduled to take place during the public exhibition of the draft Planning Proposal. Council calls for a public hearing to ensure that community members, and namely the local Aboriginal community, are given a voice on matters that deeply concern them. This would be in keeping with minimum engagement standards and DPE's own Community	Waterways A Waterway Impact Statement can be addressed at DA stage when detailed design has been undertaken. In addition, the protection of the waterways and riparian zones will also be addressed. Slope Stability A Slope Stability Assessment Report was prepared alongside this PP, the conclusion of that report notes the <i>'the area is assessed as suitable for the proposed development. It is recommended however that for the discrete locations within the proposed development area where the risk level has been classified as unacceptable or tolerable upon treatment, that implementation of treatment options to reduce this risk level to Low risk should be considered as part of any application.'</i> Detailed slope stability assessment will be carried out at DA stage to address any specific slope requirements relating to a development. Public Engagement There are no formal requirements for the proponent to undertake engagement process during public exhibition at the planning proposal stage. The planning proposal has been publicly exhibited for in

Northern Beaches Council	Response
Participation Plan. Development feasibility not demonstrated - The overall feasibility of the development scheme is questionable given the significant level of infrastructure required to support a proposal of this size. The financial arrangements regarding ongoing management of infrastructure are unclear.	excess of the required period, enabling members of the public to engage and provide comment. Please refer to the pending ACHAR for details on consultation that will be undertaken with the local Aboriginal Community . Development Feasibility No guidelines define a need to discuss development feasibility or provide details on feasibility to the determining authority. The proposed infrastructure works to facilitate development have been considered throughout the development of the proposal and are documented in the VPA letter of offer. The likely infrastructure required to support the project has been identified during the early stages of the planning proposal. This is evidenced in the numerous submissions and references to infrastructure upgrades in previous documents such as the DDP and the original planning proposal lodged in Sep 2022 including the letter of offer. The infrastructure requirements have been informed by multiple applications and enquiries dating back many years to utilities such as Sydney Water, Ausgrid, Jemena and the likes, other significant infrastructure such as slip lane on morgan road have also been identified and accounted for within the forecast project budget. The services report provided with the planning proposal provides detailed information regarding the applications and investigations completed to date. We confirm that all infrastructure upgrades required to facilitate development of the Patyegarang site would be developer funded and that there is no expectation or necessity for Council to fund any of these works.

Environmental and Heritage Group (2023)	Response
The PP fails to demonstrate application of the avoid and minimise framework. The PP should provide further details on proposed zone boundaries and structure plan impacts. PP does not meet ministerial direction 3.1 and 9.1. The BDAR underestimates biodiversity impacts, incomplete and requires revision to complete the assessment and should not be relied upon until further investigation has been done. 'Retained' vegetation is still impacted and has not been avoided. Retained vegetation areas should be considered as impacted in areas of development/impact. The operational and construction footprint impacts are underestimated and does not account for indirect impacts. The footprint should also incorporate avoid and minimise measures now. Unclear calculation of impacts for offsetting – there is no mapping indicating partial and full impacts on PCT/EEC integrity. The high likelihood of Duffys Forest being present is not sufficiently addressed, and the justification is not reliable. The justification / assessment on the presence for the Coastal Upland Swamp and Sydney Basin Bioregion EEC is inadequate. All entities may be present that are not captured. The survey timings are not clear, and any surveys undertaken outside of required times should not be used to justify lack of impacts. Bat survey should be undertaken. Amphibian survey make assumptions for unsuitable habitats without justification.	Avoid and Minimise The avoid and minimise approach has been undertaken throughout the planning proposal and urban design process. In summary, the Structure Plan is the result of years of investigative and assessment process to avoid and minimise impacts on biodiversity values at the regional scale, site scale, and project scale. Additional planning has already commenced to further avoid and minimise impacts at the precinct scale, with these details to be lodged with the development application. The Patyegarang planning proposal is a result of a comprehensive strategy to avoid and minimise biodiversity impacts, which began with a strategic review of all land within the MLALC ownership in the Northern Beaches Local Government Area. This review subsequently informed the preparation of a Development Delivery Plan under chapter 3 of State Environmental Planning Policy (Planning Systems) 2021 (formerly known as the Aboriginal Land SEPP). The strategic review of MLALC land was undertaken to identify land of high biodiversity value (among other characteristics) within the Northern Beaches LGA, with a view to identify land that should be avoided and not included within the Northern Beaches Development Delivery Plan for future development purposes. As shown in the mapping below, the assessment of these landholdings resulted in only 6 sites nominated for inclusion within the Aboriginal Lands SEPP. The avoidance of significant land holdings within the Northern Beaches LGA also provides the opportunity for biodiversity offsets across MLALC ownership and creation of biodiversity stewardship sites, mitigation and providing additional opportunities for offsets within the immediate local government area. MLALC is committed to providing and delivery appropriate Biodiversity Offset Strategies across its other landholdings as a result of this proposal. This will not only compensate for any loss as a result of the project but also enable the funding of ongoing protection, management and rehabilitation of landholdings with MLALC which are not appropriate for development. The Urban Design Strategy and site-specific indicative Masterplan submitted with the PP has been informed by a series of overarching principles, including the avoidance of development in the south-eastern part of the site which is more remote and not bordered by existing development. The preliminary BDAR considers/embeds the elements of the Urban Design Strategy and Masterplan (prepared by Cox) so that direct and indirect impacts are covered/assessed. The preliminary BDAR has informed the selection of the appropriate land use zones, including: - C2 Environmental Conservation, which has been identified to ensure impact on biodiversity valued

areas are avoided;

- RE2 Private Recreation along Snake Creek riparian corridor and parts of its tributaries, to ensure minimal development footprint and indirect impacts in sensitive areas. Impacts are further minimised through the protection of riparian corridor to protect/enhance water quality and provide habitat protection and connectivity.

- R2 residential zoning, supported by a comprehensive site specific development control plan (DCP) that includes development controls to minimise environmental impact from future development footprint.

The proposed community title scheme will also embed appropriate management and mitigation measures across the entire site.

Planning Proposal

See section above in this letter with further discussion on the Ministerial Directions.

Estimation of Impacts

The potential for underestimation of impacts is substantially less than the overestimation of impacts that has been incorporated into the assessment. The extent of impacts would be re-calculated on the basis of final detailed plans at the development application stage. The minor queries raised by EHG would not materially alter the outcome of the biodiversity assessment nor compromise the feasibility of the project.

The Structure Plan specifically addresses lot sizing, road placement and asset protection zone boundaries to facilitate retention of trees and natural rock features within the development. Asset Protection Zones will retain native vegetation to the extent that meets statutory APZ requirements. This vegetation would effectively be protected and maintained through a Vegetation Management Plan implemented by the community strata and controlled by Council. Residential lots and private spaces would not be cleared and levelled to suit broadscale project home development, but offered as treed sites with restrictions where appropriate, to encourage bespoke house designs similar in character to other residential areas across the Northern Beaches. Despite this, the biodiversity assessment has conservatively assumed for the purpose of assessment and calculation of impacts that all land within the development footprint, including APZ inner protection areas, public open space, road verges, and private spaces would be completely cleared of all native vegetation. This is an overestimation of the extent of impacts across 44.7 hectares of land.

The biodiversity assessment assumes that riparian corridors and the cultural reserve (6.9 ha) would not be directly impacted by the development but are likely to be subject to indirect impacts. This is based on detailed discussion with the bushfire consultant, stormwater consultant, and broader project team. Indirect impacts require more detailed site plans and management plans to be quantified at a later stage

once details are finalised.

Offset Calculation

Offset credit calculation and pricing have been regularly changing and updating since the commencement of the BC Act, such that changing credit requirements is an ongoing risk for all strategic planning decisions which necessarily rely on unfinalised BDARs. Sufficient information has been provided to confidently assess project merits and feasibility for rezoning.

Further, the draft BDAR has provided a draft offset calculation which will be updated at the time of formal DA lodgement and any credits paid post approval, as per the standard and required process.

Likelihood of Duffys Forest and Coastal Upland Swamp

Consideration of Duffys Forest EEC has been carried out through both qualitative and quantitative comparison with the Final Determination of the NSW Scientific Committee (this being the legal definition of the community). The quantitative comparison referred to the Smith & Smith (2000) report and method which is specifically referred to for this purpose in the Final Determination. There are cautions and limitations relevant to this method, as with any scientific method. These cautions and limitations, however, have been carefully considered and addressed in the Preliminary BDAR, and do not affect the findings set out in the Preliminary BDAR. The issue of sampling limitations is relevant to large sites where random sampling has been used. This does not apply to Patyegarang where the entire area has been traversed on foot and sampling has targeted the most likely areas for this community on site. The methods used to assess and identify this community are legally and scientifically robust. The results are consistent with recent regional vegetation maps released by DPE.

There is one patch of Coastal Upland Swamp mapped within the site on recent regional mapping. This appears to be a mistake in aerial photo interpretation due to weed invasion, most notably Coral Trees, Privet and Senna. Further detail and photos will be included in the Preliminary BDAR.

Adequacy of Surveys

Current legislation and guidelines for fungi do not require variation to survey timing be justified by a listed 'DPE Expert'. EHG have erroneously discounted the justification provided in the Preliminary BDAR on this basis. The fungi surveys were conducted by an expert on the genus, after whom one of the species is in fact named.

Targeted parallel traverse surveys for threatened plants have now been completed. These had been delayed due to seasonal survey requirements and so were not included in the July version of the Preliminary BDAR. No new threatened plant species were recorded, these results have now been

	included in the Preliminary BDAR. EHG have queried the survey of habitat for several ecosystem credit species, these species are appropriately assessed as ecosystem credit species in accordance with the BAM (2020). Further survey or mapping of habitat is not required. Amphibian surveys were designed and carried out in collaboration with Dr Marion Anstis, a recognised expert on the relevant frog species and whose work is relied upon in the industry for identification of frogs and tadpoles. Further detail on this has been added to the Preliminary BDAR. The attached comments prepared by Hayes Environmental provide detailed and comprehensive answers to each of Council's concerns. Any comments Council have made in relation to the BDAR which require details that are not required under the statutory instruments will be provided, as per the standard process, in the DA stage.
Flooding: Recognises that flood assessment has been undertaken, however there is concern on its accuracy and the appropriateness of the methodology. The Flood Report has not adequately demonstrated pre-and post-development scenarios. Recommended that the hydraulic model be extended downstream to include Oxford Falls Road. The stormwater management report doesn't adequately consider mitigation strategies for impacts on stormwater flows, or consideration of detention basin locations. The earthworks strategy involves lowering flow paths, there is concern on biodiversity impacts from this.	An updated Flooding Impact and Risk Assessment is attached that addresses these concerns. The CED FIRA Report July 2023 maps both the 1% & PMF flood events in the pre & post development scenarios within the extent of the planning proposal lands. Additional models are being prepared to assess the impact of the 1% & PMF events on Oxford Falls Rd. It is noted that Oxford Falls Rd is frequently impacted by more frequent flood events and the road is often closed in this location. To this extent flood gates are installed at Oxford Falls and managed by Northern Beaches Council so as to prevent vehicles crossing flood waters. The CED Storm Water Management Report July 2023 outlines a range of strategies to manage the impacts of storm water flows in the context of the site and environmental considerations. This strategy does not intend to construct large detention basins on the site but rather a sequence of devices that minimise and replicate natural environmental flows. A detailed earthworks strategy is yet to be resolved as this is a development application consideration. However, it is intended to minimise the extent of earthworks to reflect the natural contours of the land.
Environmental and Heritage Group (2022)	Response
Avoidance Issues The overarching concern that the proposal fails to adequately consider and avoid the biodiversity values on site. The concern stems from a lack of information / comprehensive assessment undertaken of potential biodiversity impacts. BDAR and UDR do not demonstrate the avoidance of biodiversity impacts.	Avoidance Issues As above, the structure plan is a result of extensive review to avoid and minimise impacts on biodiversity values at the regional scale, site scale, and project scale. This has been documented in the updated BDAR, which illustrates the evolution of the current structure plan. The avoid and minimise approach is sufficient to mitigate impacts to riparian zones and amphibian species as detailed in the Preliminary

The proposal fails to demonstrate the avoid and minimise framework (under BAM) as it is fully vegetated and connects to wider ecological corridors and assumes “all areas identified for potential development, including asset protection zones (APZs) would be cleared of native vegetation”. Notes how structure plan does not provide a sufficient buffer to riparian zones and the threatened species (Red Crown Toadlet) within those zones. Notes any vegetation cleared in high value areas will breach the Offset Scheme Threshold. Notes that any offsetting undertaken via Stewardship agreements is not valid/sufficient for the impacts of this planning proposal.

Information

The BDAR is a summary of methods rather than an assessment. They recommend it applies an assessment as per Stage 1 and Stage 2 of the BAM at a minimum, and considers opportunities to meet Part 8 of the BC Act 2016.

Requests information on conservation area boundaries and the limit of 26% of the site area, and the mechanisms needed to conserve these areas.

EHG is unsure if the study is comprehensive enough to exclude the likelihood of species identified on records to be present on site.
Requests information on the works to justify exclusion of the Coastal Upland Swamp Endangered Ecological Community (EEC) from the mapping. (As per briefing on 11 March 2020)

Requests further information on extent of removal to create APZs and on the boundary between the conservation and APZ zones. Recommends the layout should minimize APZs and any APZs provided must be wholly contained in development areas.

Recommends location and impacts of essential services to be considered/assessed at some level prior to DA stage to ensure development can be serviced without SAI impacts.
Recommends flooding behaviour should be modelled and mapped separate to stormwater. The Wakehurst Parkway via

BDAR. Further avoid and minimise planning has commenced to reduce impacts at the precinct scale, these details will be lodged at DA Stage.

Information

The Preliminary BDAR is not required to meet Stage 2 of the BAM at the planning proposal stage. At DA Stage, a comprehensive BDAR will be produced that addresses all aspects of the BAM as per the BC Act.

As per the above, the estimation and calculations of impacts have been addressed, this includes recognition of the APZ's though detailed analysis of impacts will be undertaken at DA stage. Further the potential likelihood of species on site has been addressed.

Discrepancies

All additional species have now been surveyed and further detail provided in the updated BDAR, and there is sufficient flexibility within the structure plan to accommodate future survey fieldwork without compromising the feasibility of the project.

Layout

As per above, the concept layout address site specific concerns and has been informed by all relevant guidelines. Detailed design will be undertaken at DA Stage with further appropriate measures put in place to improve biodiversity outcomes from the current overestimated results.

Oxford Falls Road flooding should also be considered by traffic. PP must be consistent with the local planning direction for flooding and provide commentary on this from a flood consultant.

Discrepancies:

The UDR identifies the Eastern Bentwing Bat but was not identified in the Assessment, and Large-eared Pied Bat were excluded from consideration. It is recommended a survey to identify bats and other cave species should be undertaken. The UDR states that Powerful Owls and Glossy Black Cockatoo roost on site but no nesting trees were identified in the mapping. It is recommended to study the roosting and foraging patterns of this species.

Layout:

Recommends that outcomes of biodiversity assessment should inform development layout.

The design principles for the retention of trees and rocky outcrops are unlikely to be achieved because of slope, scale of development, and associated infrastructure. Recommends conservation areas to be sized to account for direct, indirect and delayed impacts from developable footprint. This should be reflected in the Assessment Report. Expectation that any conservation areas are zoned C2.

Heritage NSW	Response
States that consultation that has been undertaken to date does not comply with the relevant requirements of the National Parks and Wildlife Regulation 2019 or the Aboriginal cultural heritage consultation requirements for proponents 2010. Recommends that a Aboriginal Cultural Heritage Assessment Report (ACHAR) be prepared as per the National Parks and Wildlife Regulation Act, Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW, and Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW. The ACHAR must include consultation with Aboriginal communities. In accordance with Clause 5.10.8 of the Warringah LEP 2011, it is important that any management, mitigation, and conservation mechanisms are developed at the planning proposal stage to help mitigate the cumulative impact of development in this region on Aboriginal cultural heritage.	Request for ACHAR and Future Consultation The ACHAR is not a mandated document for planning proposals and is commonly lodged alongside a development application. An Aboriginal Cultural Heritage Assessment Report (ACHAR) is currently being prepared and will follow the Aboriginal community consultation and reporting methodology that is required by DECCW (2010). This is being undertaken, in addition to the consultation and inputs provided throughout project by the Proponent, MLALC members. The ACHAR will be developed with First Nations people who will be provided the opportunity to inspect the land and the Patyegarang rock engravings sites. The ACHAR will be informed by the Patyegarang Conservation Management Plan (CMP) and the First Nations consultation, among other things, will discuss the mitigation of potential impacts to the engravings sites that may result from future interpretation and accumulated impacts to the sites that may result from increased public visitation. The CMP and ACHAR will be undertaken concurrently and can be completed in 3 months. Aboriginal CMP A detailed digital recording of each of the Patyegarang rock engravings, along with conditions at and surrounding each engraving site, will be undertaken to enable identification of immediate, short term, and long-term threats. The CMP will guide ongoing protection, conservation, and potential future interpretation of the Patyegarang cultural heritage sites, including specific conservation requirements under Heritage NSW authorisation. The CMP will provide principles and policies for controlled visitation and surveillance. Consultation will underpin the development of the CMP that will provide a management strategy to safeguard the future protection and ongoing conservation of these sites.

Transport for NSW	Response
Forest Way / Morgan Road Intersection: Recommends removal/restriction of kerbside parking on Morgan Road to provide an extension to the two approach lanes onto Forest Way, and an extension of approach lanes is expected. The right turn bay should be extended at minimum of 40m past the back of the queue. TfNSW will not support any additional traffic signal phasing with any additional phasing. An electronic copy of the SIDRA should be submitted for comment. The TIA does not seem to have included the cultural centre in the trip analysis. If there is an extension of the northbound right turn lane – The road works would need to be reviewed by TfNSW and needed to be completed in initial development. Proposed Slip Lane TfNSW generally agrees with the intent to provide the slip lane but suggests further discussion between DPE, Council and proponent for acquisition and design & delivery. The slip lane should be constructed in the initial development to cater for additional traffic. Slip lane should also be signalised due to number of school children using pedestrian crossing facilities. Proposed Dwelling Cap TfNSW agrees with the intent to provide a dwelling cap. Site Specific DCP The DCP should include controls for vehicle access to and from the site, and access restrictions/ emergency access from Oates Place. Other Recommends further consultation with TfNSW to agree on approach for public transport arrangement prior to PP finalisation.	Forest Way / Morgan Road Intersection & Slip Lane The proposal makes provision for a significant upgrade to the Forest Way / Morgan Road signalised intersection through the provision of: - A new slip lane from Morgan Road into Forest Way, allowing traffic travelling onto Forest Way a continuous path of travel without having to wait at a set of traffic lights; and - Extension by 40m of the northbound right turn bay from Forest Way into Morgan Road This revised slip lane design does not involve the use of Council land. This upgrade will deliver benefits to both site users and the general public by improving traffic capacity and reducing vehicle delays. It is a critical piece of infrastructure in supporting bushfire evacuation for future residents of the site as well as existing residents along Morgan Road. In response to TfNSW feedback received during the public exhibition period the northbound right turn bay on Forest Way into Morgan Road would be extended by 40m to provide for additional queueing capacity. Traffic modelling & Analysis The updated transport impact assessment has taken on board feedback received from TfNSW during the public exhibition phase of the project, which has included: - Undertaking updated traffic counts in August 2023 to reflect contemporary traffic conditions in the area - Incorporating SCATS data (provided by TfNSW) to update the traffic model in relation to phase sequencing, timing, activation of pedestrian signals and minimum walk times - Reviewing forecast queue lengths on Morgan Road and Forest Way Consideration of background traffic growth on Forest Way (as per previous traffic analysis) The findings of the traffic modelling remain largely unchanged compared to those previously presented – with the Forest Way / Morgan Road intersection forecast to operate at an acceptable 'Level of Service D'. It should be noted that the analysis undertaken is considered conservative and represents a worst case scenario for the operation of the intersection given that: - An upper limit development yield of 450 dwellings has been considered in the modelling; and - The modelling has considered background traffic growth on Forest Way and surrounding roads, despite investigations showing that traffic flows on Forest Way have remained relatively static (and even declined slightly) over the past decade. Delivery of the Road Upgrade The core requirement for the introduction of the Morgan Road slip lane is to facilitate safe and efficient

Clarification should be provided on how to restrict car use, not including the proposed gates, from the Oates Place and Forest Way egress.

evacuation for residents in the event of a major bushfire event. The slip lane is not required to support day to day traffic movements, with traffic modelling indicating the intersection would still perform acceptably at Level of Service D without the slip lane in place.

It is therefore appropriate that the delivery of the slip lane and broader road upgrade be determined on the basis of traffic movements during a bushfire evacuation event. Traffic modelling has identified a trigger point for the installation of the slip lane on Morgan Road of approximately 200 residential dwellings – beyond this level of development vehicle delays and queueing on Morgan Road would be excessive during a major bushfire event. The position is maintained that the slip lane is not to be constructed until 200 dwellings have been constructed on the site.

Public Transport Demands

Detailed analysis of bus routes and frequencies has been undertaken for the Planning Proposal. The analysis indicates there would be more than sufficient capacity on the local bus network to accommodate future demands from residents – noting any development of the site would take place over a long period of time and be subsequent to separate Development Applications. The suitability of the public transport network, factoring in any changes in supply and demand that have taken place, will be reassessed during the lodgement of these Development Applications.

Oates Place Traffic Management

Oates Place would only ever be used in the event of bushfire evacuation and not in a day-to-day basis. This may be managed through a number of methods which will be discussed further with the RFS and site manager closer to the time of the initial occupation of the site. A range of potential options would be available to manage access including removable bollards or access gates only operable via key or swipe card that is held by the site manager. A backup 'breakglass mechanism' could also be available to open the control point to traffic if required.

For further detail see the updated Transport Assessment prepared by JMT Consulting. Further consultation with TfNSW will be undertaken at DA stage.

Rural Fire Service	Response
RFS raised issues in respect of the strategic assessment criteria used for the project where he believed a higher level of strategic assessment should be used in the assessment of this project. Notwithstanding that belief there was no methodology suggested nor provided to aid that belief. The site will be impacted by significant fire risk and difficult to evacuate due to density and location of development. The transport assessment does not test realistic bushfire scenarios where some roads are but by fire or closed by emergency services. Morgan Road is not seen as a safe/viable option for an evacuation route due to close and overhanging forest. Oates Place doesn't have a slip road onto Forest Way to limit effective evacuation in this direction. Road design for the S1 and S2 development areas do not include a secondary access road, and the single access road is bordered by vegetation which needs to be addressed <i>at a later stage</i>. RFS states "The site is considered not an appropriate location for the proposal in its current form". Recommends further modelling must be undertaken to demonstrate safe evacuation during realistic bushfire scenarios, when roads are cut/closed. Compliance with minimum standards is not an appropriate solution for high-risk sites. Additional bushfire protection measures will need to be proposed to further mitigate the risk to an acceptable level.	Strategic Assessment Criteria In November 2022 PBP was amended. In section 1 Introduction it advises where it again reinforces that PBP standards, guidelines and policies were brought up to date and Travers have assumed that the RFS maintained their PBP 2019 approach to strategic planning in Chapter 4 which was a legislative direction of Ministerial Direction 4.3. Given the above PBP 2019 remains the sole policy document on strategic bushfire assessment in NSW and Travers believe that any suggestion of a higher strategic assessment method being used would be outside the realm of both Ministerial Direction 4.3 and PBP section 4. Should the RFS have any specific issues in this regard they should be brought forward. Travers Bushfire & Ecology prepared a strategic bushfire study (October 2022) and this fully responds to the matters required by both Ministerial Direction 4.3 and PBP Chapter 4. Notwithstanding that approach the RFS have recently requested the approach be enhanced and aligned to a national risk management protocol. We have chosen NERAG which is a ISO3100 protocol and which Northern Beach Council consultant Meridian Urban used in 2021. Strategic Risk Assessment In response to the concerns on the anomalies in the assessment as a high risk site, the bushfire hazards to the northwest and north northeast were upslope landscapes that associated with that is lower bushfire affectation which the RFS know is factual. The strategic bushfire study modelled the possible impact on the slip lane that turns into Forest Way as having a 12.5 k/Wm2 exposure which is low. In relation to community risk, any reference to the current 2011 plan and or the recently exhibited draft plan were written in absence of the planning proposal and any knowledge of development being likely. The current vegetation is a massive risk to the landowners and occupiers of the local community for example in Morgan Road, Oates Place, Lyndhurst Way, Caley Way and Ocean View Way in the west; and Hilversum Crescent, Slippery Dip Trail in the. A significant benefit is also achieved for special protection developments facilities such as the Uniting Church Pre School and the Uniting Church aged Care facility on the corner of Morgan Road and Forest Way; and the approved aged care facility at 117 Forest Way – which is 220m south of Oates Place. Through the planned removal of bushfire hazards the planning proposal will provide a marked decrease in hazard with the PP development entity indeed providing a hard edge to the urban development precincts that directly abut Forest Way. This can only lead to a better 'community outcome' through the redesign of bushfire hazards. Importantly, the design will enable Morgan Rd to be a safe evacuation route which it is not at the

moment. A significant benefit is also achieved for special protection developments facilities such as the Uniting Church Pre School and the Uniting Church aged Care facility on the corner of Morgan Road and Forest Way. At the moment they are unable to expand their facilities given the extensive bushfire hazards and danger they are exposed to on their eastern boundary. In addition, there is great benefit in the evacuation capability of the CSIRO radar unit on Oxford Falls Road where staff can head into the Planning Proposal landscape roads rather than travel the full length of Morgan Rd.

Road Design

Noted. These designs will be addressed at a later stage.

Further Modelling for Evacuation with Road Closures

In any bushfire evacuation event, on days of Extreme or Catastrophic risk, the Bureau of Meteorology provides advanced notice of inclement bushfire weather of up to 4 days and with a minimum of 2 days. This enables communities to plan and make their decisions in advance of such weather cycles. In addition, emergency services are also able to activate their planning scenarios. It is simply the case that not all residential communities need to evacuate or should evacuate.

The likely evacuation timing for Terrey Hills and Duffys Forest would not be at the same time as a similarly enforced evacuation from the Patyegarang site. As a point of significant difference, the evacuation from the Patyegarang site along Forest Way is not affected by any hazardous vegetation along the full 3.53 km Forest Way route. However, any evacuation event from the communities of Ingleside, Duffys Forest or Terry Hills is immensely affected by significant hazardous vegetation along the Forest Way roadway route especially from the intersection with Mona Vale Rd.

Thus, emergency services would see late evacuation from Ingleside, Duffys Forest or Terry Hills as highly dangerous and highly undesirable such that they would close, or at the very least create a controlled intersection, at the intersection of Forest Way with Mona Vale Road as a pre-emptive strategic operation.

Whilst there are small portions of vegetation remaining north of Morgan Rd they are predominantly mown under the canopy. A portion of bushland with a short downslope is located opposite the proposed development. Given the vegetation in the development site will be removed then there will be no pinch point only a perimeter road scenario which is permissible by PBP.

Compliance with Minimum Standards

Given that PBP is a prescriptive document and requires the user to apply the 'specifications and the requirements' of PBP as outlined in section 4 in order that the RFS can issue a subdivision bushfire safety authority Travers do not believe that the use of PBP could be considered a lesser standard.

Department of Planning and Environment – Crown Lands and Public Spaces	Response
Recommends that Crown roads should not be relied upon for practical access to the project site. The Department has received applications to close and purchase all the Crown roads within the proposal area, identified in orange with cross hatching 'CROWN ROADS UNDER APPLICATION'. The Crown roads suitable for transfer to Northern Beaches Council (Council) are identified in yellow 'CROWN ROADS SUITABLE FOR TRANSFER TO COUNCIL' The north section of a crown land has been identified in the PP as part of the proposed roads in the Structure plan and APZ bushfire plan, crown roads can not be used for APZs and may not provide practical access to free lots to the south. Another Crown road meets the criteria for transfer to Council and provides legal access to the freehold lots to the south. Transferring this Crown road to Council would enable Council to realign the road along the most practical alignment to provide access to Lots 954 and 955. This Crown road (yellow edged road on Morgan Rd) meets the criteria for transfer to Council under the Department's Administration of Crown Roads Policy. Transferring this Crown road to Council would enable Council to realign the road along the most practical alignment to provide access to Lots 954 and 955 to ensure legal and practical access. There is also a small section of Morgan Road (a Council public road) adjoining Lots 191 and 196 in DP752038 on the south-eastern side of the proposal area, which is constructed and provides access to numerous developments, meets the criteria for transfer to Council. A small parcel of Crown Reserve is included in the retained vegetation area and cannot form part of the proposal area.	Advice has been provided from Colliers. Relying on Crown Roads with Practical Access CED have identified the roads that are not practical for access and it is the intention to close these roads and create new roads that do provide practical access via the proposed development. Application to Purchase Crown Roads CED agree with the mapping and identification of the roads and their status on and adjacent to the site. The yellow roads should be transferred to Northern Beaches Council upon construction of road pavements and drainage. This transfer will resolve long standing access issues for adjoining land owners. Relying on Crown Roads without Practical Access The subject road is intended to be included in the project and is shaded pink as part of the rezoning of the land to R2 under the planning proposal. This road will also be constructed as a local road to provide access for both future and adjoining land together with a bush fire evacuation path and connection to Oates Place. The road will facilitate connection to Lots 954 & 955 in DP752038 which currently have no legal road access and this will resolve a long standing issue for these land owners. APZ Roads It is agreed that Crown Lands cannot be used for APZ purposes. All APZ's will be provided outside any Crown Road reserves and within the subject site. Transferring Roads to Council The yellow shaded road on the existing alignment of Morgan Rd is maintained and managed by Northern beaches Council. It is agreed that this land (road) should be transferred to Council. This situation is generally outside the delivery of the planning proposal and can be independently managed. The yellow shaded road located at the frontage of Lots 954 & 955 will be connected by public road upon the delivery of the project. This will resolve a long standing situation where these lots cross MLALC land for access without any approval. The actions of the planning proposal together with closing and opening of roads will resolve this situation. Crown Reserve DP 1285945 was recently created to identify a future road widening of Morgan Rd where the existing

formation crossed onto land transferred to MLALC. It is intended that this land is retained by the Crown and created as Road in the future

Sydney Water	Response
Sydney Water cannot support this planning proposal at this time as it is outside their wastewater servicing catchment. Recommends engagement with Sydney Water to discuss alternative servicing solutions for the site. Requires ultimate and annual growth data to support development, though acknowledges timeframes and final growth figures may change. Growth data should be completed and provided. Failure to provide this may result in Sydney Water being unable to formulate proper planning requirements. Wastewater and Water Servicing: The proposal is outside Sydney Water's catchment, and has no plans to provide wastewater services in this area. To connect to the catchment, it requires an options assessment to identify a preferred servicing strategy and enter into an agreement with Sydney Water for the delivery of services out-with our catchment. Once the options assessment is completed and a route for servicing indicated, a new referral should be sent to Sydney Water. Trunk system may have capacity to service the development, augmentation and extension may be required for local reticulation, (assessed in s73 application).	Water Servicing Colliers via its agent Metro Water Management as the WSC for the proposal have engaged with Sydney Water on the Morgan Rd project since 2017 when an initial feasibility application was lodged under Case 160354 and a second application in 2020 under Case 186126. In both cases, it was noted that Sydney Water could service the development subject to the developer completing augmentation and utility upgrades. There is an existing 100mm water main in Morgan Rd that services the existing land. This main does not have sufficient capacity to service the proposed 450 dwellings on the site. There is an existing 500mm water supply main in Forest Rd. In 2017 Sydney Water advised that this main has sufficient capacity to service the proposed development. The project will require a detailed hydraulic analysis to confirm the sizes of new mains to be provided along Morgan Rd and within the development for drinking water & fire fighting purposes. It is noted that Sydney Water advised in the Agency briefing session conducted on 1 April 2022 that servicing of the site was feasible (refer to PDU notes). Wastewater Servicing Colliers via its agent Metro Water Management as the WSC for the proposal have engaged with Sydney Water on the Morgan Rd project since 2017 when an initial feasibility application was lodged under Case 160354 and a second application in 2020 under Case 186126. Prior advice provided by Sydney Water indicates that the Warriewood Wastewater Treatment Plant has capacity to service the Pateygarang project. Existing Sewer Pumping Stations SPS 999 & SPS 0941 are located nearby and service the local area. These pumps have limited capacity to service the location and detailed hydraulic analysis of the pumping stations is required. It is intended to upgrade the existing SPS or construct an additional SPS to meet the demand of the project and convey the wastewater to the Warriewood treatment plant. With appropriate upgrade of existing & proposed new waste water systems the development can be provided with waste water systems to meet the targeted 450 dwellings proposed for the site.

A new feasibility application has been lodged with Sydney Water (Case 210514) and upon the receipt of updated advice in relation to supply of wastewater and water to the project information will be updated to confirm availability of supply to the project.

SES	Response
Recommends ensuring that the community is aware of the significant flood risk on nearby roads such as Oxford Falls Road and Wakehurst Parkway, for example, through appropriate signage. Requests flood modelling maps detailing the 1% AEP and PMF levels, as although these were requested by NSW SES during the meeting held on 12 October 2023, these were not provided to NSW SES prior to the writing of this response. Notes that the modelling demonstrates overall increases to peak flow for most post-development scenarios. Notes that the site has slope gradients reaching up to 35%, and may therefore pose a risk of overland flow flooding on the site and therefore recommend this is assessed Prefers evacuation as Emergency Management approach, where evacuation capacity and capability has been demonstrated as the most effective strategy to manage Emergency Management risks. Recommends ensuring that rising road access is available for all proposed dwellings on the site.	Community Awareness The flood modelling at the existing section of Morgan Rd where it crosses Snake Creek shows that there is no increase in flood levels as a result of the development in this location. There is an existing flood risk in this location and this is identified by signage installed by Northern Beaches Council. Local residents are aware of this risk. Request for details on slope, 1AEP%, and PMF Levels In response to the matters raised by the SES, CED refer the SES to the Craig & Rhodes / CED FIRA Report dated July 2023 that contains detailed TUFLOW flood modelling and mapping that demonstrates the extent of flood behaviour within and adjoining the site. Northern Beaches Flood Emergency Sub Plan April 2021 by the SES applies to the subject land. CED are of the view that the FIRA report prepared for the project has modelled the required frequency of storm events from the 5% to the PMF. These maps are contained in the appendix of the FIRA report. • The 5%, 1%, 0.5% and 0.2% AEP, and the PMF storm events were all modelled, and results compared (see the snip from Section 5 of the report) • Table 6 in the report demonstrates that in 3 of the 5 storm events (5%, 1%, and PMF) the flows leaving the model at the downstream end in developed conditions are lower than the flows leaving the model in existing conditions, and for the other 2 storm events (0.5% and 0.2% AEP) the flows leaving the model are the same – i.e. there is NO impact due to the development. The downstream location is shown in the third figure. • Flood mapping was provided for the 1% AEP event only. • Flood extents comparison between pre- and post- development was provided for all storm events. This demonstrates that flooding is better contained within the Riparian Corridors compared to existing, without

impacting the downstream outfall from the site.

Emergency Management Approach and Rising Roads

CED are of the view that a Shelter in Place approach is best suited to this site. Flood modelling shows that the 1% & PMF floods are contained and defined within the existing creeks and riparian flow paths on the site and they do not overtop in these events. A shelter in place approach means that residents can safely stay in their dwellings during storm events without adding unnecessarily to already busy roads.

All new roads within the project will rise away from natural flow paths and this will allow a natural escape to higher ground with out the need to pass through flood waters.

CED is aware of the potential risk of flooding & adjoining the site to residents and visitors to the site during flood events. They are confident that their TUFLOW models show that the flood paths crossing the site are well defined and contained within creek banks and corridors so as to not present a risk from overtopping and sheet flows.

The site is located at the top of the drainage catchment and as such storm events are relatively short and unlikely to create riverine flooding. CED is of the opinion a SHELTER IN PLACE strategy is best suited to the location. As the project is a Community Title development the Community Management Association can develop a Emergency Management Plan for all land owners and visitors that provides evacuation options in the event of a major storm event.

Refer to the updated Flooding Impact and Risk Assessment Report which will be provided in January 2024 for further details.

Direction Title	CONSISTENT?
Planning Systems	
1.1 Implementation of Regional Plans	YES The Planning Proposal is consistent with this Ministerial Direction. The submission received from the Greater Sydney Commission notes that the planning proposal is broadly consistent with the Greater Sydney Region Plan. The submission confirms that the planning proposal is consistent with a number of planning priorities outlined in the North District Plan.
1.2 Development of Aboriginal Land Council land	YES When this direction was made (Direction issued 6 February 2019), <i>State Environmental Planning Policy (Aboriginal Land) 2019 (now the State Environmental Planning Policy (Planning Systems) 2021)</i> applied only to land in the Central Coast local government area, as shown on the Land Application Map. On 5 August 2022, the Land Application Map of <i>State Environmental Planning Policy (Planning Systems) 2021</i> was amended to include land in the Northern Beaches Council area owned by MLALC. The Planning Proposal comprises MLALC land as shown on the Land Application Map of <i>State Environmental Planning Policy (Planning Systems) 2021</i>. A development delivery plan (DDP) has been made under the SEPP and the Planning Proposal authority must take the DDP into account when preparing a Planning Proposal. The Planning Proposal has specifically been prepared in accordance with the Northern Beach DDP and is therefore consistent with this Ministerial Direction.
1.3 Approval and Referral Requirements	YES The Planning Proposal will be consistent with this Ministerial Direction as it does not require additional referrals of concurrence by the Minister or public authority over and above the usual requirements.
1.4 Site Specific Provisions	YES The Planning Proposal will be consistent with this Ministerial Direction. The planning proposal seeks to include a site specific provision relating to a 450 dwelling cap and additional permitted uses. The dwelling cap site specific provision is modelled on existing provisions within the Warringah LEP relating to other sites.
Biodiversity and Conservation	
3.1 Conservation Zones	YES The Site does not currently contain environment protection zones. A Preliminary Biodiversity Development Assessment Report (BDAR) has been prepared by Hayes Environmental, and updated (see [xx] 2023 version) in support of the Planning Proposal which gives consideration to the objectives of this direction. Development in accordance with the proposed Structure Plan included in this Planning Proposal would exceed the Biodiversity Offset Scheme Entry Threshold on both the area and map criteria. As such, the Biodiversity

	Offset Scheme applies. The assessment concludes no entities area at risk of a serious and irreversible impact. The Planning Proposal conserves 19.8 hectares of the Site identified to have high ecological, scientific, cultural or aesthetic values and proposes the rezoning of this land as C2 Environmental Conservation.
3.2 Heritage Conservation	YES The Site includes 3 AHIMS registered Aboriginal archaeological sites. The current state of the Site is undeveloped, with no inhabitants and is a privately owned without governance from organisations such as NSW National Parks and Wildlife Service. The lack of site maintenance and protection has eroded the heritage sites and poses an ongoing risk to the conservation of heritage items in and near the Site. The Planning Proposal will protect and promote the AHIMS registered Aboriginal cultural heritage significance of the Site and is therefore consistent with this Direction. The Planning Proposal is accompanied by an Aboriginal Archeological Assessment prepared by Dominic Steele. The assessment finds the Planning Proposal will not have an unacceptable adverse impact upon the Aboriginal cultural heritage values of the land and recommends the Planning Proposal should proceed, with the Aboriginal archaeological heritage sites to be protected and conserved within the nominated open space identified by the Structure Plan. In response to agency comments a further Aboriginal Cultural Heritage Assessment Report has been instructed to commence in accordance with requirements under the National Parks and Wildlife Act. Land with Aboriginal heritage values are isolated from proposed residential uses and zoned RE2 Private Recreation. The planning proposal will facilitate the ongoing protection and management of the known AHIMS sites, together with educational opportunities.
Resilience and Hazards	
4.1 Flood Prone Land	The Site is not located within flood prone mapped land. However, due to existence of creeks across the site, a Flood Impact and Risk Assessment (FIRA) was completed to support the Planning Proposal. The FIRA concluded that the management measures proposed for the site, including its network of stormwater quantity and quality features, are effective in ensuring that there would be no adverse impacts in the overall Snake Creek catchment as a result of the proposed development. The FIRA confirms that planning proposal is consistent with the Northern Beaches Council requirements and principles of the Floodplain Development Manual. Further modelling is currently being undertaken and will be provided to DPE in January 2024 in response to EHG comments.
4.3 Planning for Bushfire Protection	YES The Site is located within a Bushfire prone area. Accordingly, Direction 4.3 applies. A Strategic Bushfire Assessment and Bushfire Protection Assessment has been undertaken by Travers Bushfire & Ecology in accordance with <i>Planning for Bushfire Protection 2019</i> (PBP 2019) and accompanies this Planning Proposal (Appendix 9 and Appendix 10). The Planning Proposal is consistent with this direction in the following ways: • The nature of the residential development is an appropriate use and the proposed hazard management

	controls are in accordance with, and often beyond, PBP 2019 to effectively address the level of hazard. • The proposal does not involve “inappropriate development” such as schools or retirement villages. • The proposed Aboriginal Cultural Centre is a commercial type facility and will provide no accommodation capability. • Significant environmental studies have been undertaken to ensure APZs have been excluded from environmentally sensitive land. Additionally, where development is proposed, the Planning Proposal is compliant with provisions 6(a) to (f) of Direction 4.4, as demonstrated below: • The APZs recommended exceed the minimum requirements outlined in PBP 2019 for subdivision development. • This is an integrated Planning Proposal that will result in a new subdivision and this be responsive to Section 100B of the Rural Fire Act. • provisions for two-way access roads which links to perimeter roads and/or to fire trail networks and adequate water supply for firefighting purposes are included. • The perimeter is located on a level terrace and circumscribes the edge of the downslopes resulting in the best design possible. Intrusions of bushland into the development have been removed and minimised to allow safe evacuation. • Controls on the placement of combustible materials in the Inner Protection Area can be a condition of consent at DA stage. The Planning Proposal will provide a future development in accordance with the planning principles of PBP 2019 and <i>Community Resilience Practice Note 2/12 Planning Instruments and Policies</i>, and as shown on the bushfire protection plan. The identified bushfire risk can be mitigated as part of any future development proposal.
4.4 Remediation of Contaminated Land	YES A Preliminary Site Investigation was prepared by SMEC to assess the potential for contamination to be present on site from past or present activities. The Site's history indicates that it has been predominately unused bushland since at least the early 1930s, with some periodic patchy clearing with tracks in the 1950s and 1960s. The Site investigations reveal 3 potential areas of environmental concern and associated contaminants of concern. Notwithstanding, it is considered that the Site can be made suitable for the proposed land uses with respect to land contamination, subject to the recommendations of the Preliminary Site Investigation report.
Transport and Infrastructure	
5.1 Integrating land use and transport	YES The Planning Proposal will enable residential development and community infrastructure in close proximity to jobs and services encouraging walking, cycling and use of public transport.
5.2 Reserving Land for Public Purposes	YES

	The Planning Proposal will be consistent with this Ministerial Direction.
Housing	
6.1 Residential zones	YES The Planning Proposal seeks to rezone the Site for low density residential uses as permitted within the zone, whilst proposing dual occupancies are permitted to broaden the choice of building types. The Planning Proposal encourages a variety and choice of housing types to provide for existing and future housing needs, whilst making efficient use of existing infrastructure and services and minimising the impact of residential development on the environment.

22nd December 2022

GYDE Consulting
Level 6, 120 Sussex Street
Sydney NSW 2000

Att: Juliet Grant
julietg@gyde.com.au

Hayes Environmental Pty Ltd
ABN 61 523 229 092
PO Box 2257, Bowral 2576
Ph 0412 600 173
Email rhogan@hayesenv.com.au
Web www.hayesenv.com.au

Dear Juliet,

RE: Planning Proposal Patyegarang (PP-2022-3802) - response to DPE (EHG) submission dated 21 November 2023

I have considered the submission provided by EHG relating to the Preliminary BDAR (Hayes Environmental, July 2023) prepared for the Patyegarang Planning Proposal.

The submission has been read alongside a detailed review of the Preliminary BDAR, with a table of technical responses appended to this letter.

In summary of the responses:

- * Several of the specific issues have been addressed by an update to the Preliminary BDAR, with additional data, information or explanation provided;
- * Many of the issues relate to misunderstandings or incorrect interpretations by EHG, as set out in the appended table;
- * Some issues relate to the planning process itself, and the level of design detail required for a Planning Proposal as opposed to a Development Application, as set out in the appended table.

The issues are grouped below into four broad discussion topics:

- A. Adequacy of demonstration of the avoid and minimise, then offset hierarchy.
- B. Underestimation of the extent of impacts.
- C. Identification of threatened ecological communities (TECs), specifically Duffy's Forest EEC and Coastal Upland Swamp.
- D. Adequacy of targeted surveys for relevant threatened species.

A Adequate demonstration of the avoid and minimise, then offset hierarchy

The Patyegarang project is the culmination of a lengthy and comprehensive avoid and minimise process, as follows:

- 1 The MLALC seek an income stream to fund the goals identified in their Community Land Business Plan.

- 2 Consideration of funding options by MLALC identified that a land development project could achieve this goal, noting that the MLALC own 912 hectares of land in Metropolitan Sydney, including 621 hectares in the Northern Beaches LGA.
- 3 All of the MLALC lands contain native vegetation in good condition so there was no upfront option to completely avoid impacts on biodiversity.

Regional-scale avoidance and minimisation.

- 4 An independent strategic assessment of (MLALC) landholdings in the Northern Beaches LGA was prepared in 2020 by Gyde Consulting, in association with Craig & Rhodes, Travers Bushfire and Ecology, JMT Consulting and in consultation with the MLALC. The strategic assessment was peer reviewed by Barr Property and Planning (October 2021). The assessment investigated the development potential of each of the land parcels, looking at matters such as biodiversity values, heritage values, bushfire risk, and infrastructure needs.
- 5 The assessment resulted in only six of the sites being nominated for inclusion in the Aboriginal Lands SEPP. It was identified that avoidance of the significant remaining landholdings across the Northern Beaches LGA provides opportunity for biodiversity offsets to be achieved locally, including through creation of biodiversity stewardship sites.
- 6 The *Northern Beaches Aboriginal Land Development Delivery Plan* (DDP) was subsequently prepared by the NSW Department of Planning & Environment (DPE) in accordance with *State Environmental Planning Policy (Planning Systems) 2021*. The DDP considers the high-level opportunities and constraints associated with future development of the six identified sites within the Northern Beaches LGA.
- 7 On the basis of strategic investigations and assessment, only one, the 71ha Lizard Rock site [now referred to as the Patyegarang Project] is currently endorsed by MLALC members and the NSW ALC to be actively investigated for land dealing. Whilst fully vegetated, this site contains lower biodiversity values than the other sites, and also contains an important cultural rock engraving that could be better protected and managed with development of the land. This site was deemed the best option to avoid and minimise impacts at the regional scale, whilst meeting project objectives.

Site-scale avoidance and minimisation

- 8 Biodiversity values within the site were assessed to identify opportunities for further avoidance and minimisation of impacts at the site scale. This resulted in amendment to a previous 2004 concept masterplan for the land, with development substantially pulled back from the more remote southeastern areas not currently bordered by existing development. This reduction in scale and re-positioning of the development also reduced fragmentation of the large local patch of bushland which extends onto adjacent lands to the south and east.

Project-scale avoidance and minimisation

- 9 Hayes Environmental carried out a more comprehensive biodiversity assessment (following the *Biodiversity Assessment Method 2020*) to inform and refine the project design, and to assess the likely impacts and offset liability.
- 10 The twenty hectares of avoided land across the southeast was designated as a conservation zone, with ongoing discussions between specialist consultants and the project team to ensure the Structure Plan could be achieved without impacting directly or indirectly upon the conservation zone.

- 11 The Snake Creek riparian corridor was widened in the south to exceed statutory minimum corridor requirements. This improved opportunities for maintaining water quality downstream, and improved the connectivity values of the Snake Creek riparian corridor.
- 12 Design of residential precincts included use of perimeter roads, to enable collection and management of stormwater, and to provide opportunities for control of access to community land (particularly the conservation zone).
- 13 A substantial bushfire APZ (up to 60m in width) would extend beyond the perimeter road, thus providing open space for recreational use, and a buffer to indirect impacts on the conservation zone, including opportunity for installation of stormwater management features and other impact management measures.
- 14 These design measures combine to provide best practice protection for the conservation zone, avoiding all direct and indirect impacts upon this area.
- 15 Further discussions between the ecologist and the project team drilled into opportunities for more specific protection of threatened species habitat, tweaking the design to retain habitat for *Tetratheca glandulosa* and the Red-crowned Toadlet, and ensuring the Structure Plan contained sufficient flexibility to enable further refinements during detailed design for the Development Application stage. Many of these details are necessarily conceptual at this level of the planning process.

Precinct-scale avoidance and minimisation

- 16 Discussions between the ecologist and stormwater consultant have resulted in conceptual design around water quality controls and treatment, and the location and method of discharges. The project team is committed to not only meeting statutory requirements in relation to water quality, but to set a benchmark for improvement of the quality of water being discharged from the site.
- 17 A range of management plans would be prepared at the development application stage to further manage, minimise and mitigate potential impacts on biodiversity values at the precinct scale (refer to Ch 8.4 of the Preliminary BDAR). These would include, but not be limited to:
 - Conservation Zone Management Plan, to protect and monitor biodiversity values within the conservation zone.
 - Vegetation Management Plan for areas of 'retained vegetation' within the development zone, including specific management and protection actions for areas of known habitat for threatened species (such as *Tetratheca glandulosa* and the Red-crowned Toadlet).
 - Construction Management Plan, to include a Chapter on biodiversity management and protection, including a tree and vegetation removal protocol, management of displaced and injured wildlife protocol, protection measures such as temporary fencing, biosecurity actions, control of site wastes.
 - Stormwater Management Plan, including specific sections addressing avoidance of impacts on areas of known Red-crowned Toadlet habitat.
 - Site-specific Development Control Plan, to address matters such as street and external house lighting, road and verge design to avoid wildlife collisions, signage, pedestrian management, biosecurity, etc

In summary, the Structure Plan is the result of a lengthy investigative and assessment process to avoid and minimise impacts on biodiversity values at the regional scale, site scale, and project scale. Additional planning has already commenced to further avoid and minimise impacts at the precinct scale, with these details to be lodged with the development application.

B Underestimation of the extent of impacts.

1. Overestimation of impacts within the Preliminary BDAR

The Structure Plan specifically addresses lot sizing, road placement and asset protection zone boundaries to facilitate retention of trees and natural rock features within the development.

Asset Protection Zones would retain native vegetation to the extent that meets statutory APZ requirements. This vegetation would effectively be protected and maintained through a Vegetation Management Plan implemented by the community strata and controlled by Council.

Residential lots and private spaces would not be cleared and levelled to suit broadscale project home development, but offered as treed sites with restrictions where appropriate, to encourage bespoke house designs similar in character to other residential areas across the Northern Beaches.

Despite this, the biodiversity assessment has conservatively assumed for the purpose of assessment and calculation of impacts that all land within the development footprint, including APZ inner protection areas, public open space, road verges, and private spaces would be completely cleared of all native vegetation.

This is an overestimation of the extent of impacts across 44.7 hectares of land.

2. Potential for underestimation of impacts

The biodiversity assessment has assumed that the APZ outer protection areas (2.67 ha) would retain occasional trees and some native groundcover. This is based on discussions, joint site inspection and site-specific mapping with the bushfire consultant.

The biodiversity assessment assumes that riparian corridors and the cultural reserve (6.9 ha) would not be directly impacted by the development, but are likely to be subject to indirect impacts. This is based on detailed discussion with the bushfire consultant, stormwater consultant, and broader project team. Indirect impacts require more detailed site plans and management plans to be quantified. It is the intent of the project team to minimise indirect impacts to the extent that additional off-setting is not warranted.

The biodiversity assessment does not include an assessment of the impacts of infrastructure requirements that are outside of Patyegarang site. The areas being considered for external infrastructure are comparatively small, and are already cleared or highly disturbed. Additional impacts associated with these would be minor.

3. Implications for strategic planning

In summary, the potential for underestimation of impacts is substantially less than the overestimation of impacts that has been incorporated into the assessment.

The extent of impacts would be re-calculated on the basis of final detailed plans at the development application stage. The minor queries raised by EHG would not materially alter the outcome of the biodiversity assessment nor compromise the feasibility of the project.

In any case, offset credit calculation and pricing have been regularly changing and updating since the commencement of the BC Act, such that changing credit requirements is an ongoing risk for all strategic planning decisions which necessarily rely on unfinalised BDARs.

Sufficient information has been provided to confidently assess project merits and feasibility for rezoning.

C Identification of threatened ecological communities (TECs), specifically Duffys Forest EEC and Coastal Upland Swamp

1. Duffys Forest EEC

Consideration of Duffys Forest EEC has been carried out through both qualitative and quantitative comparison with the Final Determination of the NSW Scientific Committee (this being the legal definition of the community).

The quantitative comparison referred to the Smith & Smith (2000) report and method which is specifically referred to for this purpose in the Final Determination. There are cautions and limitations relevant to this method, as with any scientific method. These cautions and limitations, however, have been carefully considered and addressed in the Preliminary BDAR, and do not affect the findings set out in the Preliminary BDAR.

The limitations refer to (i) degraded sites where the species diversity has been reduced, (ii) to situations where seasonal or disturbance-related dormancy might affect species diversity, and (iii) sampling limitations. None of these limitations apply to the Patyegarang site. The site is in good condition, was surveyed during appropriate conditions, and a high species diversity was recorded (meeting the minimum criteria for the method to be used). The issue of sampling limitations is relevant to large sites where random sampling has been used. This does not apply to Patyegarang where the entire area has been traversed on foot and sampling has targeted the most likely areas for this community on the site.

The methods used to assess and identify this community are legally and scientifically robust. The results are consistent with recent regional vegetation maps released by DPE.

2. Coastal Upland Swamp

There is one patch of Coastal Upland Swamp mapped within the site on recent regional mapping. This appears to be a mistake in aerial photo interpretation due to weed invasion, most notably Coral Trees, Privet and Senna. Further details and photos have been added to the Preliminary BDAR.

3. Threatened species associations.

The plant community types associated with Duffys Forest EEC are almost identical to the PCTs used for the BDAR assessment, such that any changes to threatened species associations would be minor. Any newly relevant species would most likely already have been adequately surveyed.

However, threatened species associations to respective PCTs have been regularly changed and updated since commencement of the BC Act, such that this is an ongoing risk for all strategic planning decisions which necessarily rely on unfinalised BDARs.

D Adequacy of targeted surveys for relevant threatened species

1. Fungi

Current legislation and guidelines do not require that variation to survey timing be justified by a listed DPE 'expert'. EHG have erroneously discounted the justification provided in the Preliminary BDAR on this basis. The fungi surveys were conducted by an expert on the genus, after whom one of the species is in fact named.

2. Threatened plants

Targeted parallel traverse surveys for threatened plants have now been completed. These had been delayed due to seasonal survey requirements and so were not included in the July version of the Preliminary BDAR. No new threatened plant species were recorded. Results have been added to the Preliminary BDAR.

3. Threatened fauna

EHG have queried the survey of habitat for several ecosystem credit species (Rosenbergs Goanna, Spotted-tailed Quoll, and non-breeding Bent-wing Bats). These species are appropriately assessed as ecosystem credit species in accordance with the BAM (2020). Further survey or mapping of habitat is not required.

Amphibian surveys were designed and carried out in collaboration with Dr Marion Anstis, a recognised expert on the relevant frog species, and author of technical books relied upon in the ecological industry for identification of frogs and tadpoles. Further detail around the identification of habitat and survey design has been added to the Preliminary BDAR.

Please do not hesitate to contact me with any queries or to seek clarification on any matter.

Kind regards,



Rebecca Hogan
BSc (environmental biology) MEngMngt MECA (NSW)
Accredited BAM Assessor (BAAS17090)
Principal, Hayes Environmental

PO Box 2257 Bowral NSW 2576
M: 0412 600 173
E: rhogan@hayesenv.com.au
W: www.hayesenv.com.au



Table of Responses

	Summary of issue raised	Response	Action
1	Underestimation of extent of impacts.	Biodiversity assessment for the structure plan is based on an overestimation of impacts across 44.7 hectares of land, due to assumption of total clearing of all residential precincts when in fact, the Structure Plan has been specifically design to enable some retention of trees and habitat features, particularly in open space areas and asset protection zones. The alleged underestimation of the extent of impacts (and hence, credit requirements) relates to relatively small areas of the land and is not a significant issue that would compromise the feasibility of the project. Offset credit calculation and pricing have been regularly changing and updating since the commencement of the BC Act, such that changing credit requirements is an ongoing risk for all Planning Proposals which necessarily rely on unfinalised BDARs. The boundaries of the subject land can be confirmed with consent authorities at the time of DA preparation to enable a final accurate and binding calculation of offsets. Sufficient information has been provided to confidently assess project merits and feasibility for rezoning.	No action required.
2	Underestimation of extent of impacts.	Refer to response to Point 1.	No action required.
3	Identification of Duffy's Forest TEC.	Consideration of Duffys Forest EEC has been carried out through both qualitative and quantitative comparison with the Final Determination of the NSW Scientific Committee (this being the legal definition of the community). The quantitative comparison referred to the Smith & Smith (2000) report and method which is specifically referred to for this purpose in the Final Determination. The Smith & Smith (2000) method is a legally valid and useful tool for the identification of Duffys	No action required.

		Forest TEC. There are cautions and limitations relevant to this method, as with any scientific method. These cautions and limitations, however, have been carefully considered and addressed in the Preliminary BDAR, and do not affect the findings set out in the Preliminary BDAR. The limitations refer to (i) degraded sites where the species diversity has been reduced, (ii) to situations where seasonal or disturbance-related dormancy might affect species diversity, and (iii) sampling limitations. None of these limitations apply to the Patyegarang site. The site is in good condition, was surveyed during appropriate conditions, and a high species diversity was recorded (meeting the minimum criteria for the method to be used). The issue of sampling limitations is relevant to large sites where random sampling has been used. This does not apply to Patyegarang where the entire area has been traversed on foot and sampling has targeted the most likely areas for this community on the site. The methods used to assess and identify this community are legally and scientifically robust. The results are consistent with recent regional vegetation maps released by DPE	
4	Identification of Duffy's Forest TEC.	Refer to response to Point 3.	No action required.
5	Identification of Duffy's Forest TEC.	Refer to response to Point 3.	No action required.
6	Identification of Coastal Upland Swamp TEC.	Further detail and photos to be added to the BDAR to explain and justify the PCT identification.	Update to BDAR.
7	Incorrect PCT and TEC identifications undermine threatened species associations	PCTs associated with Duffy's Forest TEC are very similar to the PCTs identified on the subject land. Any changes to the species associations would be minor and unlikely to materially affect assessment results. In any case, threatened species associations have been regularly changed and updated since commencement of the BC Act, such that this is an ongoing risk for all Planning Proposals which necessarily rely on unfinalised BDARs. An updated threatened species assessment would be part of the final BDAR for the development application, and would need to address any new threatened species issues	No action required.

		at this time, whether these arise from new listings, new PCT associations, new IBRA subregion associations, or from amendment of the PCT identifications on the subject land.	
8	Timing of surveys for threatened fungi of the genus <i>Camarophylloopsis</i> and <i>Hygrocybe</i> .	Current legislation and guidelines do not require that variation to survey timing be justified by a listed DPE ‘expert’. EHG have erroneously discounted the justification provided in the Preliminary BDAR on this basis. The survey was conducted on 6th July 2021 – just 6 days outside the designated May-June survey period. This is not a significant divergence. The survey was conducted by Dr Ray Kearney, a recognised and leading expert on these species, with survey timing and methods based on Dr Kearney’s advice. Refer to the letter from Dr Ray Kearney (included in Appendix C of the Preliminary BDAR) which sets out his experience and qualifications. It is noted that one of the species, <i>Camarophylloopsis kearneyi</i>, was named after him as a result of his work in discovering and describing the species.	No action required.
9	Timing of surveys for other threatened plants.	The Preliminary BDAR clearly states that the extent of threatened plant surveys had not yet fully met the BAM requirements, but that surveys would be completed for production of a final BDAR and calculation of offsets. The surveys have since been completed and the data will be added to the BDAR. It is noted that no further threatened species were found on the land and that the assumptions provided in the Preliminary BDAR are now sustained.	Update to BDAR.
10	Mapping and investigation of caves and crevices.	Caves and crevices within the subject land provide potential habitat for ecosystem credit species such as the Rosenberg’s Goanna and Spotted-tailed Quoll, and for the ecosystem (non-breeding) component of habitat for the dual-listed species, the Large Bent-wing Bat and Little Bent-wing Bat. The BAM does not require survey for ecosystem credit species or for the ecosystem component of dual-listed species. Further:	No action required.

		- Rosenberg's Goanna and the Spotted-tailed Quoll use a variety of shelter features, including hollow logs, tree stumps, etc. It would not be sensible to map only one type of shelter feature used by these species. - Breeding caves for both bent-wing bats are uncommon, have very specific requirements, and are typically located within deep limestone cave systems. Field survey did not record either species present during their breeding periods. No caves likely to provide suitable breeding habitat were found on the land. - Non-breeding shelter will include a much wider variety of caves and crevices. Bats move regularly between various roost sites and are not dependent on individual non-breeding caves. It would be impracticable and serve little purpose to attempt to map all possible ecosystem credit cave and crevice habitat across the land, given the micro-scale and abundance of such features across the landscape.	
11	Justification for extent of threatened amphibian surveys.	The Preliminary BDAR <i>does</i> provide a justification for how areas of habitat were identified for amphibian surveys. It is stated in Appendix D that the amphibian survey design was identified and guided by amphibian expert, Dr Marion Anstis, with decisions made on the basis of the structure of creeklines and their suitability for occupation by the relevant species. Dr Marion Anstis is a recognised expert on the relevant frog species, and author of technical books relied upon in the ecological industry for identification of frogs and tadpoles. It is also stated that the creeklines do not provide unshaded areas, emergent vegetation, or nearby grassy areas, which are all typical features of Green & Golden Bell Frog habitat. Further detail around the decision-making process will be added to the BDAR.	Update to BDAR.
12	Underestimation of extent of impacts.	Refer to response to Point 1.	No action required.

13	Width of riparian buffers.	The riparian widths for the feeder creeks to Snake Creek currently provided in the Structure Plan are such that they do not require management for bushfire risk. If these riparian widths were to be increased, then the vegetation would become a fire hazard and would need to be managed as an APZ. It is believed this would have a greater adverse impact on the vegetation, habitats, and water quality, than the narrower corridors as proposed. The Preliminary BDAR recognises the potential for indirect impacts on the narrower riparian corridors and proposes that various site management plans and mitigation measures be prepared at the detailed development application stage.	No action required.
14	Assessment of bushfire APZs.	The Preliminary BDAR is based on the DPE BDAR template and sets out the assessment step-by-step in accordance with the template. Table 22 shows the changes in vegetation integrity score for each management zone, and shows that partial loss is applied to the small areas of outer APZ. These are mapped on both Figure 3 and Figure 10. APZs are wholly contained within the Subject Land. This is clearly shown on all relevant maps. EHG's statement that <i>"the institution of APZs are likely to change the PCT integrity to the extent that it may not meet the benchmark requirements to be classified as the community"</i> is an irrelevant distraction. Firstly, NSW legislation does not include minimum condition criteria for native vegetation to be classed as a PCT or TEC. So, the vegetation would remain the same PCT until it is cleared to the extent it is no longer classed as native vegetation at all. Secondly, the calculation of offsets is based on quantitative loss of integrity from the original PCT values. So even if the altered vegetation was no longer classed as the same PCT, this would not change the assessment of impacts or calculation of offset. Whilst it is common practice and usually appropriate to assign a future integrity score of 0 to all APZs, it is not a requirement of the BC Act or BAM to do so. In cases where the APZ management is to be undertaken in a controlled manner in perpetuity (such as for a strata development), it can be appropriate to rely on only partial loss and so assign a future integrity score greater than 0. It is of course, necessary to justify such cases. The	No action required.

		Preliminary BDAR provides a justification in Ch 8.1.2. The assumption of retained vegetation values is very conservative, and is supported by discussion of how the long-term maintenance of the values would be achieved. The extent of land to which this potential under-estimation applies is 2.67 hectares.	
15	Underestimation of extent of impacts. Specific reference to Ch 8.5 of the Preliminary BDAR.	Refer to response to Point 1. Ch 8.5 addresses uncertain impacts in accordance with the DPE BDAR template – <i>ie</i> impacts that are unknowable or cannot be adequately predicted or assessed in a BDAR. You cannot assess what is not known. Ch 8.5 points to the need for an adaptive management strategy, in accordance with the DPE template guidance.	No action required.
16	Assessment of impact due to infrastructure upgrades outside of the subject land boundaries.	There are various options available relating to external infrastructure that would be finalised at the Development Application stage. The areas being considered for external infrastructure are comparatively small, and are already cleared or highly disturbed. Additional impacts associated with these would be minor and would not compromise the feasibility of the project. The final offset requirement would be accurately calculated as part of the final BDAR.	No action required.
17	Underestimation of extent of impacts. Specific reference to Ch 8.5 and Ch 10.2 of the Preliminary BDAR.	Refer to response to Point 15. Ch 10.2 has been addressed in accordance with the DPE BDAR template – it specifically addresses s9.3 of BAM 2020 (with exactly the same heading). Impacts that do not need further assessment for ecosystem credits are areas that do not contain native vegetation. Ch 5.2 of BAM 2020 Operational Manual Stage 2 adds that further assessment is not required for areas of vegetation with integrity scores below certain thresholds. The Preliminary BDAR has conservatively assumed that all areas of vegetation within the subject land (even the weed thickets) are native vegetation with integrity scores above the thresholds. Therefore, all impacts require further assessment. Or, to use the DPE template wording - there are no impacts that do not require further assessment.	No action required.

		It appears that EHG have mis-understood this statement.	
18	Consideration of Serious And Irreversible Impacts	Refer to responses to Points 3, 6, & 7.	No action required.
19	Underestimation of extent of impacts.	Refer to response to Point 1.	No action required.
20	Adequate avoidance and minimisation of impacts.	A comprehensive discussion is provided in the Preliminary BDAR which demonstrates the framework <i>has</i> been applied. Further detail and explanation will be added to the BDAR.	Update to BDAR.
21	Incorrect PCT and TEC identifications undermine threatened species associations.	Refer to response to Point 7.	No action required.
22	Underestimation of extent of impacts.	Refer to response to Point 1.	No action required.
23	EHG state they “ <i>previously recommended that at a minimum, assessment of biodiversity values and impacts be undertaken through application of stage 1 and elements of Stage 2 of the BAM.</i> ”	Application of ‘ <i>elements</i> ’ of stage 2 would produce an incomplete BDAR. It appears EHG accept that a preliminary or incomplete BDAR can be sufficient for strategic planning decisions. The Preliminary BDAR applies all of Stage 1 except for the time-constrained species surveys (which have since been completed), and virtually all of Stage 2. The additional Stage 1 survey data will be added to the BDAR.	Update to BDAR.
24	Assessment of impacts for the Planning Proposal.	The Preliminary BDAR provides a comprehensive section describing how impacts have been avoided through Structure Plan design, and sets out opportunities for further	Update to BDAR.

		avoidance at the development design stage. Avoidance has not been deferred to the development stage. The Structure Plan is the result of a lengthy investigative and assessment process to avoid and minimise impacts on biodiversity values at the regional scale, site scale, and project scale. Additional planning has already commenced to further avoid and minimise impacts at the precinct scale, with these details to be lodged with the development application. The Preliminary BDAR provides sufficient information for a strategic planning decision to be made. Notwithstanding, the BDAR will be amended to set out the details of avoidance and minimisation of impacts more clearly.	
25	Underestimation of extent of impacts.	Refer to response to Point 1.	No action required.
26	Adequate avoidance and minimisation of impacts.	Refer to response to Point 20.	Update to BDAR.
27	Underestimation of extent of impacts. Specific reference to Ch 10.2 of the Preliminary BDAR.	Refer to response to Point 17. Refer to response to Point 23.	No action required.



Department of Planning and Environment
4 Parramatta Square, 12 Darcy Street
Parramatta NSW 2150

16/01/2024
096-16

Attn: Lauren Templeman
Specialist Planning Officer

Dear Lauren,

Re: Response to Flooding Related Comments from Environment and Heritage Group (EHG)
Regarding Planning Proposal Patyegarang (PP-2022-3802)

Colliers Engineering & Design (formerly Craig & Rhodes) have previously prepared a Flood Impact and Risk Assessment (FIRA) report and Stormwater Management Report to support the Patyegarang planning proposal at Morgan Road, Belrose. The planning proposal project was submitted by Gyde dated July 2023 and has been reviewed by the Environment and Heritage Group (EHG), who have provided detailed commentary on flood risk management issues. The commentary is attached to the letter from the Department of Planning and Environment dated 21 November 2023 (refer to Attachment A).

This document has been prepared to detail Colliers' response to EHG's comments regarding flood risk management issues. Further information or clarification regarding this work can be obtained by contacting the undersigned.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kylee Smith", with a stylized flourish at the end.

Kylee Smith
Senior Civil Engineer
Colliers Engineering & Design NSW

RFI Response

Attachment 1 – EHG Comments on Planning Proposal Patyegarang (PP-2022-3802)	Colliers Response
Flood Risk Management	-
Summary The planning proposal seeks to alter a provision that affects flood prone land. EHG has reviewed the supporting information for the planning proposal and considers that insufficient information has been provided. Further information should be provided at this stage of the planning process prior to any decision on the planning proposal.	-
Consultant Qualifications It is recommended that a consultant specialised in floodplain management completes the required assessment. EHG refers to the requirements for consultant qualifications as stated in Section 1.4 of the Flood Risk and Impact Assessment (FIRA) Guideline. Those scoping, undertaking, and reviewing a FIRA should typically include an appropriately qualified professional engineer. They should have experience and advanced skills in catchment hydrology, floodplain hydraulics and have a good working knowledge of flood risk management practices and guidance in New South Wales. Flood risk management is a separate discipline to stormwater management. Experience with other similar	1. The flooding works completed as part of this FIRA has the full oversight and review by Kylee Smith, a degree qualified senior civil engineer at Colliers Engineering & Design with chartered status (CPEng, NER) and with over 13 years' experience in water resources and flood modelling.

Attachment 1 – EHG Comments on Planning Proposal Patyegarang (PP-2022-3802)	Colliers Response
projects suggests that a flood risk management specialist working for the applicant is critical to avoid a protracted assessment process.	
Ministerial Direction The Planning Proposal report Appendix 4 outlines consistency with the Ministerial Directions under Section 9.1 of the Environmental Planning and Assessment Act 1979. Regarding Direction 4.1 Flooding, the report states “The Site is not located within flood prone land. Accordingly, Direction 4.1 is not applicable.” EHG notes that the Flood Impact and Risk Assessment Report shows the land as flood affected. Therefore, consistency with the Ministerial Directions must be demonstrated. The flood planning area will need to be established.	2. The site is not identified as “flood prone land” in Council’s statutory mapping from the Local Environmental Plan (LEP). Notwithstanding, the site is affected by minor flooding which is mainly concentrated within the Snake Creek corridor and connecting overland flow paths. Whilst a site-specific flood planning area map was not produced for the planning proposal, the development was undertaken with consideration to the Local Planning Directions under Section 9.1(2) of the Environmental Planning and Assessment Act 1979 by the Minister for Planning (2022). 3. The DA Design will ensure that all lots are above the Flood Planning Level – 1% AEP + 0.5m and where necessary, road centrelines will be adjusted accordingly. Therefore, a map showing the flood planning area overlaid on the proposed layout will be prepared and provided at the time of DA submission.
Flood Impact and Risk Assessment Report A FIRA needs to be prepared in accordance with the NSW Government’s Guideline Flood Impact and Risk Assessment Guideline to support this planning proposal. The content of	4. A flood impact and risk assessment (FIRA) report was prepared (Flood Impact and Risk Assessment Report Morgan Road, Belrose, September 2022) and submitted on July 2023 with consideration to the NSW

Attachment 1 – EHG Comments on Planning Proposal Patyegarang (PP-2022-3802)	Colliers Response
the FIRA should be in general accordance with Tables 5 and 6 of Attachment A of the guideline.	Government's Flood Impact and Risk Assessment Guideline (LU01) to support this planning proposal. At Planning Proposal stage, the analysis is necessarily high-level and therefore it is not possible to respond to every element of Table 5 and 6, however, as the project develops a full FIRA assessment in accordance with LU01 Tables 5 and 6 will be submitted for DA assessment.
Modelling Hydrological and hydraulic modelling has been undertaken of the 5% AEP, 1% AEP, 0.2% AEP, 0.5% AEP and PMF events for the pre and post development scenarios. However, EHG raises concerns over the accuracy of the modelling and notes that the methodology needs to be revised before EHG's advice can be provided. EHG recommends that a flood risk management specialist prepare the relevant modelling and reporting. The Flood Impact and Risk Assessment Report states that "The stormwater volume retention from the proposed water quality and quantity features was modelled by increasing the initial loss of the developed areas, and the site development area was represented by increasing the impervious area of these catchments." This is not considered an appropriate methodology for flood modelling nor stormwater detention	5. The flood modelling methodology described by EHG involves a typical development with stormwater detention basins to detain the stormwater runoff such that post-development flows are less than or equal to pre-development flows. As discussed in full detail within the Stormwater Management Plan (Stormwater Management Plan, Morgan Rd, Belrose, September 2022) and summarised in Point 16 below, Colliers considered the option of traditional end-of-line water quality treatment and detention, however due to the very steep and rocky nature of the terrain, a stormwater strategy involving detention basins at the bottom of each catchment was deemed to be unviable and incompatible with an effective and sustainable design. 6. The proposed stormwater strategy instead adopts a more innovative Stormwater Footprint Strategy which

Attachment 1 – EHG Comments on Planning Proposal Patyegarang (PP-2022-3802)	Colliers Response
modelling. The proposed measures to mitigate peak flow impacts, such as stormwater detention, must be explicitly modelled and not simply using an increased initial loss. The hydrographs shown in the report are not indicative of stormwater detention measure outflows and do not correctly show the likely impact of changes to site hydrology. Hydrographs should be presented of the existing case, developed case without detention measures and developed case with detention measures. Note that it is not generally considered relevant or necessary to model any water quality treatment measures in flood modelling. Further details are required, including the percentage imperviousness adopted in each catchment under existing and developed conditions. The flood impact mapping will need to be recalculated after reasonable modelling of the proposed development including stormwater detention measures has been completed. It is not considered appropriate for all area of allotments aside from the roof and driveway to be considered as pervious. The overall fraction impervious for the proposed residential areas must be calculated and presented to ensure it is reasonable. Given that there is no available flood study covering the site from Council and the lack of available calibration data, reasonable efforts must be made to validate the modelling.	involves introducing both stormwater storage and stormwater treatment throughout the development at an individual lot scale, street scale and precinct scale, rather than focusing on just a basin at the bottom of each catchment. A more detailed summary is provided in Point 16 below. 7. Within the flood modelling, a methodology was adopted whereby initial loss was increased as a simplified approach to simulating storage. This was adopted for the early stages of modelling for the Planning Proposal submission only to assess potential changes in flow regime due to the development. It is expected that due to most flows being contained within the waterway, there will be minimal change to the flooding outcomes by incorporating the detention elements once detailed. Nevertheless, the water quantity / detention elements will be incorporated into the TUFLOW model and an updated, complete set of mapping will be provided at DA Stage once the earthworks grading and detailed sizing of the stormwater detention elements are completed. Colliers Engineering & Design (NSW) is confident that the modelling undertaken within the Stormwater Management Strategy (2022) for the Stormwater Footprint is sufficient to demonstrate that there is no

Attachment 1 – EHG Comments on Planning Proposal Patyegarang (PP-2022-3802)	Colliers Response
This could include comparison with a rainfall on grid model. Relevant guidance should be followed in validating both hydrological and hydraulic modelling. It is recommended that the hydraulic model is extended downstream to include Oxford Falls Road and that a suitable frequent event such as the 1 event per year is used to map flooding over the road. It is further recommended that the hydraulic model is extended a suitable distance upstream of the site for the two flow paths at the west to enable a due comparison of flood behaviour and assessment of flood impacts. The eastern flow path appears to terminate around Morgan Road and should be extended to ensure the full extent of the flow path across the site has been mapped. Flow depths greater than 0.1m should be included on the mapping. The use of a roughness (Manning's n) value of 0.05 for residential areas needs further explanation and justification. It is unclear for which area this applies and if it is a composite value for buildings, yards and driveways.	adverse impact to the downstream waterway because of the development. 8. The impervious area of the catchments was provided in Appendix B of the FIRA report (2022). For the developed catchments, an impervious area of 60% was adopted for the residential lots, 70% for road reserves, and 10% for open space areas. For the existing catchments, an impervious area of 10% was adopted across the board, to represent the existing conditions vegetated open space. These values are typically consistent with, or more conservative than the values recommended in Council's AUS SPEC Engineering Specifications (2000). Additionally, the catchments external to the site were modelled as undeveloped in the existing conditions scenario and developed in the developed conditions scenario. 9. In regards to validation of the hydrologic and hydraulic models, given the lack of available calibration data, it is proposed to validate the results for the 1% AEP storm event against two peak flow methodologies – Regional Flood Frequency Estimation (RFFE) and the NSW Rational Method. This is an industry standard approach to peak flow comparison and the results are provided in Attachment B below.

Attachment 1 – EHG Comments on Planning Proposal Patyegarang (PP-2022-3802)	Colliers Response
	10. Whilst it may ultimately be useful to extend the hydraulic model further downstream to cover Oxford Falls Road at the crossing over Oxford Creek to ensure that the full extent of the flow path across the site is mapped. It is more appropriate to undertake this analysis at DA stage once the bulk earthworks design and detailed design of the stormwater elements is complete. At this stage, extension of the model will provide no additional information to assist assessment of the Planning Proposal. 11. Extending the model further upstream of the two western flow paths will have limited benefit as the flow regime is largely shallow sheet flow in the upper reaches of the catchment due to a lack of defined flow paths in the topography. This would not result in substantially increased peak flows at the location of the inflows currently adopted. In addition, prior to detailed site grading and stormwater drainage design being modelled, sheet flow from the upstream catchment would result in shallow sheet flooding across the development lots, which is not a realistic future scenario. 12. The Manning's roughness n value of 0.05 for the residential areas represents the composite value of the developed lot excluding the building itself.

Attachment 1 – EHG Comments on Planning Proposal Patyegarang (PP-2022-3802)	Colliers Response
	However, in this model the value is largely irrelevant given the lots themselves are not inundated, as it is not a rainfall on grid model.
Flood Impacts The Flood Impact and Risk Assessment Report has not adequately demonstrated the flood afflux of the pre and post development scenarios. Tables 1 and 2 of the Flood Impact and Risk Assessment Report both show the flows would increase, which is expected to lead to flood impacts. The flood impact mapping will need to be recalculated after reasonable modelling of the proposed development has been completed, including stormwater detention measures.	13. The flows reported in Table 1, 2 and 3 of the FIRA do show a marginal increase in the post-development peak flow, however the flood afflux result shows a negligible change in peak water level. This is due to a change in the timing of the peak of the hydrographs in the post-development scenario, as Figures 11-15 of the FIRA shows the extracted flow hydrographs downstream of the site from the TUFLOW modelling, where the peak of the hydrograph in the developed conditions scenario is approximately the same as in the existing conditions scenario, but slightly shifted to the left (i.e. the peak occurs slightly earlier). In addition, the Stormwater Strategy (2022) further demonstrated, through preparation of an XP RAFTS model, that peak flows could be managed by the Stormwater Footprint Methodology. The modelling demonstrated that peak flow in the critical duration increased by no more than 8% in post-development conditions for the critical duration and increased marginally at the downstream boundary for the critical duration in post-development conditions.

Frequent Flooding of Transport Route The route to Wakehurst Parkway via Oxford Falls Road is frequently flooded and impassable at both Oxford Creek and Middle Creek. This should be considered in traffic and transport investigations and any consideration of emergency evacuation. Ideally, the Flood Impact and Risk Assessment Report should model and map flood affectation at Oxford Creek, especially smaller events. Council may be able to provide information on the Middle Creek crossing.	14. For emergency evacuation, there is a rising flood-free egress route via Morgan Road headed in a north and western direction. This would be the recommended evacuation route as opposed to travelling downstream towards the road crossings over Oxford Creek and Middle Creek which are flood affected. This can be detailed in a Flood Emergency Response Plan for the development if PMF modelling results in flooded lots upon completion of detailed design, although it is considered that this will be unlikely. 15. Refer also to the Transport report prepared by JMT.
Stormwater management The provided stormwater management report is a very high-level document that does not demonstrate adequate consideration of a strategy to mitigate the impacts of development on stormwater and flood flows. Consideration should be given to the locations of stormwater detention basins, noting that bioretention swales and basins are unlikely to meet the requirement to reduce peak flows from all storm events. In particular, the larger events must be modelled in a suitable hydrologic software package.	16. The Stormwater Strategy for the proposed Belrose Development was prepared by Leaders in the field of Integrated Stormwater Management Design. It is proposed to act as an innovative industry benchmark, rather than adopt a traditional approach where the traditional approach is not viable due to the landform and topology. The strategy is designed to mimic natural stormwater flows by minimising impervious areas, reusing rainwater and stormwater, and providing treatment measures that replicate the natural water cycle as per Point 5 in the Council DCP. The approach results in management of flood afflux as well as water quality and ensures that there is no prompt for hydrogeological adjustments to the waterway due to negligible change in the hydrological regime. This minimises the need for hard engineering solutions and works within the constraints of the natural

	features and topography of the landscape where possible. The Stormwater Footprint approach considers stormwater volume as the key variable across various scales including lot, street, and neighbourhood. The Stormwater Footprint is the ratio of the average annual runoff from post-development to the average annual runoff from pre-development where a stormwater footprint target close to 1 is the desired outcome to ensure the downstream waterway will remain unaffected by the proposed development, the geomorphic conditions will remain unchanged and the stormwater quality will achieve a reasonable result. This approach is an innovative alternative that utilises distributed water quantity and quality treatments and adopts best practice management of stormwater. The results of which were demonstrated within the Stormwater Management Strategy (2022) utilising the industry standard software MUSIC and XP RAFTS to analyse water quality and quantity.
Proposed Earthworks Strategy The proposed earthworks strategy involves the following per the Flood Impact and Risk Assessment Report: • “slightly lowering the flow paths to channelise the overland flow”, and • “all proposed development areas and roads would be filled to an elevation that is above the PMF event”.	17. The bulk earthworks design is not yet complete. Colliers Engineering & Design notes the Department’s preference to ensure suitable cross-sections with maintenance of vegetation. This preference will be considered throughout the development of the design. 18. Owing to the steep terrain on site, the proposed development areas adjacent to the waterways and overland flow paths are generally already above the

EHG queries this approach including the necessity of raising land above the PMF and the lowering of flow paths rather than provision of a suitable design cross section. EHG queries how this can be consistent with maintaining existing vegetation across the site.	PMF level, however Colliers agrees that raising the development above the PMF is not necessary and that raising to the 1% AEP + 0.5m freeboard is the preferred approach.
--	--

References

Craig & Rhodes (2022) *Flood Impact and Risk Assessment Report, Morgan Road, Belrose*

Storm Consulting (2022), *Stormwater Management Plan, Morgan Rd, Belrose*

Warringah Council (2000), *AUS-SPEC #1 Development Specification Series, Design*

Attachment A: Letter from Department of Planning

Department of Planning and Environment

Our ref: DOC23/891068
Your ref: PP-2022-3802

Lauren Templeman
Specialist Planning Officer
Planning Group
Department of Planning and Environment
4 Parramatta Square, 12 Darcy Street
PARRAMATTA NSW 2150

21 November 2023

Subject: Consultation and exhibition - Planning Proposal Patyegarang (PP-2022-3802)

Dear Lauren

I refer to the email received by the Environment and Heritage Group (EHG) via the planning portal on 25 September 2023 referring the Patyegarang planning proposal, Morgan Road, Belrose for consultation under section 3.34(2)(d) of the *Environmental Planning and Assessment, Act 1979*.

According to the Planning Proposal Patyegarang Project by Gyde Planning dated July 2023, the planning proposal seeks to:

- transfer the site from Warringah Local Environmental Plan 2000 to Warringah Local Environmental Plan 2011 and implement standard instrument zones
- secure dual occupancies as an additional permitted use within the R2 low density residential zone
- secure additional permitted uses within the RE2 Private Recreation zone to enable environmental management works, stormwater services, asset protection zones (APZs) and bushfire works, utilities and servicing works where required
- introduce maximum building heights (8.5 metres)
- introduce a range of small, medium to large residential lot sizes, and
- manage an appropriate number of dwellings based on the site capacity.

In its previous pre-lodgement comments to DPE Planning on this planning proposal dated 29 April 2022, EHG raised several issues including that “in its current form the proposal fails to adequately consider and avoid the biodiversity values that exist within the site”. It is noted that the exhibited planning proposal does not reference EHG’s pre-lodgement comments.

EHG has reviewed the exhibited planning proposal and provides detailed comments on biodiversity and flood risk management issues in Attachment 1.

Regarding biodiversity, EHG remains of the view that the planning proposal has failed to demonstrate application of the avoid and minimise framework established under the *Biodiversity Conservation Act 2016*. The Preliminary Biodiversity Development Assessment Report (BDAR) is an incomplete report and requires significant revision to provide a complete biodiversity assessment for the proposal. In this regard, the current BDAR should not be relied on for strategic planning

Department of Planning and Environment

purposes until it is further informed by adequate investigation of impacts and further avoidance of the site's biodiversity values. Insufficient information has therefore been provided to support the planning proposal including the proposed zone boundaries and structure plan.

Regarding flood risk management, the planning proposal seeks to alter a provision that affects flood prone land. EHG considers that insufficient information has been provided for the planning proposal and further information should be provided at this stage of the planning process.

Considering the above, EHG does not support the planning proposal and recommends that the concerns and issues raised in this submission are addressed.

Please also note that given the identified deficiencies and inadequacies, EHG will not be commenting on the Patyegarang Project Draft Development Control Plan in this submission. Once the planning proposal has been revised to address the issues and concerns raised in this submission, EHG will review the draft DCP.

Should you have any queries regarding this matter, please contact Susan Harrison, Senior Team Leader Planning via Susan.Harrison@environment.nsw.gov.au.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Louisa Clark".

Louisa Clark
Director
Greater Sydney Branch
Biodiversity and Conservation

Attachment 1: EHG comments on Planning Proposal Patyegarang (PP-2022-3802)

Pre-lodgement consultation

On 29 April 2023, EHG provided DPE Planning detailed pre-lodgement comments on this planning proposal (Attachment 2). EHG's submission identified a range of issues with the proposal including that "in its current form the proposal fails to adequately consider and avoid the biodiversity values that exist within the site".

EHG notes that the Department's Gateway Determination Report PP-2022-3803 dated June 23 makes no reference to EHG's pre-lodgement comments and concerns about the draft planning proposal.

The exhibited planning proposal package including the Planning Proposal Patyegarang Project by Gyde Planning dated July 2023 (Planning Proposal report) also makes no reference to EHG's pre-lodgement comments. Instead, Section 6.4.2 and Appendix 5 in the Planning Proposal report advise that a project presentation was made to EHG on 14 September 2022. It should be noted that the briefing with EHG was held on 11 March 2022, not 14 September 2022.

Biodiversity

Preliminary Biodiversity Assessment Development Report

The following comments are provided in relation to the Preliminary Biodiversity Development Assessment Report (BDAR). These comments should be read in conjunction with EHG's previous submission the requirements of which have largely not been incorporated into the latest information.

- The operational and construction footprint and therefore the extent of the Subject Land, as defined in the Biodiversity Assessment Method (BAM), is likely to be an underestimation given the full extent of impacts from the proposal have not been considered.
- Given the extent of the proposed rezoning, there are likely to be indirect impacts beyond the footprint of the proposed R2 Low Density Residential and RE2 Public Recreation zone development boundaries. In this regard, the identification of the Subject Land, must be incorporate the full extent of both direct and indirect impacts.
- In Appendix C "Applying the description (2011 Determination)" table there are several rows which indicate that the characteristics of the Subject Land are such that the occurrence of Duffys Forest is possible. There is one section that strongly indicates that Duffys Forest occurs within the Subject Land given that the characteristics relate to the floristic and location specifications of the threatened ecological community (TEC). Reference to the Smith and Smith (2000) method does not provide significant assistance to determine whether the Duffys Forest TEC occurs on the Subject Land. The conclusions provided from the Smith and Smith method applied within the BDAR was created from 0.4ha plots which is not commensurate to the Smith and Smith (2000) method which uses larger sites. In regard to the identification of the community, the Final Determination states "Diagnostic species provide a guide to identification of the community, but care should be taken in the

application and interpretation of diagnostic plant species because of sampling limitations; the reduction in species diversity in degraded sites; and the fact that some species may only be present at a site at some times as a part of the soil seedbank or as dormant buds/tubers.” In this regard, the use of the Smith and Smith (2000) diagnostic test may not result in an accurate understanding of the presence or absence of Duffys Forest within the Subject Land. The justification for the exclusion of Duffys Forest TEC is inadequate to conclude that it does not occur given the reliance on the Smith and Smith (2000) diagnostic method.

- The Smith and Smith (2000) report states “Compared with Sydney Sandstone Ridgetop Woodland, the normal vegetation community of Hawkesbury Sandstone ridges, stands of Duffy’s Forest vegetation tend to have a taller, denser tree layer and a grassier understorey” and “No sites of low open-forest or open-woodland were found, although one area of low woodland was encountered on the TAFE land at Belrose, and one area of tall open-forest at Sir David Martin Reserve, South Turramurra (neither site was sampled by quadrats)” demonstrating some variation within the TEC which has not been accounted for within the justification in the BDAR for this TEC.
- The BDAR states that “Current regional vegetation maps (Sydney Metro Area, 2016; & SVTM_NSW_Extent_PCT, 2022) do not map any part of the subject property as a PCT associated with Duffys Forest EEC”, however, Smith and Smith indicate that there are instances of Duffys Forest within Belrose and the SVTM also shows Duffys Forest within close proximity to the Subject Land indicating that, if the floristic composition and location aligns with that of the Final Determination for Duffys Forest then the likelihood of it occurring within the Subject Land is high.
- Discussion regarding the identification of Coastal Upland Swamp in the Sydney Basin Bioregion endangered ecological community (EEC) on the Subject Land lacks details which should be included to be able to determine whether the community is present on the site. Given Coastal Upland Swamps occur in areas where trees “may be present as scattered individuals or clumps of mallee or arborescent eucalypts”, a map of the waterlogged portions of the site and descriptions of the trees present in this area would assist. The BDAR states that “Numerous small ephemeral drainage lines feed into Snake Creek, many of which support slow draining soaks, small pools, and hanging swamps.” The justification for the assessment of the presence or absence of the Coastal Upland Swamp in the Sydney Basin Bioregion EEC is inadequate given the Subject Land characteristics and the descriptions within the Final Determination.
- Given the concerns raised over the identification of the plant community types (PCTs) on the Subject Land, the ecosystem credit species (ECS) and species credit species (SCS) may require updating in accordance with accurate identification of PCTs.
- Table 15 within the BDAR lists survey times required by the Threatened Biodiversity Data Collection (TBDC) for each threatened species. There are several threatened flora species which were not surveyed within the required survey period including *Camarophyllopsis kearneyi*, *Hygrocybe anomala* var *ianthinomarginata*, *Hygrocybe aurantipes*, *Hygrocybe austropratensis*, *Hygrocybe collucera*, *Hygrocybe griseoramosa*, *Hygrocybe lanecovens*,

Hygrocybe reesiae and *Hygrocybe rubronivea*. The Department's webpage on [Biodiversity experts | NSW Environment and Heritage](#) states, *Surveys for species credit species need to be conducted at the optimum time for detection. Survey months for species are automatically populated in the Biodiversity Assessment Method Calculator (BAM-C) via the Threatened Biodiversity Data Collection (TBDC). These months were selected assuming 'average' conditions, and that the survey is undertaken using an appropriate method, time of day and conditions (based on relevant survey guidelines).*

You can adjust survey timing if, for example, natural disturbances or climatic events are likely to alter the months when the species is most likely to be found. Sometimes additional information about survey times is provided in the 'General Notes' field of the TBDC: for example, 'shoulder' months, differences in survey season during particular environmental conditions or across the species distribution.

Also available for flora-specific survey is the Flora Species with Specific Survey Requirements, which you can find on the BAM-C page. If you vary your survey time from those in the BAM-C make sure you document and justify this in the Biodiversity Assessment Report. For more information see page 38 of the Biodiversity Assessment Method Operational Manual – Stage 1."

Adequate justification for alteration to the survey times or a report from a recognised "expert" has not been provided.

- In addition to the above species surveyed outside of the required survey period, there are several species listed in Table 15 that were surveyed both within and outside of the required survey period. It is unclear from the BDAR which survey effort hours are within the correct survey period and so it cannot be determined if the survey effort within the correct time periods are adequate or if the survey was largely undertaken in the incorrect survey time periods. The surveys undertaken outside of the required survey period should be disregarded unless an appropriate justification can be provided. The BDAR should show the extent of the survey efforts within the correct time periods.
- Table 19 describes caves and crevices present on the Subject Land which may be used by microchiropteran bats such as the Little Bent-wing Bat and Eastern Bent-wing Bat and the Rosenberg's Goanna and Spotted-tailed Quoll. Adequate mapping and investigation of these habitat types and their potential impacts has not been provided within the BDAR.
- SCS surveys for the threatened amphibians Red-crowned Toadlet, Green and Golden Bell Frog and Giant Burrowing Frog were required to be undertaken. Appendix D within the BDAR shares details regarding survey methods. The dedicated amphibian surveys made assumptions regarding unsuitable habitat on portions of the site, but provided no justification as to why areas were unsuitable habitat for survey. Surveys are required to be undertaken in accordance with the NSW Survey Guide for Threatened Frogs.
- Section 7.1 of the BDAR describes how biodiversity values within the Subject Land were prioritised for avoidance. While the prioritisation describes avoiding known habitat for threatened flora and fauna, the proposal impacts on a significant amount of habitat. Impacts are proposed to known threatened species habitat widely across the Subject Land, however

there are avoidance measures proposed for some areas of threatened species habitat in the areas mapped as “Conservation Zone” (Figure 3 of the BDAR). EHG considers areas mapped as “retained vegetation” have not been avoided given the proposed R2 and RE2 zoning and associated permissible uses. Future construction and land use activities within or adjacent to these areas will have direct and indirect impacts affecting vegetation retention. It is considered that the proposal has not adequately accounted for Biodiversity Values within the Subject Land and has not adequately avoided and minimised those impacts. It should be noted that the use of the R2 and RE2 zones is also discussed below under the zoning regime section of this response.

- The proposed development layout indicates minimal buffers will be provided for riparian corridors. Avoidance of further impacts through increasing riparian buffers to provide more functional biodiversity corridors is required.
- It is difficult to understand how impacts have been calculated for the credit offset requirement and where full or partial loss have been calculated for offsets without adequate mapping showing where they have been applied. Asset Protection Zones (APZs) are not considered a compatible land use within conservation areas and should be wholly contained within development areas. In fully vegetated locations, the institution of APZs are likely to change the PCT integrity to the extent that it may not meet the benchmark requirements to be classified as the community. In this regard, future vegetation integrity scores of 0 must be applied to all proposed development areas, inclusive of APZs.
- The BDAR reports that there are uncertain impacts at this “high level planning stage” in section 8.5. There are further obvious impacts that have not been accounted for and for which can be readily identified. EHG expects consideration of all potential impacts arising from the future development. This includes impacts to all areas within the proposed RE2 and R2 zones including the “retained vegetation”.
- Biodiversity impacts from infrastructure upgrades for surrounding services and road networks outside of the site boundaries must be considered in the biodiversity assessment for the proposal.
- The BDAR should consider whether there are likely to be indirect impacts to the proposed “Conservation Zone” (Figure 3) and how this land will be managed into the future considering the proposed increase in the intensity of use of the Subject Land. Not all impacts have been accounted for within the BDAR which makes it difficult to provide the required avoid and minimise measures required by the BAM. See section 8.5 and 10.2 in the BDAR. Details relating to the mechanisms that will be relied upon to conserve the areas proposed for conservation are required in addition to an understanding of the impacts. This is a relevant consideration based on the extent of development that will be facilitated by the proposal. EHG does not support the assumption that there will be no impacts to the “Conservation Zone”.
- Given the concerns raised in relation to the identification of the correct PCTs and associated TECs on the Subject Land, the considerations of which Serious and Irreversible Impact (SII)

Department of Planning and Environment

entities may be present or utilising habitat within the Subject Land and hence any information provided in relation to the assessment of SAIL may be incomplete.

- The ECS and SCS are likely to be underestimations given EHG's concerns with identifying direct, indirect and prescribed impacts as described above.

It is considered that in its current form the proposal has failed to demonstrate application of the *Biodiversity Conservation Act 2016* avoid and minimise framework.

The Subject Land is fully vegetated and contributes to larger ecological corridors beyond the Subject Land's boundaries. The native vegetation on Subject Land includes numerous records of threatened species and ecological communities, and their habitats. The BDAR has failed to adequately justify its assessment of the PCTs and any associated TECs which in turn undermines all threatened species assessments on the entirety of the Subject Land.

With consideration to the proposed structure plan and topography of the site, EHG expects all areas identified for potential development, including areas mapped as "retained vegetation" and APZs would need to be cleared or partially cleared of native vegetation to achieve the development outcomes as proposed. The BDAR does not reflect the full extent of the native vegetation removal required within the areas of retained vegetation which are proposed R2 and RE2 zones, and APZs.

EHG previously recommended that at a minimum, assessment of biodiversity values and impacts be undertaken through application of stage 1 and elements of stage 2 of the BAM. This approach will ensure biodiversity outcomes are optimised and future development can proceed with greater certainty. It will also allow EHG to adequately consider any proposed biodiversity impacts.

The planning proposal will allow for R2 and RE2 zones across the locality which will increase the intensity of the use over the Subject Land. Avoiding impacts on biodiversity values should not be deferred to the future development stage but should be addressed as part of the planning proposal to maximise the integration of conservation measures with other aspects of the planning proposal outcomes including the conservation of riparian corridors, planning of infrastructure and roads, flood management, and lot patterns.

The BDAR lacks adequate consideration of the full extent of impacts to native vegetation and Biodiversity Values across the Subject Land and as such does not provide the details necessary to be able to draw conclusions in relation to biodiversity impacts. Therefore, the BDAR does not provide the information necessary to develop a planning proposal responsive to these constraints.

The proposal does not adequately avoid and minimise impacts by appropriately locating and designing the proposal and reducing the scale of the development in accordance with Section 7 of the BAM.

Section 10.2 of the BDAR it states, "there are no impacts that do not require further assessment". The BDAR is an incomplete report and requires significant revision to complete a biodiversity assessment for the proposal. In this regard, it is recommended that the current BDAR should not be relied on for strategic planning purposes until it is further informed by adequate investigation of impacts and further avoidance of the sites Biodiversity Values.

Department of Planning and Environment

Zoning regime

RE2 Private Recreation and R2 Low Density Residential

As discussed above, Figure 3 in the BDAR shows areas mapped as 'Retained vegetation' outside of the conservation zone. The Planning Proposal report draft Structure Plan (Figure 6) also identifies these areas of 'Retained vegetation' outside the proposed conservation area. The Planning Proposal report zoning map (Figure 26) shows these 'Retained vegetation' areas within the RE2 (with additional permitted uses) and R2 zones.

Regarding the use of the R2 and RE2 zone, the Planning Proposal report states:

The revised planning proposal applies an RE2 zone to the northwest portion of the Snake Creek riparian corridor and parts of its tributaries. This reflects the proponent's intention to retain vegetation within these areas and enable their ongoing management and enjoyment by future and existing residents. The planning proposal seeks to include Additional Permitted Uses (APU) within these areas to enable works to enable the servicing and utilities of the adjoining R2 Low Density Residential zone to occur within these areas. This provision is to purely ensure that the RE2 zone can be provided without disconnecting the R2 Low Density residential zones roads and servicing across these areas. Environmental management works, bushfire works and APZs and stormwater services are also sought as additional permitted uses within the RE2 zone. The majority of these works would be exempt development under the State Environmental Planning Policy (Transport and Infrastructure) 2021 if undertaken on or behalf of a public authority, i.e., Council and Sydney Water.

EHG does not support the proposed approach of zoning the Snake Creek riparian corridor and its tributaries/ natural ephemeral flow paths, retained native vegetation and threatened species habitat to be protected as RE2 and R2. The broad range of permitted uses in the R2 and RE2 zones (including the additional permitted uses the planning proposal seeks to introduce) are inconsistent and incompatible with the retention of native vegetation and protection of the high biodiversity values present including threatened species habitat and the riparian corridor.

EHG recommends that the high biodiversity present on the Subject Land, including the entirety of the Snake Creek riparian corridor and its tributaries/ natural ephemeral flow paths as well as native vegetation and threatened species habitat to be retained and protected should be zoned C2 Environmental Conservation to ensure the conservation of these areas. The objectives and permitted uses in the C2 zone in the Warringah LEP 2011 are considered compatible and consistent with the conservation of the high biodiversity values present and will afford long term protection.

C2 Environmental Conservation

EHG notes that the Planning Proposal report states that "The revised proposal makes no changes to the proposed C2 Environmental Conservation Area".

It is unclear how conservation lands will be protected in perpetuity, owned and managed. Details relating to the mechanisms that will be relied upon to conserve the proposed conservation land are required.

Department of Planning and Environment

Perimeter roads or similar buffers should be provided between development and conservation zones. Furthermore, the pathways proposed in the conservation areas in Figure 23 Open Space Structure Plan in the Planning Proposal report is inconsistent with conservation outcomes.

Asset Protection Zones

The Planning Proposal Report states “The APZs are related to the residential development and are intended to be predominately provided within the R2 zoned land and boundaries of the proposed RE2 zones. The detailed requirements and extent of the APZs will not be finalised until the development application stage to respond to the subdivision and proposed building siting and use”. As previously advised, the extent of APZs will be a significant factor in the level of vegetation removal and biodiversity impacts that occur. EHG expects that the full extent of impacts from the APZs will be included in the planning proposal.

Ministerial Direction

The Ministerial Direction 3.1 Conservation zones requires that “A planning proposal must include provisions that facilitate the protection and conservation of environmentally sensitive areas”.

As discussed in this submission, EHG considers that the planning proposal contains an inadequate assessment of biodiversity values and in its current form the proposal has failed to demonstrate application of the avoid and minimise framework. Furthermore, the RE2 and R2 are not considered appropriate zones to retain, conserve and protect the high biodiversity values present given the broad range of uses permitted. EHG does not consider that the direction has been adequately addressed.

Flood Risk Management

Summary

The planning proposal seeks to alter a provision that affects flood prone land. EHG has reviewed the supporting information for the planning proposal and considers that insufficient information has been provided. Further information should be provided at this stage of the planning process prior to any decision on the planning proposal.

Consultant Qualifications

It is recommended that a consultant specialised in floodplain management completes the required assessment. EHG refers to the requirements for consultant qualifications as stated in Section 1.4 of the Flood Risk and Impact Assessment (FIRA) Guideline. Those scoping, undertaking, and reviewing a FIRA should typically include an appropriately qualified professional engineer. They should have experience and advanced skills in catchment hydrology, floodplain hydraulics and have a good working knowledge of flood risk management practices and guidance in New South Wales. Flood risk management is a separate discipline to stormwater management. Experience with other similar projects suggests that a flood risk management specialist working for the applicant is critical to avoid a protracted assessment process.

Department of Planning and Environment

Ministerial Direction

The Planning Proposal report Appendix 4 outlines consistency with the Ministerial Directions under Section 9.1 of the *Environmental Planning and Assessment Act 1979*. Regarding Direction 4.1 Flooding, the report states "The Site is not located within flood prone land. Accordingly, Direction 4.1 is not applicable." EHG notes that the Flood Impact and Risk Assessment Report shows the land as flood affected. Therefore, consistency with the Ministerial Directions must be demonstrated. The flood planning area will need to be established.

Flood Impact and Risk Assessment Report

A FIRA needs to be prepared in accordance with the NSW Government's Guideline [Flood Impact and Risk Assessment Guideline](#) to support this planning proposal. The content of the FIRA should be in general accordance with Tables 5 and 6 of Attachment A of the guideline.

Modelling

Hydrological and hydraulic modelling has been undertaken of the 5% AEP, 1% AEP, 0.2% AEP, 0.5% AEP and PMF events for the pre and post development scenarios. However, EHG raises concerns over the accuracy of the modelling and notes that the methodology needs to be revised before EHG's advice can be provided. EHG recommends that a flood risk management specialist prepare the relevant modelling and reporting.

The Flood Impact and Risk Assessment Report states that "The stormwater volume retention from the proposed water quality and quantity features was modelled by increasing the initial loss of the developed areas, and the site development area was represented by increasing the impervious area of these catchments." This is not considered an appropriate methodology for flood modelling nor stormwater detention modelling. The proposed measures to mitigate peak flow impacts, such as stormwater detention, must be explicitly modelled and not simply using an increased initial loss. The hydrographs shown in the report are not indicative of stormwater detention measure outflows and do not correctly show the likely impact of changes to site hydrology. Hydrographs should be presented of the existing case, developed case without detention measures and developed case with detention measures. Note that it is not generally considered relevant or necessary to model any water quality treatment measures in flood modelling.

Further details are required, including the percentage imperviousness adopted in each catchment under existing and developed conditions. The flood impact mapping will need to be recalculated after reasonable modelling of the proposed development including stormwater detention measures has been completed. It is not considered appropriate for all area of allotments aside from the roof and driveway to be considered as pervious. The overall fraction impervious for the proposed residential areas must be calculated and presented to ensure it is reasonable.

Given that there is no available flood study covering the site from Council and the lack of available calibration data, reasonable efforts must be made to validate the modelling. This could include comparison with a rainfall on grid model. Relevant guidance should be followed in validating both hydrological and hydraulic modelling.

Department of Planning and Environment

It is recommended that the hydraulic model is extended downstream to include Oxford Falls Road and that a suitable frequent event such as the 1 event per year is used to map flooding over the road. It is further recommended that the hydraulic model is extended a suitable distance upstream of the site for the two flow paths at the west to enable a due comparison of flood behaviour and assessment of flood impacts. The eastern flow path appears to terminate around Morgan Road and should be extended to ensure the full extent of the flow path across the site has been mapped. Flow depths greater than 0.1m should be included on the mapping.

The use of a roughness (Manning's n) value of 0.05 for residential areas needs further explanation and justification. It is unclear for which area this applies and if it is a composite value for buildings, yards and driveways.

Flood Impacts

The Flood Impact and Risk Assessment Report has not adequately demonstrated the flood afflux of the pre and post development scenarios. Tables 1 and 2 of the Flood Impact and Risk Assessment Report both show the flows would increase, which is expected to lead to flood impacts. The flood impact mapping will need to be recalculated after reasonable modelling of the proposed development has been completed, including stormwater detention measures.

Frequent Flooding of Transport Route

The route to Wakehurst Parkway via Oxford Falls Road is frequently flooded and impassable at both Oxford Creek and Middle Creek. This should be considered in traffic and transport investigations and any consideration of emergency evacuation. Ideally, the Flood Impact and Risk Assessment Report should model and map flood affectation at Oxford Creek, especially smaller events. Council may be able to provide information on the Middle Creek crossing.

Stormwater management

The provided stormwater management report is a very high-level document that does not demonstrate adequate consideration of a strategy to mitigate the impacts of development on stormwater and flood flows. Consideration should be given to the locations of stormwater detention basins, noting that bioretention swales and basins are unlikely to meet the requirement to reduce peak flows from all storm events. In particular, the larger events must be modelled in a suitable hydrologic software package.

Proposed Earthworks Strategy

The proposed earthworks strategy involves the following per the Flood Impact and Risk Assessment Report:

- "slightly lowering the flow paths to channelise the overland flow", and
- "all proposed development areas and roads would be filled to an elevation that is above the PMF event".

Department of Planning and Environment

EHG queries this approach including the necessity of raising land above the PMF and the lowering of flow paths rather than provision of a suitable design cross section. EHG queries how this can be consistent with maintaining existing vegetation across the site.

End of Submission

Attachment B: Peak Flow Validation

The results of the validation are outlined in Table 1 below. It is noted that the calculation methods below are purely for comparison purposes as a sanity check to determine if the calculated peak flows are within the same range of values for different methodologies.

It is important to consider the limitations of the RFFE and Rational Method. For example, the RFFE estimates are based on data from the nearest gauged catchments in the region with the nearest one being located relatively far from the site (approximately 23 km). The ARR1987 Rational Method is a calculation of peak flow using the Bransby William/Adam's equation for the time of concentration. It is noted that the estimated time of concentration for the catchment from this method is within the order of one hour, which is greater than the critical duration of the storm derived from the XP-RAFTS model, therefore the Rational Method is expected to produce a lower peak flow than XP-RAFTS.

Taking the limitations of the calculation methods into account, the peak flow estimate from XP-RAFTS is greater than the peak flow calculated from Rational Method as expected, and it also falls well within the confidence limits of the RFFE estimate.

TABLE 1 HYDROLOGICAL VALIDATION (CL = CONFIDENCE LIMIT)

Validation Location	Calculation Method	Flow (m ³ /s)
Snake Creek Outlet from Site Catchment	XP-RAFTS	71.7 (25 minute storm duration)
	RFFE	99.7 5% CL =41.3 95% CL = 244
	Rational Method	34.32

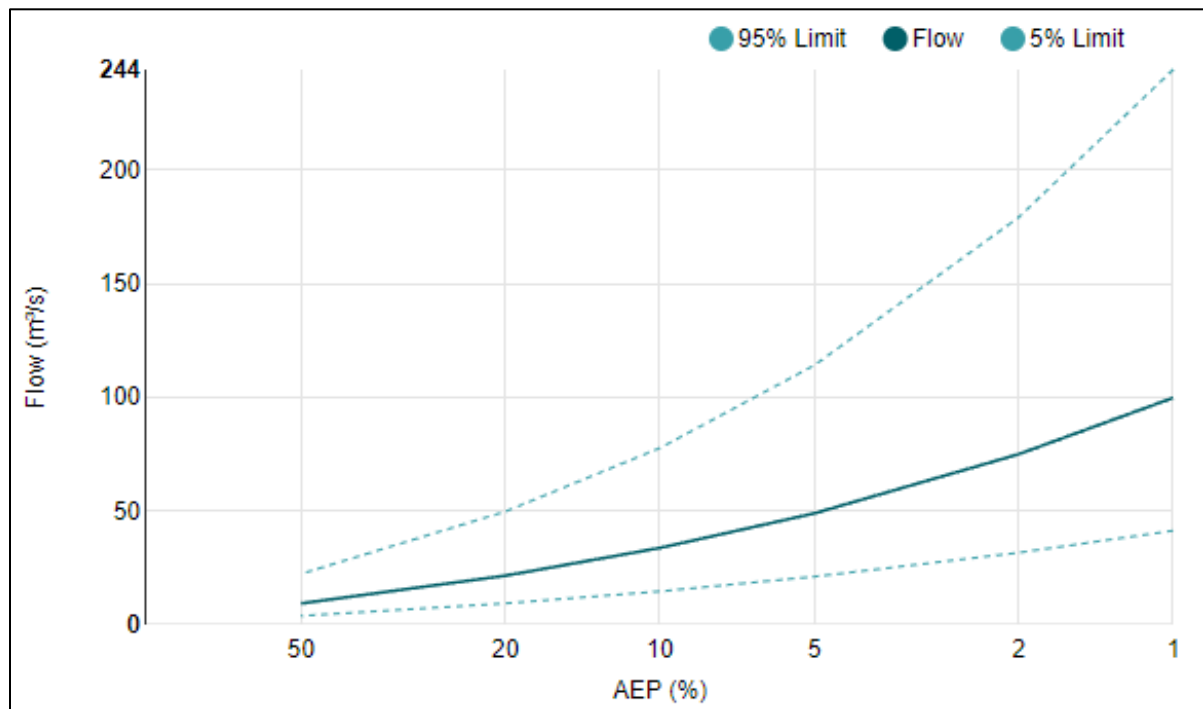


FIGURE 1 REGIONAL FLOOD FREQUENCY ESTIMATION GRAPHICAL RESULTS WITH 5% AND 95% CONFIDENCE LIMITS

AEP (%)	Discharge (m ³ /s)	Lower Confidence Limit (5%) (m ³ /s)	Upper Confidence Limit (95%) (m ³ /s)
50	9.30	3.85	22.3
20	21.5	9.32	49.7
10	33.7	14.6	77.6
5	48.9	21.1	114
2	74.9	31.6	179
1	99.7	41.3	244

FIGURE 2 REGIONAL FLOOD FREQUENCY ESTIMATION ANALYSIS TABULATED RESULTS

Attachment C: Kylee Smith CV



Kylee Smith

Senior Civil Engineer | VIC
Engineering & Design

kylee.smith@colliers.com
Main: (02) 9869 1855
colliers.com.au/ced



Area of Expertise

Kylee is a Degree qualified Civil Engineer with Chartered Status (CPEng, NER) since 2016. She has been working within Water Resources and Flood Modelling for over 12 years and has developed expertise in Hydrology, Hydraulics, Flood Impact Analysis, Flood Risk Assessments, Catchment Management and Stakeholder Engagement.

Having represented Melbourne Water at panel hearings in Victoria, Kylee is well placed to provide expertise to the Panel Hearing regarding items relating to flooding.

Professional Accomplishments

McKinnon Creek Detention Basin – Project Manager

The submission had been assessed by DNRME in QLD and there was a requirement for additional information. Kylee reviewed the current report, liaised with both DNRME and the client to ensure that all requirements were thoroughly understood and engaged and managed a Project Engineer from within WMS to undertake the technical modelling of the Basin Failure. To better understand the geotechnical aspects of the impacts of failure on the basin, Kylee engaged an external dams expert to provide advice around the failure mechanisms and geotechnical aspects.

Joslin Valley Flood Mitigation Project – Project Manager and Hydraulic Engineer

Joslin Valley lies within the LGA of Norwood, Payneham & St Peters Council, South Australia. It contains significant overland flow paths that flood many properties throughout the valley. Kylee's role was to assess a legacy flood model and update it to the latest ARR2019 Guidelines for use in this project, produce a comprehensive existing conditions report, model a range of mitigation scenarios, undertake a damages assessment of existing and mitigated conditions, and produce mapping and reporting for Council to determine the best mitigation outcome to reduce the flooding impacts throughout the area.

Menangle Park Feasibility and Water Cycle Management Study

Kylee undertook the hydrology and hydraulic model build, flood mapping and associated reporting for inclusion into a Water Cycle Management Report for Menangle Park, a 1500 lot subdivision proposal located within Medhurst in Sydney's Outer Suburbs. The WCM Report forms part of a greater study undertaken by Colliers as a Planning Submission to rezone the site. Box Hill High Density Projects for Bathla Group

Pacific National Tasman Freight Terminal - Senior Engineer – Flood Modelling)

The Tasman Freight Terminal is a proposed Intermodal Rail Hub on a site in Melbourne's outer west. Initially, Kylee undertook flood modelling of the site for the purposes of a Due Diligence assessment. Design is being undertaken and the modelling is being updated to include the Concept Design and a report submitted to the client for a land rezoning application.

Qualifications & Accreditations

Bachelor of Civil & Infrastructure Engineering, (Hons 1st Class), Water Engineering

Memberships & Affiliations

Member of Engineers Australia with CPEng NER

Technical Skills

- Hydrologic & Hydraulic Modelling
- Floodplain Mapping & Mitigation
- Development Impact Assessments
- Floodplain & Catchment Management
- Dam breach & Consequence Assessments
- Flood Emergency Response Plans
- Water Cycle Management Plans for Large New Town Rezoning Applications
- Modelling Software TUFLOW 1D & 2D, HEC-RAS 1D & 2D, RORB, 12D, Map Info, QGIS, TUFLOW FLIKE, MUSIC (basic)
- Relevant Guidelines such as ARR2019, DEWLP Development in Flood Affected Areas, VicRoads Drainage Manual, NSW Flood Management Manual (2023)
- Peer Review of Modelling undertaken by both internal and external colleagues and consultants

06 March 2024

Department of Planning, Housing and Infrastructure
4 Parramatta Square,
12 Darcy St, Parramatta NSW 2150

Attn. Brendan Metcalfe

Dear Brendan,

Patyegarang Planning Proposal - additional information in response to agency comments and gateway conditions

Further to our previous response dated 22 December 2023, we are pleased to provide this supplementary material on behalf of the Metropolitan Local Aboriginal Land Council.

The following additional reports accompany this letter and are available via sharepoint:

https://gydecomau-my.sharepoint.com/:f/g/personal/lucyl_gyde_com_au/Ei1wjfLYYnIJmRcOjSpBxvoBg9Ei0mvoX8BI2_ONIZDf6g?e=2IFow7

Consultant Report	Status and changes
Preliminary Biodiversity Development Assessment Report Hayes Ecology, 18 February 2024	Updated to respond to agency submissions (EHG) and Peer Review feedback.
Biodiversity Peer Review Biosis, 28 February 2024	Peer review of the updated Biodiversity Development Assessment Report.
Strategic Bushfire Study Travers Bushfire & Ecology, 14 February 2024	Updated to respond to RFS commentary and Peer Review feedback, including additional risk assessment.
Strategy Bushfire Study Peer Review Grahame Douglas, 23 February 2024	Peer Review of the updated Strategic Bushfire Study.
Bushfire Protection Assessment Travers Bushfire & Ecology, 14 February 2024	Updated to respond to agency submissions from Transport for NSW and Rural Fire Service.
Affordable Housing Viability Assessment Atlas Economics, 29 February 2024	Responds to Condition 3 of the Gateway Determination dated 6 June 2023.

Consultant Report	Status and changes
Response to EHG Flooding Comments Colliers 16 January 2024	Responds to additional modelling and EHG flooding comments.

Biodiversity Development Assessment Report – Hayes Environmental (2024)

Hayes Environmental has updated the Preliminary BDAR in response to the matters raised by the (former) DPE Environment and Heritage Group, including undertaking additional surveys including targeted parallel traverse surveys for threatened plants and amphibian surveys, which had been delayed due to seasonal survey requirements. The updated BDAR at chapter 7, incorporates an expanded description of the measures undertaken throughout the planning and design process to clearly demonstrate the approach to avoid, minimise and where necessary as a last resort, to mitigate impacts.

The BDAR has conservatively assumed (for the purpose of assessment and calculation of impacts) that all land within the 44.7 hectare development footprint, including APZ inner protection areas, public open space, road verges, and private spaces would be completely cleared of all native vegetation. This is a significant overestimation of the extent of impacts for the purposes of the planning proposal. A more accurate assessment of potential impact will undertaken when the first development application is prepared, noting the draft DCP and indicative Structure Plan specifically address lot sizing, road placement and asset protection zone boundaries to facilitate retention of trees and natural rock features within the development.

The preliminary BDAR has been prepared for the purpose of a Planning Proposal so the assessment can not be finalised or submitted within BOAMs. Despite this, the Preliminary BDAR has met all the requirements set out under the BAM for the Planning Proposal stage while providing significant detail into the avoid and minimise measures undertaken, as confirmed in the peer review below. As such, the BDAR offers sufficient evidence for the approval of the Planning Proposal.

Peer review of BDAR – Biosis

A comprehensive peer review of the Preliminary BDAR (2023) was commissioned by qualified, independent experts at Biosis. As part of this process, initial advice was provided to Hayes Environmental to inform a subsequent update of the BDAR.

The Peer Review confirms the Preliminary BDAR (2024) meets the requirements of Stage 1: Biodiversity assessment and Stage 2: Impact assessment [biodiversity values] of Appendix K of the Biodiversity Assessment Method (DPIE 2020).

The Peer Review also confirms sufficient information has been provided to confidently assess the merit and feasibility of rezoning as outlined in the planning proposal. The exact extent of impact to be offset can only be calculated on the basis of final detailed plans at development application stage.

Strategic Bushfire Study and Bushfire Protection Assessment – Travers Bushfire and Ecology

The Strategic Bushfire Study has been updated to address the recommendations from previous reviews from both Meridian Urban and BlackAsh. It concludes the planning proposal complies with Ministerial Direction 4.3 and section 4 *Planning for Bushfire Protection 2019* (PBP). It also confirms the Bushfire Protection Assessment addresses the site-specific bushfire protection measures identified in Chapters 3, 4 & 5 of PBP.

The Strategic Bushfire Study confirms the planning proposal either removes or significantly fragments the bushfire hazard in the locality. The vegetation removal and active bushland management associated with the planning proposal will dramatically lessen the bushfire threat within the locality, whilst also providing a significant level of improved protection for the existing residential properties east of Forest Way and the rural residential properties north and east of Morgan Rd. This is an essential planning requirement of PBP 2019

for new developments in bushfire prone areas. The perimeter road has been identified as a partial non-compliance, this non-compliance will be resolved at DA stage. See below the proposed plan of development which highlights the proposed outcomes and minimised bushfire risks as described above.

The additional information and revisions have been reflected in both the Strategic Bushfire Study and the Bushfire Protection Assessment. There are no non-complying factors which would affect the finalisation of the Planning Proposal as the peer review confirms that the scheme can be made to comply with PBP 2019 at DA stage.



Figure 1 Proposed Plan of Development – Source: Strategic Bushfire Study

Peer review of Strategic Bushfire Study – Grahame Douglas

A comprehensive peer review of the Strategic Bushfire Study was commissioned by qualified bushfire expert, Dr Grahame Douglas. This peer review did not seek to address all the details of the Strategic Bushfire Study, however, identifies key decision-making issues for consideration of the Department, NSW Rural Fire Service and Planning Panel. As part of this process, initial advice was provided to John Travers to inform a subsequent update of the Study.

The peer review identified that the provision of APZs are strategic, compliant and well located, further noting that occupants will have good access out of the development from Morgan Road to Forest Way. The peer review also confirms that the concept plan generally complies with PBP 2019, however, the provision of perimeter roads in the south-west is a deviation from the provisions of PBP 2019 and there needs to be confirmation at a suitable time by Sydney Water of the provision of adequate water supplies to the site.

Confirmation and detailed communications will be undertaken with Sydney Water at DA stage to establish the necessary water supply to the site. In relation to the perimeter road provision in the southwest of the site, the review confirms that this can be addressed at DA stage. These outcomes are reflected in the updated Strategic Bushfire Study.

Affordable Housing Viability Assessment – Atlas Economics

Condition 3 of the 2023 Gateway determination requires preparation of a financial viability assessment to support the affordable housing commitments offered as part of the planning proposal. Atlas Economics was commissioned to prepare this assessment and we request this is kept *commercial in confidence* by DPHI and Planning Panel members and not published on the Department's website.

The feasibility testing used in the financial viability assessment is the Residual Land Value (RLV) method, as required by the Gateway Determination. This method assesses the potential revenue on completion of the development, deducts development costs and makes a further deduction for profit and risk that a developer and financier would require to take on the project. If the project return and development margin are above minimum hurdles, the development is considered feasible.

The viability assessment found there is an opportunity for the planning proposal to contribute to 10% Affordable Housing, as well as contributing to public benefit works (provisionally assumed at \$8 million) and remain viable. The assessment concludes the affordable housing contribution offered by MLALC in its letter dated 18 August 2023 is feasible. Further this outcome is consistent with the Northern Beach Affordable Contributions Plan and is therefore appropriate given current parameters.

We believe the addition of a site-specific satisfactory arrangements clause within the LEP is the most appropriate mechanism to ensure delivery of affordable housing. The clause would ensure that the proposed scheme meets the infrastructure requirements set out by the relevant agencies prior to development while maintaining an efficient timeline for the planning process.

Aboriginal Cultural Heritage Assessment (ACHA)

An ACHA is generally not required at Planning Proposal stage. Notwithstanding, an ACHA is currently being prepared by Biosis.

The ACHA will be developed with First Nations people who will be provided the opportunity to inspect the land and the Patyegarang rock engravings sites. 13 parties have registered their interest to-date. Consultation will be about potential impacts to Aboriginal cultural heritage that may result from the land subdivision and how potential impacts will be managed. The ACHA will follow the Aboriginal community consultation and reporting methodology that is required by the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010).

An interim report will be available in April, and the final report is anticipated to be completed in June following the requisite statutory consultation periods.

Should you wish to discuss the contents of this letter and accompanying reports, please do not hesitate to contact me on julietg@gyde.com.au or (02) 9071 1889.

Yours sincerely



Juliet Grant
Executive Director

JMT Consulting
PO Box 199
Kingsford NSW 2032
0415 563 177

www.jmtconsulting.com.au

Department of Planning and Environment
4 Parramatta Square, 12 Darcy Street
Parramatta NSW 2150

12 August 2024

Dear Sir / Madam

Patyegarang Project Planning Proposal- Traffic Statement

Introduction

This traffic statement has been prepared on behalf of the Metropolitan Aboriginal Land Council to prepare a transport assessment to support a Planning Proposal for the 'Patyegarang Project' site in Belrose, NSW. This statement considers the amended lot size and zoning maps prepared for the proposal (as provided in Appendix A of this document) and any associated implications to the detailed traffic and transport assessment previously undertaken by JMT Consulting for the proposal as documented in the transport impact assessment report dated 9 December 2023.

Assessment

A summary of the amendments to the lot size and zoning maps are as follows:

- Showing connection to the two sections of perimeter road;
- Introduction of 450m² minimum lots adjacent to the snake creek corridor; and
- Introduction of an RE2 strip (functioning as an APZ) adjacent to the property at 20 Morgan Road

The above amendments are not considered to change the outcomes of the traffic assessment previously undertaken by JMT Consulting (as documented in the transport impact assessment report dated 9 December 2023) for the following reasons:

- No amendments are proposed to the location of vehicular access points from the external road network, specifically Morgan Road;
- The number of points of access from the external road network remain unchanged; and
- The number of lots that may be achieved on the site (up to 450) will not increase as a result of the amended plans. As there will be no increase in lot numbers the overall volume of traffic generated by a future development of the site (and therefore associated traffic impact) will not increase in comparison to that assessed in the JMT report dated 9 December 2023. The traffic impacts of the anticipated level of development on the site was deemed to be acceptable – with no deterioration in these impacts anticipated as a result of the amended lot size and zoning maps.

It should also be noted that the amended slip lane design, as presented in Appendix B of this document, provides for an appropriate traffic outcome that facilitates evacuation during a major bushfire event. The amended design provides the following features:

- No requirement for acquisition of the Council land adjacent to Forest Way – instead utilising the existing central median to accommodate road widening;
- Maintaining all traffic lanes and turning movements through the Forest Way / Morgan Road intersection; and
- Allowing for a free flow traffic movement from Morgan Road onto Forest Way, with no requirement for vehicles to be stopped at traffic lights when evacuating the site from Morgan Road.

Please do not hesitate to contact the undersigned should you have any questions.

Your Sincerely

A handwritten signature in black ink, appearing to read 'J. Milston', is placed over a light blue rectangular background.

Josh Milston

Director | JMT Consulting

MIEAust CPEng

Appendix A: Amended Lot Size and Zoning Maps

Draft Structure Plan



- Conservation Area
- Retained Vegetation
- Open space/Asset Protection
- Existing road network
- Indicative future road network
- Classified creekline
- Unclassified flow paths to be retained
- Indicative bush fire Asset Protection Zone (APZ)
- Archaeological sites: Indigenous significance
- Archaeological sites: 50m buffer zone
- Proposed residential lots
- Future R2 zoning

Draft Zoning Plan



- Conservation - C2
- Residential - R2
- Future Residential - R2
- Recreation - RE2

Minimum Lot Size



- 200m²
- 450m²
- 600m²

Alternate Draft Zoning Plan



- Conservation - C2
- Residential - R2
- Recreation - RE2

Alternate Minimum Lot Size



- 200m²
- 450m²
- 600m²

Appendix B: Amended Slip Lane Design



Colliers

Our Ref.	096-16
Dwg File Ref. [Rev] - Sheet Ref.	
096-16 SK02 - Forest Way - Morgan Rd [01] - Sketch	



Dept of Planning, Housing & Infrastructure
Planning Proposal Authority NSW
12 Darcy St Parramatta NSW
Att: Louise McMahon
Director

24/09/2024
096-16

Dear Madam,

Re: Patyegarang – Morgan Rd Belrose - Planning Proposal

We refer to the Planning Proposal for the Patyegarang site at Morgan Rd Belrose and in particularly the availability of Wastewater (sewer) to the location.

Colliers Engineering & Design are the appointed Sydney Water – Water Services Coordinator for the project.

In this regard I confirm the following;

- The site is serviced by the Warriewood Wastewater Treatment plant. This plant has the capacity to service the proposed development.
- The upgrade of any Sydney Water assets or infrastructure needed to service the project will be at no cost to government.
- Technical matters associated with the project can be easily resolved.
- There are ongoing communications with Sydney Water in regard to technical matters and their resolution.

Please contact the undersigned if you wish to discuss the matter further.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Halmarick", with a stylized flourish at the end.

Andrew Halmarick
NSW State Director – Water Services Coordinator
Colliers Engineering & Design NSW

JMT Consulting
PO Box 199
Kingsford NSW 2032
0415 563 177

www.jmtconsulting.com.au

Department of Planning and Environment
4 Parramatta Square, 12 Darcy Street
Parramatta NSW 2150

9 October 2024

Dear Sir / Madam

Patyegarang Project Planning Proposal- Revised Slip Lane - Traffic Statement

Introduction

This traffic statement has been prepared on behalf of the Metropolitan Aboriginal Land Council to support a Planning Proposal for the 'Patyegarang Project' site in Belrose, NSW. This statement considers the correspondence received from Transport for NSW (TfNSW) dated 12 September 2024 (as provided in Appendix A of this document) associated with the slip lane from Morgan Road onto Forest Way.

Assessment

The submission dated 12 September 2024 notes that TfNSW "*generally supports the intent to provide a left turn acceleration lane from Morgan Road into Forest Way southbound to cater for the additional left turn movements generated by the proposal*". The TfNSW submission did not identify concerns relating to the use of the central median on Forest Way to facilitate the introduction of the slip lane.

Subsequent to the correspondence of 12 September 2024 JMT Consulting held discussions with TfNSW staff to consider a revised slip lane option that meets the objective of providing additional traffic capacity while not compromising any future road widening plans from TfNSW. An option was developed which has received in-principle support from TfNSW – refer to concept sketch presented as Figure 1. This option provides for a 'high angled slip lane' which will be designed in accordance with Figure 8.16 of Austroads Guide to Road Design (Part 4A). This option maintains a dedicated left turn for general traffic exiting Morgan Road with no reliance on the use of any land outside of the existing road reserve.

TfNSW provided correspondence via email dated 1 October 2024 (see Appendix B) which noted their in-principle support for the amended slip lane. The correspondence noted a number of detailed design recommendations in relation to the slip lane which can readily be incorporated as part of future design investigations. These design recommendations will not impact the ability to deliver the slip lane as per the concept sketch shown in Figure 1 of this document. Prior to any works being undertaken detailed design drawings will be prepared, including vehicle swept path analysis, to be issued to TfNSW for approval. It is envisaged that the applicant would enter into a Works Authorisation Deed (WAD) with TfNSW to undertake the works within the road reserve.



Figure 1 Amended slip lane concept sketch

The amended slip lane concept is therefore considered to provide for an improved traffic outcome given:

- There is no requirement for any works outside of the existing road reserve, including the Council owned RE1 zoned land adjacent to Forest Way.
- There is no requirement for the existing central median in Forest Way to be amended
- The amended design maintains a dedicated left turn traffic movement out of Morgan Road onto Forest Way

Please do not hesitate to contact the undersigned should you have any questions.

Your Sincerely

A handwritten signature in black ink, appearing to read 'J. Milston'.

Josh Milston

Director | JMT Consulting

MIEAust CPEng

Appendix A: TfNSW Correspondence – 12 September 2024

12 September 2024

TfNSW Reference: SYD24-01483/01

DPE Reference: PP-2022-3802

Ms Kiersten Fishburn
Secretary
NSW Department of Planning, Housing and Infrastructure
Locked Bag 5022
PARRAMATTA NSW 2124

**RE: AMENDED PLANNING PROPOSAL – PATYEGARANG, MORGAN ROAD,
BELROSE**

Attention: Mr Murray Jay

Dear Ms Fishburn

Transport for NSW (TfNSW) appreciates the opportunity to provide comment on the amended Planning Proposal referred to TfNSW via an email dated 22 August 2024 as one of the agencies with operational responsibility for the roads and transport in the area. We understand the Planning Proposal has been amended by the proponent following public exhibition in September – November 2023.

TfNSW notes the key amendments to the Planning Proposal include:

1. revised zoning plan to incorporate:
 - an extension to the proposed C2 Environmental Conservation zone, incorporating land north along the Snake Creek corridor and along the two feeder streams on the western side,
 - additional RE2 Private Recreation zone to function as an APZ adjacent to the property at 20 Morgan Rd.
2. revised indicative structure plan, showing additional connections along sections of the perimeter road to the north and south-west.
3. revised minimum lot size map, incorporating a 450m² minimum lot size adjacent to the Snake Creek corridor to support appropriate APZs.
4. the introduction of additional permitted uses in the C2 Environmental Protection zone to enable environmental management works and stormwater services.
5. the introduction of a zone interface provision, as per clause 5.3 of the *Standard Instrument – Principal Local Environmental Plan* (2006 EPI 155a) to provide flexibility across zone boundaries to accommodate topographical elements during design development.
6. acknowledgement of alternative legislative mechanisms, such as *State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021* to embed detailed design controls, in

the event the draft site-specific development control plan cannot be delivered by the State Government.

TfNSW also notes the amended slip lane design, as presented in **Appendix B** of the Traffic Statement provided by JMT Consulting (12 August 2024) and provides the following comments for DPHI's consideration.

- TfNSW generally supports the intent to provide a left turn acceleration lane from Morgan Road into Forest Way southbound to cater for the additional left turn movements generated by the proposal, both in the event of a bush fire evacuation and in a typical morning peak.

However, TfNSW does not support the amended slip lane design and the central median being used by the proponent for the purpose of constructing a slip lane for the following reasons:

- The proposed design will effectively reduce the opportunity for TfNSW to use the median to implement safety/ network efficiency measures in the future due to future growth along the State Road corridor.
 - The amended design presents further issues relating to the angle of the slip lane, pedestrian crossing, and the lateral shift of Forest Way. Providing a left turn deceleration lane in Forest Way (southbound) into Morgan Road will require changes to the alignment of Forest Way on the southern side of the intersection which could result in compromising safety at the intersection.
 - It is not clear what justification has been provided for the left turn lane in Forest Way (southbound) into Morgan Road.
 - The proposal shows a high angled entry into Forest Way but introduces a short, trapped acceleration lane. This trapped acceleration lane is not supported as it introduces an unnecessary weaving movement in Forest Way and is considered a safety issue in an 80kph State Road.
 - It is not clear if SIDRA modelling has been undertaken to assess the impact and justify the proposed slip lane design.
- In the event of a bushfire emergency, the current signal arrangement could be managed by TfNSW and RFS to run the approach phase longer to coordinate an evacuation, therefore the need for the engineering works may not be necessary.

The comments provided by TfNSW in its submission dated 13 November 2023 (**ATTACHMENT A**) to the original Planning Proposal are still considered relevant to the amended proposal. We request that these matters are addressed in the report to be prepared to the Sydney North Planning Panel later this year.

Should you have any questions or further enquiries in relation to this matter, please contact Ashish Tamhane via email: development.sydney@transport.nsw.gov.au

Yours sincerely,



Carina Gregory
Senior Manager Strategic Land Use (Eastern)
Land Use, Network & Place Planning

Attachment A –Comments on original Planning Proposal PP-2022-3802

1. Forest Way / Morgan Road Intersection

- The SIDRA modelling seems to indicate the queue length in right turning lane on Morgan Road of approximately 80m in AM peak. TfNSW recommends the proponent to strongly consider either removing / restricting kerbside parking on Morgan Road to provide an extension to the two approach lanes onto Forest Way. The extension of approach lanes is expected to future proof both lanes and local road access to cater for the traffic being generated by the proposed development.
- The Traffic Impact Assessment (September 2033) identified that there is a need to extend the northbound right turn bay on Forest Way. Subject to TfNSW reviewing the updated raw SIDRA files, the right turn bay should be designed to extend at a minimum of 40m past the back of queue. This will allow adequate storage for proposed increase in traffic movements and future proof the right turn movement.
- TfNSW notes that the Traffic Control Signal phasing at the intersection of Forest Way / Morgan Road adopted in SIDRA model is based on the site observations. SCATS seem to indicate the actual cycle time onsite during both AM and PM peak is 120 sec. It is therefore recommended to seek SCATS data from TfNSW to get more accurate and realistic SIDRA model results. TfNSW will not support any additional traffic signal phasing, due to further delays envisaged, with any additional phasing. Any changes to Traffic Control Signals requires consent from the Transport for NSW (TfNSW) under Section 87(4) of the Roads Act 1993.
- SIDRA model for the intersection should be updated to include the scenarios stated above for current (2023) and future year (2033). Electronic copy of the SIDRA model should be submitted to TfNSW for review and comment, prior to the planning proposal being finalised.
- TfNSW notes that there is reference to a cultural centre / community facility in the Planning Proposal. However, the Traffic Impact Assessment does not seem to have included this in the trip analysis. It is therefore recommended to include vehicle trips likely to be generated by the proposed cultural centre / community facilities.
- Traffic assessment report has indicated that the extension of northbound right turn lane on Forest Way would be triggered following the completion of 230 dwellings on the site. Should this Planning Proposal be approved, proposed road works identified to mitigate the traffic impacts of the development would need to be reviewed and supported by TfNSW prior to the lodgement of the first subdivision development application (DA). In addition, the works would need to be completed upfront as part of the initial development to cater for additional traffic likely to be generated by the proposed development.

2. Proposed Slip Lane

- TfNSW notes that the majority of the land (Lots 10 and 11, DP 807906) required for the proposed slip lane from Morgan Road, Belrose onto Forest Way is owned by the Northern Beaches Council, zoned RE1 Public Recreation under Warringah LEP 2011 and is public land classified as “community land” under the *Local Government Act 1993*.

A Non-Binding Letter of Offer (LOO) to enter into a Planning Agreement (VPA) with Council has been submitted with the Planning Proposal and is discussed in this document (page 86 & Appendix 23). The LOO proposes contributions for key public benefits and infrastructure, including the proposed design and construction of a new slip lane at the Forest Way and Morgan Road intersection. TfNSW understand that Northern Beaches Council does not support the Planning Proposal and therefore is not in favour of entering into a VPA with the applicant.

Although TfNSW generally agrees with the intent to provide a left turn acceleration lane from Morgan Road into Forest Way southbound to cater for the additional left turn movements generated by the proposal, both in the event of a bush fire evacuation and in a typical morning peak, further discussion between DPE (as planning proposal authority), Council (as landowner) and the proponent is required. This should determine the appropriate acquisition pathway and process for the proposed slip lane, design requirements, delivery mechanism and funding arrangements and requires resolution prior to the Planning Proposal being finalised.

- We note the Traffic assessment report has indicated that the slip lane on Morgan Road is triggered following the completion of 230 dwellings on the site. TfNSW preference would be to have the slip lane constructed upfront as part of the initial development to cater for additional traffic likely to be generated by the proposed development.
- Proposed slip lane on Morgan Road should be signalised due to number of school children currently using the pedestrian crossing facilities at this intersection.

3. Proposed Dwelling Cap

- TfNSW notes that a dwelling cap of 450 dwellings on the subject land has been proposed in the Planning Proposal. TfNSW agrees with the intent to provide a dwelling cap on the subject land and would support the inclusion of a provision in the Warringah LEP 2011 to restrict the total number of dwellings.

We note however that *Section 5.1 Proposed Statutory Amendments* of the Planning Proposal (Gyde, July 2023) does not include any reference to the introduction of a proposed dwelling cap LEP provision as part of the statutory amendments that are listed in the table (refer page 31).

4. Site Specific Development Control Plan

- Site specific DCP should include proposed development controls for vehicular access arrangements to and from the site including mitigation measures and access restriction / emergency access only via Oates Place.

5. General Comments

- The traffic assessment report (September 2023, page 16) stated that the anticipated travel by bus could ultimately make up approximately 20% of all work-related trips from the site, more than double the existing model share for residents of the area. Based on a conservative estimate of 450 dwellings on the site the mode share may result in a demand of approximately 200 additional bus trips once the site is fully developed. Report further stated that observation around the occupancy of bus services in early 2022 indicated buses had more than 50% of seats unoccupied. Though it suggests existing level of public transport should be sufficient to accommodate future demands from residents, TfNSW recommends the proponent to consult with TfNSW and agree on an adequate approach to the public transport prior to planning proposal being finalised.
- TfNSW notes that there is a proposed link to Oates Place, and it is stated that the egress via Oates Place to Forest Way will only be provided during a bushfire emergency and will not be available for daily traffic movements. It is however not clear how this will be monitored and restricted from general traffic use? TfNSW understands that RFS does not support gates. Clarification should therefore be provided on how the proposed road link to Oates Place will be restricted from general car use.

Appendix B: TfNSW Correspondence – 1 October 2024

Josh Milston

From: Ashish Tamhane <Ashish.Tamhane2@transport.nsw.gov.au>
Sent: Tuesday, 1 October 2024 10:01 AM
To: Josh Milston
Subject: RE: PATYEGARANG, MORGAN ROAD - SLIP LANE

Hi Josh

Following comments are provided for your consideration:

1. High angled left turn lane is supported in principle and is to be designed in accordance with Austroads.
2. Supplied sketch shows retaining the existing SA kerb. The kerb return needs to be squared up more to deter left turn movements from the through lane.
3. Therefore, the proposed high angled left turn would need removal of the existing SA kerb, pram ramps etc and a new raised concrete triangular island be constructed.
4. Existing signal hardware would need to be adjusted to suit the new high angled left turn.
5. The high angled left turn is to be designed to suit the largest anticipated left turning vehicle i.e. 19.0m semi-trailer.
6. Proposed high angled left turn to meet all sight distance criteria for the new pedestrian crossing.

Note: It is emphasised that the comments provided above are informal and of a pre-lodgement nature. They are not to be interpreted as binding upon TfNSW and may change following formal assessment of a submitted development application along with formal concept design of a slip lane from the appropriate consent authority.

I hope this helps.

Regards

Ash Tamhane

Land Use Planner – Strategic Land Use (Eastern)
Planning & Programs, Greater Sydney Division
Transport for NSW

M 0468 658 454 **E** ashish.tamhane2@transport.nsw.gov.au

transport.nsw.gov.au

Level 4, 4 Parramatta Square, 12 Darcy Street,
Parramatta NSW 2150



**Transport
for NSW**



I acknowledge the Aboriginal people of the country on which I work, their traditions, culture and a shared history and identity. I also pay my respects to Elders past and present and recognise the continued connection to country.

31 October 2024

Planning Proposal Authority
Department of Planning, Housing and Infrastructure
4 Parramatta Square, 12 Darcy Street
Parramatta NSW 2150

Attn. Louise McMahon

Dear Louise,

Patyegarang Planning Proposal – response from Department of Climate Change, Energy, the Environment and Water – Biodiversity, Conservation and Science (BCS)

Thank you for the opportunity to respond to the BCS letter (dated 18 September 2024) regarding the Patyegarang Planning Proposal.

Preliminary Biodiversity Development Assessment Report (BDAR)

The preliminary BDAR is highly comprehensive and includes extensive documentation detailing the surveys, fieldworks and analysis which inform the conclusions and recommendations. Hayes Environmental have confirmed the preliminary BDAR meets the requirements set out under the *Biodiversity Conservation Act 2016* (BC Act), and all assumptions made in the BDAR are consistent with the current BC Act.

Further, a peer review was conducted in February 2024 confirms that the preliminary BDAR meets the requirements of Table 24 (Stage 1: Biodiversity assessment) and Table 25 (Stage 2: Impact assessment [biodiversity values]) of Appendix K of the Biodiversity Assessment Method.

In relation to BCS's concern around assessments, I refer to our previously commentary (December 2023) which addresses the adequacy of targeted surveys for relevant threatened species and identification of threatened ecological communities (TECs). Subsequently, the preliminary BDAR has been updated to confirm there is no uncertainty over the identification of Plant Community Types (PCTs) on the site. Considerable work was done across the site to specifically ground-truth and map PCTs. Threatened species associations are linked to PCTS, not TECs, and were correct as at the date of the preliminary BDAR. It is acknowledged that threatened species associations have changed regularly since commencement of the BC Act and are expected to continue to change. Technically a BDAR is only valid for 14 days, so it will need to be updated to accompany any future development application.

The preliminary BDAR sets out the avoidance and minimisation measures undertaken to meet the necessary thresholds. This is supported by significant strategic mapping of biodiversity values across the site and was used to inform the development of the indicative structure plan.

In relation to the zoning and structure plan design, the preliminary BDAR assumes a "worst case" total loss of vegetation within the development footprint. Therefore, the assessment outcomes of potential impacts will not be altered due to changes in location of zoning between the R2 and RE2 zoned land, or the design within the developable area. At this stage it is also not practical to design the structure plan to a finer scale of biodiversity values mapping. There is flexibility in the structure plan for detailed and nuanced avoidance of potential values at the detailed design stage. Any future development application will be subject to an assessment regarding the sufficient avoidance and minimisation of potential impacts on biodiversity.

Additional permitted uses (APU) in the C2 Environmental Conservation zone

It is acknowledged the PP documentation refers to the introduction of APUs in the C2 zone to permit *environmental management works, utilities and services and stormwater services*. BCS raises concern that these uses would be counterintuitive to the purposes of the C2 zone.

We note that '*environmental protection works*' and '*roads*' are permissible in the C2 zone under Warringah Local Environmental Plan (WLEP) 2011.

Our intention for the Snake Creek corridor, as stated in the PP, is to improve water quality and overall environment in the Snake Creek corridor (including the protection of environmentally sensitive flora fauna) through the management of stormwater and the implementation of WSUD initiatives. Upon review, it is anticipated these works could be characterised as '*environmental protection works*'.

Accordingly, there is no need to reference additional permitted uses in the C2 zone and the request from BCS to avoid APUs in the C2 zone can be accommodated.

Development near zone boundaries

Section 5.1 of the updated Planning Proposal includes a proposal to modify WLEP 2011 clause 5.3 regarding development near zone boundaries, such that it will apply to the R2, RE2, and C2 zones.

It is acknowledged that the *Standard Instrument – Principal Local Environmental Plan (2006)* states:

“(3) This clause does not apply to— (a) land in Zone RE1 Public Recreation, Zone C1 National Parks and Nature Reserves, Zone C2 Environmental Conservation, Zone C3 Environmental Management or Zone W1 Natural Waterways, or”

Accordingly, to respond to the concerns raised by BCS and to comply with the Standard Instrument Order, we agree to remove the reference to C2 zoned land within the proposed clause, so to only apply between the RE2 Private Recreation and R2 Low Density Residential zones.

If you would like to discuss this further, please do not hesitate to contact me.

Yours sincerely



Juliet Grant

Executive Director

julietg@gyde.com.au