APPENDICES TO OBJECTION AND SUBMISSION TO DA 233/2022

SCOTTS HEAD COMMUNITY GROUP - SAVE SCOTTS HEAD SUB-COMMITTEE

August 2022¶

Appendix A – Community survey report

RESULTS REPORT - APRIL 2022

SCOTTS HEAD VILLAGE COMMUNITY SURVEY - proposed Ingenia development

Scotts Head Community Group

SAVE SCOTTS HEAD

The Scotts Head Community Group acknowledges the Traditional Custodians of this land, the Gumbaynggirr people. We pay our respects to them, and to all the First Nations people of Australia including their respective individual cultures, and their Elders past, present and future.

HIGHLIGHTS

- **238 survey responses were received.**

- **71.4% (170) were permanent residents of Scotts Head (renters or homeowners.**

- **81.5% (194) opposed the Ingenia proposal.**

- **The top three concerns were:**

    - Increase in traffic, parking and road safety issues - 94% (202)
    - Impact to community services, like medical services - 92.6% (199)
    - Scale and speed of population growth in Scotts Head - 88.4% (190)

- **84.5% (120) of over-55 homeowners said they would never or were unlikely to consider selling their home to purchase a manufactured dwelling in the Ingenia development.**

Background

We asked the community to complete a simple, four question anonymous survey to understand how people felt about the proposal by Ingenia Lifestyles to build a manufactured housing estate of 250 dwellings for up to 500 over-55s on a bushland site just before the entrance to Scotts Head village.

When did the survey open and close?

The survey was released on 13 April 2022 and closed at mid-day 27 April 2022 (two weeks).

How was the survey publicised?

Information about the survey and the link was sent to email distribution lists of the Scotts Head Community Group. It was also shared on the Scotts Head Community Group Facebook page and 60 hard copies were distributed.

Could anyone complete the survey?

Yes. The survey was open to anyone to undertake and we asked the community to share it widely.

How did we prevent the same person submitting multiple survey responses?

The survey was designed on Google Forms and included a requirement for an email to be provided. Survey responses were then manually checked for repeat email addresses. We also reviewed survey results daily to check for any unusual activity or patterns over time - none were observed.

How many surveys were submitted?

238 survey responses were received in the two week period. 227 were entered on-line; 11 were provided in hard-copy and entered by the survey team. Not all responses answered all four survey questions.

170 responses were from permanent residents of Scotts Head, which is almost 25% of the adult population of the village.[1]

Why don't the numbers add up to 100%? - rounding of results

When summarising results, Google Forms rounds numbers to one decimal point - so the percentage results below do not always add to exactly 100%.

[1] Based on ABS 2016 Scotts Head profile, accounting for people 20 years and over - https://www.abs.gov.au/census/find-census-data/quickstats/2016/SSC13508

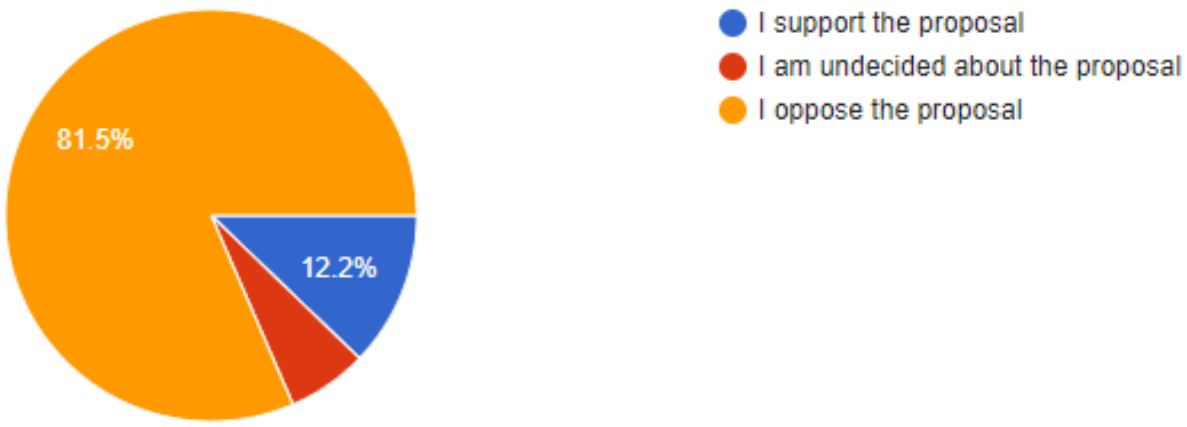
<u>What are the results?</u> (as above - these are rounded to one decimal place and do not always add to exactly 100%)

Q1. We asked people to tell us whether they were a permanent or non-permanent resident of Scotts Head or the Nambucca Valley, or whether they were just visiting the area.

- **238 responses were received to Q1.**
    - **71.4% (170) were permanent residents of Scotts Head (renters or homeowners**
    - 10.9% (26) were non-permanent residents of Scotts Head (holiday property owners and others)
    - 9.2% (22) were visitors or only staying temporarily in Scotts Head
    - 7.1% (17) were a permanent resident living in another part of the Nambucca Valley
    - 0.8% (2) were non-permanent residents living in another part of the Nambucca Valley
    - 1 (0.4%) was in the “other” (undisclosed) category,

Q2. We asked people: "Based on what you know about the proposed Ingenia Lifestyle manufactured housing development at Scotts Head, how would you describe your views about it?"

- **238 responses were received to Q2.**
    - **81.5% (194) opposed the proposal.**
    - 12.2% (29) supported the proposal
    - 6.3% (15) were undecided about the proposal.



Q3. We asked people: "If you have concerns about the proposed Ingenia Lifestyles manufactured housing development, what are they? Tick all the concerns you may have".

- **215 responses were received to Q3.**

The top concerns in order were as follows - tied concerns are listed together.

1. **Increase in traffic, parking and road safety issues - 94% (202)**
2. **Impact to community services, like medical services - 92.6% (199)**
3. **Scale and speed of population growth in Scotts Head - 88.4% (190)**
4. Impact to infrastructure, like sewer, water and power supply - 87.4% (188)
5. a) Impact to roads from additional vehicles (wear and tear) - 87% (187)
   b) Precedent for other future development - 87% (187)
6. Loss of native bushland and animal habitat - 83.7% (180)
7. Impact to Aboriginal cultural heritage (including potential loss of Aboriginal sites) - 80% (172)
8. a) Impact to the sense of community - 79.5% (171)
   b) Cumulative impacts of this and other development - 79.5% (171)
9. a) Cost of supplying community and infrastructure services - 79.1% (170)
   b) Impact to emergency services, RFS, SES and ambulance - 79.1% (170)
10. Impact to local Council funding and resources - 72.6% (156)
11. Bushfire risk - 69.8% (150)
12. Flood risk - 65.6% (141)
13. Visual or amenity impacts - 63.3% (136)

- Individual "other" comments **against** the proposal included:
  - increases in people, use of the boat ramp, dogs/faeces on the beach
  - social impacts of a gated community, demographic change and unlikely to free up housing for young families
  - different rate payments, lack of council services, inappropriate growth

- Individual "other" comments **supporting** the proposal included:
  - "It's only going to do good to the town"
  - "These are just fabricated excuses"
  - "It's fantastic" and "Will be good as not enough restaurants".

Q4. We asked: "If you are a homeowner over the age of 55, how likely are you to consider selling your home in Scotts Head or the Nambucca Valley to then purchase a manufactured dwelling in the Ingenia development at Scotts Head?

- **236 responses were received to Q4.**
    - 39.8% (94) said the question was not applicable to them as they were under 55 or not a homeowner.

- **Of the remaining 142 responses from over-55 homeowners:**
    - **84.5% (120) said "No - never" or "Unlikely"**
    - 9.9% (14) said "Yes - definitely" or "Likely"
    - 5.6% (8) were "Unsure".

Appendix B – Community petition – 272 signatures

PETITION

TO: COUNCILLORS, NAMBUCCA VALLEY COUNCIL

We, the undersigned residents of the Nambucca Valley Council, hereby express our serious concerns about the proposed Ingenia Manufactured Housing Estate on Scotts Head Road.

The proposed development will have serious negative impacts on residents in the immediate area and the Nambucca Valley more broadly.

The development is not in keeping with the small-scale residential nature of the surrounding area, is inconsistent with the principles of ecologically sustainable development in an area that is currently zoned for rural use and is potentially damaging to sites of significance to our aboriginal community.

The scale of development, which would increase the population of Scotts Head by over one-third, will place enormous strain on physical infrastructure, increase costs for the maintenance of areas of common use and result in added pressure on community services such as access to medical services and facilities, which are already inadequate to meet community needs. The limited and reduced access to community facilities and services would also be felt by residents of the proposed estate.

Approval of any development of this kind would be contrary to the interests of Nambucca Valley residents and the public interest generally.

Name	Signed	Email Address
SIERRA CURTIS	S. Curtis.	
RAMA GENNAT		
CEEDA CURTIS		
LUKE Ringstad.	L. Ringst	
RHYS PACEY	R	
Danielle Cranston		
Stephen Cranston		
SUSAN KNIGHT		
PETER KNIGHT		
JOY HARDGE		
LINDA STEWART		
CHRIS OXLEY		
Peter Maynell		
LUKE SCHWARTZ		
Leonie Schwartz.		
RICK JANSCH		
ALLAN RUDNER		
Penelope Lee		
Brian Garrett		
JIM NARRIS		
Bianca Hossey		
CRAIG MEECHAM		
Jennifer CRIMMINS		
TONY CRIMMINS		
Pat Manson		
Clarissa Crawley		
Michael Crawley		
Jason O'Donnell		

28.

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Name	Signed	Email Address
SUE McWILLIAM		
PHIL McWILLIAM		
ANYA DUNN		
GORDON FURZE		
AYLA FURZE		
TOM FURZE		
LISA SUMMERHILL		
PETER CORBETT		
Kate Nethery		
Michela Friolo		
Robert Game		
Emmy Korn		
Casey Symonds		
Anne Kennen		
GREG BIRKETT		
Malina Evans		
Gemma Shackelford		
Todd Holland		
CHERRY MANUEL		
Brad Hunt		
DON BOWDEN		
Damian Borrell		
Janet COURT		
Steve Garnham		
Jill Garnham		
RAE NEILL		
LOUISE RYALL		
Annette Balfour		
Karen Greening		

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Name	Signed	Email Address
Angela Turner		
John Poore		
June Poole.		
LISA HOGAN		
GREG HOGAN		
Alan Peters		
Shirley Naylor		
KIM RUMING		
PETER RUMING		
Avalon Vowels		
Nina Lawson		
Sandon Vowels		
Crystal Vowels		
Wade Vowels		
STEVE PERRY		
KIRRA PERRY		
KYLIE DWYER		
MYLES THOMPSON		
Gus Smith		
RICCI JANSEN.		
CLAIR WAINWRIGHT		
COOPER MCCOY		
Cathy Khatchadourian		
Sylvia Cameron		
Jan Jenkins		
NICK MCCOY		
Helen Westaway		
Tia McIntyre		
Joanne Devereaux		

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Name	Signed	Email Address
Mandy Richardson	A Richardson	
Alicia Magoffin		
David Gladdon		
Judy Morris		
Lyn Norris		
Cheryl Gilmour		
JAMES LEDGER		
Tom Doherty		
Naomi Ryan		
Neil Cunneen		
Karl Youngs		
Gretchen Tashimoto		
ZOË LEGGE		
JOHN BARTLEY		
Penny Coleing		
Darka Wanka		
Heather Wanka		
Susy Brien		
Lorien Brien		
Arlie Ledger		
Warren Hayes		
Lynne Ebert		
MARG BURNS		
Alexandra Schmidt		
Woodie Bouma		
PETE LAWSON		
Alisha Cruickshanks		
Stewart Cruickshanks		
LES TURNER		

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Name	Signed	Email Address
Tracie Lewis		
Mick Cotter		
SAMANTHA FETHERSTON		
Aleisha Cotter		
Jeff Lows		
Kerrie Budge		
Colleen Peter		
ALISON WILSON		
Rob Taylor		
SHARON FITZGERALD		
DANE NEKE		
CORINNE BOUMA		
KAIA WADLING		
DAVE WADLING		
Janet Walters		
Tony Heaton		
David Sands		
Jenny Sands		
Ros Hambly		
Steve HAMBLYN		
Tina Seidel		
COLIN MOORE		
RUSS PRESTAGE		
TERRY FALSON		

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Name	Signed	Email Address
Andrew Murray		
Glenn Lemche		
Paul Foley		
Sylvia Hudson		
Barbara Gray		
Robert Gray		
Ann Armstrong		
Rodney Chamness		
Tracy Champness		
Amber M°Quinn		
Jim Hill		
Peter Ford		
Barbara Skinner		
Tony Skinner.		
Jamie Skinner		
Kellie Skinner.		
Sam. Harris.		
Blake Harris.		
Chris Kaczan		
W. Kaczan.		
Paul Evans		
Dylan Rudner		
Mitch Neill		
Cameron Bell		
Reece Barrishill		
Joe Pecarra		
Simon Alderson-Hicks		
Sue Alderson-Hicks		
Brett Blacker		

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Name	Signed	Email Address
MARGII CALDWELL	Margi Caldwell	
JOHN VAN EMDEN		
WILL CARTWRIGHT		
Jessica Cartwright		
ROBYN COSFORD		
Diana Oakes		
Mel Gilmour		
Sam Gilmour		
TOMMY JOHNSTON		
Nathan Jones		
RAMA GUNNAT		
ED MILLS		
GREG BOYCOTE		
CALUM WICKS		
michelle WICKS		
STEPHEN EDWARDS		
Rob den Besten		
PAUL GIFFIN		
BILLY WALKER		
Kerry den-Besten		
Jennifer Conroy		
Karen Elvin		
ANDREW OLIVER		
GREG [illegible]		
[illegible]		
Violet Deller		
PAUL DELLER		
Andrew Hullman		
Jennifer Hullman		

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Name	Signed	Email Address
Angela Walker		
Dasha Gilroy		
Grant. Salmash		
John Gilroy		
Claire Forbes		
Michelle Hill		
Donna Prendla		
CATE SMITH		
Terry Graves		
Ron Marsh		
J. GRAVES		
K. NOWLAND		
P. NOWLAND		
ROD M°CULLOCH		
LIBBY FOSTER		
Harry Lynch		
Lyndall Lynch		
Michele Picario		
Carole Walker		
Allison Bosley		
Cooper McCoy		
GREG DAINTY		
Claire Slater		
Edwina Danga		
Emily Werner		
Kristine Coutts		
John Pithois		
Frank Pithois		
Don Coutts		

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Name	Signed	Email Address
JOHNNY WILLIAMS		
RITCHIE DONOVAN		
MICHAEL PETERSON		
MATT CAMILLERI		
LYN BYRON.		
BRUCE BYRON.		
Steve Hayes		
Kerry Hayes	Kerry Hayes	
MATT PRITCHARD		
PETER MCCARTHY		
Ross Painter		
KAZE NICHOLL		
Chris Bell		
MONIQUE DAVIDSON		
Adrian Comiskey		
Sheri Argyll		
GM Richardson		
Martin Mountford		

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Name	Signed	Email Address
William Dorereaux	W. Dorereaux	
Jordan Blackley		
Michael George		
Layla Schwartz		
Susie Peake		
Simone Rudolph		
NICHOLAS NAKIS		
CAROLYN BLACKADDER		
Lee Vowels		
PATTY BARRY FLINN		
Nathan Hannah		
Jacinta Sirawsa		
Belinda Edwards		
Kelly Pacey		
Nerdal Falconer		
Ethan Blackley	E. B	
Pete & Jen Hicks		
Kristy Eklund		
Graham Howard		
Leesa Constantine		
Phil Constantine		
RACHEL YOUNGER		

Appendix C - Analysis of comparable NSW Ingenia developments

Town - Ingenia Name	Town Population	Med. Town Age	Private Dwellings	Ingenia Dwellings total planned dev. size	Increase in Population % allowing 1.25 - 2.20 adults per home[1]	Dwelling increase as a % (using private dwelling data)
South West Rocks	4603	56	2765	114 + Hol	3.09-5.44%	4.12
Ettalong Beach	4793	52	2801	116	3.02-5.32%	4.14
Woolgoolga Plantations	5290	47	2477	185	4.37-7.69%	7.47
Halekulani, Cent. Coast Sunnylake Shores	2538	48	1199	94	4.62-8.14%	7.84
Lake Munmorah	5248	48	2358	230	5.47-9.64%	9.75
Morisset The Grange	3213	56	1566	215	8.36-14.72%	13.73
Halekulani, Cent. Coast Bevington Shores	2538	48	1199	184	9.06-15.94%	15.35
Anna Bay, Pt Stephens Latitude One	3846	47	1829	417	13.55-23.85%	22.80
Scotts Head	**899**	**50**	**581**	**255**	**35.45-62.40%**	**43.88**

NOTE: Consistent with the Social Impact Assessment for DA 233/2022, population and dwelling numbers are sourced from the 2016 census.

https://www.abs.gov.au/census - for town populations, medium ages and number or private dwellings

https://www.ingeniacommunities.com.au/wp-content/uploads/2021/10/INA_2021-Sustainability-Report.pdf

https://www.ingeniacommunities.com.au/wp-content/uploads/austocks/ina/2021_02_16_INA_07ecc9b53d674f2f58de26dc80551c44.pdf

[1] these are the same average household sizes as used in the Social Impact Assessment (Table 4.1) for DA 233/2022

D - Scotts Head house price analysis 2022

pricefinder

SUBURB FLYOVER REPORT

SCOTTS HEAD (HOUSE)

pricefinder

SCOTTS HEAD - Sales Statistics (Houses)

Year	# Sales	Median	Growth	Low	High
2004	22	$ 368,425	0.0 %	$ 75,000	$ 1,225,000
2005	11	$ 350,000	-5.0 %	$ 75,000	$ 880,000
2006	16	$ 320,000	-8.6 %	$ 45,000	$ 875,000
2007	27	$ 360,000	12.5 %	$ 140,000	$ 2,300,000
2008	12	$ 410,000	13.9 %	$ 108,000	$ 918,560
2009	29	$ 320,000	-22.0 %	$ 85,000	$ 765,000
2010	15	$ 350,000	9.4 %	$ 87,000	$ 497,000
2011	8	$ 367,500	5.0 %	$ 283,333	$ 575,000
2012	6	$ 412,500	12.2 %	$ 272,500	$ 850,000
2013	21	$ 360,000	-12.7 %	$ 250,000	$ 850,000
2014	27	$ 339,000	-5.8 %	$ 237,500	$ 775,000
2015	32	$ 380,000	12.1 %	$ 175,550	$ 660,000
2016	36	$ 393,500	3.6 %	$ 188,417	$ 1,050,000
2017	23	$ 445,000	13.1 %	$ 230,000	$ 980,000
2018	24	$ 512,000	15.1 %	$ 310,000	$ 1,030,000
2019	20	$ 617,500	20.6 %	$ 280,000	$ 1,565,000
2020	22	$ 634,500	2.8 %	$ 349,000	$ 1,850,000
2021	29	$ 900,000	41.8 %	$ 340,000	$ 2,650,000
2022	2	$ 779,166	-13.4 %	$ 333,333	$ 1,225,000

Median Sale Price

$900k

Based on 29 recorded House sales within the last 12 months (2021)

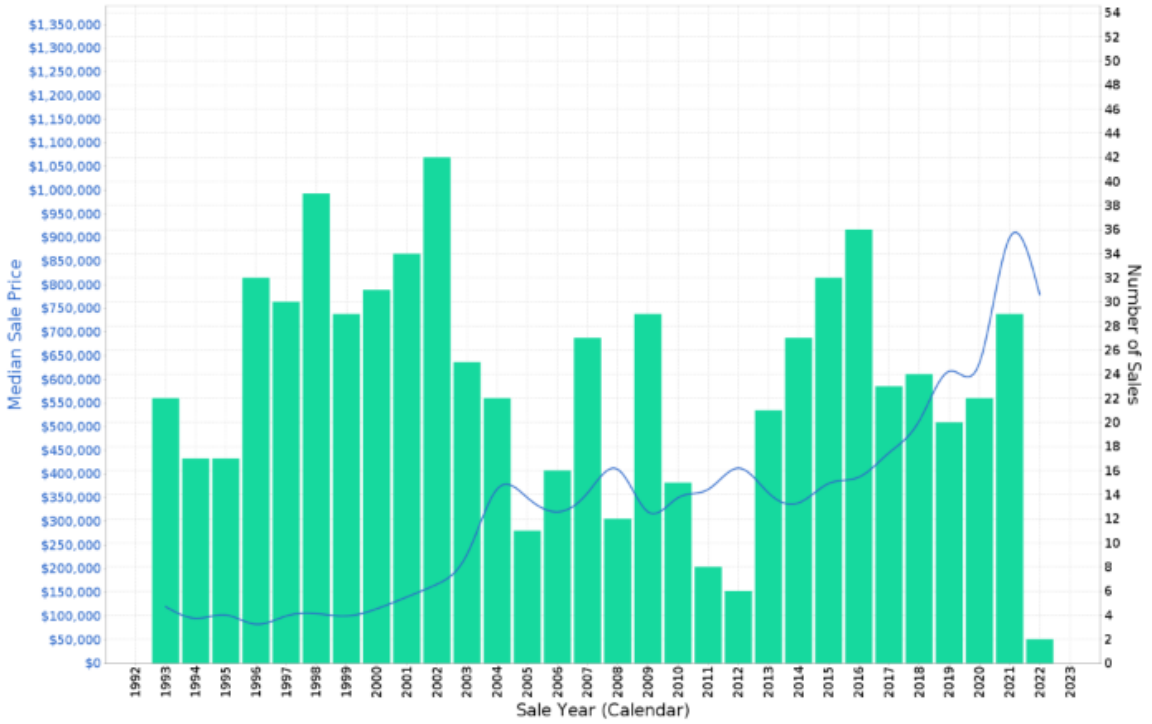
Based on a rolling 12 month period and may differ from calendar year statistics

Suburb Growth

+41.8%

Current Median Price: $900,000
Previous Median Price: $634,500

Based on 51 recorded House sales compared over the last two rolling 12 month periods



SCOTTS HEAD - Recently Sold Properties

Median Sale Price

$900k

Based on 29 recorded House sales within the last 12 months (2021)

Based on a rolling 12 month period and may differ from calendar year statistics

Suburb Growth

+41.8%

Current Median Price: $900,000
Previous Median Price: $634,500

Based on 51 recorded House sales compared over the last two rolling 12 month periods

Sold Properties

29

Based on recorded House sales within the 12 months (2021)

Based on a rolling 12 month period and may differ from calendar year statistics

Appendix E – Flood access and fire photos Scotts Head 2020-2022

Scotts Head Road 2021 – access from development site and Village to Grassy Head Rd and Pacific Highway blocked (ie. no way into or out of Scotts Head)

New flood warning mural – Scotts Head Road underpass to Pacific Highway - 2022

Scotts Head Rd 2021

Grassy Head Road

Scotts Head Road – corner of Cookies Road, looking south(route to Pacific Highway blocked)

Scotts Head Road – end April 2022 – water flowing from Ingenia site on south side of road towards Warrell Creek on north side of road

2019/20 Black Summer

Top of Vista Way / Panorama, Scotts Head

Beach towards headland

Corner Gloucester and Wallace

Hill Street looking north – beach and mountains not visible

Appendix F – independent traffic report

NK TRAFFIC
TRAFFIC AND TRANSPORT CONSULTANTS

TRAFFIC REPORT

TRAFFIC AND PARKING IMPACT STUDY
TRAFFIC ASSESSMENT
MULTI–UNIT DEVELOPMENT

1006 Scotts Head Road - Way Way

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August 2022

CONTENTS

1.0 INTRODUCTION

NK TRAFFIC was commissioned by Scotts Head Community Group - Save Scotts Head Sub-committee to assess the traffic and parking arrangements of the proposed Development at 1006 Scotts Head Rd, Way - Way.

The proposal is within Nambucca Valley Council. There is no development at the site where the proposed development is designed to be constructed surrounded by Greenfield Land.

This traffic report assesses the traffic and parking implications. The report has been prepared to accompany the Group's submission to the DA.

In the following topics, the traffic and parking impacts are assessed to determine whether the proposal's traffic impact has detrimental effects on the road network and residents within the surrounding area. In more detail this report outlines the following:

- Describes the existing site and location,
- Reviews the existing traffic conditions,
- Analyses the parking demand
- Examines the access requirements
- Provides information on the Public Transport
- The expected traffic generation
- Reviews the impact of the development traffic on the road network
- Conclusions and potential impacts which could be detrimental to the surrounding road network.

Locality Map – 1006 Scotts Head Rd Way - Way

2.0 DESCRIPTION OF THE PROPOSAL

The proposal comprises the construction of a new caravan park at 1006 Scotts Head Rd, Way Way.

The Caravan Park and facilities include the following:

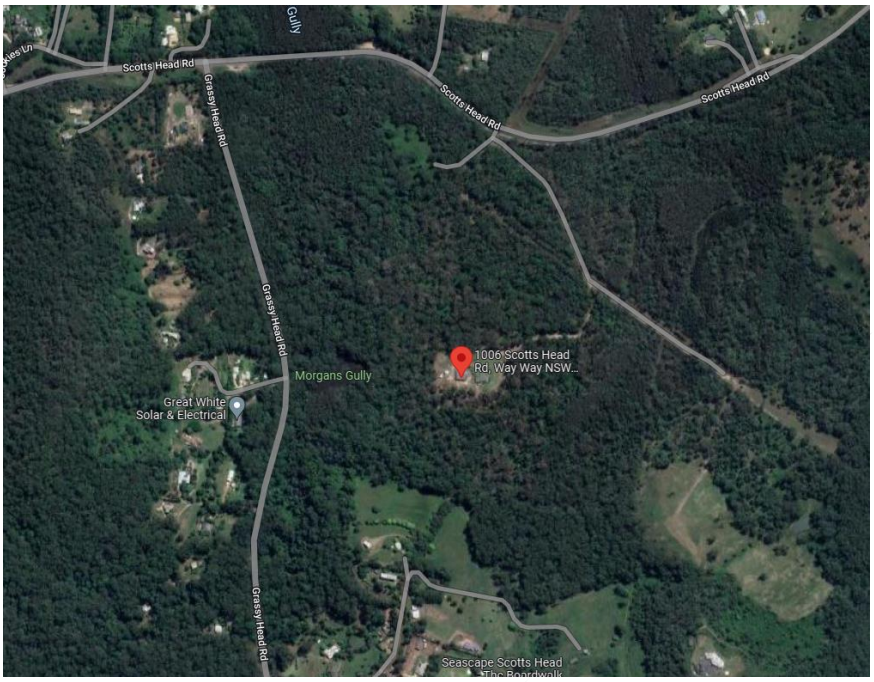
255 long-term dwelling sites and 2 short-term dwelling sites
Three communal areas include the following facilities:
A Parking area of 638 car Parking Spaces
Medical consulting rooms
Car, buggy, and bus parking
Social lounges and dining
Bar and kitchen
Outdoor alfresco and lawn
Pool
Gym & studio
Arts and crafts room
Library and business centre
Cinema
Bowling green
Pickle ball courts
BBQ pavilion
Golf simulator
Dog park
Community Garden
Community
Operations shed
Caravan storage
Caravan wash bay
The medical consulting rooms are to be accessible to the public, with access provided before the security gate into the estate. All other communal facilities are for residents only

The proposal provides 638 off-street parking Caravan Parking spaces for residents for visitors (Long Term and Short Term) visitors, Medical Consulting Rooms and other Communal Areas.

It should be noted that the Traffic Impact Assessment refers to 638 car parking spaces where the statement of environmental effects for the DA refers to 641 parking spaces.

Access to the premises is off Scotts Head Rd. The proposal includes access roads via three north-south sealed roads and a secondary access road.

The following traffic assessment has been undertaken to review the traffic and parking implications and impacts of the proposed development.



Existing Site and Access

3.0 EXISTING TRAFFIC CONDITIONS

Scotts Rd is classified as a two–way regional road under the jurisdiction of the Nambucca Council. The sign posted speed limit is 90 km/h. The road is classified as a Regional Road.

Giinagay Way connects with Scotts Rd to the north. It is a two–way road with one lane in each direction. The sign posted speed limit along this road is 80 km/h.

The site is located south of Scotts Rd at the Pacific Highway.

Scotts Head Rd at the access Rd intersection

Site access roads

4.0 ROAD SAFETY

The NSW Crash statistics provide crash data statistics for the road network around the Nambucca Valley Area.

The crash statistics for a three–year period is shown in the Crash map below and provided below in the reported detailed statistics.

There are also reported near–misses indicated in the Compass IoT Safepoint platform and excessive vehicle g-forces which are derived from connected vehicles' data displayed in the Compass IoT Brakepoint Road intelligent platform.

The NSW Road Safety data and the Compass IoT Road intelligence data mentioned above are provided in the following topics.

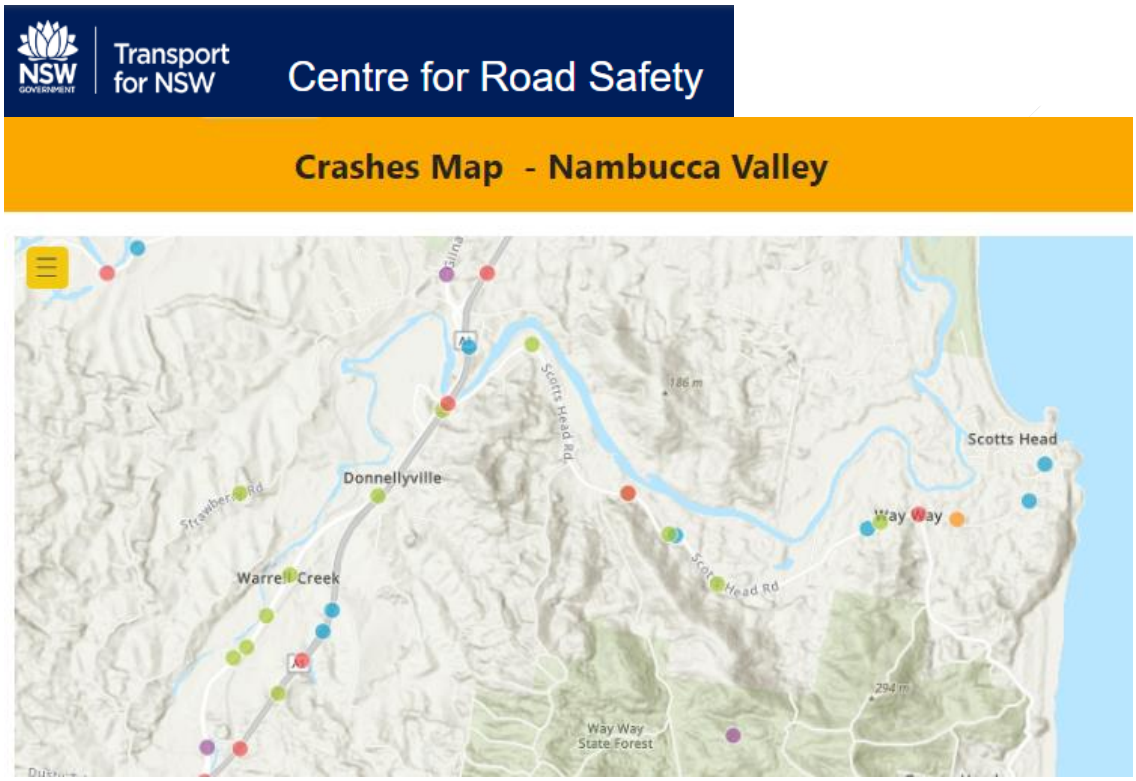
The Crash Statistics have been obtained from the TfNSW Centre for Road Safety for a three-year period 2018-19-20. The 3- year recorded injury crashes have been identified for the roads that provide access to the proposal and the surrounding road network.

The Compass IoT technology uses data from connected vehicles and provides road safety analysis through the Safepoint Platforms and insight along the network showing where the vehicles are at more risk or which road sites require treatment. This is done through the G-

Force thresholds. The Compass IoT survey platform also indicates traffic volumes and speeds. The traffic volumes and speeds have been analysed further in the next topics.

The following information deals with Road Safety issues that have been assessed to determine the risks associated with the existing road network and to determine any risks which require to be examined related to the additional vehicles generated as a result of the proposal.

NSW ROAD SAFETY STATISTICS



The NSW Crashes reported 73 injury crashes within a three-year period in the road network surrounding the proposed site. Of these crashes 7 are reported as fatal. This represents a remarkably high number of serious and fatal crashes for a relatively low small number of roads surrounding the site.

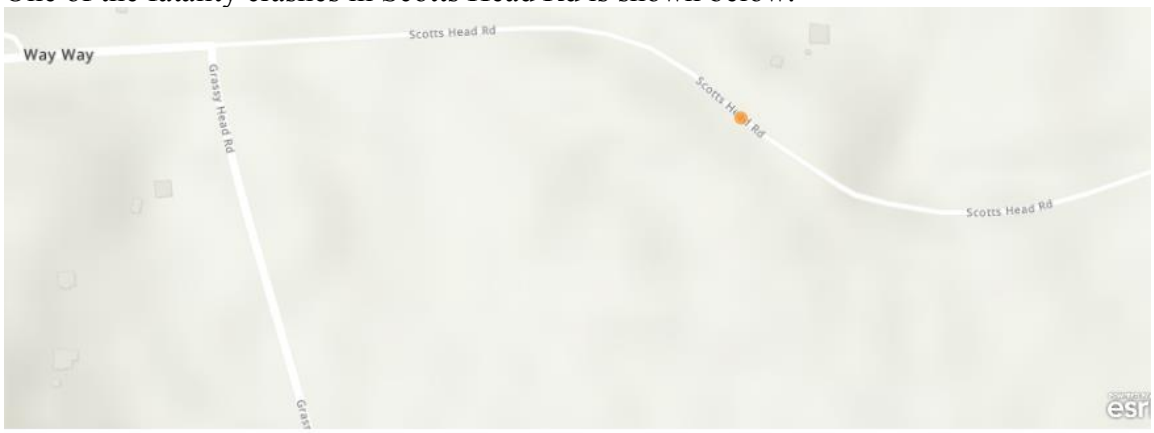
The following reports indicate the reporting year, the degree of a crash, the RUM – Code and other factors which indicate the details of each crash.

Reporting year	Crash Id	Degree of crash	RUM - code	RUM - description	Type of location	Natural lighti
2020	1239846	Serious Injury	13	Right near	T-junction	Daylight
2020	1240646	Moderate Injury	71	Off rd left => obj	Divided road	Darkness
2020	1243784	Moderate Injury	75	Off end of road	T-junction	Daylight
2020	1247122	Moderate Injury	83	Off rt/rt bnd=>obj	2-way undivided	Daylight
2020	1248440	Serious Injury	85	Off rt/lft bnd=>obj	2-way undivided	Daylight
2020	1249966	Serious Injury	9	Ped other	2-way undivided	Dusk
2020	1251960	Moderate Injury	81	Off left/rt bnd=>obj	Roundabout	Daylight
2020	1253269	Serious Injury	74	On road-out of cont.	2-way undivided	Daylight
2020	1255990	Serious Injury	83	Off rt/rt bnd=>obj	2-way undivided	Daylight
2019	1189666	Fatal	66	Object on road	2-way undivided	Daylight
2019	1191241	Moderate Injury	30	Rear end	Divided road	Daylight
2019	1194287	Moderate Injury	3	Ped on carriageway	2-way undivided	Dusk
2019	1197192	Serious Injury	20	Head on	2-way undivided	Daylight
2019	1197342	Moderate Injury	80	Off left/right bend	2-way undivided	Daylight
2019	1197802	Serious Injury	46	Reversing into obj	2-way undivided	Daylight
2019	1199071	Serious Injury	83	Off rt/rt bnd=>obj	2-way undivided	Daylight
2019	1197192	Serious Injury	20	Head on	2-way undivided	Daylight
2019	1197342	Moderate Injury	80	Off left/right bend	2-way undivided	Daylight
2019	1197802	Serious Injury	46	Reversing into obj	2-way undivided	Daylight
2019	1199071	Serious Injury	83	Off rt/rt bnd=>obj	2-way undivided	Daylight
2019	1200596	Serious Injury	20	Head on	2-way undivided	Daylight
2019	1200976	Serious Injury	85	Off rt/lft bnd=>obj	2-way undivided	Dusk
2019	1202153	Moderate Injury	0	Ped nearside	T-junction	Daylight
2019	1202167	Moderate Injury	13	Right near	T-junction	Daylight
2019	1205652	Moderate Injury	21	Right through	X-intersection	Daylight
2019	1205780	Serious Injury	86	Off left/left bend	2-way undivided	Daylight
2019	1206710	Moderate Injury	88	Out of cont on bend	2-way undivided	Daylight
2019	1208450	Moderate Injury	20	Head on	2-way undivided	Daylight
2019	1208507	Serious Injury	85	Off rt/lft bnd=>obj	2-way undivided	Daylight
2019	1210457	Serious Injury	88	Out of cont on bend	T-junction	Daylight
2019	1210899	Fatal	71	Off rd left => obj	Divided road	Dawn
2019	1214562	Serious Injury	73	Off rd rght => obj	2-way undivided	Daylight
2019	1214751	Moderate Injury	20	Head on	2-way undivided	Daylight
2019	1215609	Fatal	85	Off rt/lft bnd=>obj	2-way undivided	Darkness
2019	1216257	Fatal	70	Off road to left	2-way undivided	Daylight
2019	1217583	Serious Injury	2	Ped far side	T-junction	Daylight
2019	1217643	Moderate Injury	13	Right near	T-junction	Daylight
2019	1219363	Fatal	85	Off rt/lft bnd=>obj	2-way undivided	Darkness
2019	1220146	Serious Injury	3	Ped on carriageway	2-way undivided	Daylight
2019	1220171	Moderate Injury	4	Ped walk with	Divided road	Darkness
2019	1220461	Serious Injury	0	Ped nearside	2-way undivided	Daylight
2019	1221109	Moderate Injury	10	Cross traffic	T-junction	Daylight
2019	1223767	Moderate Injury	70	Off road to left	2-way undivided	Daylight
2019	1227158	Serious Injury	30	Rear end	Roundabout	Daylight
2018	1160468	Moderate Injury	73	Off rd rght => obj	2-way undivided	Darkness
2018	1161278	Fatal	2	Ped far side	2-way undivided	Daylight

2018	1162397	Serious Injury	87	Off lft/lft bnd=>obj	Divided road	Darkness
2018	1163075	Serious Injury	20	Head on	2-way undivided	Daylight
2018	1163515	Moderate Injury	81	Off left/rt bnd=>obj	2-way undivided	Daylight
2018	1164114	Serious Injury	13	Right near	T-junction	Daylight
2018	1165343	Serious Injury	73	Off rd rght => obj	2-way undivided	Daylight
2018	1166797	Moderate Injury	46	Reversing into obj	2-way undivided	Daylight
2018	1166910	Serious Injury	81	Off left/rt bnd=>obj	2-way undivided	Darkness
2018	1168440	Serious Injury	20	Head on	Divided road	Daylight
2018	1171420	Serious Injury	73	Off rd rght => obj	2-way undivided	Darkness
2018	1172226	Serious Injury	83	Off rt/rt bnd=>obj	2-way undivided	Darkness
2018	1172633	Serious Injury	30	Rear end	2-way undivided	Daylight
2018	1173593	Serious Injury	74	On road-out of cont.	2-way undivided	Daylight
2018	1174111	Serious Injury	80	Off left/right bend	T-junction	Daylight
2018	1174650	Serious Injury	71	Off rd left => obj	Divided road	Daylight
2018	1174766	Moderate Injury	71	Off rd left => obj	2-way undivided	Darkness
2018	1176378	Serious Injury	85	Off rt/lft bnd=>obj	2-way undivided	Dawn
2018	1177738	Serious Injury	85	Off rt/lft bnd=>obj	2-way undivided	Daylight
2018	1178285	Serious Injury	10	Cross traffic	T-junction	Daylight
2018	1178521	Moderate Injury	71	Off rd left => obj	Divided road	Dawn
2018	1178856	Moderate Injury	67	Struck animal	2-way undivided	Darkness
2018	1180241	Serious Injury	84	Off right/left bend	Divided road	Darkness
2018	1180521	Serious Injury	71	Off rd left => obj	2-way undivided	Daylight
2018	1182467	Serious Injury	72	Off road to right	2-way undivided	Daylight
2018	1184053	Serious Injury	85	Off rt/lft bnd=>obj	2-way undivided	Daylight
2018	1184723	Serious Injury	87	Off lft/lft bnd=>obj	2-way undivided	Daylight
2018	1185164	Fatal	83	Off rt/rt bnd=>obj	2-way undivided	Daylight
2018	1186122	Serious Injury	20	Head on	2-way undivided	Daylight
2018	1189990	Serious Injury	86	Off left/left bend	2-way undivided	Dusk

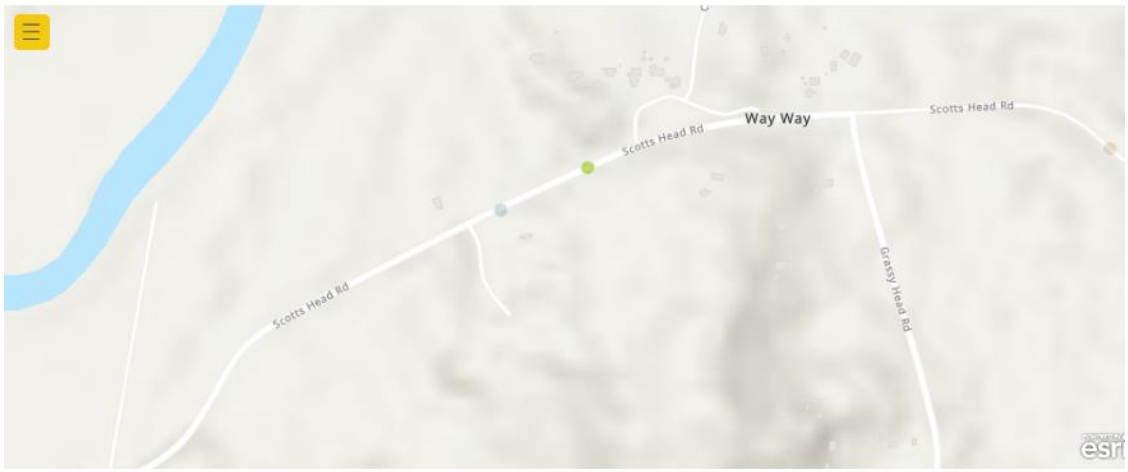
The above three–year crash statistics indicate a high number of crashes, many of them serious, including fatalities in the surrounding road network.

One of the fatality crashes in Scotts Head Rd is shown below.



Reporting year	Crash Id	Degree of crash	RUM - code	RUM - description	Type of location	Natural lighting	Longitude	Latitude	Number killed	Number injured
2018	1185164	Fatal	83	Off rt/rt bnd=>obj	2-way undivided	Daylight	152.985342	-30.755741	1	1

A serious injury recorded along Scotts Head Read is shown below



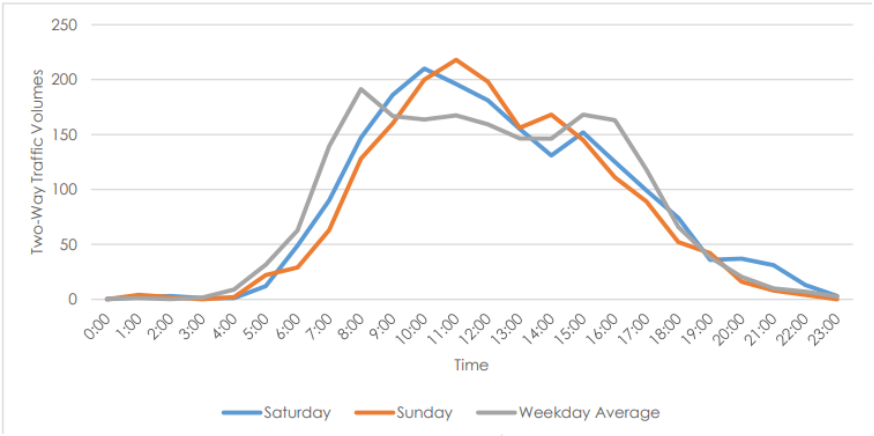
Reporting year	Crash Id	Degree of crash	RUM - code	RUM - description	Type of location	Natural lighting	Longitude	Latitude	Number killed	Number injured
2018	1189990	Serious Injury	86	Off left/left bend	2-way undivided	Dusk	152.975310	-30.756051		1

The geometry of the road with the two-way undivided road in a high-speed environment with the absence of a road shoulder and many trees close to the carriageway creates a safety issue along these rural roads. The additional traffic added to the road network due to the proposal is expected to create additional road risks unless road safety measures are undertaken to reduce the road trauma.

Prior to any additional traffic being added to the road network, it is recommended that a Road Safety Audit take place with significant interventions be applied to increase road safety in Scotts Head Road and the surrounding road network.

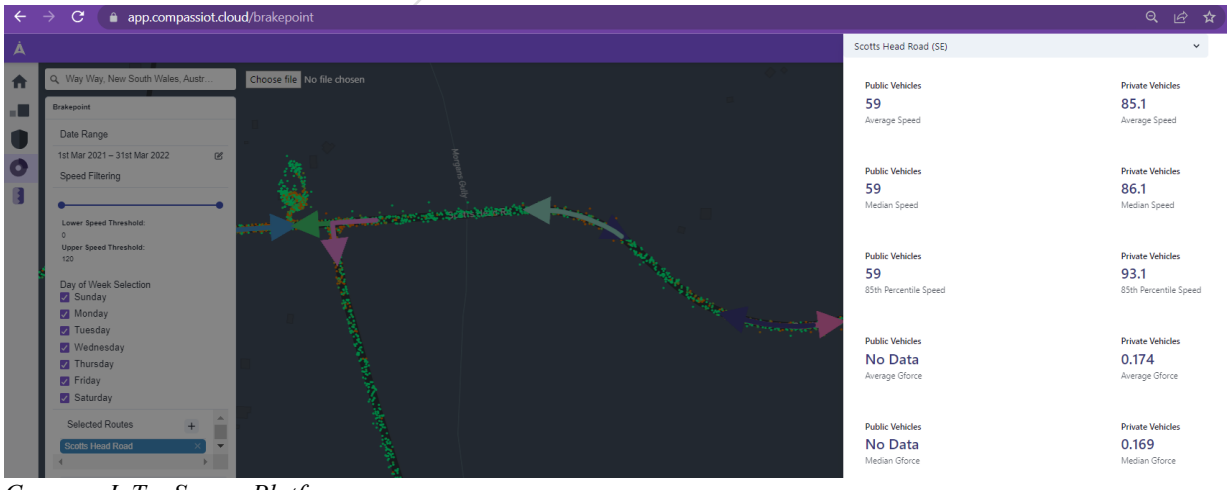
Taking into consideration that the additional traffic added to the road network represents approximately 50% of traffic on the road network and specifically along Scotts Head Road, it is anticipated statistically that the road crashes will be increased at a high rate, provided that no significant changes will take place along the road network.

The traffic counts undertaken in 2021(TTPP – provided in the traffic assessment dated 24 June 2022) indicate on average 191 vehicle movements in the AM peak (8.00 am – 9.00 am) and 168 vehicle movements in the PM peak (3.00 - 4.00 pm). Below is the graph indicating the fluctuation of traffic flows.



Existing traffic volumes

Traffic Survey from the Compass IoT platform shows the traffic speeds long Scotts Head Road. The following visualization from the Compass IoT platform shows Average, Mean and 85% speeds.

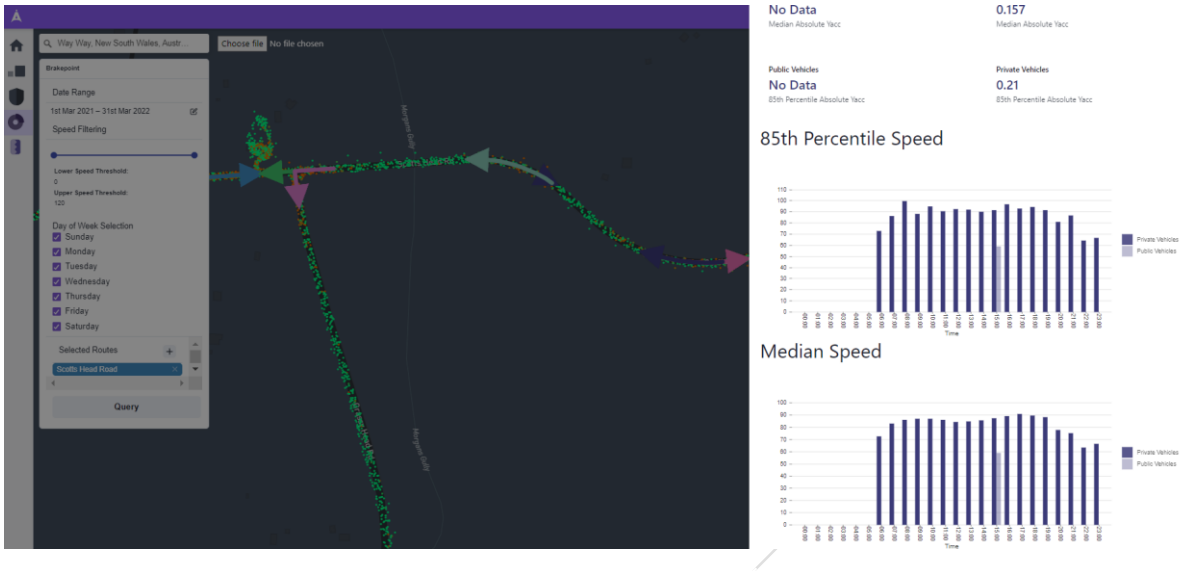


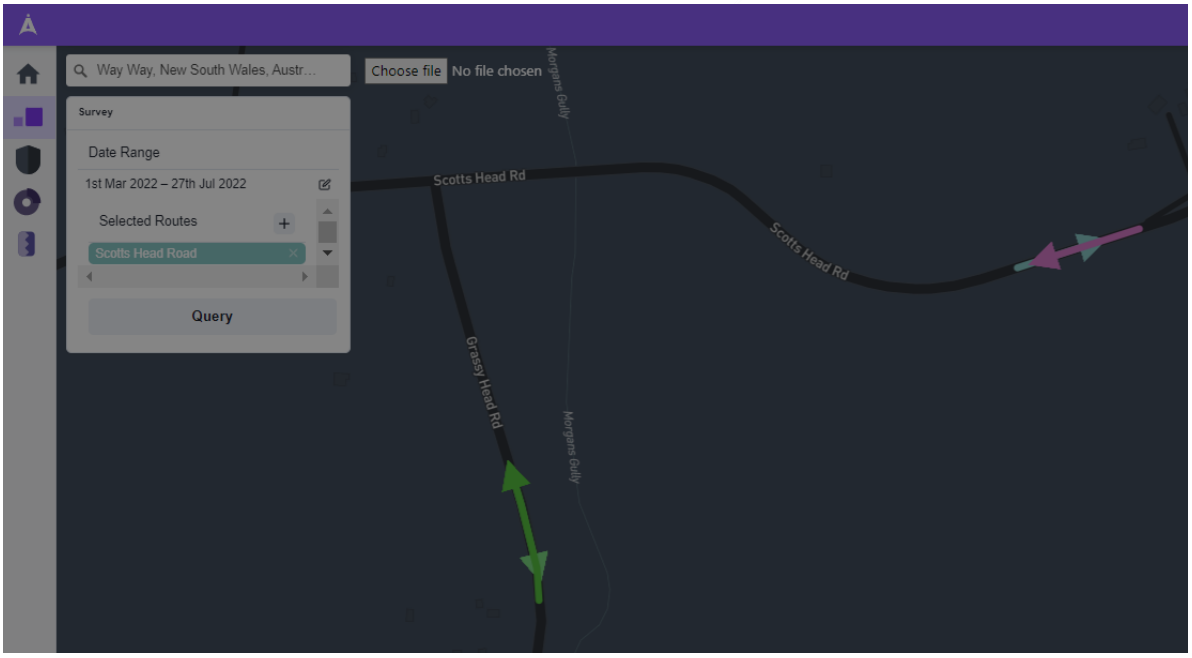
Compass IoT – Survey Platform

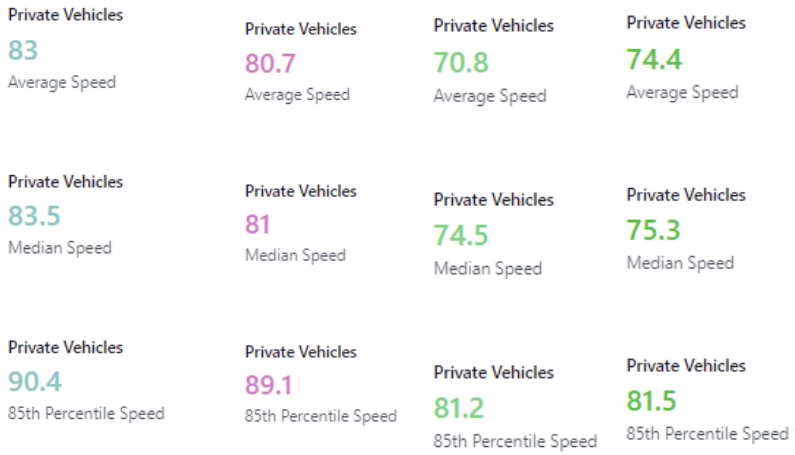
The traffic speed along Scotts Head Road Eastbound indicates 85.1 (Avg), 86.1 (Median) and 93.1 (85%).

The graphs below indicate the fluctuation of speeding during various times of the day.

The high speeds are almost constant with the highest at 8.00 am at 22.00.







Scotts Head Road – both directions

Direction	Average Speed	85th Percentile Speed	Volume Per Peak Hour (AM)	Volume Per Peak Hour (PM)	Total Volumes (Existing plus development)
East	83 km/h	90.4 km/h	96		
West	80.7 km/h	89.1 km/h	95		

Traffic Speeds Compass IoT – Survey
Traffic Volumes TTPP report – 24 June 2022

Grassy Head Rd – both directions (Survey Data by Compass IoT Road intelligence)

Direction	Average Speed	85th Percentile Speed	Volume Per Peak Hour (AM)	Volume Per Peak Hour (PM)	Daily Volumes
East	83 km/h	90.4 km/h	56	61	429
West	80.7 km/h	89.1 km/h	59	81	437

Traffic Speeds Compass IoT – Survey
Traffic Volumes Compass IoT – Road intelligence data

Traffic Surveys – Compass IoT Road intelligence data

5.0 COMPASS IOT ROAD INTELLIGENCE DATA

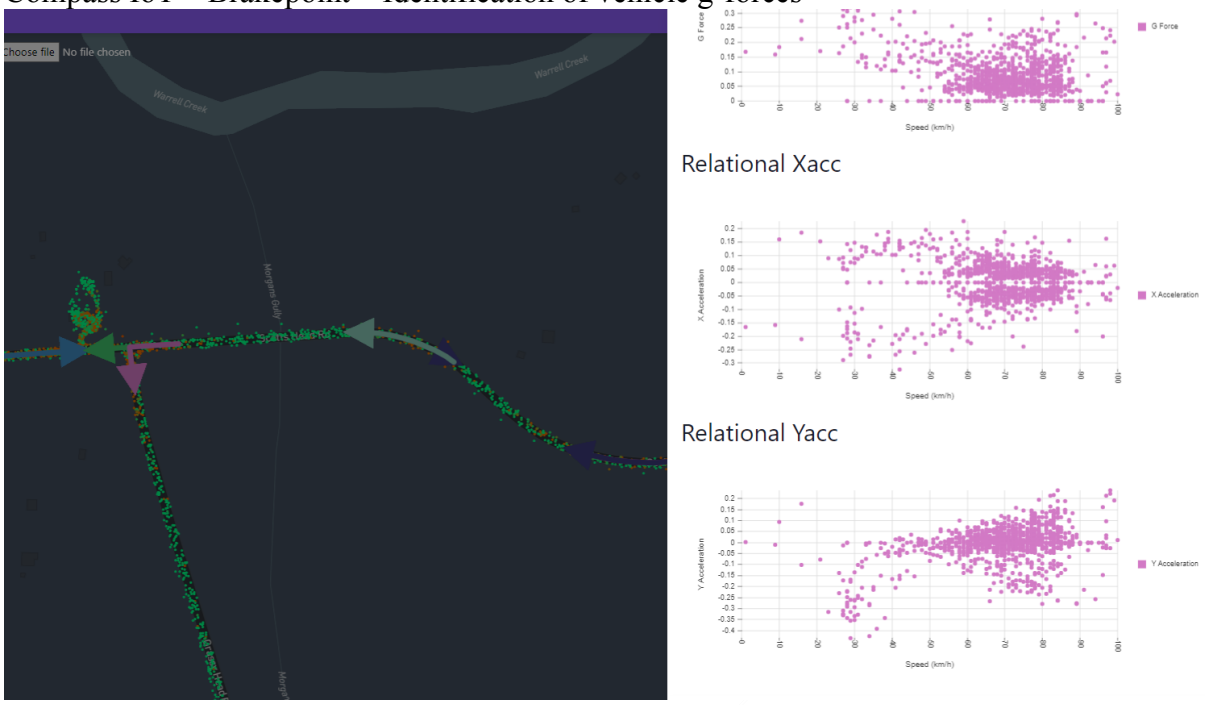
Using the Compass IoT Road intelligence data, NK Traffic has undertaken vehicle g-force analysis to determine the risks along the road network.

The three Compass IoT platforms used provided vehicle, speeds, volumes, near misses, and g-forces (braking accelerating and swerving) indicating the road sites surrounding the development with high risks.

The road intelligence platforms used indicate the following:

The Compass IoT Brakepoint platform indicates high braking accelerating and swerving values especially close to the bends.

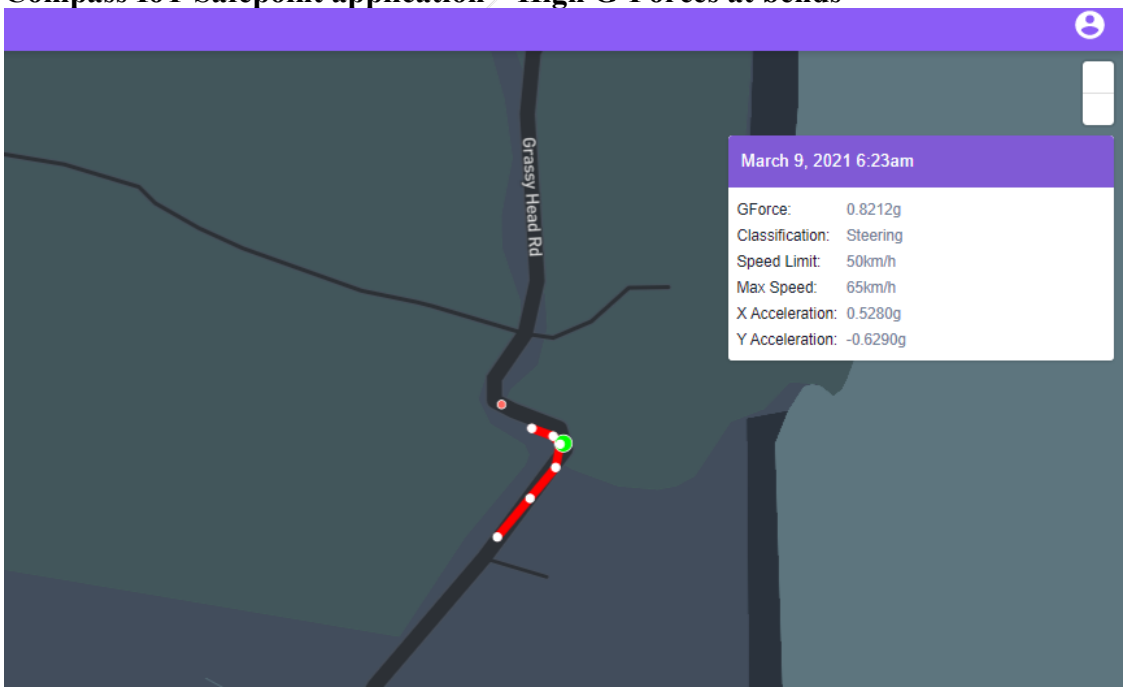
Compass IoT – Brakepoint – Identification of vehicle g-forces



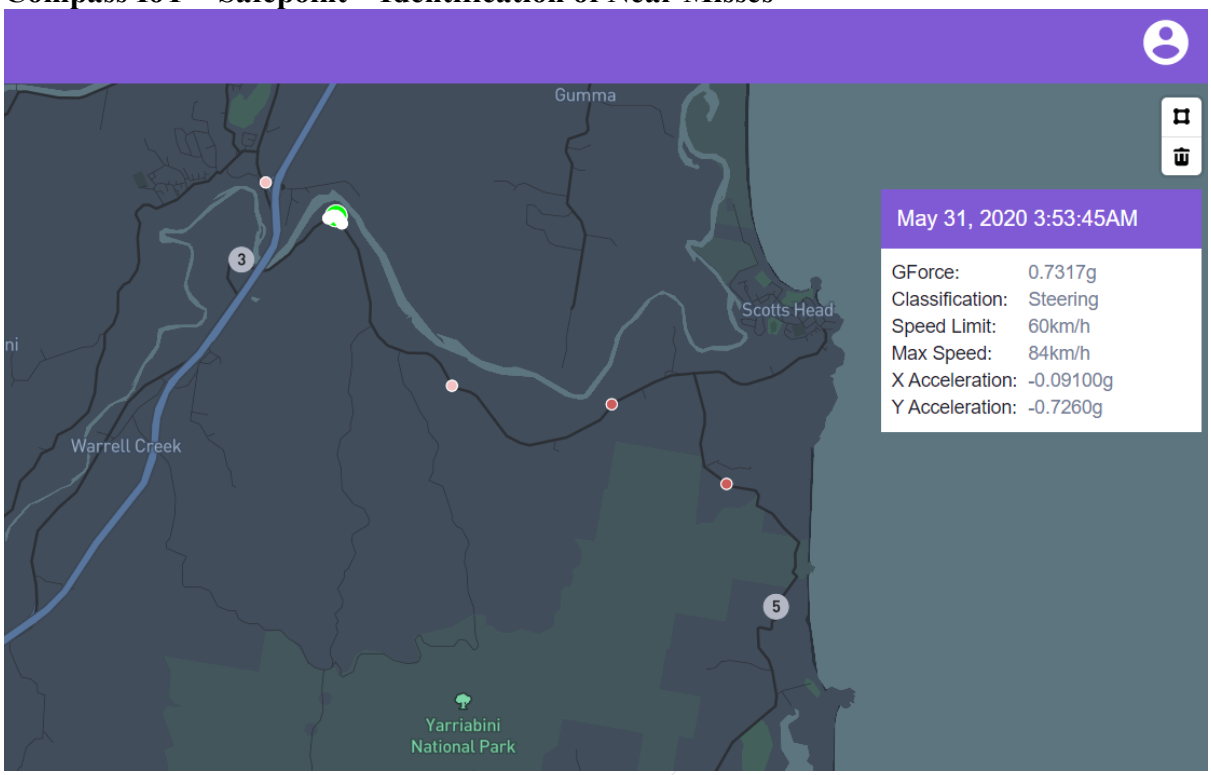
Compass IoT Brakepoint G - Forces recorded on the road network

The Compass IoT Safepoint application reveals some serious near misses along the surrounding road network, especially at bends. Below is a high G-Force 'Steering 'event shown along Grassy Head Rd on one of the bends.

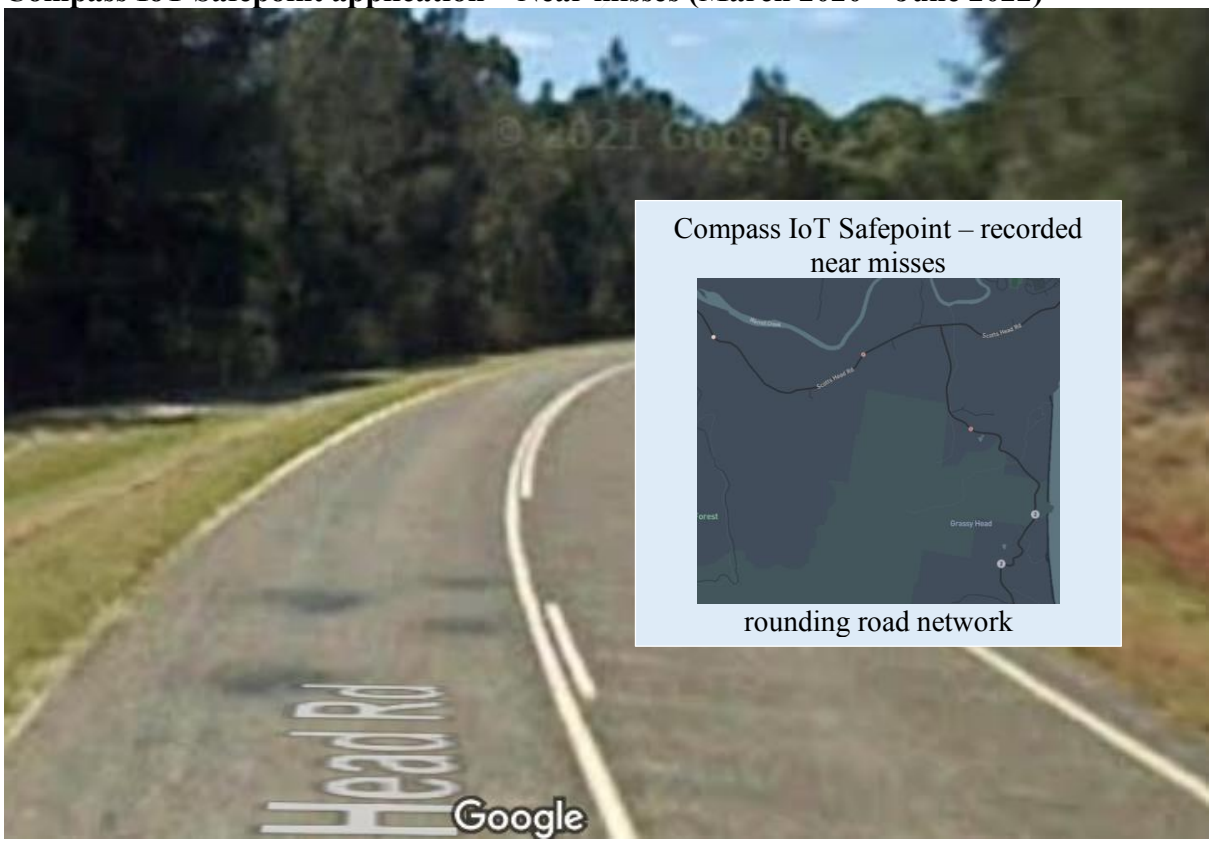
Compass IoT Safepoint application – High G-Forces at bends



Compass IoT – Safepoint – Identification of Near Misses



Compass IoT Safepoint application – Near misses (March 2020 – June 2022)



Near Misses shown along very sharp bends along Scotts Head Rd

The above data has been extracted by the Compass IoT Road intelligence data from the Survey and Brakepoint platforms (www.compassiot.com.au).

The above 85% speeds are like the ones provided by TTPP Consultants in the submission report. (Dated 24 June 2022 for the Ingenia Communities). The above surveys (Compass IoT and TTPP) are compatible and indicate that if the development is implemented the increase in traffic from the current basis level is substantial.

Once the additional traffic from the proposal is added to the existing traffic, the indication is that, from the existing 351 vehicles per AM peak (8.00 am – 9.00 am), additional 105 + 10 (125) vehicle trips as a result of the proposal, a total of 476 vehicles for the am peak.

For the PM peak on average, 356 vehicle movements (3.00 pm – 4.00 pm) and the additional 105 + 8 (123) vehicle movements as a result of the proposed development, a total of 479 vehicle movements.

The assumption made in the traffic assessment that 20% of residential trips are related to entering the site and 80% of residential trips are related to exiting the site during the AM peak hour, and vice versa during the PM peak hour is reasonable.

Therefore, the above equates to 125 X 80% exiting the site and 125 x 20% entering the site in the AM peak and vice versa.

This corresponds to the following amount of traffic in the morning and AM peak as a result of the additional volumes added to the road network in the AM and PM peak

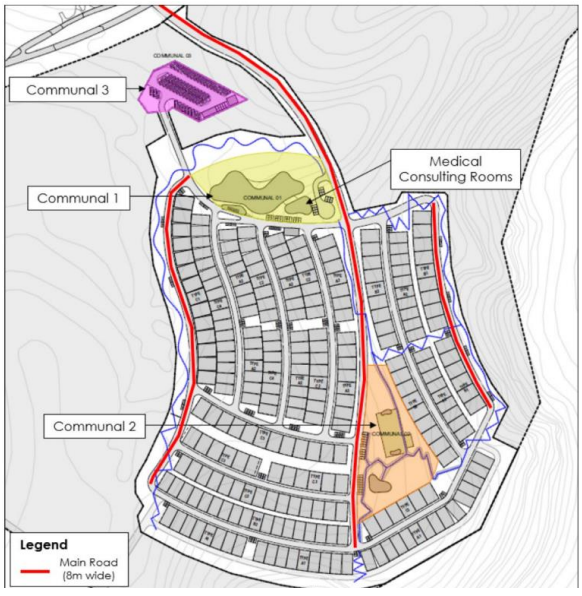
Regarding the Medical Centre 10 vehicle trips per hour in the AM peak and eight vehicles per (50/50) distribution.

AM Peak

- 100 vehicles entering the site
- 25 vehicles exiting the site

PM Peak

- 25 vehicles entering the site
- 100 vehicles exiting the site



6.0 PARKING SUPPLY

The parking assessment provided in the submission is in accordance with the Nambucca Valley Council Development Control Plan (DCP) and the Local Government (Manufactured Home Estates, Caravan Parkes, Camping Grounds and Moveable Dwellings).

The parking rates provided are in accordance with the following:

Type	Size	Car Parking Rate	Source	Car Parking Requirement	Car Parking Provision
Caravan Park Resident	257 dwellings (255 long-term and 2 short-term sites)	1 resident space for each dwelling site	LGR	257	514
Caravan Park Visitor (Long Term Sites)	255 long-term sites	1 visitor parking space for every 10 long-term sites in the caravan park	LGR	26	81
Caravan Park Visitor (Short Term Sites)	2 short-term sites	1 visitor parking space for every 20 short-term sites in the caravan park	LGR	1	1
Medical Consulting Rooms	349.6m²	1 space per 40m2 GFA	DCP	9	10
Other Communal Areas	Ancillary. Communal areas are accessible residents only. However, additional parking around the communal areas have been provided for residential visitors.			-	32
Total				293 spaces	638 spaces

There are 638 Parking spaces proposed which represent 2 spaces per residential dwelling and is in accordance with the minimum statutory under the Council requirements.

Council requires 1 resident parking space for each dwelling site, a min requirement of 257 car parking requirements. The Council DCP requires 1 visitor parking space for every 10 long-term sites in the caravan park, a total of 26 car parking requirements.

The Medical Consulting Rooms for a total of 349.6 m² (1 space for 40 m²) require 9 car parking spaces. There are other Communal areas accessible to residents where there are no requirements for parking.

The proposed 638 parking spaces represent the provision of many more parking spaces than the requirements. Breaking down the proposed parking spaces there appears to be excessive provision. Specifically, the following proposed parking spaces are proposed:

- 514 residential dwelling car parking spaces are proposed (+ 257).
- 81 Caravan Park visitor parking (+55)
- 1 for short term visitor parking (0)
- 10 for Medical Consulting rooms parking (+1)
- 32 parking spaces for Communal areas (+32)

A total of 638 parking spaces are designed for the proposal. The required parking spaces are 293. There are 345 additional parking spaces proposed in the design.

The very high provision for parking is an indication of the high demand for private vehicles associated is expected for the proposal and / or an indication of anticipation for future expansion of the Caravan Park.

In accordance with the above, the parking supply for this type of use is excessive and there is no obvious reason to provide such a very high supply of parking, unless there is the view that this proposal will scale up in the future.

The proposed parking layout is described in the parking report in form of garage parking accessed off internal roads and kerbside visitor car parking spaces with a combination of 90 - degree and parallel parking.

The proposed 8 m internal roads do not allow enough space to create 90 – degree parking and allows the provision of only one parking lane and two travelling lanes.

Taking into consideration the proposed road widths, there are parking limitations which will restrict the on-street parking supply.

7.0 VEHICLE ACCESS ARRANGEMENTS

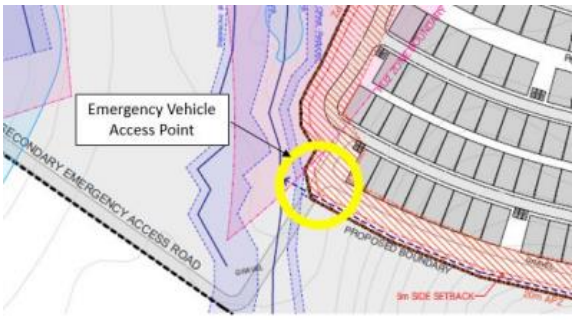
Access to the development is provided via a two-way access road off Scotts Head Rd.

The traffic report state that "The internal roads are to be designed as per the requirements of the Local Government (Manufactured Home Estate, Caravan Park, Camping Grounds and Moveable Dwellings) Regulation 2021 (LGR), which stipulates the following minimum road widths.

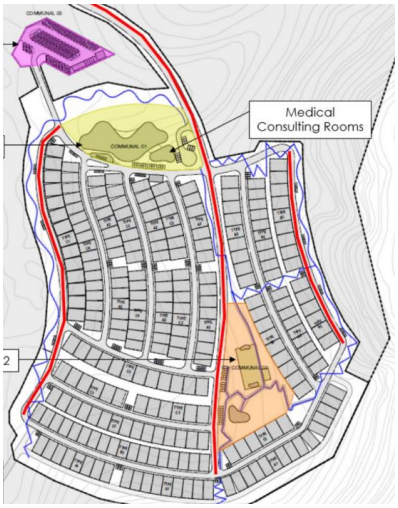
- 7 m wide road for the entrance road
- 6 m wide road for the two -way access road

There are 8 m wide entrance road and three north-south roads. The remaining road grid includes 6 m wide sealed road. The road hierarchy as per the proposed designs is shown in the following Figure.

Access to the main road network



Emergency Access



The Guide to Traffic Management Part 12 – Traffic Impacts of Developments refers to the following adverse impacts of the residential subdivisions that can occur as a result of the access roads within the development and their connections to the arterial road network.

- Excessive volumes of traffic at connections with the arterial road network or within the development itself.
- Too many conflicts at connection points
- Poorly managed traffic conflicts at connection points (location or type of intersection controls)
- Excessive volumes on local streets leading to the connection points
- Excessive trip lengths to exit the subdivision
- Excessive speeds on streets within a new or existing local street
- Crashes involving motor vehicles on local streets
- Factors influencing the efficiency, safety and amenity of the local streets include.
- Under - provision of arterial roads
- Arterial road congestion and delay
- External connectivity of the local street system
- Internal connectivity of the local streets system
- Location of traffic-generating developments

Most of the above list of adverse impacts identified in The Guide to Traffic Management Part 12 are relevant to the proposed development.

- The volumes expected to be generated by the development have been dealt with at a previous topic and show that an additional 60 % + of vehicles will be added to the road network

- Due to the multiple access roads, there will be too many conflicts at connection points

- There are only two exit points from the proposed subdivision, one is for the main traffic from the developments and the other one for emergency vehicles. This one road connection creates additional issues related to natural disasters, such as flooding or fire, or other emergency traffic arrangements.

- The vehicle speeds onto the surrounding arterial roads are extremely high and the access to the low access roads has to be managed to reduce the speeds to 40 or 30 km/h taking into account the narrowness of the proposed roads, the many intersection points and the conflict points of the road access system with the arterial road network.

- These conflict points include the entry/exit to the site from Scotts Head Rd, the secondary emergency road where that exits the site onto Scotts Head Rd and within the proposed road network

- Exiting and entering the development from the main arterial road system when congested has the potential to create road safety issues and impact residents' amenity, taking into consideration the multiple crash sites and near miss locations on Scotts Head Rd as analyzed previous topics in this report.

- The traffic generation for the whole development is a critical issue as there is an exceedingly high percentage of traffic that would be added onto the road system and is analyzed in the following topic.

8.0 TRAFFIC GENERATION

The 'RMS Guide to Traffic Generating Development – 2002' *"https://roads-waterways.transport.nsw.gov.au/business-industry/partners-suppliers/documents/guides-manuals/guide-to-generating-traffic-developments.pdfprovides traffic generation rates for various developments".*

These rates have been updated in the 2013 RMS Guide to Traffic Generating Developments. The updated Guide for Traffic Generating Developments (Technical Direction 04a) refers to the traffic generating rates for Seniors.

Guide to Traffic Generating Developments. Updated traffic surveys. (nsw.gov.au)
Specifically, the Guide refers to the following rates. Weekday daily vehicle trips = 2.1 per dwelling Weekday peak hour vehicle trips = 0.41 per dwelling (Note that morning site peak hour does not coincide with the network peak hour). These rates apply to surveys undertaken in 2009 in Urban and Regional areas in NSW. Table 1 below indicated traffic generation rates surveyed in various rural areas. These rates are an indication of the amount of expected traffic generation

Table 1

	Non-Metropolitan Area				
Site ID	**SH6**	**SH7**	**SH8**	**SH9**	**SH10**
No. of Occupied Units (Total)	**240**	**71**	**70**	**38**	**81**
Weekend					
Person-based Trips					
- Site Peak Hour	123	28	35	22	46
Trips/ Unit	0.51	0.55	0.50	0.58	0.57
- Vehicle Network Peak	123	6	35	15	37
Trips/ Unit	0.51	0.12	0.50	0.39	0.46
Daily Total Person Trips	452	119	111	114	182
Trips/ Units	1.88	2.33	1.59	3.00	2.25
Vehicle-based Trips					
- Site Peak Hour	85	15	20	11	33
Trips/ Unit	0.35	0.29	0.29	0.29	0.41
- Network Peak	79	3	18	6	27
Trips/ Unit	0.33	0.06	0.26	0.16	0.33
Daily Total Car Trips	312	56	65	58	131
Trips/ Unit	1.30	1.10	0.93	1.53	1.62
Daily Total CV Trips	3	0	0	2	3
Trips/ Unit	0.01	0.00	0.00	0.05	0.04
Daily Total Vehicle Trips	315	56	65	60	134
Trips/ Unit	1.31	1.10	0.93	1.58	1.65
% CV	1.0%	0.0%	0.0%	3.3%	2.2%

The following areas appear more compatible with the proposed development:
SH6 – Bonnells Bay
SH7 – Wamberall
SH8 – Kincumber
SH9- Tahmor
SH-10 Bowral

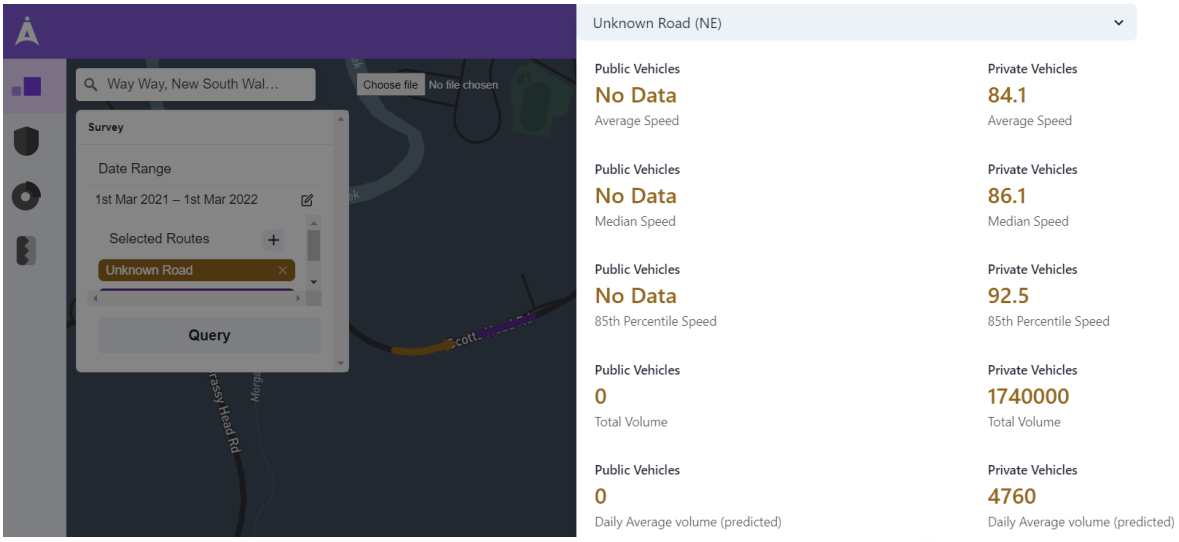
There are more similarities between the SH10 area to the proposed development in relation to the surrounding road network. The peak–hour rate per unit for the compared area is 0.41. These rates correspond to the 255 long-term sites and 2 short-term sites 257 x 0.41 = 105 trips per peak hour. These are the expected peak hour AM and PM trips for the residential component.

The above are two-way trips, however, as an estimate, the split is calculated as 20% inbound and 80% outbound in the AM and 80 % inbound and 20% outbound in the PM peak. In addition to the Senior residential component, there are also Medical Consultant rooms proposed. The estimated rate for these medical rooms is: The RMS Guide to Traffic Generating Developments indicates the following traffic generating rates for AM and PM peaks.

AM = 3.2 vehicle trips per medical room
PM = 2.6 vehicle trips per medical room
There are 3 Medical Consulting Rooms which are expected to generate approximately 10 vehicle trips per AM and PM peaks. There are also patients/carers expected to visit the medical centre from the surrounding area. The closest residents are located at approximately 1.5 km away. In accordance with the above, 105 (seniors' component plus 10 vehicle trips) are estimated to be generated per morning and afternoon peak 125 vehicle trips per peak hour.

The potential increase in the number of vehicle movements along the frontage street will remain well within the environmental capacity of the street, with no adverse impacts on the amenity of the area.

8.1 Street System Operation
As per Austroads definition, which classifies a local road as typically a local street carrying less than 2,000 vehicles per day and 250 vehicles per hour in the peak period. Scotts Head Rd is classified as an arterial rural road with approximately 5000 vehicles per day. This is under the RMS classification.



Compass IoT – Survey platform

The Compass Iot survey platform shows daily traffic volumes and indicates average and 85% speed 84.1 km/h and 92.5 km/h respectively.

Scotts Head Rd is classified as a rural, regional road with daily volumes of around 5000 vehicles per day.

A summary of road characteristics under the functional classification system is outlined in the following table:

Functional Classification of Roads

Road Type	Traffic Volume (AADT)	Through Traffic	Inter-Connections	Speed Limit (km/h)
Arterial/Freeway	No Limit	Yes	Sub-Arterial	70-110
Sub-Arterial	< 20,000	Some	Arterial/Collector	60-80
Collector	< 5,000	Little	Sub-Arterial/Local	40-60
Local	< 2,000	No	Collector	40

The term 'Level of Service' for road capacity has been defined by AUSTROADS (1998) as: "A qualitative measure describing operational conditions within a traffic stream and their perception by the motorists and passengers".

In general, there are six levels of service designated from A to F, with a level of Service B representing the best-operating conditions (i.e.) free flow and the level of Service F the poorest.

Although there is no threshold beyond which problems may emerge, this above-identified standard is based on concepts of good practice, with a concerted focus on safety factors.

In relation to the streets within the proposed development, the following applies as the streets will be considered local streets and accessways.

Environmental capacity performance standards on residential streets

Road class	Road type	Maximum Speed (km/hr)	Maximum peak hour volume (veh/hr)
Local	Access way	25	100
	Street	40	200 environmental goal
			300 maximum
Collector	Street	50	300 environmental goal
			500 maximum

The proposed access and internal roads have been designed to accommodate two-way traffic with an 8 m wide entrance road and three major north-south roads. The widths of these roads can accommodate for two-way movement but will be restricted to parallel parking only on one side. The signposted speeds have not been identified at this stage, however, to meet the maximum peak hour volumes and to satisfy the environmental capacity performance standards the speed limits should be 40 km/h and maximum 50 km/h for the collector roads.

The impact of a development proposal on the road system is to assess the effect on traffic efficiency, the objective of which is to maintain the existing Level of Service (LOS), which is used as the performance standard.

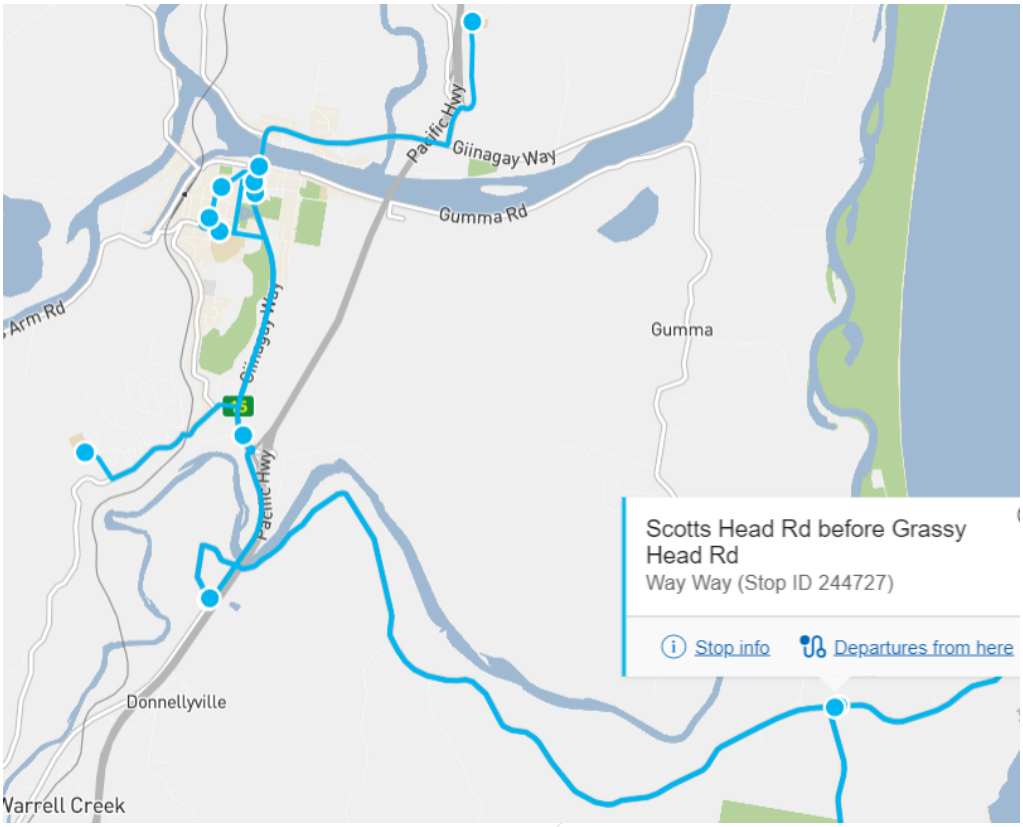
The impact of the proposed development can be considered more in terms of how the existing vehicle speeds within the current road environment are considered a risk. The traffic volumes are consistent with the classification of this type of road.

In conclusion, the additional traffic as a result of the development's traffic generation is significant. Therefore, the traffic generated by the proposed development is expected to adversely impact the surrounding road

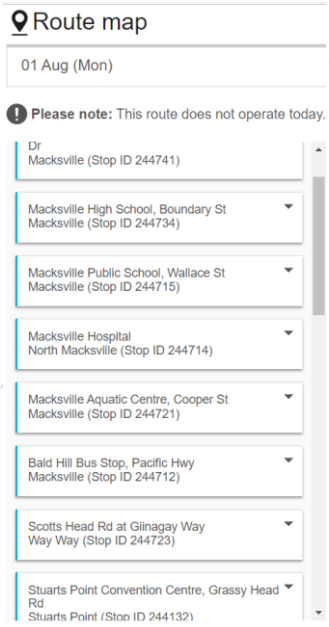
9.0 PUBLIC TRANSPORT

The proposal is located approximately 1.2 km/h of the 356-Bus Service from Macksville to Scotts Head Road. The bus services operate only during the weekdays, three mornings and three evening services

The bus services are substandard and will not be able to support the public transport needs for the development. The low public transport accessibility increases the demand for private vehicles.



356 Bus Service



Due to flooding during the Survey the 356 Bus Route is not operational.

During many flooding instances the only bus route in the area is not operational

The size of the development suggests requirements for further access to public transport or any increased traffic generation due to lack of access to public transport.

The above service disruption due to natural disasters and events indicates that the dependence on private vehicles is critical as residents and their visitors cannot rely on public transport.

10.0 ADVERSE TRAFFIC AND TRANSPORT IMPACTS

Scotts Head is the primary connection to the Pacific Highway. Grassy Head Rd is a secondary, alternative option to get to the highway.

Scotts Head Rd has been regularly flooded in recent years and many times the community must exit via the main network via Grassy Head Rd. The pavement conditions along Grassy Head Road are poor which adds to the existing high road safety risk.

This has potential to become an issue, as the amount of traffic accessing Grassy Head Road will have a longer way to travel and the proportion of vehicles added to the road network versus the existing volumes on Grassy Head Road will be very high. A Traffic Management Plan is required to address the potential deviation of traffic along the secondary route, taking into consideration the traffic generated by the development.

The narrow main access and secondary roads are vulnerable to extreme weather conditions, such as high winds and bush fire. Due to the proximity of trees to the carriageway has a high risk of blocking access to the community and a risk of preventing access or exiting the area in the event of fire, flooding and high winds.

The cumulative traffic and parking impact of the proposal to Scotts Head village, the shopping area, the beach car parks, and the local residential streets will be obvious during the peak tourism period. The lack of adequate car parking facilities is already creating adverse effects on the Scotts Head Community. Any additional vehicles added on the road network, as a result of the proposed development will add additional strain on the road system.

The proposed secondary emergency exit requires to be designed safely and requires a Traffic Management Plan (TMP) which will address the road safety issues at that location, taking into consideration the number of vehicles required to exit the site.

The site is located within 1.2 km from the nearest bus stop. It has been mentioned in the previous topic the poor public transport (bus) connection. This is exacerbated by the poor pedestrian access to the bus stops, especially for the most vulnerable. The risks are very high for the pedestrians and mobility impaired, considering the narrow verges, the non-existent footway and the speed limit of 90 km/h. The combination of the above, could have catastrophic impact and would put pedestrians, mobility impaired and cyclists in an extremely vulnerable situation. A road safety audit is recommended to address the above pedestrian issues.

The traffic counts provided have been undertaken during the period impacted by Covid. Therefore, it is anticipated the real traffic volumes would be more than 40 % higher than the surveys ones. If that is the case, this will most likely increase the assessed adverse impacts stated in this report.

11.0 CONCLUSION

This traffic and parking report include the assessment of the traffic and parking implications of the proposed development at 1006 Scotts Head Rd Way Way. It has been prepared to assist the submission of the Scotts Head Community Group to the DA at 1006 Scotts Head Rd, Way - Way.

The proposal includes 255 long–term dwellings sites and 2 short–term dwelling sites a Medical Consulting room Centre (350 m²) and communal areas.

Most of the following list of adverse impacts identified in The Guide to Traffic Management Part 12 are relevant to the proposed development.

- The volumes expected to be generated by the development have been dealt with in a previous topic and show that an additional 60 % + of vehicles will be added to the road network

- Due to the multiple access roads, there will be many conflicts at connection points

- There are only two exit points from the proposed subdivision, one is for the main traffic from the developments and the other one for emergency vehicles. This one road connection creates additional issues related to natural disasters, such as flooding or fire, or other emergency traffic arrangements.

- The vehicle speeds onto the surrounding arterial roads are very high and the access to the low access roads need to be managed to reduce the speeds to 40 or 30 km/h, considering the narrowness of the proposed roads, the many intersection points and the conflict points of the road access system with the arterial road network.

- Exiting and entering the development from the main arterial road system, when congested, has the potential to create road safety issues and impact on residents' amenity. The multiple crash sites and near miss locations on Scotts Head Rd as analyzed previous topics in this report is an indication off more crashes in the near future. (The crash data has been provided by the TfNSW three – year Crash data and the 'near miss' data from the Compass IoT Safepoint platforms).

- There have been 73 injury crashes within a three-year period in the road network surrounding the proposed site. Of these crashes, 7 are reported as fatal. This represents an exceedingly high number of serious and fatal crashes for a relatively low small number of roads surrounding the site.

- The traffic volume counts used by TTPP have been used and vehicle speeds have been used from the Compass IoT Road intelligence platforms (Survey & Brakepoint). These traffic volumes identified in the Compass IoT platforms are similar to the traffic volume surveys identified in the TTPP surveys:

- The existing traffic volumes estimated using the Compass IoT technology indicate that the AM peak hour volumes along Scotts Head Rd are 105 vehicles per peak hour for the AM and PM peaks. 191 vehicles per AM peak (8.00 am – 9.00 am) and an additional 105 (Residential) + 3 (Medical) vehicle trips as a result of the proposal, a total of 299 vehicles for the AM peak. In the PM peak on average, 168 vehicle movements (3.00 pm – 4.00 pm) and the additional 105 (Residential + 3 Medical) vehicle movements as a result of the proposed development, a total of 276 vehicle movements.

- Although the total amount of traffic movements is typical for a Rural Road, the amount of traffic added to the road network is significant as it represents 63% increase in the morning peak and a 60% increase in the PM peak.

- The speed data derived from the Compass IoT intelligence indicate on Scotts Head Rd 85% Speed 90.4 km/h eastbound and 89.1 westbound. Although these speeds do not exceed the sign posted speed limit, they are exceedingly high for the geometry of the Scotts Head Road, the poor site distances, and the proximity of the trees adjacent to the carriageway which create a risk to motorists.

- The proposed access and internal roads have been designed to accommodate two-way traffic with an 8 m wide entrance road and three major north-south roads. The width of the roads allows for two travelling lanes and only one parking lane. The proposed parking arrangements for 90-degree angle parking and / or two parking lanes in each direction is not feasible due to the narrow design of the proposed access roads.

- The geometry of the road with the two-way undivided road in a high-speed environment with the absence of a road shoulder and many trees close to the carriageway create a safety issue. The traffic added to the road network, due to the proposal, expected to create additional road risks, unless road safety measures are undertaken to alleviate the road trauma.

- The assessment based on the RMS Guide to Traffic Generating Developments indicate, that the additional vehicle trips generated by the development during peak hours are significant.

- The additional traffic generated taking into consideration the lack of infrastructure on the road network is expected to impact the road network and amenity within the surrounding area.

- The traffic generation for the whole development is a critical issue, as there is a very high percentage of traffic that would be added onto the road system.

- The site is not served adequately by regular bus services near the development. This will create additional pressure on the road system due to the additional demand for private vehicles, including residents and their visitors.

- A total of 638 parking spaces are designed for the proposal. The required parking spaces are 293. There are 345 additional parking spaces proposed in the design.

- The exceedingly high provision for the proposed development's parking, is an indication of the high demand for private vehicles associated with the proposal expected and/or an indication of anticipation for future expansion of the Caravan Park.

- In accordance with the above, the parking supply for this type of use is excessive and there is no obvious reason to provide such an exceedingly high supply of parking, unless there is the view that this proposal will scale up in the future.

- The pavement conditions along Grassy Head Road are poor which adds to the existing high road safety risk.

- Due to the proximity of trees to the carriageway has a high risk of blocking access to the community and a risk of preventing access or exiting the area in the event of fire, flooding and high winds.

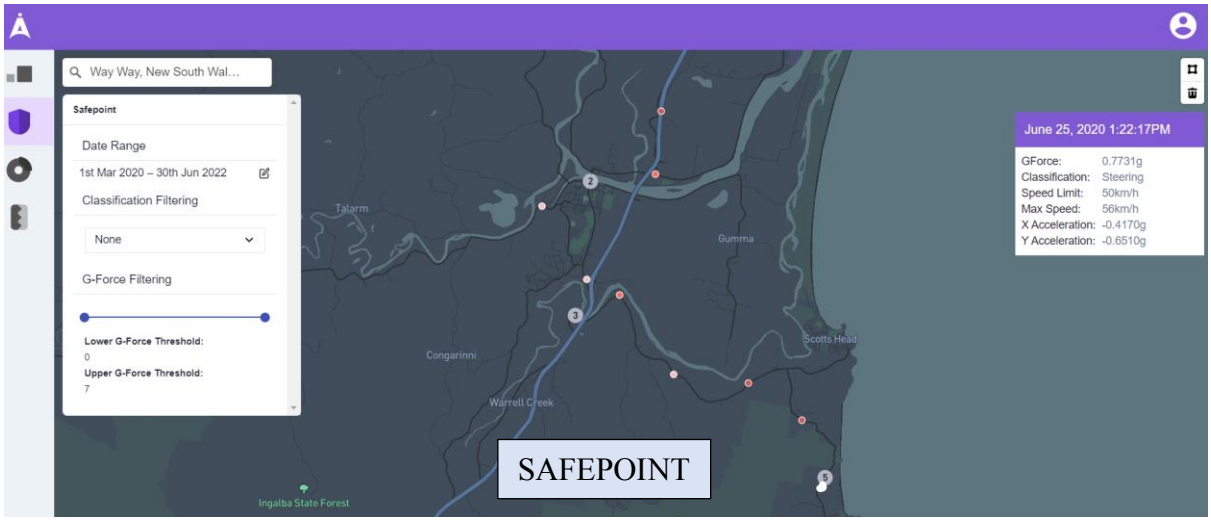
- Any additional vehicles added on the road network as a result of the proposed development, will add additional strain on the road system. The cumulative traffic and parking impact of the proposal to Scotts Head village, the shopping area, the beach car parks and the local residential streets will be obvious during the peak tourism period.

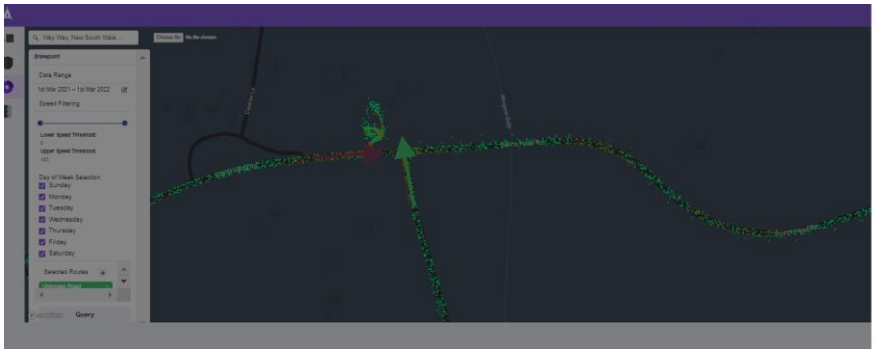
- There is poor pedestrian access to the bus stops, especially for the most vulnerable. The risks are very high for the pedestrians and mobility impaired, considering the narrow verges, the non-existent footway and the speed limit of 90 km/h. This could have catastrophic impact and would put any pedestrian, mobility impaired and cyclists in an extremely vulnerable situation.

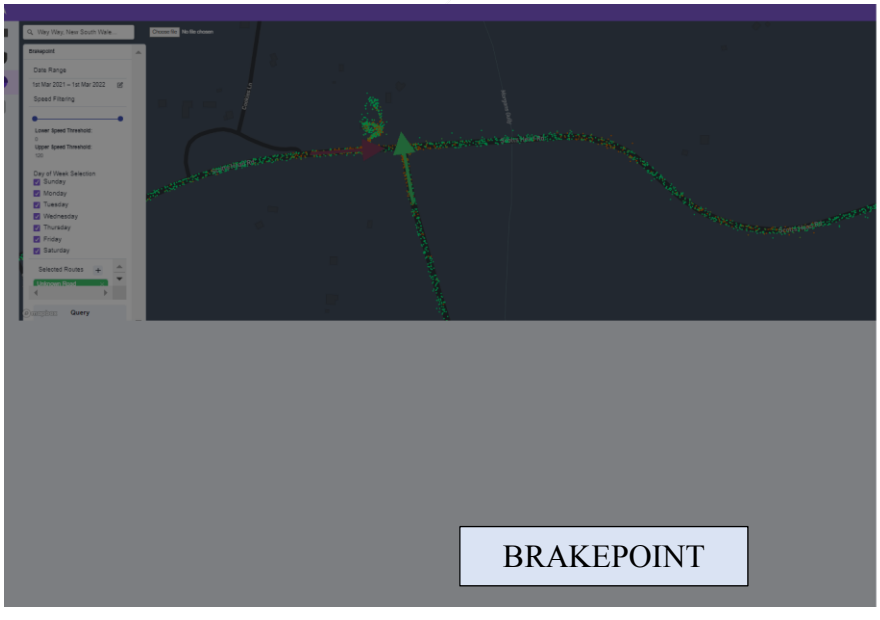
- In conclusion, from the traffic and parking impact assessment carried out there are obvious adverse traffic and parking and road safety implications identified for the proposed development at 1006 Scotts Head Rd Way - Way.

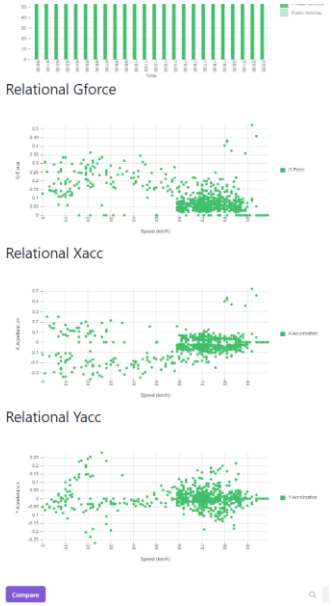
ANNEXURES

COMPASS IOT – ROAD INTELLIGENCE DATA

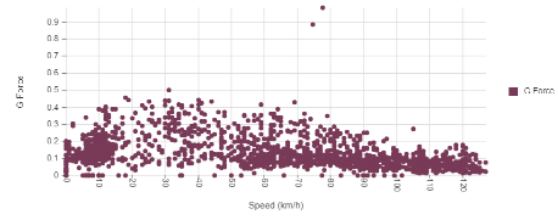








Relational Gforce



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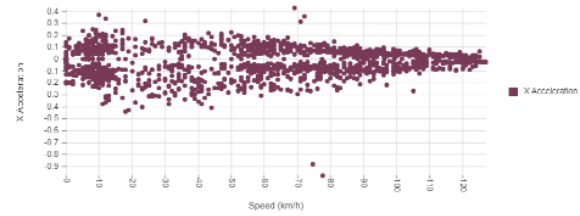

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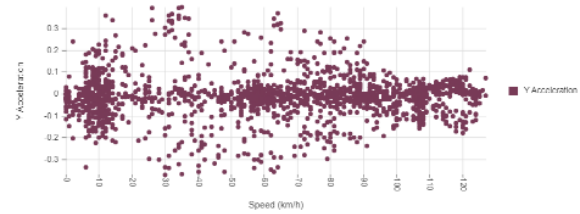
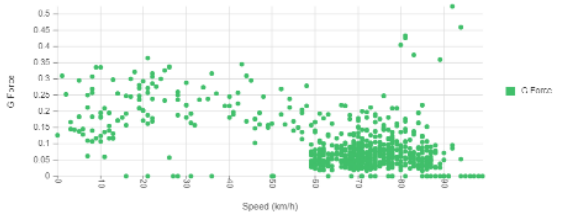


Compare

Relational Gforce



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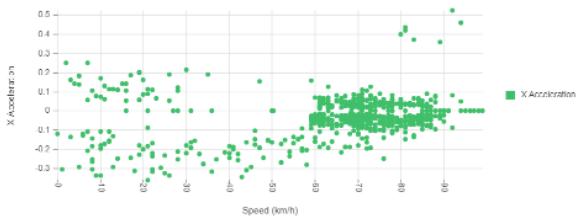

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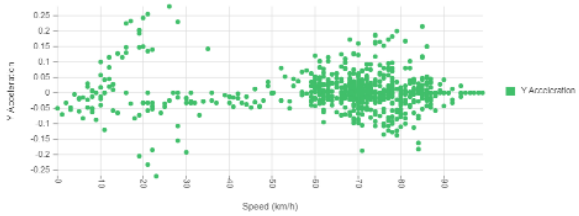

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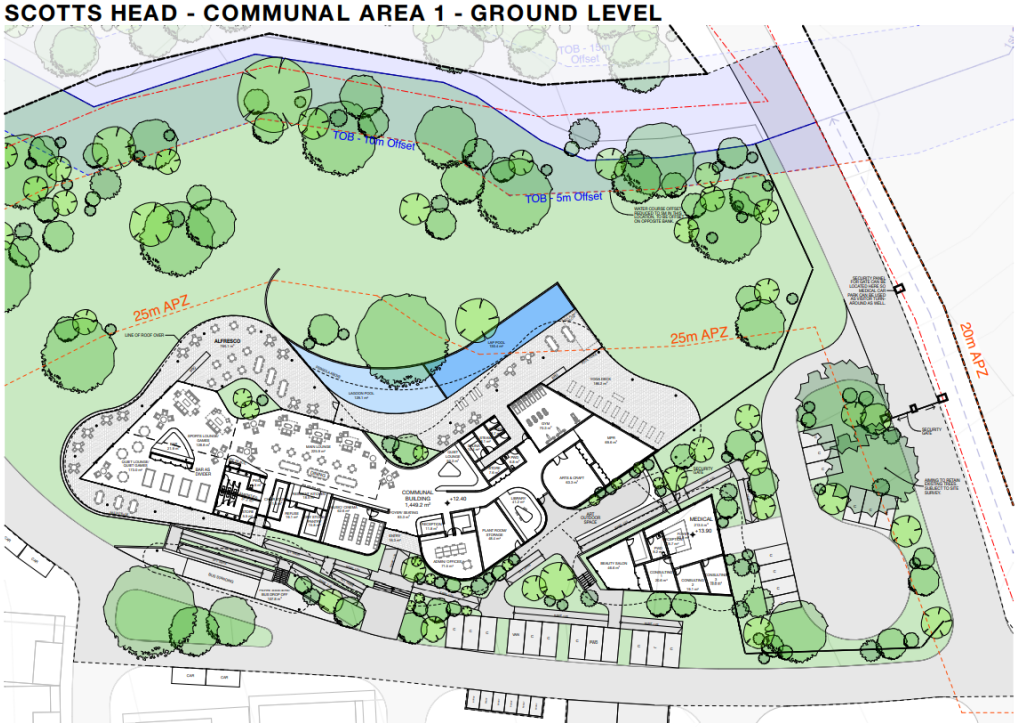
BRAKEPOINT

SCOTTS HEAD - COMMUNAL AREA 1 - GROUND LEVEL

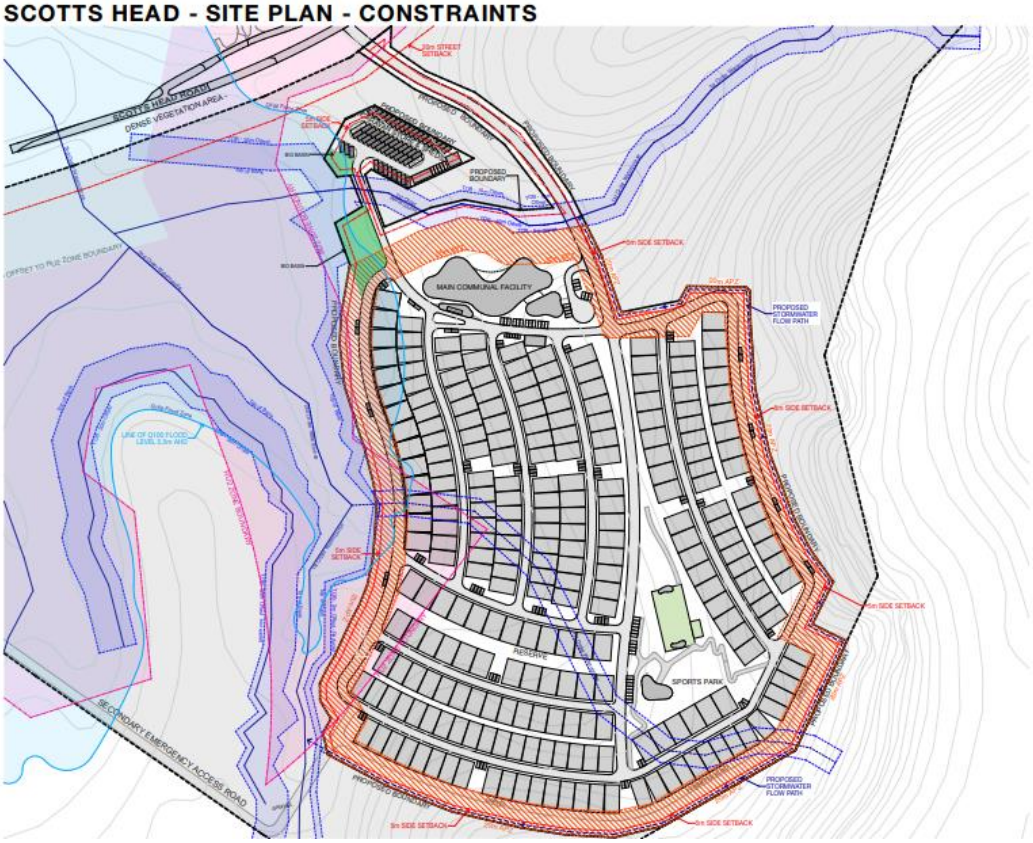


AREA	
INTERNAL	AREA
Communal Building	1449.2m²
Medical Centre	213.5m²
Total Internal Area	**1662.7m²**
EXTERNAL	AREA
Alfresco	717.8m²
Yoga Deck	196.7m²
Lagoon Pool	129.1m²
Lap Pool	130.4m²
Total External Area	**1174m²**
Total Area	**2832.7m²**

LEGEND

- ASSET PROTECTION ZONE *(APZ)*
- WATERCOURSE TOP OF BANK OFFSET ZONE
- EXISTING WATER COURSE
- SITE SETBACK

SCOTTS HEAD - SITE PLAN - CONSTRAINTS



SITE INFORMATION	
ITEM	#
SITE AREA	15.96Ha
PROPOSED RELOCATABLE DWELLINGS	255
PROPOSED SHORT TERM CARAVAN SITES	2
PROPOSED RESIDENTIAL VISITOR PARKING	82
PROPOSED COMMUNAL VISITOR PARKING	42
PROPOSED COMMUNAL BUGGY PARKING	6
PROPOSED COMMUNAL CARAVAN PARKING	52
PROPOSED SHORT TERM SITES (65m²)	2

LEGEND

- Q100 FLOOD ZONE = *5.5m AHD HABITABLE FFL = 6.0m AHD*
- ASSET PROTECTION ZONE *(APZ)*
- WATERCOURSE TOP OF BANK OFFSET ZONE
- BIO RETENTIO ZONE
- RU2 ZONE 100M OFFSET ZONE
- EXISTING WATER COURSE TO REMAIN
- EXISTING WATER COURSE TO BE ADJUSTED
- PROPOSED STORMWATER FLOW PATH
- SITE SETBACK

Appendix G – independent bushfire report

BLACKASH
BUSHFIRE CONSULTING

15 August 2022

Scotts Head Community Group Inc
[redacted]

Dear [redacted],

Re: Desk-top review of exhibited DA bushfire assessment

Blackash Bushfire Consulting has been engaged by Scotts Head Community Group Inc to provide a peer review of the Bushfire Hazard Assessment report by Building Code & Bushfire Hazard Solutions Pty Limited dated 22 June 2022 for a proposed Lifestyle Village at 1006 Scotts Head Road, Way Way (the site) which is legally known as Lot 11 DP 1243930.

The independent peer review has been completed by Mr Lew Short who is a Fire Protection Association of Australia (FPAA) 'Bushfire Planning & Design' (BPAD) Level 3 Certified Practitioner (No. BPD-PA 16373). I confirm that I do not have any conflict of interests or pecuniary interest regarding the independent review. The review does not include a site inspection or an assessment of the vegetation or slopes and has relied upon the work presented in the bushfire assessment report.

In undertaking the review, I have had regard to:

- Bushfire Assessment Report Prepared by Building Code & Bushfire Hazard Solutions Pty Limited dated 22nd June 2022.
- Statement of Environmental Effects (SEE) for the Proposed over 55's Residential Lifestyle Community (Caravan Park) by Focus Town Planning dated June 2022
- Traffic Impact Assessment completed by The Transport Planning Partnership dated 24 June 2022
- NSW Rural Fire Service Planning for Bushfire Protection 2019 and associated legislation

1. Background

The SEE (p. 2) notes that the proposal seeks:

- 255 long-term sites
- 2 short term sites
- Community facility / club house and recreation areas
- Internal roads, installation of visitor car parking and waste storage facilities
- Secondary emergency access road
- Associated earthworks, stormwater control, site servicing, landscaping and fencing

PO BOX 715 WAHROONGA NSW 2076 AUSTRALIA
M 0419 203 853 | E lew.short@blackash.com.au
W blackash.com.au

BPAD Bushfire Planning & Design Accredited Practitioner Level 3

TINTAGEL INVESTMENTS PTY LTD T/A BLACKASH BUSHFIRE CONSULTING ABN 99 000 704 861

The proposed development footprint within Lot 11 DP 1243930 is zoned part RU2 Rural Landscape and part RU1 pursuant to the NLEP 2010. A caravan park is permitted with consent.

The proposed development is on designated Bushfire Prone Land.

The proposed development and setback distances, including asset protection zones (APZ) is shown at Attachment 1.

2. Assumptions of the Bushfire Report

The bushfire report has taken the following positions:

- Tourist development (including caravan parks) is captured as Special Fire Protection Purpose (SFPP) under section 100b of the *Rural Fires Act 1997* (RF Act). **This is correct.**

- Dwelling sites within a caravan park are permitted to accommodate camping, moveable dwellings (caravans/ motor homes) or cabins. In the context of the application of (PBP) these types of uses have different risk profiles and subsequently are assessed differently. **This is correct.**

- A Bushfire Attack Level (BAL) which meets ≤29kW/m2 can be applied where Asset Protection Zones (APZs) and setback accord with PBP. **This is correct**

- Standards for construction have been provided within the report such that all proposed long-term sites provide APZs achieving ≤29kW/m2 which will have a restriction requiring the application of the relevant BAL. **This meets PBP** (see section 3).

3. Manufactured Home Estates

Clause 46 of the Rural Fires Regulation (RF Reg) identifies additional SFPP for which a bush fire safety authority is required:

> *For the purposes of paragraph (i) of the definition of special fire protection purpose in section 100B (6) of the Act, the following purposes are prescribed:*
>
> > *(a) a manufactured home estate (within the meaning of State Environmental Planning Policy No 36—Manufactured Home Estates), comprising two or more caravans or manufactured homes, used for the purpose of casual or permanent accommodation (but not tourist accommodation)*

PBP (p. 52) notes the following for Manufactured Home Estates (MHE):

> *Manufactured home estates – Manufactured housing can be built to achieve all levels of construction required under the NCC. However, SEPP 36—Manufactured Home Estates does not require a separate development consent for each manufactured home after development consent is given for the estate.*

Due to the nature of manufactured home estates, there is no mechanism within the development consent process to ensure that the dwellings will be constructed to the standards applied within AS 3959 or NASH Standard. Therefore, ***the acceptable solution*** *for manufactured housing is the provision of an APZ which achieves 10kW/ m2 commensurate with SFPP development in line with Table A1.12.1.*

Where ***evidence*** *can be provided which confirms that dwellings within the manufactured home estate will be constructed to the appropriate construction standards under AS 3959 or NASH Standard,* ***an APZ can be provided which meets 29kW/m2 in line with Tables A1.12.2 - A1.12.3****.*

Observations
The Bushfire Protection Measures (BPM) have been adequately addressed and discussed within the Bushfire Report (see Attachment 2). Of the BPMs, the following is provided:

Access
Access within the site generally complies with PBP. However, the traffic report does not provide for continuous 8m wide roads connecting within the site.

The proposal is close to Scotts Head township. The Bushfire Report provides limited consideration of the isolated (the site is surrounded on four sides by bushland) nature of the development and the potential for the site to be cut off in the event of a bushfire.

The Bushfire Report provides a review of historic bushfires within the vicinity of the site and states that the site is not affected by historic fire paths – which is correct. However, PBP does not consider historic fire paths and potential exists for the site to be impacted on four sides by bushfire. The site is accessed by a single access handle which does not provide APZ's, increasing the potential of bushfire restricting access to and from the site in the event of a bushfire emergency.

The Traffic Report (p. 3) notes that:

A secondary vehicle access road is to be provided south of the site for emergency vehicle use. This access road will also connect to Scotts Head Read in the north.

The access for emergency vehicles is not identified within the SEE or Bushfire Report which presents inconsistencies. The proposed secondary access is not fit for purpose in the event of a bushfire affecting the site as an alternate evacuation point as it is within dense vegetation. However, it could be used as a management track or for backburning. The secondary access does not have an easement or access handle identified within the site Masterplan.

Asset Protection Zones
The APZ assessment completed at section 4.0 of the Bushfire Report is in keeping with PBP and meets the acceptable standards for the long-term dwelling sites, short term sites and community facility. The Bushfire Report provides recommendations to provide for the minimum construction levels of the various uses which is supported through the provision of a positive covenant / easement be established to

ensure that the future dwellings will be constructed to the appropriate construction standard under AS3959 or the NASH Standard. This is supported.

The proposed APZs are shown in Attachment 1 which complies with PBP.

The access handle into and out of the site is narrow. PBP does not provide APZ requirements for access handles. However, the proposal has the potential for fire to impact the site on 4 sides and only a single access is provided in and out of the site, noting that the emergency access would not be used in the event of a bushfire.

For a large number of people within the site, it is imperative that the access is assured in the event of a bushfire affecting the site. This could be reduced depending on the emergency management arrangements within the Bushfire Emergency Management Plan which has not been completed.

PBP provides guidance for development that could be considered isolated, providing additional measures to mitigate bushfire risk such as increased construction standards and or larger APZs.

4. Adequacy of Submission

For the purposes of section 100B (4) of the Act, an application for a Bushfire Safety Authority (BSA) must be made in writing and must include the prescriptive documentation. The submission requirements for a BSA are provided by Clause 44 of the RF Reg (see Attachment 2) which have been observed and completed adequately within the Bushfire Report.

The report does not consider broader access issues with the site potentially being isolated by fire which could be bolstered to provide redundancy.

Conclusion

From a bushfire perspective, the reviewed documentation meets the minimum requirements of PBP.

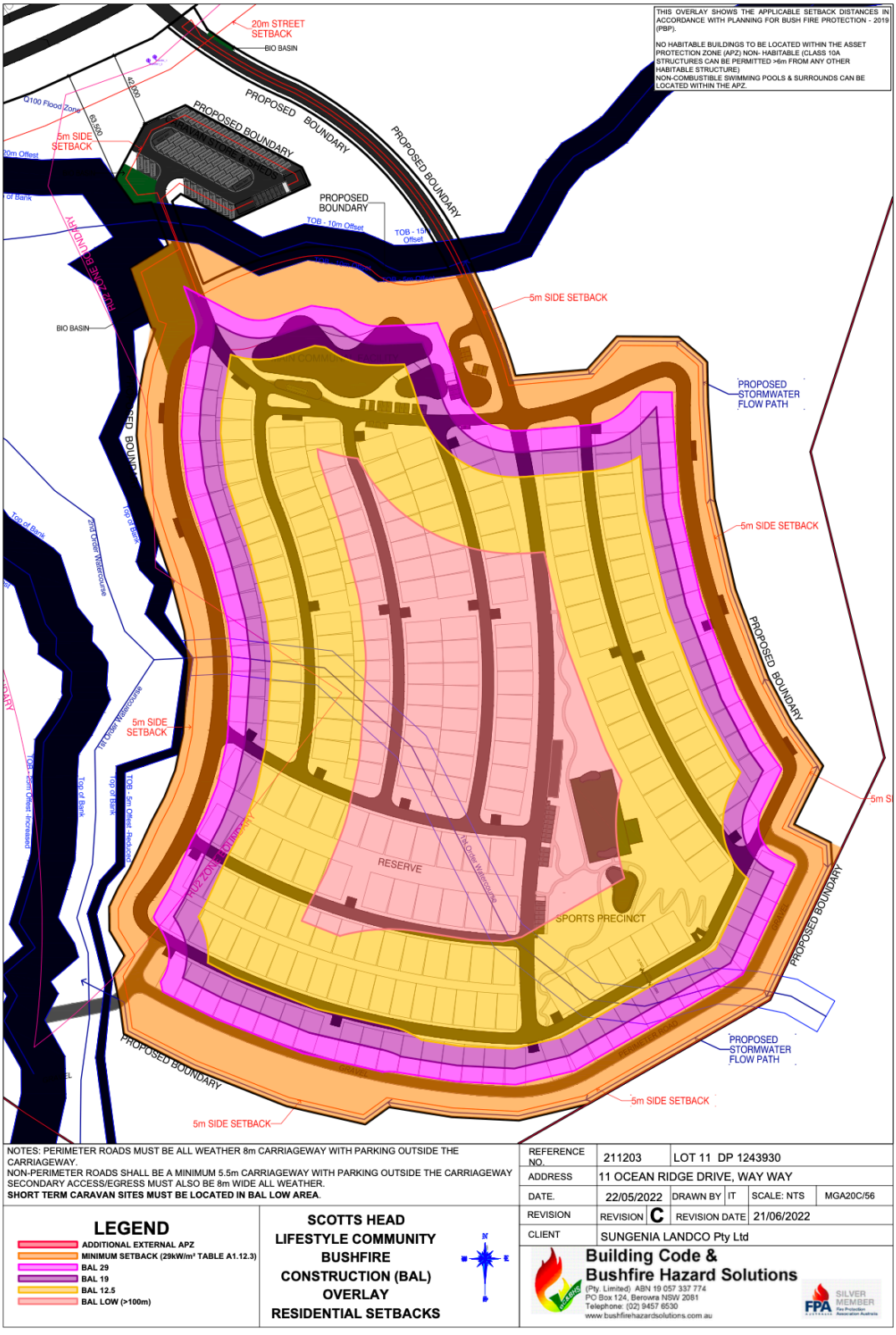
In the event of a bushfire impacting the site, the access handle within the site is likely to be cut by fire, thus isolating the development.

The Bushfire Emergency Management Plan for the site has not been completed and could require conditions and triggers that the site is not occupied above a certain Fire Danger Rating or if fires are in the vicinity of the site. This would need to be determined the by the applicant in consultation with the RFS.

From my review of the documentation, there is nothing that would compel the RFS not to support the proposal.

Lew Short | Principal
B.A., Grad. Dip. (Design for Bushfires), Grad. Cert. of Management (Macq), Grad. Cert. (Applied Management)

Attachment 1 Bushfire Attack Overlay (source Building Code & Bushfire Hazard Solutions 22 June 2022)



Attachment 2 Application for bush fire safety authority

For the purposes of section 100B (4) of the Act, an application for a bush fire safety authority must be made in writing and must include the following:

Clause 44 of the Rural Fires Regulation	Observed in the Bushfire Assessment Report
(a) a description (including the address) of the property on which the development the subject of the application is proposed to be carried out,	Observed and adequately completed
(b) a classification of the vegetation on and surrounding the property (out to a distance of 140 metres from the boundaries of the property) in accordance with the system for classification of vegetation contained in Planning for Bush Fire Protection,	Observed and adequately completed
(c) an assessment of the slope of the land on and surrounding the property (out to a distance of 100 metres from the boundaries of the property),	Observed and adequately completed
(d) identification of any significant environmental features on the property,	Observed. Provided in section 7.05
(e) the details of any threatened species, population or ecological community identified under the Threatened Species Conservation Act 1995 that is known to the applicant to exist on the property,	Observed. Provided in section 7.05
(f) the details and location of any Aboriginal object (within the meaning of the National Parks and Wildlife Act 1974) or Aboriginal place (within the meaning of that Act) that is known to the applicant to be situated on the property,	Observed. Provided in section 7.05
(g) a bush fire assessment for the proposed development (including the methodology used in the assessment) that addresses the following matters:	Observed and adequately completed
(i) the extent to which the development is to provide for setbacks, including asset protection zones, *(ii) the siting and adequacy of water supplies for fire fighting,* *(iii) the capacity of public roads in the vicinity to handle increased volumes of traffic in the event of a bush fire emergency,*	Observed and adequately completed within the site. Briefly covered in section 7.05
(iv) whether or not public roads in the vicinity that link with the fire trail network have two-way access,	NA
(v) the adequacy of arrangements for access to and egress from the development site for the purposes of an emergency response,	Not provided but noted as being covered by the Bushfire Emergency Management Plan
(vi) the adequacy of bush fire maintenance plans and fire emergency procedures for the development site,	Not provided
(vii) the construction standards to be used for building elements in	Observed and

the development,	adequately completed
(viii) the adequacy of sprinkler systems and other fire protection measures to be incorporated into the development,	
(h) an assessment of the extent to which the proposed development conforms with or deviates from the standards, specific objectives and performance criteria set out in Chapter 4 (Performance Based Controls) of Planning for Bush Fire Protection.	Observed and adequately completed

Appendix H – Independent ecology report

Australian Environmental Surveys
ABN 83 708 906 210

Scotts Head Community Group – SHCG
Incorporated Body Registration Number: INC9874531
SCOTTS HEAD NSW
Phone: +61 405 556797
Supplied by e-mail: scottsheadcommunitygroup@gmail.com

18 August 2022

Attention: Relevant SHCG representative

Dear Sir/Madam

Re: Review of the Assessment documentation for DA 233/2022
at 11 Ocean Ridge Road, Way Way (Scotts Head) NSW - Lot 11 DP1243930

Thank you for engaging and providing AES with the opportunity to provide input via undertaking an objective review of the above proposal and an assessment of the documentation as well as the process thus far in developing the assessment documentation that is currently before Nambucca Heads Shire Council and currently on public exhibition.

Mindful of time constraints, I have endeavoured to primarily focus on the potential biodiversity impacts of the proposal on the subject land, but I have also unavoidably spent at least some time evaluating the broader planning and permissibility aspects of the proposal and the approval pathway and in relation to the Local Environment Plan (LEP). I have also considered some of the other factors that impinge on or influence at least indirectly or peripherally on the biodiversity focus.

The proposal by Ingenia is understood to be for a 257 multi resident development that is also proposed to be accompanied by several other associated facilities considered to be integral components to it. These ancillary uses, and activities are described as being significant components of the Ingenia proposal and hence should be serious considerations when applying the definitions for proposal permissibility within the relevant zone. The Ingenia property has a split zone of RU1 and RU2 under the Nambucca LEP 2010 the proposal is identified or at least purported to be for a caravan park. The van park is identified as being to house over 55's and hence is almost exclusively for Seniors living. The housing has been labelled or described as being as a caravan park but is identified as being for 99% 'older' person permanent/long term residential occupation. This brings into question the purpose and intent of the proposal at the outset and hence whether the labelling as caravan park could be considered an incorrect assignation.

This type of Seniors development, in light of recent events and outcomes in eastern Australia, should raise some special concerns and hence such risk associated planning considerations need to be applied very carefully to such developments where vulnerable seniors living communities are proposed in areas that are both flood prone and/or have high bushfire risks, in addition to and irrespective of other important constraint issues associated with the site. Both these underlying risks are clearly applicable to this proposal and the site.

When the stormwater and flooding report by *Northrop Consulting Engineers Pty Limited* is examined Figures A3-A4 (pp 30-31) 1m contours depicted identify those areas with common flood risk elevations.

However, Figure B1 (page 38) depicts an 18% AEP flooding risk model that fails to logically depict flood levels into sub-catchments (SC) 10, SC7 and to some extent even SC8 within Figure A3. An expanded evaluation of the stormwater and flooding issues for the development are provided within Attachment 1 provided below. These highlighted issues here and expanded upon below need to be given appropriate consideration as part of the assessment of this proposal.

Aspects of the Statement of Environmental Effects are also seemingly contradictory where it discusses the low anticipated population growth rates for Nambucca Shire and then makes a somewhat reversed logic about the need and appropriateness of such a large population boosting proposal?

Most concerning about the Ingenia proposal, however, is the somewhat unusual inclusion of a separate plot-based Biodiversity survey of the subject land undertaken by Land Eco Pty Ltd, an ecological consultancy firm. This document is appended to the main Biodiversity Assessment Report BDAR undertaken by Anderson Ecology and Planning (AEP); a subsequent consulting firm engaged to progress the earlier site study commenced by Land Eco. The first study has mapped the vegetation to an apparent high level of accuracy and assigned zonation's based on evaluated condition class. The Land Eco study also formulated the credit offset obligation requirements triggered by the proposal for a significant number of species credit categorised threatened species as well. However, the AEP report has also mapped the vegetation on the site, but which differs substantially from the earlier study and appears to have markedly simplified the vegetation mapping.

On closer analysis, but without attempting to recalculate the BDAR interpretations, there appear to be significant discrepancies that warrant a careful re-evaluation of the BDAR by the consent authority and seeking the provision of a transparent reconciliation between the two somewhat conflicting reports. It could be interpreted that the AEP study has appeared to use only some of the plot data and re-applied other vegetation plot data provided within the Land Eco study as well as amalgamating of some of the condition class vegetation zones that results in a reduced offset credit obligation for the various entities that are identified. Furthermore, some of the implicated Threatened Species do not appear to have had targeted survey effort in accordance with survey guidelines but were still dismissed. Land Eco reported the detection of the Black Grass-dart Butterfly as well as the possible sighting of its larval food plant, *Alexfloydia repens*. The presence of this plant was flagged, and a specimen indicated as requiring confirmation, but AEP has dismissed these two species as occurring and without further disciussion. Consequently, a more detailed analysis of all the various threatened species implicated by the proposal and that are provided in Attachment 1 should be given a more robust consideration in undertaking an adequate assessment of this proposal.

Other matters considered include the Bushfire Planning considerations that appears to have applied the lesser APZ buffer requiring tables based on an incorrect categorisation of the

proposal based on the true vulnerabilities of the identified over 55 occupation age class of future residents. In any case even the lesser APZ requirements do not appear to have been included in the Biodiversity Assessment and offset analysis and calculations. Some of the required APZs even when the lower (incorrect?) APZ buffer requirement is applied also appear to not be achievable. This is certainly the case when the larger APZs stipulated within RFS (2019) for 'vulnerable' or Special Fire Protection (SFPP) Developments are applied. The Bushfire planning component of the proposal is discussed in greater detail within Attachment 1 below where maps depicting the possible APZ requirements are provided. The more appropriate larger APZ would require significantly larger areas of clearing and the resultant larger biodiversity offset requirements calculated. These larger APZ requirements do not appear to be achievable.

I have thus reviewed the various assessment documents indicated and have also undertaken various other searches, as well as made enquiries to provide further perspective. I consequently advise that there are several significant issues associated with this development proposal as it stands. The various assessments undertaken relating to general planning (SEE), flooding, biodiversity, and bushfire considerations, each require careful re-evaluation and reconciliation with the proposal as described. All these issues discussed briefly above are discussed in greater detail in Attachment 1 to this letter and several recommendations based on this more detailed analysis have been made and are provided below.

Recommendations

1. That permissibility's under RU1 and RU2 land use zones of the Nambucca LEP 2010 be clarified and that the proposal categorisation, in light of the proposal's description, stated intent and design inclusions be objectively evaluated against the relevant zone permissibility under the LEP.
2. That Nambucca Shire Council should require that the two conflicting BDAR analyses forming part of the biodiversity study be reconciled and the contradictory offset credit obligation calculations be transparently re-evaluated to resolve differences between them.
3. That Nambucca Shire Council communicate with the proponent and/or the Land Eco consultancy to determine whether the 'draft' indicated report provided within the AEP appendices has validity and legal or intellectual property considerations for its inclusion. Council may need to consider the validity of the DA in its current form.
4. That all the relevant species credit threatened species gain adequate assessment and offset credit allocations as part of any approval. This should include those with dual offset categories eg *Myotis* as well as those currently not considered at all eg *Alexfloydia repens* that was flagged as likely present by Land Eco but was dismissed by AEP without further justification.
5. That SAII considerations be applied to the candidate Threatened Species implicated by the proposal.
6. That flood risk be appropriately assessed, and the various flooding AEP models provided within the stormwater and flood report be extended into, and not clipped from the development area footprint, where they would appear, from the provided 1m contour levels, to logically extend? (See Figures A3 and B1 below).
7. That the planning for bushfire protection (RFS 2019) be correctly applied. This should be based on the true land use proposed because, as it stands, it appears to be endeavouring to navigate via creative interpretations of LEP permissibility interpretations as well as then in a contraindicated way to avoid the consequent special SFPP APZ requirements that should be applied to a Seniors categorised development within the 'special vulnerable community' category for Bushfire Protection (RFS, 2019).

8. Ensure that when the appropriate APZ is applied, it is adequately assessed for its biodiversity impact and consequent offset obligation implications.
9. That Nambucca Council within the context of its evaluation and assessment of the biodiversity impact implications of the DA should consider recommending to the proponent that the proposal should be referred to the Commonwealth Minister for a determination as to it being a controlled action under the EPBC Act 1999 as several implicated entities are also listed under the Commonwealth Act as well.
10. Note that:
    a. all the native vegetation mapped on site is likely to be assigned as a Threatened Ecological Community (TEC).
    b. On the available information it should primarily assigned to Swamp Sclerophyll Forest and to a lesser extent the Subtropical Coastal Floodplain Forest EECs,
    c. Care needs to be made to ensure that the vegetation on the site is correctly assigned to the appropriate PCT.
    d. That the vegetation integrity condition scores determined are objectively used and allocated to properly establish and reflect condition class and its zonation on site.
    e. most importantly, that the incorrect PCT assignations are not used as a method for reducing credit obligations.
11. That Nambucca Shire Council should consider contacting NSW Department of Planning and Environment (DPE) Biodiversity Conservation Division (BCD) to gain advice and guidance in evaluating the disparate Biodivetrsity offset credit assignations provided by two competing/conflicting BDAR components submitted in support of the proposal as well as the flooding and bushfire disparities identified herein.

If you have any further questions about this assessment/review, the writer Ross Wellington, can be contacted on +61 407 489489 or by email at rwrossco@gmail.com

Yours sincerely

ROSS WELLINGTON
Australian Environmental Surveys - AES
Principal
Senior Ecologist
Accredited Biodiversity Expert
Conservation Planner
Environmental Educator

Attachment 1

1. Proposal Description Planning and Site Considerations

The Ingenia proposal site has split land use zones of RU1 and RU2. The biodiversity values map does not depict any specific affectation of the site itself however the extent of the proposed clearing is 18.45 ha of a 55 ha land parcel, consequently automatically triggers the proposed development to require a BDAR because the clearing to lot area ration threshold is triggered, irrespective of whether other BDAR thresholds, such as AOBV, AOS for specific threatened entities that have been identified, and/or via an automatic BV Map indicated affectation. These being the four (4) triggers for a BDAR requirement under the BC Act and the EP&A Act within their interactions re Biodiversity categorised development under Part 4 EP&A Act 1974. The table below identifies these basic BDAR triggers within the BAM.

Minimum lot size associated with the property	Threshold for clearing, above which the BAM and offsets scheme apply
Less than 1 ha	0.25 ha or more
1 ha to less than 40 ha 0.5 ha or more	0.5 ha or more
40 ha to less than 40 ha	1 ha or more
1000 ha or more	2 ha or more

The Land use zonation for the Ingenia property under the Nambucca LEP 2010 has a split zone RU1 and RU2.

Prohibited development under RU1 includes: - Attached dwellings; Caravan parks; Co-living housing; Entertainment facilities; Function centres; Group homes; Independent living units; Multi dwelling housing; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite Day care centres; Semi-detached dwellings; Senior's housing.

Prohibited development under RU2 includes: - Attached dwellings; Co-living housing; Entertainment facilities; Independent living units; Multi dwelling housing; Recreation facilities (indoor); Residential flat buildings; Respite Day Care centres; Semi-detached dwellings; Senior's housing; Serviced apartments.

The proposal has apparently been deemed or purported to be categorised as a caravan park but in various other respects could and likely should be considered seniors housing or one of the other prohibited categories of development within the RU1 and RU2 zones. As a Caravan Park it is partly prohibited within the RU1 but if categorised as a seniors housing development or another reasonable interpreted determination of the proposal as described. The proposal is or might reasonably be argued as described to be more appropriately aligned with a prohibited development. The purported categorisation of the proposal may not be consistent with the definition of caravan park and many of the proposed ancillary proposal components might also conflict with the zone permissibility's under the DA.

An evaluation of Marine Protected areas, Acid Sulfate Soil Risk Mapping and Sensitive Coastal areas SEPP (Resilience and Hazards) 2021 revealed:

- Low Risk ASS are identified in the western part of the Ingenia land parcel
- Coastal Wetlands and Proximity Area for Coastal Wetlands are outside of the Ingenia property but are close by downstream of the proposal. These sensitive wetlands should be given due consideration within any development outcome on the Ingenia site. Coastal vulnerability mapping currently does not exist (at least publicly) but the subject land may have values that warrant consideration for such map inclusion and the criteria for such a listing under the new SEPP (Resilience and Hazards) 2021.
- Marine Protected areas including fish habitat protection zones are not implicated for the Warrell Creek or Nambucca River estuaries. The nearest Fisheries Habitat Protection Zones are north of Coffs Harbour.

2. Stormwater and Flooding

The stormwater and flooding report by *Northrop Consulting Engineers Pty Limited* has been briefly examined.

This report raises a number of considerations about what the likely changes or consequences for hydrology, flow regime and water quality both within and downstream of the proposal are likely to be. Not only has the site been identified within the biodiversity assessment report as having several groundwater dependent ecosystems existing on the site and that rely on these natural flow and infiltration regimes but that flows deriving from the site flow to sensitive coastal wetlands that contribute to the important habitat values downstream of the development.

Within the Northrop report Figures A3-A4 (pp 30-31) provide 1m contour depictions that identify those areas with common flood risk elevations. However, Figure B1 (page 38) in this report depicts an 18% AEP flooding risk model that fails to logically depict flood levels into the sub-catchments (SC) comprising the development footprint. Thus SC10, SC7 and to some extent even SC8 within Figure A3 (page 30) appear to have had flood level extent clipped from it and hence minimising the apparent flood affectation extent of the development footprint to only the lower sections of SC10 and SC9.

These two map figure images clipped from within the Northrop Stormwater flooding report would therefore appear to need to be reconciled. Given that similar flood inundation patterns should, based on contours, be depicted extending along the yellow lines in the clipped images below and hence extending within the main development proposal footprint.

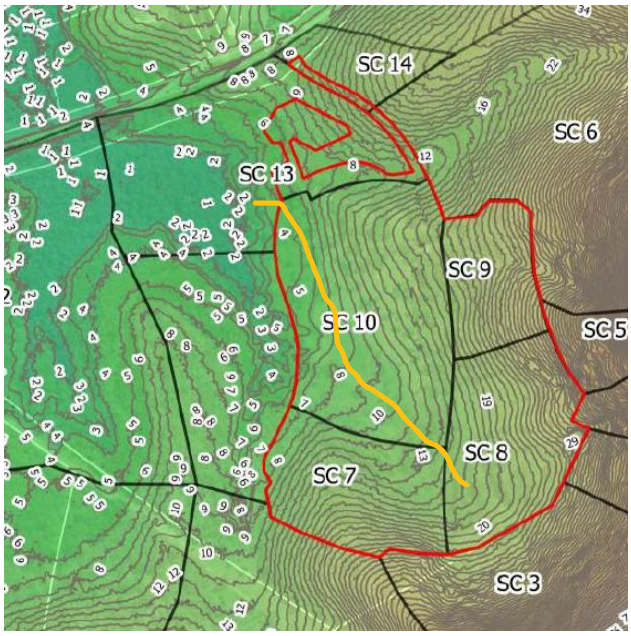


Figure: A3

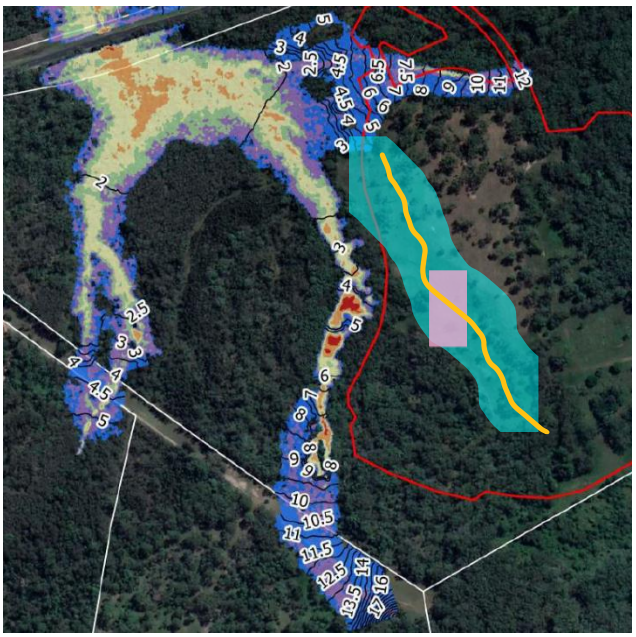


Figure: B1

Various other Flood modelling Figures B2 to B13 (pp 39-49) without the development footprint and the equivalent flood modelling Figures C1 to C13 (pp 50-61) with the development footprint depicted all fail to depict the logically expected flooding model extent within the development footprint.

3. Bushfire Planning

A Bushfire Report has been prepared to meet Planning for Bushfire Protection – PBP (RFS 2019) by accredited bushfire consultants Building Code and Bushfire Hazard Solutions Pty Limited (BCBHS, 2022). This submitted supporting report has been read and was specifically examined for relevant matters that relate to the extent of the various components of the development, the requirements of each of these for APZs based on appropriate/prescribed BAL ratings based on proposed use and in accord with relevant table APZ distance levels to meet requirements under PBP.

The BCBHS report Figure 1 identifies almost the entire Ingenia development site as being vegetation Category 1 with the small, cleared area and excluded component being identified as Vegetation Category 2. This report also analyses the various components of the proposal in accordance with PBP, Table A1.12.3 (page 90, RFS 2019) this considers residential developments. However, given this development is for 99% Seniors living with a likely majority of people within an at-risk categorisation (by stated design). Were an almost exclusively seniors over 55 occupations as intended to prevail, many would also likely be requiring some form of additional care, and internal recreational opportunities and as indicated by the proposal also intends to provide medical consulting rooms and presumably some care opportunities as well.

This might therefore require the proposal to be correctly reconsidered as a Special Fire Protection Proposal (SFPP) development and hence require the appropriately much larger APZ requirements depicted more appropriately within Table A1.12.1 (page 89, RFS 2019).

Even applying the APZ requirements of Table A1.12.3 (20-25m) do not appear to be achievable in all instances of the current proposal and certainly cannot be achieved if the likely more appropriate Table A1.12.1 for SFPP developments were more extensive APZs of 67-79m required to be applied, see Section 6, page 49 (RFS, 2019) for some examples of such developments requiring this consideration.

The bushfire report also fails to depict even the lesser APZ requirements in the form of a map that shows the proposed extent of the development footprint of the proposal AND the specified APZs required surrounding within the site. This would not only have depicted the areas where the APZ requirements cannot be met using the lesser APZ requirements and additionally allow the full extent of clearing to be accurately evaluated in the Biodiversity Development Assessment Report.

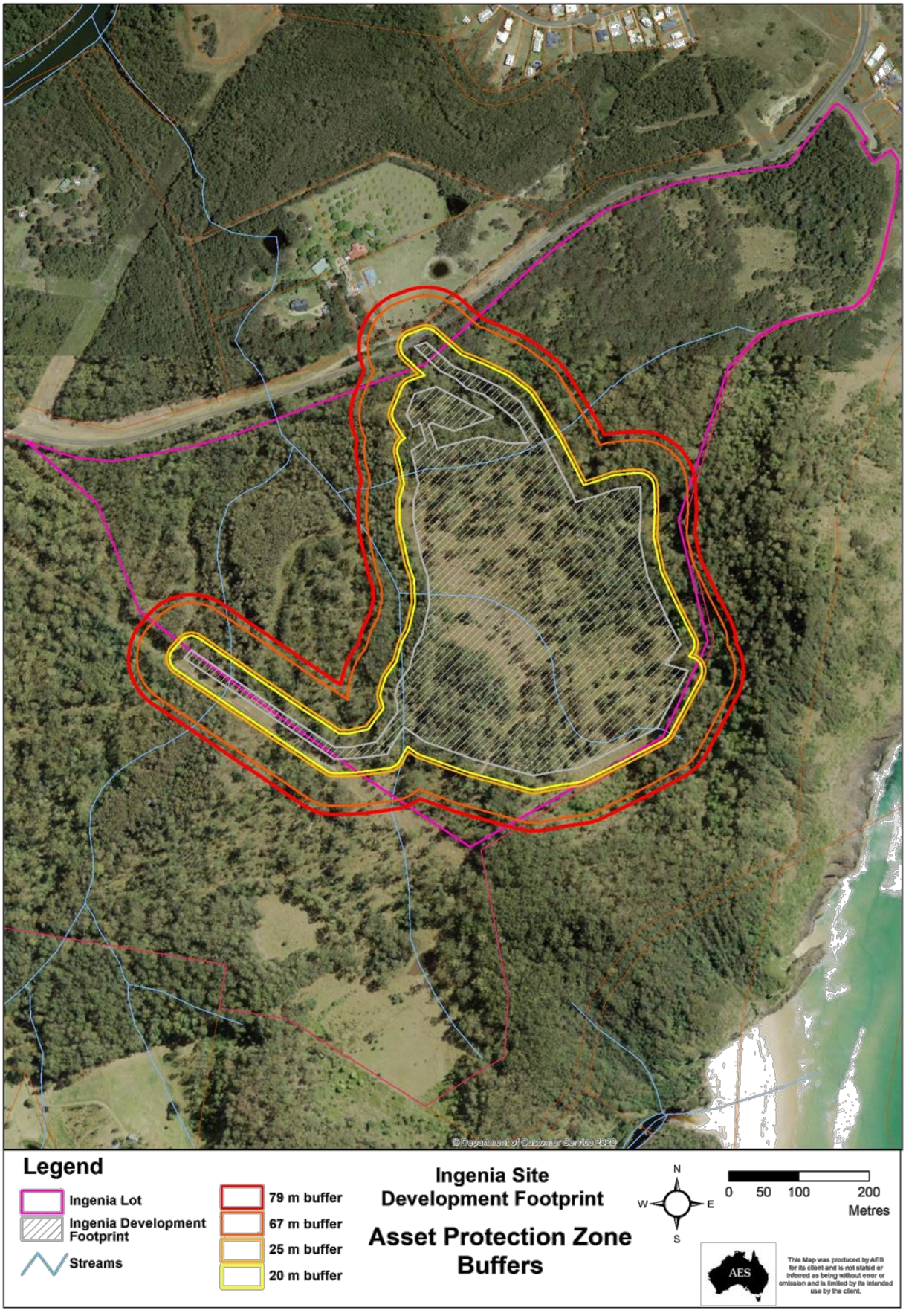


Figure: Possible APZ Buffers

4. Ecology and Biodiversity

The assessment of the biodiversity values likely to be impacted by the development of the site has been undertaken by Anderson Family Trust [271 706 605 10] T/A *Anderson Ecology and Planning* (AEP); AEP Corporation Pty Limited [627 617 976].

The AEP report dated 1 July 2022 has appended within their primary Biodiversity Development Assessment Report (BDAR) BOAMS: 00033599/BAAS17002/22/00033600, another Biodiversity Assessment report (Draft/Preliminary) that had been earlier prepared by *Land Eco Consulting Pty Ltd* dated 7 March 2022 for the same site and development. I have read both reports and there are considerable conflicting details between the two reports as to the biodiversity assessment process and the BAM calculations provided by both consultants.

It is noted that the Land Eco report has retained the 'Draft' Watermark within their report raising the issues as to whether the preparer of that report is content with or has authorised what appears to be a 'still in draft' report version to be submitted within the AEP BDAR supporting the current proposal. This act by AEP and the proponent is confusing, creates somewhat contradictory assessment details in advice to the consent authority, and perhaps could be considered somewhat even bizarre. I have not been given permission to undertake a site inspection to allow me to make an independent evaluation of the biodiversity values present and hence the veracity of any of the claimed details present. A formal request to allow me to make such a site inspection by the SCHCG on (7 August 2022) was refused by the proponent.

I have undertaken an ArcMap GIS desktop evaluation using various vegetation and other data sets publicly available to assist in my biodiversity evaluation on behalf of the SHCG.

A BioNet Atlas search of the subject land and a surrounding buffer area to it was undertaken in early August 2022. This Bionet Search revealed a total of seventy-two (72) threatened species from within the study area with 68 of these having real potential of occurring on or in the immediate vicinity of the subject land. Furthermore, based on vegetation associations and other known threatened species distributional patterns, a further 17 threatened species are considered as having potential to occur as well (see Table 1 below).

In analysing the two disparate BAM-C calculations provided by AEP 2022 and LEC 2022 provided as an Appendix within the former the following interpretation have been made. Time constraints have precluded a complete reanalysis and/or re-entry of the data provided within either AEP or

- Zonation, PCT and patch size allocations provided by Land Eco in its BAM assessment appeared to have been only partly used. Reassignment of parts of zones or merging of zones, reassignment of PCT elements to other PCTs and/or low-quality patches being merged with higher quality patches.
- the resolution of vegetation mapping provided by Land Eco has been somewhat simplified by AEP. More Plots were undertaken and provided by Land Eco than were used and there appears to have been only selective use of the Plot data by AEP. The possible ignorance of some higher value/quality plots and the merging of lower condition class zones with higher condition class zones might be a cause of a dilution of ecosystem credit values as well as other species credit threatened species values reliant on the habitat values within BAM-C.
- Land Eco has allocated/determined more vegetation zones, as is generally recommended by the BAM Operational Manual.
- Targeted surveys for many of the identified or predicted species credit threatened species within the BAM assessment were not undertaken. Had Land Eco's indicative recommendations been conceded and committed to be undertaken then the current DA submission would still be pending because the required targeted Spring surveys could still not have been undertaken whilst the opportunity to do these is almost upon us.

- No substitute species expert reports appear to have been undertaken or at least have not been submitted to validate apparent reduction in credit obligations for various species credit species as would be an alternative to doing the targeted surveys.
- The suspected observation of Floyds Grass *Alexfloydia repens* made by Land Eco further recommended that targeted survey for this species should be undertaken during appropriate flowering times. No such targeted surveys were undertaken by AEP, yet despite this recommendation by Land Eco, AEP has concluded this plant species is unlikely present. Land Eco detected the Black Grass-dart Butterfly on-site and the species makes use specifically of Floyd's Grass as its primary larval food plant and is known to rarely wander more than ca 50m from patches of this plant. A specimen (unconfirmed) in non-flowering condition was tentatively identified as Floyds Grass by Land Eco. This clearly demonstrates that further survey effort for this plant species and potentially others, is warranted.
- Consideration of all of the SAII candidate threatened entities, either identified for the site or considered as potentially occurring should be evaluated and thoroughly assessed and documented from the SAII perspective.
- Several threatened species were identified on-site during surveys by Land Eco, the BAM-C also predicted several others to be present or having a high likelihood of occurring. This was indicated within the draft report by Land Eco and notified to the proponent with a recommendation that targeted survey and guideline compliant surveys should be undertaken to rule in our out certain additional species credit categorised threatened species from credit obligation. The implicated threatened species each require certain seasonal or climatic considerations and methodologies to comply with the relevant DPE survey guidelines, but these surveys were apparently never undertaken. Ingenia appointed an alternative consultancy (AEP) who have since prepared the BDAR on exhibition using Land Eco data. For the Land Eco recommended seasonally and climatically appropriate timing of recommended surveys to have occurred the proposal could not yet have been submitted to Nambucca Shire Council because the earliest opportunity for these surveys to have been undertaken is still to seasonally arrive, being this Spring (2022) or later and/or for still other entities from early to late Summer seasonal timing. Some targeted species would also ideally have appropriate meteorological/weather events prevailing as well. Alternatively, an assumed presence position could be taken accompanied by a species-specific expert report to provide legitimate credit values for each threatened entity's habitat extent so obtained. Neither of these processes have happened.

The threatened species implicated by BAM-C and its required survey guideline application, as well as triggered targeted survey, as identified by Land Eco, have not yet had targeted surveys undertaken. Hence survey no suitable survey effort has been undertaken that could enable dismissal from having habitat presence indicated within the BAM calculator. Consequently, appropriate credit obligation calculations have therefore not been compliantly calculated or correctly included/excluded. Comparison of the credits calculated by the AEP Vs Land Eco biodiversity assessments needs to be carefully reconciled and the analysis transparently provided to present the consent authority with accurate impact credit values and correctly conditioned offset obligations.

a. BAM-C Indicated Threatened Species

Aepprymnus rufescens Rufous Bettong

Argynnis hyperbius Laced Fritillary

Botaurus poiciloptilus Australasian Bittern

Carteornis leucotis White-eared Monarch

Cercartetus nanus Eastern Pygmy-possum

Coeranoscincus reticulatus Three-toed Snake-tooth Skink

Crinia tinnula Wallum Froglet

Hoplocephalus bitorquatus Pale-headed Snake

Hoplocephalus stephensii Stephens banded Snake

Lichenostomus fasciogularis Mangrove Honeyeater

Litoria aurea Green and Golden Bell Frog

Litoria brevipalmata Green-thighed Frog

Lophoictinia isura Square-tailed Kite

Mixophyes balbus Stuttering Frog

Mixophyes iteratus Giant Barred River Frog

Petalura gigantea Giant Dragonfly

Ocybadistes knightorum Black Grass-dart Butterfly - detected

Petaurus norfolcensis Squirrel Glider - detected

Phascogale tapoatafa Brush-tailed Phascogale

Planigale maculata Common Planigale

Potorous tridactylus Long-nosed Potoroo

Pteropus poliocephalus Grey-headed Flying-fox

Turnix maculosus Red-backed Button-quail

Dasyurus maculatus Spotted Quoll

Vespadelus troughtoni Eastern Cave bat

Petaurus australis Yellow Bellied Glider

Diurus disposita Willawarrin Doubletail

Dracophyllum macranthum

*Lindernia al*sinoides Noah's False Chickweed

Miniopterus australis Little Bent-winged Bat

Miniopterus orianae oceanensis Large Bentwinged Bat

Rhodamnia rubescens Scrub Turpentine

Rhodomyrtus psidioides Native Guava

The above 33 BAM-C triggered threatened species are implicated by the proposal as warranting consideration and hence application of the BAM actually predicts an additional 17 threatened species that were not necessarily indicated by way of a BioNet Atlas Search alone as provided within the table below.

b. Appropriate Survey Requirements

Appropriate targeted surveys in accordance with prescribed or recommended survey methodologies under the BAM have not been undertaken for the listed entities above. Some have been opportunistically detected and these entities are indicated above. In the alternative, an assumed presence and credit obligation calculation could have been done but this has not occurred or included all the above species.

Given the disparity in vegetation mapping between the two BAM assessments and the credit calculations for the above, it is here considered that a re-appraisal and recalculation of credits be undertaken.

Adequate Survey methods for most of these species needs to be applied and include suitable trapping methods and with appropriate seasonal and weather event conditions prevailing.

- Pitfall and other (funnel, Elliot, cage or harp) trapping survey methodological efforts in accord with relevant survey guidelines should have been undertaken or where not undertaken had presence assumed (particularly for some of the herpetological target species)
- Southern Myotis (dual credit species) was dismissed as requiring consideration or inclusion for credits even though present on the basis that water bodies were contended to be not present. Yet the site has a network of drainage lines and has flood prone wet areas that might be validly considered as requiring credit obligation calculations
- Several threatened plants have potential to occur and require appropriate flowering season surveys
- The consideration of the development footprint that includes the various possible APZ requirements are not believed to have been considered in the BAM credit calculation for offset credit obligations because of residual impacts. Other prescribed impacts beyond the strictly development impact offset credit obligation are also likely needing to be considered given the number of threatened entities implicated, many of which having not been conceded or considered.

c. BioNet Search

Class	Family	*Scientific Name*	Common Name	NSW Status	Comm Status	No Recs
Amphibia	Myobatrachidae	*Mixophyes balbus*	Stuttering Frog	E1,P,2	V	1
Amphibia	Myobatrachidae	*Mixophyes iteratus*	Giant Barred Frog	E1,P,2	E	24
Amphibia	Hylidae	*Litoria aurea*	Green and Golden Bell Frog	E1,P	V	2
Amphibia	Hylidae	*Litoria brevipalmata*	Green-thighed Frog	V,P		2
Reptilia	Cheloniidae	*Caretta caretta*	Loggerhead Turtle	E1,P	E	3
Reptilia	Cheloniidae	*Chelonia mydas*	Green Turtle	V,P	V	4
Aves	Columbidae	*Ptilinopus magnificus*	Wompoo Fruit-Dove	V,P		17
Aves	Apodidae	*Hirundapus caudacutus*	White-throated Needletail	P	V,C,J,K	13
Aves	Procellariidae	*Macronectes giganteus*	Southern Giant Petrel	E1,P	E	2
Aves	Ciconiidae	*Ephippiorhynchus asiaticus*	Black-necked Stork	E1,P		46
Aves	Ardeidae	*Ixobrychus flavicollis*	Black Bittern	V,P		5
Aves	Accipitridae	*Haliaeetus leucogaster*	White-bellied Sea-Eagle	V,P		22
Aves	Accipitridae	*Hieraaetus morphnoides*	Little Eagle	V,P		1
Aves	Accipitridae	*Lophoictinia isura*	Square-tailed Kite	V,P,3		5
Aves	Accipitridae	*Pandion cristatus*	Eastern Osprey	V,P,3		48
Aves	Gruidae	*Grus rubicunda*	Brolga	V,P		5
Aves	Burhinidae	*Burhinus grallarius*	Bush Stone-curlew	E1,P		1
Aves	Burhinidae	*Esacus magnirostris*	Beach Stone-curlew	E4A,P		1
Aves	Haematopodidae	*Haematopus fuliginosus*	Sooty Oystercatcher	V,P		2
Aves	Haematopodidae	*Haematopus longirostris*	Pied Oystercatcher	E1,P		5
Aves	Scolopacidae	*Calidris canutus*	Red Knot	P	E,C,J,K	1
Aves	Scolopacidae	*Numenius madagascariensis*	Eastern Curlew	P	CE,C,J,K	1
Aves	Laridae	*Sternula albifrons*	Little Tern	E1,P	C,J,K	2
Aves	Cacatuidae	*Calyptorhynchus lathami*	Glossy Black-Cockatoo	V,P,2		240
Aves	Psittacidae	*Glossopsitta pusilla*	Little Lorikeet	V,P		4
Aves	Psittacidae	*Lathamus discolor*	Swift Parrot	E1,P,3	CE	3
Aves	Strigidae	*Ninox connivens*	Barking Owl	V,P,3		4
Aves	Strigidae	*Ninox strenua*	Powerful Owl	V,P,3		12
Aves	Tytonidae	*Tyto longimembris*	Eastern Grass Owl	V,P,3		1
Aves	Tytonidae	*Tyto novaehollandiae*	Masked Owl	V,P,3		12
Aves	Tytonidae	*Tyto tenebricosa*	Sooty Owl	V,P,3		23
Aves	Meliphagidae	*Anthochaera phrygia*	Regent Honeyeater	E4A,P	CE	1
Aves	Neosittidae	*Daphoenositta chrysoptera*	Varied Sittella	V,P		5
Aves	Campephagidae	*Coracina lineata*	Barred Cuckoo-shrike	V,P		2
Aves	Artamidae	*Artamus cyanopterus cyanopterus*	Dusky Woodswallow	V,P		1
Mammalia	Dasyuridae	*Dasyurus maculatus*	Spotted-tailed Quoll	V,P	E	13
Mammalia	Dasyuridae	*Phascogale tapoatafa*	Brush-tailed Phascogale	V,P		17
Mammalia	Phascolarctidae	*Phascolarctos cinereus*	Koala	V,P	E	107
Mammalia	Petauridae	*Petaurus australis*	Yellow-bellied Glider	V,P		78
Mammalia	Petauridae	*Petaurus norfolcensis*	Squirrel Glider	V,P		26
Mammalia	Pseudocheiridae	*Petauroides volans*	Greater Glider	P	V	10
Mammalia	Macropodidae	*Macropus parma*	Parma Wallaby	V,P		1
Mammalia	Pteropodidae	*Pteropus alecto*	Black Flying-fox	P		21
Mammalia	Pteropodidae	*Pteropus poliocephalus*	Grey-headed Flying-fox	V,P	V	124
Mammalia	Pteropodidae	*Syconycteris australis*	Common Blossom-bat	V,P		5
Mammalia	Emballonuridae	*Saccolaimus flaviventris*	Yellow-bellied Sheathtail-bat	V,P		2
Mammalia	Molossidae	*Micronomus norfolkensis*	Eastern Coastal Free-tailed Bat	V,P		11
Mammalia	Vespertilionidae	*Falsistrellus tasmaniensis*	Eastern False Pipistrelle	V,P		2
Mammalia	Vespertilionidae	*Myotis macropus*	Southern Myotis	V,P		5
Mammalia	Vespertilionidae	*Phoniscus papuensis*	Golden-tipped Bat	V,P		5
Mammalia	Vespertilionidae	*Scoteanax rueppellii*	Greater Broad-nosed Bat	V,P		5

Mammalia	Vespertilionidae	*Vespadelus troughtoni*	Eastern Cave Bat	V,P		1
Mammalia	Miniopteridae	*Miniopterus australis*	Little Bent-winged Bat	V,P		48
Mammalia	Miniopteridae	*Miniopterus orianae oceanensis*	Large Bent-winged Bat	V,P		16
Mammalia	Balaenopteridae	*Megaptera novaeangliae*	Humpback Whale	V,P	V	1
Mammalia	Physeteridae	*Physeter macrocephalus*	Sperm Whale	V,P		2
Insecta	Hesperiidae	*Ocybadistes knightorum*	Black Grass-dart Butterfly	E1		51
Flora	Apocynaceae	*Cynanchum elegans*	White-flowered Wax Plant	E1	E	1
Flora	Apocynaceae	*Marsdenia longiloba*	Slender *Marsdenia*	E1	V	173
Flora	Apocynaceae	*Parsonsia dorrigoensis*	Milky Silkpod	V	E	197
Flora	Apocynaceae	*Tylophora woollsii*	Cryptic Forest Twiner	E1	E	1
Flora	Fabaceae (Faboideae)	*Glycine clandestina (broad leaf form)*	*Glycine clandestina* (broad leaf form) in the Nambucca Local Government Area	E2		1
Flora	Juncaginaceae	*Maundia triglochinoides*		V		15
Flora	Menispermaceae	*Tinospora smilacina*	Tinospora Vine	E1		1
Flora	Myrtaceae	*Melaleuca groveana*	Grove's Paperbark	V		6
Flora	Myrtaceae	*Rhodamnia rubescens*	Scrub Turpentine	E4A	CE	76
Flora	Myrtaceae	*Rhodomyrtus psidioides*	Native Guava	E4A		29
Flora	Orchidaceae	*Dendrobium melaleucaphilum*	Spider orchid	E1,P,2		13
Flora	Poaceae	*Alexfloydia repens*	Floyd's Grass	E1		12
Flora	Rutaceae	*Acronychia littoralis*	Scented *Acronychia*	E1	E	6
Flora	Santalaceae	*Thesium australe*	Austral Toadflax	V	V	1
Flora	Sapotaceae	*Niemeyera whitei*	Rusty Plum, Plum Boxwood	V		28

d. MNES Search

EPBC Act Protected Matters Search tool was also applied to the subject land with an appropriate buffer.

The outcome of this search is also provided below:

The following EPBC Act listed Threatened Ecological Communities identified or predicted to occur.

Community Name	Threatened Category	Presence	Buffer Status
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South	Endangered	Community likely to occur within area	In feature area
Coastal Swamp Sclerophyll Forest of New South Wales and South-East Queensland	Endangered	Community known to occur within area	In feature area
Littoral Rainforest and Coastal Vine Thickets of Eastern Australia	Critically Endangered	Community likely to occu within area	In feature area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community likely to occu within area	In feature area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occu within area	In feature area

Australian Government
Department of Agriculture, Water and the Environment

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 10-Mar-2022

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	1
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	87
Listed Migratory Species:	67

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	10
Commonwealth Heritage Places:	1
Listed Marine Species:	87
Whales and Other Cetaceans:	12
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	7
Regional Forest Agreements:	1
Nationally Important Wetlands:	2
EPBC Act Referrals:	6
Key Ecological Features (Marine):	None
Biologically Important Areas:	5
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name	Buffer Status
EEZ and Territorial Sea	In buffer area only

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community likely to occur within area	In feature area
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	Community known to occur within area	In feature area
Littoral Rainforest and Coastal Vine Thickets of Eastern Australia	Critically Endangered	Community likely to occur within area	In feature area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community likely to occur within area	In feature area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Atrichornis rufescens Rufous Scrub-bird [655]	Endangered	Species or species habitat may occur within area	In buffer area only
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Endangered	Species or species habitat may occur within area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area	In feature area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In feature area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area	In feature area
Pterodroma neglecta neglecta Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat may occur within area	In buffer area only
FISH			
Epinephelus daemelii Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In feature area
Seriolella brama Blue Warehou [69374]	Conservation Dependent	Species or species habitat known to occur within area	In feature area
Thunnus maccoyii Southern Bluefin Tuna [69402]	Conservation Dependent	Species or species habitat likely to occur within area	In feature area
FROG			
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Mixophyes balbus Stuttering Frog, Southern Barred Frog (in Victoria) [1942]	Vulnerable	Species or species habitat known to occur within area	In feature area
Mixophyes iteratus Giant Barred Frog, Southern Barred Frog [1944]	Vulnerable	Species or species habitat known to occur within area	In feature area
INSECT			
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area	In feature area
Phyllodes imperialis smithersi Pink Underwing Moth [86084]	Endangered	Species or species habitat may occur within area	In feature area
MAMMAL			
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In feature area
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area	In feature area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In feature area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat known to occur within area	In feature area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat known to occur within area	In feature area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
Potorous tridactylus tridactylus			
Long-nosed Potoroo (SE Mainland) [66645]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pseudomys novaehollandiae			
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pseudomys oralis			
Hastings River Mouse, Koontoo [98]	Endangered	Species or species habitat may occur within area	In buffer area only
Pteropus poliocephalus			
Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area	In feature area
PLANT			
Acronychia littoralis			
Scented Acronychia [8582]	Endangered	Species or species habitat known to occur within area	In feature area
Arthraxon hispidus			
Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Asperula asthenes			
Trailing Woodruff [14004]	Vulnerable	Species or species habitat may occur within area	In feature area
Cryptostylis hunteriana			
Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Cynanchum elegans			
White-flowered Wax Plant [12533]	Endangered	Species or species habitat known to occur within area	In feature area
Euphrasia arguta			
[4325]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Haloragis exalata subsp. velutina Tall Velvet Sea-berry [16839]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat may occur within area	In feature area
Marsdenia longiloba Clear Milkvine [2794]	Vulnerable	Species or species habitat known to occur within area	In feature area
Parsonsia dorrigoensis Milky Silkpod [64684]	Endangered	Species or species habitat known to occur within area	In feature area
Persicaria elatior Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area	In feature area
Plectranthus nitidus Nightcap Plectranthus, Silver Plectranthus [55742]	Endangered	Species or species habitat may occur within area	In buffer area only
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Sarcochilus fitzgeraldii Ravine Orchid [19131]	Vulnerable	Species or species habitat may occur within area	In feature area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Tylophora woollsii [20503]	Endangered	Species or species habitat known to occur within area	In feature area
REPTILE			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area	In feature area
SHARK			
Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In feature area
Galeorhinus galeus School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark [68453]	Conservation Dependent	Species or species habitat may occur within area	In feature area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In feature area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardenna grisea Sooty Shearwater [82651]		Species or species habitat likely to occur within area	In feature area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat may occur within area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In feature area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat known to occur within area	In feature area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In feature area
Sternula albifrons Little Tern [82849]		Breeding known to occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Migratory Marine Species			
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area	In feature area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In feature area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area	In feature area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In feature area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eubalaena australis as Balaena glacialis australis			
Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In feature area
Lamna nasus			
Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area	In feature area
Megaptera novaeangliae			
Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Mobula alfredi as Manta alfredi			
Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In feature area
Mobula birostris as Manta birostris			
Giant Manta Ray [90034]		Species or species habitat may occur within area	In feature area
Natator depressus			
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area	In feature area
Orcinus orca			
Killer Whale, Orca [46]		Species or species habitat may occur within area	In feature area
Rhincodon typus			
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In feature area
Sousa sahulensis as Sousa chinensis			
Australian Humpback Dolphin [87942]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Cuculus optatus			
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus			
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Foraging, feeding or related behaviour known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area	In feature area
Calidris ruficollis Red-necked Stint [860]		Foraging, feeding or related behaviour known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Charadrius bicinctus Double-banded Plover [895]		Foraging, feeding or related behaviour known to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area	In feature area
Gallinago megala Swinhoe's Snipe [864]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Gallinago stenura Pin-tailed Snipe [841]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Numenius minutus Little Curlew, Little Whimbrel [848]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Numenius phaeopus Whimbrel [849]		Foraging, feeding or related behaviour known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pluvialis fulva Pacific Golden Plover [25545]		Foraging, feeding or related behaviour known to occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area	In feature area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Foraging, feeding or related behaviour known to occur within area	In feature area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
Communications, Information Technology and the Arts - Australian Postal Corporation		
Commonwealth Land - Australian Postal Commission [11360]	NSW	In buffer area only
Commonwealth Land - Australian Postal Corporation [11650]	NSW	In feature area
Communications, Information Technology and the Arts - Telstra Corporation Limited		
Commonwealth Land - Australian Telecommunications Commission [11661]	NSW	In feature area
Commonwealth Land - Australian Telecommunications Commission [11662]	NSW	In feature area
Commonwealth Land - Australian Telecommunications Commission [11648]	NSW	In buffer area only
Commonwealth Land - Australian Telecommunications Commission [11649]	NSW	In feature area
Commonwealth Land - Australian Telecommunications Commission [11651]	NSW	In feature area
Commonwealth Land - Telstra Corporation Limited [12917]	NSW	In feature area
Commonwealth Land - Telstra Corporation Limited [12631]	NSW	In feature area
Defence		
Commonwealth Land - Defence Service Homes Corporation [11359]	NSW	In buffer area only

Commonwealth Heritage Places			[Resource Information]
Name	State	Status	Buffer Status
Historic			
Macksville Post Office	NSW	Listed place	In feature area

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]		Species or species habitat likely to occur within area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Breeding likely to occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Foraging, feeding or related behaviour known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area overfly marine area	In feature area
Calidris ruficollis Red-necked Stint [860]		Foraging, feeding or related behaviour known to occur within area overfly marine area	In feature area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat may occur within area	In feature area
Charadrius bicinctus Double-banded Plover [895]		Foraging, feeding or related behaviour known to occur within area overfly marine area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Charadrius ruficapillus Red-capped Plover [881]		Foraging, feeding or related behaviour known to occur within area overfly marine area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea antipodensis gibsoni as Diomedea gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In feature area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area overfly marine area	In feature area
Gallinago megala Swinhoe's Snipe [864]		Foraging, feeding or related behaviour likely to occur within area overfly marine area	In feature area
Gallinago stenura Pin-tailed Snipe [841]		Foraging, feeding or related behaviour likely to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Foraging, feeding or related behaviour known to occur within area overfly marine area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Neophema chrysostoma Blue-winged Parrot [726]		Species or species habitat may occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Numenius minutus Little Curlew, Little Whimbrel [848]		Foraging, feeding or related behaviour likely to occur within area overfly marine area	In feature area
Numenius phaeopus Whimbrel [849]		Foraging, feeding or related behaviour known to occur within area	In feature area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat known to occur within area	In feature area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In feature area
Pluvialis fulva Pacific Golden Plover [25545]		Foraging, feeding or related behaviour known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis as Rostratula benghalensis (sensu lato)			
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Stercorarius skua as Catharacta skua			
Great Skua [823]		Species or species habitat may occur within area	In feature area
Sternula albifrons as Sterna albifrons			
Little Tern [82849]		Breeding known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus			
Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area	In feature area
Thalassarche bulleri			
Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche bulleri platei as Thalassarche sp. nov.			
Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri			
Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche cauta			
Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche eremita			
Chatham Albatross [64457]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida			
Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche melanophris			
Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area overfly marine area	In feature area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Foraging, feeding or related behaviour known to occur within area overfly marine area	In feature area
Fish			
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area	In feature area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area	In feature area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area	In feature area
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area	In feature area
Hippichthys heptagonus Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area	In feature area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In feature area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area	In feature area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area	In feature area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area	In feature area
Solegnathus dunckeri Duncker's Pipehorse [66271]		Species or species habitat may occur within area	In feature area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area	In feature area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area	In feature area
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area	In feature area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area	In feature area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In feature area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area	In feature area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area	In feature area
Reptile			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In feature area
Hydrophis elegans Elegant Seasnake [1104]		Species or species habitat may occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area	In feature area
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area	In feature area

Whales and Other Cetaceans		[Resource Information]	
Current Scientific Name	Status	Type of Presence	Buffer Status
Mammal			
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area	In feature area

Current Scientific Name	Status	Type of Presence	Buffer Status
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area	In feature area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In feature area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area	In feature area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In feature area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In feature area
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]		Species or species habitat likely to occur within area	In feature area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area	In feature area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area	In feature area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Clybucca	Historic Site	NSW	In buffer area only
Fishermans Bend	Nature Reserve	NSW	In feature area
Gaagal Wanggaan (South Beach)	National Park	NSW	In feature area
Gumma	Indigenous Protected Area	NSW	In feature area
Ngambaa	Nature Reserve	NSW	In feature area
Yarrahapinni Wetlands	National Park	NSW	In buffer area only
Yarriabini	National Park	NSW	In feature area

Regional Forest Agreements		[Resource Information]
Note that all areas with completed RFAs have been included.		
RFA Name	State	Buffer Status
North East NSW RFA	New South Wales	In feature area

Nationally Important Wetlands		[Resource Information]
Wetland Name	State	Buffer Status
100 Acre Swamp	NSW	In feature area
Clybucca Creek Estuary	NSW	In feature area

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Nambucca Heads to Urunga Pacific Highway Upgrade, NSW	2013/6963	Controlled Action	Post-Approval	In buffer area only
Pacific Highway Upgrade, Warrel Creek to Nambucca Heads, NSW	2013/7101	Controlled Action	Post-Approval	In feature area
Not controlled action				

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Weed Species Removal at Lions Park, Bowraville	2010/5493	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
Wild Dog Baiting	2006/2768	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Referral decision				
Breeding program for Grey Nurse Sharks	2007/3245	Referral Decision	Completed	In feature area

Biologically Important Areas			
Scientific Name	Behaviour	Presence	Buffer Status
Dolphins			
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Breeding	Likely to occur	In feature area
Seabirds			
Ardenna carneipes Flesh-footed Shearwater [82404]	Foraging	Known to occur	In buffer area only
Procellaria parkinsoni Black Petrel [1048]	Foraging	Likely to occur	In buffer area only
Sharks			
Carcharias taurus Grey Nurse Shark [64469]	Foraging	Known to occur	In feature area
Whales			
Megaptera novaeangliae Humpback Whale [38]	Foraging	Known to occur	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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5. Vegetation Mapping

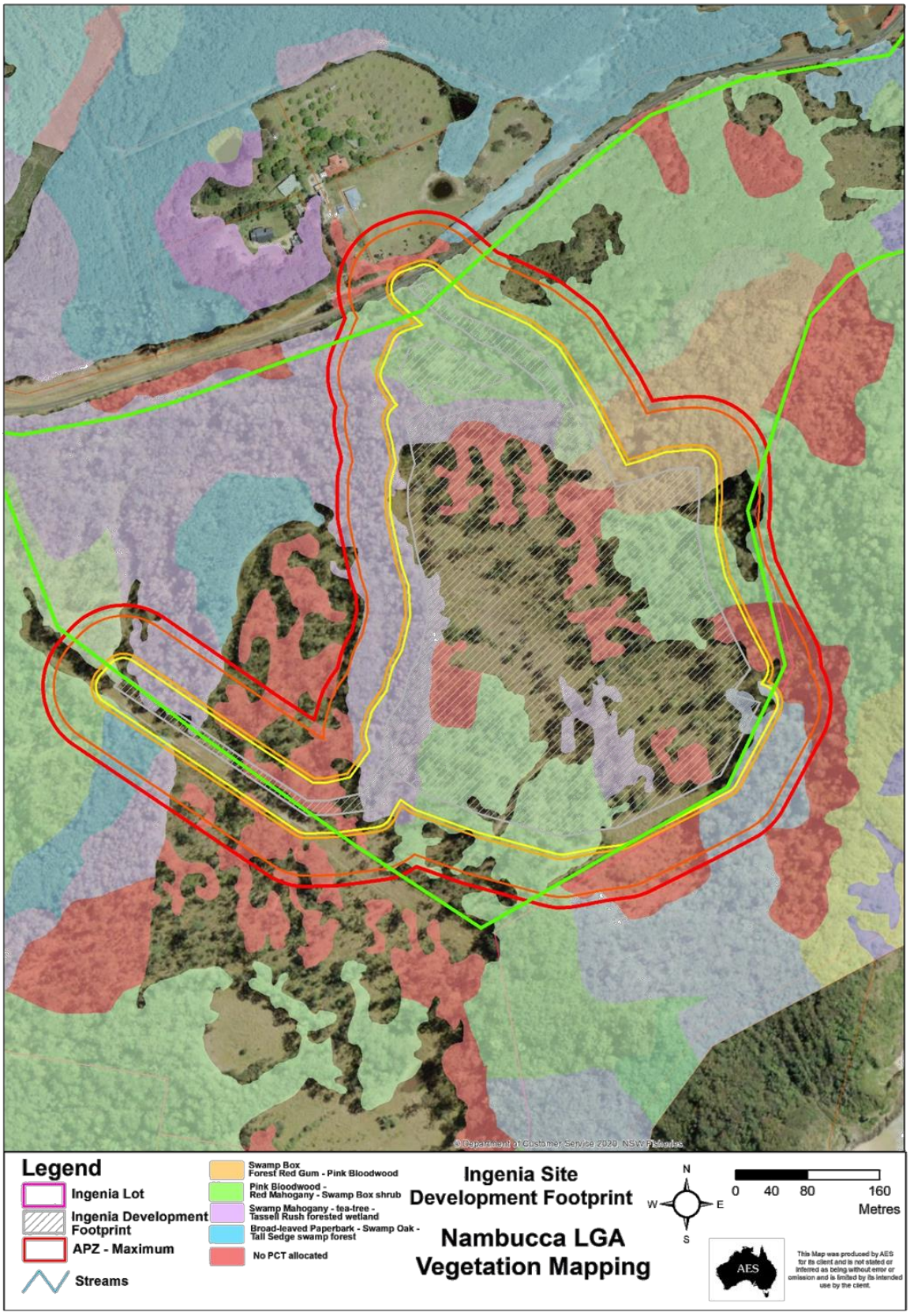

Figure: Nambucca LGA Vegetation Mapping 2015

6. References

AEP (2022) Biodiversity Development Assessment Report Proposed Caravan Park and associated infrastructure at 11 Ocean Ridge Drive, Way Way, NSW. Report Prepared for the Proponent 1 July 2022

Building Code & Bushfire Hazard Solutions Pty Limited (2022) Bushfire Assessment Report Proposed Lifestyle Village 1006 Scott's Head Road, Way Way, NSW. Reference Number 220358. Report Prepared for the Proponent 22 June 2022, 27 pp

LandEco (2022) [Draft] Biodiversity Development Findings Report: Development at 11 Ocean Ridge Drive, Way Way NSW 2447, Report prepared for the Proponent 7 March 2022 [Provided as an Appendix I to AEP 2022]

NSW Rural Fire Service (2019) *Planning for Bushfire Protection. A Guide for Councils, Planners, Fire Authorities and Developers*.

7. Authorship

This review was undertaken by Ross Wellington Principal of AES – Australian Environmental Surveys that has operated for many years and has undertaken many studies including for the Five-Forests Studies on the South Coast of NSW, CRA/RFA state-wide surveys, NSW Forestry Regional Assessments and numerous other projects across NSW and interstate.

He has previously been relevantly employed by the NSW State Government in various roles and functions.

These have included:

- Department of Education and Training - High School Science Teacher, Teacher-in-Charge/Principal of an Environmental Education Centre School
- NSW National Parks and Wildlife Service – Senior Threatened Species Officer
- Department of Environment and Conservation – Recovery Planning Officer & State-wide Threatened Species Coordinator
- Department of Environment and Climate Change – Senior Biodiversity Conservation Officer
- Environment Protection Authority – Forestry Compliance Officer
- Office of Environment and Heritage – Conservation Planning Officer

In the Private sector he has also worked for medium and large environmental consultancy firms Molino Stewart, Eco Logical Australia and Eco Planning on a myriad of environmental and primarily ecologically related studies including offsetting, Biobanking and Biodiversity Stewardship related projects. He has prepared numerous threatened species expert reports and liaised with the BCT in doing so.

Consequently, Ross has had over 30 years involved with environmental and biodiversity related issues and projects and the legislative framework within which these matters are considered and operate. This has included involvement within policy development, and biodiversity conservation legislative change. He has reviewed and/or prepared all manner of development assessment documents such as EIS, SIS, SEE, REF, management plans, plans of management as well as BDARs and the like.

Ross has prepared various Government Department Best Practice Guides, Environmental Impact Assessment Guidelines, Threatened Species Profiles, Policy Guidelines, Recovery Plans and contributed to Threat Abatement Plans and other statutory documents.

He is a recognised expert in Biodiversity Conservation and has been accredited as a Biodiversity Expert for several threatened entities. Ross has been engaged on numerous occasions as an expert in the NSW Land and Environment Court to advise on biodiversity conservation and associated development related matters.

Ross is well positioned and qualified to provide this review.

Appendix I – Independent planning report

LAND & ENVIRONMENT PLANNING

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Biodiversity review - DA 233/2022, 11 Ocean Ridge Drive, Way Way

Biodiversity issues associated with a development application for a Residential Lifestyle Community (Caravan Park) on Lot 11 DP 1243930, 11 Ocean Ridge Drive, Way Way (DA 233/2022) have been reviewed as the request of Scotts Head Community Group.

The attached report outlines how biodiversity matters should be considered in the assessment of the development application. It highlights specific legislative requirements that apply for this important issue. The report identifies deficiencies in the Biodiversity Development Assessment Report (BDAR) accompanying the application.

Land & Environment Planning (LEP) prepared the report to inform and assist the review of the development application. LEP is a specialist biodiversity and strategic environmental planning consultancy with extensive experience in the assessment and review of development proposals and in strategic planning for biodiversity.

The report concludes that in relation to biodiversity issues, the proposed development as described in the development application does not appear to meet the legislative requirements that would allow it to be approved under the *Biodiversity Conservation Act 2016* and *Environmental Planning and Assessment Act 1979*.

It is suggested that matters identified in the report are drawn to the attention of the consent authority and taken into account in the assessment and determination of the development application.

Yours sincerely

M Fallding
Principal, Land & Environment Planning
22 August 2022

Biodiversity review - DA 233/2022, Lot 11 DP 1243930, 11 Ocean Ridge Drive, Way Way

1 Background

This report outlines how biodiversity matters need to be considered in the review and assessment of the development application, recognising that specific legislative requirements apply for this important issue.

The report has been prepared by Land & Environment Planning for the Scotts Head Community group to inform and assist the review of a development application for a caravan park/ manufactured home estate/ residential lifestyle community development at 11 Ocean Ridge Drive Way Way in the Nambucca local government area (DA 233/2022).

Land & Environment Planning (LEP) is a specialist biodiversity and strategic environmental planning consultancy with extensive experience in the assessment and review of development proposals and in strategic planning for biodiversity. The review was undertaken by Martin Fallding, principal of LEP who is experienced in reviewing development applications although not an accredited assessor under the *Biodiversity Conservation Act 2016*.

The report focuses on the following matters:

1. Consent authority responsibilities to consider biodiversity.
2. Adequacy of information for determining the development application.
3. Avoidance of biodiversity impacts.
4. Biodiversity matters relevant to the determination of the application.
5. Biodiversity Development Assessment Report (BDAR) review.
6. Biodiversity credit calculation and review.

The review is based on a desktop analysis of available information from a number of sources. Permission was sought to access the site from the development proponent to support the review, however access was denied.

2 Consent authority responsibilities to consider biodiversity

The consent authority has a responsibility to consider biodiversity under the *Environmental Planning and Assessment Act 1979* and to meet legislative requirements relating to threatened species under the *Biodiversity Conservation Act 2016*, with the potential for requirements under the *Fisheries Management Act 1994* and *Water Management Act 2000* (relating to streams and groundwater dependent ecosystems) also applying.

Additional requirements to consider significant impacts on nationally listed threatened and migratory species may apply under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

When preparing a development application that may impact on biodiversity values, the proponent must:

1. Include relevant and sufficient information in the development application and statement of environmental effects to identify the nature and extent of the impact.
2. Determine whether there is likely to be a significant impact on threatened species or threatened ecological communities (either as a result of exceeding the vegetation clearing threshold, the land being identified on the Biodiversity Values Map, or by undertaking a threatened species test of significance) and therefore whether a Biodiversity Development Assessment Report (BDAR) must accompany the development application.
3. Where a Biodiversity Development Assessment Report (BDAR) is required this must be prepared by an accredited assessor to accompany the development application. The BDAR must meet Biodiversity Assessment Methodology (BAM) requirements including documenting measures taken to avoid and minimise impacts on biodiversity values and determining a biodiversity offset credit requirement for the NSW Biodiversity Offset Scheme (BOS) where avoiding and minimising biodiversity impacts is not feasible.

Importantly, there are legislative requirements established in the *Biodiversity Conservation Act 2016* and the *Environmental Planning and Assessment Act 1979* to take steps to avoid and minimise the impact on biodiversity values on the site as required in Section 6.4 of the *Biodiversity Conservation Act 2016*.

Section 6.4 of the *Biodiversity Conservation Act 2016* outlines the purpose of the Biodiversity Offset Scheme (BOS), and establishes a requirement to identify measures to offset or compensate for impacts on biodiversity values **after** steps are taken to avoid or minimise those impacts. NSW case law has confirmed the requirement to avoid or minimise biodiversity impacts and if this pre-condition is not met then offsets in the BOS are not relevant and cannot be applied (*IRM Property Group (No. 2) Pty Ltd v Blacktown City Council* [2021] NSWLEC 1306, *Tomasic v Port Stephens Council* [2021] NSWLEC 56, *Planners North v Ballina Shire Council* [2021] NSWLEC 120).

The responsibilities of a consent authority in determining a development application accompanied by a BDAR are set out in Section 7.13 of the *Biodiversity Conservation Act 2016*. These responsibilities apply in addition to those under the *Environmental Planning and Assessment Act 1979* as provided for in Section 1.7 of that Act. This section provides that the *Environmental Planning and Assessment Act 1979* has effect subject to the provisions of Part 7 of the *Biodiversity Conservation Act 2016* and Part 7A of the *Fisheries Management Act 1994*.

Guidelines and supporting information has been prepared to support applicants and consent authorities in preparing BDARs and assessing them and is available

at https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/resources-tools-and-systems

In addition to requirements under the *Biodiversity Conservation Act 2016* identified above relating to BDARs, Section 4.15 of the *Environmental Planning and Assessment Act 1979* requires a consent authority determining a development application to take into consideration a range of relevant matters, including the following matters that relate to the assessment of biodiversity issues:

1. The provisions of any environmental planning instrument applying to the land.
2. The provisions of any development control plan applying to the land.
3. The likely impacts of the development, including environmental impacts on both the natural and built environment.
4. The suitability of the site for the development.
5. The public interest.

In determining the development application, relevant statutory requirements to consider biodiversity matters in addition to those included in the Biodiversity Development Assessment Report are identified in the following table.

Biodiversity related matter	**Details**
ENVIRONMENTAL PLANNING INSTRUMENTS & STRATEGIC CONTEXT	
Nambucca Valley Local Strategic Planning Statement (LSPS)	The strategic context for local environmental plans is outlined in local strategic planning statements, with the basis for strategic planning affecting the within the local government area (Nambucca Valley Council 2020). A LSPS goal under planning priority 2 is that "**the vegetation, biodiversity and habitats of the Nambucca Valley will be protected and enhanced to support sustainable, diverse and abundant wildlife populations**".
Nambucca Local Environmental Plan 2010 (LEP)	The LEP applying to the land aims include promoting development and encouraging growth "that is ecologically sustainable" and "**to protect, manage and enhance areas of high quality landscape, natural and scenic resources and environmental values, including water resources, wildlife habitat and corridors**". Other than these aims there are no specific provisions that directly impact on the consideration of biodiversity.
State Environmental Planning Policy (Biodiversity and Conservation) 2021	Chapter 4 of this SEPP Koala Habitat Protection 2021 is relevant because the land is zoned RU 1 and RU2. It aims to "**encourage the conservation and management of areas of natural vegetation that provide for habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline."** Section 4.9 of the SEPP requires a council to assess "**whether the development is likely to have any impact on koalas or koala habitat**" before granting consent.
State Environmental Planning Policy (Resilience and Hazards) 2021	Chapter 2 of this SEPP is relevant to the proposed development as part of the land and development site is mapped within the "coastal use area". Clause 2.8 sets out considerations for consent, and specifically requires that "**development consent must not be granted . . . unless the consent authority has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development**."

Biodiversity related matter	**Details**
DEVELOPMENT CONTROL PLANS	
Nambucca Development Control Plan 2010 (DCP)	The DCP includes objectives "**to ensure development responds to the character and qualities of the surrounding environment**" and "**to ensure development responds to the features and qualities of the subject site**".
	Part A Section 4.8 states that "**Council will need to be satisfied that the proposed development will not have a significant effect on threatened species populations or ecological communities or their habitats**" and "**in general, existing trees and riparian vegetation are to be retained and preserved wherever practicable**".
	Part A Section 4.9 requires natural watercourses, drainage channels and riparian zones to be retained in their natural state wherever possible "**to ensure that their ecological function is not compromised**". Buffer zones to watercourses are recommended in Part F of the DCP.
LEGISLATIVE OBJECTS & PUBLIC INTEREST	
Environmental Planning and Assessment Act 1979	An object of the EP&A Act Section 1.3 (e) is "**to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats**".
	Protection of biodiversity is a principle underpinning the facilitation of ESD, one of the aims of the EP&A Act S1.3 (b)
Water Management Act 2000	Relevant objects of the Act include 3(b) to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality" and "to integrate the management of water resources with the management of other aspects of the environment, including the land, its soil, its native vegetation and its native fauna".
	Water Sharing Plan for the Nambucca Unregulated and Alluvial Water Sources 2016. Objective 10(a) of this plan is "to **protect, preserve, maintain and enhance the important river flow dependent and high priority groundwater-dependant ecosystems** of these water sources"
North Coast Regional Plan 2036	Direction 2 of this plan is to **enhance biodiversity, coastal and aquatic habitats, and water catchments, specifically in relation to areas of high environmental value**. Figure 4 of the regional plan identifies the land having Potential High Environmental Value. The plan also states that "new development should be appropriately located to **limit any adverse impact on the region's biodiversity**, coastal and aquatic habitats and water catchments".

3 Adequacy of information for determining the development application

In relation to biodiversity, the application and accompanying reports have been prepared to strictly meet the requirements for the preparation of a BDAR and with limited regard to the additional matters relevant to biodiversity that the consent authority is required to consider in determining the application.

Limitations in the biodiversity information provided are as follows:

1. No consideration or information is provided in relation to the strategic biodiversity context for the site, including catchment protection, groundwater dependent ecosystems, downstream water quality impacts

and risks, landscape scale habitat connectivity, or the rehabilitation potential for the site.

2. The BAM methodology is not adequate for the purpose of assessing all relevant impacts including local biodiversity values and the strategic conservation context. While this method considers the impacts associated with loss of a limited number of threatened species and ecological communities, its purpose is to estimate the biodiversity offset credit requirement for the purpose of the BOS. It is not intended or required for a BDAR to provide a comprehensive and full assessment of biodiversity.
3. For a development requiring complete reforming of the site (including up to 5 metres of excavation and 4 metres of fill as shown on the civil engineering concept design) and removal of all vegetation within the development site, mapping of individual trees should have been undertaken (noting habitat trees) to be able to quantify and assess biodiversity impacts adequately.
4. Riparian offset zones shown on the civil engineering concept design are conceptual and not realistic, and do not appear to reflect the true extent or characteristics of the riparian areas or groundwater dependent ecosystems.
5. Bushfire asset protection zone extent is minimal and the bushfire assessment report relies on the effect of a positive covenant or easement to be able to comply with the minimum Planning for Bushfire Protection standard. Asset protection zones also encroach on riparian buffers and flood affected land where vegetation clearing should not occur, and there is no opportunity to increase asset protection as may be required with projected climate change. It appears likely that to provide adequate bushfire safety for the development the APZ area would need to be increased and/or the development extent reduced.
6. The biodiversity assessment in the BDAR considers only the development area and not the land as a whole on with the development is sited. This means the biodiversity values on the remainder of the site are unknown and its future is uncertain.

4 Avoidance of biodiversity impacts

As identified in Section 2 above, the *Biodiversity Conservation Act 2016* requires the consent authority to be satisfied that measures to avoid or minimise impacts on biodiversity values have been taken before the development can be considered for approval and offsets can be applied under the NSW Biodiversity Offset Scheme. Requirements for applying the avoid, minimise and offset hierarchy are identified in Section 7.1 and 7.2 of the BAM.

The judgement in *IRM Property Group (No. 2) Pty Ltd v Blacktown City Council* [2021] NSWLEC 1306 highlighted that

> *"The concept of avoidance, minimisation and offsets to address impacts to biodiversity values is consistent with a key purpose to maintain a healthy, productive and resilient environment, as provided for in s 1.3(k) of the BC*

> *Act. The requirement for the proposed development to first seek to avoid or minimise impact, and then if required, offset the loss of native vegetation that has biodiversity values is a hierarchical approach, as explained by Preston CJ in Denoci Pty Ltd v Liverpool City Council [2020] NSWLEC 102 (Denoci judgement) at [27].*"

As explained in the Denoci judgement, s 4.15(1)(b) of the EPA Act also requires consideration of the likely impacts of the proposed development, including likely environmental impacts on the natural environment.

The following principles are relevant in determining whether suitable measures to avoid impacts on biodiversity values have been taken:

1. Assessment of avoidance is based on the 'development area'.
2. Biodiversity values have been identified and documented on both the 'site' and the 'development area' using appropriate methodology and field surveys.
3. Both on and off-site impacts on biodiversity values are to be considered when reviewing impact avoidance or minimisation.
4. Impact avoidance and minimisation measures must include, but not be limited to, consideration of (1) appropriateness of project scoping, footprint relocation and/or reduction, (2) changed timing of project activity, and (3) design-based avoidance and minimisation.
5. Analysis of alternative development and land management options is to be undertaken and suitably documented (including costs, benefits and risks of each option).
6. Review is undertaken of the consistency of the proposed development with the aims, objectives and provisions relevant legislation, strategic plans or local standards, and this is documented.
7. The process for demonstrating avoidance or minimisation and the application of these principles is documented.

In Section 1.39 the Statement of Environmental Effects accompanying the development application states that "avoid and minimise has been considered through development placement and changed iterations and retention of good quality habitat to both the east and west of the development along with ensuring retention of appropriate corridors for fauna movement. Vegetated Riparian Zone habitat within 40 m of the development will be managed through a Biodiversity Management Plan (BMP). Remaining impacts are proposed to be offset by retirement of appropriate credits".

Section 1.6 of the Statement of Environmental Effects identifies amendments made to the design and layout of the development as a result of community consultation and, states in that "the amended masterplan provides for:

- Increased setbacks from Scotts Head Road maintaining the bushland views and ecology along Scotts Head Road
- Reduction in cut and fill, allowing the existing topographic form to be retained

- Integration of watercourses into the design, and
- Integration of habitat corridors into the design."

There is no detail either in the Statement of Environmental Effects or the BDAR of how the amended design avoids impacts on biodiversity values or the options that have been considered. The comments suggest that no substantive or reasonable review of design alternatives or avoidance measures has been undertaken. The BDAR states in its review of avoidance that "the site is appropriate for development as a result of the land zoning, existing use and vegetation condition", a statement that is clearly incorrect.

To meet the legislative requirement to avoid biodiversity impacts, a range of options could have been considered and should have been reviewed and described in the development application, including the following:

1. No development
2. Choosing a suitable alternative site with less impact on biodiversity values and reduced bush fire asset protection requirements
3. Reducing the development footprint by reducing the number of dwellings, the size of dwelling sites, limiting setbacks between buildings, or choosing a different layout
4. Reducing the extent of cut and fill and changing the building design to reduce the requirement for earthworks. This is significant when the Nambucca Development Control Plan 2010 limits the extent of cut and fill to 1.2 metres whereas the proposed development proposes earthworks in excess of three times this amount
5. Increasing setbacks from riparian areas
6. Retaining existing trees within the development area
7. Establishing a stewardship site over the non-development area of the land to offset the impact of the development
8. Establishing a stewardship site to protect biodiversity over the whole land and/or creating a koala reserve on the land

The legislative provisions of the BC Act provide that unless the consent authority is satisfied that reasonable measures have been taken to avoid biodiversity impacts, the Biodiversity Offset Scheme cannot be used to provide biodiversity offsets. If the suggested principles identified above for evaluating the extent to which avoidance of impacts on biodiversity values has been demonstrated are applied, then the development proposal clearly fails this test.

5 Biodiversity Development Assessment Report review

The BC Act requires a BDAR, prepared by an assessor, to be submitted with a development application when the BOS applies. The consent authority will determine the development application having regard to the BDAR.

The consent authority has an obligation to undertake a critical review of a Biodiversity Development Assessment Report, the requirements for which are

specified in Appendix K of the Biodiversity Assessment Method 2020 (BAM). The document *Guidance for local government on undertaking a critical review of a Biodiversity Development Assessment Report* (Department of Planning Industry and Environment 2020) includes a checklist of review matters.

In assessing the BDAR, the consent authority has the following key roles as outlined in the *Local Government Resource Manual* (DPE 2022):

- To determine whether impacts on biodiversity values have been avoided, minimised and mitigated.
- To determine whether impacts are serious and irreversible.
- To impose the credit requirement specified in the BDAR or to increase or decrease this requirement.

Key questions requiring assessment in reviewing the BDAR are outlined in the table below, together with a preliminary assessment of the extent to which the BDAR satisfactorily addresses these matters.

BDAR Review Table

BDAR review question	Comment
1. Preliminary matters	
Was the report prepared by an accredited assessor?	This requirement has technically been met, since an accredited assessor signed the report. However, fieldwork was undertaken by relatively inexperienced staff, and the BDAR also is based on work done by a separate consultant.
Has the report been certified as BAM compliant within 14 days of the submission date?	The BDAR was certified and dated 1 July 2022, with the development application lodged on 15 July 2022. Requirement has been met.
Has the accredited assessor provided a checklist indicating compliance with Appendix 10 or 12 of the BAM, as relevant?	The BDAR checklist is included as Appendix K
What significance triggers require the preparation of a BDAR?	The area of clearing of native vegetation is estimated at 16.81 ha and above the minimum threshold of 1 ha. A BOSET report was also prepared and shows that none of the site is identified on the Biodiversity Values Map and thus the map does not trigger the BOS.
What inconsistencies are there between the BDAR and other components of the DA?	Inconsistencies in the use of the terms site and development area between the Statement of Environmental Effects and the BDAR. The BDAR refers to the 'development area as the 'subject site' and the land of which it is located as the 'study area' and 'parent lot'. There is inconsistency in the site boundary between Figure 1 and Appendix A – development plan where part of emergency access road to south west is excluded
2. Describing biodiversity values on the site – landscape features	
Is the development site described and identified on the Site Map and Location Map?	The development plan is included in Appendix A and the boundary is shown on Figure 1 site map and Figure 2 site location.

BDAR review question	**Comment**
Is there a general description of the biodiversity and other environmental features of the site?	Included as Table 2. Omits any reference or description of environmental features outside the development area, excluding reference to the land as a whole and surrounding land.
Are the IBRA bioregion and subregion identified correctly?	Appears correct
Is the native vegetation extent correctly mapped on an aerial image? Has planted native vegetation been included?	Three vegetation maps are included in the BDAR, (1) 2015 Nambucca LGA mapping, (2) AEP PCT mapping (Figure 4), and (3) Land Eco report (Figure 6 Appendix I). AEP has determined that the area of native vegetation to be cleared covers the whole development area and this appears reasonable. However, there are discrepancies between the three vegetation maps especially in relation to plant community types and condition, and this should be subject to independent review since this affects the calculation of biodiversity credits. Importantly, mapping in the BDAR by AEP fails to show vegetation communities outside the development area and therefore does not facilitate the assessment of the impact of the proposal in context
Has the per cent native vegetation cover within a 1500 metre buffer of the development site been determined? Is the percentage cover reasonable?	Appears reasonable and is shown in Figure 2. A proportion of the area within the buffer is ocean and it is not clear how this may affect calculations of impact, although the BDAR does not identify this issue.
3. Describing biodiversity values on the site – native vegetation and threatened ecological communities	
Is there a map of plant community types (PCTs) on the development site?	BDAR Figure 4 shows PCTs on the development area, although this differs significantly from PCT mapping identified by another consultant (Appendix I).
Is there an explanation of how the PCT was determined? Are the conclusions reasonable?	While the conclusions superficially appear reasonable, mapping differences suggest that PCTs should be further reviewed by an accredited specialist.
Is there a map of threatened ecological communities (TECs)?	A separate map of TECs has not been prepared, although some of the PCTs do correspond with TECs. It is not clear what proportion of the development area is listed as a TEC. Provision of this information could assist in determination of the development application.
Is there a map of vegetation zones with PCTs? Are the zones reasonable?	BDAR Figure 4 shows PCTs and vegetation zones on the development area, although differs significantly from PCT mapping identified by another consultant (Appendix I). This should be subject to review by an independent accredited assessor.
Has the patch size of each vegetation type been determined?	Table 8 Summary of Vegetation Areas provides this information.
Is there an estimate of the per cent cleared value of the PCT?	Information is included in Tables 5, 6 & 7.

BDAR review question	**Comment**
Is there a map of plot locations relative to vegetation zones?	BDAR Figure 4 shows plot locations. Additional vegetation plots were completed across the whole site and are included in Appendix I. Some of these have been included within the BDAR.
Are there enough plots? Are plots clustered close to vegetation zone boundaries?	Should be reviewed by an independent accredited assessor.
Is there a table with plot data and current vegetation integrity scores for vegetation zones on the development site?	BDAR Table 9 includes vegetation integrity score data.
Are the plots within a vegetation zone relatively consistent?	Not possible to determine based on information provided. Should be reviewed by an independent accredited assessor
4. Describing biodiversity values on the site – threatened species	
Is there a list of predicted ecosystem species likely to occur?	Shown in BDAR Table 10. Appears reasonable although not subject to detailed review.
Has the exclusion of any predicted ecosystem species been justified?	Appears that no predicted ecosystem species have been excluded. Requires further specialist review
Is there a list of predicted species credit species likely to occur?	Shown in BDAR Table 10. Appears reasonable although limited field survey affects adequacy of the assessment. List has not been subject to detailed review.
Has the exclusion of any predicted species credit species been justified?	A total of 11 potential species were excluded from consideration. Requires further specialist review.
Is there a table indicating whether the remaining candidate species are present or likely to use the habitat on the development site and how this was determined?	Not clear. Table 13 shows survey results and exclusion for species credit species. Remaining threatened species recorded are listed in Section 1.4.6. Requires further specialist review.
Where targeted survey has been undertaken, are the methods compliant with DPIE guidance or best practice?	Methods appear reasonable. However, survey effort requires review, especially seasonality and weather conditions applicable at time of survey. No estimate has been made of the expected accuracy of survey results.
If an expert report has been used to determine presence or absence of a threatened species has the expert been approved by the Chief Executive of DPIE?	Not applicable
Does an expert report justify conclusions on species presence and estimates or on species absence? Are the conclusions reasonable?	Not applicable
Is there a species polygon for each remaining species credit species, including those species assessed by counts of individuals?	Shown on Figures 7, 8 & 9. Requires further specialist review.
Is there a table with an area or count of individuals for each remaining candidate species credit species?	Not included. Insufficient survey data to present details. Many species are assumed presence only

BDAR review question	**Comment**
5. Impact assessment	
Has there been a genuine effort to avoid and minimise impacts on native vegetation and habitat?	Efforts to avoid and minimise impacts on native vegetation and habitat have not been adequately described and justified. Project design avoidance measures are outlined in Section 2.2 and the development area is justified on the basis that it "coincides mostly with the lowest quality native vegetation and the area with the most exotic species" and that remnant vegetation to the west, east and south "demonstrates continued habitat connectivity that is not incompatible with the proposed development footprint". Appendix J maps show two development design iterations that do not indicate development options or take into consideration native vegetation or threatened species issues. The BDAR does **not** demonstrate that the proponent has taken *all reasonable steps* to avoid impacts before considering minimisation and offset measures? Measures to minimise impacts are limited to conditions of development consent, including the vegetated riparian zones being managed under a Biodiversity Management Plan, an Erosion and Sediment Control Plan, and a Construction Environmental Management Plan. Details of these plans are not been specified and unknown. Table 15 outlines additional details of impact avoidance and minimisation, suggesting that "**the site is appropriate for development as a result of the land zoning, existing use and vegetation condition**" (p74). This is not sufficient justification to meet the legislative requirement for avoidance of impacts.
Has there been a genuine effort to avoid and minimise prescribed impacts?	Not applicable. No prescribed impacts are relevant on the land
Have all the direct impacts of the development on native vegetation and habitat during construction and operation phases been assessed and a credit obligation calculated?	Direct impacts are assessed in Table 19, although this assessment is not comprehensive and superficial at best, with no quantitative data presented to support the assessment.
Have all the indirect impacts of the development on native vegetation and habitat during construction and operation phases been assessed?	Reviewed in Table 20. Indirect impacts identified were limited to noise, vibration, dust, light spill, non-native vegetation, and visual amenity and pertain only to the land on which the development is situated. No off-site impacts are considered. This assessment is not adequate or realistic and fails to consider cumulative impacts of native vegetation loss.
Have all the prescribed biodiversity impacts relevant to the development during construction and operation phases been assessed?	Reviewed in Table 22. No prescribed impacts are applicable on the land

BDAR review question	**Comment**
Is the assessment thorough and are the conclusions reasonable?	In its impact identification and assessment, the BDAR is superficial and the conclusions are not reasonable.
Have reasonable and effective mitigation measures been identified for: • displacement of resident fauna during vegetation clearing • indirect impacts on adjacent and downstream vegetation and habitat • prescribed biodiversity impacts?	These mitigation measures are not considered in any meaningful way.
Are mitigation measures summarised in a table, including: • proposed techniques • timing • frequency • responsibility • risk of failure?	Mitigation measures are identified in Tables 19, 20 and 21 although are not adequate when considering the size and nature of the development proposal. The measures identified are generic and not directly related to the quantitative and qualitative impacts that would be expected.
Have potential serious and irreversible impacts (SAIIs) been correctly identified? An impact is serious and irreversible if it is likely to contribute significantly to the risk of a threatened entity becoming extinct in accordance with principles set out in clause 6.7(2) of the BC Reg. Guidance to assist a decision-maker to determine a serious and irreversible impact includes criteria and supporting information to assist with the application of these principles.	Potential serious and irreversible impacts (SAIIs) been identified and relevant criteria addressed for two species only, the frog *Mixophyes balbus* and the orchid *Diuris disposita*. It is conceivable that additional SAII assessments should have been undertaken, although this is legally the responsibility of the consent authority to determine. The BDAR does not include sufficient information to identify why other potential SAII species were not included in the assessment. Further independent expert review is suggested.
Has additional information for potential SAIIs been provided to support the decision-maker?	Minimal information has been included apart from two species considered in Tables 23, 24, 25 & 26. Further independent expert review is suggested.
6. Credit obligation	
Is there a table detailing impacted PCTs (and ecosystem credit species) and the associated credit obligation?	Included in Table 27. Calculations have not been checked and independent review is suggested.
Is there a table detailing impacted species credit species and the associated credit obligation?	Included in Table 28. Calculations have not been checked and independent review is suggested.
Is the Biodiversity Credit Report from the BAM Credit Calculator (BAM-C) appended to the report?	Biodiversity credit report has not been checked and independent review is suggested

Review of the BDAR has identified important deficiencies that make it difficult to approve the proposal in its present form:

1. The legislative requirement to avoid or minimise impacts on biodiversity values has not been met, and alternative development options have not been identified. The "avoid and minimise strategy" for the development is outlined in Table 15 of the BAM and focuses on ecological surveys, management and operational issues with no evidence demonstrating that

site selection and design of the development has avoided biodiversity impacts.

2. Direct and indirect biodiversity impacts have not been adequately identified or quantified. For example, indirect impacts associated with provision of services to the development have not been identified, nor have downstream water quality and hydrological impacts.
3. Inconsistencies exist in PCTs, vegetation management zones and credit calculations between the BDAR and information presented in Appendix I. No explanation of these inconsistencies and their consequences is provided.
4. Minimal field surveys were undertaken for the species credit species, and there is an inadequate level of certainty upon which to determine the actual impact of the development on biodiversity values. For example, in its report Appendix I, Land Eco suggested additional field surveys to confirm that species requiring credits are not present on the site.
5. It appears that the location of streams and determination of stream orders is derived from relatively inaccurate 1:25,000 scale mapping and may be inadequate as a basis to determine stream locations and appropriate setbacks that conform with *Water Management Act 2000* requirements, and to ensure the protection of riparian vegetation and stream hydrological characteristics. For example, inconsistencies are noted in Nambucca Hydroline data in S 1.4.4.2.
6. The BDAR fails to mention or consider groundwater dependent ecosystems on the land as mapped in the Water Sharing Plan for the Nambucca Unregulated and Alluvial Water Sources 2016.
7. The BDAR only relates to the development area and fails to consider the biodiversity values of the land as a whole, or the surrounding land. This is essential for assessing biodiversity impacts adequately, including cumulative loss of native vegetation, loss of habitat connectivity, impacts on downstream biodiversity.
8. The area to which the BDAR applies is slightly different to the development area and fails to consider the impact of the emergency access road to the south west.
9. Information is missing from the Statement of Environmental Effects and the BDAR that is required to address specific regulatory requirements identified in Section 2 (eg coastal landscape, any off site impacts and strategic planning objectives).
10. Consideration of potential impacts on koalas is superficial and warrants more detailed review, given that the land has suitable koala habitat and there is at least one record of the koala in close proximity within the reasonable past. For example, the BDAR indicates that biodiversity values are high and the loss of these is contrary to the strategic objectives and the aims of the Nambucca LEP and Koala SEPP.
11. Survey effort undertaken for the koala does not comply with requirements of the Koala (*Phascolarctos cinereus*) Biodiversity Assessment Method Survey Guide (Department of Planning and Environment 2022b).
12. Surveys for orchids have not been undertaken at appropriate times to enable detection of relevant species.

13. Insufficient evidence is provided in the BDAR as to whether an EPBC Act referral is warranted in relation to the development.
14. Consideration needs to be given to the future use and management of the residue area of the site.

Key review questions are as follows:

1. Whether the Biodiversity Development Assessment Report accompanying the application meets all relevant regulatory requirements.
   COMMENT – While superficially the BDAR submitted does appear to meet relevant regulatory requirements, there are numerous questions about its adequacy. Key matters such as the accuracy of PCT mapping and credit calculations should be checked by an independent accredited assessor for the consent authority to be satisfied that the BDAR is an appropriate basis upon which to grant consent, and to ensure appropriate conditions of consent.

2. Whether the requirement in the *Biodiversity Conservation Act 2016* and regulation to avoid impacts on biodiversity values (1) has been demonstrated in the development application, and (2) has been satisfactorily achieved.
   COMMENT – Neither information presented in the BDAR or in the Statement of Environmental Effects satisfies the legislative requirement to avoid impacts on biodiversity values arising from the proposed development. This test is a requirement for the development to be approved and cannot be met.

3. Whether the number and class of biodiversity credits required to offset the residual impacts on biodiversity values have been appropriately calculated.
   COMMENT – Credit calculations should be checked by an independent accredited assessor to be satisfied that the BDAR is an appropriate basis upon which to grant consent, and upon which to base conditions of consent. Importantly, the consent authority has the option to increase or decrease the credit requirement where this is reasonable in the circumstances.

6 Biodiversity credit calculation and review

The adequacy and accuracy of credit calculations has not been reviewed and can only be undertaken by an accredited assessor. It is suggested that this should be subject to independent review.

The document *Guidance on preparing conditions of consent from the Biodiversity Development Assessment Report* supports consent authorities to prepare conditions of consent for development applications to which the BOS applies. When granting consent to a proposed development to which the BOS applies, the conditions of consent must require the applicant to retire biodiversity credits of

the number and class specified in the BDAR. Some of the key principles to consider are that:

1. Concurrence from the Environment Agency Head is required if the consent authority reduces the number of biodiversity credits required to be retired, but not if it is increased.
2. Offset obligations are to be satisfied prior to impacting on biodiversity.
3. Evidence that the offset obligation has been satisfied is required.
4. Biodiversity actions available to offset a credit requirement are listed in the ancillary rules.
5. Use of variation rules can only be approved following demonstration of reasonable steps to find like-for-like biodiversity credits.
6. The requirement to condition a credit obligation does not limit the consent authority's ability to require other measures to be undertaken to avoid or minimise impacts on biodiversity.

The requirement to impose a credit obligation does not limit the consent authority's ability to require other biodiversity-related conditions; for example, council can also impose conditions in accordance with relevant Local Environmental Plan (LEP) or Development Control Plan requirements.

7 Biodiversity matters relevant to the determination of the application

Biodiversity matters are important in the determination of the development application, and it is important to recognise that the application relates to the whole land parcel and not only the development area identified in the Statement of Environmental Effects. Relevant information for the whole site has not been included in the development application.

Even though there is extensive information that is missing from the development application and necessary to properly inform the determination of the application, it is clear from information available to the consent authority that:

1. Both the land and the development area retain important biodiversity values, including threatened species and threatened ecological communities.
2. The proposed development would have a significant impact on biodiversity values.
3. The development is above the vegetation clearing threshold for entry to the NSW Biodiversity Offset Scheme and a BDAR is required.
4. The BDAR is deficient in key respects which limit the ability of the development to be approved.

Other matters relevant to the assessment of biodiversity impacts arising from the development include the following:

1. Assessment and impact of carbon emissions arising from loss of biodiversity.

2. The extent to which the BAM and *Biodiversity Conservation Regulation 2017* objective to achieve no net loss of biodiversity would be achieved.
3. Indirect and off-site impacts (including landscape scale habitat connectivity) on groundwater dependent ecosystems identified in the Nambucca Water Sharing Plan made under the *Water Management Act 2000*, and stream and riparian impacts including impacts on wetlands identified as of importance.
4. The likely nature and source location of offset credits required under the NSW Biodiversity Offset Scheme, and their availability.
5. Impacts on native wildlife of additional traffic generated by the development, especially on key species such as the koala.
6. Impacts on *Environment Protection and Biodiversity Conservation Act 1999* listed matters of national environmental significance.
7. Local biodiversity values that benefit the amenity of the local community.
8. Opportunities available to rehabilitate degraded habitat and vegetation communities and improve biodiversity values on the land.

8 Conclusions & recommendations

Key questions requiring review in the determination of the application are considered in the table below. Importantly, review of biodiversity issues associated with the proposal described in the development application shows that:

1. The proposed development would significantly impact on biodiversity values.
2. No reasonable measures have been taken to avoid or minimise the impacts on biodiversity values.

This means that having regard to biodiversity issues, the proposed development as described in the development application does not appear to meet the legislative requirements that would allow it to be approved under the *Biodiversity Conservation Act 2016* and *Environmental Planning and Assessment Act 1979*. Assessment of biodiversity issues associated with the development further indicates that:

1. The land is not suitable for the proposed development and the proposed development would have a significant impact on biodiversity values.
2. If the development was to be approved, this would be contrary to strategic planning and community objectives for Nambucca local government area and the North Coast Region, and would not support the achievement of relevant legislation including the *Environmental Planning and Assessment Act 1979*, *Biodiversity Conservation Act 2016*, *Water Management Act 2000*, and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.
3. If the development was to be approved it requires the provision of biodiversity offsets under the NSW Biodiversity Offset Scheme and relevant provisions apply, including the requirement for the consent

authority to be satisfied that reasonable steps have been taken to avoid and minimise impacts on biodiversity values.

4. No evidence exists that appropriate measures to avoid and minimise impacts on biodiversity values have been taken. Without this, it is not open to the consent authority to approve the application.
5. Even if reasonable avoidance of impacts could be justified, and were to be accepted by a consent authority, the substantial environmental impacts associated with the development suggest that any development of the land as contemplated, even at a reduced scale, would lead to important loss of local biodiversity values and associated benefits to the local community. Protection of essential natural ecosystems and processes is of local, state and national importance and is not supported by the development of this site and of the type proposed.
6. The preferred use of the land is to retain it as a natural area, protecting, rehabilitating and appropriately managing the natural plant communities that occur.

Key biodiversity assessment questions for the consent authority

Assessment question	**Response**
1 Have biodiversity values on the site been appropriately identified?	No. However, sufficient information exists to demonstrate that important biodiversity values are retained on the site and will be significantly impacted upon if the development was to proceed as proposed
2 Does the proposed development sufficiently avoid or minimise impacts on biodiversity values?	No. Reasonable steps have not been taken to avoid impacts on biodiversity values and these are not demonstrated as required in the BDAR or in the Statement of Environmental Effects. The requirements of the *Biodiversity Conservation Act 2016* in this regard have not been met, and the consent authority cannot therefore reasonably consider granting consent to the development under the *Environmental Planning and Assessment Act 1979*.
3 Are there biodiversity impacts from the proposed development that are in addition to those impacts required to be identified by the BAM, and included in the BDAR?	Yes. There are additional biodiversity impacts, although these have been either not identified, or not assessed in the development application and accompanying documentation.
4 What are the direct and indirect impacts of the proposed development on biodiversity values and the functioning of natural ecosystems?	Indirect impacts on biodiversity are not sufficiently identified or described in the application to enable them to be adequately assessed.
5 Are commitments from the development proponent in relation to biodiversity realistic, and can they be met?	Commitments by the applicant to protect biodiversity are limited to the preparation of a Biodiversity Management Plan for the adjoining riparian area. Uncertainty exists as to whether this commitment can, or will be fulfilled, and it is limited in impact to a very small proportion of the land.
6 Having regard to biodiversity values and relevant matters under Section 4.15 of the Environmental Planning and Assessment Act 1979, is the development acceptable and should it be approved?	No. The impacts of the development on biodiversity warrant refusal of the application.

Most importantly, the proposed development does not take the necessary steps to avoid or minimise impacts on biodiversity values on the site as required in Section 6.4 of the *Biodiversity Conservation Act 2016*. There is also a likely impact on the natural environment and Section 4.15(1)(b) of the *Environmental Planning and Assessment Act 1979* cannot be achieved.

References

NSW Department of Planning and Environment (2022a) Local Government Resource Manual: NSW Biodiversity Offsets Scheme https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-offsets-scheme-local-government-resource-manual

NSW Department of Planning and Environment (2022b) Koala (*Phascolarctos cinereus*) Biodiversity Assessment Method Survey Guide

NSW Department of Planning Industry and Environment (2020) Guidance for local government on undertaking a critical review of a Biodiversity Development Assessment Report https://www.environment.nsw.gov.au/research-and-publications/publications-search/guidance-for-local-government-doing-critical-review-of-biodiversity-development-assessment-report

Nambucca Valley Council (2020) Local Strategic Planning Statement

Nambucca Shire Council (2015a) Koala Habitat Study for the Nambucca Shire Council Coastal Area.

Nambucca Shire Council (2015b) Vegetation Mapping within the Nambucca Local Government Area – Coastal Lowland Vegetation Communities and Potential Threatened Ecological Communities – Volume 1 Project Report