
Biodiversity Report

Bega Urban Land Release Planning Proposal

April 2025

Project Number: 250138

Document verification

Project Title:	Bega Urban Land Release Planning Proposal
Project Number:	250138
Project File Name:	250138 Bega ULR biodiversity V1

Revision	Date	Prepared by	Approved by
Final	3/04/2025	Bianca Heinze	Bianca Heinze
Draft	31/03/2025	Bianca Heinze	Brooke Marshall

NGH Pty Ltd is committed to environmentally sustainable practices, including fostering a digital culture and minimising printing. Where printing is unavoidable, NGH prints on 100% recycled paper.

We acknowledge the Traditional Owners of this land and pay our respect to Elders past, present and emerging. We recognise that the First Nations peoples of Australia have traditionally managed the resources of this land in a sustainable way, and that they are the original custodians of the Australian environment.

Table of contents

1. Introduction.....	1
1.1. Background.....	1
1.2. Purpose	1
2. Approach	2
3. Review of zoning.....	3
3.1. Western precinct.....	4
3.2. Central precinct.....	5
3.3. Eastern precinct	5
4. Conclusion.....	12

Figures

Figure 1-1 Planning precincts that form the Bega Urban Land Release planning proposal.....	1
Figure 3-1 Lowland Grassy Woodland patches and proposed zoning in the western precinct.....	6
Figure 3-2 Central precinct with unlikely and possible areas of Lowland Grassy Woodland	7
Figure 3-3 Lowland Grassy Woodland distribution in the eastern precinct	8
Figure 3-4 Approximate local occurrence of LGW based on SVTM mapping and a 50m buffer	11

Tables

Table 3-1 Biodiversity constraints that intersect with the planning precincts.....	3
Table 3-2 Threatened ecological communities that occur in the planning precincts.....	4
Table 3-3 PCTs associated with Lowland Grassy Woodland	9

Acronyms and abbreviations

BAM	Biodiversity Assessment Methodology
BC Act	<i>Biodiversity Conservation Act 2016 (NSW)</i>
BCS	Biodiversity, Conservation and Science Directorate, NSW DCCEEW
BSA	Biodiversity Stewardship Agreement
BVM	Biodiversity Values Mapping
BVSC	Bega Valley Shire Council
DA	Development application
DCCEEW	Department of Climate Change, Energy, the Environment and Water (NSW) (formerly DPE)
DPHI	Department of Planning, Housing and Infrastructure (NSW) (formerly DPE)
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
GDA	Geographic Datum of Australia
GIS	Geographic information system
ha	hectares
HEV	High environmental values
ISEPP	State Environmental Planning Policy (Infrastructure) 2007 (NSW)
KFH	Key Fish Habitat
km	kilometres
LEP	Local Environment Plan
LGW	Lowland Grassy Woodland
m	metres
NGH	NGH Consulting Pty Ltd

PCT	Plant community type
PVP	Property Vegetation Plan
SVTM	State Vegetation Type Mapping
TEC	Threatened ecological community

Executive summary

Bega Valley Shire Council (BVSC) submitted a scoping proposal for Bega Urban Lands Release in 2024. This Biodiversity Report supports the planning proposal by providing technical biodiversity advice on the rezoning of urban land releases, to support strategic planning decisions.

In our review of the proposed zoning, we found that Lowland Grassy Woodland Threatened Ecological Community (LGW) is the most likely biodiversity value to constrain future developments, particularly in the proposed R2 low density residential zoning in the eastern precinct. NGH consider that smaller lot development in the known LGW area in the eastern precinct would lead to degradation and increased fragmentation of LGW within the planning precincts. However, we also note that the Test of Significance under the Environment Planning & Assessment Act 1979 (EP&A Act) and Biodiversity Conservation Act 2016 requires the consideration of impact at the local scale. We acknowledge that BVSC have refined the proposed urban release areas to avoid large areas of LGW locally. We agree that the Part 4 EP&A Act development approval pathway provides an adequate means of assessment including avoiding and minimising higher quality LGW on a microscale but avoided areas would need some formal in-perpetuity conservation mechanism to provide meaningful protection.

1. Introduction

1.1. Background

Council submitted a scoping proposal for the Bega Urban Release Planning Proposal in 2024 and met with Biodiversity Conservation & Science Directorate (BCS) in September 2024 to carry out a broad assessment of the biodiversity values and constraints of the planning precincts under consideration. The western, central and eastern planning precincts are shown in Figure 1-1.

Considering the plan, BCS suggested that a biodiversity certification assessment would be the preferred pathway for this scoping proposal. After investigating options and the experience of other local councils, BVSC have decided this is unsuitable for various reasons including the long timeframe of certification assessments. They consider that future subdivisions proponents could demonstrate the 'avoid and minimise' principles through the Part 4 local development approval (DA) process under the *Environmental Planning & Assessment Act 1979* (EP&A Act) on a lot by lot basis, rather than apply a more strategic approach.

BVSC have now removed areas initially proposed for conservation zoning from the scoping proposal to give landowners more flexibility regarding development; they could elect to avoid or offset impacts of future subdivisions they may propose in these areas associated with higher biodiversity values.

1.2. Purpose

The purpose of this letter is to provide technical biodiversity advice on the rezoning of urban land releases, to support Bega Valley Shire Council's strategic planning decisions in relation to the Bega Urban Release Planning Proposal. Please find attached a review of the proposed rezoning, considering:

- NGH 2023 constraints analysis
- Biodiversity Conservation & Science Directorate (BCS) feedback
- The current condition of biodiversity values of these areas with reference to strategies 5.1 and 6.1 of the *Draft South East and Tablelands Regional Plan 2041*.

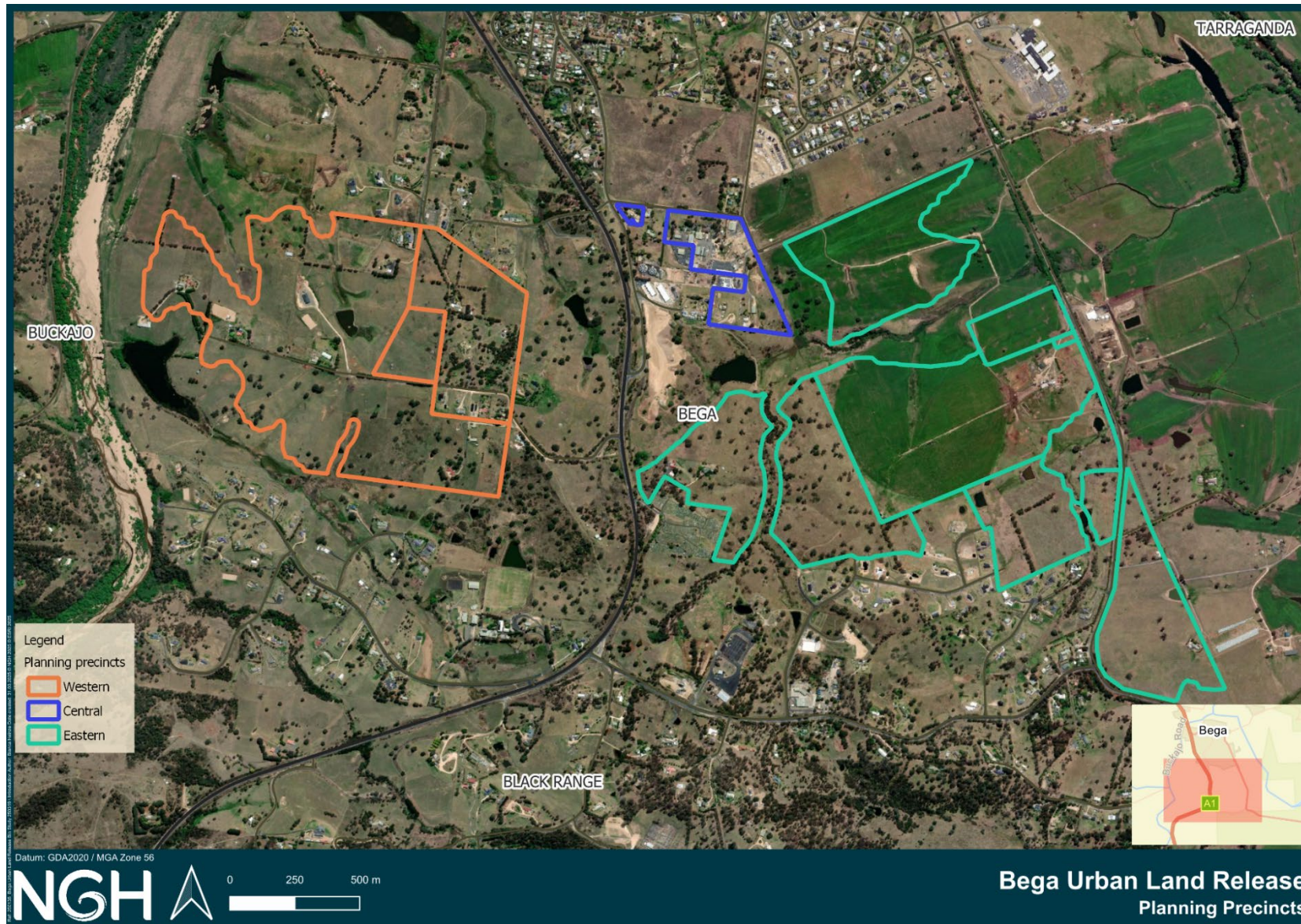


Figure 1-1 Planning precincts that form the Bega Urban Land Release planning proposal

2. Approach

This review of the proposed rezoning has been prepared by desktop only; no site validation has been undertaken. It includes consideration of NGH's 2023 advice regarding biodiversity high environmental values (HEV) mapping for BVSC and review of BCS feedback (October 2024) on Council's current scoping proposal.

The 2023 biodiversity constraints mapping is based on the presence of:

1. Biodiversity Values Mapping (BVM) - protected riparian land
2. Threatened Ecological Communities (TEC) elicited from State Vegetation Type Mapping (SVTM) Plant Community Type (PCT) associations
3. Threatened species records and habitat
4. High environmental values mapping (HEV) including native vegetation extent and biodiversity corridors
5. Wetlands and riparian buffers (hydrological)
6. Category 2 vulnerable land (steep or highly erodible)
7. Key fish habitat.

These same parameters were reviewed in the planning proposal precincts to consider potential future impacts on biodiversity due to zoning changes. BCS feedback on the planning proposal was reviewed. NGH were able to provide analysis of information from multiple sources including BCS field notes, previous field surveys in the area, satellite image interpretation and available biodiversity and planning layers, such as SVTM.

SVTM provides coarse mapping of native vegetation across NSW. To reflect guidelines provided by agencies such as BCS for mapping woodland communities and for consistency with Biodiversity Assessment Methodology 2020 (BAM), NGH buffered relevant SVTM PCTs by 50m to depict TEC patches using QGIS. This was undertaken to better reflect the BAM definition of a 'patch' of native vegetation, being where there is a canopy gap of less than 100m for wooded communities. These patches were then refined based on recent aerial imagery (e.g. to exclude developed areas) and BCS' field notes.

3. Review of zoning

Five of the seven parameters relevant to high biodiversity values intersect with the planning precincts (Table 3-1):

1. BVM
2. TEC / SVTM
4. HEV
5. Wetlands and riparian buffers (hydrological)
7. KFH

Four of these are generally considered to pose a minor constraint on a development application that requires clearing for urban expansion. Generally, BVSC have minimised potential impacts from development on HEV lands in keeping with Strategy 5.1 of the *Draft South East and Tablelands Regional Plan 2041*. One parameter, threatened ecological communities (TEC), has potential to highly constrain future developments. This is discussed further below.

Table 3-1 Biodiversity constraints that intersect with the planning precincts

Constraint type	Area (ha)	Comment
BVM	0.057	Small areas are avoidable; would trigger Biodiversity Offset Scheme if clearing proposed in these areas.
HEV	0.176	One area relates to TEC (refer below); two other areas are snippets of a buffer and are unlikely to affect future developments
Hydrological	1.966	Includes existing dams, drainage lines and wetland area. Requirements for riparian buffers at DA stage would consider this constraint.
KFH	1.056	KFH buffers intersect with planning precincts; if riparian buffers observed, no impacts likely and manageable at DA stage.
TEC / SVTM	29.849	Refer below for details. Most likely to constrain future developments

Three NSW listed TECs occur in the planning precincts:

- River-flat Eucalypt Forest
- Lowland Grassy Woodland
- Freshwater Wetlands on Coastal Floodplains.

Table 3-2 provides comment on each of these within the proposed residential zones in the planning precincts. Lowland Grassy Woodland TEC is the most extensive with the greatest potential to constrain future development proposals. This is discussed in detail by precinct in the proceeding section.

Table 3-2 Threatened ecological communities that occur in the planning precincts

BC Act = NSW Biodiversity Conservation Act 2016, EPBC Act = Commonwealth Environment Protection and Biodiversity Conservation Act 1999

PCT ID	Area (ha)	TEC	Comments
3181	1.719	River-flat Eucalypt Forest (BC Act, EPBC Act)	Small and highly fragmented patches in western precinct R5 & eastern precinct R2. Condition unknown. Sufficiently small to be assessed via DA.
3185	0.18	River-flat Eucalypt Forest (BC Act, EPBC Act)	
3332	26.376	Lowland Grassy Woodland (BC Act, EPBC Act)	Most extensive, most constraining.
3975	1.574	Freshwater wetlands on Coastal Floodplains (BC Act)	Majority mapped in cleared industrial area, unlikely to occur. Small portion mapped in western precinct R5; aerial suggests may occur although R5 zoning avoids actual drainage line.

3.1. Western precinct

R5 large lot residential

BCS support the proposed rezoning of some areas to R5, although noting small patches of potential Lowland Grassy Woodland (LGW).

As shown in Figure 3-1, NGH have identified at least six patches likely to qualify under the BC Act in the proposed R5 zone. Assuming a minimum lot size of around 1 ha, we have overlaid a 100m grid to indicate potential lot sizes. Using this grid, it can be seen that subdivision lot sizes of approximately 1 ha or smaller would be feasible across most of the land. Where LGW occurs, a lot size of 1 ha or greater would allow avoidance of remnant LGW trees. LGW patches also have potential to be used as offset areas by proponents.

R2 low density residential

BCS visited Finucane Lane to access this area and found that patches of vegetation consisted of a mix of planted native species and remnant trees associated with LGW. However, they found the site would be unlikely to meet LGW classification. This is shown in Figure 2 as the LGW ‘unlikely’ patch within the proposed R2 zone. NGH notes that the presence of native vegetation (threatened species habitat) including planted vegetation and hollow-bearing trees may be a constraint to any proposed developments, however this can be assessed through the Part 4 DA process.

RE1 public recreation

This zoning was supported by BCS. NGH notes it appears to be an area that may be prone to flooding.

3.2. Central precinct

Figure 3-2 shows that patches identified by SVTM as potential LGW are ‘unlikely’ or ‘possible’ to occur, meaning that remnant trees within the ‘possible’ patch may be derived from an associated PCT. However, fragmentation and degradation from past clearing and current land use has likely reduced the structural and floristic diversity of this patch such that it may have only low biodiversity value. This would need to be confirmed via a field survey, which would form part of any DA. E1 local centre and E2 commercial centre zoning was supported by BCS.

3.3. Eastern precinct

RE1 public recreation

As shown in Figure 3-3, a patch of ‘likely’ LGW intersects with the southern proposed RE1 public recreation zone, while the other is proposed over a low-lying paddock area. BCS support RE1 zoning in this area and NGH note that it affords protection to a likely patch of LGW.

R2 low density residential

The majority of the R2 zone area was supported by BCS with acknowledgement that avoidance would need to be demonstrated on a case by case basis for high value remnant trees.

There are two key areas where BCS does not support the planning proposal:

- LGW patches either side of Parbery Creek
- Small LGW patch south of Warragaburra Road.

Figure 4 shows these patches as ‘known’ LGW. Based on BCS site inspection, adjacent biodiversity assessments for previous developments and past NGH inspections in the Travelling Stock Route and cemetery, these two patches are likely to be of moderate to high quality and potentially qualify for EPBC Act LGW status also.

Biodiversity Report

Bega Urban Land Release Planning Proposal

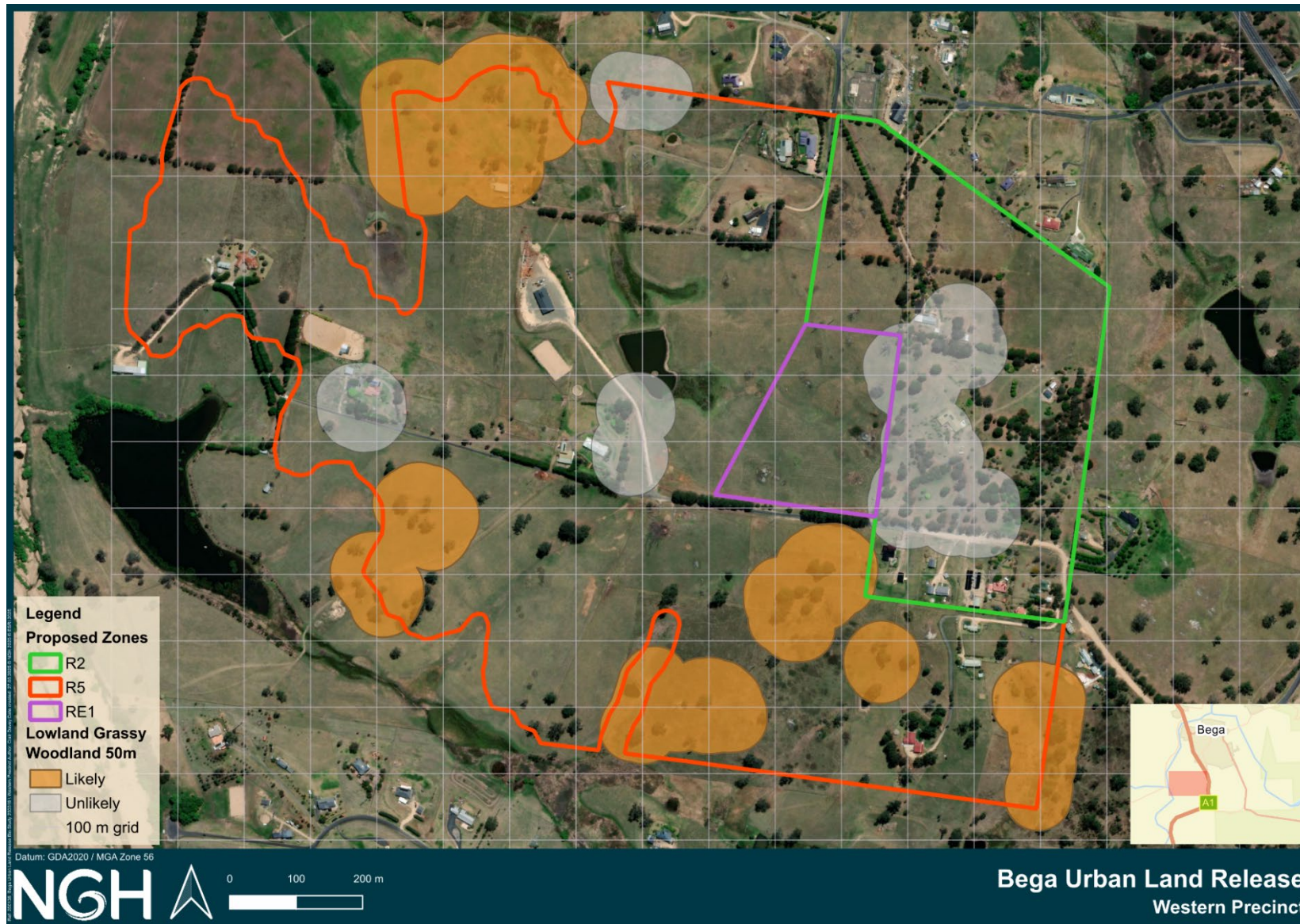


Figure 3-1 Lowland Grassy Woodland patches and proposed zoning in the western precinct



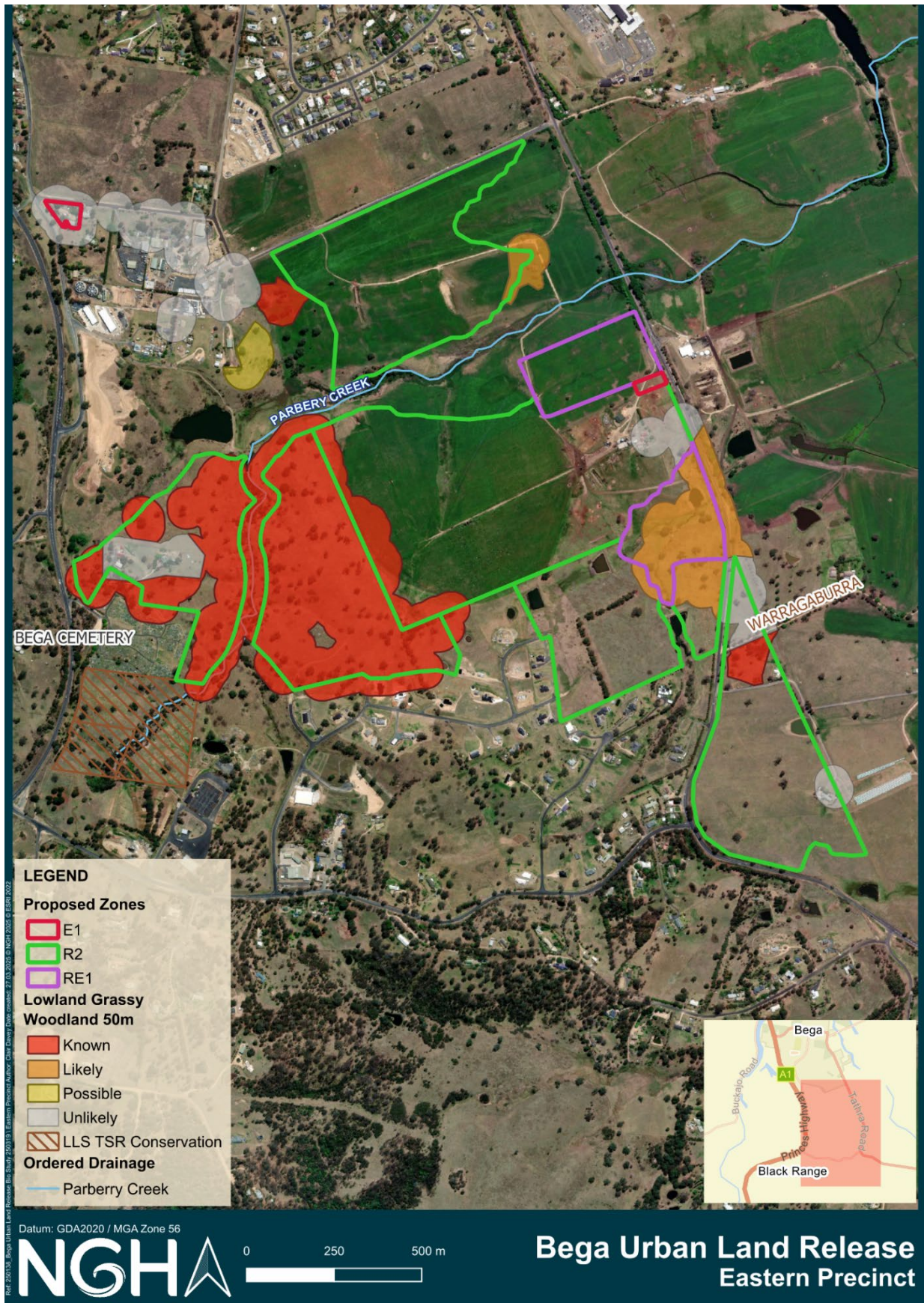


Figure 3-3 Lowland Grassy Woodland distribution in the eastern precinct

BVSC accepts that the planning proposal may lead to some loss of LGW in this zone but maintains that sufficient LGW remains locally to prevent local extinction of the community. NGH consider that smaller lot development in the eastern precinct would lead to degradation and increased fragmentation of LGW within the planning precincts. BVSC note the inclusion of several patches of LGW in residential zones allows for future proponents to demonstrate avoidance on their property. This is expected to create a patchwork of privately protected LGW remnants within the urban limits of Bega. NGH notes that the cost of a Biodiversity Stewardship Agreement (BSA) under the BC Act to protect avoided lands or provide offsets for a development can be prohibitive for private landholders. For long term positive outcomes for ecological connectivity through urban areas, the avoided areas would need formal protection through a mechanism such as *Conveyancing Act 1919* s.88b instrument to be conditioned with the DA.

NGH notes that a key aspect to be considered under the EP&A Act for Part 4 development applications is the Test of Significance. A criteria for the Test of Significance is the potential for a development to impact the *local occurrence* of an ecological community. To consider the extent of LGW at a local scale, NGH selected associated PCTs in SVTM (note: not all occur locally), buffered by 50m as described in 'approach' (Table 3-3).

Table 3-3 PCTs associated with Lowland Grassy Woodland

PCT ID	PCT name
4138	Araluen Valley Flats Red Gum forest
797	Derived grassland of the South Eastern Highlands Bioregion and South East Corner bioregion
4052	South Coast Low Hills Red Gum Grassy Forest
3330	South Coast Lowland Woollybutt Grassy Forest
3325	South Coast Valley Flats Ribbon Gum Forest
3332	South East Lowland Grassy Woodland

As can be seen in Figure 3-4, LGW TEC is a dominant local ecological community. On a local scale, BVSC has sought to avoid higher constraint areas as much as possible in search for urban lands. This includes focusing urban growth areas away from higher value biodiversity areas in Merimbula and Eden in accordance with Strategy 6.1 of the *Draft South East and Tablelands Regional Plan 2041*. Satellite imagery in Figure 3-4 suggests that tree cover density is higher, indicating potential high quality areas, in many of the LGW patches beyond the planning proposal than within. NGH agree that the local development approval pathway via Part 4 of the EP&A Act (with due consideration of the BC Act) provides an appropriate means of assessment including avoiding and minimising higher quality patches on a microscale, particularly when considered within the wider local context of the LGW community occurrence.

R2 low density residential - existing approved development on Ray Miller's land

BCS noted an existing approved development in the eastern precinct on Ray Miller's land, which is currently zoned R5 large lot residential. BVSC acknowledge this approval along with the accompanying Property Vegetation Plan (PVP). If the landowner wishes, they can surrender the existing approval in order to gain a higher residential yield from the land and this is the rationale behind rezoning that area. In terms of the PVP, BVSC or the proponent would get advice from Local Land Services if that avenue were to be pursued. NGH advises that an R2 scale development on this land may require detailed planning, such as building envelopes, at an early stage along with conservation areas additional to those under the PVP.

Parbery Creek

BVSC notes that the vegetation along Parbery Creek is zoned C2 environmental conservation (not part of this planning proposal). This zoning would be preserved and protects the area of highest tree density as well as the waterway. The C2 zone extends south to Kerrisons Lane and protects an area of LGW. NGH agree C2 zoning is appropriate along Parbery Creek, which provides north-south habitat connectivity and conserves an area of TEC.

Biodiversity Report

Bega Urban Land Release Planning Proposal

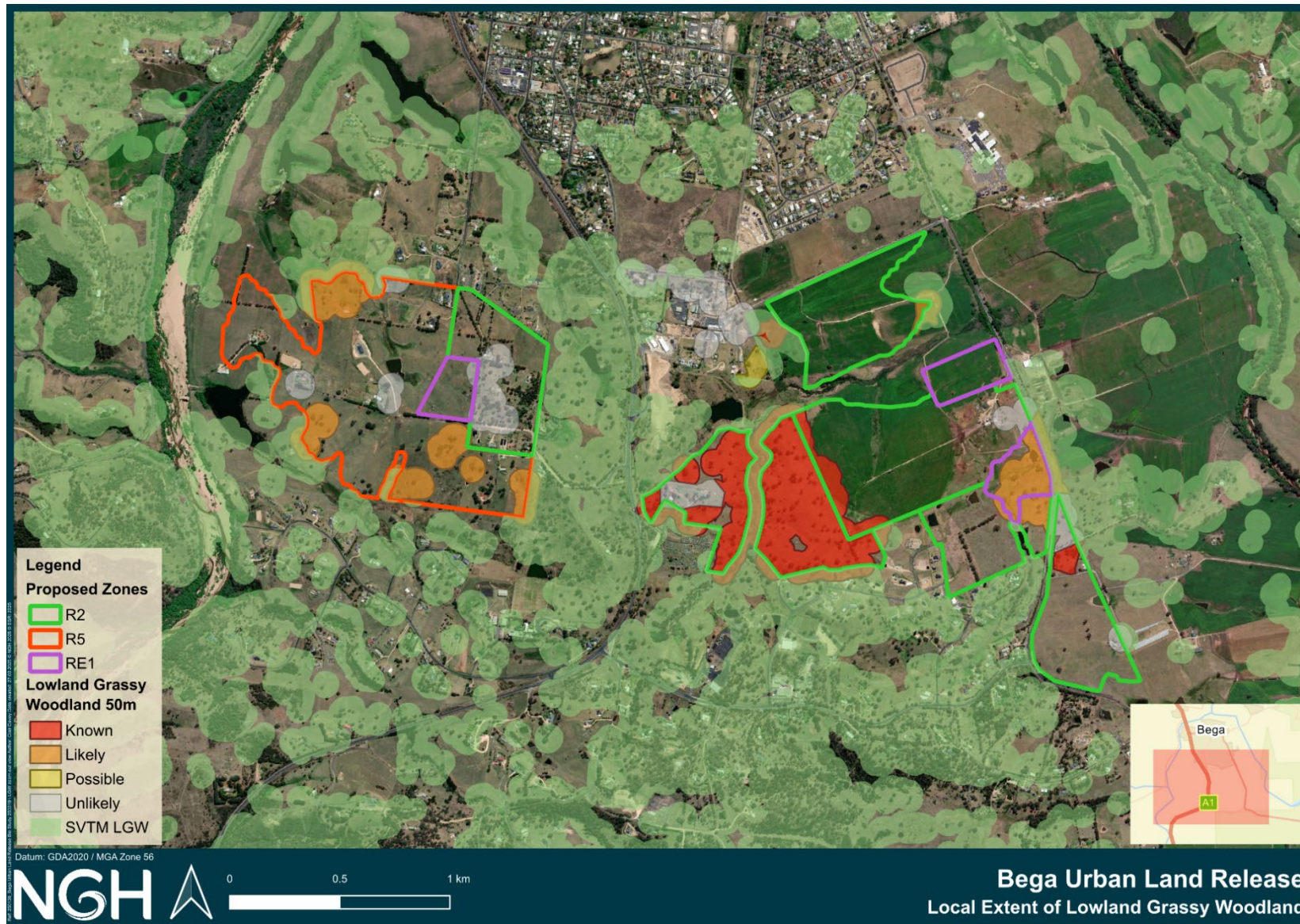


Figure 3-4 Approximate local occurrence of LGW based on SVTM mapping and a 50m buffer

4. Conclusion

In summary, NGH acknowledges that the planning proposal has potential to lead to clearing of and therefore impact upon Lowland Grassy Woodland TEC within the planning precincts, due to smaller lot subdivisions. The most intact areas occur in the eastern precinct and NGH advise that DAs in the known LGW patches are likely to require careful planning. However, given the widespread local occurrence of this TEC, the cumulative impacts are considered unlikely to lead to local extinction of Lowland Grassy Woodland.

This would be evidenced by a test of significance on a case-by-case basis through development applications to BVSC against the specifics of a proposal. NGH agree that with conditioned in-perpetuity protection such as through a BSA under the BC Act or a s.88b instrument under the *Conveyancing Act 1919*, patches of TEC within the planning precincts have potential to be used by private landholders as avoided areas or offsets for future development applications, creating a mosaic of protected lands in Bega's residential areas which would maintain habitat connectivity and pollination pathways through the town.

NGH Pty Ltd

NSW • ACT • QLD • VIC

ABN 31 124 444 622 ACN 124 444 622

E: ngh@nghconsulting.com.au

GOLD COAST

2B 34 Tallebudgera Creek Road
Burleigh Heads QLD 4220

T. (07) 3129 7633

SYDNEY REGION

Suite 9.01, Level 9, 28 Foveaux Street
Surry Hills NSW 2010

T. (02) 8202 8333

BEGA

Suite 11, 89-91 Auckland Street
(PO Box 470)
Bega NSW 2550

T. (02) 6492 8333

MELBOURNE

Level 14, 10-16 Queen Street
Melbourne VIC 3000

T: (03) 7031 9123

TOWNSVILLE

Level 4, 67-75 Denham Street
Townsville QLD 4810

T. (07) 4410 9000

BRISBANE

T3, Level 7, 348 Edward Street
Brisbane QLD 4000

T. (07) 3129 7633

NEWCASTLE - HUNTER & NORTH COAST

2 Dick Street
Newcastle West NSW 2302

T. (02) 4929 2301

WAGGA WAGGA - RIVERINA & WESTERN NSW

35 Kincaid Street (PO Box 5464)
Wagga Wagga NSW 2650

T. (02) 6971 9696

CANBERRA

Unit 8, 27 Yallourn Street
(PO Box 62)
Fyshwick ACT 2609

T. (02) 6280 5053

SUNSHINE COAST

Building 1, 30 Chancellor Village Boulevard
Sippy Downs QLD 4556

T: 13 54 93

WODONGA

Unit 2, 83 Hume Street
(PO Box 506)
Wodonga VIC 3690

T. (02) 6067 2533