



Byron Shire Development Control Plan 2014

Chapter B1 Biodiversity



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THE BUNDJALUNG PEOPLE

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Chapter B1 – Biodiversity

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B1.1 Introduction

Biodiversity is the variety of all life forms on earth; the different plants, animals and micro-organisms and the ecosystems of which they are a part. Our ecosystems are dynamic, interactive and complex and maintaining their functions in a healthy state protects biodiversity. Byron Shire comprises **approximately** 43% High Environmental Value vegetation (including National Parks and Reserves), hosting 145 threatened plants, 160 threatened animals and 1750ha of fragmented coastal **koala habitat**. However, two federal reports (2019; 2020) state that Australia is ranked second in the world for extinction and on-going biodiversity loss, and further, that our federal legislation the *Environmental Protection and Biodiversity Conservation Act* 1999 (currently under review) has failed and is ineffective.

~~Recent changes to NSW legislation such as the *Biodiversity Conservation Act* 2016 and the *Local Land Services Act* 2013, have likewise failed to halt the decline of **threatened species**, their habitat and ecological communities, where koalas are now predicted to be extinct before 2050. In addition, the Black Summer fire season (2019-2020) saw 5.4 million hectares in NSW burnt over 160 days of continuous fires comprising; 59% of National Parks, 58% of State forests, 35% of NE NSW Rainforest and 54% of Gondwana World Heritage Rainforest.~~

Under rapidly changing and unprecedented climatic conditions, increasing the **resilience** of Byron Shire's natural areas and unique biodiversity has become crucial. This DCP chapter supports climate change adaptation through the principle of avoidance in the first instance, and subsequently minimisation, wherever avoidance is proven to be untenable. ~~This chapter is to be read in conjunction with Chapter A: Preliminaries, particularly as it relates to context and site analysis, as well as biodiversity planning principles.~~



Note 1: For the purpose of this DCP Chapter, **avoid** means “to keep away from”. Evidence of avoidance may be illustrated through the use of ecological buffers, the design of a development footprint, or by regulating the timing or location of activities. If it is not possible to avoid impacts, then opportunities should be sought to minimise the impacts. **Minimise** means “reduce to the smallest possible amount or degree”

~~This DCP chapter further supports the NSW Biodiversity Conservation Investment Strategy 2018, North Coast Regional Plan 2036 directions and Byron Shire's; Local Strategic Planning Statement, LEP 2014, Rural Land Use Strategy 2017 and Biodiversity Conservation Strategy 2020-2030.~~

B1.1.1 Aims and Objectives of this Chapter

The aim of this chapter is to ensure that, ~~subject to any relevant overarching state or commonwealth legislation,~~ the planning and design of new development maintains or improves ecological values within Byron Shire thereby increasing the **resilience** of our natural areas and supporting both biodiversity and climate adaptation.

Objectives of this Chapter

Ensure development:



1. Identifies, retains and restores native vegetation and habitats for native species in patches of a size and configuration that will enable existing plant and animal communities to survive in the long term and support climate adaptation.
2. Identifies and retains high carbon storage ecosystems (e.g. blue carbon systems such as salt marsh, mangroves and sea grasses), **wildlife corridors** and **refugia**.
3. Provides development controls that prevent the degradation or loss of ecological values and or biodiversity.
4. Provides guidance on the information required to enable informed decision-making.
5. Ensures that construction and operational impacts of development are avoided and or mitigated using current best practice standards.
- ~~6. Provide guidance on acceptable measures to avoid or minimise the impact of proposed development on biodiversity including proposals affected by Part 7 of the Biodiversity Conservation Act 2016 and the Koala Habitat Protection SEPP 2019.~~
7. Compensates for unavoidable habitat losses and/or to improve biodiversity outcomes in accordance with applicable legislation, or in the absence of such legislation, contemporary best practice.

B1.1.2 Application of this Chapter

This chapter applies to development **applications**:

- ~~on, or adjacent to, any land with natural features such as;~~ mapped as containing High Environmental Value (HEV) vegetation, as per Council's online GIS mapping, or
- ~~on land where 'red flagged areas' and their associated ecological setback is located, or (areas of land with high biodiversity conservation value which should be excluded from the development envelope), koala use trees, watercourses, wetlands, threatened species and their habitat, threatened ecological communities, threatened populations, wildlife corridors,~~ areas identified under the Coastal Management SEPP 2018, Koala Habitat Protection SEPP 2019 and the Byron Coast Comprehensive Koala Plan of Management.

~~It further applies to vegetation clearing requiring development consent where:~~

- ~~where clearing of native vegetation clearing~~ is ancillary to development, or
- ~~on land that contains it is~~ a heritage item or ~~is~~ located in a heritage conservation area, or
- ~~on land that contains it is~~ an Aboriginal object or ~~is located~~ in an Aboriginal place of significance or conservation area.

~~For development where this Chapter applies, proponents are strongly encouraged to work with a suitably qualified ecology consultant throughout the process to ensure adequate consideration of biodiversity matters. Whilst Council seeks to maintain online HEV mapping to a high standard, the mapping process is dynamic and is not always an accurate information source. Accordingly, it is important that desktop review of HEV mapping is coupled with a site inspection to validate whether this Chapter applies, and any biodiversity considerations.~~



Where the proposed development avoids impacting HEV or red flagged areas, an ecological assessment is not required. However, this will normally still entail the preparation of a site survey inclusive of vegetation and a site inspection by an ecologist to identify any red flag vegetation types and ensure that no red threatened flora, or threatened fauna habitat are present within the development envelope.

Where the development envelope overlaps with red flag areas, or their prescribed ecological setbacks, an Ecological Assessment, prepared by a suitably qualified consultant, is required. The Ecological Assessment is to include a Vegetation or Biodiversity Conservation Management Plan. Ecological buffers do not apply to infill development types.



Note 2: Where development consent is not required, vegetation removal is managed by DCP Chapter B2 Tree and Vegetation Management.

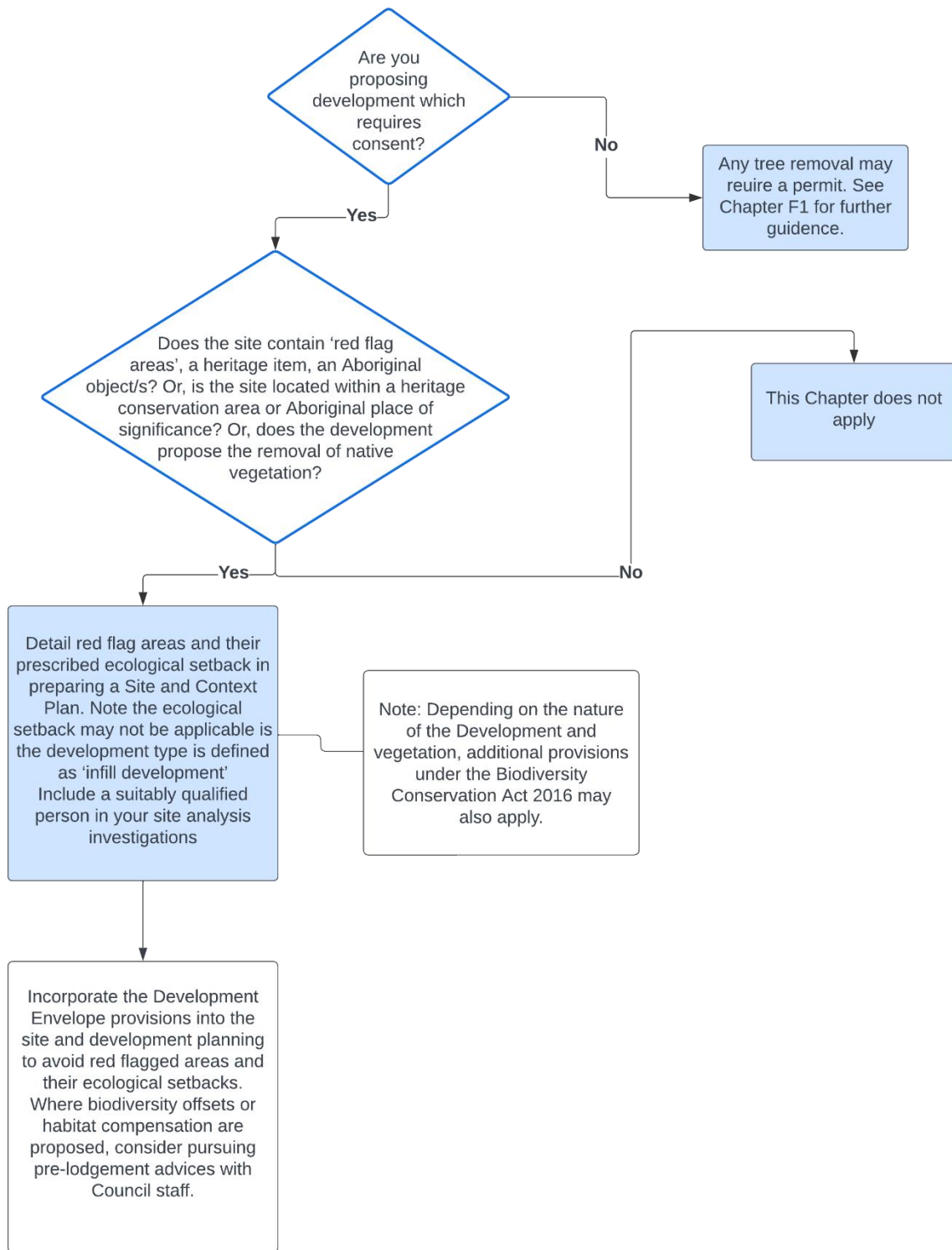


Figure 1: Does this Chapter Apply?



~~B1.1.3 — Relationship to LEP, NSW Government Statutes and other policy~~

~~Relationship to the Local Environmental Plan (LEP)~~

~~This chapter supports the aims of other provisions of the relevant Local Environmental Plan in relation to the conservation and management of the natural environment.~~

~~Relationship to Overarching Legislation~~

~~Environmental Planning and Assessment Act 1979 (EP&A Act)~~

~~This chapter of the DCP addresses the objects of the Environmental Planning and Assessment Act 1979 (EP&A Act) relating to the protection and conservation of the natural environment, in particular the following objects of the EP&A Act (previously s5):~~

- ~~● 1.3(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,~~
- ~~● 1.3(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,~~
- ~~● 1.3(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats.~~

~~This chapter of the DCP also sets out matters that the consent authority will take into account in considering the following “matters for consideration” under the EP&A Act (previously s79C):~~

- ~~● 4.15(1)(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,~~
- ~~● 4.15(1)(c) the suitability of the site for the development,~~
- ~~● 4.15(1)(e) the public interest.~~

~~Biodiversity Conservation Act 2016 (BC Act)~~

~~This chapter of the DCP also addresses the purpose of the Biodiversity Conservation Act 2016 (BC Act) relating to the impacts of proposed development and land use change on biodiversity. In addition to adopting the principles of ecologically sustainable development, the following particular purposes of the BC Act are relevant:~~

- ~~● 1.3(a) to conserve biodiversity at bioregional and State scales, and~~
- ~~● 1.3(b) to maintain the diversity and quality of ecosystems and enhance their capacity to adapt to change and provide for the needs of future generations, and~~



- ~~1.3(c) to improve, share and use knowledge, including local and traditional Aboriginal ecological knowledge about biodiversity conservation, and~~
- ~~1.3(d) to support biodiversity conservation in the context of a changing climate, and~~
- ~~1.3(h) to support conservation and threat abatement action to slow the rate of biodiversity loss and conserve **threatened species** and ecological communities in nature, and~~
- ~~1.3(k) to establish a framework to avoid, minimise and offset the impacts of proposed development and land use change on biodiversity, and~~
- ~~1.3(l) to establish a scientific method for assessing the likely impacts on **biodiversity values** of proposed development and land use change, for calculating measures to offset those impacts and for assessing improvements in **biodiversity values**.~~

~~Part 7 of the BC Act, together with the Biodiversity Conservation Regulation 2017 (BC Regs) and some aspects of the *Local Land Services Act 2013* (LLS Act), outline the framework for assessment and approval of biodiversity impacts associated with certain proposals that require development consent. Subject to the provisions of the BC Act, such developments are ultimately determined under the *Environmental Planning and Assessment Act 1979*.~~

~~Part 6 of the BC Act introduces a Biodiversity Offsets Scheme (BOS). A development to which the Biodiversity Offsets Scheme applies, requires the preparation of a Biodiversity Development Assessment Report (BDAR) to accompany the development application. Where a BDAR is required, it must be prepared by an accredited assessor in accordance with the Biodiversity Assessment Method (BAM) established under the BC Act.~~

~~Both the BAM and BC Act are based on a mitigation hierarchy which requires the proponent to formally consider measures that avoid and minimise biodiversity impacts before proposing **biodiversity offsets**. If the avoid and minimise measures proposed are considered acceptable by the consent authority, any resulting **biodiversity offsets** must be delivered in accordance with the BOS and the proponent cannot commence development until the offset obligation is met.~~

~~Council's main role as the consent authority under Part 7 of the BC Act (amongst other things) is to determine:~~

- ~~1. if measures proposed to avoid and minimise biodiversity impacts are acceptable (BC Act s7.13); and~~
- ~~2. if the development will result in a serious or irreversible impact on **biodiversity values** (BC Act, s7.16); and~~
- ~~3. that any residual impacts are offset (or otherwise addressed) in accordance with the BC Act (s7.13).~~

~~Section 7.13(6) of the BC Act enables Council to determine their own set of standards to avoid and minimise biodiversity impacts as follows:~~

~~"7.13(6) this section does not operate to limit the matters that a consent authority may take into consideration:~~

- ~~(a) in relation to the impact of proposed development on **biodiversity values**, the measures that a consent authority may require to avoid or minimise those~~



~~impacts or the power of a consent authority to refuse to grant consent because of those impacts, or~~

~~(b) in deciding whether to reduce or increase the number of biodiversity credits to be retired”.~~

~~Accordingly, this chapter of the DCP sets out the requirements to avoid or minimise the environmental impacts of development.~~

~~Local Land Services Act 2013 (LLS Act)~~

~~This Chapter of the DCP also addresses the objects of the Local Land Services Act 2013 (LLS Act) relating to the management of natural resources regarding ecologically sustainable development, in particular:~~

- ~~• (e) to ensure the proper management of natural resources in the social, economic and environmental interests of the State, consistently with the principles of ecologically sustainable development (described in section 6 (2) of the *Protection of the Environment Administration Act 1991*), and~~
- ~~• (f) to apply sound scientific knowledge to achieve a fully functioning and productive landscape.~~

~~In circumstances where a previously approved development exists and a further proposed development requires the clearing of native vegetation, ancillary or otherwise, Section 60Q (2) applies where:~~

- ~~• Schedule 5A does not permit clearing or any other activity:
 - ~~(a) without an approval or other authority required by or under another Act or another Part of this Act (or in anticipation of the grant of any such approval or other authority), or~~
 - ~~(b) in contravention of any provision of or made under (or in contravention of any agreement made under) another Act or another Part of this Act.~~~~

~~as well as Section 60S (4) where:~~

- ~~• A land management (native vegetation) code does not permit clearing or any other activity:
 - ~~(a) without an approval or other authority required by or under another Act or another Part of this Act, or~~
 - ~~(b) in contravention of any provision of or made under another Act or another part of this Act.~~~~

~~as administered by Section 4.17 (previously s80A) of the *Environmental Planning and Assessment Act 1979*.~~



B1.1.3 Biodiversity Assessment Pathways

Given the potential operation of both the EP&A Act and the BC Act, there are two major assessment pathways (Figure 1) which affect the level of biodiversity assessment and the information required to support a development application.

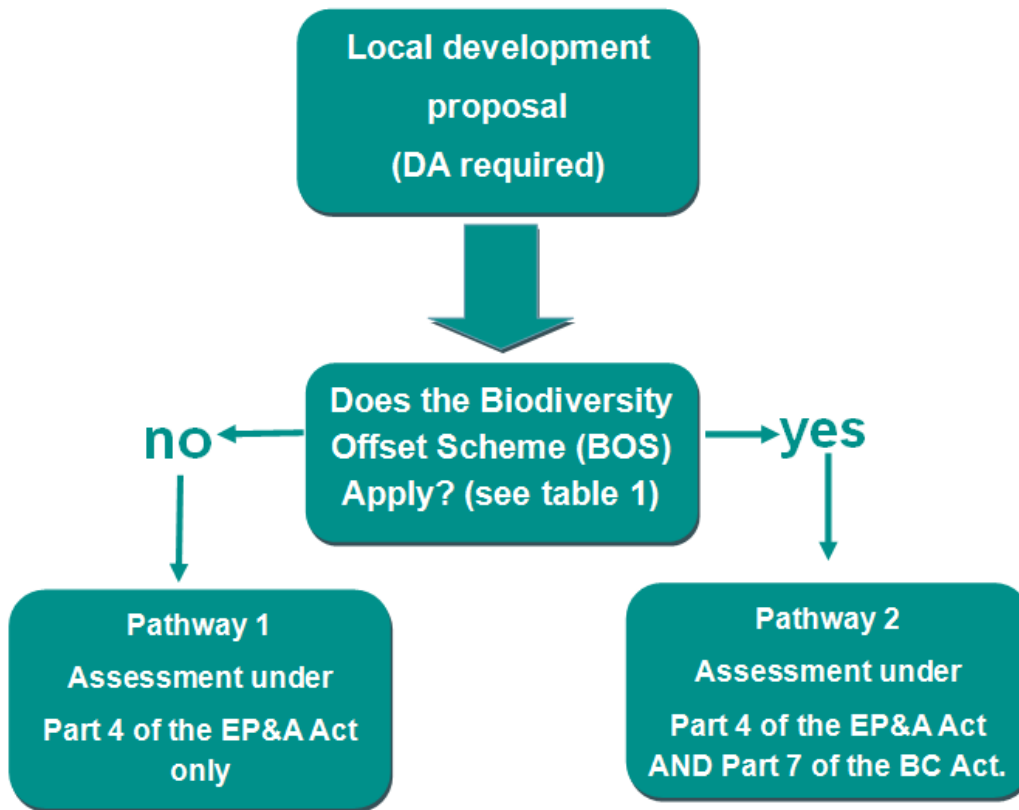


Figure 2: Assessment Pathways

The appropriate pathway depends on whether the proposed development triggers the Biodiversity Offset Scheme (BOS) under the BC Act (Table 1) or not (Table 2).

Table 1: Does the Biodiversity Offset Scheme (BOS) apply? (includes any development “likely to affect **threatened species” under s7.2 of the BC Act)**

BOS applies to any of the following:	Reference:
<ul style="list-style-type: none"> Any proposed clearing of native vegetation (see Table 2) or other action prescribed by the Regulations that is on land identified on the Biodiversity Values Map 	BC Act: s7.2(1)(b); s7.4(1) BC Regs: s7.1(1)(b), s6.1, s7.3
<ul style="list-style-type: none"> The development is likely to affect threatened species or ecological communities according to the test of significance 	BC Act: s7.2(1)(a), s7.3
<ul style="list-style-type: none"> Any proposed clearing of native vegetation (Table 2) exceeds the BOS area threshold 	BC Act: s7.2(1)(b); s7.4(1) BC Regs: s7.1(1)(a), s7.2
<ul style="list-style-type: none"> The development is carried out in a declared area of outstanding biodiversity value 	BC Act: s7.2(1)(c)
BOS does not apply if the development:	
<ul style="list-style-type: none"> Involves clearing of native vegetation on category 1 – exempt land 	BC Act: s7.4
<ul style="list-style-type: none"> Is on biodiversity certified land 	BC Act: s7.6

Table 2: What is clearing of native vegetation? (for development applications under Part 4 of the EP&A Act only)

“Native vegetation” includes any of the following:	Reference:
<ul style="list-style-type: none"> Trees (including any sapling), shrubs, understory plants, groundcover and wetland plants established in NSW prior to European settlement. 	LLS Act: s60B(1), s60B(2)
<ul style="list-style-type: none"> Dead or non-native vegetation mapped within Category 2-vulnerable regulated land 	LLS Act: s60B(3)



“Native vegetation” does not include:	
<ul style="list-style-type: none"> Marine vegetation including mangroves and saltmarsh 	LLS Act: s60B(4)
“Clearing” of native vegetation:	
<ul style="list-style-type: none"> Is defined as (a) cutting down, felling, uprooting, thinning or otherwise removing native vegetation, (b) killing, destroying, poisoning, ringbarking or burning native vegetation. 	LLS Act: s60C
<ul style="list-style-type: none"> Includes all clearing of native vegetation arising from the proposed development (e.g. roads and other infrastructure, fire protection zones etc.) 	LLS Act: s60C
<ul style="list-style-type: none"> Includes any clearing of native vegetation likely to arise from subdivision. 	BC Regs: s7.1(3)

If the proposed development **does not trigger** the Biodiversity Offset Scheme (BOS) then Pathway 1 applies (Figure 2).

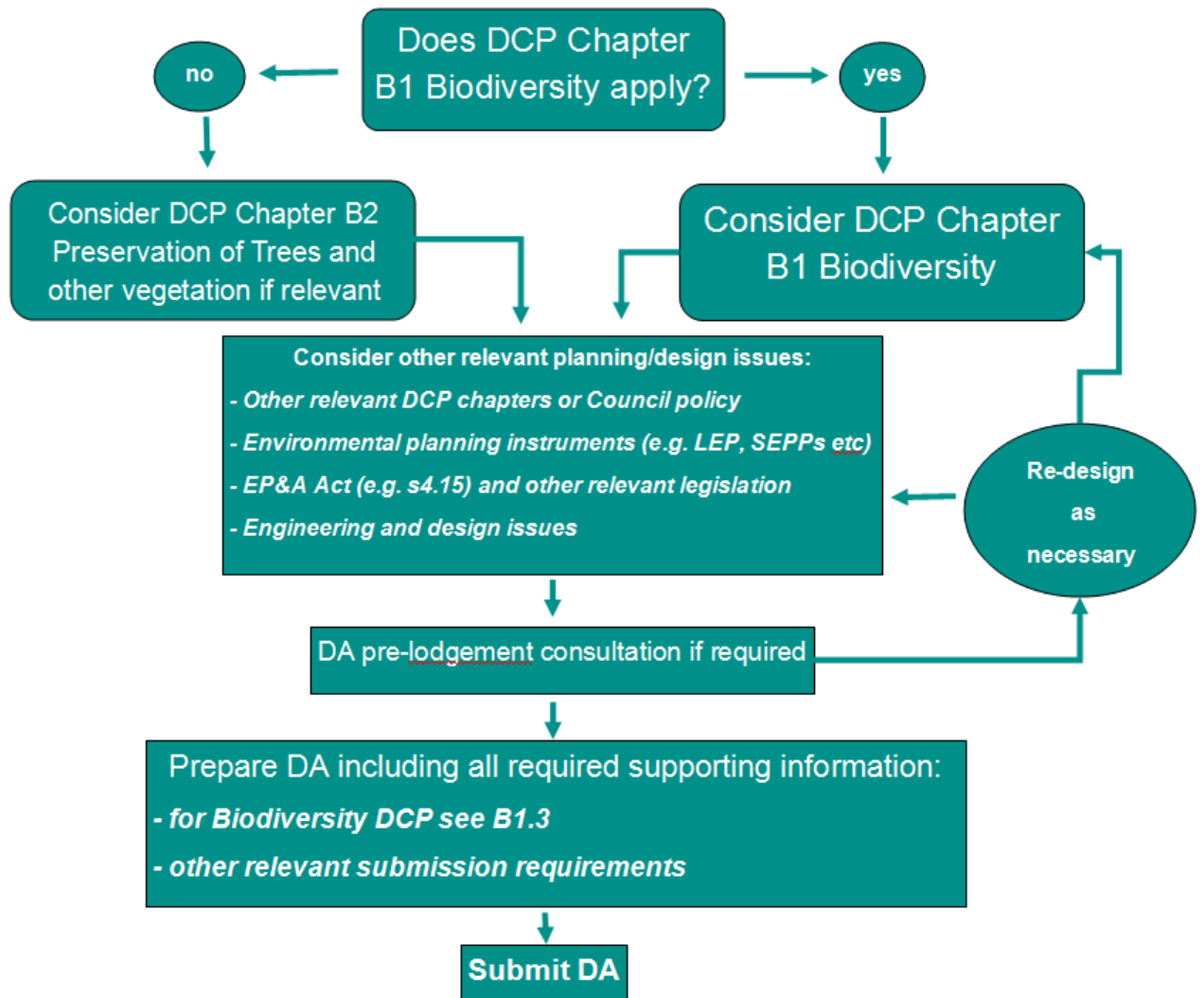


Figure 3: Pathway 1 Assessment under Part 4 of the EP&A Act

Where the proposed development **does trigger** the BOS (Table 1) then Pathway 2 applies (Figure 3).

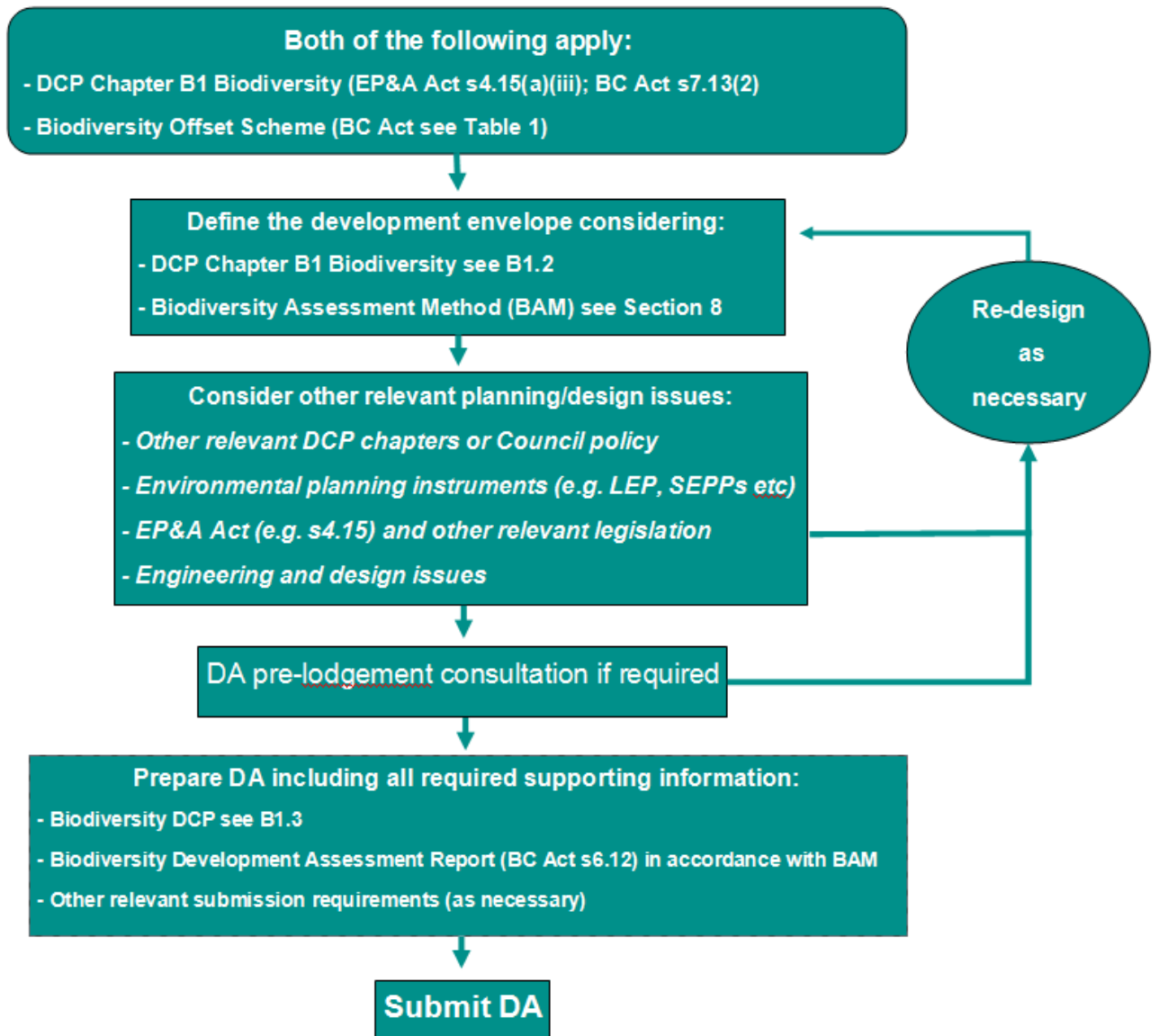


Figure 4: Pathway 2 Assessment under Part 4 of the EP&A Act and Part 7 of the BC Act.

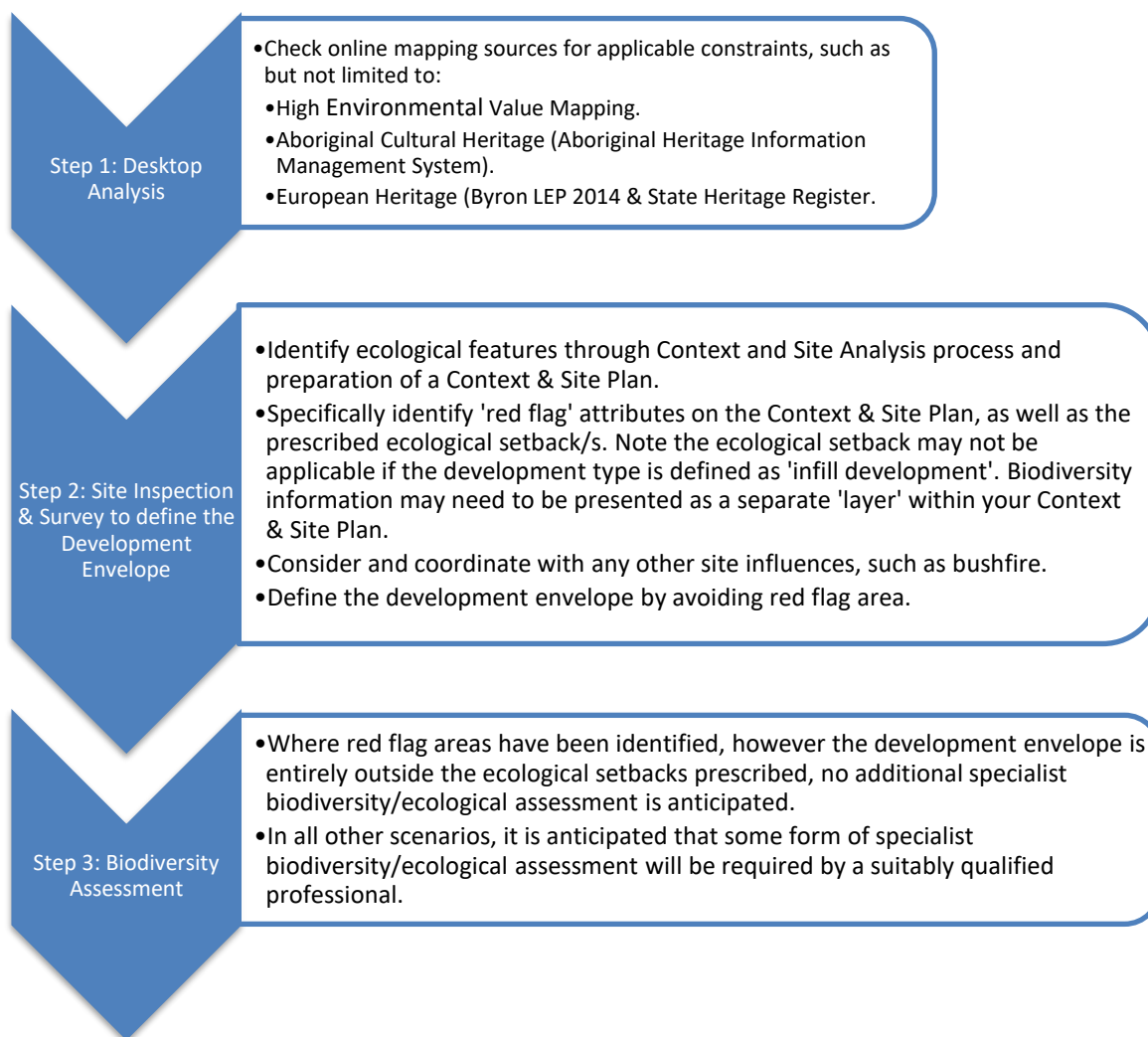


Figure 5: Recommended Methodology for Development Preparation

~~B1.1.5 Biodiversity Planning Principles~~

~~The following principles underpin the provisions within this chapter. All development should wherever possible demonstrate consistency with these principles, which may also be used to guide more complex or novel development proposals.~~

~~P1. Ecologically Sustainable Development~~

~~The principles of Ecologically Sustainable Development will be followed in the exercise of Council responsibilities:~~

~~a. The precautionary principle~~

~~If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and~~

~~private decisions should be guided by: (a) careful evaluation to avoid, wherever practicable, serious or irreversible damage, and (b) an rigorous and science-based assessment of the risk—weighted consequences of various options;~~

~~**b. Inter-generational equity** requires the present generation to ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations;~~

~~**c. Conservation of biological diversity and ecological integrity**~~

~~The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making, including in the formulation, adoption and implementation of any economic and other development plan, program or project. Biological diversity means the diversity of life and comprises:~~

~~i. Genetic diversity (the variety of genes in a population)~~

~~ii. Species diversity (the variety of species)~~

~~iii. Ecosystem diversity (the variety of communities and ecosystems).~~

~~**d. Improved valuation, pricing and incentive mechanisms**~~

~~Environmental factors should be included in the valuation of assets and services such as; (a) the polluter pays principle, where those who generate pollution and waste should bear the costs of containment, avoidance or abatement, (b) the user of goods and services should pay prices based on the full life cycle of the costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste, (c) environmental goals, having been established, should be pursued in the most cost effective way.~~

~~P2. Consistency with overarching biodiversity strategies~~

~~Council's decision making should be consistent with, and contribute to, targets set out in any relevant adopted local, regional, NSW State or National strategy that addresses the conservation and/or management of biodiversity (e.g. NSW Biodiversity Conservation Investment Strategy 2018).~~

~~P3. No net loss~~

~~The carrying out of development should maintain or improve biodiversity outcomes wherever possible within Byron Shire.~~

~~P4. Climate change~~

~~Development should not compromise or impact the ability of any native flora and fauna species to respond to the impacts of climatic change.~~



Habitat Retention

~~P5. In situ conservation~~

~~Biodiversity is best conserved in situ (on site). The prevention of habitat loss and degradation is the first priority. This is significantly more cost-effective and has less risk than providing for ongoing mitigation or the reconstruction of habitat in another area (i.e. offsetting biodiversity). This further supports climate change adaptation through increasing the **resilience** of natural areas.~~

~~P6. Habitat fragmentation and connectivity~~

~~Council decision-making should not contribute to habitat fragmentation and wherever possible, increase landscape connectivity.~~

~~Natural areas are strongly influenced by the landscape in which they are embedded. The larger, less disturbed and better connected natural areas are, the more likely they are to retain a higher level of biodiversity and **resilience** to impacts.~~

~~P7. Small remnants~~

~~Small patches of habitat should be retained where possible and measures taken to mitigate edge effects and other relevant threats.~~

~~Small isolated patches of habitat are often vulnerable to edge effects and other threats from the adjacent landscape. However such areas often support a wide range of native species (including **threatened species**), represent communities of 'over-cleared' vegetation while providing **refugia** and /or stepping stones across the landscape for flora and fauna. Such **refugia** found in small remnants may be crucially important to the survival of certain species into the future under changing climate conditions.~~

~~P8. Disturbed habitats~~

~~Where possible, measures should be taken to retain and restore disturbed habitats.~~

~~There are few natural areas that remain free of disturbance or threatening processes. Disturbed habitats represent opportunities for natural regeneration, restoration and enhancement, increasing ecological **resilience**, while playing an important role in protecting native flora and fauna and in many instances, **threatened species**.~~

~~P9. Patch diversity~~

~~Measures should be taken to conserve biodiversity at patch scale.~~

~~Patches of bushland or other natural areas (e.g. wetlands) containing multiple vegetation communities commonly support high species diversity in conjunction with ecosystem diversity.~~



~~P10. Fauna habitat~~

~~Key fauna habitat resources should be retained and where possible enhanced.~~

~~Many native fauna including **threatened species** have specific resource requirements (e.g. feeding, nesting, and roosting) for their continued survival. Also, most native animals are not confined to a single ecological community and make use of resources across a range of different habitats. As ranges change, resource use has, and will continue to evolve across urban and other developed land.~~

~~P11. Watercourses~~

~~Natural watercourses and the riparian land adjoining them should be retained and rehabilitated where possible. These areas provide critical resources and refuge during extreme weather events particularly during drought and or fire.~~

~~P12. Under reserved and over-cleared vegetation communities~~

~~Ecological communities that have been over-cleared or under-reserved in the formal reserve system (e.g. National Parks and Nature Reserves) should be retained and where possible enhanced.~~

~~Many vegetation communities have been disproportionately cleared since European settlement or are poorly reserved in the formal reserve system. Their long term future will depend on their conservation on private land e.g. Saline Wetlands. (see Far North Coast Regional Conservation Plan pg. 26)~~

~~Impact Assessment and Mitigation~~

~~P13. Avoid and minimise~~

~~Priority should be given to avoid any impacts at their source. In this context 'avoid' means "to keep away from". Evidence of avoidance may be illustrated through the use of ecological buffers, the design of a development footprint, or by regulating the timing or location of activities. If it is not possible to avoid impacts, then opportunities should be sought to minimise the impacts. Minimise means "reduce to the smallest possible amount or degree".~~

~~P14. Biodiversity offsets and compensation~~

~~Subject to P13 above, where avoidance and minimisation have been clearly considered and illustrated, unavoidable residual impacts arising from development may be allowable. In such instances, an acceptable arrangement to compensate for, or offset the loss of **biodiversity values** should only occur on or near the impact site.~~



~~P15. Habitat heterogeneity~~

~~Ecological mapping and assessments should recognise that there can be considerable local variation within and between habitats belonging to individual ecological communities described at regional scales.~~

~~Ecological communities are commonly described regionally in general terms but are characterised at specific sites by local variations. Individual site specific responses to environmental and climatic conditions, disturbance regimes and cumulative impacts and location may all contribute to these distinctions.~~

~~P16. Indirect and cumulative impacts~~

~~Ongoing pressures on biodiversity arising from indirect and/or cumulative impacts of development must be understood, minimised and effectively mitigated.~~

~~P17. Habitat restoration and management~~

~~As much of Byron Shire contains fragmented landscapes, it is not sufficient to simply prevent direct habitat loss. Retained habitats associated with development should be actively managed (through a management plan or other mechanism) to prevent the ongoing degradation of **biodiversity values** and will contribute to climate adaptation.~~

~~P18. Ecological setback~~

~~Developments adjoining natural areas are to provide for an effective **ecological setback** to avoid and minimise adverse impacts on **biodiversity values**.~~

~~P19. Bushfire~~

~~Measures to mitigate bushfire risk should take into account the natural fire regimes essential for supporting the relevant ecological community(s) and avoid negative impacts on biodiversity.~~

~~P20. Weeds and cultivated plantings~~

~~Development adjacent to natural areas should avoid the use of non-indigenous plants or have measures in place (such as slashed bushfire asset protection zones) to limit their dispersal into natural areas.~~

~~P21. Introduced animals~~

~~Development should not cause or exacerbate adverse impacts on biodiversity from the introduction of animals.~~



~~P22. Fauna protection~~

~~Where appropriate, developments should integrate measures to protect and facilitate native fauna occupancy and movement (such as the suitable design of swimming pools, fences, landscaping, road crossings, nature strips and nest structures etc.).~~

~~P23. Construction impacts~~

~~Where appropriate, measures to ensure any impacts on biodiversity and other natural resources are effectively mitigated throughout the construction phase of the development.~~

~~P24. Ecological assessment~~

~~The assessment of **biodiversity values** should address site, landscape and regional values in accordance with contemporary best practice.~~

~~P25. Costs of ongoing management~~

~~In accordance with the principles of Ecologically Sustainable Development (see P1) the proponent or development should bear the costs of managing ongoing pressures placed on **biodiversity values** as a result of development.~~

B1.2 Defining the development envelope

~~The NSW Biodiversity Conservation Investment Strategy 2018 outlines four criteria to guide the identification of priority areas that meet the requirements of the Biodiversity Conservation Act 2016:~~

~~**Criterion 1:** Areas of high environmental value should be prioritised.~~


~~**Criterion 2:** Areas that improve ecological connectivity and **resilience** to climate change should be prioritised.~~

~~**Criterion 3:** Areas that contribute most towards achieving a comprehensive, adequate and representative protected area system should be prioritised.~~

~~**Criterion 4:** Areas where high environmental value assets are under the greatest pressure should be prioritised.~~

~~Council's High Environmental Value (HEV) vegetation was identified and mapped in 2017 using the methodology required by the Office of Environment and Heritage (OEH) data model. HEV vegetation comprises 43% of the Byron Shire (including National Park estates) and as such, is under increasing pressure from development and tourist visitation.~~

~~With approximately 83% of the Shire zoned as rural, this part (B1.2) of this DCP will mainly apply to those lands, except where HEV vegetation exists within non-rural areas.~~

 **Note:** Where development is not proposed, vegetation is managed by the provisions of DCP Chapter B2 Tree and Vegetation Management.

B1.2.1 Development Envelope Controls

Objectives

1. To identify ecologically significant areas (red flags) with the potential to influence the shape and form of a proposed **development envelope**.
2. To ensure areas that areas to be retained are adequately protected and or managed to guarantee their long-term ecological viability.
3. To ensure 'no net loss of biodiversity' through the principles of **firstly** avoiding and minimising development impacts, **and offsetting where avoidance cannot be practically achieved**.
4. Ensure any offsetting maintains or improves the biodiversity value of the site and is compatible with other site influences, such as bushfire.

Performance criteria

1. Maintain and improve biodiversity within infill development areas of the Byron Shire by demonstrating:



- a. A development envelope which embodies the Biodiversity Planning Principles established in Chapter A.
 - b. A development envelope which displays clear priority to avoiding and minimising impacts on biodiversity values.
 - c. Where avoidance of biodiversity values is demonstrated as not practical, a clear methodology demonstrating how the development envelope minimises and offsets impact is to be provided.
2. Maintain and improve biodiversity without undermining holistic responses to other development influences, such as bushfire threat.
 3. Facilitate alternative offsets or solutions to maintain and improve biodiversity where avoidance of red flag areas cannot practically be achieved.

Prescriptive measures – General

1. When defining the **development envelope** the following red flags and **ecological setbacks** (Table 3) must be retained on site (including any native vegetation therein):

Table 3: Ecological setbacks required for red-flagged areas.

Red flag ^a	Ecological setback ^b (m)
HEV Vegetation^c	
Threatened Ecological Communities (includes Critically Endangered, Endangered or Vulnerable listed under State or Commonwealth legislation)	30
Over-cleared vegetation types (A vegetation type of which more than 70% has been cleared in the Catchment Management Area).	20
Over-cleared landscapes (A Mitchell landscape in which more than 70% native vegetation cover has been cleared. NSW is divided into 580 relatively homogeneous landscape units in terms of geomorphology, soils and broad vegetation types mapped at a scale of 1: 250000 (Mitchell 2002, 2003), which are colloquially termed “Mitchell Landscapes” after their author).	20
Old growth	30



Red flag ^a	Ecological setback ^b (m)
<p>(old-growth forests are ecologically mature forests, often diverse in structure and species with relatively large old trees, some of which may contain tree hollows).</p>	
<p>Important wetlands</p> <p>(Wetlands protected under NSW State or Commonwealth legislation or policy. Includes wetlands mapped under the NSW State Environmental Planning Policy (SEPP) Coastal Management 2018, previously SEPP 14 Wetlands).</p>	50
<p>Other wetlands</p> <p>(Any other wetland other than an Important wetland. Wetland has the same meaning as defined within NSW Wetland Policy:</p> <ul style="list-style-type: none"> • Wetlands are areas of land that are wet by surface water or groundwater, or both, for long enough periods that the plants and animals in them are adapted to, and depend upon moist conditions for at least part of their lifecycle. They include areas that are inundated cyclically, intermittently or permanently with fresh, brackish, or saline water, which is generally still or slow moving except in distributary channels such as tidal creeks which may have higher peak flows. • Examples of wetlands include; mangroves, backwaters, sedgeland, wet heathlands, lakes, lagoons, estuaries, rivers, floodplains, swamps, bogs, billabongs, marshes, coral reefs and seagrass beds). 	20
<p>Other bushland on a slope >18 degrees</p>	20
<p>Pre-existing protected habitat</p> <p>(Areas of existing habitat (or other land) provided with formal long-term protection designed to limit further development.</p> <p>Protected habitat can be established by various mechanisms including but not limited to; restrictive covenants, rezoning, voluntary planning agreements, formal conservation agreements, biodiversity stewardship agreements, or in some cases dedication to Council or other public authority. The mechanism(s) to establish protected habitat must be conditioned or otherwise approved by Council).</p>	20m or as above, whichever is larger



Red flag ^a	Ecological setback ^b (m)
Wildlife Corridors	
<p>Land within a defined wildlife corridor</p> <p>(Refers to linear areas that link wildlife habitat and provide a crucial role in maintaining connectivity between plant and animal populations that would otherwise be at greater risk of extinction. Such corridors are critical for the maintenance of ecological processes, enabling migration, colonisation and interbreeding of plants and animals).</p>	20
Threatened and significant species	
<p>Areas with a species polygon for threatened fauna or other significant fauna that are known or predicted to occur at the site.</p> <p>(Threatened fauna or flora is any species listed as critically endangered, endangered or vulnerable under NSW State or Commonwealth legislation).</p>	20
<p>Areas with a species polygon for threatened flora or other significant flora that are known or predicted to occur at the site.</p> <p>(A species polygon is an area of land enclosing the known or predicted habitat of targeted flora or fauna. In most cases known records will be used for flora and predicted habitat will be used for fauna).</p>	10
Koala habitat	
<p>Koala habitat outside of areas defined within a Comprehensive Koala Plan of Management.</p>	20
<p>Isolated or scattered koala use trees with evidence of koala activity</p>	20
<p>Any other areas where koalas are present and/or koala habitat is planted with public monies.</p>	20
Waterways and Riparian areas (from the top of the bank)	



Red flag ^a	Ecological setback ^b (m)
Stream order	
First order stream	10
Second order stream	20
Third order stream	30
Fourth order stream	40
Estuarine area (Any part of a river, lake, lagoon or coastal creek whose level is periodically or intermittently affected by coastal tides, up to the highest astronomical tide).	50
Flying fox camps	
Year round or intermittent	100
Other habitat features	
Very large native trees (Local native trees that have a trunk diameter of greater than or equal to 0.8 metres at 1.4 metres above the natural ground level. Local native trees are trees that existed in the Byron Shire before European settlement).	10
Stags and hollow-bearing trees	10 ^d
Raptor nests	50
<p>^a an area of land with high biodiversity conservation value which should be excluded from any development envelope.</p> <p>^b Where more than one red flag applies or an ecological setback is specified under another adopted plan or policy (e.g. locality plan), the larger ecological setback applies.</p>	

Red flag^a**Ecological setback^b (m)**

^c Mapping available on [councils website](#)

^d A larger **development setback** may need to be considered to prevent damage to built structures in the event of a tree or stag fall.

2. The ecological setbacks prescribed in Table 3 are not applicable to infill development.
3. Where evidence confirms that red flag vegetation types have been voluntarily planted (i.e. not required by a condition of consent, or via public funding), the ecological setbacks prescribed in Table 3 are not applicable.
4. Unless adequate pre-existing **biodiversity offset** arrangements have been made under a Council-endorsed strategic planning process (e.g. a master plan) or a State or Federal government approval, clearing of native vegetation or other habitat not *red flagged* in Table 3 will generally not be supported unless all of the following apply:
 - a. the area to be cleared is less than 5000m²;
 - b. the clearing does not result in a significant decrease in habitat connectivity;
 - c. there are no other suitable locations on the site;
 - d. an **ecological setback** of 20m is maintained; and
 - e. adequate provision is made to compensate for any clearing ensuring no net loss to biodiversity.
5. Where pre-existing offset arrangements or other biodiversity management measures secured under a Council-endorsed strategic planning process (e.g. a master plan) or a State or Federal government approval exists, such arrangements shall be:
 - a. implemented to the extent to which they are relevant to the development application under consideration; and
 - b. only varied because of specific impacts of the development, changed circumstances, or new information not previously considered.
6. In the case of HEV vegetation on the coastal floodplain (as per Council's current flooding information) consideration shall be given to increasing the **ecological setbacks** required under Table 3 to allow for future landward migration of native vegetation affected by climate change induced increases in tidal inundation and rises in the water table.
7. Despite DCP 2014 Chapter D6 Subdivision, development involving the subdivision of land where HEV vegetation exists, or is adjacent to that land, must;
 - a. formally define **development envelopes** on each proposed lot to ensure future development of the subdivided lots avoid any relevant red flagged areas associated with **ecological setbacks**.
 - b. with the exception of individual very large trees, stags or hollow-bearing trees, any proposed lot(s) with an area less than 1 hectare shall not include red flagged areas.



- ~~8. Minor variations to the red flagged areas identified in Table 3 may be considered to achieve practical outcomes. Some examples include:~~
- ~~a. minor incursions into the **ecological setbacks**;~~
 - ~~b. **ecological setbacks** that necessarily overlap with access roads or other linear infrastructure (e.g. a narrow access road that does not require clearing with native vegetation on each side);~~
 - ~~c. isolated patches of native vegetation with an area of less than 1000m²;~~
 - ~~d. **ecological setbacks** arising from adjoining land not in the same ownership~~
 - ~~e. threatened or other significant fauna that are considered vagrant, highly nomadic, or are not closely associated with the habitat on site;~~
 - ~~f. areas subject to a controlled activity approval under the *Water Management Act 2000*.~~
 - ~~g. threatened or other significant flora that occur as seedlings or saplings outside of their natural habitat.~~
- ~~9. Any minor variation referred to above must not:~~
- ~~a. trigger a subsequent red flag in another area defined within Table 3, or~~
 - ~~b. conflict with any statutory consideration that requires the retention of that area.~~
- ~~10. A development application seeking a minor variation must:~~
- ~~a. clearly demonstrate the variation sought;~~
 - ~~b. demonstrate that alternative layouts have been considered and that the impacts cannot be reasonably be avoided;~~
 - ~~c. show how the variation impact is consistent with the relevant planning principles and objectives of this DCP Chapter.~~
11. Where a proposed development adjoins waterways or riparian areas Council may, where considered appropriate require bank stabilisation works, adequate arrangements for public access, measures to minimise pollution and sedimentation and or measures to reduce impacts of biting insects.
12. **Development setbacks** required to manage potential bushfire risk shall not overlap with red flagged areas referred to in Table 3 or other retained native vegetation.
13. A **development setback** required to manage potential bushfire risk may overlap with an **ecological setback** (Figure 4) and be managed as an **environmental management buffer** (Figure 4) where:
- a. The highest feasible **Bushfire Attack Level (BAL) rating** has been applied, and
 - b. no more than 50% of the **ecological setback** is used for that purpose; and
 - c. the overlap is managed within a vegetation management plan to maximise ecological values within the scope of the bushfire management requirements (i.e. maintaining a minimum of 30% native tree canopy cover and a fuel reduced understory).



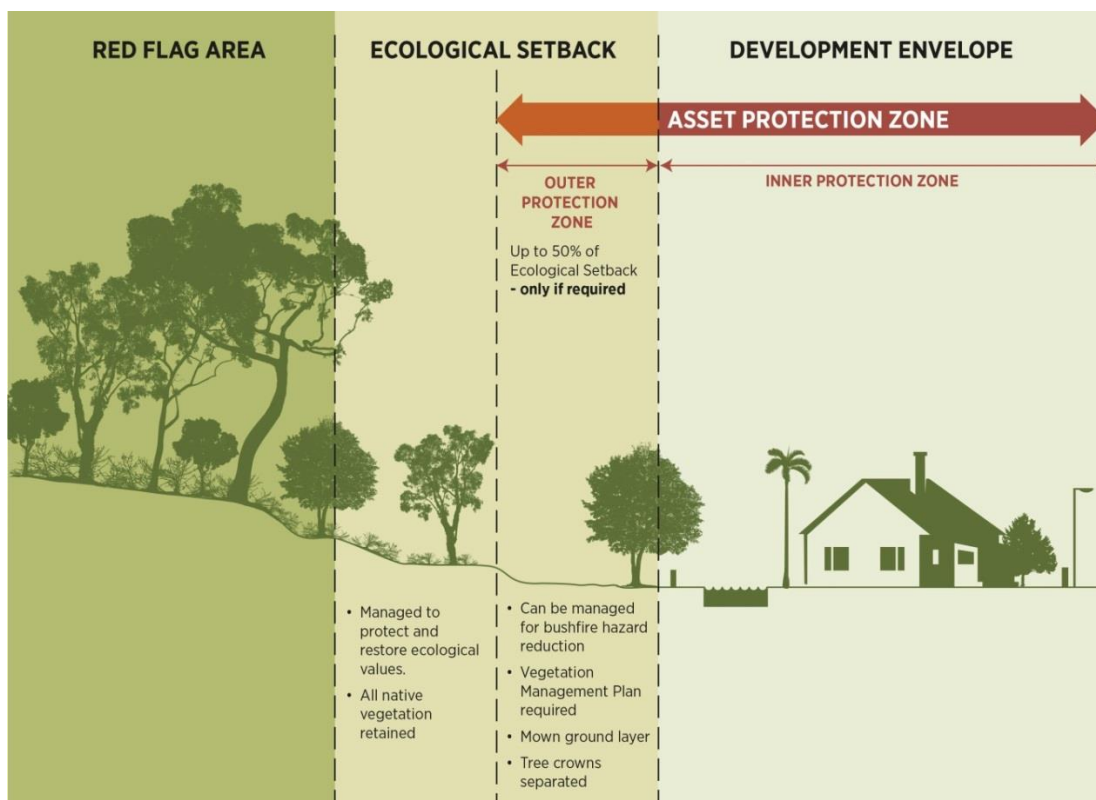


Figure 6: Example of the relationship between the development envelope, ecological setbacks, red flagged areas and bushfire protection.

14. Any clearing entitlement under the NSW Rural Fire Service 10/50 Vegetation Clearing Code of Practice for NSW (or similar subsequent provision) shall be regarded as a **development setback**.
- ~~15. Other acceptable solutions may be appropriate, however the application must demonstrate that:

 - a. there is **no net loss** to biodiversity; and
 - b. a clearly equivalent or superior long-term outcome can be assured; and
 - c. the variation is consistent with all the relevant planning principles and objectives of this DCP Chapter.~~
- ~~16. It is strongly advised that any proposal that involves variations to the measures within this DCP Chapter, or any proposed offsetting are discussed through Council's pre-lodgement consultation process prior to lodgement (See B1.3.3).~~
17. If the development application is required to enter the Biodiversity Offset Scheme (BOS) under the *Biodiversity Conservation Act 2016*, the accompanying Biodiversity Development Assessment Report (BDAR) is to include assessment of all entities for serious and irreversible impacts on **biodiversity values** as defined under the Biodiversity Assessment Method (BAM). Additional entities for assessment may further be required by Council as per BAM (s10.2.1.5).
18. If the development application **is not** required to enter the Biodiversity Offset Scheme (BOS) under the *Biodiversity Conservation Act 2016*, any native vegetation, threatened

or other significant fauna habitat cleared, damaged, or degraded as a result of development shall be offset or otherwise compensated for in accordance with contemporary best practice or adopted Council policy. Such areas are to be secured in perpetuity as protected habitat and managed under a vegetation or biodiversity conservation management plan (see B1.2.5).

19. Where vegetation removal is proposed, compensatory planting, consistent with the Biodiversity Planning Principles, is to be detailed. The following compensatory ratios will apply unless an equivalent habitat restoration or creation is proposed to equivalent biodiversity quality of that being removed.

1:10 for trees of high environmental value;

e.g. local indigenous trees in high environmental value vegetation and habitat, local indigenous rainforest trees, trees within a wildlife corridor, trees with habitat value for local wildlife, trees with a diameter at breast height >50cm.

1:5 for trees of medium environmental value;

e.g. local indigenous trees not located in high environmental value vegetation and habitat, a wildlife corridor or which do not have habitat value for local wildlife.

1:1 for trees of low environmental value;

e.g. other trees not located in high environmental value vegetation and habitat, a wildlife corridor or which do not have habitat value for local wildlife.

Survival rates

These ratios apply to survival rates after 2 years. Additional offset vegetation is encouraged to be implemented to accommodate for a survival rate of less than 100% of the planted trees.

20. Species to be used for compensatory plantings must provide habitat value and are not to be selected exclusively for their landscape or aesthetic value.
- ~~21. Council may waive the requirement for offsetting where the proponent can demonstrate that they have voluntarily created equivalent habitat on the land (or adjoining land in the same ownership) which is subject to the development application. Such areas are to be secured in perpetuity as protected habitat and managed under a vegetation or biodiversity conservation management plan (VMP or BCMP see B1.2.5).~~



Note 3:

Minor variations to the red flagged areas identified in Table 3 may be considered to achieve practical outcomes. Some examples include minor incursions into the ecological setbacks; ecological setbacks that necessarily overlap with access roads or other linear infrastructure (e.g. a narrow access road that does not require clearing with native vegetation on each side); isolated patches of native vegetation with an area of less than 1000m²; ecological setbacks arising from adjoining land not in the same ownership; threatened or other significant fauna that are considered vagrant, highly nomadic, or are not closely associated with the habitat on site; areas subject to a controlled activity approval under the Water

Management Act 2000; threatened or other significant flora that occur as seedlings or saplings outside of their natural habitat.

Any minor variation must not:

- a. trigger a subsequent red flag in another area defined within Table 3, or
- b. conflict with any statutory consideration that requires the retention of that area.

Other acceptable solutions may be appropriate, however the application must demonstrate that the variation is consistent with all the relevant planning principles and objectives of this DCP Chapter and:

- a. there is no net loss to biodiversity; and
- b. a clearly equivalent or superior long-term outcome can be assured; and

It is strongly advised that any proposal that involves variations to the measures within this DCP Chapter, or any proposed offsetting are discussed through Council's pre-lodgement consultation process prior to finalising your application for lodgement.

Examples of Acceptable Solutions:

Note 4: variations must lead to *no net loss* to biodiversity. Examples of where an **ecological setback** applies may be dealt with in a variety of ways (see Figures 5 and 6).

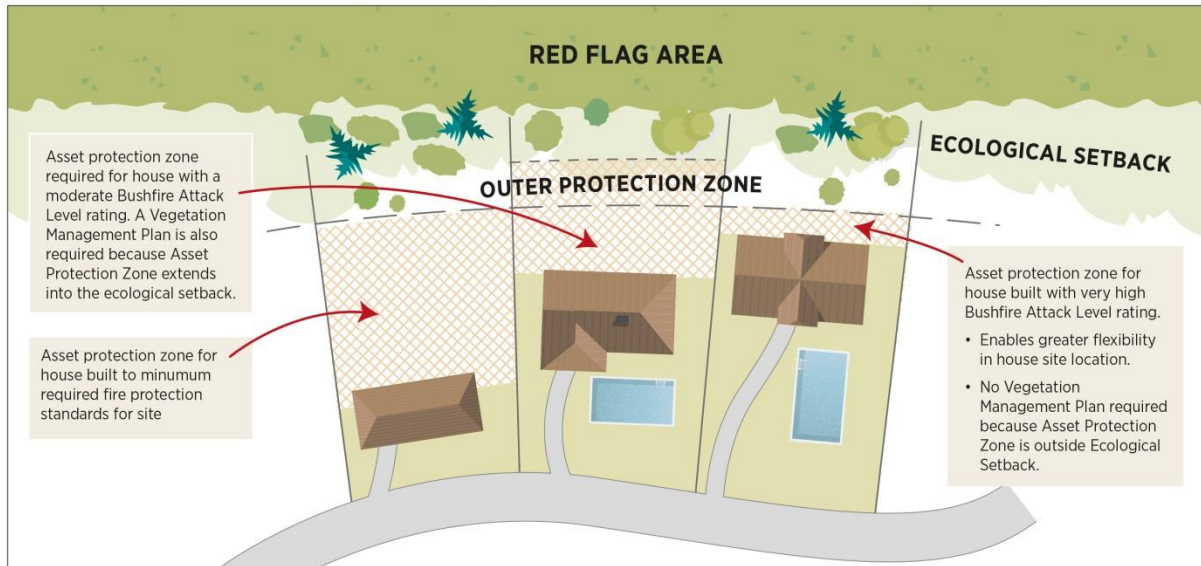


Figure 7: Example of red flagged area, **ecological setback**, differing Asset Protection Zones (APZs) and vegetation management requirements.

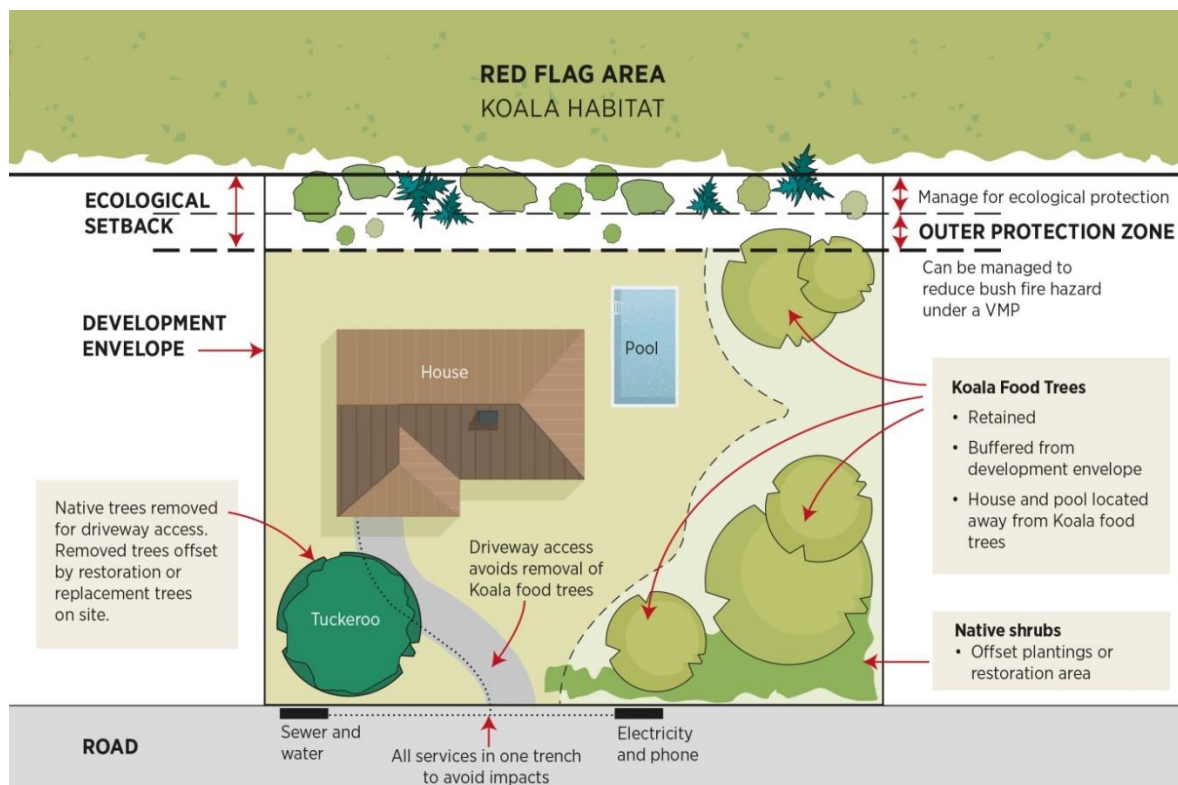


Figure 8: Example of a red flagged area and **ecological setback** with avoid and minimise components.

Prescriptive measures – Subdivisions

Where the subdivision of land is required for development, more complex design may be required (Figure 7) alongside additional management objectives (Table 4). In accordance with the principles of ecologically sustainable development, the proponent or development should bear the costs of managing ongoing pressures placed on **biodiversity values** as a result of development as outlined in Table 4 (below).

Note 4: For developments not outlined in Table 4, requirements will be determined on a case by case basis consistent with the scale and type of impact associated with the proposal.

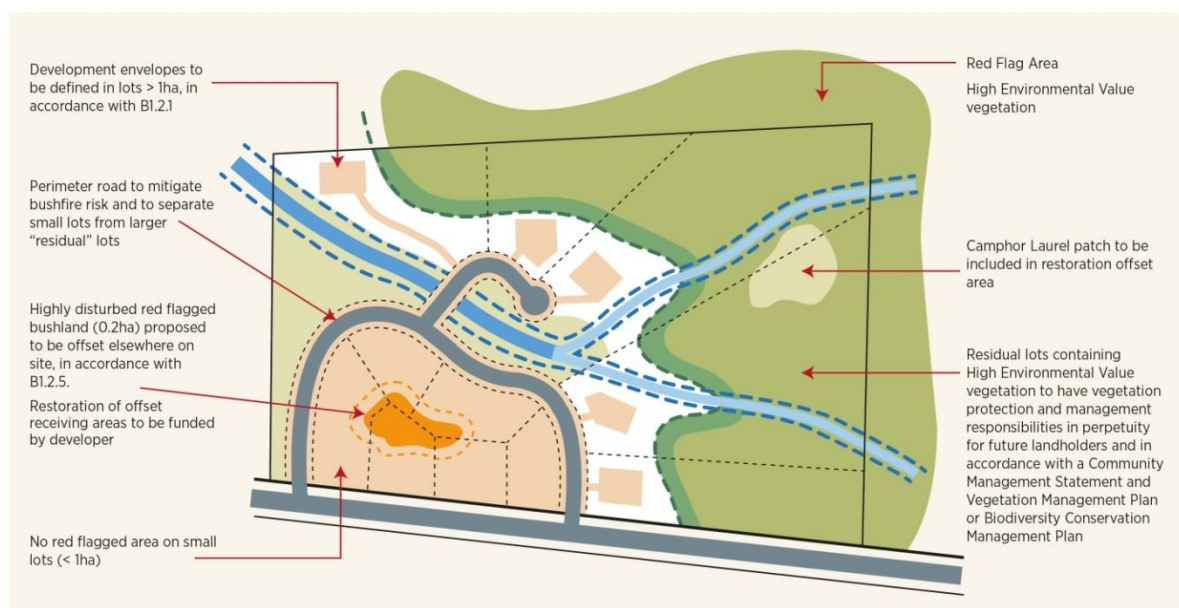
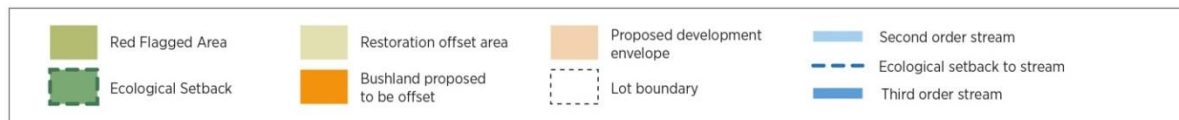



Figure 9: Example of a subdivision layout incorporating restoration areas as offsets for development and management requirements.

Table 4 Management and protection requirements for subdivisions

Subdivision Type	Number of lots	Management Requirement	Protection Requirement
Subdivisions in Residential zones, Tourist zones	>=25	BCMP In perpetuity	All red flags and associated ecological setbacks over the entire site including 3 rd order streams or higher

Subdivision Type	Number of lots	Management Requirement	Protection Requirement
or Industrial zones.	6-24	BCMP establishment period and 10 years maintenance	All red flags and associated ecological setbacks over the entire site including 3 rd order streams or higher
	<=5	VMP Establishment period and 5 years maintenance	All red flags and associated ecological setbacks within 100m of any proposed development envelope(s)
Subdivisions in Rural zones	>=10	VMP or BCMP (fauna dependant) in perpetuity	All red flags and associated ecological setbacks over the entire site including 3 rd order streams or higher
	<10	VMP or BCMP (fauna dependant) Establishment period and 5 years maintenance	All red flags and associated ecological setbacks over the entire site including 3 rd order streams or higher

 **Note5:** An Establishment period means; the period commencing with the implementation of an approved vegetation or biodiversity management plan and ending when the works specified in that plan meet the performance criteria (as defined within the approved plan) to the satisfaction of Council. The establishment period represents the time necessary to carry out initial environmental repair, restoration and monitoring prior to on-going maintenance.

B1.2.2 Development infrastructure and other controls

Included within the **development envelope** are associated infrastructure such as (but not limited to) roads, driveways, fencing, waste water systems, landscaping, bushfire protection zones, **ecological setbacks**, other **development setbacks** and easements for telephone, electricity and other services. Wherever development is proposed on land with or adjacent to, High Environmental Value (HEV) vegetation and/or red flags, the following prescriptive measures apply.

Objectives

1. To ensure that the infrastructure related to development is designed in such a way that it avoids and mitigates impacts to **biodiversity values**.
2. To ensure that domestic animals and pest species are considered, and where possible, controlled, mitigated or eliminated as part of development design.



Performance criteria

1. Development consistent with the provisions of this Section.

Prescriptive measures

Roads

1. Roads and associated infrastructure are considered part of the **development envelope** and their location should be consistent with the provisions outlined (above) in Table 3.
2. Wherever Council considers that on-going impacts to wildlife are likely to arise from new or upgraded roads, the proponent may be requested to carry out additional fauna surveys to determine the likely impacts on **biodiversity values** and explore fauna friendly road design such as; speed limits, traffic calming, signage, exclusion fencing and fauna crossing structures (under passes, overpasses etc.).
3. Where on-going impacts to wildlife are likely, the road design is to incorporate best practice fauna sensitive design features to facilitate unimpeded wildlife movement as well as minimising any other ongoing impacts on **biodiversity values**, paying particular attention to the requirements of any threatened fauna or other significant fauna. Such design features are to be monitored and maintained to minimise impacts on wildlife.
4. During road construction and upgrading, appropriate environmental safeguards are to be employed to minimise any biodiversity impacts.
- ~~5. Fauna friendly road design structures shall be maintained by the proponent for a minimum period of five years after road dedication unless otherwise agreed by Council.~~
6. Where a vegetation or biodiversity conservation management plan is required, any measures or related conditions of consent to mitigate road impacts on biodiversity shall be incorporated into the management plan and implemented accordingly.

Fencing

7. Where wildlife are likely to move between areas of suitable habitat (e.g. rural residential development), fencing must be designed to permit the free movement of native fauna (unless designed to specifically exclude movement such as along roads).
8. Development design shall consider the potential impacts on biodiversity, paying particular attention to threatened fauna to ensure that fencing or other structures do not inadvertently direct native animals into danger.
9. Fauna exclusion fencing (or other measures) shall be used where there is a significant fauna mortality risk as a result of crossing from one area of suitable habitat to another (e.g. busy roads) or entering built up areas (e.g. urban development with dogs).
10. Any fauna exclusion fencing or other measures (including temporary structures to perform the same task) shall be constructed and operational prior to the physical commencement of works (including clearing vegetation, the use of heavy equipment for

the purpose of breaking ground for bulk earthworks, or infrastructure for the proposed development).

11. Fencing design shall include suitable clearances to maintain functionality and allow for access for replacement and routine maintenance.
12. All exclusion fencing, fauna friendly fencing or other structures designed to protect fauna shall be monitored and maintained to minimise impacts on wildlife.
13. Where appropriate, fencing, barriers or other measures shall be used to limit or control human access (e.g. motor vehicles) to environmentally sensitive areas.
14. Where a vegetation or biodiversity conservation management plan is required, any wildlife fencing measures or related conditions of consent shall be incorporated into the management plan and implemented accordingly.

Noise and lighting

15. Where Council considers that wildlife impacts are likely to arise from noise, the proponent may be requested to carry out additional fauna surveys to determine the likely impacts on biodiversity, paying particular attention to threatened fauna or other significant fauna and explore appropriate mitigation measures including, but not limited to, suitable buffers to environmentally sensitive areas, traffic speed restrictions, timing of noisy activities and/or installing appropriate noise barriers.
16. Council will not support development where the impacts of noise on **biodiversity values** cannot be adequately mitigated.
17. Where the **development envelope** contains or adjoins known bush stone curlew habitat or microbat colonies, street lighting must be of a type that does not attract insects.
18. Sports field lighting (or similar high intensity outdoor lighting) shall be designed to avoid light spill into natural areas.
19. Development adjacent to beaches must prevent light arising from development spilling onto beaches to avoid potential impacts on shorebird and turtle behaviour (e.g. nesting).
20. Where a vegetation or biodiversity conservation management plan is required, any measures or related conditions of consent to mitigate noise and lighting shall be incorporated into the management plan and implemented accordingly.

Domestic animals

21. Council may prohibit the keeping of domestic animals where there is an unacceptable residual risk (i.e. a risk that cannot be adequately mitigated by other measures such as exclusion fencing) arising from the development to threatened or other significant species. In such cases Council will require:
 - a. a restrictive covenant under Part 6 (Division 4) of the *Conveyancing Act 1919* to ensure that the domestic animal(s) in question (e.g. dogs) are not kept or brought onto the allotment; and



- b. conditions of consent to prohibit domestic animals entering the site during construction.
22. The application of the above measure (21) does not apply to:
- a. “assistance animals” as defined under the *Disability Discrimination Act 1992* or
 - b. a “working dog” as defined under the *Companion Animals Act 1998*, in the case of non-urban zoned land.
23. Where permitted, all domestic animals are to be contained within the landholder’s property and prevented from roaming in natural areas.
24. In larger scale developments involving subdivision, where domestic dogs are permitted, adequate provision should be made for exercising them off leash. Such areas shall be designed to prevent dogs from accessing natural areas.
25. Where a vegetation or biodiversity conservation management plan is required, any measures or related conditions of consent to manage domestic animals shall be incorporated into the management plan and implemented accordingly.

Pest animals

26. Developments must be designed to minimise the likelihood of pest animal establishment/proliferation and where relevant, include measures to control pest animals.
27. Standing water bodies and constructed wetlands shall be designed to minimise their suitability for cane toads and other aquatic pest species (e.g. Mosquitofish (*Gambusia spp.*)). Such areas shall be regularly monitored and managed to contain and adequately control pest animal populations.
28. Where a vegetation or biodiversity conservation management plan is required, any measures or related conditions of consent to manage pest animals shall be incorporated into the management plan and implemented accordingly.
29. For developments involving subdivision a restrictive covenant under Part 6 (Division 4) of the *Conveyancing Act 1919* shall be applied to prohibit the keeping of declared pest animals (foxes, rabbits etc.) and/or other pest animals considered to pose a significant risk to biodiversity relevant to the site.

Pest plants

30. Developments must be designed to minimise the establishment/proliferation of pest plant species (weeds) declared under the *Biosecurity Act 2015*, and where present, include measures to control them.
31. All landscaping and landscape design shall be consistent with DCP 2014 Chapter B9 Landscaping.
32. Where a vegetation or biodiversity conservation management plan is required, any measures or related conditions of consent to manage pest plants shall be incorporated into the management plan and implemented accordingly.

B1.2.3 Koala Habitat

The Byron Coast Koala Habitat Study completed in 2012, identified a small population of approximately 240 koalas utilising 1750 hectares of highly fragmented habitat across the *coastal portion* of Byron's Local Government Area. The report found that based on an optimal occupancy rate of 50%, a minimum area of 2,800 hectares of well-connected **koala habitat** would be required to ensure the population's long-term viability within the coastal area.

Given the extent of National Parks (59%) and Nature Reserves (58%) burnt during the 2019-2020 fire season, with an estimated 3 billion animals killed, koala populations within NSW are projected to have been reduced by up to 70% and considered critically endangered. Further, the recent NSW Parliamentary inquiry into koalas and **koala habitat** in NSW found that without intervention, Koalas in NSW will become extinct before 2050, and:

- fragmentation and the loss of habitat poses the most serious threat to koala populations in NSW (Finding 4), and
- protecting **koala habitat** is hampered by the inconsistencies and disconnection between different planning instruments within the NSW planning system, and there is an urgent need to address this (Finding 14).

Within the 42 recommendations outlined in the Parliamentary report, funding and support to local councils to conserve **koala habitat** were identified and included: identifying pockets of urban bushland for inclusion into the State's protected area network, supporting the implementation of local koala conservation initiatives, and conducting mapping required for comprehensive koala plans of management.

As such, the retention of all **koala habitat** within Byron Shire is critical. This section applies to all identified **koala Habitat** within the Byron Coast Comprehensive Koala Plan of Management and all other areas where koalas and **koala habitat** are present.

~~For the purpose of this DCP Chapter **koala habitat** means:~~

- ~~1. Areas of native vegetation mapped and identified as per Clause 7 of the State Environmental Planning Policy Koala Habitat Protection 2019 (Koala SEPP); or~~
- ~~2. Areas identified within the Byron Coast Comprehensive Koala Plan of Management; or~~
- ~~3. Areas of native vegetation, including plantings, that comprise **koala use tree** species found in Schedule 2 of the Koala Habitat Protection SEPP 2019 specific to the North Coast Koala Management Area (Appendix 1), and~~
- ~~4. Sightings and or records of koalas (within a 2.5km range of **koala habitat**) persistent over 3 koala generations that may be evidenced by breeding females and or historical records and or survey.~~

Objectives

1. To protect the remaining koala populations and **koala habitat** in Byron Shire through the principle of avoidance.



2. To increase the total area of **koala habitat** within the identified koala planning area and across the broader Local Government Area by at least 25% including consolidated linkages within and beyond the identified koala planning area.
3. To maintain the presence of a self-sustaining koala population within the coastal area and undertake the identification of koala populations in the surrounding areas and hinterland.
4. To identify areas known to have koala populations as evidenced by land containing **koala use trees** species (~~Appendix 1) listed in Schedule 2 for the North Coast Koala Management Area within the Koala Habitat Protection SEPP 2019~~ and;
 - a. historical koala records (within a 2.5km range of **koala habitat**) that establish generational persistence and or,
 - b. records of breeding females, or
 - c. sufficient survey to establish generational persistence.

Performance criteria

Development consistent with the provisions of this Section.

Prescriptive measures

1. For development in areas identified in the Byron Coast Comprehensive Koala Plan of Management (CKPoM), the provisions of Part 2 within the CKPoM apply.
2. For development in areas outside of the identified areas within the CKPoM that have **koala use trees** (Appendix 1) and or **koala habitat** on or adjacent to their Lot, irrespective of the size of the Lot, the requirements of this DCP Chapter apply.
3. The following mitigation measures are required to be addressed within any development application that has the potential to impact koalas and or **koala habitat** irrespective of Lot size.
 - a. **Habitat buffer**
 - i. The entire **development envelope** must illustrate the required **ecological setback** as outlined in Table 3 to **koala use trees** (Appendix 1) and **koala habitat**.
 - b. **Disturbance**
 - i. Establishment of tree protection zones around retained **koala use tree** species as per the Australian Standards (AS 4970-2009 Protection of trees on development sites) before any construction or clearing commences and preclusion of any development activities within the tree protection zones until after all construction is completed.
 - ii. Any clearing of land not to commence until the proposed clearing area has been inspected for koala presence and written approval has been obtained from a suitably qualified person.

- iii. Clearing of native vegetation and or earthworks as part of any development must be temporarily suspended within a range of 25m from any tree that is occupied by a koala and must not resume until the koala has moved from the tree of its own volition.
- iv. Clearing in accordance with (ii) may only proceed for the day on which the inspection has been undertaken and where the suitably qualified person remains on site.
- v. Where (i)-(iv) do not apply, sites where koalas are within a 2.5km range of **koala habitat** are to be protected from disturbance through appropriate exclusion fencing from urban areas and roads. Such fencing should still allow for koalas to readily disperse through habitat and linkages within the landscape.

c. Dog attack

- i. The keeping of dogs is prohibited on the title of land for any new lots arising from a subdivision of land, where that land is adjacent to or forms part of **koala habitat**, **wildlife corridors** or **refugia**.
- ii. A restriction on the movement of dogs; including the use of dog and koala proof fencing that effectively contains dogs and excludes koalas, with the provision of koala furniture that allows koalas to escape yards should they gain entry.
- iii. Dog exclusion from **koala habitat** areas, and only allowed off leash in areas determined as to not contain linkages to **koala habitat**, **wildlife corridors** or **refugia**.
- iv. Signage and education as appropriate regarding koala conservation and habitat where dog exclusion applies.
- v. Exemption from (i)-(iii) may only apply to dogs who are assistance animals as defined under the *Companion Animals Act 1998*.

d. Vehicle Strike

- i. Traffic speed limit (40km) and calming measures where appropriate.
- ii. Consideration of fauna **appropriate lighting** where applicable given koalas are mostly active at night, for example 'down lighting' within 30m of **koala habitat**.
- iii. Use of koala proof fencing that includes the provision of escape mechanisms.
- iv. Inclusion of land bridges and or underpasses where appropriate in combination with koala proof fencing.

e. Swimming Pools

- i. Incorporation of features and koala furniture that allows koalas to escape pools and the fenced area; such as a shallow ramp or thick taut rope



(minimum 50mm diameter) that is secured to a poolside fixture and trails in the pool at all times.

- ii. Use of pool fencing that effectively excludes koalas.
- iii. No structures near pool fences that allow koalas to gain access over fencing.

f. Bushfire

- i. Bushfire asset protection zones required for development shall not include **koala habitat**.
- ii. The development and implementation of a bushfire management plan that specifically addresses risks to **koala habitat** where appropriate.

g. Impediments to movement

- i. Infrastructure or development must be designed in such a way that is reliably known to not impede the natural movements of koalas between **koala use trees** and or **koala habitat** ~~and or wildlife corridors~~ and or natural water sources.
 - ii. Infrastructure or development must be designed in such a way that facilitates koala movement by incorporating the retention of **koala use trees** and where it is safe to do so, planting **koala use trees** (Appendix 1) to provide safe passage and **refugia**.
 - iii. Infrastructure or development must retain existing **koala habitat**, ~~wildlife corridors~~ and **refugia** while minimising any adverse impacts from such infrastructure or development. In some instances this may mean the use of koala exclusion fencing in order to protect **koala habitat** or **wildlife corridors** from impacts.
4. All **koala use tree** species (Appendix 1) planted or otherwise, are to be retained.
 5. All **koala use tree** species (Appendix 1) that have been planted with public monies are to be retained and protected in perpetuity regardless of land tenure.
 6. All **koala habitat** and individual **koala use trees** (Appendix 1) are to be illustrated on all site plans by stadia metric survey and include: location, area size (where applicable), plant community type (where applicable), species name, height and DBH.
 7. All plantings of **koala use trees** (Appendix 1) as a result of consent conditions under the *Environmental Planning and Assessment Act 1979* are to be protected in perpetuity by an effective legal restriction on the title of land.
 8. All restoration of **koala habitat** as a result of consent conditions under the *Environmental Planning and Assessment Act 1979* shall be protected in perpetuity by an effective legal restriction on the title of land.

B1.2.4 Ecological Assessment

For development proposals required to be assessed under the *Environmental Planning and Assessment Act 1979* on land that has or is adjacent to High Environmental Value (HEV) vegetation and/or *red flags* (Table 3), an ecological assessment (Appendix 2) may be required. This requirement is in addition to any other statutory requirements or provisions as defined under other legislation e.g. Coastal Management SEPP 2018 or Koala Habitat Protection SEPP 2019.

Objectives


1. To ensure that any **biodiversity values** that could be impacted by the proposed development are adequately identified.
2. To inform the decision-making process in a timely and efficient manner.

Performance criteria

Development consistent with the provisions of this Section.

Prescriptive measures

1. For development where the proposed **development envelope does not** overlap with red flagged areas or associated **ecological setbacks** in Table 3 and a vegetation or biodiversity conservation management plan is not required:
 - a. A site plan and current aerial photo (at a scale of 1:200 or better) showing the extent of any red flagged areas and **ecological setbacks** as defined in Table 3 in relation to the proposed **development envelope**.
 - b. A signed statement from a qualified ecologist stating that the proposed **development envelope** does not impinge on any *red flagged areas* or **ecological setbacks** in Table 3, or require a vegetation or biodiversity management plan.
 - c. A signed statement from a qualified ecologist stating that the Biodiversity Offset Scheme (BOS) does not apply to the development including:
 - i. Information to support the conclusion that the proposal does not exceed the BOS threshold; and
 - ii. A response to the five part test of significance set out under s7.3(1) of the BC Act.
 - d. Details of any site visits, ecological surveys (including historical) or previous vegetation/restoration activities conducted on the site.

 **Note:** Where the proposed development **avoids** impacting HEV or red flagged areas, **an ecological assessment is not required**. However, this will normally entail a site inspection ensuring that no threatened flora, or threatened fauna habitat are present within the **development envelope**.



2. ~~For development where the proposed **development envelope does** overlap with red flagged areas or associated **ecological setbacks** in Table 3, or a vegetation or biodiversity conservation management plan is required:

 - a. ~~A signed statement from a qualified ecologist stating that the Biodiversity Offset Scheme (BOS) does not apply to the development including:

 - i. ~~Information to support the conclusion that the proposal does not exceed the BOS threshold; and~~
 - ii. ~~A response to the five part test of significance set out under s7.3(1) of the BC Act.~~~~
 - b. ~~An ecological assessment (Appendix 2) or management plan (where applicable) prepared in accordance with the requirements of B1.2.5 Vegetation Management Plans and Biodiversity Conservation Management Plans.~~~~
3. ~~For development where the proposed also triggers entry into the Biodiversity Offset Scheme (BOS):

 - a. ~~A Biodiversity and Development Assessment Report (BDAR) prepared in accordance with the Biodiversity Assessment Method (BAM) under the BC Act.~~
 - b. ~~Consistent with the BAM (s10.2.1.5) the BDAR shall include an assessment of any additional candidate entities as required by Council.~~
 - c. ~~A vegetation or biodiversity conservation management plan (where applicable) prepared in accordance with the requirements of B1.2.5 Vegetation Management Plans and Biodiversity Conservation Management Plans.~~~~



~~**Note:** As per s7.13(4) of the *Biodiversity Conservation (BC) Act 2016*, Council may consider seeking an increase or reduction in the number of biodiversity credits required under the BC Act, dependant upon the application of the *no net loss* principle.~~

B1.2.5 Vegetation Management Plans & Biodiversity Conservation Management Plans

In situ (on site) conservation ensures the retention, protection and rehabilitation of native vegetation and habitat on the site where it naturally occurs. As such it is the preferred option to offset any impacts (residual or otherwise) to biodiversity that may arise from development. Vegetation or Biodiversity Conservation Management Plans conserve local level genetics and ecosystem processes through the retention and restoration of native vegetation, thereby providing for the maintenance and connectivity of remnant and regrowth vegetation and habitat. Under changing climatic conditions, the restoration of existing native vegetation on site increases **resilience** and supports climate adaptation.

Managing the impacts of global temperature rise has become increasingly crucial. This part of the DCP Chapter addresses both mitigation and adaptation through the identification and restoration of natural areas and their processes which will retain and/or increase the sequestration of CO₂ (carbon).

Objectives

1. To identify, maintain and improve natural areas and existing ecological processes and functions through the application of in situ (on site) conservation measures and techniques.
2. To retain local **biodiversity values** at the genetic, species and ecosystem levels.
3. To maintain and improve habitat and ecosystem connectivity at local and landscape levels.
4. To enhance the long-term viability of **wildlife corridors** and **refugia**.
5. To retain and/or enhance carbon (CO₂) sequestration in situ (on site).

Performance criteria

1. Development consistent with the provisions of this Chapter.

Prescriptive measures

1. Where red flagged areas are impacted by infill development, Council may, at its discretion, require the preparation of a Vegetation Management Plan (VMP)
2. A [Vegetation Management Plan](#) (VMP), as per Council's guidelines, is required for any proposal:
 - a. that will impact High Environmental Value (HEV) vegetation and/or a *red flagged* area, or requires management of an **environmental management buffer** within an **ecological setback** (Table 3); and or
 - b. that has such a requirement under any other DCP Chapter (e.g. DCP Chapters D2, D3 and D6).
3. A [Biodiversity Conservation Management Plan](#) (BCMP), as per Council's guidelines, is required for any development that triggers the requirement of a VMP and **also** either:
 - a. impacts a threatened fauna species known to occur on site (e.g. **koala habitat**); and or
 - b. includes the subdivision of land (determined on a case by case basis).
4. The requirement of a BCMP overrides the necessity of a VMP as both contain similar information and management actions. However, a BCMP generally has increased management actions over a longer period of time (See Table 4) and requires more detailed information.



Note 6: a preliminary desktop assessment of the site's **biodiversity values** is available on [Councils website](#) and the [SEED portal](#). Pending availability, Council staff can assist with some of this information and provide advice on its implications for preparing the information referred to above.

B1.3 Development Application

~~B1.3.1 Statutory Considerations~~

~~When determining an application for development consent involving impacts on biodiversity, the consent authority must consider various statutory provisions and statutory instruments such as:~~

- ~~• Environmental impacts on the natural environment under Section 4.15 (previously s79c) of the *Environmental Planning and Assessment Act 1979*~~
- ~~• Development affecting **koala habitat** under the *Koala Habitat Protection SEPP 2019*~~
- ~~• Development affecting Coastal wetlands and/or Littoral rainforest identified under the *Coastal Management SEPP 2018*~~
- ~~• Development that is “likely to significantly affect **threatened species**” as set out in the *Biodiversity Conservation Act 2016* (including development that triggers entry into the BOS under the BC Act).~~
- ~~• Potential impacts under other **threatened species** legislation such as the *NSW Fisheries Management Act 1994* and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.~~
- ~~• Specific Council LEP Clauses including the overall aims of the LEP~~
- ~~• Clearing or other works within 40m of a designated stream under the *Water Management Act 2000*.~~

~~Proposed development should also be consistent with any relevant strategies, plans or policies prepared and adopted by State, Commonwealth or Local authorities such as:~~

- ~~• Far North Coast Regional Conservation Plan 2010~~
- ~~• State and Federal Threatened Species Recovery Plans~~
- ~~• Byron Coast Comprehensive Koala Plan of Management~~
- ~~• Byron Shire Biodiversity Conservation Strategy 2020-2030~~

~~B1.3.2 Approvals required by other Agencies~~

~~In some instance, additional approvals will be required by other agencies before development can proceed, for example:~~

- ~~• Development in bushfire prone areas (Rural Fire Service),~~
- ~~• Works within 40m of the bed or banks of a waterway (Department of Primary Industries – Office of Water).~~

~~B1.3.3 Pre-lodgement consultation~~

~~Consultation with Council officers regarding this DCP Chapter is encouraged prior to lodgement. Where written advice is required or complex issues arise (such as threatened fauna) applicants are encouraged to discuss the proposal with Council's Development Assessment Panel~~

~~Prior to attending a pre-lodgement consultation, the applicant should have considered the controls specified within this DCP Chapter and assembled sufficient information to allow a preliminary biodiversity constraints assessment. This will facilitate discussion on ways to improve or maintain biodiversity outcomes, including alternative designs is necessary.~~

~~A pre-lodgement consultation is strongly encouraged for proposals that:~~

- ~~● Intend to seek a variation to any of the development controls; or~~
- ~~● Involve **biodiversity offsets** or habitat compensation.~~

~~B1.3.4 Variations to Development Controls~~

~~Where variations are sought as outlined in this DCP Chapter, all variation proposals should be discussed with Council staff and properly documented within the development application.~~

B1.3.5 Development Application Lodgement Requirements

Once all the relevant matters regarding the size and location of the **development envelope**, design of the proposed development and any impacts associated with additional statutory issues have been considered, the following information is required to support the development application. This information is additional to the general information required under other Chapters of the DCP.

Objective

1. To ensure that development proposals are supported by sufficient information that demonstrate impacts on biodiversity and **biodiversity values** and allow the consent authority to determine the application.

Prescriptive measures

1. For development proposals required to be assessed under the *Environmental Planning and Assessment Act 1979* on land that has or is adjacent to High Environmental Value (HEV) vegetation and/or red flagged areas (Table 3), the requirements outlined in B1.2.4 Ecological Assessment apply.
2. For development proposals that will impact High Environmental Value (HEV) vegetation and/or a red flagged area, or require management of an **environmental management buffer** within an **ecological setback** (Table 3); and/or has such a requirement under any other DCP Chapter (e.g. DCP Chapters D2, D3 and D6), the



requirements of B1.2.5 Vegetation Management Plans and Biodiversity Management Plans apply.

3. A response to Statutory Considerations where relevant.
4. A response to development controls within this DCP Chapter.
5. A summary and record of pre-lodgement consultation minutes where relevant.
6. Details of any proposed variation to the prescriptive measures within this DCP Chapter including:
 - a. A response to establish consistency with the Biodiversity Planning Principles within this DCP Chapter, and
 - b. A response to establish consistency with the relevant objectives within this DCP Chapter.



Appendices

Appendix 1 – Schedule 2: Koala Use Tree Species for the North Coast Koala Management Area.

Common name	Scientific name
Forest Oak	<i>Allocasuarina torulosa</i>
Rough-barked Apple	<i>Angophora floribunda</i>
Red Bloodwood	<i>Corymbia gummifera</i>
Large-leaved Spotted Gum	<i>Corymbia henryi</i>
Pink Bloodwood	<i>Corymbia intermedia</i>
Spotted Gum	<i>Corymbia maculata</i>
White Mahogany	<i>Eucalyptus acmenoides</i>
Cabbage Gum	<i>Eucalyptus amplifolia</i>
Orange Gum	<i>Eucalyptus bancroftii</i>
Grey Gum	<i>Eucalyptus biturbinata</i>
New England Blackbutt	<i>Eucalyptus campanulata</i>
Large-fruited Grey Gum	<i>Eucalyptus canaliculata</i>
Thick-leaved Mahogany	<i>Eucalyptus carnea</i>
Narrow-leaved Ironbark	<i>Eucalyptus crebra</i>

Common name	Scientific name
Narrow-leaved stringybark	<i>Eucalyptus eugenoides</i>
Broad-leaved Red Ironbark	<i>Eucalyptus fibrosa</i>
Slaty Red Gum	<i>Eucalyptus glaucina</i>
White Stringybark	<i>Eucalyptus globoidea</i>
Flooded Gum	<i>Eucalyptus grandis</i>
Silver-top Stringybark	<i>Eucalyptus laevopinea</i>
Craven Grey Box	<i>Eucalyptus largeana</i>
Tallowwood	<i>Eucalyptus microcorys</i>
Grey Box	<i>Eucalyptus moluccana</i>
Forest Ribbon Gum	<i>Eucalyptus nobilis</i>
Blackbutt	<i>Eucalyptus pilularis</i>
Grey Ironbark	<i>Eucalyptus placita</i>
Bastard Tallowwood	<i>Eucalyptus planchoniana</i>
Small-fruited Grey Gum	<i>Eucalyptus propinqua</i>
Bastard White Mahogany	<i>Eucalyptus psammitica</i>
Grey Gum	<i>Eucalyptus punctata</i>
Red Mahogany	<i>Eucalyptus resinifera</i>

Common name	Scientific name
Swamp Mahogany	<i>Eucalyptus robusta</i>
Steel Box	<i>Eucalyptus rummeryi</i>
Sydney Blue Gum	<i>Eucalyptus saligna</i>
Large-fruited Red Mahogany	<i>Eucalyptus scias</i>
Narrow-leaved Red Gum	<i>Eucalyptus seeana</i>
Grey Ironbark	<i>Eucalyptus siderophloia</i>
Scribbly Gum/Narrow-leaved Scribbly Gum	<i>Eucalyptus signata/Eucalyptus racemosa</i>
Forest Red Gum	<i>Eucalyptus tereticornis</i>
Stringybark	<i>Eucalyptus tindaliae</i>
Bastard White Mahogany	<i>Eucalyptus umbra</i>
Broad-leaved Paperbark	<i>Melaleuca quinquenervia</i>

Appendix 2: Guidelines for an Ecological Assessment

An ecological assessment is to be prepared by a suitably qualified ecologist with tertiary qualifications in environmental science (or equivalent) and a minimum of 2 years experience.

Where an ecological assessment is required, assessment of the subject site and where appropriate, the adjoining land, must include the following information:

1. Identification of any of the following:
 - a. High Environmental Value (HEV) vegetation and habitats on or adjoining the subject site.
 - b. Land zoned W1 or W2.
 - c. Areas identified under the *Biodiversity Conservation Act 2016*.
 - d. Areas identified under the *Local Land Services Act 2013*.
 - e. Areas identified under a **State Environmental Planning Policy as the Coastal Management SEPP 2018** (e.g. Coastal wetlands, Littoral rainforest and proximity areas).
 - f. Areas identified under the **State Environmental Planning Policy (Biodiversity and Conservation) 2021 Koala Habitat Protection SEPP**.
 - g. Any adjoining National Parks or Nature Reserves.
 - h. **Threatened Ecological Communities** (TECs) on or adjoining the subject site.
 - i. **Threatened species** records within 1 km of the subject site.
 - j. Identified **wildlife corridors**
 - k. Threatened fauna habitat
 - l. **Koala habitat**
 - m. **Koala use tree** species including; Species name, height, location and DBH (Diameter at breast height).
 - n. **Hollow** bearing trees including; Species name, height, location, DBH, use and or potential use evaluation.
 - o. Flying fox colony on or adjacent to the subject site.
 - p. Waterways (including **stream order**), wetlands and riparian vegetation.
2. A site plan based on a recent aerial photo at a scale of 1:200 (or better) that illustrates the following details:
 - a. The location of the ecological values identified on the site including those listed in point 1 (above), and
 - b. The extent and type of vegetation community present on site, and
 - c. The extent of the entire **development envelope**, red flagged areas and **ecological setbacks** (where applicable).



3. Where the removal of any **koala use tree** species (Appendix 1) is proposed, an assessment of koala activity must be included. Such an assessment must be undertaken by a suitably qualified person utilising current best practice techniques e.g. detection dog, SAT etc.
4. A response to the five part test of significance set out under s7.3(1) of the BC Act.
5. Full and accurate references to all material relied upon in the assessment must be provided in the report.



Appendix 3: Definitions & Acronyms

BAM: Biodiversity Assessment Method established under the *Biodiversity Conservation Act 2016*.

BDAR: Biodiversity Development Assessment Report prepared in accordance with the *Biodiversity Conservation Act 2016*

BOS: Biodiversity Offsets Scheme established under the *Biodiversity Conservation Act 2016*

Biodiversity offset: measures taken to compensate for any residual significant, adverse impacts that cannot be avoided or minimised, and/or rehabilitated or restored, in order to achieve 'no net loss' or, a net gain to biodiversity.

Biodiversity values: as defined in s1.5 of the *Biodiversity Conservation Act 2016*:

- (a) **vegetation integrity**—being the degree to which the composition, structure and function of vegetation at a particular site and surrounding landscape has been altered from a near natural state,
- (b) **habitat suitability**—being the degree to which the habitat needs of **threatened species** are present at a particular site,
- (c) **biodiversity values**, or biodiversity-related values, prescribed by the regulations.

Bushfire Attack Level (BAL) rating: represents the scale used to determine a building's risk of catching fire. The use of a high BAL rating can minimise impacts to biodiversity through reducing the area required for Asset Protection Zones.

Development envelope: an area of land inclusive of all existing or proposed buildings and other associated infrastructure including but not limited to roads, driveways, waste water systems, landscaping, bushfire protection zones, **ecological setbacks**, other **development setbacks** and easements for telephone, electricity and other services. It does not include lands retained for extensive agriculture or nature conservation.

Development setback: an area of land required to separate elements of the **development envelope** (such as habitable buildings) from an incompatible land use or environmental hazard. Examples include setbacks to manage bushfire risk, noxious industries, odour and noise (see Chapter B6 Buffers and Minimising Land Use Conflict).

Ecological setback: an area of land required to separate the **development envelope** from an ecological asset or *red-flagged area* that is to be retained. NB in most instances the **ecological setback** will be less than the required setback to manage bushfire risk (See B1.2).

Ecological values: includes the composition, structure and function of ecosystems and includes (but is not limited to) species, populations, ecological communities and their habitats.

Environmental management buffer: a management area within the **ecological setback** that requires specific management to minimise on-going impacts of the development. The management requirements of the buffer will vary depending on the type of ecological asset (red-flagged area) it is protecting. Such management actions will be defined in either a vegetation or biodiversity conservation management plan.



Koala habitat: Areas of native vegetation mapped and identified as per Clause 7 of the Koala Habitat Protection SEPP 2019; or

1. Areas identified within the Byron Coast Comprehensive Koala Plan of Management; or
2. Areas of native vegetation, including plantings, that comprise **koala use tree** species found in Schedule 2 of the Koala Habitat Protection SEPP 2019 specific to the North Coast Koala Management Area (Appendix 1), and
3. Sightings and/or records of koalas (within a 2.5km range of **koala habitat**) persistent over 3 koala generations that may be evidenced by breeding females and/or historical records and/or survey.

Koala use trees: as outlined in State Environmental Planning Policy Koala Habitat Protection 2019, Schedule 2: Koala Use Trees for the North Coast Koala Management Area.

Mitigation hierarchy:

• **Avoidance:** measures taken to avoid creating impacts from the outset, such as careful spatial or temporal placement of infrastructure that avoids impacts on **biodiversity values**.

• **Minimisation:** measures taken to reduce the duration, intensity and / or extent of impacts (including direct, indirect and cumulative impacts) that are unable to be avoided as far as practically feasible.

• **Offset:** measures taken to compensate for any residual or adverse impacts that are unable to be avoided, minimised and /or rehabilitated or restored, in order to achieve *no net loss or a net gain* of biodiversity.

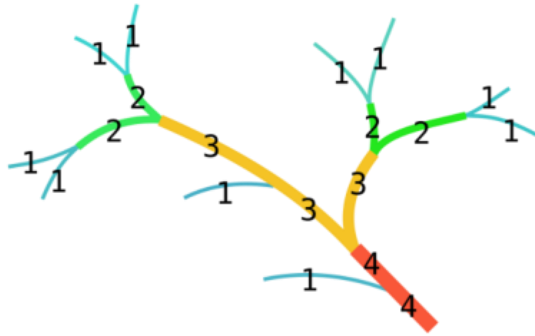
Other significant fauna/flora: Fauna or flora that have local significance but are not yet determined as threatened under NSW State or Commonwealth legislation.

Refugia: an area that species can retreat to, persist in and potentially expand from under changing climatic conditions and/or disturbance.

Resilience: the capacity of an entity or entities to recover from or adapt to disturbance or change.

Stream order: the topmost sections of a dendritic waterway network mapped at 1:25000 scale as defined by the Strahler stream classification (see diagram below). Where two flow paths of a first order stream join, the section downstream of their junction becomes a second order stream. Where two second order streams join, the waterway downstream of the junction becomes a third order stream and so on. **Ecological setbacks** associated with specific stream orders are measured from the top of the highest bank.





Strahler stream order

Suitably qualified person: means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Threatened Ecological Communities: an ecological community facing a high risk of extinction in the near future, listed as critically endangered, endangered or vulnerable under NSW State or Commonwealth legislation. For example, the Critically Endangered Ecological Community (Commonwealth): Lowland Rainforests of Subtropical Australia.

Threatened Population: a species population facing a high risk of extinction in the near future, listed as critically endangered, endangered or vulnerable under NSW State or Commonwealth legislation. For example, the Endangered Population (NSW State): Koala *Phascolarctos cinereus* (Goldfuss, 1817) between the Tweed and Brunswick Rivers east of the Pacific Highway (previously listed under the *Threatened Species Conservation Act 1995*).

Threatened species: any individual species facing a high risk of extinction in the near future, listed as critically endangered, endangered or vulnerable under NSW State or Commonwealth legislation. For example, the Critically endangered (Commonwealth): Mitchell's Rainforest Snail (*Thersites mitchellae*) and Critically endangered (NSW State): Scrub Turpentine (*Rhodamnia rubescens*).

Wildlife corridor: refers to linear areas that link wildlife habitat and provide a crucial role in maintaining connectivity between plant and animal populations that would otherwise be at greater risk of extinction. Such corridors are critical for the maintenance of ecological processes, enabling migration, colonisation and interbreeding of plants and animals.