

Biodiversity Requirements for Development Applications



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We acknowledge the traditional owners of this land and elders past and present. We recognise Aboriginal people as the original custodians of the Northern Beaches.

Contact us

These guidelines have been prepared to assist applicants in meeting the legislative and planning requirements of their development. If you have any questions about these guidelines or how to protect biodiversity values on your property, please contact Council via the details below:

Phone: 1300 434 434

Email: council@northernbeaches.nsw.gov.au

Web: via our [online customer service form](#)

Disclaimer

While every reasonable effort has been made to ensure this document is correct at the time of printing, Northern Beaches Council disclaims any and all liability to any person in respect of anything or the consequence of anything done or omitted to be done in reliance upon the whole or any part of this document.

We have developed a set of guidelines to help applicants and ecological consultants meet the biodiversity reporting requirements when submitting a development application (DA). Designing your development with these guidelines in mind will help streamline the assessment of your DA and minimise the likelihood that additional information will be required.

You may need to refer to one or more of these guidelines, depending on the level of impact arising from your proposal:

- [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 development impacts to biodiversity values such as native vegetation, threatened species and threatened ecological communities.

Early planning and pre-lodgement advice

If you are planning a proposal which is complex or likely to impact upon important biodiversity values, you may wish to book a pre-lodgement meeting with Council. This allows you to discuss your proposal with relevant experts and obtain preliminary advice prior to lodging your DA. Contact **Council's Planning Enquiry Service**.

Understanding the different levels of assessment required

| Is the development footprint on the <u>Biodiversity Values Map</u> ? | Level of impact from proposal | Assessment required | Relevant Guide/s |
|--|---|---|---|
| | <p>The development will not impact upon any of the following:</p> <ul style="list-style-type: none"> • Five or more 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 Guideline 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 which do not require additional vegetation removal.</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 Guideline 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> <p>Compliance with relevant LEP/DCP biodiversity controls is to be addressed in any FFA.</p> | <p><u>Guideline 1</u> <u>Guideline 4</u></p> |
| | <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>Compliance with relevant LEP/DCP biodiversity controls is to be addressed in any BDAR.</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> | <p><u>Guideline 2</u> <u>Guideline 4</u></p> <p><u>Guideline 3</u> (if a BMP is required)</p> |
| 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' | | |

Important Note: Developments should always be designed and sited to avoid environmental impacts in the first instance. Assessment of impacts must consider direct and indirect impacts of the proposal, including clearing of vegetation within the development footprint and clearing requirement for the establishment of 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 (prescribed) trees.



Guideline 1

Flora and Fauna Assessment



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What is a Flora and Fauna Assessment?

Development Applications (DAs) and associated modifications 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.

When is an FFA required?

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

1. Is not located on the NSW Biodiversity Values Map; AND
2. Will impact upon one or more of the following:
 - Five or more native protected (**prescribed**) trees
 - A Threatened Ecological Community (TEC)
 - More than 50m² of native vegetation
 - 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 Eastern Hill, 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 values must be demonstrated in any DA or modification application. Important biodiversity values include large hollow-bearing or remnant trees, threatened ecological communities (TECs), threatened species habitat, aquatic habitats, vegetation communities and land identified on the NSW Biodiversity Values Map. Early discussions between your consultants (e.g. ecologist, arborist, landscape architect) during the design stage can help to ensure that impacts are appropriately avoided and minimised.

Example measures to protect important biodiversity values include:

- Locating the development within existing disturbed or developed areas. This may require a configuration of the design or a reduction in the footprint of the development.
- 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 natural values.
- In bush fire prone areas, locate or orientate your dwelling to minimise the impact of any required bush fire risk management measures (e.g. asset protection zones or new 10/50 clearing entitlements) on vegetation.
- In accordance with Planning for Bush Fire Protection 2019, any required APZs should be wholly contained to the property.
- Designing and locating the development to minimise the need for substantial excavation or ground disturbance.
- Where safe, retain dead trees with hollows or cavities as they provide vital habitat for native fauna, including many threatened species.
- Identify and mark off 'no go' areas on the site where native vegetation or other wildlife habitat will be protected during construction and after the development.
- Complying with the landscaping, open space and setback requirements that apply to your property.

| 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 (LEP and DCP) 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 (with coordinates where possible) 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 threatened ecological communities (TECs) known or likely to occur in the study area and locality; » Description, map and photographs of any Plant Community Types (PCTs) and TECs 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; any new 10/50 clearing entitlement, landscaping, and ongoing operation of the development. • Direct and indirect impacts may include: clearing and modification of vegetation (e.g. for APZs); 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 (including for any required APZs) 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 Guideline 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 when a proposal (i.e. a new DA or a modification) triggers 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 or modification application 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 for a BDAR, visit the NSW Department of Climate Change, Energy, the Environment and Water's (DCCEEW) 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)**. The BAM is an assessment manual that provides a consistent method for assessing biodiversity and the impacts of a development.

A list of accredited assessors is available on the **DCCEEW website**; alternatively, ask your ecological consultant if they are an accredited assessor when planning your DA.

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). Shapefiles and BAM plot data sheets are to be uploaded to the BOAMS case file.

What is required in a BDAR?

The requirements of a BDAR are outlined in the Biodiversity Assessment Method (BAM).

In addition to meeting the requirements outlined in the BAM, the BDAR must:

- be certified (signed) by the accredited assessor as compliant with section 6.15 of the BC Act within 14 days of finalisation of the credit reports
- include all finalised credit obligation reports generated in the BAM Calculator (BAM-C)
- be submitted to Council within 14 days of finalisation of the BAM-C reports
- address the proposal's compliance with applicable LEP and DCP biodiversity controls.

Council encourages assessors to utilise the BDAR template available on the DCCEEW website.

Serious And Irreversible Impacts (SAlls)

The concept of Serious And Irreversible Impacts (SAll) 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 SAll on threatened species or ecological communities.

Biodiversity Values Map review

If your property is included on the Biodiversity Values Map, you can apply to DCCEEW 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 DCCEEW for a **review**.

Modification Applications

Where a proposal triggers entry into the BOS, any future modification applications are likely to require an ecologist's statement or updated BDAR to confirm whether the modification will result in greater impacts and offset credit obligations.

How can I avoid and minimise impacts to biodiversity?

Measures to avoid and minimise impacts to biodiversity values must be demonstrated in any DA. Important biodiversity values include large hollow-bearing or remnant trees, threatened ecological communities (TECs), threatened species habitat, aquatic habitats, vegetation communities and land identified on the NSW Biodiversity Values Map. Early discussions between your consultants (e.g. ecologist, arborist, landscape architect) during the design stage can help to ensure that impacts are appropriately avoided and minimised.

Example measures to protect important biodiversity values include:

- Locating the development within existing disturbed or developed areas. This may require a configuration of the design or a reduction in the footprint of the development.
- 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 natural values.
- In bush fire prone areas, locate or orientate your dwelling to minimise the impact of any required bush fire risk management measures (e.g. asset protection zones or new 10/50 clearing entitlements) on vegetation.
- In accordance with Planning for Bush Fire Protection 2019, any required APZs should be wholly contained to the property.
- Designing and locating the development to minimise the need for substantial excavation or ground disturbance.
- Where safe, retain dead trees with hollows or cavities as they provide vital habitat for native fauna, including many threatened species.
- Identify and mark off 'no go' areas on the site where native vegetation or other wildlife habitat will be protected during construction and after the development.
- Complying with the landscaping, open space and setback requirements that apply to your property.





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. Actions in the BMP will need to be implemented in accordance with the conditions of consent, unless otherwise specified by Council.

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).

Who can prepare and deliver a BMP?

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

| 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 and/or accreditation under the BAM |
| 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 II in Conservation and Land Management or equivalent To undertake works – Certificate II in Conservation and Ecosystem Management 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 (including APZs and any existing or new 10/50 Code clearing entitlements) 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 otherwise specified by Council, and include a schedule for ongoing monitoring and reporting.• The following delivery stages are to be included in the BMP:<ul style="list-style-type: none">» prior to commencement» prior to issue of construction certificate» during construction» prior to issue of occupation certificate» ongoing. |
| 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@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. Coordinates for photo points are to be provided where possible. |
| Maps | <ul style="list-style-type: none">• A site map showing site boundaries, bush fire asset protection zones (APZs), any new 10/50 Code clearing entitlements, and BMP management zones including any proposed temporary or permanent fencing• A detailed map of vegetation communities, threatened species records/habitat and weeds• A map of 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



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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).

Who can undertake impact mitigation measures?

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

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).

| 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:

- Roads & Traffic Authority (now Transport for NSW) **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 DCCEEW's Heritage division.</p> |



Tree hollows are important for wildlife habitat
Image credit: Alex Graham



Habitat features to be retained should be demarcated from work area
Image credit: Alex Graham

| 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
Image credit: Alex Graham



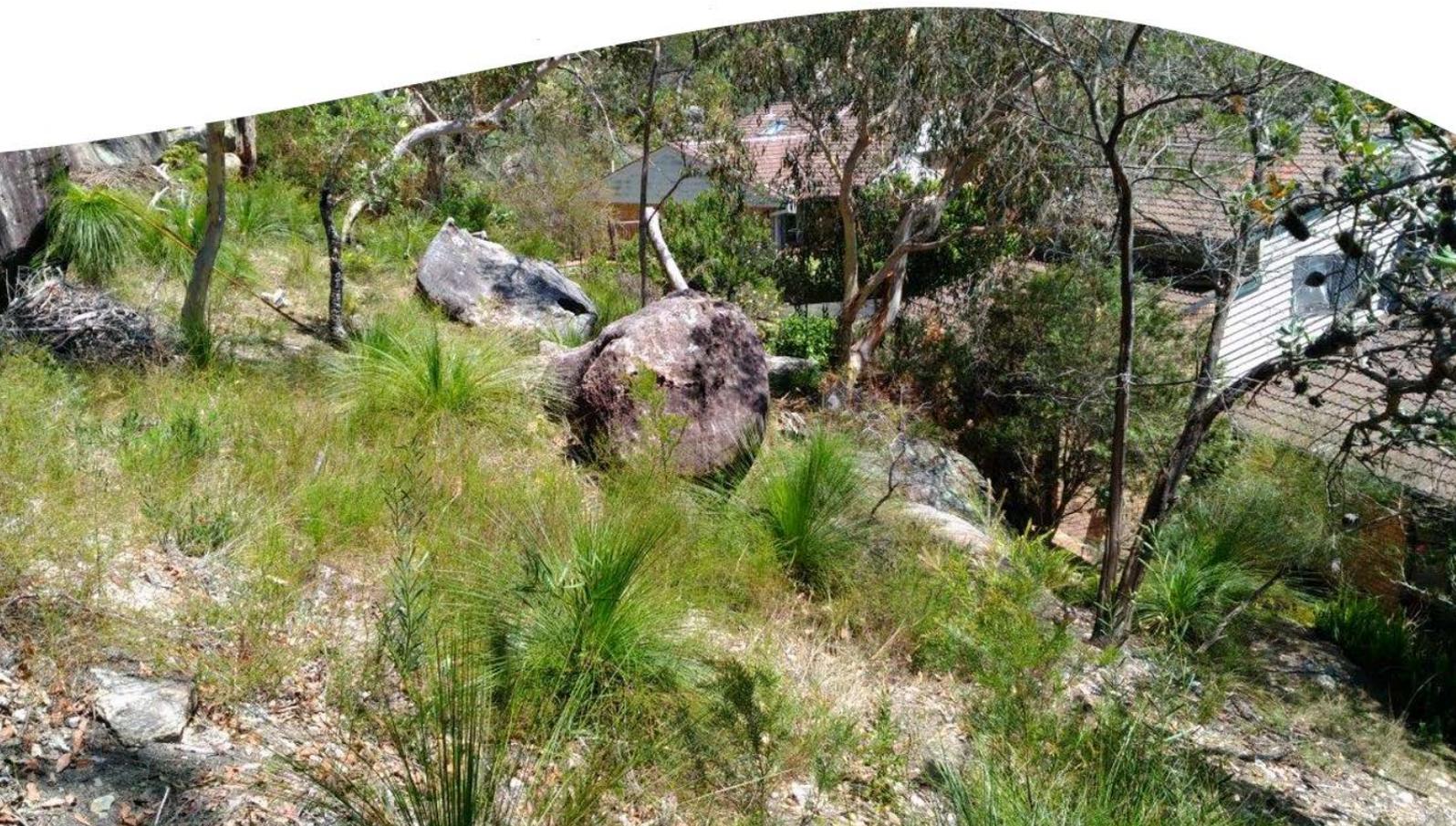
Permanent fencing to protect areas of retained vegetation.
Image credit: Alex Graham

| 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 to an appropriate nearby area by the attending ecologist or a licensed wildlife carer. • 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. |



Image credit: Alex Graham

| 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"> remnant, large or hollow-bearing; assessed as having a high Safe Useful Life Expectancy (SULE); located within a foreshore or riparian area; 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 Image credit: Alex Graham



A salvaged and reinstated hollow Image credit: Alex Graham

Helpful links

[Planning rules for your property](#)

[Northern Beaches planning controls](#)

[Council's Planning Enquiry Service](#)

[NSW Biodiversity Offsets Scheme](#)

[NSW Biodiversity Values Map](#)

[Threatened species test of significance guidelines](#)

[Find a BAM accredited assessor](#)

[Find a practicing ecological consultant](#)

[Aboriginal cultural heritage](#)

[Removing and pruning trees on private land](#)

[Planning for Bush Fire Protection 2019](#)

[10/50 Vegetation Clearing Code](#)

[Northern Beaches Local Priority Weed Management Plan](#)

[NSW WeedWise website](#)





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