21-000403



STATEMENT OF ENVIRONMENTAL EFFECTS

AMENDED SUBDIVISION APPLICATION INYADDA DRIVE, MANYANA – LOT 2 DP1161638, LOT 2 DP1121854, LOT 106 DP755923

Prepared for Heir Asquith



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1 INTRODUCTION

Egis Consulting Pty Ltd have been engaged by Heir Asquith Pty Ltd to prepare this Statement of Environmental Effects (SEE) in support an amendment to Development Application SF10921 (DA) for the subdivision of Lot 2 in DP1161638, Lot 2 in DP1121854 & Lot 106 in DP755923 (subject land) also known as Inyadda Drive, Manyana, under Part 4 of *The Environmental Planning and Assessment Act 1979 NSW* (EP&A Act).

This Development Application seeks Shoalhaven City Council's consent for the subdivision of the subject land into 65 residential lots together with a community title lot for the conservation of 57.53 ha of land for biodiversity conservation purposes. Refer to Figure 2.1 showing the subject land and Figure 3.1 for the proposed subdivision plan.

The proposed 65-lot residential subdivision will set aside Lot 1 for a community title lot for environmental conservation purposes which contains the environmentally sensitive, C3 zoned land.

The subject site is situated within the Shoalhaven Local Government Area (LGA). The site is currently zoned as R1 – General Residential, R5 - Large Lot Residential C3 – Environmental Management and RE1 – Public Recreation under the *Shoalhaven Local Environmental Plan (LEP) 2014*.

The Development Application seeks consent for a 65-lot residential subdivision including the following development:

- Lot 1 57.53 ha Community title lot for biodiversity protection purposes;
- Lots 2-66 Torrens title residential lots ranging in size from 2000m² to 2840m²;
- Lot 67 Proposed public reserve for a local park (2088m²) containing grave site to be dedicated to Council;
- Lot 68 Proposed RE1 Open Space Lot (3054m²) to be acquired by Council;
- Creation of a pedestrian accessway over Lot 1 to provide access to the beach;
- Creation of a 6m wide fire trail including a beach access trail over Lot 1;
- Creation of a 6m wide drainage easement over lots 17 & 23;
- Construction of an 8m wide pavement for emergency purposes with restricted access to Curvers Drive;
- Road Construction and dedication including intersection treatments to existing public roads;
- Upgrade to Inyadda Drive including new culverts to provide flood free access;
- Indicative Building Envelope Plans to restrict buildings;
- Asset Protection Zones as required to meet Planning for Bushfire Purposes;
- Tree removal within the development footprint;
- Protection of Hollow-bearing trees within proposed lots;
- Bulk earthworks to facilitate building platforms;
- Retaining walls around perimeter roads;
- Stormwater and Water Quality works including swales in the road reserve;
- Street tree planting;
- Proposed sewer servicing scheme including pump out system; and
- Community title management statement.

This Development Application is accompanied by a 'Biodiversity Development Assessment Report' (BDAR) in accordance with the Biodiversity Assessment Method 2020 (BAM) required under the *Biodiversity Conservation Act 2016*.



Heir Asquith Pty Ltd is the developer of the land subject to this Development Application. The appropriate owner's consent from Manyana Projects Pty Ltd for submission of this DA is provided under a separate cover letter.

The estimated cost development is \$16,636,785 including GST; therefore, the relevant consent authority is Shoalhaven Council.

This DA is identified as integrated development under Section 4.46 of the *Environmental Planning and Assessment Act 1979* and seeks referral and concurrence from Natural Resource Access Regulator (NRAR) under Section 91 of the *Water Management Act 2000*, Rural Fire Service (RFS) under Section 100B of the *Rural Fires Act 1997*, for a Bushfire Safety Authority and the Office of Environment Heritage under Section 90 of the *National Parks and Wildlife Act 1974* for an Aboriginal Heritage Impact Permit (AHIP).

The proposed development has been assessed against the planning requirements contained in:

- State Environmental Planning Policy (SEPP) (Resilience and Hazards) 2021
- Shoalhaven Local Environmental Plan (LEP) 2014
- Shoalhaven Development Control Plan (DCP) 2014
- Section 4.15 of the EP&A Act 1979 (as amended)

The following documents are submitted in support of this application:

- Appendix A: Survey Plan prepared by Egis Consulting
- Appendix B: Subdivision Plans prepared by Egis Consulting
- Appendix C: Civil Engineering Plans prepared by Egis Consulting
- Appendix D: Stormwater Management and Flood Assessment Report prepared by Egis Consulting
- Appendix E: Geotechnical Assessment prepared by Terra Insight
- Appendix F: Landscape Plans prepared by Site Image
- Appendix G: Preliminarily Site Contamination Investigation prepared by Terra Insight
- Appendix H: Coastal Engineering Report prepared by Horton Coastal Engineering
- Appendix I: Aboriginal Cultural Heritage Assessment Report (ACHAR) prepared by Apex Archaeology
- Appendix J: European Heritage Assessment Grave Site prepared by Chris & Charlotte Webb
- Appendix K: Biodiversity Development Assessment Report (BDAR) prepared by GHD
- Appendix L: Bushfire Impact Assessment Report prepared by Blackash Bushfire Consulting
- Appendix M: Traffic Impact Assessment Report prepared by PDC
- Appendix N: Vegetation Management Plan prepared by GHD
- Appendix O: Water and Wastewater Infrastructure Servicing Report prepared by Calibre Professional Services (for information)
- Appendix P: Draft Community Management Statement
- Appendix Q: Previous Owners Consent for APZ over Lot 1 DP1161638



2 SITE ANALYSIS

2.1 Site Location and Context

The subject site includes three parcels of land, being Lot 2 in DP1161638, Lot 2 in DP1121854 & Lot 106 in DP755923, Inyadda Drive, Manyana.

The subject site is 76.69 ha within a rural area of North Manyana, within the southern area of Shoalhaven LGA. The site is currently characterised as a vacant, bushland site adjoining Inyadda Beach with dense vegetation, as shown in Figure 2.1 below. The site has road access from Inyadda Drive and adjoins existing residential development off Curvers Drive to the south. Manyana is located to the north of Lake Conjola and currently has a residential population of approximately 520 people (as per the 2016 census).



FIGURE 2.1 – LOCALITY PLAN (NEARMAP, 2023)

2.2 Background

2.2.1 Previous Rezoning

The subject site was previously used for farming purposes and was subdivided by Kyemagh in 1955 to create 27 lots off Curvers Drive. The remaining lot was subsequently sold to Kylor Pty Ltd.

A Planning Proposal to rezone the subject site to R2 Low Density Residential, permitting a total of 330 residential lots was prepared and submitted to Shoalhaven Council by Kylor Planning and subsequently, taken over by JWD Projects.

The Planning Proposal was previously refused by the Department of Planning, Industry and Environment (DPIE) as it was taking too long to be assessed and determined due to outstanding information such as Aboriginal Heritage assessment over the subject site and unresolved Biodiversity issues.

The Planning Proposal process for the subject site to permit 330 residential lots has been rescinded from Shoalhaven Council, with the applicant preferring to utilise the existing zoning of the site for large-lot residential development.



2.2.2 Previous Development Application

The original development application was lodged on 16 December 2021 for a '100-lot residential subdivision including a Community title lot for biodiversity protection purposes, Proposed public reserve lot for a local park and RE1 open space lot, road construction and dedication, Asset Protection Zones, tree removal within the development footprint, bulk earthworks, stormwater and water quality works including on-lot water quality treatment, street tree planting and proposed sewer servicing scheme including pump out system'.



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2.3 Site Description

A site walkover was conducted on the 1st October, 20th October and 28th October 2021 as part of the collection of the survey data. The images below detail the nature and treatment of the creek lines on the site, the location of the informal dams and the heavy re-growth of vegetation after the 2019-20 bushfires which can be seen in image 1 below. Refer to Figure 2.2 for the approximate location of the images below.









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FIGURE 2-2 - SITE AERIAL (NEARMAPS, 2023)

2.4 Zoning

The subject site is zoned R1 General Residential, R5 Large Lot Residential, RE1 Public Recreation and C3 Environmental Management under the *Shoalhaven Local Environmental Plan 2014*, as shown in Figure 2-3 below. The subdivision of land and construction of the road is permissible with consent in accordance with *Shoalhaven LEP 2014* and this amended subdivision is more consistent with the intended economic and environmental uses of the subject site than the original proposal application.





The zone objectives for each relevant zone are detailed below. It needs to be recognized that the development footprint is within the R1 and R5 zones. The R1 – General Residential Zone has a minimum lot size of 500m², and the proposed development principles has not utilized the R1 minimum lot size potential of the land and has applied the R5 – Large Lot Residential minimum lot size of 2000m² across the residential subdivision. This design principle has been driven by reducing the development footprint and development yield to provide a greater environmentally sensitive outcome for the development of the property. The proposed development is consistent with the zone objectives of the R1, R5 and C3 and RE1 zones, as detailed below:

R1 – General Residential

1 Objectives of zone

- To provide for the housing needs of the community.
- To provide for a variety of housing types and densities.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To identify land suitable for future urban expansion.

Response: The proposed subdivision of larger lots provides the opportunity for housing needs to be met that is not found elsewhere within the Manyana community. The proposed development is not contrary to the objectives of the R1 zone.

R5 – Large Lot Residential

1 Objectives of zone

• To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality.

Response: Complies. The proposed development provides housing needs for the Manyana community that are consistent with the larger lot sizes of the surrounding area. The proposed development has minimised the development footprint in order to preserve the environmentally sensitive land.

• To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future.

Response: Complies. The proposed large lots are consistent with the lot sizes in the surrounding community.

• To ensure that development in the area does not unreasonably increase the demand for public services or public facilities.

Response: Complies. Adequate arrangements have been made for the connection of the proposed lots to services such as water, sewer, electrical and NBN.

• To minimise conflict between land uses within this zone and land uses within adjoining zones.

Response: Complies. The proposed development of the R5 land does not cause conflict with the adjoining land uses. The creation of the community title association will ensure that the adjoining C3 Environmental Management zone is managed in perpetuity for biodiversity conservation.

The C3 Environmental Management zoning is contained within the proposed biodiversity protection Lot 1. The associated bio-retention basins and Road No.6 located partially within the C3 zone are reduced in size from the original layout and is for the purposes of environmental protection works. The basin provides erosion protection works as defined within the SLEP 2014 as 'environmental protection works'.

C3 – Environmental Management

1 Objectives of zone

• To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.

Response: The proposed development includes the creation of a biodiversity conservation lot that's purpose is to protect and restore the biodiversity. Bio-retention basins are proposed around the edge of the subdivision to manage and treat stormwater runoff. The amended subdivision layout has located two basins - one basin within the R1 – General Residential zoning. The other smaller basin is partially located within the C3 zone. However, its purpose can be defined as 'environmental protection works' which is consistent with the permissibility and objectives of the C3 zone.

To provide for a limited range of development that does not have an adverse effect on those values.



Response: Complies. The development proposed within the C3 lot is limited to the fire trail for PBP purposes and containing APZ's and the bio-retention basin located off the southern precinct. These basins has been significantly reduced in size and is necessary to ensure that no adverse impacts occur on the remainder of the proposed biodiversity conservation lot from the proposed residential subdivision. Therefore, the proposed development does not have an adverse impact on the ecological, scientific, cultural or aesthetic values of the C3 zone.

• To protect the natural and cultural features of the landscape, including coastal and foreshore areas, that contribute to scenic value and visual amenity.

Response: Complies. The proposed development within the C3 zoned land can be defined as 'environmental protection works, therefore complies with the objective to protect the natural features of the coastal landscape.

• To maintain the stability of coastal landforms and protect the water quality and ecological values of estuaries and coastal streams.

Response: Complies. The proposed development does not impact on the coastal landforms and is proposing to retain the C3 Environmental Land as biodiversity conservation. Additionally, the proposed development is not negatively impacting on the water quality and ecological values of estuaries and coastal streams, which has been confirmed within the BDAR and the Coastal Engineering Report. The bio-retention basins are proposed to treat the development run-off to ensure that the post-development flows match closely to the pre-development flows and no additional impacts are caused to the existing waterways.

RE1 - Public Recreation

- 1 Objectives of zone
- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

Response: The proposed local reserve (Lot 168) is consistent with the objectives of the RE1 zone as it enables the land to be used for public open space purposes and is protecting and enhancing the natural environment for recreational purposes. It is noted that Shoalhaven Council is the assigned acquisition authority for the subject RE1 land.

As detailed above, the application is consistent with the objectives of the relevant zones.



3 PROPOSED DEVELOPMENT

The proposed subdivision is consistent with the *Shoalhaven Local Environmental Plan (LEP) 2014* and, in general more consistent with the intended economic and environmental uses of the subject site than the previous planning application as envisaged in the current zoning.

The amended Development Application seeks consent for a 65-lot residential subdivision including the following:

- Lot 1 57.53ha Community title lot for biodiversity protection purposes;
- Lots 2-66 Torrens title residential lots ranging in size from 2000m² to 2840m²;
- Lot 67 Proposed public reserve for a local park (2088m²) containing grave site to be dedicated to Council;
- Lot 68 Proposed RE1 Open Space Lot (3054m²) to be acquired by Council;
- Creation of a pedestrian accessway over Lot 1 to provide access to the beach;
- Creation of a 6m wide fire trail including a beach access trail over Lot 1;
- Creation of a 6m wide drainage easement over lots 17 & 23;
- Construction of an 8m wide pavement for emergency purposes with restricted access to Curvers Drive;
- Road Construction and dedication including intersection treatments to existing public roads;
- Upgrade to Inyadda Drive including new culverts to provide flood free access;
- Indicative Building Envelope Plans to restrict buildings;
- Asset Protection Zones as required to meet Planning for Bushfire Purposes;
- Tree removal within the development footprint;
- Protection of Hollow-bearing trees within proposed lots;
- Bulk earthworks to facilitate building platforms;
- Retaining walls around perimeter roads;
- Stormwater and Water Quality works including swales in the road reserve;
- Street tree planting;
- Proposed sewer servicing scheme including pump out system; and
- Community Title Management Statement.





FIGURE 3-1 - PROPOSED SUBDIVISION PLAN (EGIS 2023)



FIGURE 3-2 - PREVIOUS SUBDIVISION PLAN (CALIBRE 2021)



3.1 Summary of Changes from previous application:

The previous Development Application was for 100-lot residential subdivision, whereas the amended development application has been prepared in response to issues raised by Council, particularly in regard to biodiversity concerns. The amended subdivision layout has reduced the lots from 100 to 65 residential lots to avoid the impacts on significant ecological communities (EEC), particularly the Illawarra Lowlands Grassy Woodland. Additionally, the amended subdivision has altered the drainage strategy, with on-lot bioretention being removed and replaced with swales within the road reserves, amended bulk-earthworks strategy include the retention of numerous hollow-bearing trees and the removal of retaining walls to the proposed residential lots. Following is a summary of the changes being proposed within this application:

3.1.1 Biodiversity

- Reduction in the development footprint to reduce impact on the SAII entity, 'Illawarra Lowlands Grassy Woodland' (PCT 1326).
- The amended subdivision layout has been significantly reduced to effectively avoid and minimise adverse impact on the endangered ecological communities (EEC). The amended layout has been determined to not have a serious or irreversible impact (SAII) on biodiversity values to PCT 1326 as referenced in the 'North Manyana Subdivision Biodiversity Development Assessment Report (BDAR') included in Appendix K.
- Increase in size for the conservation lot (Lot 1) for biodiversity purposes from 45.58 ha to 57.25 ha of land.
- The protection of hollow-bearing trees within the amended subdivision layout with restricted Building Envelope Plans.

3.1.2 Stormwater

- This application removes the on-lot bioretention basins which has been replaced with bio-retention swales within the road reserve. This amendment further reduces the development footprint of the end of line bio-basins.
- Addition of a 6m wide drainage easement along the boundary of proposed lots 17 & 23 to cater for overland stormwater.

3.1.3 Roads

- Realignment of road No.7 adjoining the existing properties on Curvers Drive to address resident concerns, with no road adjoining the back property boundaries. Therefore, the road will have no visual impact on the surrounding properties.
- Revision of Road No.6 to an 8m wide pavement for emergency fire evacuation purposes, with restricted access off Curvers Drive.

3.1.4 Planning

- Number of residential lots has been reduced from 100 to 65 lots.
- Lots No. 2 & 3 have been re-oriented to not front Inyadda Drive with access from internal roads.
- Indicative Building Envelope Plans has been proposed for each lot, which will ensure that the hollow- bearing trees are protected during future development. The Building Envelope plans will be a restriction to user on title under a Section 88B instrument.

3.1.5 Engineering

• Reduced extent of retaining walls to the edge roads adjoining the biodiversity conservation lot with no retaining walls within the lots as proposed.



- Reduced cut and fill volumes from 116, 732m³ of cut volume from the initial application to 20,130m³ of cut for the amended layout. This demonstrates the reduced extent of ground reshaping and minimises any adverse impacts.
- Swales included within the road design and amended bio basin design.

The subdivision application has assessed the relevant integrated development provisions of Section 4.46 of the EP&A Act as outlined in Table 3-1 below.

3.2 Community Title Scheme

3.2.1 Land Zoning Permissibility under the *SLEP 2014* – Schedule 1 Additional Permitted Uses

It should be noted that the subject property in addition to the land use zone, has additional permitted uses, under Schedule 1- Additional Permitted Uses of the *Shoalhaven Local Environmental Plan 2014*, Clause (6) Use of certain land at Manyana. This clause states that:

6 Use of certain land at Manyana

- (1) This clause applies to land identified as "Sch 1.15" on the Clauses Map, being Lot 2, DP 1121854, Sunset Strip, Manyana, that part of Lot 106, DP 755923, (Portion 106), Inyadda Drive, Manyana that is in Zone E3 Environmental Management; and that part of Lot 2, DP 1161638, Inyadda Drive, Manyana that is in Zone E3 Environmental Management.
- (2) Development for the purposes of advertising structures, amusement centres, community facilities, food and drink premises, function centres, helipads, heliports, recreation facilities (indoor), recreation facilities (major), recreation facilities (outdoor) and registered clubs is permitted with development consent.



FIGURE 3-3 - EXTRACT OF ADDITIONAL PERMITTED USES MAP (SHOALHAVEN LEP)

The subject site benefits from additional permitted uses on the C3 – Environmental Management Land under Schedule 1.15 of the SLEP 2014. This statement is brought to Council's attention and from an environmental and biodiversity position, it is not desirable that such additional land uses as listed under Schedule 1(6) are to be undertaken on the C3 zoned land.

Accordingly, on behalf of the applicant, the applicant/owner, will restrict the use of the land, restricting the permitted land uses on the property as there is no intention to conduct such activities. This will be done by way of a deed of covenant in accordance with Section 88 of the *Conveyancing Act 1919* and section 30 of the *Community Land Development Act 2021*. Instead, the C3 zoned land will be included within the Community Title Scheme as a



Biodiversity Conservation Lot and managed by the Community Management Association in accordance with a BDAR and associated Vegetation Management Plan, which is detailed below.

Restricting the use of the permitted uses on the C3 zoned land is considered a significant reduction in the development use of the subject property, further minimising the impacts of the proposed development.

3.2.2 Community Title Subdivision

The application proposes a revised **Community Title Scheme** which comprises of the 65 residential lots and the Lot 1 as a Community Title lot, to be held under the ownership of a Community Association. The Community Title Scheme will outline the intention to manage and protect the biodiversity of this land. In addition, the community association will also be responsible for:

- (a) the maintenance and management of the bio-retention basins on the community land;
- (b) maintenance of the pedestrian accessway across the creek line; and
- (c) Maintenance of the 8m wide emergency access trail to Curvers Drive to the east of lot 54of the existing Curvers Drive properties.

3.2.3 Community Management Statement

The detailed Community Management Statement, pursuant to a Community Plan, should be a condition of approval to be submitted with the Subdivision Works Certificate. A draft Community Statement is included at Appendix P. It is noted that the need for a Community Management Statement is, in the usual course, suggested to be a pre-commencement requirement of subdivision works, which can be imposed through conditions of development consent. The draft Community Management Statement in Appendix P will be legally drafted to comply with the *Community Land Development Act 2021*, the Regulations and sets out the following principles:

- (a) Structure of the community association
- (b) Biodiversity Conservation
 - i. Maintain native flora and fauna in perpetuity in accordance with the recommendations provided in the BDAR.
 - ii. Maintain all parts of the Community Property subject to the Vegetation Management Plan (Appendix G of the BDAR).
- (c) Maintain detention and bio-retention basins.
- (d) Maintain the timber pedestrian access between northern and southern precincts.
- (e) Maintain the 8m wide emergency access trail to Curvers Drive to the east of lot 54 of the existing Curvers Drive properties emergency access trail to the rear of Curvers Drive properties.
- (f) The right to provide infrastructure and servicing over the community land, which will be handed to the relevant service authorities.
- (g) Maintenance of retaining walls.

Individuals Lots within the Community Title Scheme will have the following additional restrictions:

- (a) Sewer pump-out system through a Section 88B Restriction as to User
- (b) No cats allowed through a Section 88B Restriction as to User.

Separate lots for the roads have not been named within the subdivision plans, as the intention is to dedicate the roads to Council. The subdivision plans will be compliant with the *Community Land Development Act 2021* prior to issue of the Subdivision Works Certificate, which can be included as a condition of development consent.



Referral Act	Section	Referral Trigger	Y/N
Coal Mine and Subsidence Compensation Act 2017	bsidence subsidence district.		x
Fisheries 144 Management Act 201 1994 205 219		Aquaculture permit Permit to carry out dredging or reclamation work Permit to cut, remove, damage or destroy marine vegetation on public water land or an aquaculture lease, or on the foreshore of any such land or lease. Permit to: a) set a net, netting or other material, or b) construct or alter a DA, floodgate, causeway or weir, or c) otherwise create an obstruction, across or within a bay, inlet, river or creek, or across or around a flat.	
Heritage Act 1977			Х
Mining Act 1992	63, 64	Grant of a mining lease.	x
National Parks and Wildlife Act 1974 90 Grant of Aboriginal Heritage Impact Permit.		Grant of Aboriginal Heritage Impact Permit.	~
Petroleum (Onshore) Act 1991	16	Grant of Production lease.	
Protection of the Environment Operations Act 1997 43(a), 47 and 55 43(b), 48 and 55 43(d), 55 and 122		Environment protection licence to authorise carrying out of scheduled development work at any premises. Environment protection licence to authorise carrying out scheduled activities at any premises (excluding any activity described as a "waste activity" but including any activity described as a "waste facility". Environment protection licence to control carrying out of non-scheduled activities for the purpose of regulating water pollution resulting from the activity.	
Roads Act 1993 138		 consent to— (a) erect a structure or carry out a work in, on or over a public road, or (b) dig up or disturb the surface of a public road, or (c) remove or interfere with a structure, work or tree on a public road, or (d) pump water into a public road from any land adjoining the road, or (e) connect a road (whether public or private) to a classified road 	
Rural Fires Act 1997 100B		Authorisation under Section 100B in respect of bush fire safety of subdivision of land that could lawfully be used for residential or rural residential purposes or development of land for special fire protection purposes.	
Water Management80,90,91Water use approval, Water management work approval or activity approval under Part 3 Chapter 3.		~	

4 ENVIRONMENTAL ASSESSMENT

4.1 Biodiversity Development Assessment Report (BDAR) - Biodiversity Conservation Act 2016

Section 1.7 of *the Environmental Planning and Assessment Act 1979* provides that a development is also subject to the provisions of Part 7 of the *Biodiversity Conservation Act 2016* (BC Act). Part 7 contains additional requirements with respect to assessments, consents and approvals. It provides the listing of threatened species and communities, framework to avoid and offset the impacts of the proposed development under the Biodiversity Offsets Scheme (BOS) and establishes a scientific method for assessing the likely impacts on biodiversity values with measures to offset the impacts under the Biodiversity Assessment Method (BAM).

A Biodiversity Development Assessment Report (BDAR) has been prepared by GHD, 'North Manyana Subdivision Biodiversity Development Assessment Report', attached in Appendix K to identify the potential impacts on biodiversity associated with the proposal and detail how the proposed development will avoid, minimise and offset the impacts upon the native vegetation and biodiversity listed communities under the BC Act in conjunction with assessment under the Biodiversity Assessment Method (BAM) 2020. The proposal has aimed to avoid and minimise impacts to native vegetation and habitat values by amending the original subdivision layout for the development.

The proposed development seeks to clear 17.95 of native vegetation for a 19.58 ha subdivision containing 65 residential lots with the total readily developable area of 36.54 hectares. The proposed subdivision includes a conservation lot of 57.25 ha in area over the remainder of the study area, including 17.95 ha of the readily developable area. Figure 4.2 below details the various iterations of the development footprints proposed for the site, which evidently details the reduction of the current proposal of 65 lots from the previous versions to reduce impact on the Endangered Ecological Community (EEC) PCT (Plant Community Type) 1326 (identified in purple in Figure 4.3).

The proposal has been assessed to have residual direct impacts within a 19.58-hectare development footprint including:

- "Removal of 17.95 hectares of native PCT's and associated threatened ecological communities in the development footprint as summarised in Figure 4.1 below.
- Removal of up to 17.88 hectares of known habitat for the threatened fauna species Eastern Pygmy Possum (*Cercartetus nanus*).
- Removal of up to 1.38 ha of PCT 1326 Woollybutt White Stringybark Forest Red Gum grassy woodland on coastal lowlands, which is part of a local occurrence of a threatened ecological community listed under the BC Act and EPBC Act, as well as an entity at risk of a potential Serious and Irreversible Impact (SAII).
- Removal of a further 1.64 ha of non-native vegetation and cleared land in the development footprint with negligible value for threatened species that do not require further assessment under the BAM".

A Construction Environmental Management Plan (CEMP) will be required for the construction phase of the proposal and prepared prior to issue of the Construction Certificate. The CEMP is envisaged to detail the mitigation measures such as appropriate management of bushfire Asset Protection Zones (APZ's), to prevent the spread of weeds and or soil into adjacent areas of retained vegetation, appropriate fencing, enforcement of legal obligations to control priority weeds during construction to reduce impact on biodiversity. Details of these items are included within the BDAR included in Appendix K.

Mitigation measures would be implemented to minimise potential indirect or operational impacts of the subdivision. These would include:

- Implementation of a Vegetation Management Plan (VMP) over the conservation lot until such time that any BSA is obtained over the land including measures to mitigate potential indirect impacts of the proposal, manage unauthorised land uses, environmental weeds and other threats to biodiversity values regenerate areas of poor condition or non-native vegetation to functional native ecosystems
- Ongoing water quality management as part of an integrated stormwater management system
- Measures to reduce the increased risk of fire



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- Prescribed fencing requirements
- Ecologically sensitive street lighting design
- Domestic animal restrictions.

Credits required to commence construction, and prior to any BSA being established would be secured on the open market from stewardship sites that provide biodiversity credits that comply with the trading rules of the NSW Biodiversity Offsets Scheme. A payment to the Biodiversity Conservation Fund is also considered an appropriate action if a suitable number and type of biodiversity credits cannot be secured from stewardship sites. Should a BSA come into force over the conservation lot adjacent to the development footprint, appropriate credits could be secured and retired from this. This approach would further enhance a 'like for like' conservation of the PCTs and threatened species affected by the proposal and directly benefit local populations of the species affected by development impacts.

The proposal has included purposeful design of the subdivision within the readily developable land at the study area to substantially avoid and minimise impacts to the environmental plant communites, resulting in residual impacts to just 1.38 ha of the community and regeneration of 1.94 hectares as part of a functional patch of the community with a greater extent and improved condition and security than the baseline condition. As such the proposal is likely to avoid the risk of a SAII to Illawarra Lowlands Grassy Woodland.

Figure 4.1 below details the re-iterations of the subdivision proposals on the subject site. The yellow outlines highlight the previous 100-lot proposal compared to the red/blue outline which is the current 65-lot proposal. This showcases the significant reduction of impact on the purple, being the PCT1326 Illawarra Lowlands Grassy Woodland.



FIGURE 4-1 - AVOIDANCE OF IMPACTS MAP (GHD 2023)





FIGURE 4-2 – EXTENT OF ILLAWARRA GRASSY WOODLAND MAP (GHD 2023)

4.1.1 Impact Assessment

Several versions of the subject subdivision layout have been developed and then amended in response to detailed understanding of the site's biodiversity values and with particular focus on avoiding a SAII on Illawarra Lowlands Grassy Woodland.

As detailed in Figure 4.3 below, the reduced impact subdivision layout achieves a substantial reduction in the extent of impact to biodiversity values, especially the Illawarra Lowlands Grassy Woodland EEC at the study area and the risk of an SAII. The reduced impact subdivision layout represents additional avoidance of impacts in the readily developable land at the study than that presented in the 2021 DA, which had avoided impacts considered in the previous planning proposals. The following avoidance measures within the readily developable area has been incorporated into the amended subdivision layout:

- Reducing the number of residential lots from 100 to 65 including reducing the extent of native vegetation removal from 25.71 ha to around 17.95 ha with the additional 57.25 ha of land to be added to the conservation lot.
- Adjusting the subdivision layout to avoid impacts to Illawarra Lowlands Grassy Woodland. The area of
 removal of the community (1.38 ha) is now less than the area that would be regenerated (1.64 ha of nonnative vegetation and clearings within the overall patch of the community and a further 0.5 ha of poor
 condition PCT 1326).
- The extent of cut and fill has been minimised as far as possible within stormwater management and constructability constraints. Building envelopes have been defined within each residential lot to support the conservation of hollow-bearing trees within the development footprint. The hollow bearing trees mapped for retention would be conserved through a Section 88B restriction on title. It is likely that some additional canopy trees space, native groundcover vegetation and soil profiles would be retained in the areas shown outside infrastructure envelopes and cut and fill areas on Figure 8.3 of the BDAR, included in Appendix K.



Feature	2021 DA development footprint	2021 DA conservation lot	Reduced impact development footprint	Reduced impact conservation lot
Number of lots	100 residential	1 community title / conservation	65	1 community title / conservation
Total area (ha)	28.44	48.34	19.58	57.25
Total area of native vegetation (ha)	25.68	47.14	17.95	54.89
Total area of the Illawarra Lowlands Grassy Woodland EEC (ha)	9.32	3.59	1.38	11.53
Percentage of the local occurrence of Illawarra Lowlands Grassy Woodland EEC at the study area	72.18%	27.82%	10.71%	89.29%
Non-native and cleared land (ha)	2.76	1.20	1.64	2.36

FIGURE 4-3 - COMPARISON OF SUBDIVISION LAYOUT IMPACTS (GHD 2023)

4.2 Rural Fire Services Approval

A Bushfire Impact Assessment (BIA) report has been prepared by Blackash Bushfire Consulting, included in Appendix L to support the proposed large-lot residential subdivision. The subject site has been identified as bushfire prone land vegetated with a mixture of Forest and Tall Health vegetation. The BIA assessed the proposed subdivision layout against the RFS Planning for Bushfire Protection (PBP) 2019 and determining the bushfire threat and identifying the size of required Asset Protection Zones (APZ). The site and adjoining areas are mapped as BPL, being a mixture of Category 1 Forest Vegetation, and Category 1 Tall Heath Vegetation, and Vegetation Buffer.

A conservative approach has been taken with respect to vegetation mapped as Heath within the central riparian zone and wider APZ have been used to provide a consistent approach meeting the standard for Forest along that interface. The proposal is for Community Title subdivision and the APZ and fire trail will be managed under a Bushfire Management Plan that will form part of the Community Association documentation, and works will be maintained by a single entity.

The proposed development includes the construction maintenance of a Category 1 standard Fire Trail within an overall 12 metre wide APZ extending from opposite Lot 89 to the Crown Reserve at Inyadda Beach. Combined with the southern part of the development, this will significantly improve bushfire protection to approximately 55 existing lots that would otherwise have no permanent bushfire protection in place across this 900-metre-long interface. This will improve firefighter safety and effectiveness during bushfire incidents and will facilitate Hazard Reduction burning into the future. Refer to Figure 4.4 below for the proposed Asset Protection Zone mapping.

All proposed lots have practical building envelopes to meet BAL-29 standards from the time of subdivision approval, with APZ encroachment into individual lots limited to the front setback area. The inclusion of a 24m wide APZ on the adjacent Lot 1 DP1161638 to benefit proposed Lot 42 has been previously negotiated with the owner under the previous development application, and a letter of support stating that a suitable easement will be created is submitted as part of this development application.



It should be noted that 16m wide perimeter roads have been implemented throughout the subdivision layout, with two connections off Inyadda Drive. The southern portion of the development has two access points, one off Inyadda Drive and one off Curvers Drive for emergency vehicles access only.



FIGURE 4-4 - ASSET PROTECTION ZONES MAP (BLACKASH 2023)

Overall, Blackash has determined that the proposed development can comply with Planning for Bush Fire Protection 2019 will be referred to RFS for integrated approval. Refer to the Bushfire Impact Assessment report attached in Appendix L of this report.

4.3 Natural Resources Access Regulator (NRAR)

The proposed development will be referred to NRAR in order to assess the impacts of the proposed development upon the existing watercourses throughout the site. A suitable riparian zone buffer has been achieved which is in accordance with the *Guidelines for riparian corridors on waterfront land* The Stormwater Management Plan has addressed the *Water Management Act 2000* requirements. Refer to the Stormwater Management Plan included in Appendix D for further information.

Additionally, a Coastal Engineering Report has been prepared by Horton Coastal Engineering which detailed the impact of the proposed subdivision on the Intermittently Closed and Open Lake and Lagoon (ICOLL). This report concluded that the proposed development "would not be expected to significantly affect freshwater inflows reaching the entrance, and thus would not significantly affect how often breakouts occur and their duration. The opening and closing regime of the ICOLL would thus not be expected to change as a result of the proposed development. The creek would be expected to continue to have an entrance that is closed almost all of the time, and even more so than at present if sea level rise causes the entrance berm to increase in level".

4.4 Aboriginal Heritage Impact Permit (AHIP)

An Aboriginal Cultural Heritage Report (ACHAR) has been prepared by Apex Archaeology for the subject site. This report details the results of the archaeological assessment which was completed in accordance with the Code of Practice and the consultation undertaken with the Aboriginal community in accordance with the ACHCRs. The



archaeological study has investigated for aboriginal relics or items of significance within the development footprint area.

This study revealed that there are six previously registered Aboriginal (AHIMS) sites within the study are and a number of artefact concentrations were identified on the ground surface, which were mainly formed from silcrete and considered to likely been sourced form locally available raw material. Four of the six Aboriginal sites would not be impacted by the proposed subdivision works. Apex has detailed a number of management options for the site and suggests a two staged surface collection along with avoidance of four of the six sites within the study area.

Further, Apex Archaeology has determined that Aboriginal cultural material is present within the study area in a highly disturbed context. The development area was not assessed as possessing intact areas with potential for Aboriginal cultural material or deposits to be present. The proposed development does not avoid all the Aboriginal cultural material within the site, which as a result requires an application for an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the *National Parks and Wildlife Act 1974* is required to permit harm to these items, namely sites 58-2-0337 and 58-2-0341. Refer to the ACHAR attached in Appendix I of this report for further information.

It is noted that the site is considerably disturbed through public access to the area since at least the 1970s. The area has been used for motorbike and 4WD use, with multiple tracks and trails created throughout the area. Substantial illegal dumping of rubbish, building waste (bricks, bottles, garden waste, tiles, asbestos etc), excavation of soil and dumping of soils has occurred throughout much of the western portion of the study area, along with dumping of wrecked car bodies in numerous locations throughout the entirety of the study area. These actions have disturbed the ground surface significantly within the area considered to be PAD.



5 PLANNING ASSESSMENT

This section considers the planning issues relevant to the proposed development and provides an assessment of the relevant matters prescribed in Section 4.15 (1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

5.1 Environmental Planning Instruments

This section addresses the proposed development's consistency and compliance with the relevant Environmental Planning Instruments in the following sections below.

TABLE 5-1 -	SUMMARY OF ST	TATE ENVIRONMENTAL	PLANNING POLICIES

Plan	Comments	
SEPP (Resilience and Hazards) 2021 – Chapter 4 Remediation of Land	A contamination assessment report has been prepared by Terra Insight for the proposed development. This report concluded that the risk of contamination on the subject site impacting the proposed development of the site is low except the areas subject to historical illegal waste disposal which will require localised remediation. The PSI identified localised lead contamination at sample locations BH18 and D12 respectively which will require off-site disposal by a licensed asbestos contractor. The PSI concluded that the level of contaminants identified in these two areas does not warrant a formalised Remediation Action Plan (RAP) for the site and therefore, the site is deemed suitable for the proposed residential development. The PSI details recommendations such as removal of asbestos dumped material should from the site by a licenced professional, implementation of an unexpected finds protocol and the implementation of a Construction Management Plan. Therefore, this addresses Clause 4.6 of the SEPP (R&H) 2021.	
	It is noted that the study did not identify contaminants within the areas proposed for development that would preclude the residential development of the site at a level which requires further management in accordance with the Contaminated Lands Act. It is recommended that further assessment and remediation of the site is pursued as part of the construction. Refer to the PSI in Appendix G for further information.	
SEPP (Transport and Infrastructure) 2021	The development does not involve the creation of more than 50 lots on a site with access to a classified road or 200 lots on a site with access to any other road. Therefore, the development is not traffic generating development in accordance with SEPP (Infrastructure) and does not require referral to TfNSW.	
SEPP (Planning Systems) 2021	The development is not a class of development described in Schedule 4A of the EP&A Act, being a development that has a capital investment value of more than \$30 million The estimated cost of this development is approximately \$16,636,785 and is therefore classified as local development.	



SEPP (Resilience and Coastal Management

The subject site is identified under the SEPP (Resilience and Hazards) 2021 - Chapter 2 Hazards) 2021 - Chapter 2 Coastal Management as being mapped as partial 'Coastal Environment Area' and partially 'Coastal Use Area'.



The area identified as Coastal Environment Area is to be retained as an environmental management lot and no physical works are proposed within the lot other than an Asset Protection Zone (APZ).

The area identified as 'Coastal Use Area' map is consistent with the controls which details that consent must not be granted to development on land that has considered whether the development is likely to cause an adverse impact on the access along the foreshore or beach, overshadowing and the loss of views from public places, visual amenity and scenic qualities of the coast as well as Aboriginal cultural heritage.

The proposed residential development footprint does not encroach into the Coastal Environmental Area or Coastal Use Area. The proposed Lot 1 as an environmental conservation lot is consistent with the objectives of the SEPP. Elements such as APZ and fire trails are proposed within these areas, however, are consistent with Clause 2.10 and 2.11 of the SEPP.



5.2 Shoalhaven Local Environmental Plan (LEP) 2014

The proposed development is has been assessed under the Shoalhaven Local Environmental Plan (LEP) 2014. Table 5-2 below assesses the proposed development against the applicable controls within the Shoalhaven LEP.

Clause	Provision/Standard	Comment	
		Shoalhaven City Council is the relevant consent authority for this development application.	
Clause 2.2 - Zoning of land to which Plan applies	The subject site is R1 General Residential, R5 Large-Lot Residential, C3 Environmental Management and RE1 Public Recreation.	The proposed residential development is permissible with consent in the applicable zones.	
Clause 2.3 - Zone objectives and Land Use Table	The objectives of the R1 General Residential Zone is to: provide for the housing needs of the community and to enable other land uses that provide facilities or services to meet the day to day needs to the residents. The objectives of the R5 Large Lot Residential Zone are to: provide residential housing in a rural setting while preserving, and minimising impacts on environmentally sensitive locations and scenic qualities as well as to minimise conflict between land uses within this zone and land uses within adjoining zones. The objectives of the C3 Environmental Management zone are to: protect, manage and restore areas with special ecological, scientific, cultural, or aesthetic values.	The proposed development has adopted the character of the R5 Large Lot Residential zone over the proposed residential development areas. This has been done as the R1 General Residential zoning area on the subject site was limiting the development footprint due to the irregular shape of the zone boundary. It needs to be recognised that the development footprint is within the R1 and R5 zones. The R1 – General Residential Zone has a minimum lot size of 500m2, and the proposed development principles has not utilized the R1 minimum lot size potential of the land and has applied the R5 – Large Lot Residential minimum lot size of 2000m2 across the residential subdivision. This design principle has been driven by reducing the development footprint and development yield to provide a greater environmentally sensitive outcome for the development of the property. The proposed development is consistent with the zone objectives of the R1, R5 and C3 zones. The proposed subdivision of larger lots provides the opportunity for housing needs to be met that is not found elsewhere within the Manyana community. The proposed development is not contrary to the objectives of the R1 zone. The proposed development provides housing needs for the Manyana community that are consistent with the larger lot sizes of the surrounding area. The proposed development has minimised the development footprint in order to preserve the environmentally sensitive land. The proposed large lots are consistent with the lot sizes in the surrounding community. The proposed development of	

TABLE 5-2 - ASSESSMENT UNDER SHOALHAVEN LOCAL ENVIRONMENTAL PLAN (LEP) 2014



		the R5 land does not cause conflict with the adjoining land uses. The creation of the community title association will ensure that the adjoining C3 Environmental Management zone is managed in perpetuity for biodiversity conservation. The C3 Environmental Management zoning is contained within the proposed biodiversity protection Lot 1. The associated bio-retention basins located partially within the C3 zone are reduced in size from the original layout and is for the purposes of environmental protection works. The basin provides erosion protection works as defined within the SLEP 2014 as 'environmental protection works'. The development proposed within the C3 lot is limited to the fire trail for PBP purposes and containing APZ's and the bio-retention basin located off the southern precinct. This basin has been significantly reduced in size and is necessary to ensure that no adverse impacts occur on the remainder of the proposed biodiversity conservation lot from the proposed residential subdivision. Therefore, the proposed development does not have an adverse impact on the ecological, scientific, cultural or aesthetic values of the C3 zone. The proposed development does not impact on the coastal landforms and is proposing to retain the C3 Environmental Land as biodiversity conservation. Additionally, the proposed development is not negatively impacting on the water quality and ecological values of stuaries and coastal streams. The bioretention basins are proposed to treat the development run-off to ensure that the post-development flows match closely to the pre-development flows and no additional impacts are caused to the existing waterway
Clause 2.6 – Subdivision – Consent requirements	Land to which this plan applies may be subdivided, but only with development consent.	The proposed residential subdivision is permissible with consent. This DA will be seeking consent from Shoalhaven City Council.
Clause 4.1 - Minimum subdivision lot size	The objectives of this clause are to ensure that subdivision is compatible with, and reinforces the predominant or historic subdivision pattern and character of an area, to minimise any likely impact of subdivision and development on the amenity of neighbouring properties,	The minimum lot size applied to the residential development is 2000m ² , which is consistent with the minimum lot size for the R5 Large Lot Residential Land. The minimum lot size identified for the R1 General Residential land is 500m ² . This minimum lot size is not used due to the shape and size of the zone boundary not being conducive of a suitable development footprint. It should be noted that the development potential of the subject site utilising the minimum lot size of R1 and R5 is approximately 299 lots. The utilisation of this development potential is seen as inappropriate for the subject site, considering the environmental sensitivity of the site. Therefore, the proposed development yield of 65



		residential lots is viewed as being a conservative option that minimises the environmental impact. The minimum lot size identified for the C3 Environmental Management Lot is 40ha. The proposed community title Lot No.1 for environmental & biodiversity conservation contains both C3 and R5 zoned land is 57 ha in total. Therefore, the proposed development complies with the minimum Lot size of 40ha.	
Clause 4.1AA – Minimum subdivision lot size for community title schemes	The size of any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum size shown on the Lot Size Map in relation to that land.	The proposed development is consistent with the minimum lot sizes identified for the subject site and the community title scheme is applicable to the community lot.	
Clause 4.2G – Boundary adjustment of land in certain rural and environmental protection zones	The objective of this clause is to facilitate boundary adjustments between lots where one or more resultant lots do not meet the minimum lot size shown on the Lot Size Map in relation to that land, but the objectives of the relevant zone can be achieved.	This clause applied to land in the C3 Environmental Management zone. It is noted that Lot No. 53 and Lot 54 contains land that is zoned both C3 and R1. The proposed residential development is to occur only within the portion of the lots zoned R1 General Residential. It is requested that Council consider this as a minor encroachment and a logical adjustment to the zone boundaries.	
Clause 4.3 – Height of Buildings	The objectives of this clause is to ensure buildings are compatible with the height, bulk and scale of the existing and desired future character of a locality.	The maximum height of buildings specified for the land zoned R5 Large Lot Residential is 8.5m. No physical buildings are proposed within this development application; however, it is envisaged that the future character of the development is consistent with the surrounding low-density residential character of Manyana.	
Clause 5.1 – Relevant acquisition authority	The objective of this clause is to identify, for the purposes of section 3.15 of the Act, the authority of the	The relevant acquisition authority for RE1 Public Recreation is Shoalhaven Council.	



	State that will be the relevant authority to acquire land reserved for certain public purposes if the land is required to be acquired under Division 3 of Part 2 of the Land Acquisition (Just Terms Compensation) Act 1991 (the owner-initiated) acquisition provisions).	Lot 68 (RE1 Public Recreation Zoned land) is to be acquired by Shoalhaven Council, as detailed in the extract below.	
Clause 5.10 – Heritage Conservation	The objective of this clause is to conserve the environmental heritage of Shoalhaven, to conserve archaeological sites, to conserve Aboriginal objects and Aboriginal places of heritage significance.	As detailed in Section 4.4 above, Apex Archaeology has completed an Aboriginal Cultural Heritage Report for the subject site, which revealed that there are six previously registered Aboriginal sites within the study area, although the proposed development area will not impact on 4 of the 6 sites. As a result, it is determined that the proposed subdivision works will require the issue of an AHIP. Refer to the AHIP	
Clause 5.21 – Flood Planning	The objectives of this clause are to minimise the flood risk to life and property associate with the use of land and to allow development on land that is compatible with flood function and behaviour on the land, taking into account projected changes as a result of climate change and to enable the safe occupation and efficient evacuation of people in an event of a flood.	A Flood Assessment has been completed by Egis Consulting. This assessment revealed that the site remains mostly outside the existing 100-year ARI flood, and the development directs the flows away from the site along the northern side. The proposed development has been determined to not be aggravating flood levels surrounding the site and will not experience any significant impacts from the afflux generated in the development condition. The proposed development includes upgrades to the existing culvert under the northern end of Inyadda Drive, to provide flood free access above the 1% AEP to the public benefit to the existing and proposed residents of Manyana. Although the proposed development is downstream of the subject flooding, the developer is proposing to upgrade the culvert to Inyadda Drive to remove the flooding and provide flood free access to Manyana residents. Refer to the Stormwater Management Plan included in Appendix D of this report for further information. Detailed assessment of Cl.5.21 as follows: (a) to minimise the flood risk to life and property associated with the use of land, Response: Refer to the Stormwater Report prepared by Egis. The proposed development does not cause any adverse flood impacts on adjoining properties.	



(b) to allow development on land that is compatible with
the flood function and behaviour on the land, taking into account projected changes as a result of climate change,
Response: Complies. Refer to the Stormwater Report for detail on flood function and climate change of the proposed development.
(c) to avoid adverse or cumulative impacts on flood behaviour and the environment,
Response: Complies. The proposed development does hot have an adverse impact on the flood behaviour and the environment. Refer to the Stormwater Report for additional information.
(d) to enable the safe occupation and efficient evacuation of people in the event of a flood.
Response: Complies The proposed upgrade to the culvert on the northern end of Inyadda Drive will ensure that the proposed and existing community of Manyana will have flood free access and evacuation in the event of a flood.
(2) Development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the development—
(a) is compatible with the flood function and behaviour on the land, and
Response: The flood mapping presented in the Stormwater Management Report demonstrates that the proposed development is above the relevant flood levels and ensures no aggravating of the flood behaviour outside of the site. The mainstream flooding has been limited to the waterways.
(b) will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and
Response: The flood mapping presented in the Stormwater Management Report demonstrates that the proposed development ensures no aggravating of the flood behaviour outside of the site. The proposed development does not have any adverse flooding effects on other developments or properties.
(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and
Response: The proposed developments does not have any adverse impacts on any evacuation routes. The current







		Response : The proposed development ensure the lots are flood free for all storm events up to and including the PMF event.
Clause 6.2 – Public Utility Infrastructure	Development consent must not be granted for development on land in an urban release area unless the Council is satisfied that any public utility infrastructure that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when it is required.	Services will be made available for the proposed development. An Infrastructure servicing report has been prepared by Egis which details the water and wastewater strategies for the subject site. The preferred water supply strategy is to connect to the existing DN200 watermain located on Inyadda Drive, which may require minor upsizing but will be confirmed during detailed design with Shoalhaven Water. The wastewater strategy is proposed to be a pressure sewer system which would include on-property pressure units for each residential property. Consultation and discussions with Shoalhaven Water will be commenced prior to detailed design. Refer to Appendix O for further detail on the Infrastructure Servicing Report.
Clause 7.1 – Acid Sulfate Soils	The objective of this clause is to ensure that development does not disturb, expose or drain acid sulfate soils and cause environmental damage.	The subject site is identified as Class 5 Acid Sulfate Soils which requires any works within 500m of adjacent Class 1,2, 3 or 4 land that is below metres Australian Height Datum and by which the water table is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land. A Geotechnical Report has been prepared by Terra Insight which revealed that the acidic soils are endemic to the area and is unlikely to be exposed to oxidising chemical agents as part of the residential development of site, the soil can be re-used on site without treatment. These naturally occurring acidic soils, such as the residual soils which underlie the site, are not considered an environmental hazard as they form part of an acidophilic ecosystem whose health depends on maintaining an acidic environment. Therefore, should not be treated as Acid Sulfate Soils as treatment may result in the liming of naturally acidic ecosystems, leading to an unnaturally alkaline environment, resulting in sever ecological damage to the acidophilic organisms that rely on the acidic nature of the ecosystem. Terra Insight recommends that a formal management plan for the site is therefore deemed not required. Refer to the Geotechnical Report attached in Appendix E of this report for further information.
Clause 7.2 – Earthworks	The objectives of this clause are to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions	Complies. The proposed earthworks will not have a detrimental impact on the environmental functions of the land. The BDAR has assessed the proposed development against the environmental functions of the land and the ACHAR has assessed the proposed earthworks against the heritage values of the land.

	and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.	The proposed earthworks have been designed to minimise the impact on the current environmental functions and neighbouring uses. The building pads have been designed to utilise batters rather than implement the use of retaining walls, keeping the ground as natural as possible. Proposed sandstone retaining walls along the northern boundary reach a maximum height in the order of 3-4m to achieve an appropriate height in the road sag to discharge the site stormwater to the required basin level. The basin level set allows us to drain and discharge the bio-retention filter to existing levels without requiring a tail out drain through the vegetated area to the east. The road sag level has been set to allow appropriate cover over a stormwater pipe sized to take the sites flows while still discharging above the basin filter level. The road has been graded at council minimum 1% from this sag level to minimise the height of the retaining wall. The retaining wall proposed for Road No.6 is maximum 2m height. The detailed design of the retaining walls will be provided at Subdivision Works Certificate stage. The cut and fill volumes are 20,130m3 of cut, 135,965m3 of fill, with a balance of 115,835m3 of imported fill required, which is demonstrated within the Engineering Plans attached in Appendix C.
Clause 7.5 – Terrestrial Biodiversity	The objective of this clause is to maintain terrestrial biodiversity by protecting the native fauna and flora, protecting the ecological processes necessary for their continued existence and encouraging the conservation and recovery of native fauna and flora and their habitats.	The subject site is located within 40m of a bank of a natural waterbody and is identified as Biodiversity – significant vegetation and Biodiversity - habitat corridor on the Terrestrial biodiversity Map. Section 4(a) specifies that development must not be granted unless the consent authority is satisfied that: (a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or (b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or (c) if that impact cannot be minimised—the development will be managed to mitigate that impact. GHD have conducted an ecological assessment within a Biodiversity Development Assessment Report (BDAR) under the <i>Biodiversity Conservation Act 2016.</i> on the subject site which has revealed that the proposed development does not have an adverse impact on terrestrial biodiversity. The subdivision layout has been amended to reduce impact on native vegetation as well as retain hollow-bearing trees where possible. Several



		mitigation measures have been proposed to ensure that the potential impacts of removal of native vegetation is managed correctly. Refer to the BDAR report attached in Appendix K for further detail. Overall, the proposed development complies with this clause and adequately balances the removal of vegetation for the development footprint with an environmental conservation lot to be managed by the future community.
Clause 7.6 – Riparian land and watercourses	The objective of this clause is to protect and maintain water quality within watercourses, the stability of the bed and banks of watercourses, aquatic and riparian habitats, ecological processes within watercourses and riparian areas.	The subject site is not identified in the Riparian Lands and Watercourses Map, although the site does have a creek which traverses the western portion of the site. Refer to the Stormwater Report provided in Appendix D for further information. Further, a Coastal Engineering report has been prepared which determines that the proposed development does not impact the opening and closing of the Intermittent Closed and Open Lake Lagoon (ICOLL).



5.3 Shoalhaven Development Control Plan 2014

5.3.1 Shoalhaven Development Control Plan (DCP) Section 12 Chapter G11 TABLE 5-3 - ASSESSMENT UNDER SHOALHAVEN DEVELOPMENT CONTROL PLAN (DCP) 2014

Performance Criteria	Acceptable Solution	Comment	
5.1 Residential Neighbourhood Design			
P1. To ensure the subdivision layout responds to site characteristics, setting, landmarks and views through street and open space areas.	A1.1 No recommended acceptable solution. Each situation requires an individual approach.	Complies. The proposed subdivision layout has considered the site characteristics, setting and landmarks. The proposed community Lot No.1 responds to the ecological sensitivity of the site and siting of the development footprint was determined in collaboration with the ecologists.	
P2. To reinforce neighbourhood identity and focus on community facilities within convenient walking distances for residents.	A2.1 No recommended acceptable solution. Each situation requires an individual approach.	Complies. Pedestrian footpaths have been provided around the proposed development, in addition to the fire trail with pedestrian connectivity that connects the northern and southern precincts together as well as a link to Inyadda Beach. Refer to the Subdivision Plans in Appendix B for additional information.	
P3. To provide a high level of internal access and external connections for local vehicular traffic, pedestrian and cycle movement, whilst deterring through traffic and creating safe road conditions for all users.	A3.1 No recommended acceptable solution. Each situation requires an individual approach.	Complies. The internal access roads have been designed in accordance with Australian Standards as well as Council's DCP. A traffic impact assessment has been conducted for the proposed development which determined that the development and road design is safe for vehicles & pedestrians.	
P4. To design street layouts and lot density to minimise fuel consumption, reduce travel distances, maximise public transport effectiveness and encourage walking and cycling.	A4.1 No recommended acceptable solution. Each situation requires an individual approach.	Complies. The proposed road design has been devised to minimise potential travel distances and encourage walking and cycling. The perimeter road is compliant with RFS PBP requirements and does not include any cul-de-sacs or no through roads.	
P5. To ensure street and lot layout enable efficient provision of physical services.	A5.1 No recommended acceptable solution. Each	Complies.	


	situation requires an individual approach.	
P6. To provide a range of lot sizes to permit a variety of housing types and compatible land uses that are consistent with Council's Housing Strategy.	A6.1 No recommended acceptable solution. Each situation requires an individual approach.	Complies. The proposed development is providing lot sizes that range from 2000m ² to 3129m ³ . This lot size is consistent with the lot sizes within Shoalhaven and the immediate Manyana/Bendalong community.
P8. To distribute and locate public open space appropriately that contributes to a range of uses, stormwater management, environmental care and low maintenance costs.	A8.1 No recommended acceptable solution. Each situation requires an individual approach.	Complies.
P9. To ensure lot layout retains significant vegetation and natural areas, incorporates cultural and natural features, minimises soil erosion and avoids flood prone land.	A9.1 No recommended acceptable solution. Each situation requires an individual approach.	Complies. The proposed lot layout has been devised to provide public open space that has been designed to be located on the 'Goodsell' Grave Site, being an important European heritage item. This is discussed further in Appendix J of this report. Additionally, The proposed development includes the protection of biodiversity through Community Lot No.1, which the community association will protect and manage the sensitive biodiversity land in perpetuity.
P10. To ensure integration of lot layout with the surrounding urban environment that complements existing desirable streetscapes and landscapes and promotes shared use of public facilities by adjoining communities.	A10.1 No recommended acceptable solution. Each situation requires an individual approach.	The proposed subdivision is compatible with the existing community of Manyana. The subdivision includes the provision of community facilities such as public open space that incorporates the local heritage grave site as well as public access to Inyadda beach through the provision of a fire trail. Additionally, a pedestrian accessway linking the northern and southern precincts promotes the shared use of public roads and beach access from adjoining communities.



5.3 :Local Street Networks		
P18. The street network has clear function, and each street conforms to its function in the network.	A18.1 Streets link with other streets that are no more two levels higher or lower in the hierarchy.	Complies. The proposed street network does not have street links that are more than two levels higher/lower in hierarchy.
P19. There are clear physical distinctions between each type of street. Distinctions are based on function, legibility, convenience, traffic volumes, vehicle speeds, public safety and amenity.	A19.1 The street network reflects the characteristics specified in Table 1.	Complies. The proposed road widths are 16m along the creek, 18m internal roads and half-width construction for Inyadda Drive. These widths generally comply with Table 1 in the DCP.
P20. Design features of each type of residential street encourage driver behaviour appropriate to the primary function of the street.	A 20.1 The street network reflects the characteristics specified in Table 1. Table 1 specifies that Local Street/Collector Street are required to have a carriageway width of 7-9m. Table 2 specifies that street reserve width for Local Streets is to be 18m wide with a 4.5m verge width. The street reserve width for Access Streets is to be 16m wide with a 4m verge width.	The street network is complaint with the characteristics for local streets specified in Table 1 of the DCP. It should be noted that a variation to the road widths being reduced to 16m is sought to the roads that adjoin open space, as these roads have removed the footpath on the outside of the perimeter road. This variation is minor in nature and is still consistent with the overall street network. The characteristics of the proposed road that of an access street, with low vehicle movements. The proposed roads are consistent with the requirements of an access street, being a road reserve width of 16m and a 4m wide verge.
P21. Junctions along residential streets are spaced to create safe and convenient vehicle movements.	A21.1 Intersections are spaced as set out in Table 2 of this section. Provide wheelchair/pram ramps at intersections and crossing points where footpaths are constructed or likely to be constructed in accordance with Council's Pedestrian Access and Mobility Plan.	Complies. The proposed intersections are spaced out in accordance with Table 2, which details preferred configuration of location of intersections. Wheelchair and pram ramps are provided where necessary and detailed within the Engineering Plans included in Appendix C of this report.
P22. Movement of residents between their homes and higher order roads is convenient.	A22.1 Driving distance from any dwelling to the nearest collector or higher order road is no more than 700m.	Complies. The maximum driving distance between the proposed development and Inyadda Drive is 650m. Complies. No more than three turning movements at intersections



	A22.2 No more than three turning movements at intersections are required in order to travel from any home to the most convenient collector street or higher order road.	are required in order to travel from the proposed development to Inyadda Drive.
P25. The street network facilitates walking and cycling within the neighbourhood and to local activity centres.	A25.1 Provide a safe, convenient and identifiable network for pedestrians and cyclists, as set out in Section 5.4 – Pedestrian and Cycle Facilities.	Complies. The proposed development can deliver a safe and convenient road network for pedestrians and cyclists, in addition to connecting to the wider cycle network that stretches from Inyadda Beach to Bendalong. Refer to the Traffic Impact Assessment Report in Appendix M for further information.
P26. The topography and vegetation of the site are considered in the street network. Advantages of existing or potential site assets and view opportunities are considered/incorporated in the street network.	A26.1 Provide for the establishment of streetscapes that incorporate the provisions of Section 5.12 – Residential Streetscapes.	Complies. The streetscapes have been embellished with street trees and other required services. Refer to the Public Domain/ Landscape Plan in the Engineering Plans for further detail for street trees as per Council's Specifications.
P27. Street network considers the existing and future desired streetscape.	A27.1 Provide for the establishment of streetscapes that incorporate the provisions of Section 5.12 – Residential Streetscapes.	Complies. The streetscapes have been embellished with street trees and other required services. Refer to the Public Domain/ Landscape Plan in the Engineering Plans for further detail.
P28. Orientate the street network to promote efficient solar access for dwellings.	A28.1 Align streets in either east-west or north-south direction wherever possible.	Complies. The streets have ben aligned in a north-south direction with connecting roads running east- west. This enhances the solar access for proposed lots. Refer to the Subdivision Plans in Appendix B for additional detail.
P29. Incorporate/accommodate natural drainage and open space systems into the street network.	-	Complies. A Stormwater Management Plan has been prepared for the subject development application which details the drainage strategy. Water Quality for the roads are provided in two bioretention basins and swales within the road reserve. Refer to the Stormwater



		Management Plan in Appendix D for further information.
P30. Traffic generated by the development is within the acceptable capacity of the roads.	-	Complies. The proposed development has been assessed by PDC within a Traffic Impact Assessment which concluded that the traffic generated by the development is minimal and poses no adverse impact on the current capacity of roads and road network. Refer to the Traffic Report in Appendix M for further information.
 P31. Restraint measures for traffic speed and/or volume must consider other street users and residents of adjoining dwelling by avoiding: stop start conditions; increased traffic emissions; unacceptable traffic noise; devices that reduce convenience or safety for cyclists and public transport. 	-	Complies. Refer to the Traffic Impact Assessment Report in Appendix M for further information.
P32. Street/carriageway widths and lengths optimise the cost effectiveness of the street network.	-	Complies. The proposed street network has been designed to be cost effective whilst adhering to the RFS PBP requirements for road widths and Asset Protection Zones for Bushfire purposes.
P33. The street network provides for the cost-effective provision of public utilities.		Complies. Refer to the Infrastructure Servicing Report in Appendix O for further information.
5.4 Pedestrian and Cyclist Facilities		
P34. All new residential areas are to provide a network of pedestrian and cycle routes that connect to adjoining streets, open spaces and activity centres.	-	Complies.
 P35. The network of footpaths and cycle routes optimise: walking and cycling; anticipation of likely users, e.g. school children, parents with prams, the aged and disabled, 	-	Complies. The proposed footpaths encourage walking and cycling and link to open space networks such as Inyadda Beach and the beachside cycling/walking track.



 commuter and recreational cyclists; links to open space networks and community facilities such as schools, public transport and local activity centres; consideration of the site topography; and cyclist and pedestrian safety. 		
 P36. Location of footpaths and cycleways are determined via the consideration of: Low vehicle speeds and volume. The comfort and safety of pedestrians is not adversely affected by cyclists. The protection of pedestrians and cyclists from parked vehicles and vehicles moving on the street and driveways. That postal deliveries must not inconvenienced. The location of physical services. Cross falls. Landscaping. The presence of development fronting the street. The safety of pedestrians and cyclists. 		Complies. Footpaths have been provided where convenient and taken into consideration comfort and safety of pedestrians and location of physical services.
P37. Alignment of paths allows safe, interesting and convenient use by pedestrians.	-	Complies.
P38. Footpaths or shared paths are designed and constructed of appropriate width, longitudinal gradient and sight distances to cater for the number of projected pedestrians and cyclists and user types (e.g. the aged, the	-	Complies. The proposed footpaths are 1.2m wide 0.6m off the boundary and 4m wide verges for all roads. The proposed footpaths and have been designed to cater for a number of projected pedestrians.



very young, people with prams and people with a disability)		
P41. Adequate provision is made for safe street crossings for all street users with safe sight distances and adequate pavement markings, warning signs and safety rails (where appropriate for cyclists).	-	Complies. Refer to the Engineering Plans in Appendix C for further detail.
P42. Easily maintained pedestrian and cyclist paths are built with stable surfaces suited to the projected use.	-	Complies.
5.7 Street Design	, 	,
P52. Design features convey the primary function of each residential street type.	A51.1 The minimum specifications for each street type complies with Austroads.	Complies. The minimum, specifications for the proposed roads complies with Austroads standards.
P53. Verge width addresses special site conditions and future requirements.	A52.1 Verge width is sufficiently increased to accommodate larger scale landscaping, indented parking, future carriageway widening, retaining walls, cycle paths and overland flow paths	The verge width is 4m on all roads which provides adequate area for landscaping, swales and required services.
P54. Design facilitates use by pedestrians, particularly people with disabilities, the aged, cyclists and children.	 A54.1 Slow points using horizontal deflection slow traffic to design speed. A55.2 Slow points and carriageway narrowing accommodate the needs of cyclists by ensuring speed compatibility and adequate space for concurrent passage or off-street diversions. A55.3 Landscape design and on-street parking complement speed restriction measures. 	Complies. Complies.
P57 Carriageway and verge width allows for unobstructed access to individual lots, even when a car is parked on the opposite side of the street.	Lot design enables driveways on major collector streets and streets carrying more than 3000vpd to be designed and built to promote forward movement of vehicles across the verge.	Complies. All proposed lots have access off proposed internal roads which do not exceed 3000vpd. All lots have adequate frontage to accommodate access in a forward direction, single movement.



	A57.2 Vehicles can enter or reverse from a lot in a single movement.	
 P67 Design and provide utility services that: are cost effective over their life cycle; and Minimise short and long term adverse environmental and visual impacts. 	 A66.1 Design and provision of utility services, including broadband, conforms to the requirements of the relevant service authorities. A67.2 Compatible services are located in common trenching. A67.3 Subdivisions are located where there is adequate water for domestic and fire-fighting purposes. A67.4 Subdivision is staged to ensure that each stage is fully serviced before a new area is released. A67.5 Water supply and sewerage networks are accessible, easy to maintain and cost effective based on life cycle costs. A67.6 Adequate buffers between utilities and houses are provided, to protect residential amenity and health provide. A67.7 Underground electricity supply is provided to residential areas, except where major technical difficulties are encountered, such as the presence of significant rock. A67.8 Provision of reticulated gas is subject to requirements of the service, including NBN, is to be installed where underground electricity is to the service provide. 	Complies. Utility services will be designed to meet all servicing requirements. A Water and wastewater servicing report that was prepared for the previous application is provided in Appendix O. This report detailed that the preferred approach for wastewater servicing being a proposed sewer pressure pump in accordance with Council's specifications. Water supply to the site has sufficient capacity to service the proposed development.
P68 Services are to be available and accessible	is to be provided A67.1 Where required, the subdivider is to provide, at no cost to Council:	Complies. A sewer pressure pump has been proposed for the subject site. Refer to the Water and



	 Suitable easements for water and sewer rising main; An agreed area of land for pumping stations; Easements or land for access to pumping stations; 	Wastewater Servicing Report in Appendix O.
5.10 Stormwater Drainage	, 	
P73 Design systems with the capacity to control stormwater flows under normal operating conditions for the relevant design storm.	 A72.1 Design and construction of minor storm drainage systems is in accordance with this Section and Engineering Design Specifications Section D5 Stormwater Drainage Design. A73.2 Drainage networks are well defined to ensure there are no hidden flow paths that could reduce their capacity to convey design flows. A73.3 Design of minor systems takes full account of existing downstream systems. 	Complies. The proposed stormwater management and drainage has been designed in accordance with Section D5 of the Shoalhaven DCP. Refer to the Stormwater Management Report in Appendix D for further information.
P74 The system is designed to allow for safe passage of vehicles at reduced speed on streets that are affected by runoff from the relevant design storm.	A73.1 Minor road drainage systems are designed for the 20% AEP event.A74.2 Low flow pipes within public reserves contain 25% of the 10% AEP flow.	Complies. Refer to the Stormwater Management and Flood Assessment Report in Appendix D for further information.
P75 The system is accessible and easily maintained.	 A74.1 Design and construction of minor storm drainage systems is in accordance with this Section and Engineering Design Specifications Section D5 Stormwater Drainage Design. A75.2 Access for maintenance is available where a portion of the minor system lies within a site. A75.3 Selection of materials is based on their suitability, 	Complies. Refer to the Stormwater Management and Flood Assessment Report in Appendix D for further information.



	durability, maintainability and cost effectiveness.	
5.12 Residential Streetscape		
 P78 Street and landscape design: creates attractive residential environments with distinct character and identity; respects existing attractive streetscapes in established areas; complements streetscapes in areas where desired future urban character has been defined; defines, where appropriate, a street theme for new streets and integrates with new developments; is sensitive to site attributes; Complements the functions of the street. 	 77.1 A landscape plan showing the following is submitted: street reserves and indicative locations of the carriageway, parking bays, footpaths, cycleway systems, speed control devices, bus stops, street lighting and substations; location of existing vegetation to be removed and/or conserve; footpath trees with a maximum spacing of 10 metres, minimum distance from intersection 10 metres, provide a six month maintenance period. A78.2 Tree planting that considers the natural landscape, the image and role of the street; solar access requirements, soils, suitability of species; and services is provided. 	Complies. A streetscape plan showing indicative location of street trees have been provided within Landscape Plans included in Appendix F of this report. Complies. Street Tree planting species has been chosen from Council's suggested planting schedule provided during the previous development application RFI stage.
5.13 Residential Allotment Layout		
P80 Lot areas and dimensions take into account the site natural opportunities and constraints.	 A79.1 The subdivision lot design positively responds to: Slope and desirability of minimising earthworks/retaining walls associated with dwelling construction. natural or cultural features; 	All lots are large lots, being above 2,000m ² with min frontages of 27.5m. The large lots are conductive for adequate building footprints and have retained hollow bearing trees where possible. This detail has been provided within the Building Envelope Plan included within the subdivision bundle in Appendix B of this report.



	 soil erosion and bushfire risk; Special features such as trees and views, including identification of mature stands of trees to be retained and supplementary planting. 	
P81 Provide coincidental legal and practical access.	A80.1 Each lot is to have coincidental legal and practical access in a rural and/or residential subdivision.	Complies. Each lot has legal and practical access.
P85. Minimise overshadowing and privacy impacts on adjoining residents.		Complies. The proposed development is not proposing any dwellings in the subject application. The majority of the lots have been oriented in a north-south direction to maximise solar access.
P89 Large lot residential subdivision is to contribute to the variety of lots sizes available for low density development.	A88.1 Minimum dimensions for low density residential lots 2000m2 to 4000m2: Rectangular corner lots • 35m square width; • 55m depth; • 2000m2 area. Rectangular non-corner lots • 30m square width; • 55m depth; • 2000m2 area.	Complies. The minimum subdivision lot size is 2000m2 with a frontage ranging from 31.4m – 66.5m for rectangular non corner lots with depths ranging from 32.5m – 83m. The minimum subdivision size for rectangular corner lots is 2026m ² with frontages ranging from 30.4m to 61.1m and depths ranging from 47.7m- 66.7 Refer to the Subdivision Plans included in Appendix B for further information. A variation from the minimum dimensions for rectangular corner and non-corner lots is requested due to irregular block shape of the subdivision that has resulted from reduction of development over the biodiversity where possible. The proposed subdivision delivers a variety of lot sizes and is conducive for low density residential development that is sympathetic to

5.14 Geotechnical		the existing neighbourhood character of Manyana. All proposed lots have adequate building area behind the building line and can facilitate the future low- density dwellings. The proposed development complies with the objectives of Clause 5.13 of the SDCP – Chapter G11 as it is providing a range and mix of lot sizes to suit a variety of dwellings, provide lots that are oriented north-south to maximise solar access and energy conservation principles, provide lots of sufficient size to protect environmental features and that have been designed to suit the site constraints. Building Envelope Plans are submitted within the Subdivision Plan bundle in Appendix B which demonstrates that adequate buildings can be accommodated on all proposed lots.
P91. Subdivision is prevented in high- risk slip areas	A90.1 Subdivision designs exclude locating lots in areas with slope stability problems; or provide suitable advice from a practising certified geotechnical engineer	Complies. The proposed lots have been designed to accommodate slope and in accordance with geotechnical advice. The site is not identified to have any slope stability problems. Refer to the Geotechnical Report included in Appendix E for further information.
P92 Subdivision is designed to provide for controlled filling and for the free flow of surface water.	 A91.1 Subdivisions are NATA Laboratory tested and subdivision design creates: all lots above flood level; minimum surface grade of 1% falling to the road or drainage system approved fill material placed in 150mm consolidated layers; 	Complies. All proposed lots are above the flood level. Refer to the Flood Report in Appendix D for further information. All proposed roads have a minimum of 1% longitudinal grade with 3% crossfall. All lots have 1% as a minimum longitudinally and crossfall. The approved fill material will be unknown until an updated geotechnical report is received and



	 minimum density 95% Standard Proctor Compaction Test AS1289 Where depth of fill exceeds 300mm, an 88B Restriction is imposed on the requiring foundation design in accordance with AS2870 1986. 	confirmed at the construction certificate stage. The minimum density requirement of 95% is unknown until an amended geotechnical report is completed and will be confirmed at construction certificate stage. The depth of fill requirements will be confirmed and completed at the Subdivision Works Certificate stage by the surveyors. This is not required to be addressed at the development application stage.
5.15 Strata and Community Title Subo	division	
P93 Limit the range and extent of owner corporation activities as far as practical.	A92.1 Create separate sites for each dwelling with their own public street frontage;	Complies. Each proposed lot has their own separate site and public street frontage.
	A93.2 Limit communal land to driveways only.	A Community Management Plan has been provided, detailing the management of the Conservation
	A93.3 Design dwellings to minimise the need for	Lot No.1 and associated fire trails.
	corporate building management;	Each dwelling has a separate private open space entitlement.
	A93.4 Ensure cost-effective management of communal open space or shared facilities; A93.5 Provide separate utility service metres to each	The proposed street layout clearly defines the public and communal areas of the development, identifying the communal open space lot for biodiversity
	dwelling and, if necessary, any common area;	conservation purposes. Refer to the Subdivision Plans in Appendix B for further information.
	A93.6 Attach all private open space areas to a dwelling unit;	The community Management Statement addresses the
	A93.7 Meet all requirements of any development application which may apply to the building proposed to be subdivided.	requirements under the <i>Community</i> <i>Land Development Act 2021</i> , refer to draft community management statement in Appendix P for further detail.
	A93.8 The street and lot layout clearly define the public, communal and private areas of a development, including the function, ownership and management of open spaces and communal areas.	



5.4 Water Cycle Management

A Stormwater Management Report has been prepared by Egis Consulting which details the proposed stormwater and trunk drainage strategy based on the Water Sensitive Urban Design (WSUD) principles set out in the Shoalhaven Development Controls Plan 2014.

The stormwater quantity modelling has adopted roadside swales and end of line basins prior to discharge into the waterways. The site is located immediately upstream of the ocean outflow and therefore the proposal will exclude detention to avoid the risk of aligning peaks with the upstream contributing catchment. The local stormwater flows from the Inyadda Drive catchment will be managed by the minor and major drainage network (pit and pipe and road reserve overland flow.

The stormwater quality treatment strategy includes the utilisation of bioretention basins to treat the road areas and bio-swales within the road reserve. The proposed basins are as follows:

- The minimum bioretention of 465m2 to treat the northern catchment roads
- The minimum bioretention of 255m2 to treat the southern catchment roads

The report concludes that there is no additional impact on adjoining properties during the developed scenario and would be managed by the stormwater strategy.

5.5 Flooding

A Flood Impact Assessment has been prepared for the subject site within the Stormwater Management Report with associated Flood Mapping, which demonstrated that the project will manage flooding through the site to Inyadda Beach and does not encroach into the residential development area.

The flood modelling has demonstrated that the project will manage flooding throughout the site extending down to Inyadda beach. Existing and Developed flood depth, afflux and velocity mapping have been presented for the 1% AEP 30-minute critical duration storm. These results demonstrate that there is no additional impact on adjoining properties during the developed scenario and would be managed by the stormwater strategy.

Tuflow modelling was used for the 1% AEP storm, which demonstrated that the flood extents are conveyed within the existing tributaries. The site remains mostly outside the existing 100-year ARI flood, and the development directs the flows away from the site along the northern side. Overall, the proposed development is not aggravating flood levels surrounding the site and will not experience any significant impacts from the afflux generated in the development condition. Refer to the Stormwater Management Plan included in Appendix D of this report for further information.

It is noted that the amended development proposal includes upgrades to the existing culvert under the northern end of Inyadda Drive, to provide flood free access above the 1% AEP to the public benefit to the existing and proposed residents of Manyana. Although the proposed development is downstream of the subject flooding, the developer is proposing to upgrade the culvert to Inyadda Drive to remove the flooding and provide flood free access to Manyana residents.

The outlet at the beach is not going to change therefore the outlet for the flood modelling is assumed to be adequate. Refer to report letter sent by Horton Coastal Engineering included in Appendix H of this report.

5.6 Coastal Engineering

Coastal Engineering Report has been prepared by Horton Coastal Engineering which detailed the impact of the proposed layout on the Intermittently Closed and Open Lake and Lagoon (ICOLL). This report concluded that the proposed development "would not be expected to significantly affect freshwater inflows reaching the entrance, and thus would not significantly affect how often breakouts occur and their duration. The opening and closing regime of the ICOLL would thus not be expected to change as a result of the proposed development. The creek would be expected to continue to have an entrance that is closed almost all of the time, and even more so than at present if sea level rise causes the entrance berm to increase in level". Refer to the report in Appendix H for further information.



5.7 Heritage

The subject site has been assessed for Aboriginal Archaeology and Non- Aboriginal Archaeology (European Heritage).

An Aboriginal Heritage assessment has been prepared by Apex Archaeology. See Section 3.4 of this report for further information.

5.7.1 Non- Aboriginal Archaeology

A draft heritage conservation management plan has been prepared by Chris & Charlotte Webb Pty Ltd for the subject site due to the location of two Goodsell Graves located on Lot 2 DP 1161638. The report has been prepared with the aim to manage and protect the graves during and after development of the surrounding land and only addresses and assesses the heritage significance of the property since European settlement.

The Goodsell graves are enclosed by a four-course white bagged brick wall, measuring 2.5m x 2.5m with a reinforcing concrete infill. The grave is both for Jesse and Mary Goodsell. The graves are well preserved, showing the influence of the recent management of the graves and the surrounding area.

The cultural significance of the graves has been assessed under the NSW Heritage Manual and the Burra Charter. The Goodsell graves have been determined to have local significance through their association with the Goodsell family who were early settlers and received the first land grant for the subject property.

The draft conservation management plan recommends that a curtilage for the graves follows the edge of the regrowth area, approximately 10m beyond the edge of the graves on all sides, which will allow the heritage significance of the site to be retained. Refer to the draft conservation management plan attached in Appendix J for further information.

5.8 Transport and Accessibility

PDC Consultants have prepared an amended Traffic Impact Assessment of the proposed residential subdivision development application. The proposed development is not of a scale that requires referral to TfNSW under the *SEPP* (*Transport and Infrastructure*) 2021.

Existing intersections were assessed for traffic impacts, being the intersection of Bendalong Road & Inyadda Drive and the intersection of Inyadda Drive & Curvers Drive which reflected the existing operations and can be used as a baseline for assessing the traffic impacts of the proposed subdivision.

The SIDRA modelling revealed that the existing intersection performances are excellent during weekday and peak periods. The low levels of congestion would be expected given the relative remoteness of the intersections and low traffic volumes during the AM and PM peaks. The traffic modelling study concluded that no intersection turn treatments are triggered by the anticipated trip generation of the subdivision, with basic rural right and left intersection turn treatments, which are considered satisfactory for the three intersections.

Overall, the Traffic Impact Assessment concluded that the addition of the subdivision traffic will have little to no impact on the performance of Inyadda Drive intersections with Bendalong and Curvers Drive due to the estimated low traffic volume generation. As such, no external road network improvements are proposed or required to support the subdivision.



6 SECTION 4.15 EVALUATION

In determining a development application, a consent authority is to take into consideration the following matters:

- (a) The provisions of:
- *i.* Any Environmental Planning Instrument

State & Regional Planning Policies

• State Environmental Planning Policy (Transport and Infrastructure) 2021.

The proposed development has considered the provisions of the *State Environmental Planning Policy* (*Transport and Infrastructure*) 2021. The proposed development does not meet the criteria for traffic generating development and as such, does not require referral to TfNSW.

• State Environmental Planning Policy (Resilience and Hazards) 2021

The subject site is identified under the *SEPP (Resilience and Hazards) 2021 as* being mapped as partial 'Coastal Environment Area' and partially 'Coastal Use Area'. The proposed development footprint does not encroach into the Coastal Environment Area, or the Coastal Use Area and the environmental conservation Lot No.1 is consistent with the objectives of the SEPP. Refer to Table 5.1 for further information.

The objective of the *SEPP (Resilience and Hazards) 2021* – Chapter 4 is to promote the remediation of contaminated land for the purpose of reducing risk of harm to human health. The proposed development has been assessed by Terra Insight to have a low risk of contamination except the areas subject to historical illegal waste disposal which will require localised remediation. The PSI concluded that the level of contaminants identified in these two areas does not warrant a formalised Remediation Action Plan (RAP) for the site and therefore, the site is deemed suitable for the proposed residential development. Recommendations have been included such as removal of asbestos dumped material should from the site by a licenced professional, implementation of an unexpected finds protocol and the implementation of a Construction Management Plan. This adequately addressed Clause 4.6 of the R&H SEPP. Refer to the contamination report (Preliminary Site Investigation) included in Appendix G of this report.

• State Environmental Planning Policy (Planning Systems) 2021

The development is not a class of development described in Schedule 4A of the EP&A Act, being a development that has a capital investment value of more than \$30 million.

Local Environmental Plan

The proposed development is permissible with consent under *Shoalhaven Local Environmental Plan 2014*, and the relevant provisions are addressed in Section 5.2 of this SEE.

ii. Any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Director-General has notified the consent authority and that the making of the proposed instrument has been deferred indefinitely or has not been approved)

There is no proposed or draft instrument applicable to the subject development application.

iii. Any Development Control Plan



The proposed development is generally in accordance with the Shoalhaven Development Control Plan 2014 and addresses all relevant controls of the DCP in Section 5.3 of this SEE.

iiia. Any planning agreement that has been entered into under Section 7.4, or any draft planning agreement that a development has offered to enter into under Section 7.4.

Not applicable.

iv. Any matters prescribed by the regulations (to the extent that they prescribe matters for the purposes of this paragraph)

Not applicable.

(b) The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality

This Statement of Environmental Effects has considered the potential impacts of the proposed large lot residential development. It is believed that the proposal will guide the orderly and sustainable development within the subject site, and is considerate of the economic, environmental and social needs of the locality.

Natural and Built Environments

The proposal demonstrates no unacceptable impacts to the natural or built environment as described throughout this Statement of Environmental Effects. The proposed large-lot residential subdivision provides a better environmental outcome. The proposed development is in accordance with the *Shoalhaven Local Environmental Plan 2014* as well as adhering to the character of the Manyana village

Social and Economic

In addition to having a more desirable outcome from an ecological perspective, the proposed development demonstrates beneficial social and economic outcomes for the locality. The proposed development once completed will generate additional access for the community to Inyadda Beach and protection to the existing lots of Curvers Drive from Bushfire Hazards due to the implementation of a fire-trail and Asset Protection Zones. Additionally, the proposed development will generate surplus housing supply and choice for the Manyana community in a community title scheme that is centred around the protection of the biodiversity values existing on the subject site.

(c) The suitability of the site for the development

The subject site is considered to be suitable for the proposed residential large-lot subdivision due to the following:

- Development is consistent with the objectives and controls of *Shoalhaven Local Environmental Plan 2014* and Shoalhaven Development Control Plan 2014.
- The proposal is permissible with consent in accordance with the LEP and meets the objectives of the applicable R5 Large Lot Residential, C3 Environmental Management, R1 General Residential and RE1 Public Recreation land use zoning of the site.
- The proposed development reduces the environmental footprint and has considered the retention of connectivity associated with the proposed conservation lands proposed in Lot No.1. The proposed layout is viewed to be more desirable from an ecological perspective than the previous 2018 & 2019 & 2021 schemes by amending the original subdivision layout in response to a detailed understanding of the site's biodiversity values and offset requirements.
- The site is suitable from an environmental perspective and there are no significant constraints affecting the site, with studies commissioned confirming the suitability of the site from a bushfire, traffic,



ecological/biodiversity, Aboriginal and European heritage, contamination, stormwater, servicing perspective.

• Any submissions made in accordance with this Act or the regulations

No submissions in accordance with the Act or the regulations have been made at this stage. Opportunities for submissions addressing the proposed development will be during the notification of the Development Application.

(d) The public interest

The proposed development is in the public interest as it is delivering housing options to the community of Manyana, in addition to the following:

Public Interest

• There are no aspects of the proposed development that would be contrary to the public interest. The proposal is considered to be within the public interest as it will be delivering an enhanced environmental outcome to the development of the subject site than previous submitted proposals.

No adverse Impacts

• There will be no adverse environmental impacts as a result of the proposed development. Key matters pertaining to the proposal have been adequately addressed with this Development Application to ensure that the proposal is within the public interest.

Bushfire Protection

- Protection to the existing lots of Curvers Drive from Bushfire Hazards due to the implementation of a firetrail and Asset Protection Zones with the provision of a fire trail that provides beach access over the community title conservation lot.
- The proposed fire trail along the rear of the current Curvers Drive properties as well as the road will provide a public benefit for emergency fire vehicles to access the area to provide fire protection. This is a major benefit in terms of Planning for Bushfire Purposes, where the existing residents are being provided with bushfire protection measures that currently do not exist.

Biodiversity Conservation

- The Biodiversity Conservation area will be protected within the community title lot and will be managed in perpetuity by the community association, which delivers a greater environmental benefit to the land than what is currently occurring with no agreed maintenance of that land.
- Biodiversity Protection of sensitive lands that are currently damaged and under threat from the unlawful BMX activities occurring on site, this will be rectified with the community association managing the land and securing it from unwanted intrusions.
- The proposed development will prevent all the unlawful activities that are currently occurring on-site and no longer cause a public nuisance to the Manyana community.

Relinquish Additional Permitted Uses

Relinquishing uses on site permitted through Schedule 1 of the SLEP 2014 – Clause 1.15 through the
proposed development of a biodiversity conservation lot in perpetuity. This will give the Manyana
community certainty that these currently additional permitted uses of extensive development cannot occur
on the subject site.

Infrastructure Upgrades – Flood free access

The applicant has offered to upgrade the existing culvert under the northern end of Inyadda Drive, to
provide flood free access above the 1% AEP to the public benefit to the existing and proposed residents of
Manyana. Although the proposed development is downstream of the subject flooding, the developer is
proposing to upgrade the culvert to Inyadda Drive to remove the flooding and provide flood free access to
Manyana residents.



• The existing residents on Curvers Drive are encroaching on the subject property with no formal rights of access. The proposed development seeks to provide pedestrian access within the fire trail to allow the residents to access the beach via the proposed right of way.

It is noted that not all of the residents on Curvers Drive submitted an objection to the proposed development application during the public consultation process. Therefore, it should be recognised that the proposed development is not contrary to the public interest as indicated by Council. The adjoining owners on Curvers Drive are not adversely affected by the proposed development.

7 CONCLUSION

This amended Statement of Environmental Effects has addressed all the relevant matters for consideration with respect to the proposed large-lot community-title residential subdivision at Inyadda Drive, Manyana being Lot 2 DP1161638, Lot 2 DP1121854 and Lot 106 DP755923.

The proposed development seeks consent for subdivision of the site into 65 residential lots together with a community title lot (Lot 1) for the conservation of 57.25 ha of land for biodiversity purposes, Lot 67 for a proposed local park and Lot 68 for proposed RE1 open space lot to be acquired by Council, in addition to associated works detailed in Section 3 of this report.

The proposed subdivision is requested to be approved with the development consent from Shoalhaven Council for the following reasons:

- The proposed development reduces the environmental footprint and favourably considers the retention and connectivity associated with the proposed conservation lands proposed in Lot No.1. The proposed layout is viewed to be more desirable from an ecological perspective than the previous 2018, 2019 & 2021 schemes by amending the original subdivision layout in response to a detailed understanding of the site's biodiversity values and offset requirements to not cause a Serious and Irreversible Impact on Endangered Ecological Communities, specifically the Illawarra Lowlands Grassy Woodland.
- The site is suitable from an environmental perspective and there are no significant constraints affecting the site, with studies commissioned confirming the suitability of the site from a bushfire, traffic, ecological/biodiversity, Aboriginal and European heritage, contamination, stormwater, servicing perspective.
- The proposed development is permissible with consent in accordance with the existing planning controls under Shoalhaven LEP and meets the objectives of the applicable R5 Large Lot Residential, C3 Environmental Management, R1 General Residential and RE1 Public Recreation land use zoning of the site.

The public interest matters have been addressed with a proposed fire trail that will provide emergency access to the existing Curvers Drive residences, removal of the road against Curvers Drive properties and culvert improvements on Inyadda Drive to provide flood free access to benefit the Manyana community.

The development is identified as integrated development under Section 4.46 of the *EP&A Act 1979* and requires referral to external authorities, being the Natural Resource Access Regulator (NRAR) under Section 91 of the *Water Management Act 2000*, Rural Fire Service (RFS) under Section 100B of the *Rural Fires Act 1997*, for a Bushfire Safety Authority and the Office of Environment Heritage under Section 90 of the *National Parks and Wildlife Act 1974* for an Aboriginal Heritage Impact Permit (AHIP).

The estimated Capital Investment Value for the proposed residential development is not over \$30 million; therefore, the relevant consent authority is Shoalhaven Council.

The proposed development promotes the orderly and economic use of the site and is in accordance with the provisions under the *Shoalhaven Local Environmental Plan (LEP) 2014, SEPP (Transport and Infrastructure) 2021, SEPP (Resilience and Hazards) 2021, SEPP (Planning Systems) 2021* and the Shoalhaven Development Control Plan.

Shoalhaven City Council are requested to issue development consent to enable the subdivision to proceed.



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