

Assessment of Conservation Zones at five properties at Teven, Ballina Shire.

February 2025



Cover photograph: Wet sclerophyll forest, Teven, Ballina Shire 2024 (Photo Credit – J. Wickers)

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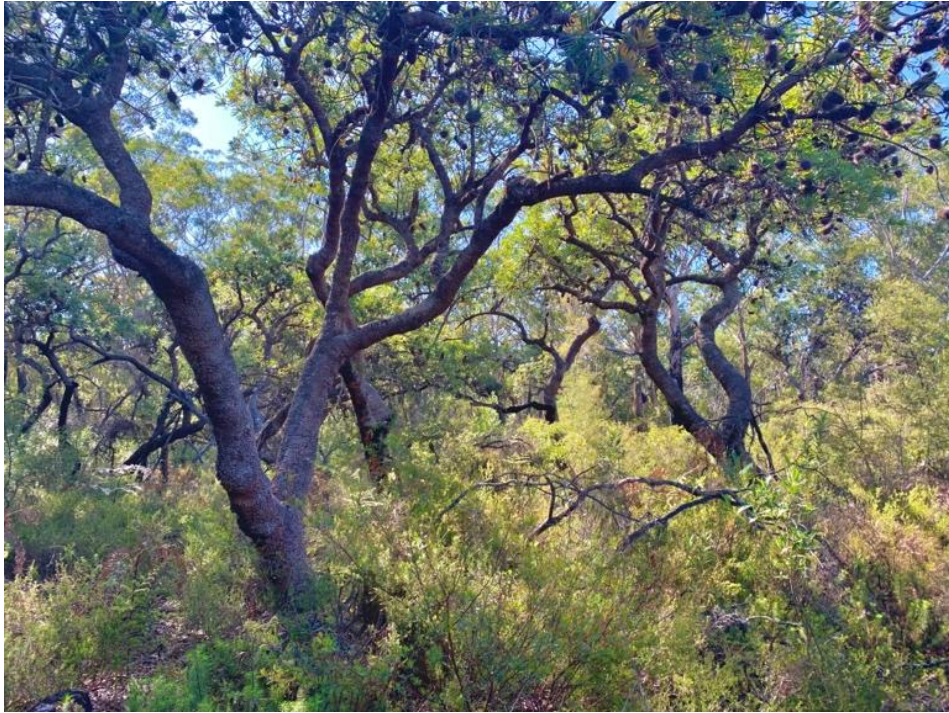
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First Nations People

The People of the Bundjalung Nation developed and maintained a deep and rich connection with the land of the Ballina area. The land nourished all of the person, supplying physical, spiritual, cultural and identity necessities. We wish to acknowledge the First Nations People and pay our respects to their Elders past, present and future.



Ngunya Jargoan Indigenous Protected Area, Wardell/Bagotville (Photo credit G. Beyer).

Acknowledgements

Ballina Shire Council initiated this study and Klaus Kerzinger (Ballina Shire Council) provided support throughout the project.

We would like to thank the Teven landholders who provided access to their property and supported the site visits.

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1. Study Background

Zoning land for environmental protection in the Ballina Shire has a long history.

- 2011-2012. Ballina Shire Council (BSC) proposes new environmental zones in the draft Ballina Local Environmental Plan 2011.
- 2012. The NSW Government announces a review of these lands and defers them from being included in the new LEP. Ballina LEP 2012 is made without any environmental zones.
- 2015. Northern Councils EZone Review conducted by the NSW State Government (NSW Department of Planning and Environment, 2015).
- 2021. BSC reviews all deferred matter land (excluding existing environmental protection zones under Ballina LEP 1987) and develops draft maps (Ascent Ecology, 2021).
- October 2021. Planning Proposal reported to Council's Ordinary meeting. Council resolves to submit the planning proposal to the NSW Government for review and Gateway determination.
- Feb - March 2023. Planning Proposal – *Ballina Local Environmental Plan 2012. Conservation Zone Review (Integration of certain deferred matter land) BSCPP 21/004 February 2023 (V3 Exhibition) 23/2426* placed on public exhibition.
- July 2024 the Department of Planning, Housing and Infrastructure advised that Amendment No 55 of Ballina LEP 2012 had been made. This amendment applied to 457 lots and applied zones generally consistent with the exhibited Conservation Zone Review planning proposal.
- Excluded from Amendment No 55 were 257 lots, including the lots the subject of this report, which were the subject of landowner objections. These lots still require transition from Ballina LEP 1987 to Ballina LEP 2012.

2. Objectives

Ballina Shire Council have identified five (5) properties at Teven (Figure 1) to be used as a test case to finalise unresolved zoning.

The key objectives of this study are:

- Consult with affected landholders.
- Undertake site visits to assess the ecological values present.
- Assess if the vegetation in the areas of interest meets the criteria for Conservation Zone (CZone).
- Determine the primary use of the land at the sites to inform the zoning of the land under the provisions of Ballina LEP 2012.

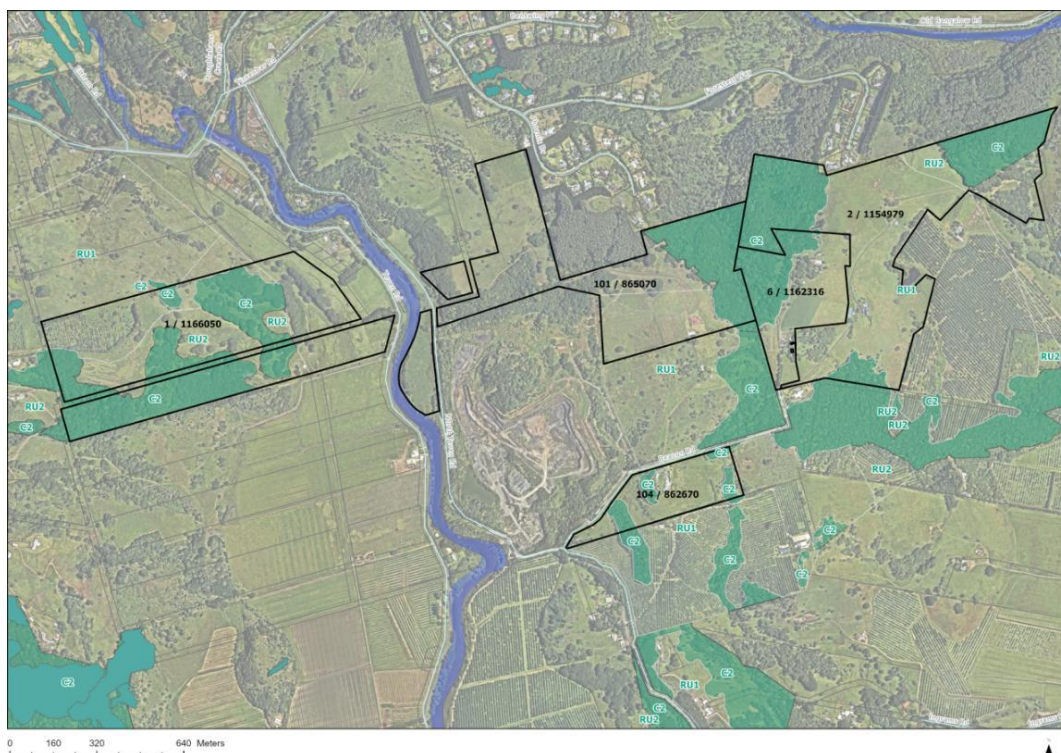


Figure 1 Properties to be assessed in study at Teven (Ballina LGA)

3. Determination of Conservation Zones

The application of CZones in Ballina Shire is required to be based on the NSW Department of Planning and Environment's 2015 *Northern Councils E Zone Review Final Recommendations Report* (NCEZR). Refer to Appendix 1 for details on the criteria for applying C2 - Environmental Conservation or C3 - Environmental Management zoning.

To-date the assessment of CZones has been based on available spatial data, including vegetation mapping and aerial photography.

This study will assess if the vegetation at the sites meets the CZone criteria by undertaking biodiversity field inspections and ground surveys.

4. Primary use of land

The 2015 NCEZR notes that where a C2 or C3 conservation zone is proposed, the primary use of the land is to be considered. The primary use may vary across a particular property depending on the characteristics of the land.

The primary use of the land is defined as the main use for which the land has been used for the last two years.

The primary land use (PLU) category Environmental applies to areas of native vegetation where natural ecological processes predominate. This category may include some agricultural uses such as grazing where these activities are of a secondary or ancillary nature. The PLU Agriculture applies to areas where agricultural activities including cropping, horticulture, pasture management, grazing or other forms of agriculture predominate.

For land that Council has verified as consistent with the vegetation criteria for a conservation zone, an Environmental Conservation (C2) or Environmental Management (C3) zone will generally be applied if the primary use of the land is confirmed to be Environmental.

5. C2 and C3 Land Use Zones

Appendix 2 is an extract from the Ballina Local Environmental Plan 2012 (2013 EPI 20) detailing the zone objectives, permitted uses without consent, permitted uses with consent and prohibited activities in a C2 and C3 zone.

BSCs *existing and continuing use rights* fact sheet notes that the NSW Environmental Planning and Assessment Act 1979 (EPA Act) protects landowners from any hardship that may result from such changes by giving them the power to continue using their land under continuing use rights. Any lawful activity being carried out on the land will continue if there is a zone change.

It should be noted that there is no requirement to fence or maintain the vegetation within a C2 or C3 zone.

6. Local Land Services Land Categories

The LLS land category mapping does not determine zoning, however it does provide additional information about current permissible uses in the proposed CZone areas.

Figure 2 is the LLS Native Vegetation Regulatory map at the Teven sites. The map designates areas of land where the clearing of native vegetation is categorised as regulated or exempt under Part 5A of the Local Land Services Act 2013. The orange shaded areas are mapped as Vulnerable regulated land. Because of the steep slopes, clearing of native vegetation may not be permitted under the Land Management (Native Vegetation) Code 2018, and a limited range of allowable activities are permitted.

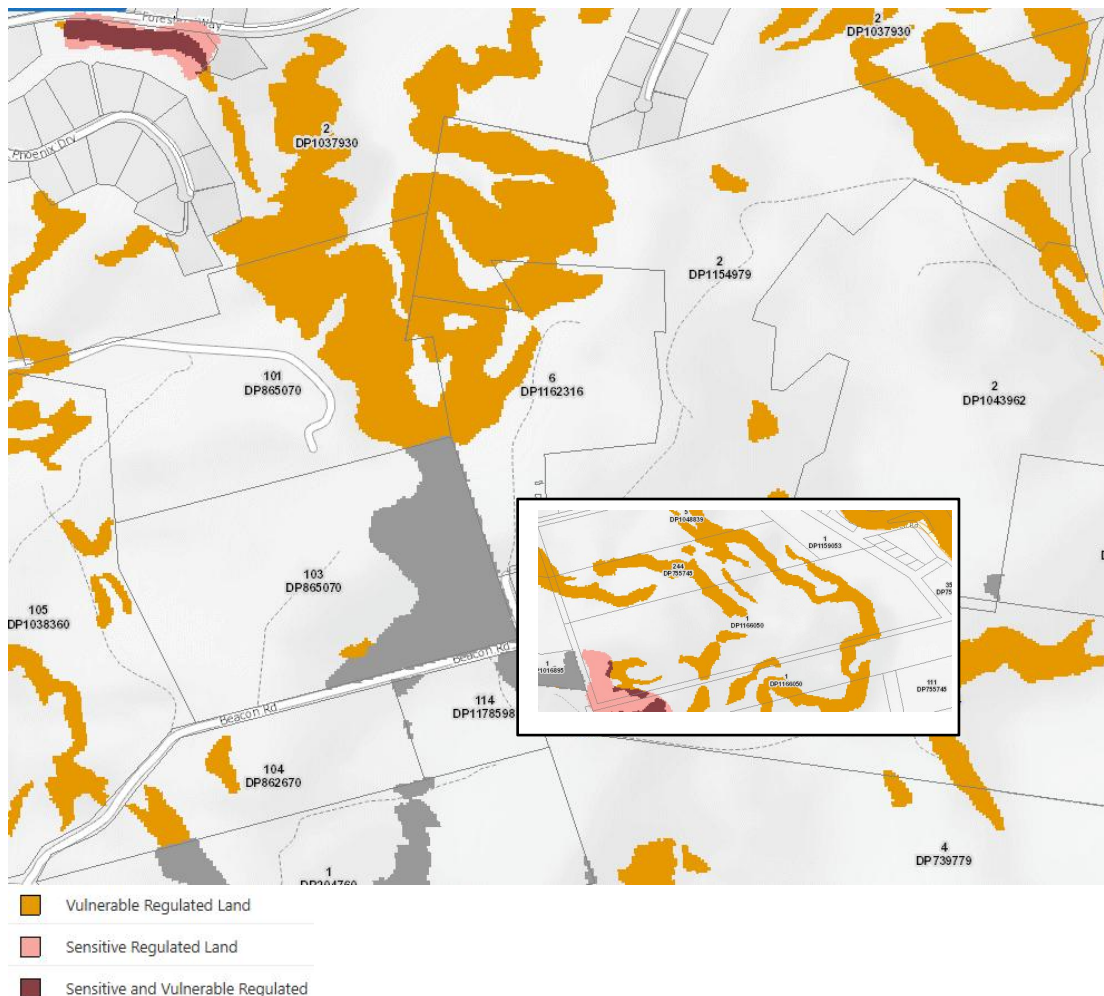


Figure 2 LLS land categories Teven (Sourced from NSW Government Transitional native vegetation regulatory map viewer)

7. Site Assessments

Site visits involved traversing the proposed CZone sites at the five properties. The path walked was recorded with a GPS device and photo points taken throughout each site.

The key information collected through notes and photographs included:

- Evidence of koala activity
- Sightings of threatened flora and fauna
- Type of vegetation community
- Vegetation community boundaries
- Condition of vegetation (eg. Extent and type of weeds)
- Growth stage of vegetation
- Primary landuse activities
- Topography of site (eg. Slope).

After each site visit the proposed CZone area was reviewed using current Nearmaps aerial photography, historical aerial photography, photo points and field notes. Homogenous areas based on vegetation type and condition were divided into different zones.

Each zone was then assessed against the CZone criteria listed in the NSW Department of Planning and Environment's 2015 *Northern Councils E Zone Review Final Recommendations Report* (NCEZR).

7.1 118 Beacon Road - Lot 6 DP 116231

Site Visit Date: February 11 2025

Assessors: Jane Wickers, Georgia Beyer (EarthScapes Consulting)

Site visit path and photo points see Figure 3.

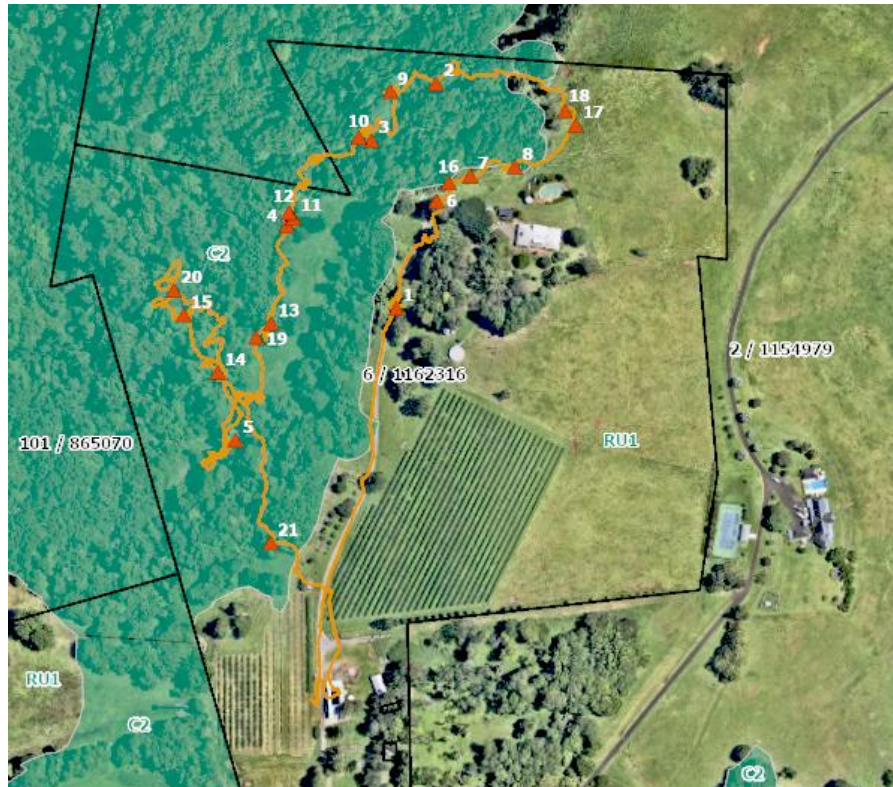


Figure 3 Site visit map - 118 Beacon Road and proposed zones as per 2023 Conservation Zone Review Planning Proposal

Site Visit Results

The C2 zone as originally proposed in 2023 (Conservation Zone Review Planning Proposal for 118 Beacon Road) has been divided into 3 main assessment zones for the purposes of this assessment as shown in Figure 4. Zone 1 has been further divided into zones 1a and 1b.

A Primary Land Use (PLU) determination has been made for each zone as indicated in Table 2 and for the reasons nominated in the zone commentaries below.

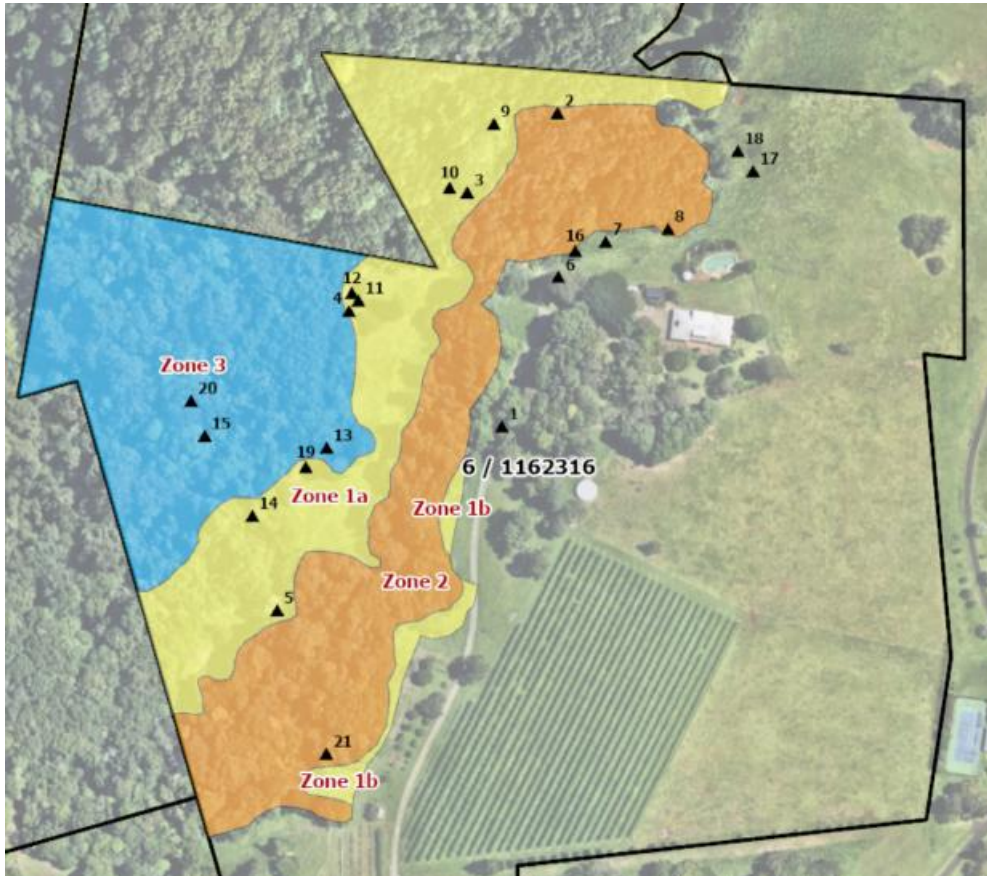


Figure 4 Zonation map 118 Beacon Road

Zone 1a

This zone is in the central part of the proposed CZone and has a total area of 15,152 sq m .

The northern part of this zone included disturbed wet sclerophyll vegetation.

Weeds throughout this zone included Camphor laurel (*Cinnamomum camphora*), Borad-leaf privet (*Ligustrum lucidum*), Small leaf privet (*Ligustrum sinense*), Tropical soda apple (*Solanum viarum*), and White passionflower (*Passiflora subpeltata*) (Plates 3 and 5).

There is evidence that zone 1a is actively used for cattle grazing. Two dams are located in the south-west of this zone (Plates 1 and 2). Water pumping infrastructure including a pump, pump house and water lines are contained within this zone. The water line runs through Zone 2 and connects with storage facilities located within the proposed RU1 zone.

Cleared areas with pasture grasses are also present in this zone (Plate 4).

Coffee plants were also observed and the owners advise they are considering planting fruits in the understorey within the proposed CZone area.

Due to the presence of agricultural infrastructure and its active use for cattle grazing a PLU of Agriculture has been assigned to this zone.



Plate 1 - PP5



Plate 2 - PP5



Plate 3 - PP10



Plate 4 - PP11



Plate 5 - PP19

Zone 1b

This zone is an adjustment to the vegetation mapping to exclude Camphor laurels (*Cinnamomum camphora*) and cleared areas (Plate 6). The total area of this zone is 1,774 sq m.

A PLU of Agriculture has been assigned to this zone as the vegetation does not meet the C zone criteria.



Plate 6 - PP1

Zone 2

This zone is Subtropical rainforest, with mixed species including Coastal tuckeroo (*Cupaniopsis anacardioides*), Guioa (*Guioa semiglauc*a), Foam bark (*Jagera pseudorhus*), and Red kamala (*Malotus philippensis*) (Plates 7 to 10). The total area of this zone is 18,030 sq m .

The growth stage is a mix of advanced regrowth and old growth.

There is evidence that natural regeneration is occurring.

There is minimal weed with some scattered Camphor laurel (*Cinnamomum camphora*), and Broad-leaf privet (*Ligustrum lucidum*) along the edges of the zone.

The site fits the description of Lowland Subtropical Rainforest, listed as a threatened ecological community (TEC) under state and commonwealth legislation. Details of this TEC are available in the *Advice to the Minister for Sustainability, Environment, Water, Population and Communities from the Threatened Species Scientific Committee (the Committee) on an Amendment to the List of Threatened Ecological Communities under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.

Whilst cattle have access to this zone, the vegetation is Lowland Subtropical Rainforest (a TEC) and for this reason, a PLU of Environmental has been assigned to this zone.



Plate 7 - PP16



Plate 8 - PP7



Plate 9 - PP2



Plate 10 - PP21

one
3

Zone 3

This zone contains wet sclerophyll forest. Canopy trees included Brushbox (*Lophostemon confertus*) and Tallowwood (*Eucalyptus microcorys*) with a rainforest midstorey and understorey (Plates 11 to 13). The total area of this zone is 17,306 sq m .

The forest was in good condition containing trees in different growth stages. A Tallowwood was late mature and there were likely others in the late stage of growth. Some trees meet the definition of old growth. Figure 5 is an aerial photograph from 1959 which confirms the likelihood of some old growth trees.

Some weeds were present including Camphor laurel, Coffee and White passionflower.

Tallowwood is a preferred Koala (*Phascolarctos cinereus*) feed tree, and there are records of Koala to the north in adjoining forest.

Zone 3 is considered to have high environmental value with little evidence of more recent agricultural activity. For this reason a PLU of Environmental has been assigned to this zone.



Figure 5 1958 aerial photograph, Teven (supplied by D. Perkins)



Plate 11 - PP20



Plate 12 - PP15



Plate 13 - PP4

Site Visit Assessment

Table 1 summarises each zone when the primary land use and site visit results are assessed against the NCEZR report.

Table 1 Site visit assessment 118 Beacon Road

Zone	Primary Land Use	Suitable zone	NCEZR attributes
1a	Agriculture	Rural	N/A
1b	Agriculture	Rural	N/A
2	Environmental	C2	✧ Endangered Ecological Communities (EECs) listed under the <i>Threatened Species Conservation Act 1995</i> and/or the <i>Environment Protection and Biodiversity Conservation Act 1999 - Lowland Rainforest</i> ✧ Native vegetation in over-cleared Mitchell landscapes - Rainforest ✧ Key Threatened Species Habitat
3	Environmental	C2	✧ Native vegetation in over-cleared Mitchell landscapes - Wet sclerophyll forests ✧ Key Threatened Species Habitat

7.2 444 North Teven Road - Lot 101 DP 865070

Site Visit Date: February 14 2025

Assessors: Jane Wickers, Georgia Beyer (EarthScapes Consulting)

Site visit path and photo points see Figure 7.

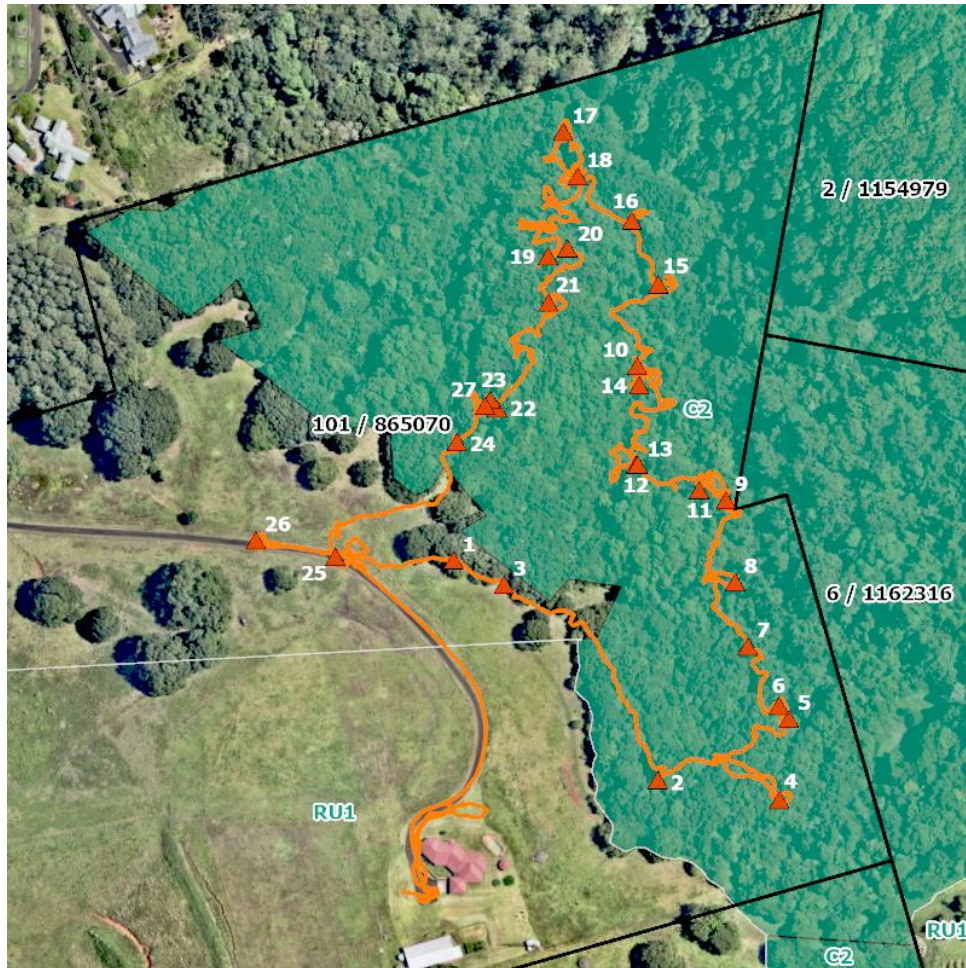


Figure 6 Site visit map - 444 Teven Road and proposed zones as per 2023 Conservation Zone Review Planning Proposal

Site Visit Results

The C2 zone as originally proposed in 2023 (Conservation Zone Review Planning Proposal for 444 Teven Road) has been divided into 2 main assessment zones for the purposes of this assessment as shown in Figure 7.

A Primary Land Use (PLU) determination has been made for each zone as indicated in Table 2 and for the reasons nominated in the zone commentaries below.

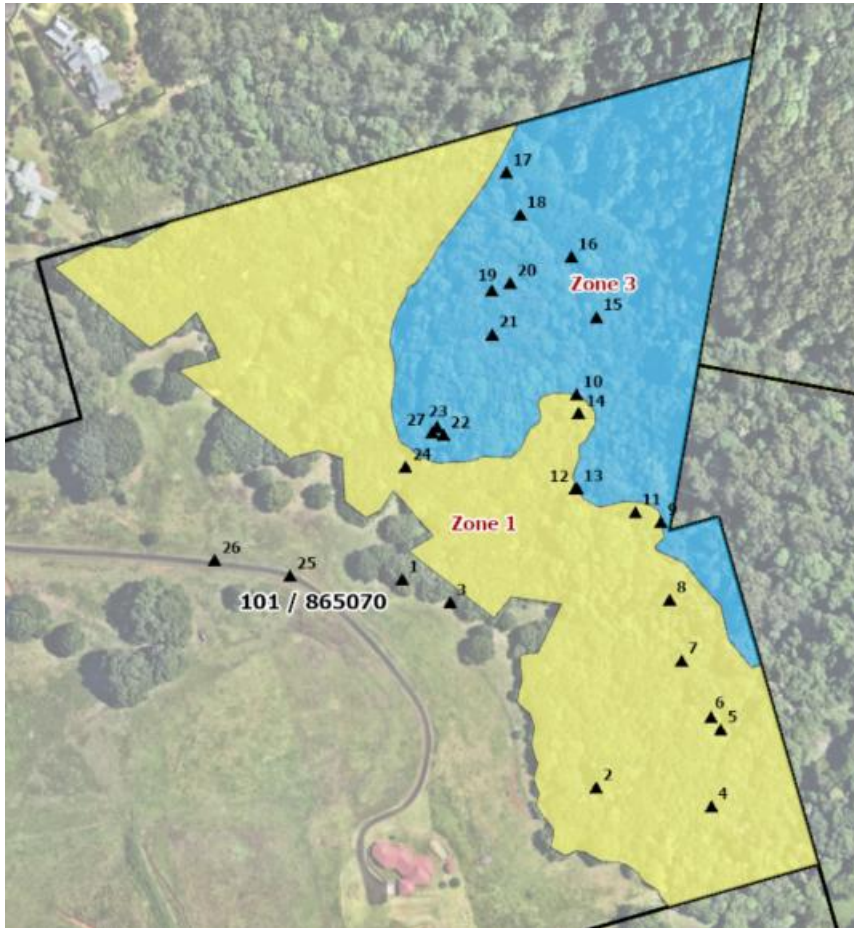


Figure 7 Zonation map 444 Teven Road

Zone 1

This zone is steep sloping land in the east of the property. Historic aerial photography (Figure 5) indicates that this area was previously farmed for bananas. The total area of this zone is 51,707 sq m .

The vegetation was mixed regrowth forest generally dominated by exotic species Camphor laurel (*Cinnamomum camphora*) and Broad-leaf privet (*Ligustrum lucidum*) (Plates 14 to 18). Native rainforest trees and scattered Brushbox (*Lophostemon confertus*).

A small area of remnant Lowland Rainforest was observed adjacent to the north-west of the zone but was not included as the zoning was nor Deferred Matter (DM).

There is evidence that this zone is used for cattle grazing and is surrounded by pasture grasses (Plate 19).

Due to the degraded condition of the vegetation and its active use for cattle grazing a PLU of Agriculture has been assigned to this zone.



Plate 14 - PP1



Plate 15 - PP3



Plate 16 - PP2



Plate 17 - PP24

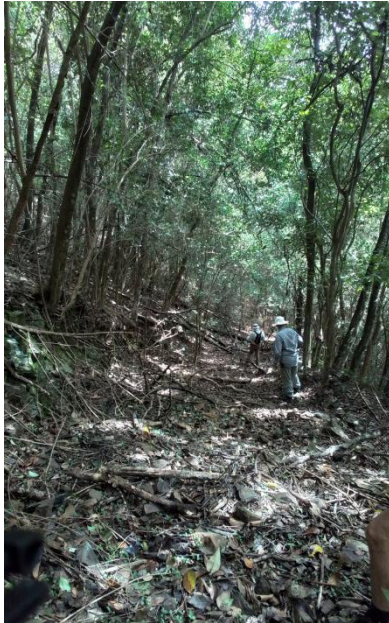


Plate 18 - PP6



Plate 19 - PP26

Zone 3

Zone 3 is in the north-east of the property. The land is very steep and includes a drainage line. The total area of this zone is 31,700 sq m .

The vegetation was wet sclerophyll forest with Brushbox (*Lophostemon confertus*) and Tallowwood (*Eucalyptus microcorys*) on the eastern edge, and Brushbox and Tallowwood mixed with Pink bloodwood (*Corymbia intermedia*) and other eucalypts in the central zone (Plates 20 to 25). The midstorey and understorey contained rainforest species and the ground layer in the central zone was dominated by native *Lomandra* species.

Weeds were present but in low density including Camphor laurel (*Cinnamomum camphora*) and Broad-leaf privet (*Ligustrum lucidum*).

The zone contained large old trees. These trees are visible in the 1958 historic aerial photography (Figure 5).

Tallowwood is a preferred Koala tree and there are records of Koalas to the north in adjoining vegetation.

A single Rough-shelled Bush Nut (*Macadamia tetraphylla*) was seen near PP11, the species is listed as vulnerable under state and commonwealth legislation.

Zone 3 is considered to have high environmental value with little evidence of more recent agricultural activity. For this reason a PLU of Environmental has been assigned to this zone.



Plate 20 - PP7



Plate 21 - PP11



Plate 22 - PP20



Plate 23 - PP21



Plate 24 - PP22



Plate 25 - PP18

Site Visit Assessment

Table 3 summarises each zone when the primary land use and site visit results are assessed against the NCEZR report.

Table 2 Site visit assessment 444 Teven Road

Zone	Primary Land Use	Suitable zone	NCEZR attributes
1	Agriculture	Rural	N/A
3	Environmental	C2	✧ Native vegetation in over-cleared Mitchell landscapes - Wet sclerophyll forests ✧ Key Threatened Species Habitat

7.3 660 Teven Road - Lot 1 DP1166050

Site Visit Date: February 14 2025

Assessors: Jane Wickers, Georgia Beyer (EarthScapes Consulting)

Site visit path and photo points see Figure 8.



Figure 8 Site visit map - 660 Teven Road and proposed zones as per 2023 Conservation Zone Review Planning Proposal

Site Visit Results

All areas assessed were dominated by Camphor laurel (*Cinnamomum camphora*) and Broad-leaf privet (*Ligustrum lucidum*) (Plates 29 to 41). There was a small number of native rainforest species spread throughout including Guioa (*Guioa semiglauc*a) and Red kamala (*Mallotus philippensis*). Some areas were cleared with scattered Camphor laurel, east of PP4. The total area of proposed CZone was 191,454 sq m.

A single Rough-shelled Bush Nut (*Macadamia tetraphylla*) was seen to the south of PP17 (Plate 42), outside the proposed CZone. The species is listed as vulnerable under state and commonwealth legislation.

Cattle access all of the proposed CZone area. A range of farm infrastructure was observed, including farm sheds, fences, water tanks (Plates 26 and 27). Powerlines run along the southern boundary and the vegetation below are managed by Essential Energy (Plate 28).

Due to the degraded condition of the vegetation and the grazing of cattle in all areas, a PLU of Agriculture has been assigned to all vegetation on the property.



Plate 26 - PP14



Plate 27 - PP16



Plate 28 - PP7



Plate 29 - PP5



Plate 30 - PP3



Plate 31 - PP6



Plate 32 - PP17



Plate 33 - PP4



Plate 34 - PP19



Plate 35 - PP10



Plate 36 - PP18



Plate 37 - PP11



Plate 38 - PP12



Plate 39 - PP13



Plate 40 - PP21



Plate 41 - East of PP 4



Plate 42 - South of PP17. *Macadamia tetraphylla*

Site Visit Assessment

None of the vegetation observed meets the criteria for a C2 or C3 zone because of the dominance of weeds species.

7.4 54 Beacon Road - Lot 104 DP862670

Site Visit Date: February 17 2025

Assessors: Jane Wickers, Georgia Beyer (EarthScapes Consulting)

Site visit path and photo points see Figure 9.



Figure 9 Site visit map - 54 Beacon Road and proposed zones as per 2023 Conservation Zone Review Planning Proposal

Site Visit Results

The C2 zone as originally proposed in 2023 (Conservation Zone Review Planning Proposal for 54 Beacon Road) has been divided into 3 main assessment zones for the purposes of this assessment as shown in Figure 10. Zone 1 has been further divided into zones 1a and 1b.

A Primary Land Use (PLU) determination has been made for each zone as indicated in Table 3 and for the reasons nominated in the zone commentaries below.



Figure 10 Zonation map 54 Beacon Road

Zone 1a

This zone is located in the central part of the property to the west of the house on a slope. The total area of this zone was 5,042 sq m.

The vegetation was dominated by exotic Camphor laurel (*Cinnamomum camphora*), with a small number of native rainforest species including Guioa (*Guioa semiglauc*a) and Coastal tuckeroo (*Cupaniopsis anacardioides*) (Plates 43 to 45).

Due to the degraded condition of the vegetation and its active use for cattle grazing a PLU of Agriculture has been assigned to this zone.



Plate 43 - PP1



Plate 44 - PP2



Plate 45 - PP16

Zone 1b

This is a narrow zone on the eastern edge of Zone 2, with a total area of 979 sq m .

This area has been grazed by cattle and contains pasture grasses (Plate 46) and has a PLU of Agriculture.



Plate 46 - PP12

Zone 2

This zone is in the eastern part of the property in a rocky, steep area. It is fenced to protect the site from grazing cattle. The total area of was 6,471 sq m.

The vegetation was planted with a 2011 LLS grant and also contains regrowth (Plates 47 to 49). It may have contained remnant vegetation.

Key species include Guioa (*Guioa semiglauc*), Sandpaper fig (*Ficus* sp.), Blue quandong (*Elaeocarpus grandis*) and Macaranga (*Macaranga tanarius*). The forest was in fairly good condition with minimal weeds.

The vegetation is in good condition and would be best suited to a PLU of Environmental. It is noted however that the LLS grant funding obligations have been completed and a zoning of Environmental may only be applied with the land owners agreement.



Plate 47 - PP14



Plate 48 - PP11



Plate 49 - PP15

Zone 3

Zone 3 is located in the east of the property adjacent to a creek line. It is fenced to protect the site from grazing cattle. The dam on the creek-line is not proposed to be included in the CZone. The total area was 7,512 sq m.

The vegetation was planted with a 2011 LLS grant and also contains regrowth (Plates 50 to 53). This zone may be remnant vegetation that has been enhanced through regeneration and plantings.

Key species include Pink euodia (*Melicope elleryana*), Brown kurrajong (*Commersonia bartramia*), Bangalow palm (*Archontophoenix cunninghamiana*), Broad-leaved paperbark (*Melaleuca quinquenervia* and/or *Calistemon salignus*) and Oak (*Casuarina* sp.).

The vegetation is in very good condition with few or no weeds. The zone would be best suited to a PLU of Environmental. It is noted however that the LLS grant funding obligations have been completed and a zoning of Environmental may only be applied with the land owners agreement.



Plate 50 - PP4



Plate 51 - PP5

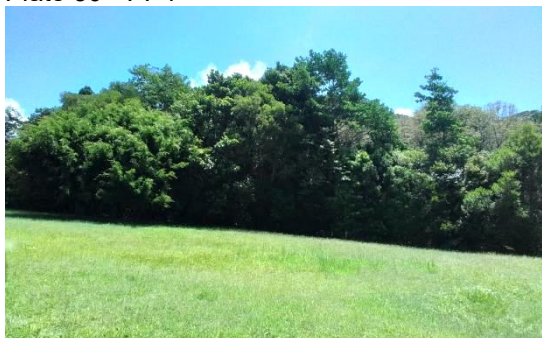


Plate 52 - PP6



Plate 53 - PP9

Site Visit Assessment

Table 3 summarises each zone when the primary land use and site visit results are assessed against the NCEZR report.

Table 3 Site visit assessment 54 Beacon Road

Zone	Primary Land Use	Suitable zone	NCEZR attributes
1a	Agricultural	Rural	N/A
1b	Agricultural	Rural	N/A
2	Environmental	C2 *	✧ Native vegetation in over-cleared Mitchell landscapes - Rainforest ✧ Key Threatened Species Habitat
3	Environmental	C2*	✧ Native vegetation in over-cleared Mitchell landscapes - Rainforest ✧ Key Threatened Species Habitat

* The NCEZR notes that a CZone cannot be applied to land without the land owners agreement where land has been actively revegetated by the current owner, unless the revegetation was undertaken with grant funding which required ongoing protection of the vegetation.

7.5 225 Cumbalum Rd - Lot 2 DP1154979

Site Visit Date: February 17 2025

Assessors: Jane Wickers, Georgia Beyer (EarthScapes Consulting)

Site visit path and photo points see Figure 11.

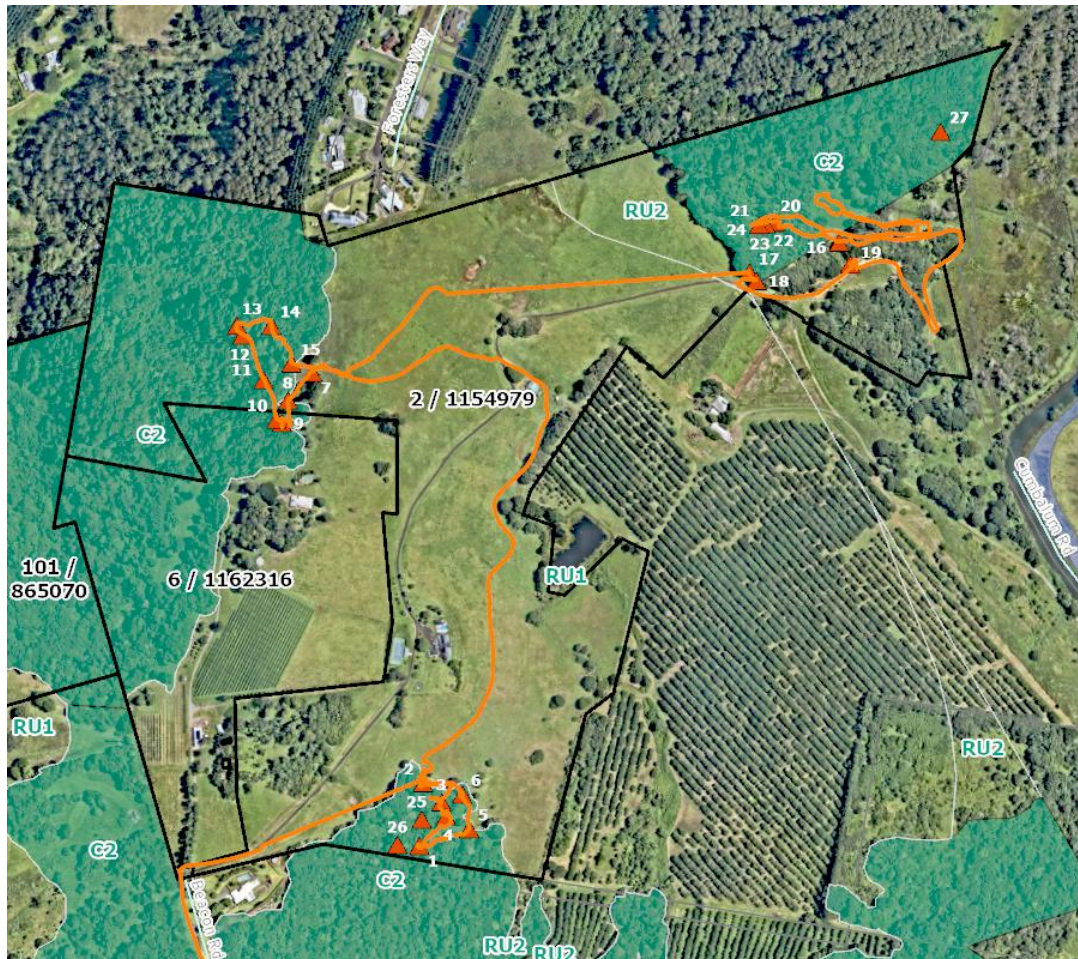


Figure 11 Site visit map - 225 Cumbalum Road and proposed zones as per 2023 Conservation Zone Review Planning Proposal

Site Visit Results

The C2 zone as originally proposed in 2023 (Conservation Zone Review Planning Proposal for 225 Cumbalum Road) is located in 3 locations at this property. At each location, the proposed CZone has been divided into zones.

A Primary Land Use (PLU) determination has been made for each zone in each section and for the reasons nominated in the zone commentaries below.

Site Visit Results

Southern patch

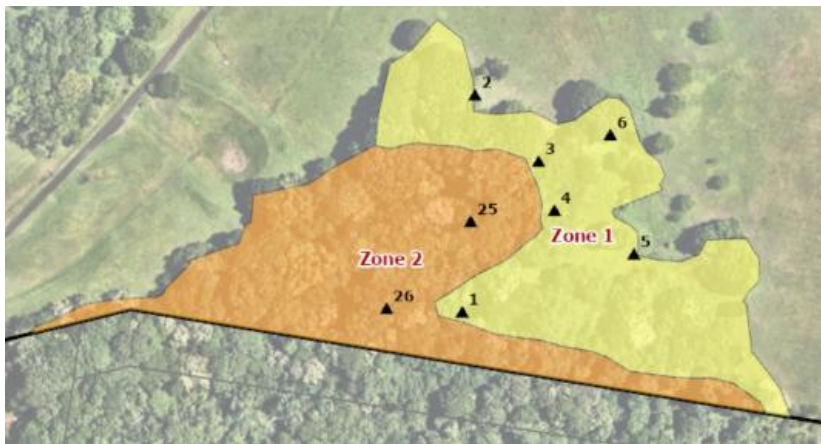


Figure 12 Zonation map 225 Cumbalum Road (Southern Patch)

Zone 1

This zone was highly disturbed and dominated by exotic species Camphor laurel (*Cinnamomum camphora*) and Broad-leaf privet (*Ligustrum lucidum*) (Plates 54 to 56). There were multiple clearings with paddock weeds including tobacco bush (*Solanum mauritianum*). The total area of this zone was 7,677 sq m.

A small numbers of rainforest regrowth trees were also present.

Due to the degraded condition of the vegetation and its active use for cattle grazing a PLU of Agriculture has been assigned to this zone.



Plate 54 - PP4

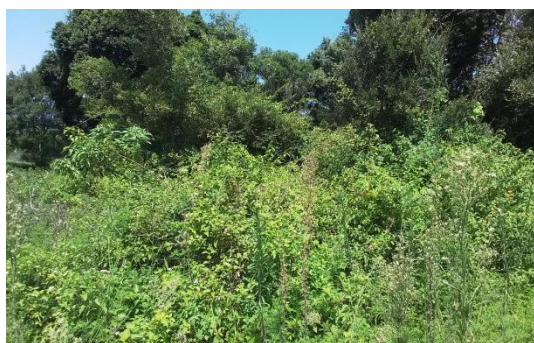


Plate 55 - PP1



Plate 56 - PP6

Zone 2

This zone was rainforest remnant with mixed species including Coastal tuckeroo (*Cupaniopsis anarcardioides*) (Plates 57 to 60). The zone had some disturbance and there were some weed species including Camphor laurel (*Cinnamomum camphora*) and ochna (*Ochna serulata*). The site contained arrow-head vine, either *Tinospora tinosporoides* or *Tinospora smilacina*, both are threatened species listed under state legislation. The site fits the description of Lowland Subtropical Rainforest, listed as a threatened ecological community under both state and commonwealth legislation. Details of this TEC are available in the *Advice to the Minister for Sustainability, Environment, Water, Population and Communities from the Threatened Species Scientific Committee (the Committee) on an Amendment to the List of Threatened Ecological Communities under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*. The total area of this zone was 8,077 sq m.

There is evidence that natural regeneration is occurring.

Whilst cattle have access to this zone, the vegetation is Lowland Subtropical Rainforest (a TEC) and for this reason, a PLU of Environmental has been assigned to this zone.

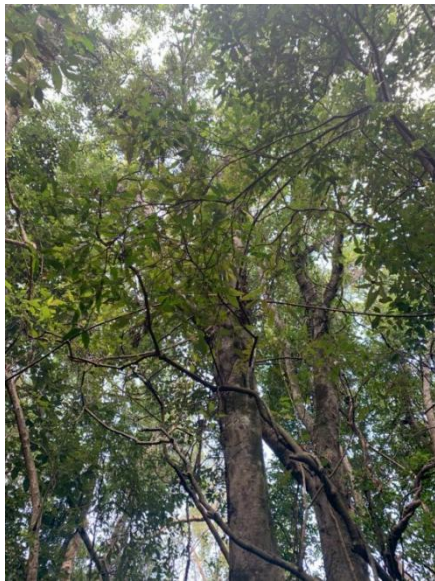


Plate 57 - PP26



Plate 58 - PP26

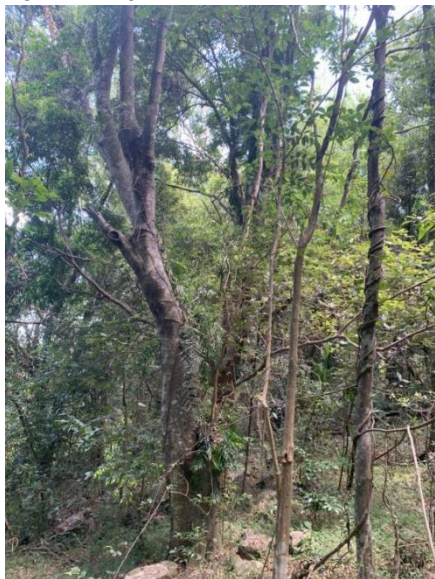


Plate 59 - PP26



Plate 60 - PP26

Site Visit Assessment

Table 4 summarises each zone when the primary land use and site visit results are assessed against the NCEZR report.

Table 4 Site visit assessment 225 Cumbalum Road (Southern Patch)

Zone	Primary Land Use	Suitable zone	NCEZR attributes
1	Agricultural	Rural	N/A
2	Environmental	C2	✧ Endangered Ecological Communities (EECs) listed under the <i>Threatened Species Conservation Act 1995</i> and/or the <i>Environment Protection and Biodiversity Conservation Act 1999 - Lowland Rainforest</i> ✧ Native vegetation in over-cleared Mitchell landscapes - Rainforest ✧ Key Threatened Species Habitat

North-western patch

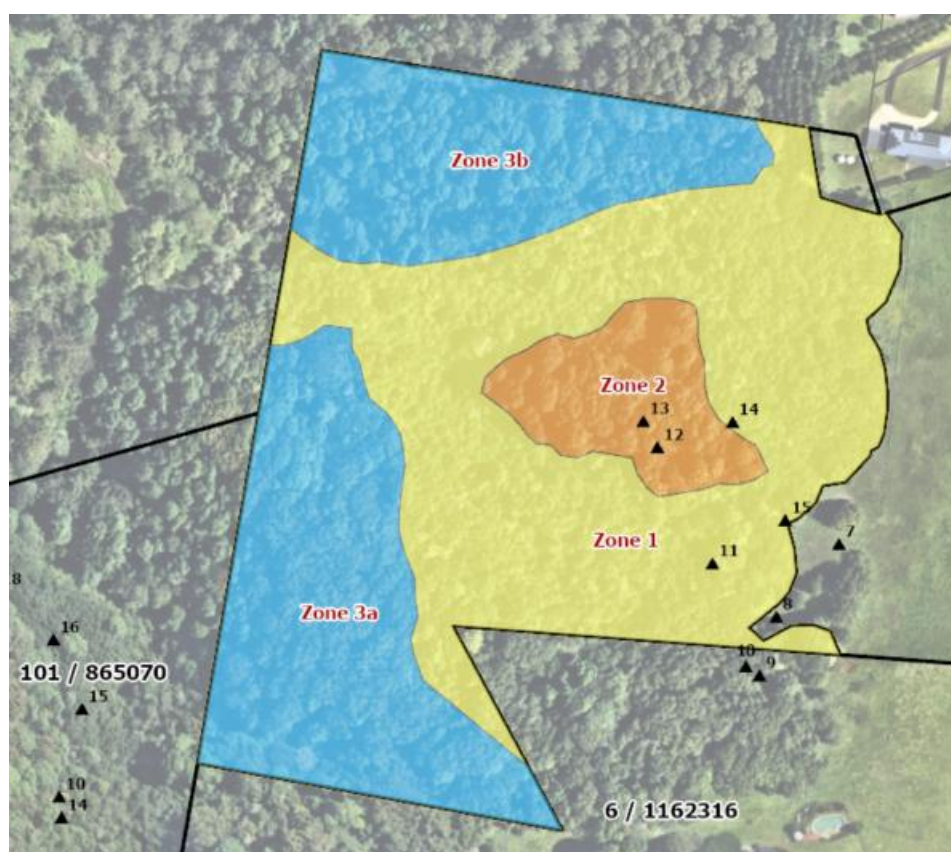


Figure 13 Zonation map 225 Cumbalum Road (North-western Patch)

Zone 1

This zone is steep sloping land in the north-west of the property. The total area of this zone was 40,684 sq m.

This zone was regrowth dominated by exotic species Camphor laurel (*Cinnamomum camphora*) and Broad-leaf privet (*Ligustrum lucidum*) (Plates 61 to 64). There were native rainforest species and small patches of forest dominated by native rainforest species amongst the weeds. There was Arrow-head vine to the east of PP14, either *Tinospora tinosporoides* or *Tinospora smilacina*, both are threatened species listed under state legislation.

There is evidence that this zone is used for cattle grazing and is surrounded by pasture grasses.

Due to the degraded condition of the vegetation and its active use for cattle grazing a PLU of Agriculture has been assigned to this zone.



Plate 61 - PP 7



Plate 62 - PP11



Plate 63 - PP8



Plate 64 - PP15

Zone 2

This central zone was wet sclerophyll forest dominated by Brushbox (*Lophostemon confertus*), with rainforest species in the midstorey and understorey (Plates 65 to 68). The total area of this zone was 7,196 sq m.

There were some weeds including camphor laurel (*Cinnamomum camphora*).

The forest was in good condition containing trees in different growth stages.

This zone is considered to have high environmental value with little evidence of more recent agricultural activity. For this reason a PLU of Environmental has been assigned to this zone.



Plate 65 - PP12



Plate 66 - PP12



Plate 67 - PP12



Plate 68 - PP12

Zone 3a

This zone is very steep and includes a drainage line. The total area of this zone was 19,786 sq m.

Only a small part of Zone 3a was visited during the site visit but this zone was visible from neighbouring properties. The vegetation was wet sclerophyll forest containing Tallowwood (*Eucalyptus microcorys*) and Brushbox (*Lophostemon confertus*), with rainforest species in the midstorey and understorey. Tallowwood is a preferred koala feed tree and there are records of koalas in adjoining vegetation to the north.

Large trees were present in this zone that are also visible in the 1958 aerial photograph (Figure 5).

Weed species included Camphor laurel (*Cinnamomum camphora*) and Broad-leaf privet (*Ligustrum lucidum*) (Plates 69 and 70).

This zone is considered to have high environmental value with little evidence of more recent agricultural activity. For this reason a PLU of Environmental has been assigned to this zone.



Plate 69 - PP14 from 444 Teven Rd



Plate 70 - PP10 from 118 Beacon Rd

Zone 3b

This zone was not visited during the site visit but it could be seen from Zone 2. The total area of this zone was 15,089 sq m.

Zone 3b was wet sclerophyll forest dominated by Brushbox (*Lophostemon confertus*) with rainforest species in the midstorey (Plate 71).

Large trees are present in this zone that are also visible in the 1958 aerial photograph (Figure 5).

This zone is considered to have high environmental value with little evidence of more recent agricultural activity. For this reason a PLU of Environmental has been assigned to this zone.

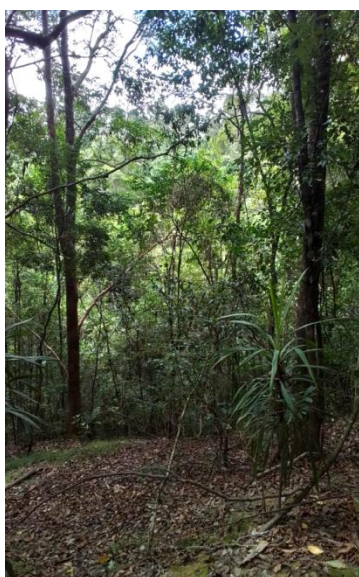


Plate 71 - From PP 13

Site Visit Assessment

Table 5 summarises each zone when the primary land use and site visit results are assessed against the NCEZR report.

Table 5 Site visit assessment 225 Cumbalum Road (North-western Patch)

Zone	Primary Land Use	Suitable zone	NCEZR attributes
1	Agricultural	Rural	N/A
2	Environmental	C2	✧ Native vegetation in over-cleared Mitchell landscapes - Wet sclerophyll forests
3a	Environmental	C2	✧ Native vegetation in over-cleared Mitchell landscapes - Wet sclerophyll forests ✧ Key Threatened Species Habitat
3b	Environmental	C2	✧ Native vegetation in over-cleared Mitchell landscapes - Wet sclerophyll forests ✧ Key Threatened Species Habitat

Eastern Section

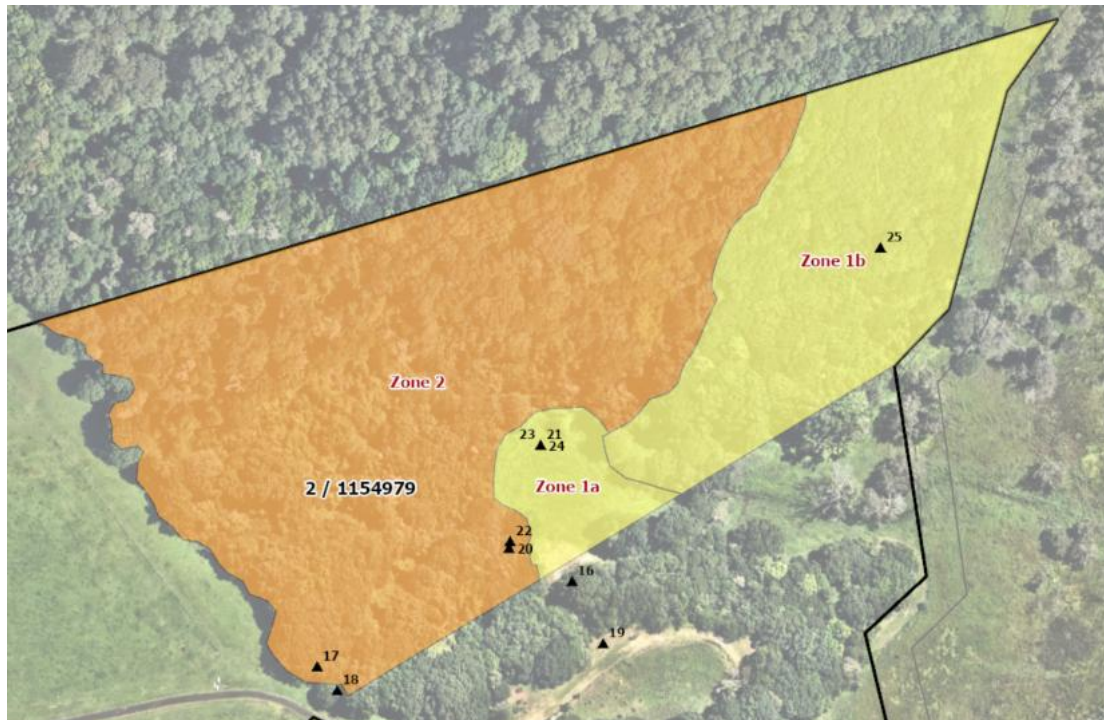


Figure 14 Zonation map 225 Cumbalum Road (North-eastern Patch)

Zone 1a

This is a small area (3,225 sq m) of cleared land, adjacent to the rainforest (Plates 72 and 73).

This area is cleared of vegetation and is actively used for cattle grazing. A PLU of Agriculture has been assigned to this zone.



Plate 72 - PP16



Plate 73 - PP24

Zone 1b

This zone was dominated by mature exotic Camphor laurel (*Cinnamomum camphora*) (Plates 74 and 75). The total area of this zone was 16,706 sq m.

There were mature native rainforest species present in the canopy, midstorey and understorey.

Due to the degraded condition of the vegetation and the access of the site to cattle, a PLU of Agriculture has been assigned to this zone.



Plate 74 - PP26



Plate 75 - PP26

Zone 2

This zone was steep and included drainage lines. The total area of this zone was 39,851 sq m.

The vegetation was rainforest, likely including remnant vegetation with regrowth (Plates 76 to 79).

There were scattered weeds including camphor laurel (*Cinnamomum camphora*), Coffee (*Coffea arabica*), and Lantana (*Lantana camara*).

This zone is steep and contains vegetation considered to have high environmental value. As there was little evidence of more recent agricultural activity, a PLU of Environmental has been assigned to this zone.



Plate 76 - PP18



Plate 77 - PP22



Plate 78 - PP23



Plate 79 - PP21

Site Visit Assessment

Table 6 summarises each zone when the primary land use and site visit results are assessed against the NCEZR report.

Table 6 Site visit assessment 225 Cumbalum Road (North-eastern Patch)

Zone	Primary Land Use	Suitable zone	NCEZR attributes
1a	Agriculture	Rural	N/A
1b	Agriculture	Rural	N/A
2	Environmental	C2	✧ Endangered Ecological Communities (EECs) listed under the <i>Threatened Species Conservation Act 1995</i> and/or the <i>Environment Protection and Biodiversity Conservation Act 1999 - Lowland Rainforest</i> ✧ Native vegetation in over-cleared Mitchell landscapes - Rainforest ✧ Key Threatened Species Habitat

References

Ascent Ecology 2021. Identification of Proposed E2 and E3 Zones – Ballina Shire Council Integration of Certain Deferred Matters. Ascent Ecology Pty Ltd, Brunswick Heads.

Ballina Shire Council Conservation Zone Review (Integration of Certain Deferred Matter Land) Methodology Report February 2023 CM 23/2428

Ballina Shire Council 2023. Fact Sheet 5. Conservation Zone Review. Existing and continuing use rights.

NSW Department of Planning and Environment (2015). Northern Councils E Zone Review Final Recommendations Report ISBN 978-1-76039-139-3

Appendix 1 - Criteria for Application of Conservation Zones

C2 and C3 criteria from Northern Councils EZone Review Final Recommendations Report 2015.

Criteria	Description
C2 Environmental Conservation	
SEPP26 Littoral Rainforests	Land mapped as littoral rainforest in accordance with the statewide policy for littoral rainforest protection (<i>State Environmental Planning Policy 26 – Littoral Rainforests</i>).
SEPP14 Coastal Wetlands	Land mapped as coastal wetlands in accordance with the statewide policy for coastal wetland protection (<i>State Environmental Planning Policy 14 – Coastal Wetlands</i>).
Endangered Ecological Communities (EECs) listed under the <i>Threatened Species Conservation Act 1995</i> and/or the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .	Land containing vegetation communities listed as Endangered Ecological Communities under the <i>Threatened Species Conservation Act 1995</i> (TSC)¹ and the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC)². The <i>Far North Coast Regional Conservation Plan</i>³ lists the following vegetation communities as examples of EECs that currently exist on the Far North Coast: <i>Byron Bay Dwarf Graminoid Heath Community, Coastal Cypress Pine Forest, Coastal Saltmarsh, Freshwater Wetlands in Coastal Floodplains, Littoral Rainforest, Lowland Rainforest, Lowland Rainforest on Floodplains, Subtropical Coastal Floodplain Forest, Swamp Oak Floodplain Forest, Swamp Sclerophyll Forest on Coastal Floodplains, Themeda grassland on Seaciffs and Coastal Headlands, White Gum Yellow Gum Blakely's Red Gum Woodland, and White Gum Moist Forest.</i> Other vegetation communities may be added consistent with these Acts in the future.
Key Threatened Species Habitat	This criterion includes: - old-growth forests where the overstorey or canopy trees are in the late mature stage of growth⁴; - areas of predicted high conservation value for forest fauna assemblages, refugia, endemic forest fauna or endemic invertebrates⁵; and - habitats for threatened species or endangered populations that cannot withstand further loss where the threatened species or endangered population is present⁶.

Over-cleared vegetation communities	Land comprising: 1. over-cleared vegetation communities, where more than 70% of the original (pre 1750) extent of the native vegetation type has been cleared⁷ and 2. native vegetation in over-cleared Mitchell landscapes⁸. The <i>Far North Coast Regional Conservation Plan</i> lists the following as examples of: ▪ Over-cleared vegetation communities on the Far North Coast⁹: – Rainforests, Wet sclerophyll forests (shrubby and grassy subformations), Dry sclerophyll forests (shrubby and shrub/grass subformations), Grassy woodlands, Grasslands (Themeda australis sod tussock), Heathlands, Forested wetlands, Freshwater wetlands, Saline wetlands; and ▪ Over-cleared Mitchell landscapes⁹: – Byron–Tweed Alluvial Plains, Byron–Tweed Coastal Barriers, Clarence–Richmond Alluvial Plains and Upper Clarence Channels and Floodplains.
Culturally significant lands	Areas of culturally significant lands such as Aboriginal object sites, Aboriginal places of heritage significance and other significant objects identified by the local Aboriginal community ¹⁰ .

C3 Environmental Management

Riparian and estuarine vegetation and wetlands	Land comprising riparian and estuarine vegetation on <i>waterfront land</i> , defined under the <i>NSW Water Management Act 2000</i> , or wetland areas other than those mapped as SEPP14 Coastal Wetlands. Waterfront land is defined under the <i>NSW Water Management Act 2000</i> as the bed of any river, lake or estuary and any land within 40 metres of the river banks, lake shore or estuary mean high water mark.
Rare, Endangered and Vulnerable Forest Ecosystems	Land comprising areas of rare, endangered and vulnerable forest ecosystems as defined by the <i>JointANZEC/MCFFA National Forest Policy Statement Implementation sub-committee (JANIS)</i> (Commonwealth of Australia 1997) ¹¹ .
Native vegetation on coastal foreshores	Native vegetation on land with frontage, or adjoining or adjacent to, a beach, estuary, coastal lake, headland, cliff or rock platform.

¹ <http://www.environment.gov.au/biodiversity/threatened/communities/nsw-act>

² <http://www.environment.nsw.gov.au/threatenedspeciesapp/default.aspx?keywords>

³ Far North Coast Regional Conservation Plan, NSW Environment Climate Change and Water, 2010, p24 ⁴ <http://www.epa.nsw.gov.au/resources/pnf/OGRFreviewFieldIdent.pdf>

⁵ Scotts, D 2003, Key Habitats and Corridors for Forest Fauna: A Landscape Framework for Conservation in Northeast New South Wales, NPWS Occasional Paper no. 32, National Parks and Wildlife Service, Sydney, NSW.

⁶ NSW Office of Environment and Heritage 'Threatened Species Profiles Database' <http://www.bionet.nsw.gov.au>

⁷ Keith, DA 2006, Ocean Shores to Desert Dunes the Native Vegetation of New South Wales and the ACT, Department of Environment and Climate Change, Hurstville.

⁸ Mitchell, PB 2002, 'NSW Ecosystems Study: Background and Methodology', report prepared for National Parks and Wildlife Service, Hurstville, NSW and Far North Coast Regional Conservation Plan, NSW Environment Climate Change and Water, 2010, p27.

⁹ Far North Coast Regional Conservation Plan, NSW Environment Climate Change and Water, 2010, p26

¹⁰ Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW, NSW Department of Environment, Climate Change & Water (2011)

¹¹ Refer to Appendix 1 of the Department's Final Recommendations Report.

Appendix 2 - C2 and C3 Zone Land Use Table

CZones are designed to recognise and protect land that has important environmental value.

C2 Environmental Conservation

Objectives of zone

- ◆ To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- ◆ To prevent development that could destroy, damage or otherwise have an adverse effect on those values.

Permitted without consent

Environmental protection works.

Permitted with consent

Dwelling houses; Environmental facilities; Extensive agriculture; Oyster aquaculture; Research stations; Roads.

Prohibited

Business premises; Hotel or motel accommodation; Industries; Multi dwelling housing; Pond-based aquaculture; Recreation facilities (major); Residential flat buildings; Restricted premises; Retail premises; Seniors housing; Service stations; Tank-based aquaculture; Warehouse or distribution centres; Any other development not specified in item 2 or 3.

C3 Environmental Management

Objectives of zone

- ◆ To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- ◆ To provide for a limited range of development that does not have an
- ◆ adverse effect on those values.

Permitted without consent

Environmental protection works; Extensive agriculture.

Permitted with consent

Camping grounds; Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Farm building; Home-based child care; Information and education facilities; Intensive plant agriculture; Kiosks; Oyster aquaculture; Pond-based aquaculture; Recreation areas; Research stations; Roads; Roadside stalls; Tank-based aquaculture; Tourist and visitor accommodation; Water recreation structures.

Prohibited

Backpackers accommodation; Hotel or motel accommodation; Industries; Intensive livestock agriculture; Multi dwelling housing; Residential flat buildings; Retail premises; Seniors housing; Service stations; Serviced apartment; Warehouse or distribution centres; Any other development not specified in item 2 or 3.