



Byron Shire Development Control Plan 2014

Chapter B1 Biodiversity



**BYRON
SHIRE
COUNCIL**

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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.

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”

B1.1.1 Aims and Objectives of this Chapter

The aim of this chapter is to ensure that 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. 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.
7. Integrates the assessment of biodiversity with other applicable constraints, such as bushfire.

B1.1.2 Application of this Chapter

This chapter applies to development applications:

- On land 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 where clearing of native vegetation is ancillary to development, or
- on land that contains a heritage item or is located in a heritage conservation area, or
- on land that contains 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 F1 Tree and Vegetation Management.



Note 3: For the purposes of this Chapter B1 Biodiversity only,

Infill development means development, other than subdivision, on land zoned other than RU1, RU2, C1 – C4, W1 and W2 where the lot size is less than 2,500m²

For **infill development**, the **development envelope** must be set back at least 3 meters from the nearside trunk of any HEV tree, or outside of the Tree Protection Zone of HEV vegetation, whichever is the greater.

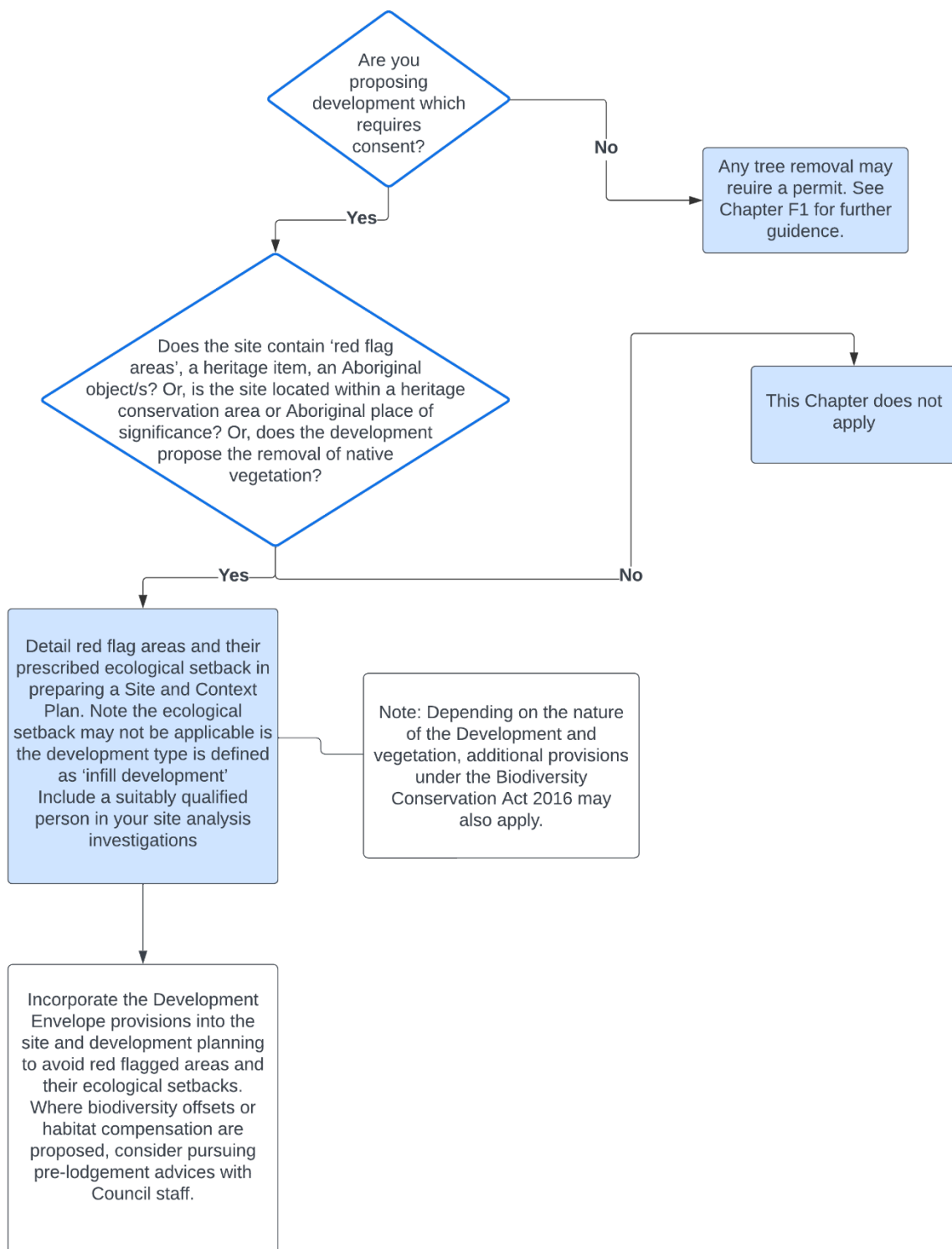


Figure 1: Does this Chapter Apply?

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.

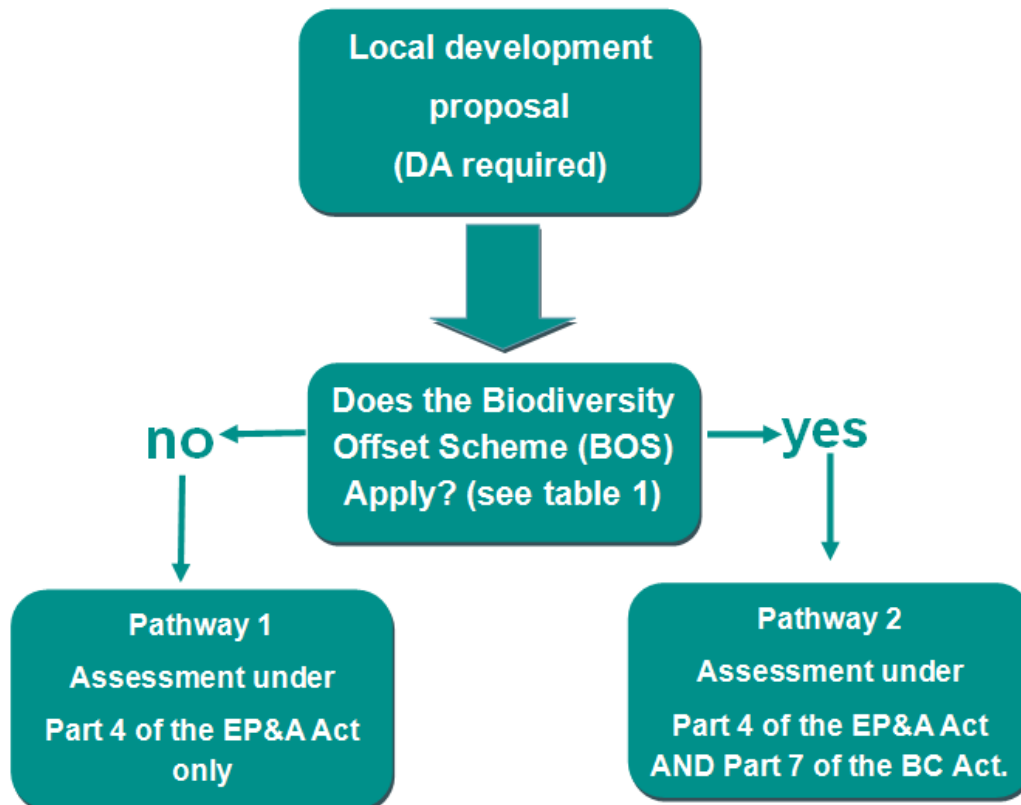


Figure 2: Assessment Pathways

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).

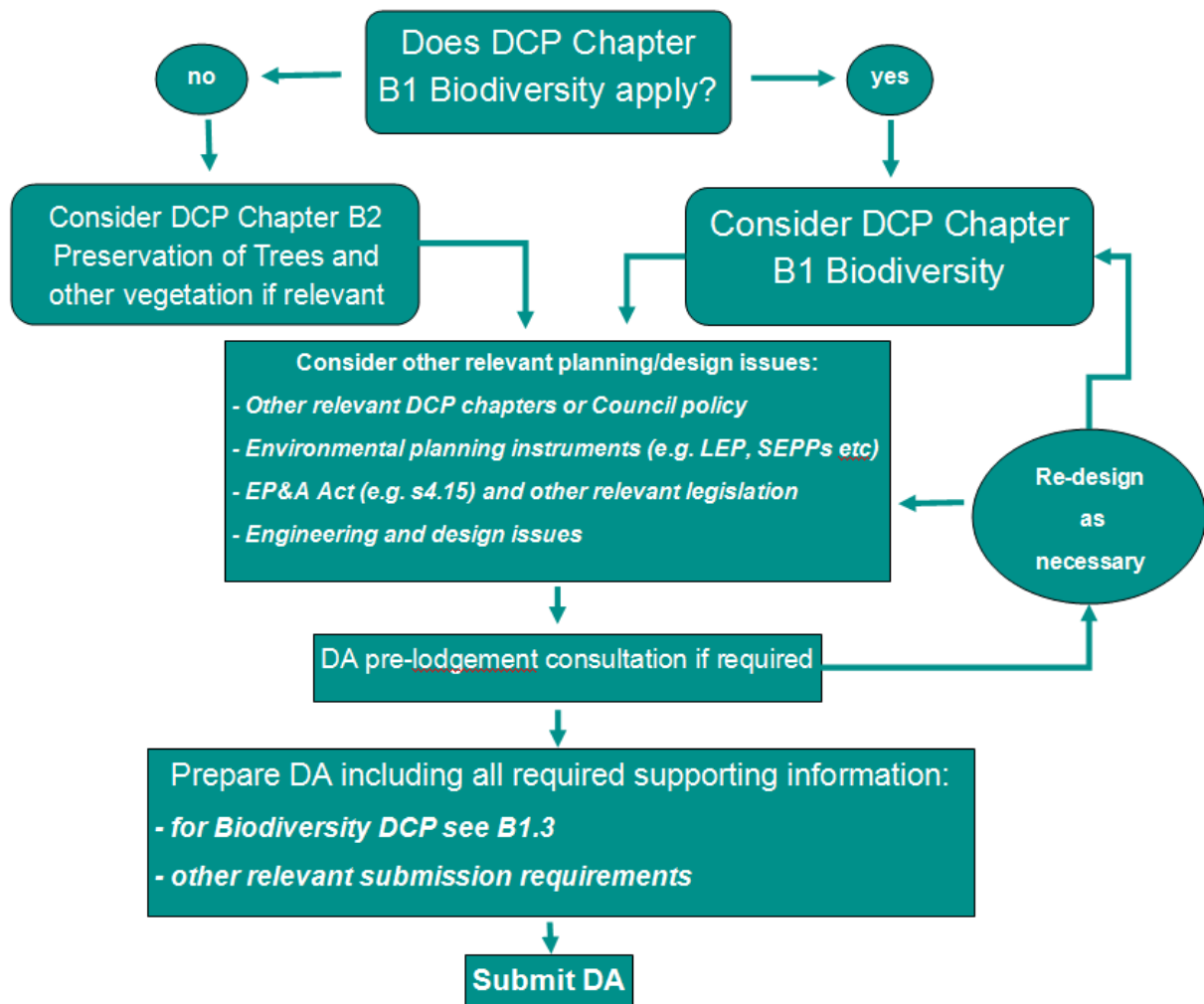


Figure 3: Pathway 1 Assessment under Part 4 of the EP&A Act

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

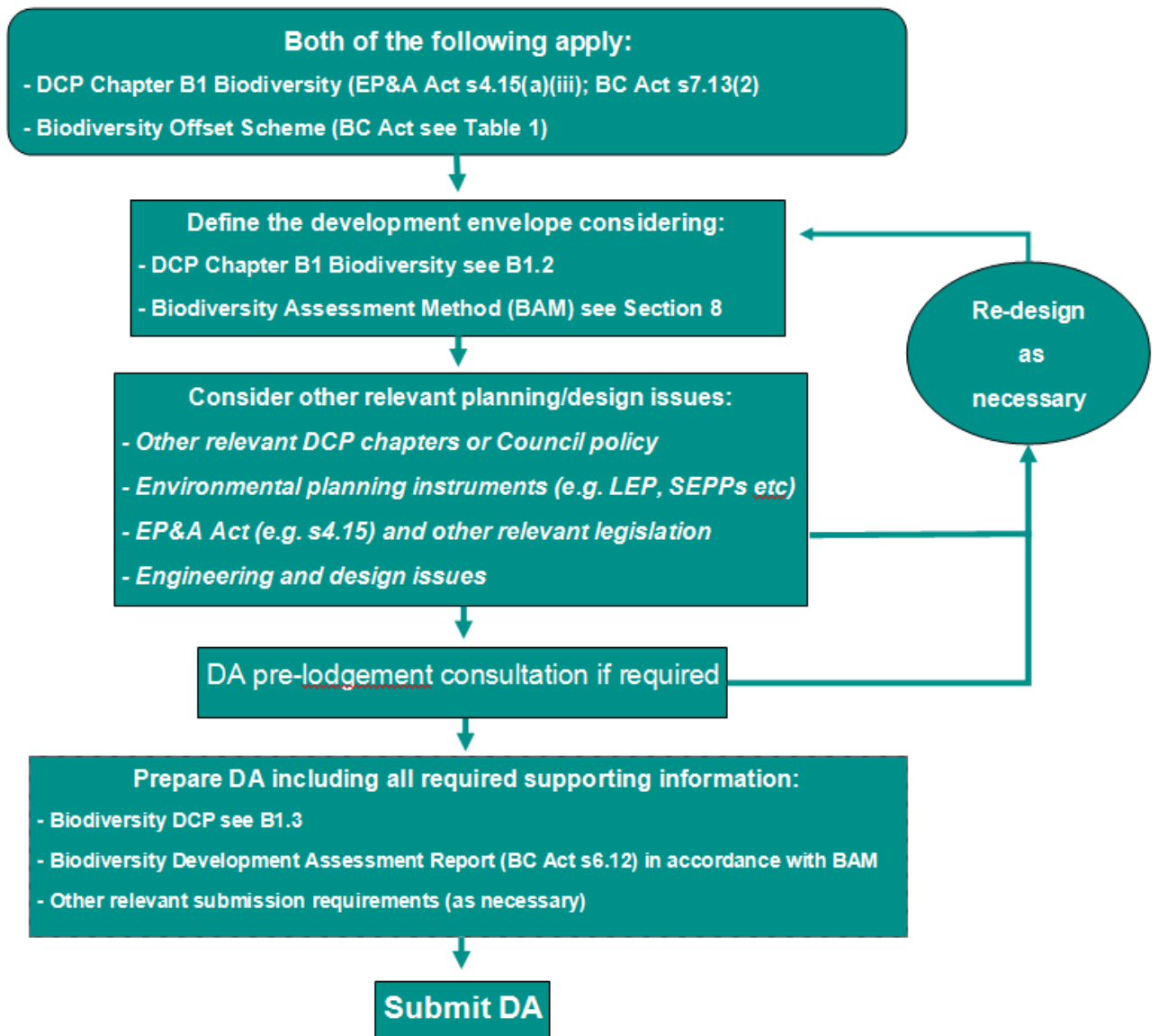


Figure 4: Pathway 2 Assessment under Part 4 of the EP&A Act and Part 7 of the BC Act.

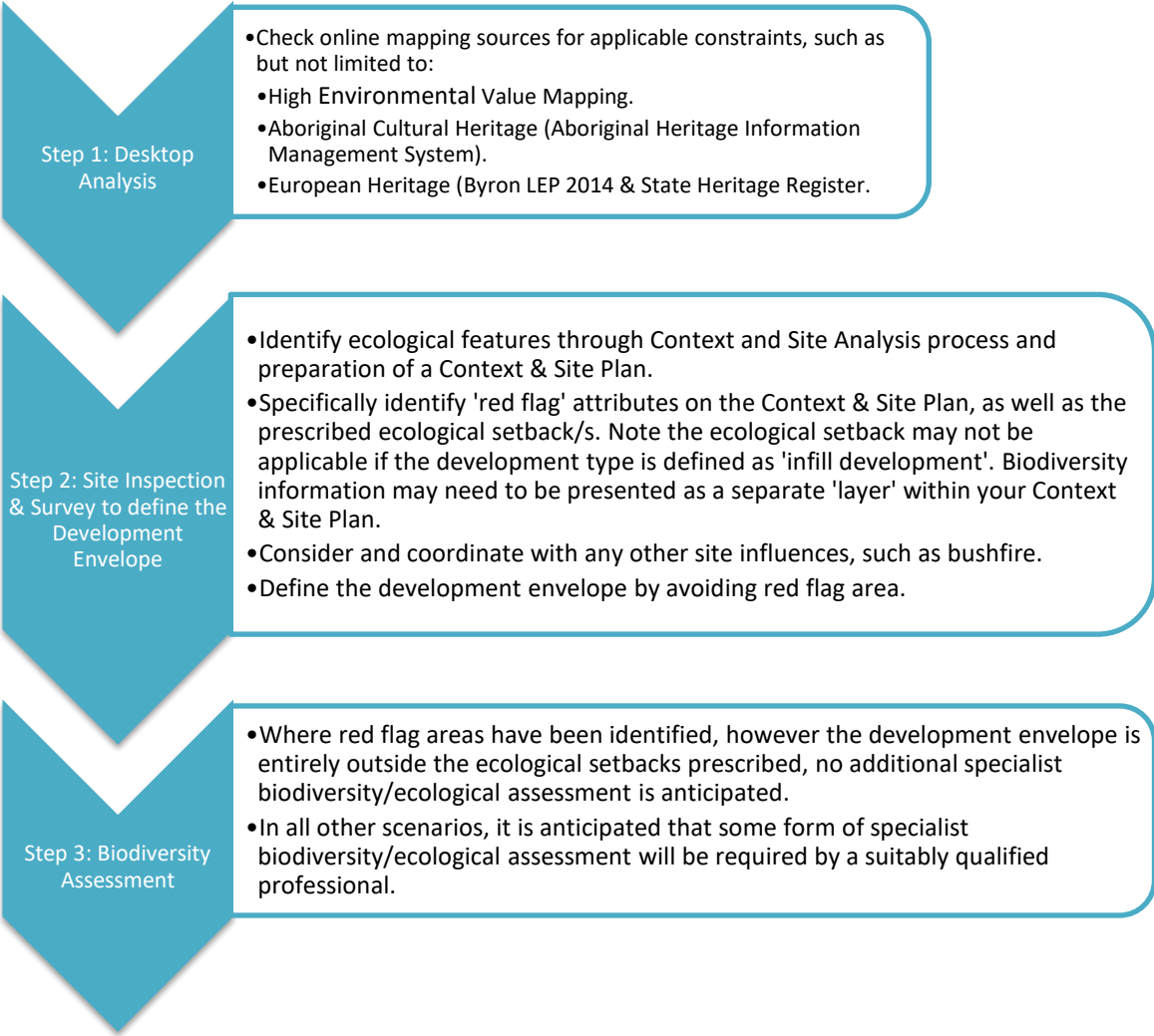


Figure 5: Recommended Methodology for Development Preparation

B1.2 Defining the development envelope

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.
5. Encourage alternative and innovative design to maintain and improve biodiversity values, such as modular housing and construction techniques that complement existing biodiversity features.

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 (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).	30
Important wetlands (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).	50
Other wetlands (Any other wetland other than an Important wetland. Wetland has the same meaning as defined within NSW Wetland Policy : <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 	20

Red flag ^a	Ecological setback ^b (m)
<p>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.</p> <ul style="list-style-type: none"> Examples of wetlands include; mangroves, backwaters, sedgelands, wet heathlands, lakes, lagoons, estuaries, rivers, floodplains, swamps, bogs, billabongs, marshes, coral reefs and seagrass beds). 	
Other bushland on a slope >18 degrees	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
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	

Red flag ^a	Ecological setback ^b (m)
Koala habitat outside of areas defined within a Comprehensive Koala Plan of Management.	20
Isolated or scattered koala use trees with evidence of koala activity	20
Any other areas where koalas are present and/or koala habitat is planted with public monies.	20
Waterways and Riparian areas (from the top of the bank)	
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	10

Red flag ^a	Ecological setback ^b (m)
(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).	
Stags and hollow-bearing trees	10 ^d
Raptor nests	50

^a an area of land with high biodiversity conservation value which should be excluded from any **development envelope**.

^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.

^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** due to lot size constraints. However, **infill development** must clearly demonstrate how the **development envelope** has been sized and sighted to avoid and minimise impacts to red flags listed in Table 3. Refer also to Note 3 regarding tree setbacks applicable to HEV vegetation.
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. 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.
9. **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.
10. 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).

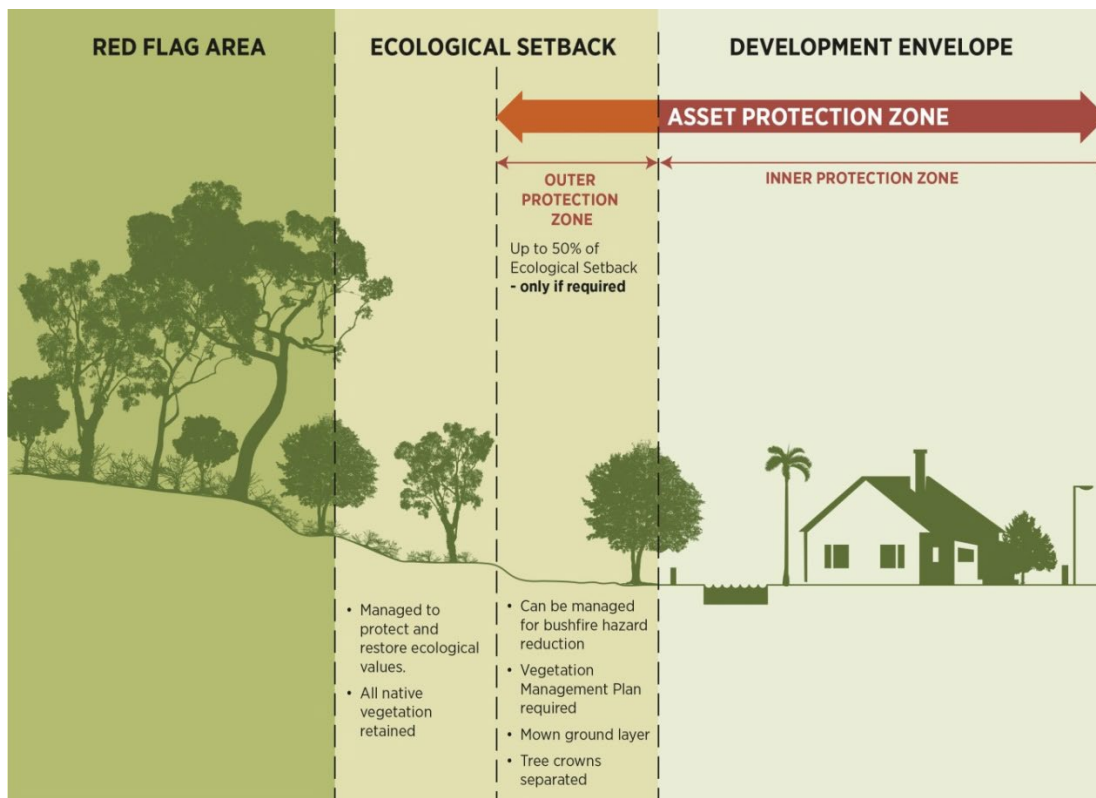


Figure 6: Example of the relationship between the development envelope, ecological setbacks, red flagged areas and bushfire protection.

11. 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**.
12. 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).
13. 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).
14. 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.

15. Species to be used for compensatory plantings must provide habitat value and are not to be selected exclusively for their landscape or aesthetic value.



Note 4:

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 5: 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).

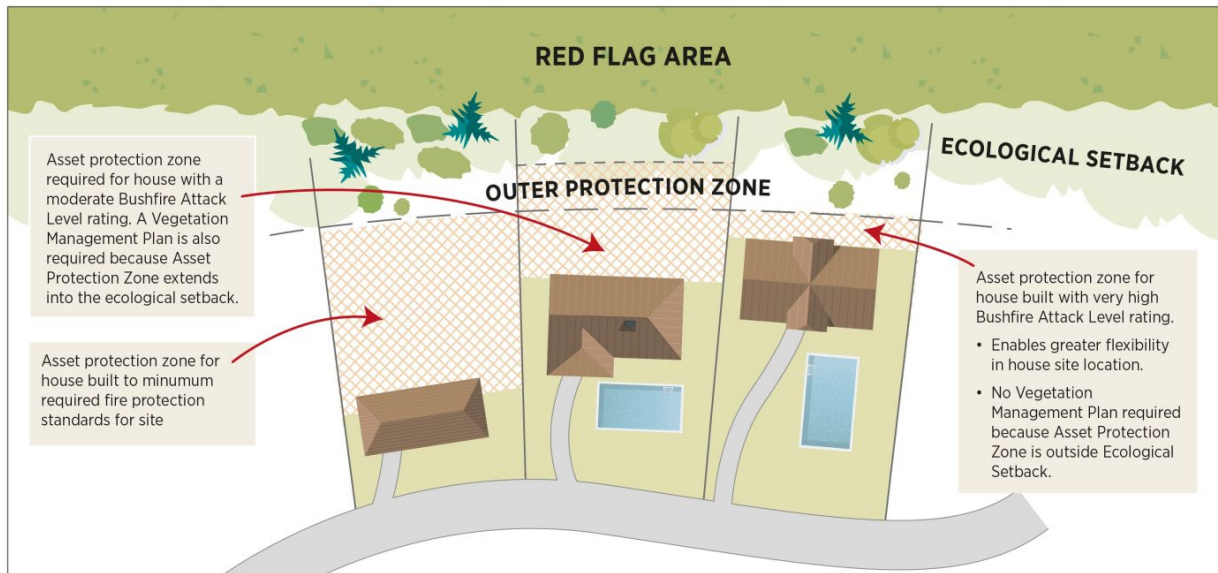


Figure 7: Example of red flagged area, ecological setback, differing Asset Protection Zones (APZs) and vegetation management requirements.

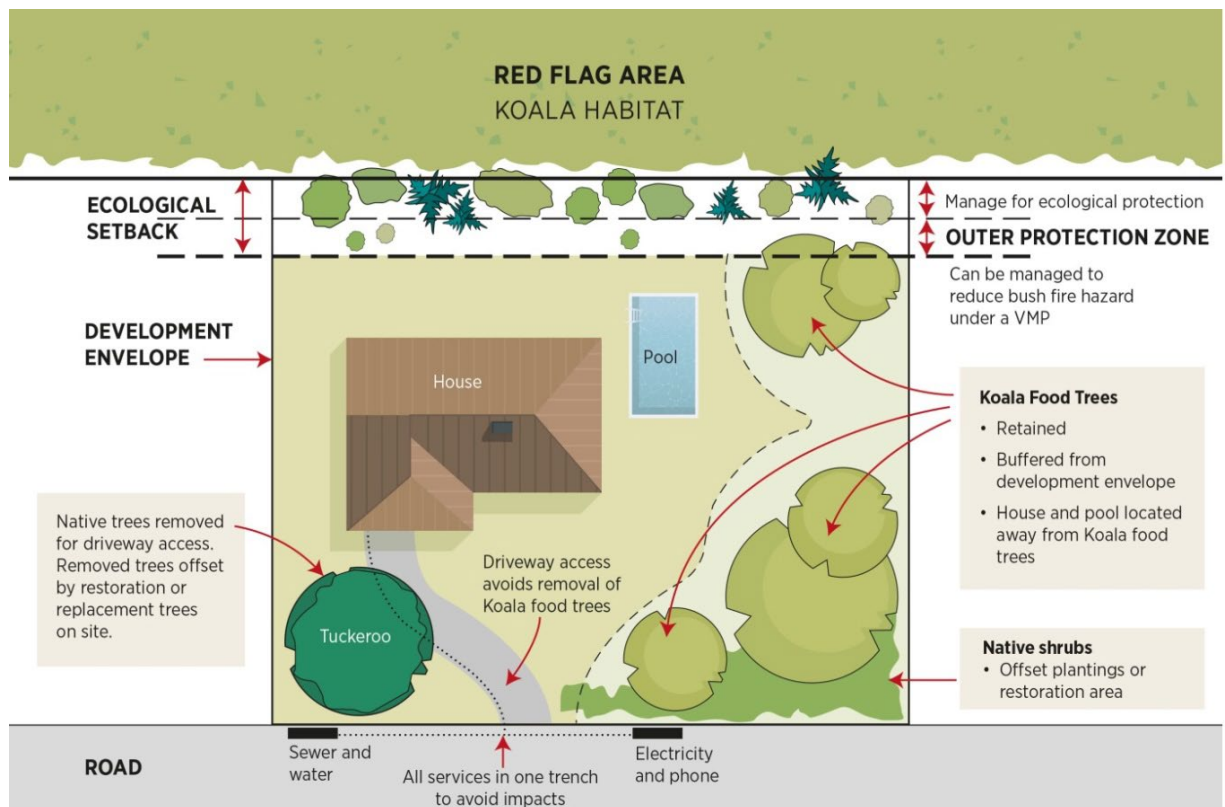


Figure 8: Example of a red flagged area and ecological setback with avoid and minimise components.

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 6: 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.

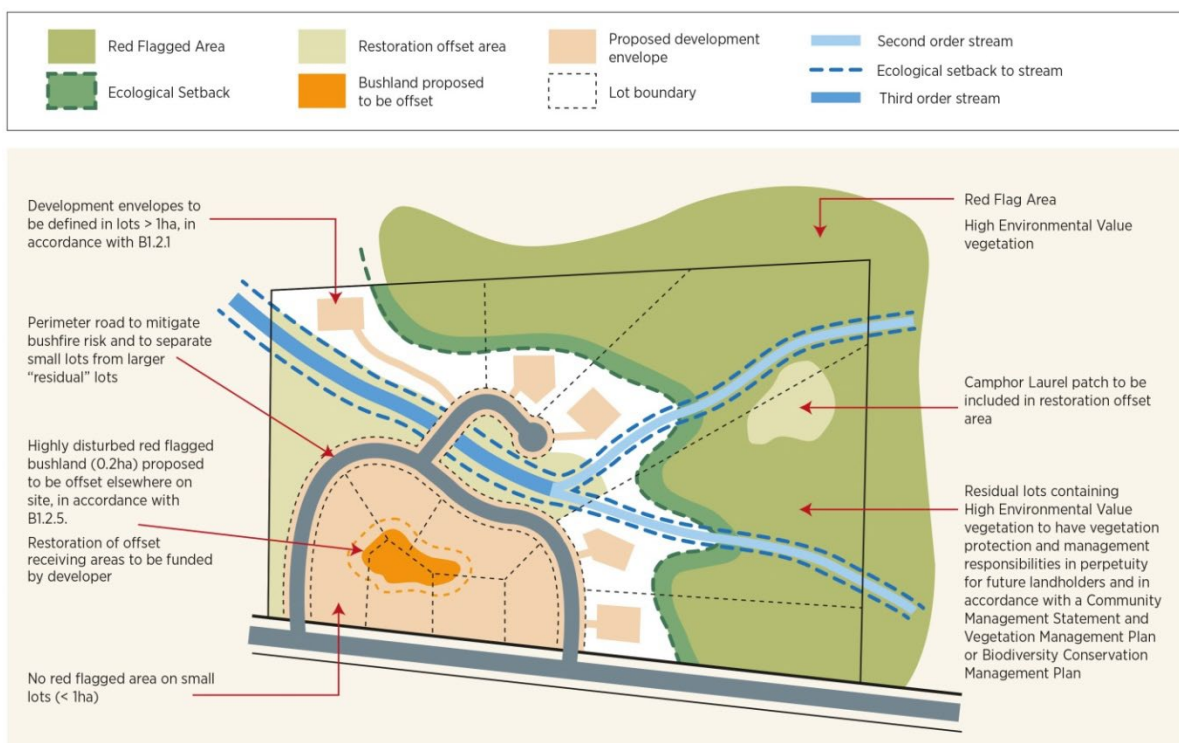



Figure 9: Example of a subdivision layout incorporating restoration areas as offsets for development and management requirements.

Table 4 Management and protection requirements for subdivisions

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

 **Note 7:** 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

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. 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

6. 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).
7. 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.
8. 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).
9. 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).
10. Fencing design shall include suitable clearances to maintain functionality and allow for access for replacement and routine maintenance.
11. All exclusion fencing, fauna friendly fencing or other structures designed to protect fauna shall be monitored and maintained to minimise impacts on wildlife.
12. Where appropriate, fencing, barriers or other measures shall be used to limit or control human access (e.g. motor vehicles) to environmentally sensitive areas.
13. 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

14. 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.
15. Council will not support development where the impacts of noise on **biodiversity values** cannot be adequately mitigated.
16. 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.
17. Sports field lighting (or similar high intensity outdoor lighting) shall be designed to avoid light spill into natural areas.

18. 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).
19. 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

20. 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.
21. 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.
22. Where permitted, all domestic animals are to be contained within the landholder’s property and prevented from roaming in natural areas.
23. 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.
24. 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

25. Developments must be designed to minimise the likelihood of pest animal establishment/proliferation and where relevant, include measures to control pest animals.
26. 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.

27. 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.
28. 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

29. 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.
30. All landscaping and landscape design shall be consistent with DCP 2014 Chapter B9 Landscaping.
31. 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.

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 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**, 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**, 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 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**, 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 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 8: 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.

Byron Shire Council Guidelines for preparing Vegetation Management Plans (VMP) or Biodiversity Conservation Management Plans (BCMP) can be found on Council's website.

B1.3 Development Application

B1.3.1 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 A14.1 g) 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 Coastal wetlands, Littoral rainforest and proximity areas).
 - f. Areas identified under the State Environmental Planning Policy (Biodiversity and Conservation) 2021.
 - 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.