Engineering Referral

E2022/80010

DA No.	**10.2021.170.1**
Proposal:	Mixed Use Development comprising Twenty Seven (27) New Eco Tourist Facility Cabins, Seven (7) Ancillary Buildings including Wellness Facility, Refuges, Depot, Addition of Deck to Existing Centre and Associated Earthworks and Vegetation Removal, and Change of Use of Fourteen(14) Private Education Accommodation Units to Eco Tourist Facility Units
Property description:	PT: 1 DP: 1031848 951 Broken Head Road BROKEN HEAD
Parcel No/s:	238081
Applicant:	Planners North Pty Ltd
Owner:	BHCF Pty Ltd
Zoning:	Zone No. E2 Environmental Conservation / PART E3 Environmental Management / PART RU2 Rural Landscape / PART SP1 Special Activities / PART DM Deferred Matter
Planning Officer:	Mr I C Holland
Referral Date:	14 April 2021

This engineering assessment is based on the following documents:

Date	Description	TRIM Doc. No.
28/3/22	TfNSW Response	E2022/28295
8/8/22	TIS & Engineering Report	E2022/75395
8/8/22	SEE	E2022/75399
8/8/22	Site Plan 2	E2022/75400
8/8/22	Site Plan	E2022/75401
8/8/22	Development Drawings	E2022/75402

RECOMMENDATION

No engineering objections, subject to the conditions recommended at the end of this report

Note to Planner: Footbridge over the waterway is not supported due to insufficient information

Renan Solatan 17 August 2022

Administration use only

- ❑ **Check if Engineer has granted Roads Act approval, please create 51 register and determine it, need to also place payments on the DA – Fee Codes RAA $105 and RAI $310**
- ❑ **Lock Assessment Report**
- ❑ **Print full Assessment Report for file with sign off included by engineer.**

**** Administration Instructions****

- ☐ Update tracking item outcome as 'COMP'
- ☐ Lock document.
- ☐ Place referral and documents with Stamped plans on trolley for delivery to Planner

PLEASE RETURN REFERRAL TO ADMIN TRAY

ASSESSMENT

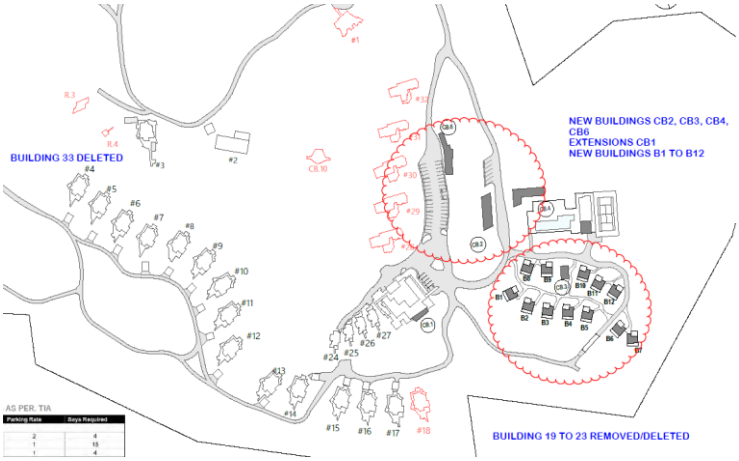
Initial Review				Additional Info Req.
LEP	☒ 2014	☐ 1988		☐
DCP	☒ 2014	☐ 2010	☐ 2002	☐
DP & S88B	☐ Easements	☐ Restrictions	☐ Covenants	☐
Road Frontage	☐ Private	☐ Local	☐ Classified	☐
Subdivision	☐ Land	☐ Strata	☐ Community	☐
Strata Development Contract	☐ Yes	☐ No		☐
Traffic & Parking Considered	☒ Yes	☐ No		☐
Traffic Committee Referral	☐ No	☐ Local	☐ Regional	☐
Flood Affected Land	☐ Yes	☐ No		☐
Coastal Erosion	☐ Yes	☐ No		☐
Slip/Subsidence	☐ Yes	☐ No		☐
Controlled Activity Approval	☐ Yes	☐ No		☐
Stormwater Considered	☐ Yes	☐ No		☐
Previous DA	☐ Yes	☐ No		☐
DAP Advice	☐ Yes	☐ No		☐

Proposal - Mixed Use Development of the eastern part of Lot 1 DP 1031848	Traffic	Parking
12 x B Type cabins all located in grassland east of the pool and tennis court;	Additional 12 cabins	Additional 12 cabins
reception and administration building (CB.2); (37 staff)	staff	1 space per 2 staff
bushfire refuge building (CB.3);	no	no
recreation facility (indoor) building adjacent to the pool and alterations to an existing pool building to provide a food and beverage kiosk (CB.4);	ancillary	ancillary
storage and maintenance building (CB.6);	no	no
Alts & adds to the existing Private Education Centre building (CB.1) & use of that structure (other than the Library and Office area) as a restaurant or cafe	restaurant or cafe	restaurant or cafe
The “eco-tourist facility” use of the part of the land zoned SP1 for recreational, educational and amenity purposes		

The resultant proposal to be resubmitted in late July / early August 2022 has reduced the scope, removing several items from the application, as follows:

- Removal of 14 x Type A cabins (A9 to A22) and 1 x Treehouse Retreat (C1), including removal of the associated boardwalk buggy track, pathways and steps;
- Redesign and relocation of 8 x Type A cabins (A1 to A8) and 4 x Type B Rainforest Retreat cabins (B1 to B4), now defined in the revised proposal as B1 to B12.
- Reduction in the amount of roads and paths servicing the proposed development;
- Reduction in the water and sewerage infrastructure servicing the proposed development;
- Removal of the shed (CB05), depot building (CB07) and associated infrastructure; and
- Reduction in the size of the proposed reception buildings (CB02) and associated infrastructure.

The revised proposal now seeks to increase the existing occupancy by 24 (12 units x 2 persons per unit).



Site Plan

LEP 2014 / DCP 2014

BUILDING & OTHER DEVELOPMENT

1. External Access				
Reference	**Comments**	**S**	**U**	**N A**
Section 79 C of Environmental Planning and Assessment Act 1979 *Section 79C (1) (a) (i) the provision of any environmental planning instrument* *Section 79C (1) (a) (iii) the provision of any development control plan* *Section 79C (1) (b) the likely impacts of that development*				
LEP 2014				
Cl. 6.6€	*Suitable vehicular access is available – refer DCP comments below.*	☒	☐	☐
DCP 2014				
B3.2.1.7	*Road Access – Council Controlled Roads*	☒	☐	☐

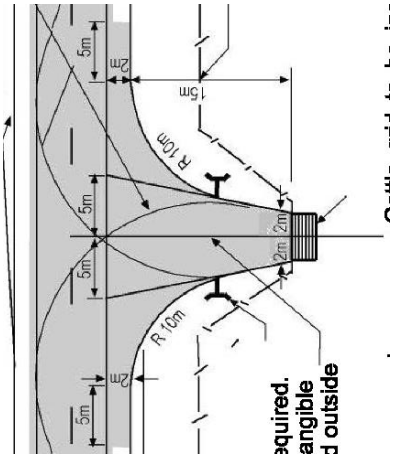
Broken Head Road forms part of The Coast Road (MR545) a classified (Regional) road.

Council is the roads authority for both roads and all other public roads in the area, in accordance with Section 7 of the *Roads Act 1993*.

Comments from TfNSW

Council should be satisfied that the existing access arrangement is appropriate for the proposed increase in daily and peak hourly demand at the site access.

Existing Access



TfNSW Standard Drawing

The current proposal meets the TfNSW Type 1 Typical Rural Property Access Standard. No upgrading works required.

2. Number of Parking Spaces

Section 79 C of Environmental Planning and Assessment Act 1979
Section 79C (1) (a) (iii) the provision of any development control plan
Section 79C (1) (b) the likely impacts of that development

DCP 2014

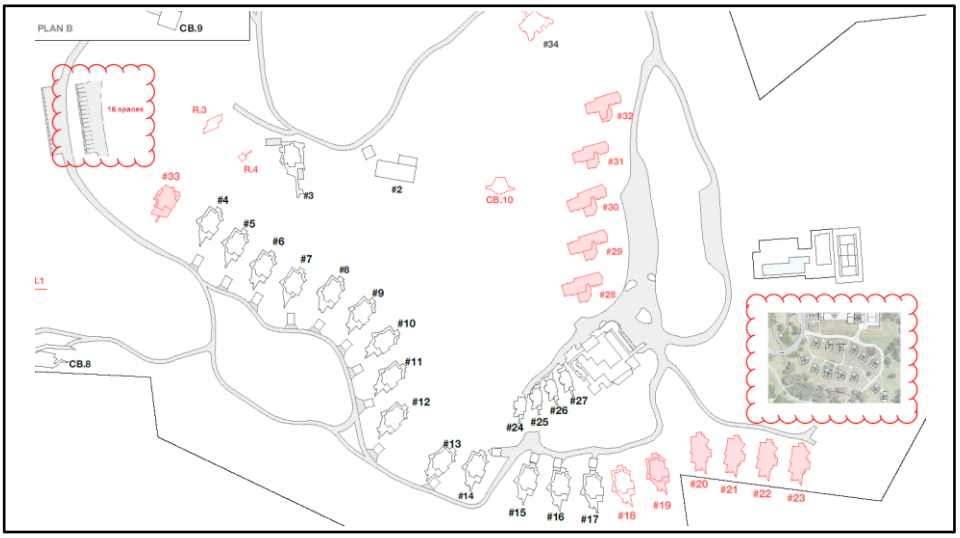
B4.2.5	*Car Parking Requirement – the following calculations are based on table B4.1 in section B4.2.12.*	☒	☐	☐

Proposal

The mixed use development" comprises of the ongoing use of the land for the purposes of Private Education, in accordance with the existing consent, and the addition of 2 "additional uses", being use of the land for the purposes of “Eco tourism facility”; and a “restaurant or café” (a type of “food and drink premises”).

Site Plan

Assessment



Cabins

- Number = 12 cabins
- Parking Rate = 1 space per cabin
- Required = 12 spaces

Staff

- Number = 11 staff
- Parking Rate = 1 space per 2 staff
- Required = 5.5 spaces say 6 spaces

Visitors

- Number = 12 cabins
- Parking Rate = 1 space per 4 cabins
- Required = 3 spaces

Total Number Required = 21 spaces

Restaurant – principal purpose being for the preparation and serving of food and drink for consumption by participants of the Private Education and ecotourism activities.

The addendum to the TIA did not assess the traffic generated by the restaurant. The restaurant is therefore ancillary to Private Education and ecotourism activities.

Condition be included that the restaurant use for the patrons of Private Education and ecotourism activities only and no public access is permitted.

Existing

Number	Type	Status	Parking Rate	Requirement
2	House	Existing	2 spaces per house	2
3	Unit	Existing	1 space per unit	1
4	Unit	Existing	1 space per unit	1
5	Unit	Existing	1 space per unit	1
6	Unit	Existing	1 space per unit	1
7	Unit	Existing	1 space per unit	1
8	Unit	Existing	1 space per unit	1
9	Unit	Existing	1 space per unit	1
10	Unit	Existing	1 space per unit	1
11	Unit	Existing	1 space per unit	1
12	Unit	Existing	1 space per unit	1
13	Unit	Existing	1 space per unit	1
14	Unit	Existing	1 space per unit	1
15	Unit	Existing	1 space per unit	1
16	Unit	Existing	1 space per unit	1
17	Unit	Existing	1 space per unit	1
24	Unit	Existing	1 space per unit	1
25	Unit	Existing	1 space per unit	1
26	Unit	Existing	1 space per unit	1
27	Unit	Existing	1 space per unit	1
			Total	21

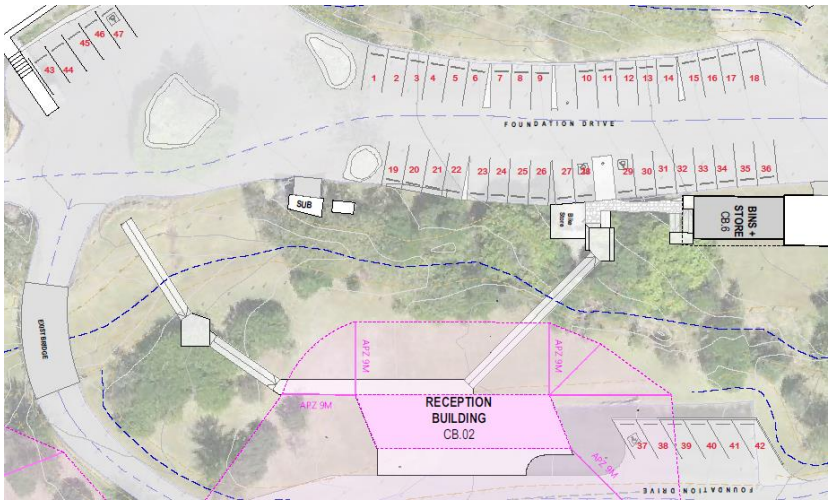
Number	Type	Status	Parking Rate	Requirement
1(34)	House	Not constructed	2 spaces per house	2
18	Unit	Not constructed	1 space per unit	1
19	Unit	Not constructed	1 space per unit	1
20	Unit	Not constructed	1 space per unit	1
21	Unit	Not constructed	1 space per unit	1
22	Unit	Not constructed	1 space per unit	1
23	Unit	Not constructed	1 space per unit	1
28	Unit	Not constructed	1 space per unit	1
29	Unit	Not constructed	1 space per unit	1
30	Unit	Not constructed	1 space per unit	1
31	Unit	Not constructed	1 space per unit	1
32	Unit	Not constructed	1 space per unit	1
33	Unit	Not constructed	1 space per unit	1
			Total	14
Visitors		32 units	1 space per 4 units	8
Staff		26	1 space per 2 staff	13
Manager		1	1 per manager	1
			Total	22
Existing Parking Requirement			Total	57

Overall Total is 78 spaces (57 + 21)

It is noted that there are 14 parking spaces allocated for units and house not built. These parking spaces can be provided during the construction of these buildings

Revised Total is 62 parking spaces

Parking Provided



There are 47 parking spaces provided including 4 accessible parking. Two accessible parking does not comply with AS2890.6:2009.

Plus 16 parking spaces south of unit 33.

Total parking provided is 63 parking spaces

Outcome

The proposal is in excess by 1 parking space.

Building CC for the approved and not constructed buildings will require condition to provide a further 14 parking spaces to cater for all units & house unconstructed.

B4.2.9	*Loading Bays*	☒	☐	☐

Total Area of the Building = 6620m²

located for loading and unloading on-site)	Gross Floor Area	Single Rigid Vehicle	Medium Rigid Vehicle	Heavy Rigid Vehicle	Articulated Vehicle
Retail premises, tourist and visitor accommodation (except bed and breakfast accommodation and farmstay accommodation)	0-199	1	-	-	-
	200-599	-	1	-	-
	600-1,499	1	1	-	-
	1,500-1,999	2	1	-	-
	2,000-2,799	2	2	-	-
	2,800-4,399	2	2	1	-
	4,400-8,499	2	2	1	1

The development triggers the requirement of an articulated vehicle to enter and exit the site.

Although AV has been triggered in the DCP, the uses in the development only require an HRV to enter and exit the site.

HRV is the largest vehicle to enter and exit the site. Specifically, Council's Front Loader RCV.

3. Internal Access Arrangements

Reference	Comments	S	U	NA
Section 79 C of Environmental Planning and Assessment Act 1979 *Section 79C (1) (a) (i) the provision of any environmental planning instrument* *Section 79C (1) (a) (iii) the provision of any development control plan* *Section 79C (1) (b) the likely impacts of that development*				
LEP 2014				
Cl. 6.6€	*Suitable vehicular access is available – refer DCP comments below.*	☒	☐	☐
DCP 2014				
B4.2.2	*Parking Layout Standards*	☒	☐	☐

User Class 2 and User Class 4 in accordance with AS2890 are the applicable classes for the proposal

All User class 2 parking spaces complies with the design requirements of AS2890.1:2004 and two (2) out of four (4) accessible parking does not comply to the design requirements of AS2890.6:2009.

This shall be conditioned accordingly

B4.2.3	*Vehicle Access and Manoeuvring Areas*	☒	☐	☐

Comments from TfNSW

The driveway, internal manoeuvring, car parking and service vehicle areas should be designed and constructed in accordance with the relevant parts of AS.2890 and to Council's specifications

Reference	Comments	S	U	NA
Section 79 C of Environmental Planning and Assessment Act 1979 *Section 79C (1) (a) (i) the provision of any environmental planning instrument* *Section 79C (1) (a) (iii) the provision of any development control plan* *Section 79C (1) (b) the likely impacts of that development*				
Comments Internal driveways of the site are able to accommodate the manoeuvring of all types of vehicles including the Front Loader RCV. The construction of a footbridge in front of the reception connecting the carparking area does not have sufficient details to assess the impact onto the defined stream. There are existing pedestrian access to the reception, therefore the deletion of the footbridge in the design proposal will not impact onto the pedestrian access mobility for the site. Recommendation Delete the footbridge				
B4.2.9	*Loading Bay Layout*	☒	☐	☐

Entry & Exit to the South

Entry & Exit to the North

Internal Turnaround Movement

BSC Standard Front Loader RCV

Assessment using AutoCAD 2023 Vehicle Tracking software found that Council's Front Loader RCV can enter & exit in forward direction without any issues

4. Traffic

Section 79 C of Environmental Planning and Assessment Act 1979
Section 79C (1) (a) (i) the provision of any environmental planning instrument
Section 79C (1) (a) (iii) the provision of any development control plan
Section 79C (1) (b) the likely impacts of that development

DCP 2014

B4.2.1	*Traffic Impact*	☒	☐	☐

19/8/22

Comments from TfNSW

1. The proposed development will increase peak hourly and daily demand for vehicles. The current layout of the intersection at the site access provides a 'Seagull' treatment for turning vehicles and safe intersection sight distance (SISD) is achieved in both directions for the 80km/h speed environment
2. Any regulatory signs will require the endorsement of the Local Traffic Committee prior to Council approval. Please refer to A guide to the delegation to councils for the regulation of traffic available here.

Assessment

Trip Generation

Existing (moderate impact)

Land Use	Traffic generation rates						DVT's	PHT's
	Daily Vehicle Trips		Peak Hour Vehicle Trips					
Residential								
Dwelling houses	7.4	/dwelling	0.78	/ dwelling	No. of dwellings =	1	7.4	0.78
Medium density residential flat building	Up to 2 bedrooms							
	4 - 5	/dwelling	0.4-0.5	/dwelling	No. of dwellings =	19	76 - 95	7.6 - 9.5
	3 bedrooms or more							
	5 - 7	/dwelling	0.5-0.65	/dwelling	No. of dwellings =	0	0 - 0	0 - 0

Existing + Approved Units not constructed (moderate impact)

TOTAL: 169.8 17.06

Land Use	Traffic generation rates						DVT's	PHT's
	Daily Vehicle Trips		Peak Hour Vehicle Trips					
Residential								
Dwelling houses	7.4	/dwelling	0.78	/ dwelling	No. of dwellings =	2	14.8	1.56
Medium density residential flat building	Up to 2 bedrooms							
	4 - 5	/dwelling	0.4-0.5	/dwelling	No. of dwellings =	31	124 - 155	12 - 16
	3 bedrooms or more							
	5 - 7	/dwelling	0.5-0.65	/dwelling	No. of dwellings =	0	0 - 0	0 - 0

Proposal (low impact)

TOTAL: 60 6

Land Use	Traffic generation rates						DVT's	PHT's
	Daily Vehicle Trips		Peak Hour Vehicle Trips					
Residential								
Dwelling houses	7.4	/dwelling	0.78	/ dwelling	No. of dwellings =	0	0	0
Medium density residential flat building	Up to 2 bedrooms							
	4 - 5	/dwelling	0.4-0.5	/dwelling	No. of dwellings =	12	48 - 60	4.8 - 6
	3 bedrooms or more							
	5 - 7	/dwelling	0.5-0.65	/dwelling	No. of dwellings =	0	0 - 0	0 - 0

Existing + Proposal (moderate impact)

TOTAL: 162.4 16.28

Land Use	Traffic generation rates						DVT's	PHT's
	Daily Vehicle Trips		Peak Hour Vehicle Trips					
Residential								
Dwelling houses	7.4	/dwelling	0.78	/ dwelling	No. of dwellings =	1	7.4	0.78
Medium density residential flat building	Up to 2 bedrooms							
	4 - 5	/dwelling	0.4-0.5	/dwelling	No. of dwellings =	31	124 - 155	12 - 16
	3 bedrooms or more							
	5 - 7	/dwelling	0.5-0.65	/dwelling	No. of dwellings =	0	0 - 0	0 - 0

Existing + Approved Units not constructed + Proposal (moderate impact)

TOTAL: 234.8 23.56

Land Use	Traffic generation rates						DVT's	PHT's
	Daily Vehicle Trips		Peak Hour Vehicle Trips					
Residential								
Dwelling houses	7.4	/dwelling	0.78	/ dwelling	No. of dwellings =	2	14.8	1.56
Medium density residential flat building	Up to 2 bedrooms							
	4 - 5	/dwelling	0.4-0.5	/dwelling	No. of dwellings =	44	176 - 220	18 - 22
	3 bedrooms or more							
	5 - 7	/dwelling	0.5-0.65	/dwelling	No. of dwellings =	0	0 - 0	0 - 0

Trip Generation		
	Daily	Peak Hour
Existing	102	10.28
Existing + Approved Units not constructed	170	17.06
Proposal	60	6
Existing + Proposal	162	16.28
Existing + Approved Units not constructed + Proposal	235	23.56

Summary

The traffic generated by the proposal & existing is lesser than the existing + approved & unconstructed buildings. The ultimate traffic generation is 235 daily trips and 24 peak hour trips a theoretical increase of 65 daily trips and 7 peak hour trips.

Previous TIA 3080-1070 by Geolink, fourth issue dated 20/01/2021

Original Proposal

Table 2.2 Linnaeus Existing Use Traffic Estimate

Existing Use	Number	Daily Trip Rate per Unit	Peak Hour Trip Rate per Unit	Total Daily Trips	Total Peak Hour Trips
Dwelling	1	7.4	0.78	7.4	0.78
Education accommodation	19	3	0.4	57	7.6
Total				65	9

Table 3.2 Estimated Traffic Generation of Proposed Development

Proposed Use	Number	Daily Trip Rate per Unit	Peak Hour Trip Rate per Unit	Total Daily Trips	Total Peak Hour Trips
Eco-tourism Accommodation	27	3	0.4	81	10.8

TIA Findings

The existing 'seagull' intersection arrangement on MR545 has been assessed according to the warrants for turn treatment and safe intersection sight distance according to Austroads.

The existing arrangement provides for traffic safety and efficiency for both the existing development and expected development traffic generation, with ample capacity for much higher traffic volumes.

The existing access connection to MR545 also has enough width and length to meet the requirements of AS2890 for access.

As a result, it is expected that the existing arrangement will continue to operate satisfactorily for traffic safety under the proposed development.

Amended Proposal

Land Use	Traffic generation rates: Daily Vehicle Trips		Traffic generation rates: Peak Hour Vehicle Trips			DVT's	PHT's
					TOTAL:	162.4	16.28
Residential							
Dwelling houses	7.4	/dwelling	0.78	/ dwelling	No. of dwellings = 1	7.4	0.78
Medium density residential flat building	Up to 2 bedrooms						
	4 - 5	/dwelling	0.4-0.5	/dwelling	No. of dwellings = 31	124 - 155	12 - 16
	3 bedrooms or more						
	5 - 7	/dwelling	0.5-0.65	/dwelling	No. of dwellings = 0	0 - 0	0 - 0

The amended proposal (16 peak hour trips) generates less peak hour traffic than the original proposal (20 peak hour trips).

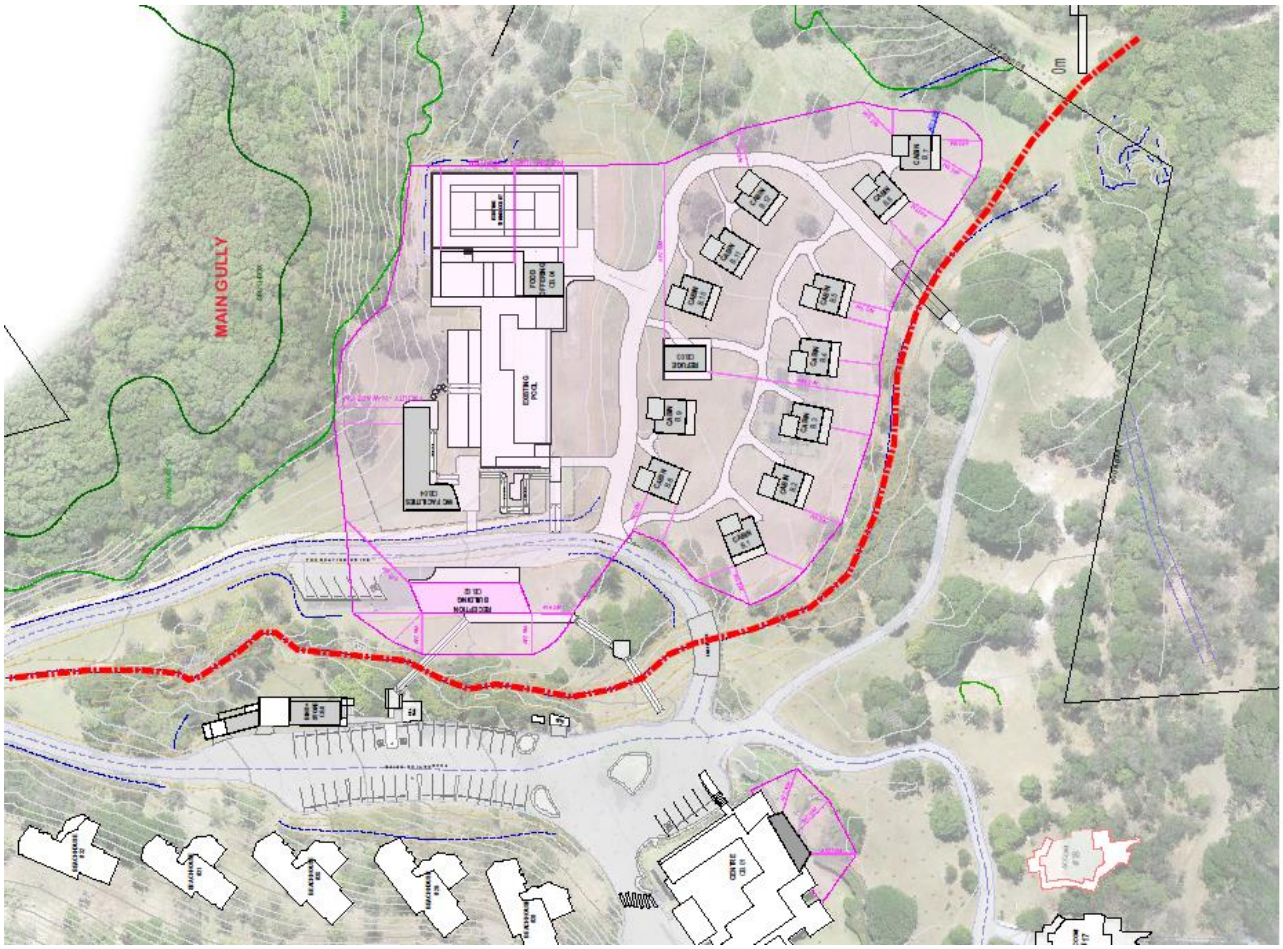
As a result, the existing arrangement will continue to operate satisfactorily for traffic safety under the amended development proposal.

SEPP (Infrastructure) 2007				
Cl. 101	*Development with frontage to classified road*	☒	☐	☐
Minimal Impact				
Cl. 104	*Traffic-generating development (Schedule 3)*	☒	☐	☐
Minimal Impact				

5. Stormwater management

Section 79 C of Environmental Planning and Assessment Act 1979
Section 79C (1) (a) (i) the provision of any environmental planning instrument
Section 79C (1) (a) (iii) the provision of any development control plan
Section 79C (1) (b) the likely impacts of that development

LEP 2014				
Cl. 6.6(d)	*Stormwater drainage – refer DCP comments below.*	☐	☐	☐
DCP 2014				
B3.2.3.1	*Development Application*	☐	☐	☐
B3.2.3.2	*Properties adjacent to or containing waterways*	☐	☐	☐
B3.2.3.3	*Site Drainage*	☒	☐	☐



Amended Proposal

TABLE 3.2 LAND USE BUDGET

Land Use	Area (ha)	Percentage (%)
Site Area	110.7	100%
Roads & Parking	2.1	1.9%
Buildings	0.66	0.6%
Habitat & Landscaped Area	107.9	97.5%

Minimal earthworks are proposed to maintain the existing topography of the site, minimise environmental disturbance, avoid impacting existing services and allow for retention of the existing stormwater drainage flow paths.

Stormwater flows for both the minor and major storm events are to stay aboveground. The stormwater management at the site is to match the existing conditions as best as possible. Cabins designed 'on stilts' allowing for flow underneath the buildings, and an overall minimal use of hardstand areas.

Rainwater harvesting will be used wherever possible, collecting roof water rather than allowing it to generate runoff. In larger or longer storm events, overflow from rainwater tanks will be directed to basic constructed gravel pits, encouraging as much flow as possible to infiltrate.

The existing network of open swale drains will be expanded to fit the proposed works and design to ensure stormwater flow has a minimal impact on the amenity, usability and integrity of the infrastructure. The central gully along with the other open swale drains will be vegetated to provide water quality treatment during the flow of stormwater through the site

Works are proposed over the second order stream. These works will require a Controlled Activity Approval.

The proposal will increase the impervious area (approximately 2000m^2 or 0.2%) of the site. This increase however is considered minimal and will not create adverse impact to the site and its surrounds.

B3.2.3.4	*Lawful Point of Discharge*	☒	☐	☐
First Order Stream traversing through the site				
B3.2.3.5	*Easements*	☐	☐	☒
B3.2.3.6	*On-site Stormwater Detention (OSD)*	☐	☐	☒
B3.2.3.7	*Stormwater Quality and Treatment*	☒	☐	☐
To be conditioned accordingly				
B3.2.4	*Sedimentation and Erosion Control Measures*	☒	☐	☐
To be conditioned accordingly				

6. Coastal Hazard

Reference	Comments	S	U	NA
Section 79 C of Environmental Planning and Assessment Act 1979 *Section 79C (1) (a) (i) the provision of any environmental planning instrument* *Section 79C (1) (a) (iii) the provision of any development control plan* *Section 79C (1) (b) the likely impacts of that development*				
LEP 2014				
Cl. 5.5(3)(d)	*Development within the coastal zone*	☒	☐	☐

Reference	Comments	S	U	NA
Erosion precinct 3 encroaches into the site, however no buildings are located inside precinct 3.				
DCP 2014				
E1.2.9	*Development and servicing of land affected by predicted coastal hazards*	☐	☐	☒
E5.4.1	*Development and servicing of land affected by predicted coastal hazards*	☒	☐	☐

7. Geotechnical Hazard

Reference	Comments	S	U	NA
Section 79 C of Environmental Planning and Assessment Act 1979 *Section 79C (1) (a) (iii) the provision of any development control plan* *Section 79C (1) (b) the likely impacts of that development*				
General				
N/A	*Geotechnical Hazards, soil instability - subsidence, slip, etc.*	☐	☐	☐
DCP 2014				
B14.2	*Excavation and Fill in all Zones*	☐	☐	☐

8. Other Matters

Item No.	Comments	S	U	NA
1		☐	☐	☐
2		☐	☐	☐

REQUEST FOR FURTHER INFORMATION (STC) CHECKLIST

Prior to further consideration from an engineering viewpoint, the following mattes must be addressed:

☒	~~Submission of an amended traffic assessment prepared in accordance with the requirements of section B4.2.1 of Chapter B4 of DCP 2014.~~ ~~The following are to be considered:~~ • ~~To include the existing traffic utilising the access for Case 1 & Case 2 peak distributions and recalculation of the queue length provision between the Byron Bay Road and the existing controlled gate~~ • ~~Transport For NSW drawing – Typical Rural Property Access Northern Region 19/5/20~~
☐	~~Submission of plans and calculations demonstrating compliance with the requirements of Chapter B4 of DCP 2014 for car parking, bicycle and loading facilities. The plans should include dimensions, finished levels, grades and turning paths demonstrating compliance with AS 2890.~~
☒	~~Submission of a Stormwater Concept Plan, prepared in accordance with section 3.4 of Council's Comprehensive Guidelines for Stormwater Management, demonstrating compliance with section B3.2.3 of Chapter B3 of DCP 2014.~~ ~~The following are to be considered:~~ • ~~Compliance to Table B3.2 for Precinct 1 & 2:~~ • ~~Hydrologic study by a qualified person to demonstrate that the proposal will not interfere with the natural flowpath or be subject to flooding. Appropriate buffers to waterways must be provided~~ • ~~Details or analysis must be undertaken to investigate the impact of the works specifically the proposed earthworks and building works within and adjacent to the waterway and identify the Flood Planning Levels of buildings, Q_{100} water surface levels, Q_{100} depth of flow and Q_{100} velocities.~~
☐	~~Submission of detailed Stormwater Management Construction Plans, prepared in accordance with section 3.5 of Council's Comprehensive Guidelines for Stormwater Management, demonstrating compliance with section B3.2.3 of Chapter B3 of DCP 2014.~~
☐	~~Submission of a flooding assessment demonstrating compliance with clause 6.3 of Byron LEP 2014 and section C2.3.3 & C2.3.4 of Chapter C2 of DCP 2014.~~
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Recommended Conditions

Parameters

1) Coastal Erosion
The development must cease if at any time the coastal erosion escarpment comes within 50 metres of any building associated with this development. The buildings and works used in connection with the development must be removed immediately to an approved location by the owner of the land. The owner must return the landform of the subject land to the predevelopment state and suitably revegetate the land.

In this condition coastal erosion escarpment means the landward limit of erosion in the dune system caused by storm waves.

Note: at the end of a storm the escarpment may be nearly vertical; as it dries out, the escarpment slumps to a typical slope of 1 vertical to 1.5 horizontal.

2) Controlled Activity Approval – Stormwater Works adjacent to the waterway area
A Controlled Activity Approval under section 92 of the Water Management Act 2000 must be made to the Natural Resources Access Regulator (NRAR) for works within the waterway area.

Such plans and specifications must be submitted to the Principal Certifying Authority and shall form part of the Construction Certificate.

The following conditions are to be complied with prior to issue of a Construction Certificate for building works

3) Sediment and Erosion Control Management Plan required
The application for a Construction Certificate is to include plans and specifications that indicate the measures to be employed to control erosion and loss of sediment from the site. Control over discharge of stormwater and containment of run-off and pollutants leaving the site/premises must be undertaken through the installation of erosion control devices such as catch drains, energy dissipaters, level spreaders and sediment control devices such as filter fences and sedimentation basins.

Such plans and specifications must be approved as part of the Construction Certificate.

NOTE: The plans must be in compliance with Council's current "Northern Rivers Local Government Development Design & Construction Manuals and Standard Drawings".

4) Stormwater Drainage – Connection to Existing Drainage System
The application for a Construction Certificate is to include plans and specifications for stormwater drainage in accordance with AS/NZS 3500.3:2003, *Plumbing and drainage, Part 3: Stormwater drainage*. All stormwater drainage for the development must be conveyed by a gravity system to the existing stormwater drainage system within the site. Such plans and specifications must be approved as part of the Construction Certificate.

The following WSUD measures must be included in the design of the stormwater management plan for the site but not limited to:

- Vegetated swales
- Rainwater harvesting
- Rainwater tanks
- Stormwater Quality measures to meet the objectives of Table B3.1 of Chapter B3 of DCP 2014
- Dispersion trenches
- Energy dissipators at outlet points

5) Car parking layout, vehicle circulation and access plans required.
The application for a Construction Certificate is to include plans and specification that indicate access, parking and manoeuvring details in accordance with the plans approved by this consent.

The access, parking and footpath for the site is to comply with the requirements of AS 2890.1-2004: Parking facilities, Part 1: Off-street car parking and AS 2890.2 – 2010 - Parking facilities, Part 2: Off-street commercial vehicle facilities. Plans are to include, but not be limited to, the following items:

a) A total of 63 parking spaces including 4 accessible parking spaces
b) Adopt a parking user class 2 for general parking and class 4 for accessible parking
c) Pedestrian access mobility plan (footpath network). Footbridge over the waterway area from the reception building is to be deleted.
d) pavement design, comprising an all weather surface, such as asphalt, bitumen seal, concrete, pavers or other similar treatment;
e) site conditions affecting the access;
f) existing and design levels;
g) longitudinal section from the road centreline to the car space(s);
h) drainage details;
i) turning paths; and
j) line marking and signage.

The engineering plans and specifications are to be designed by a qualified practising Civil Engineer. The Civil Engineer is to be a corporate member of the Institution of Engineers Australia or is to be eligible to become a corporate member and have appropriate experience and competence in the related field.

Such plans and specifications must be approved as part of the Construction Certificate.

NOTE:
The plans must be in compliance with Council's current “Northern Rivers Local Government Development Design & Construction Manuals and Standard Drawings”.

All approved building/units but not constructed will require additional parking spaces

The following conditions are to be complied with prior to any building or construction works commencing

6) Erosion and Sediment Control Management Plan required
Erosion and sedimentation controls are to be in place in accordance with the approved Erosion and Sediment Control Plan.

Sediment and erosion control measures in accordance with the approved Erosion and Sedimentation Control plan/s must be maintained at all times until the site has been stabilised by permanent vegetation cover or hard surface.

Any such measures that are deemed to be necessary because of the local conditions must be maintained at all times until the site is made stable (i.e. by permanent vegetation cover or hard surface).

Note: Council may impose on-the-spot fines for non-compliance with this condition

The following conditions are to be complied with during construction

7) Maintenance of sediment and erosion control measures
Sediment and erosion control measures must be maintained at all times until the site has been stabilised by permanent vegetation cover or hard surface.

The following conditions are to be complied with prior to occupation of the building

8) Internal driveway, footpath and parking areas in accordance approved plans

A internal driveway, footpath and parking areas are to be constructed from the property boundary to the proposed car space(s) in accordance with the approved plans.

9) Stormwater disposal

Stormwater must be collected and disposed of in a controlled manner such that stormwater flows are:

a) Clear of buildings and infrastructure,
b) Clear of effluent disposal areas,
c) Not concentrated so as to cause soil erosion,
d) Not directly to a watercourse, and
e) Not onto adjoining land.

The following conditions will need to be complied with at all times

Notes