

Biodiversity Requirements for Development Applications



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We have developed a set of guidelines to help applicants and ecological consultants meet the biodiversity reporting requirements when submitting a development application (DA). One or more of the following guidelines will help you prepare your DA, based on the level of development impact proposed:

- Guideline 1: Flora and Fauna Assessments (FFAs)
- Guideline 2: Biodiversity Development Assessment Reports (BDARs)
- Guideline 3: Biodiversity Management Plans (BMPs)
- Guideline 4: Impact Mitigation Measures

Impacts on biodiversity

Development-related biodiversity impacts include, but are not limited to:

- Tree or vegetation clearing for the proposed development footprint;
- Clearing of Asset Protection Zones (APZs) and any other additional bush fire access requirements required to comply with Planning for Bush Fire Protection 2019;
- Likely construction impacts such as noise, vibration or clearing for machinery access, material and waste stockpiles;
- Road or driveway construction, installing services and stormwater infrastructure, on-site sewage management (OSSM) tanks and dispersal areas, changes in hydrology;
- Indirect impacts to biodiversity such as soil disturbance, runoff, wastewater disposal, artificial lighting, or increases in human activity and noise.

Biodiversity and local development

Council is committed to protecting, enhancing and restoring local bushland and biodiversity and the unique value they have. Part of this commitment is ensuring that new developments are consistent with the principles of ecologically sustainable development and are designed to first avoid and then minimise impacts upon bushland and biodiversity, as well as responding to bush fire risk, in line with Council's **Bushland and Biodiversity Policy 2021**.

Planning and development within the Northern Beaches LGA is currently controlled by four Local Environmental Plans (LEP) and four Development Control Plans (DCPs). Council's LEPs and DCPs include several provisions designed to protect and conserve biodiversity.

The biodiversity controls which apply to your property must be addressed in the DA documentation. Where DAs are inconsistent with the biodiversity planning controls, your application may not be supported. Please access Council's **Online Planning Enquiry** tool to determine which biodiversity controls apply to your property.

Biodiversity and NSW Legislation

The principle of designing development to protect environmental assets is enshrined in State legislation through the *NSW Biodiversity Conservation Act 2016* (BC Act) and *Biodiversity Conservation Regulation 2017* (BC Regulation). This legislation requires that developments be designed to avoid and minimise impacts to the natural environment, and for any residual impacts to then be assessed. The residual impact is the impact remaining after measures to avoid and minimise impacts to biodiversity have been applied.

Any new DA submitted to Council (including subdivisions), or modification to an approved development under Part 4 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act), may require assessment under the provisions of the BC Act. This legislation sets out the requirements for assessing the development impacts to biodiversity, including threatened species and threatened ecological communities.

Early planning and pre-lodgement advice

We recommend attending a DA pre-lodgement meeting if you are planning a proposal which is likely to impact upon important biodiversity values including native vegetation identified on the NSW Biodiversity Values Map. A pre-lodgement meeting can be helpful as it provides you with an opportunity to discuss your proposal with relevant experts and obtain preliminary advice prior to lodging your DA. Pre-lodgement meetings can be booked via Council's **website**.

Understanding the different levels of assessment required

Is the development footprint on the Biodiversity Values Map?	Level of impact from proposal	Assessment required	Relevant Guide/s
No	<p>The development will not impact upon any of the following:</p> <ul style="list-style-type: none"> • More than four protected (prescribed) native trees* • Any threatened species or ecological communities • More than 50m² of native vegetation • Important resources or habitat features for wildlife. This may include features like tree hollows, rock overhangs or wetlands. In Manly, some residential properties also provide important habitat for endangered penguins and bandicoots. Please see Guidelines 1 for more information. 	<p>Compliance with relevant LEP/DCP biodiversity objectives is to be addressed in the Statement of Environmental Effects (SEE).</p> <p>OR as determined by Council at pre-lodgement meeting</p> <p>Note: this level of assessment is typical for minor developments with limited impacts such as landscaping works or modification applications.</p>	
No	<p>The development will impact upon any of the following:</p> <ul style="list-style-type: none"> • More than four protected (prescribed) native trees* • Any threatened species or ecological communities • More than 50m² of native vegetation, but less than the applicable Biodiversity Offset Scheme (BOS) area clearing threshold • Important resources or habitat features for wildlife. This may include features like tree hollows, rock overhangs or wetlands. In Manly, some residential properties also provide important habitat for endangered penguins and bandicoots. Please see Guidelines 1 for more information. 	<p>The application is to be accompanied by a Flora and Fauna Assessment (FFA) prepared by a suitably qualified ecologist.</p> <p>OR as determined by Council at pre-lodgement meeting</p> <p>Note: this level of assessment is typical for small to medium lot subdivisions, construction of a new dwelling, and other medium to large scale developments (such as a Seniors Living development).</p>	Guideline 1 Guideline 4
	<p>The development will result in either of the following:</p> <ul style="list-style-type: none"> • A significant impact to a threatened species, population or ecological community as determined by a 'threatened species test of significance' • Impacts to an area of native vegetation greater than the applicable Biodiversity Offset Scheme (BOS) area clearing threshold 	<p>The application is to be accompanied by a Biodiversity Development Assessment Report (BDAR) prepared by an accredited assessor in accordance with the NSW Biodiversity Assessment Method (BAM).</p> <p>Where developments require a BDAR due to the scale of impacts such as clearing of native vegetation above the Biodiversity Offsets Scheme clearing threshold, such developments may also require a Biodiversity Management Plan (BMP). The requirement for a BMP will be determined by Council.</p>	Guideline 2 Guideline 4 Guideline 3 (if a BMP is required)
Yes	<p>The development will impact upon:</p> <ul style="list-style-type: none"> • Areas identified on the NSW Biodiversity Values Map, including the Little Penguin 'Area of Outstanding Biodiversity Value' 	<p>Note: this level of assessment is required when the proposal triggers entry into the NSW Biodiversity Offsets Scheme (BOS).</p>	

Important Note: Developments should be designed and sited to avoid environmental impacts in the first instance. Assessment against the objectives of relevant Council LEP and DCP controls must consider direct and indirect impacts of the proposal, including vegetation clearing within the development footprint and clearing required to establish bush fire asset protection zones (APZs). The assessment requirements outlined above address biodiversity-related controls only.

*Additional reports, such as an Arboricultural (tree) Impact Assessment, may also be required if the proposal is likely to impact upon protected trees. Applicants should consider obtaining detailed tailored advice through Council's **DA pre-lodgement service**.



Guideline 1

Flora and Fauna Assessment



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What is a Flora and Fauna Assessment?

Development Applications (DAs) that do not trigger the Biodiversity Offsets Scheme (BOS) but still result in direct or indirect impacts to native vegetation or wildlife habitat may still require a Flora and Fauna Assessment (FFA). This guideline provides information on when an FFA is required, who can prepare one and the minimum level of information to be included in an FFA.

When is an FFA required?

An FFA is required to be submitted with a DA when the development:

1. Is not located on the NSW Biodiversity Values Map; AND
2. Will impact upon one or more of the following:
 - A Threatened Ecological Community (TEC)
 - More than 50m² of native vegetation
 - Five or more native protected (prescribed) trees
 - Important resources or habitat features for wildlife.

Who can prepare an FFA?

An FFA must be prepared by a suitably qualified and experienced ecologist with one or more of the following qualifications:

- A qualified ecologist with an Ecological Consultants of Australia (ECA) membership;
- An accredited assessor under the NSW Biodiversity Assessment Method (BAM).

What is an important resource or habitat feature for wildlife?

Some fauna species require specific or unique features in the environment for their shelter and food. Developments that will remove or impact upon such features are likely to require assessment in an FFA. Important resources and features include:

- Tree hollows
- Rock overhangs
- Wetlands and swamps
- Large stormwater culverts which may provide roosting habitat for microbats
- Residential gardens and lawn provide foraging habitat for endangered bandicoots in **some parts of Manly**
- Rock platforms, cliffs and built structures in **some foreshore areas of Manly** provide important habitat for the endangered penguin population.

How can I avoid and minimise impacts to biodiversity?

Measures to avoid and minimise impacts to biodiversity must be demonstrated in any DA submitted to Council. Appropriate measures to achieve this include:

- Avoid impacting native vegetation in any areas mapped within the NSW **Biodiversity Values Map** published by the NSW Department of Planning, Infrastructure and Environment (DPIE);
- Avoid impacts to any areas identified as a Threatened Ecological Community (TEC);
- Where safe, avoid removing large native trees, hollow-bearing trees or dead trees with hollows or cavities as they provide vital habitat for native fauna;
- Where permissible, opt for increasing the height of the proposed development rather than expanding the development footprint if an increased footprint is likely to impact native vegetation;
- In bush fire prone areas, locate or orientate your dwelling to maximise the distance between the dwelling and any areas of native vegetation.



Barking Owl. Image credit: John Taylor

Section	*Required information
Introduction	<ul style="list-style-type: none"> • Identification and description of the site • Description of the proposed development and references to plans and reports used for the assessment. • The regional context and physical description of the study area including hydrology, geology, soils, landforms, climate and types and conditions of the habitat(s) in, and adjacent to, the land affected by the proposal.
Legislative and planning requirements	<ul style="list-style-type: none"> • An outline of legislative requirements relevant to the proposal, addressing local and state environmental planning instruments relevant to biodiversity. • Consideration of the proposal against the thresholds of the NSW Biodiversity Offsets Scheme (BOS).
Survey methodology and results	<ul style="list-style-type: none"> • The level of survey effort will depend on the size of the development and the level of impact. However, at minimum, all FFAs should include the following information: <ul style="list-style-type: none"> » Details of desktop and field survey methods employed; » A map and photos of the study area and subject site; » A list of flora and fauna species (native and introduced) identified on site; » A list and map of threatened species and ecological communities known or likely to occur in the study area and locality; » Description, map and photographs of any Plant Community Types (PCTs) identified within the study area; » List of threatened flora surveyed for, including whether the survey was undertaken within the recommended survey period as outlined in the Threatened Biodiversity Data Collection (TBDC). » Description of fauna habitat available on the site; » Map of all hollow-bearing trees located within the study area, including a description of the size of the hollow (cm); » Map of survey method locations (including any specialist fauna survey methods), including a map of GPS tracks, survey dates, times and weather conditions; » Map of environmental features and habitat types (such as sandstone outcrops, culverts or overhangs); » Discussion of any constraints or limitations of the study.
Impact assessment	<ul style="list-style-type: none"> • The FFA should identify all direct and indirect impacts to biodiversity values associated with the proposal. This includes impacts associated with: demolition and construction; excavation and fill; construction access and staging areas; materials and debris stockpiling; installation of services and stormwater infrastructure; onsite effluent disposal areas, establishment of bush fire APZs; landscaping, and ongoing operation of the development. • Direct and indirect impacts may include: clearing and modification of vegetation; removal of habitat features such as hollows, caves and rock outcrops; fragmentation or isolation of habitat; changes to flora and fauna dispersal routes; soil disturbance, run-off and sedimentation; increased noise, vibration, increased lighting and traffic in natural areas, and demolition or modification of human-made structures utilised by wildlife (such as bats). • The area (ha) of native vegetation required to be cleared for the development should be clearly stated. • Threatened species 'Tests of Significance' for any applicable threatened entities, prepared in accordance with Section 7.3 of the BC Act. • Where relevant, an assessment against the <i>Environmental Protection and Biodiversity Conservation Act 1999</i> (Significant Impact Guidelines 1.1 – Matters of National Environmental Significance) is also required.
Avoid and minimise	Discussion of measures undertaken to avoid and minimise impacts of the development.
Mitigation measures	Identification of mitigation and/or compensatory measures to reduce impacts following avoidance and minimisation of impacts. Appropriate mitigation measures are outlined further in Guidelines 4.
Conclusion	Assessment of the proposal against the biodiversity controls and legislation applicable to the site. A statement summarising the overall direct, indirect, ongoing and cumulative impacts of the proposal on biodiversity values of the subject site and locality, with specific reference to impacts to threatened entities and important wildlife habitat.

* Note: In some cases, a letter-style report may be sufficient where impacts are considered to be of a minor nature. Work with your ecologist to determine the most appropriate approach.



Guideline 2

Biodiversity Development Assessment Report



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What is a Biodiversity Development Assessment Report?

A Biodiversity Development Assessment Report (BDAR) is a report required under the NSW Biodiversity Conservation Act 2016 due to a proposal triggering the Biodiversity Offsets Scheme (BOS). A BDAR outlines how a proposal has and can avoid/minimise potential impacts, and identifies the number and type ('class') of biodiversity offset credits required to achieve a standard of 'no net loss' of biodiversity.

When is a BDAR required?

A BDAR is required for any development proposal that triggers entry into the BOS by exceeding one or more of the following thresholds:

1. Where there is native vegetation clearing or a prescribed impact (see Section 6.1 of the BC Reg.) to land on the **NSW Biodiversity Values Map**, including the Little Penguin 'Area of Outstanding Biodiversity Value' (AOBV; formerly Critical Habitat)
2. Where a **Test of Significance** (or 'five part test') has been undertaken in accordance with Section 7.3 of the BC Act, and has determined that the proposal is likely to have a significant impact on a threatened species or ecological community.
3. Where the area of native vegetation to be impacted is greater than the site's applicable **area clearing threshold**. This threshold is determined by the property's minimum lot size.

For more information on the triggers of a BDAR, visit the NSW DPIE **website**.

Who can prepare a BDAR?

A BDAR can only be prepared by a person accredited (under section 6.10 of the BC Act) to apply the **Biodiversity Assessment Method (BAM)**. Visit the list of **accredited assessors** or alternatively ask your ecological consultant if they are an accredited assessor when planning your DA.

What is required in a BDAR?

The requirements of a BDAR are outlined in the **BAM**. The BAM is an assessment manual that provides a consistent method for the assessment of biodiversity, including assessing certain impacts on threatened species and threatened ecological communities, their habitats, and impacts on biodiversity values. Council recommends preparation of BDARs consistent with the NSW Government's template - <https://www.environment.nsw.gov.au/research-and-publications/publications-search/guidance-for-the-biodiversity-development-assessment-report-template>.

Serious and Irreversible Impacts

The concept of **Serious And Irreversible Impacts (SAIL)** is a central component of the NSW Biodiversity Offsets Scheme. It is about protecting threatened species and threatened ecological communities that are at greatest risk of extinction.

Under the NSW BC Act, a consent authority cannot approve a development that is likely to have a Serious and Irreversible Impact on threatened species or ecological communities

Biodiversity Values Map review

If your property is included on the Biodiversity Values Map, you can apply to the NSW Department of Planning, Industry and Environment (DPIE) for a **Biodiversity Values Explanation Report**. This report provides detailed information about the different data layers applying to a property and explains the basis for inclusion of land on the Biodiversity Values Map.

If you believe that the Biodiversity Values mapping for your property is incorrect, you can also apply to DPIE for **a review**.

Submission of a BDAR

If your development triggers entry into the BOS by way of one or more entry thresholds, a BDAR must be submitted to Council with the DA.

Accredited assessors who are preparing and submitting BDARs must add Council as a 'case party' in the Biodiversity Offsets and Agreements Management System (BOAMS).

How can I avoid and minimise impacts to biodiversity?

Measures to avoid and minimise impacts to biodiversity must be demonstrated in any DA submitted to Council.

Appropriate measures to achieve this include:

- Avoid impacting native vegetation in any areas mapped within the NSW **Biodiversity Values Map** published by the NSW Department of Planning, Infrastructure and Environment (DPIE);
- Avoid impacts to any areas identified as a Threatened Ecological Community (TEC);
- Where safe, avoid removing large native trees, hollow-bearing trees or dead trees with hollows or cavities as they provide vital habitat for native fauna;
- Where permissible, opt for increasing the height of the proposed development rather than expanding the development footprint if an increased footprint is likely to impact native vegetation;
- In bush fire prone areas, locate or orientate your dwelling to maximise the distance between the dwelling and bush fire risks.



Grevillea caleyi. Image credit: Ben Fallowfield



Guideline 3

Biodiversity Management Plan



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Biodiversity Management Plan

Background

The purpose of a Biodiversity Management Plan (BMP) is to assist in the protection and management of important native vegetation and fauna habitat on a development site.

The aim of a BMP is to provide a schedule of impact mitigation measures along with ongoing conservation, restoration and maintenance activities to allow for the long-term maintenance of bushland and biodiversity values on the site. Most actions in the BMP will need to be implemented prior to the release of an occupation certificate.

Who can prepare and deliver a BMP?

A BMP must be developed and implemented by suitably qualified and experienced person

When is a BMP required?

Council may request a BMP prior to a development consent to assist in the management of impacts, or as a requirement for a Controlled Activity Approval under the Water Management Act 2000.

In many cases, any application which triggers entry into the Biodiversity Offsets Scheme (BOS) may require a BMP in addition to a Biodiversity Development Assessment Report (BDAR).

Task	Responsibility and relevant qualification required
Preparation of a BMP	An ecologist who is accredited to apply the NSW Biodiversity Assessment Method; or NSW Ecological Consultants Association member; or For vegetation management only – Certificate III in Conservation and Land Management (Natural Area Restoration) or equivalent
Role as Project Ecologist during BMP implementation	Qualified practicing ecologist preferably with membership to the NSW Ecological Consultants Association
On-ground works required by a BMP	For supervision of on-ground works such as weed removal, bush regeneration and revegetation – a minimum two years experience supervising bush regeneration works, and Certificate III in Conservation and Land Management (Natural Area Restoration) or equivalent To undertake works – Certificate II in Conservation and Land Management (Natural Area Restoration) or equivalent



Technical requirements of a BMP

A BMP must contain sufficient information to allow bush regenerators to prepare a quotation for its implementation. At a minimum, the following information is to be included:

Chapter	Required Information
Introduction	<ul style="list-style-type: none">• Identification and description of the site including Lot, DP and street address.• Identification and description of proposed management zones to be included in the BMP.
Management zones	<ul style="list-style-type: none">• A description and map of each proposed management zone, including existing bushland condition and significant environmental features.• Clear and achievable objectives for each zone.• Detailed management actions proposed to achieve each objective.• Identification of any retained native vegetation on the map
Management actions	<ul style="list-style-type: none">• The BMP must specify which management actions will be undertaken, for example:<ul style="list-style-type: none">» Installing a nest box» Pre-clearing and clearing procedures» Weed removal» Replanting» Fencing and tree protection» Erosion and sedimentation controls» Seed collection» Habitat salvage
Work schedule/GANTT Chart	<ul style="list-style-type: none">• A work schedule or GANNT chart outlining the timing and responsibility for delivery of management actions.• The BMP should have a maintenance period of no less than five years unless specified by Council, and must include the following delivery stages:<ul style="list-style-type: none">» prior to commencement» prior to issue of construction certificate» during construction'» prior to issue of occupation certificate» ongoing. <p>Where possible, all works must be scheduled 'prior to issue of construction certificate'</p>
Performance indicators	<ul style="list-style-type: none">• Meaningful performance indicators should be identified for each management action.• For smaller sites, performance criteria may be limited to photo point monitoring undertaken by the owner. If this option is used, photo points must capture all management actions.• Copies of annual monitoring reports are to be provided to Council's Bushland & Biodiversity Team at: biodiversity.planning@northernbeaches.nsw.gov.au
Photo monitoring points and baseline photographs	<ul style="list-style-type: none">• Baseline photo points to be included, taken at the time of the BMP preparation to track progress of site management.
Figures	<ul style="list-style-type: none">• A map showing site boundaries and each proposed management zone• A detailed weed density map• A map showing the location and direction of photo points
Tables	<ul style="list-style-type: none">• A list of Priority and environmental weeds identified on the site• A list of suitable local native species for planting on site (where applicable)• Minimum planting densities for groundcovers, understorey, mid-storey and canopy



Guideline 4

Impact Mitigation Measures

Impact Mitigation Measures

Background

Council is committed to protecting, enhancing and restoring local bushland and biodiversity and the unique value they have. Part of this commitment is ensuring that new developments are consistent with the principles of ecologically sustainable development and are designed to first **avoid** and then **minimise** impacts upon bushland and biodiversity. **Mitigation** measures may then be considered to address any residual impacts.

This guideline must be referred to during the preparation of a Flora and Fauna Assessment (FFA), Biodiversity Development Assessment Report (BDAR) or Biodiversity Management Plan (BMP).

When are impact mitigation measures required?

Impact mitigation measures are required whenever an **unavoidable** impact will occur. It is important to note that Council may not support the application of mitigation measures in lieu of available design solutions which avoid biodiversity impacts. For example, installing a nest box is not an equal substitute to retaining a naturally-developed hollow, and should only be considered as a last option.

Council may apply specific biodiversity mitigation measures as a condition of development consent, however applicants should seek to proactively integrate appropriate measures into their proposal and demonstrate these in the FFA, BDAR or BMP (whichever applies).

Who can undertake impact mitigation measures?

Biodiversity mitigation measures are to be implemented by suitably qualified and experienced persons.

Task	Responsibility and relevant qualification required
Pre-clearing survey	<ul style="list-style-type: none">Ecologist with at least 3 years' experience; or
Clearing supervision	<ul style="list-style-type: none">Registered and licenced wildlife carer with at least 3 years' experience
Nest boxes	
Exclusion zones	<ul style="list-style-type: none">Licensed and registered surveyor, and/orEcologist with at least 3 years' experience.
Sensitive clearing for Asset	<ul style="list-style-type: none">Bush regenerator, and/or
Protection Zones	<ul style="list-style-type: none">Qualified arborist
Nest boxes	<ul style="list-style-type: none">Installation by experienced and qualified persons is highly recommended (i.e. Working at Heights accredited).

Additional sources of information

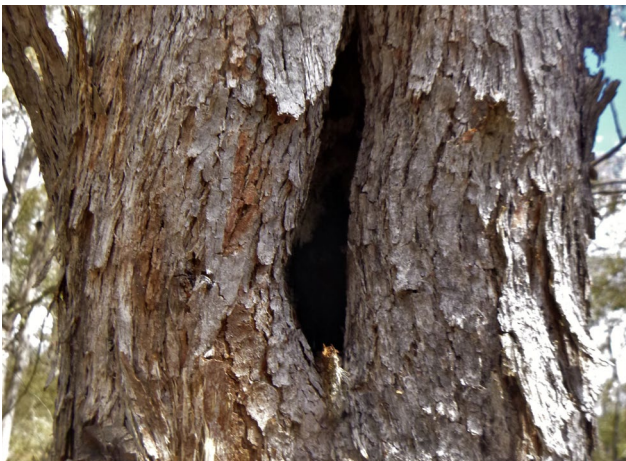
This guideline offers best-practice methods, however other measures may be proposed based on other best-practice guidelines such as:

- Road and Traffic Authority (RTA) **Biodiversity Guidelines**
- Local Land Services **Build your own Wildlife Nest Box**

Potential mitigation measures and how to implement them

Measures provided below are considered best-practice, however may not be suitable for all sites. Please note that Council may apply conditions of consent which differ from the mitigation measures outlined below, depending on site-specific characteristics and the nature of the development.

Measure	When is this required?	Timing	Process
Pre-clearing surveys	<p>Important biodiversity values occur on the site including:</p> <ul style="list-style-type: none">• Threatened species and ecological communities• Hollow-bearing trees• Bird nests or possum dreys• Escarpment, including caves and crevices• Dense shrubbery or native grass tussocks• Aquatic habitat, including soaks, dams and creeks.• Significant vegetation clearing is required, and there is a high risk that a threatened species may be found within vegetation to be cleared.	No more than seven days prior to clearing commencement	<ul style="list-style-type: none">• Habitat features are to be demarcated using high visibility flagging tape. Spray paint may be used but is not required• Habitat is to be inspected for occupying fauna. Disused nests are to be carefully dismantled or relocated prior to clearing• A concise letter report is to be prepared and provided to Council that includes:<ul style="list-style-type: none">» A list of habitat features identified» A list of threatened flora and fauna identified» A list of priority weeds identified» A map detailing the locations of habitat, threatened species and weeds» Recommendations to manage any of the above features identified, and» Photographs of significant findings <p>Any suspected Aboriginal Heritage finds must be immediately reported to Council, and NSW DPE - Environment and Heritage</p>



Tree hollows are important for wildlife habitat



Habitat features to be retained should be demarcated from work areas

Measure	When is this required?	Timing	Process
Exclusion Zones	<p>Establishment of temporary exclusion fencing may be required when:</p> <ul style="list-style-type: none"> • Approved vegetation clearing limits are not already clearly delineated by permanent fencing or natural landscape boundaries (e.g. cliff face) • Environmental values within the approved clearing area must be retained • Signage may also be required to inform workers or members of the public of the exclusion zone 	<p>Prior to commencement</p> <p>Temporary exclusion fencing is to be removed following completion of works</p>	<p>The type of exclusion fencing will depend on the nature of the biodiversity asset to be protected</p> <p>Where clearing limits require delineation, high-visibility bunting is to be used.</p> <ul style="list-style-type: none"> • Where a biodiversity feature within the approved clearing limits is required to be retained, red and white hazard tape is to be used <p>Exclusion zone fencing requiring star pickets must be established outside tree protection zones (in accordance with Australian Standard AS 4970-2009 Protection of trees on development sites) and following any recommendations by the project arborist</p>
	<p>Establishment of permanent exclusion fencing or bollards may be required when:</p> <ul style="list-style-type: none"> • Sensitive values have been identified on site and require protection • the boundaries of APZs and retained native vegetation must be delineated (generally for larger properties) 	<p>Prior to any vegetation clearing works OR following removal of temporary fencing</p>	<ul style="list-style-type: none"> • Permanent boundaries are to be surveyed and marked on the ground before installing permanent fencing or bollards • Bollards are to be installed at regular intervals (e.g. 5 – 10m). Bollards should be non-combustible materials • Permanent fencing should be 'fauna friendly' (e.g. not barbed wire) and built of non-combustible materials



Temporary delineation bunting

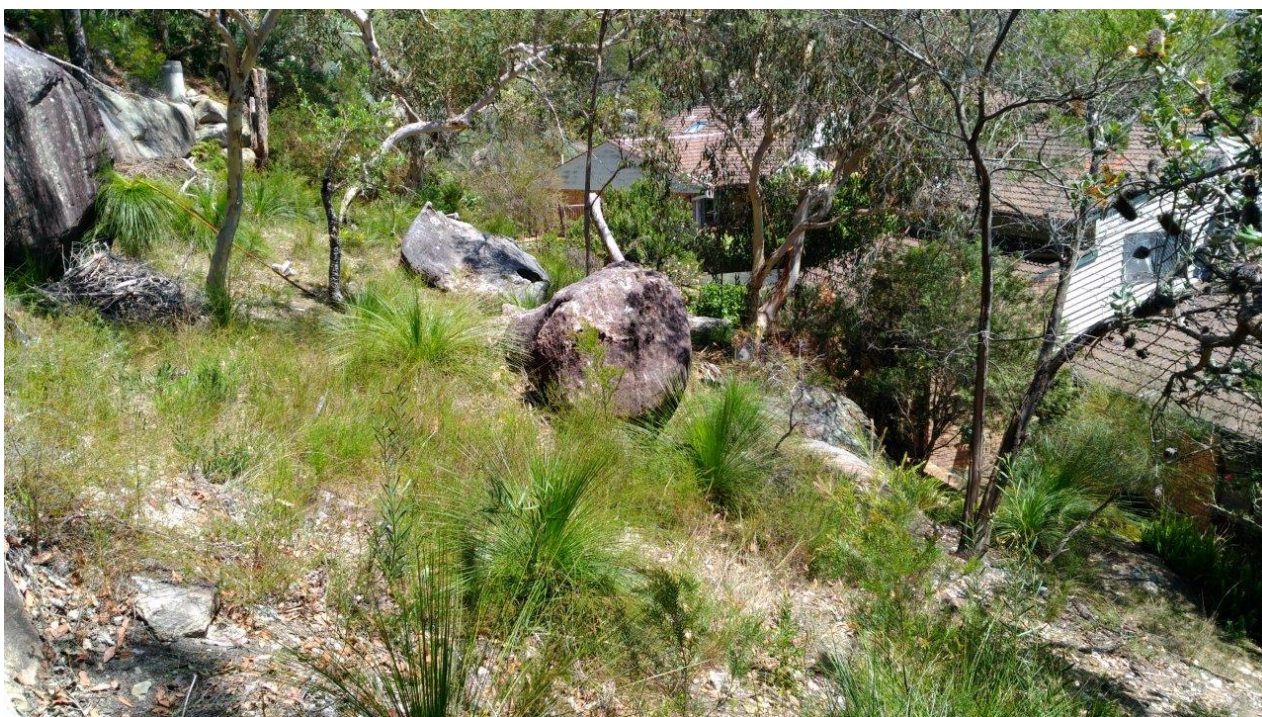


Permanent fencing to protect areas of retained vegetation

Measure	When is this required?	Timing	Process
Vegetation clearing supervision	<p>Project ecologist supervision of vegetation clearing may be required when clearing operations have potential to displace or harm protected fauna.</p> <p>Specifically:</p> <ul style="list-style-type: none"> When there is habitat within the development area that must be protected; If an ecologist cannot safely dismantle or exclude all habitat during the pre-clearing process. <p>It should be noted that while clearing supervision operations take place (during the day), hollow-bearing trees are likely to be occupied by nocturnal fauna, unable to self-relocate.</p>	<p>During vegetation clearance</p> <p>Where timing allows, clearing should be avoided during fauna breeding seasons (typically spring- early summer).</p>	<p>A two-staged clearing process is to be undertaken:</p> <ul style="list-style-type: none"> Stage 1: Removal of non-habitat. Habitat trees are to be left standing overnight, to allow nocturnal fauna an opportunity to self-relocate prior to Stage 2 clearing. Stage 2: Removal of habitat trees. Habitat is to be inspected by climbing arborists or an ecologist prior to removal, and fauna unable to self-relocate are to be captured and relocated. <p>Following capture:</p> <ul style="list-style-type: none"> Healthy fauna are to be relocated by the attending ecologist in suitable nearby areas. Injured or juvenile fauna are to be taken to a nearby vet or transferred into the care of a registered wildlife carer. Any captured pest species are to be euthanised humanely by the attending ecologist and must not be released.



Measure	When is this required?	Timing	Process
Sensitive clearing for Asset Protection Zones	<p>When an Asset Protection Zone (APZ) has been approved and vegetation management is required.</p> <p>The level of vegetation clearing required to establish an approved APZ must be consistent with the following standards:</p> <ul style="list-style-type: none"> Any Inner Protection Area (IPA) is to be maintained at less than 15% cover but must not be cleared to less than 10% cover Any Outer Protection Area (OPA) is to be maintained at less than 30% cover and must not be cleared to less than 25% cover 	<p>Following consent from Council, subject to timing considerations (right)</p>	<p>Where your consent allows, clearing for APZs should incorporate the following measures:</p> <ul style="list-style-type: none"> Vegetation clearing should preferentially remove exotic species before any native vegetation is cleared Species diversity should be maintained in the canopy and mid-storey where possible i.e. if three tree species occur on the site, all three species should be retained where possible Slashing of native and groundcovers should be timed to allow seeds to set. This will assist in maintaining species diversity and soil health <p>The following biodiversity values should be prioritised for retention during establishment of APZs:</p> <ul style="list-style-type: none"> Threatened Ecological Communities (TECs) Locally native trees that are: <ul style="list-style-type: none"> » assessed as having a high Safe Useful Life Expectancy (SULE); and » remnant, large or hollow-bearing; or » located within a foreshore or riparian area; or » a preferred food resource or habitat for a threatened species (e.g. banksia for Eastern Pygmy-Possum). In special cases, exotic trees may be retained if they provide resources or habitat for a threatened species



Measure	When is this required?	Timing	Process
Nest boxes	<p>Installing nest boxes may be required to compensate for the removal of hollow-bearing trees.</p> <p>If the nest box type is not specified in the consent conditions, boxes must be selected to cater for native species known to occur within the Northern Beaches LGA.</p> <p>Nest boxes may be sourced from:</p> <ul style="list-style-type: none"> • Commercial suppliers • Volunteer organisations, such as a local Men's Shed • Constructed by you, following online guidelines such as those produced by Local Land Services found here. 	<p>Prior to any vegetation clearing works OR following removal of temporary fencing</p>	<p>Install nest boxes in line with the following:</p> <ul style="list-style-type: none"> • Height: At least three metres above ground-level, or at the same height as the removed hollow • Aspect: North-east to avoid hot afternoon sun • Location: On a native tree, as close as possible to the location of the original hollow-bearing tree • Density: Evenly spaced, with no more than a single box per tree or as advised by the Project Ecologist <p>Where possible, natural hollows should be salvaged and reinstated in nearby trees, rather than using artificial nest boxes</p>



Nest box for a small parrot



A salvaged and reinstated hollow