

NOOSA PLANNING SCHEME POLICY 18— ECOLOGICAL ASSESSMENT GUIDELINES

Introduction

Council recognises the amenity and lifestyle enjoyed by residents and visitors is significantly dependent upon the protection and enhancement of the natural environment and ecological values found within the Shire. Council is strongly committed to protecting native flora and fauna by—

- a) maintaining biological diversity and ecological processes;
- b) protecting flora and fauna listed as either Endangered, Vulnerable or Rare under the Nature Conservation Act 1992 and/or the Environmental Protection and Biodiversity Conservation Act 1999, from direct or indirect impacts and from key threatening processes;
- c) protecting remnant and regrowth vegetation for various reasons including for wildlife corridors, water quality, buffers and habitat; and
- d) protecting areas of high scenic and historical or indigenous cultural heritage value.

The purpose of this Policy is to —

- a) identify some of the circumstances under which an ecological assessment may be required;
- b) ensure that the ecological attributes of areas are identified, protected and managed before, during and after development, thereby contributing to the Shire-wide protection of environmental values;
- c) assist applicants to adequately address the environmental and ecological aspects of the development site by ensuring a consistent approach for ecological assessments; and
- d) ensure flora, fauna and ecosystem information collected is provided in a format that allows easy input to relevant databases for use in improving knowledge of the Shire's ecological values.

1. Application

Without limiting its discretion under section 3.3.6¹ of the *Integrated Planning Act (IPA)*, Council may request information about an application in any circumstances that Council determines including if the application proposes development on premises that may have one or more of the following features—

¹ s3.3.6 of the IPA - Information requests to applicant (generally)

- a) supports native vegetation (remnant and/or regrowth);
- b) the potential to support rare, threatened, migratory or other significant species²;
- c) located in or adjacent to a protected estate (a national park, conservation park, state forest, etc.);
- d) located within a water supply catchment area or in close proximity to a stream, river wetland or waterway; or
- e) the site is considered part of a critical habitat area or a linkage in a vegetation/wildlife corridor³.

2. Relevant Reference Documents

The following reference documents should be consulted in conjunction with Ecological Assessments within Noosa Shire—

*The Noosa Plan
(Planning Scheme for
Noosa Shire):*

- Particular attention should be given to the relevant Locality Plan and associated overlay maps and also PART 13 of The Noosa Plan with respect to the Biodiversity Overlay sections.
- *Table 13.1* deals with assessment categories and relevant assessment criteria for the Biodiversity Overlay; and
- *Table 13.2* states the specific outcomes sought for the Biodiversity Overlay Code and states probable solutions for code assessment development.

*Vegetation of Noosa
Shire (Edition 2):*

This report outlines the vegetation communities and associated intrinsic, extrinsic and comparative values of vegetation communities. This report has been prepared to supplement the Council's vegetation mapping for the Shire and to provide a strategic approach for the management of floral biodiversity within the Shire.

*Fauna & Its Associated
Biodiversity Values in
Noosa Shire:*

This report has been prepared to identify fauna species (including Rare and Threatened) and determine the potential for fauna species to occur in different regional ecosystems within Noosa Shire. This report also outlines the fauna species that are considered Regionally and Locally Significant for Noosa Shire.

*Bushland Fire
Management Plan for
Noosa Shire Council:*

The purpose of the management plan is to assist in the management and conservation of biodiversity within Noosa Shire by establishing appropriate ecological fire management practices. Bushfire hazard ratings are assessed against each regional ecosystem for the Shire. The management plan also considers the management of life and property associated with bushfires.

*Networks based on
Landform, Landscape,
Aesthetic and
Environmental Values in
Noosa Shire:*

This planning study identifies open space networks based on landforms and landscapes that characterise Noosa Shire, and the aesthetic and environmental values of those features. It identifies particular open space features and values and the land uses that would be likely to conflict with those values. It maps open space linkages based on ranges, waterways, critical vegetation and wildlife corridors.

² Refer to the report "Fauna and its Associated Biodiversity Values in Noosa Shire"

³ Refer to "Networks based on Landform, Landscape, Aesthetic and Environmental Values in Noosa Shire (1996)" and Schedule 5 Map 4 of The Noosa Plan.

3. Permits and Qualifications of the Consultant

The consultant(s) undertaking the Ecological Assessment must have appropriate qualifications in Environmental Science, Botany, Zoology, Ecology or another related discipline. The consultant(s) must also have demonstrated experience in undertaking flora and fauna surveys, assessing regional ecosystems, and conservation, ecology and biodiversity assessments and preferably within the South-east Queensland Bioregion.

Persons undertaking ecological assessments must have the appropriate permits from the Environmental Protection Agency and the Animal Ethics Committee and must be registered with the Department of Primary Industries before undertaking ecological surveys. Undertaking ecological surveys without these permits is in breach of the Animal Care and Protection Act 2001. All reports submitted from studies undertaken in accordance with this policy must demonstrate compliance with these requirements;

Under the permit requirements, persons undertaking research/survey must provide detailed information of any rare or threatened species, which are found on the site to the Environmental Protection Agency (EPA). The EPA collects flora and fauna records to store on its Nature Search Wildnet database.

4. Level of Detail Required

4.1 Survey Period

- a) All ecological assessments are to be conducted over 4-5 days and nights unless otherwise specified by Council. For larger sites and developments, a greater ecological assessment and timeframe may be required
- b) Requests to undertake a lesser level of assessment than that specified in this document will be a matter for negotiation between the applicant and Council's Manager Environmental Services, based on the potential environmental impact of the particular development proposed and the environmental characteristics of the site.
- c) The study area is to include the maximum area likely to be affected by the construction and ongoing operation of the proposed development. The area outside the development area on the site is also to be incorporated into the field survey, and in some instances it may be necessary to also include areas surrounding or adjoining the property. The survey dates and weather conditions during the survey period should also be recorded.

4.2 Community Consultation

It is recommended that local naturalists and other people who are likely to be able to provide further detailed information about the ecological values of the study area (eg: members of local environmental or catchment groups) are consulted during the preparation of the Ecological Site Assessment.

4.3 Past records and Database searches

Past records, particularly of rare, threatened or significant species, that have been recorded in the general vicinity should be referenced and documented in the report. This in turn will provide a basis for specific targeted searches for a particular species. Records include research reports and databases such as Nature Search (Wildnet), Queensland Museum, Queensland Herbarium, etc.

4.4 *Site Characteristics*

- a) An accurate, clear description of the site's location is important to enable it to be identified by other recorders. Data recorded for the location of the site include—
 - i plain English description using local points to locate the site eg. street corners, shopping centres etc. This acts as a cross-reference for the other methods of recording the site's location;
 - ii an AMG description of the site for use in GIS based data systems; and
 - iii Lot on plan description of the site.
- b) Data recorded for the physical nature of the site include:
 - i slope;
 - ii aspect;
 - iii waterways and wetlands;
 - iv position in the terrain; and
 - v soils and geology.

5. **Flora Assessment**

5.1 *Aim*

The aim of flora assessment is to assess and document the flora species and floral associations of the site.

5.2 *Methods*

- a) Following an initial assessment of the study area, plot or transect based survey methods should be used which cover all vegetation communities and, within these, all microhabitats (e.g. gullies, ridges etc). Target species (Rare, Threatened and Significant species) and their associated habitat should be thoroughly searched for the presence, extent and condition of these potential species. Species listed under the *Nature Conservation Act 1992* and/or the *Environmental Protection and Biodiversity Conservation Act 1999* should be clearly stated within the report. The survey work should be supplemented by undertaking searches of available literature and flora databases
- b) Due to the variability of structure, species composition and abundance in vegetation communities, it is usually necessary to sample a community several times. Sampling to include seasonal variations may be necessary to collect a full list of annuals, such as herbs and grasses or other cryptic species, which may be more distinctive during fruiting/flowering periods; and
- c) Plant identification should be undertaken for each vegetation association, recording any target species and including exotic species. Where possible, flora should be identified and recorded in the field down to a genus level. Any plant species that have not previously been recorded in Noosa Shire (reference *Vegetation of Noosa Shire Edition 2* report) should be noted as such. Any unconfirmed flora species should be sent, using the appropriate methods, to the Queensland Herbarium for positive identification.

5.3 *Outputs—*

- a) List all flora species (terrestrial and aquatic) and abundances of flora species that are currently on the site;
- b) List of target species (Rare, Threatened or Significant) which have a potential to utilise the site;
- c) Identify and interpret rare, threatened and significant species presence and/or absence from the target species for the site;
- d) Identify and describe vegetation associations;
- e) Describe the structural and spatial floral diversity;
- f) Detail the level and extent of weed infestation and/or disturbances; and
- g) Assessment of the extrinsic values.

6. **Vegetation Community Assessment**

6.1 *Aim*

The aim of Vegetation Community Assessment is to interpret and classify the Regional Ecosystems and assess the broader biodiversity values (local, regional, state) of the study site.

6.2 *Methods*

a) **Regional Ecosystems**

The Regional Ecosystems of the site should be classified from detailed field assessments of the vegetation community and geology (Landzone) and the current Regional Ecosystem mapping. The survey should seek to confirm the current Regional Ecosystem mapping. Where the field assessment identifies anomalies in regional ecosystem mapping, or provides detailed assessment of the site with a corresponding increase in the level of detail relating to vegetation communities on the site, a revised map showing the proposed classification of vegetation communities and the rationale for the changes must be provided. The updated descriptions of Regional Ecosystems and their associated conservation status can be accessed from the Environmental Protection Agency (EPA) website.

Regrowth vegetation should also be assessed and mapped for the site. The assessment of the regrowth is to include—

- i A detailed floristic assessment;
- ii The estimated age of the vegetation; and
- iii A predicted timeframe for the regrowth to be considered remnant vegetation according to the Queensland Herbarium guidelines.

b) ***Biodiversity Assessment/Values***

When assessing the broader biodiversity values, the *EPA SEQ Biodiversity Planning Assessment* should be consulted. The *Biodiversity Planning Assessment* incorporates the *EPA Biodiversity Assessment Mapping Methodology (BAMM)*. The final rating system from the *Biodiversity Planning Assessment* gives a significance rating of State, regional or

local/other value. The *Biodiversity Planning Assessment* incorporates biodiversity values such as—

- i habitat for Endangered, Vulnerable or Rare (EVR) species;
- ii ecosystem value;
- iii tract size;
- iv relative ecosystem size;
- v condition;
- vi ecosystem diversity;
- vii context and connection;
- viii core habitat for priority species;
- ix special biodiversity values;
- x corridors; and
- xi threatening process.

c) The Noosa Plan – Biodiversity Overlay Category

The subject property should be located on the relevant Locality Plan maps contained within The Noosa Plan to determine if the subject property is captured by any attribute associated with the Biodiversity Overlay Map. Further information regarding the Biodiversity Overlay and the Specific Outcomes and Probable Solutions can be found in 'Part 13—Overlays' of The Noosa Plan.

6.3 *Outputs—*

- a) Interpret, delineate and map all vegetation communities on the site. The map should also indicate the locations of waterways and wetlands, including artificial wetlands or wetlands that may have been modified and do not contain the full complements of identifying species;
- b) Identify the regional ecosystems and associated conservation status acknowledged by the current Department of Natural Resources, Mines & Energy (DNRM& E) maps;
- c) Identify and classify the regional ecosystems according to the vegetation and landzone assessments and extensive fieldwork undertaken;
- d) A detailed floristic assessment should be undertaken for each regional ecosystem, encompassing structure and species composition, nature and extent of non-native plants, health and ecological condition, extrinsic values, etc;
- e) An assessment of the biodiversity significance (State, Regional, Local) in accordance with the *EPA SEQ Biodiversity Planning Assessment* and detail the information that derived the conclusion; and
- f) Assessment against The Noosa Plan Biodiversity Overlay Code.

7. Fauna Assessment

7.1 Aim

To assess and document the fauna species and faunal assemblages of the site.

7.2 Methods

- a) For fauna surveys, a minimum of four days and nights survey time is recommended to minimise any sampling duration influences within any given sampling period. At least one sampling site should be established in each broad ecosystem and habitat type. Additional seasonal survey sampling may need to be undertaken for cryptic, migratory and/or seasonal species, which may occur on the site;
- b) The survey work should be supplemented by undertaking searches of available literature and fauna databases. Species listed under the *Nature Conservation Act 1992* and/or the *Environmental Protection and Biodiversity Conservation Act 1999* should be clearly stated within the report. Further, any fauna species listed as Regionally or Locally Significant in the "*Fauna and its Associated Biodiversity Value in Noosa Shire*" should be referenced.
- c) Table 7.1 outlines the survey techniques, methods and the minimum duration that is needed to undertake a fauna survey.

Table 7.1—Fauna Surveys

Survey Technique	Methods	Minimum Duration
Diurnal Search	This involves intensive investigation of streams, ground layer (under logs, rocks and leaf litter), low vegetation (under bark and in tree stumps) and caves for target invertebrates and all amphibians, reptiles, bats and animal signs, eg. Scats, owl pellets, remains and tracks.	1-2hr/day during the middle of the day for each vegetation community
Pitfall Traps	A pitfall trap line should comprise 3 or more pits (20L containers) and appropriate drift fencing. At least one pitfall trap line for each habitat type/ vegetation community with a minimum of 3 pitfall trap lines for the site. Pitfall traps should be cleared early morning and late afternoon.	Four days and nights
Opportunistic Records	Covers all fauna outside the systematic survey times.	None
Spotlighting	Using a combination of high-powered spotlights and head torches to be carried out on foot only. This method surveys nocturnal fauna.	2hr/night for four nights
Elliot Traps	The Elliot transects should comprise of approximately 20 Elliots (varying sizes should be used). At least one Elliot transect for each habitat type/vegetation community with a minimum of 4 Elliot transects for the site.	Four days and nights
Wire Cage (possum) and Arboreal Traps	Each Elliot transect above should include 2 Wire Cage Traps and up to 5 platform mounted arboreal traps which are secured to selected trees.	Four days and nights
Bird Surveys	Transects are walked with 5-10 minutes spent at each spot. Birds are recorded indicating method of identification (ie call or visual observation). Surveys	1hr/day and night for 4 days and nights

Survey Technique	Methods	Minimum Duration
	are conducted for 1hr from dawn to early morning, 1hr at dusk to early evening and 1 hr during night for nocturnal species.	
Nocturnal Voice Playback and Call Recording	This techniques uses voice playback to determine the presence of species that may be difficult to physically observe in the field (eg owls and frogs)	1hr/night for 4 nights
Ultrasonic Bat Call Detectors and/or Harp Traps and Mist Nets	This device records the ultrasonic calls of micro chiropteran bats. For the capture of micro chiropteran bats	1hr/night for 4 nights 2hr/night for 4 nights
Hair Tubes	Different sizes of hair tubes should be left on site for up to two weeks as an additional method of mammal detection	Recommended
Scats, Tracks and other Traces search	Evidence of fauna can be determined from scats, tracks, scratches, bones etc.	1hr/night for four nights
Aquatic Bait Trap/Netting	Various methods of aquatic surveying should be undertaken where there is a water body on the subject site	To be undertaken when water body is present on site

- d) In addition to the methods identified in Table 7.1, specific methods may be required to target particular fauna species identified as potentially occurring within the study area, particularly rare, threatened and significant species.

7.3 *Information that may be requested*

- a) A detailed account of the methods used in the fauna survey and locations defined on a site map;
- b) List all fauna species (terrestrial and aquatic) and abundances that are currently on the site;
- c) Identify and interpret rare, threatened and significant species presence and absence from the target species for the site; and
- d) Assessment of the extrinsic values.

8. **Impacts and Recommendations**

8.1 *Planning Scheme Reference*

The Noosa Plan makes reference to Riparian Buffer areas, for the major waterways in the Shire, and native vegetation areas, referred to as either Environmental Protection or Environmental Enhancement. Environmental Protection, Environmental Enhancement and Riparian Buffer areas are depicted on the Biodiversity overlay maps (OM1.1 - OM9.1) associated with each Locality Plan in The Noosa Plan.

Ecological Assessment reports should address the Overall and Specific Outcomes of the Biodiversity Overlay Code in relation to the proposed development. Development that is consistent with the specific outcomes in section 13.7-13.9 complies with the Biodiversity Code.

8.2 *Assessment of Impacts*

In assessing proposed development which may impact on the Shire's biodiversity Council may consider using the "Decision Support Process (steps 1-5) for Assessing Proposed Changes/Intensification of Use in Areas of Nature Conservation Significance" (in **Appendix 2**), which has been sourced from the *Regional Nature Conservation Strategy for South East Queensland 2003-2008*, Environmental Protection Agency, September 2003. The full report can be accessed through the website: <http://www.epa.qld.gov.au/publications>.

The potential impacts of the proposed development should be outlined, especially with regard to vegetation clearing and impacts on Rare, Threatened and Significant species. The potential impacts should consider the design, construction and operational phase of the development.

The assessment of impacts shall provide a discussion of the biological requirements of the flora and fauna species that have been recorded from the site or are considered likely to occur on the site, and the implications of the development on the viability of the species and the ecosystem. Recommendations should address any measures or changes to the development design that may be required to avoid or mitigate any impacts of the proposed development during the design, construction and operation phases.

The report should discuss the expected impacts of the proposal on site. As a minimum, the report should also—

- a) Include recommendations to reduce impacts on surrounding lands;
- b) Include recommendations on how to avoid or minimise adverse impacts on remnant native vegetation and other areas of habitat significance through sympathetically designed development layout plans;
- c) Highlight areas for the retention and protection of remnant native vegetation and native fauna habitat;
- d) Highlight areas that should be buffered;
- e) Highlight areas that should be fenced;
- f) Highlight areas requiring weed control; and
- g) Highlight areas that should be monitored.

8.3 *Recommendations for Threat Abatement*

Recommendations for threat abatement of associated biodiversity values should address any measures or changes to the development design that may be required to avoid or mitigate any impacts of the proposed development during the design, construction and operation phases. These measures can include, but are not limited to, the following—

- a) Threat Abatement Plans;
- b) Species Recovery Plans;
- c) Conservation Management Plans;
- d) Environmental Management Plans;

- e) Fire Management Plans;
- f) Revegetation and Rehabilitation Management Plans;
- g) Sediment and Erosion Control Plans; and,
- h) Water Quality Management Plan.

8.4 *Potential Impacts*

Where a proposed development has the potential to impact on the Shire's biodiversity, Council may request measures, which may include one or more of the above Plans, to abate any potential impacts.

Appendix 1 provides a checklist of the critical information requirements of this policy.

POLICY HISTORY

PSP18 adopted by Council on 3 November 2005 and effective 3 February 2006.

APPENDIX 1: Check list

Names and qualifications of personnel undertaking the scientific survey;

Relevant permit numbers (EPA, DPI);

Noosa Plan – Biodiversity Overlay;

Rare, Threatened or Significant flora on site;

Rare, threatened or significant fauna on site;

Regional ecosystems and classifications (Conservation and Biodiversity Status);

BAMM classification;

Other significant information (i.e. National Estate Listing, RAMSAR Site, Wetland etc.)

APPENDIX 2: Decision Support Process (Steps 1-5)

Figure 24 Decision support process (Steps 1 and 2) for assessing proposed changes / intensification of use in areas of nature conservation significance

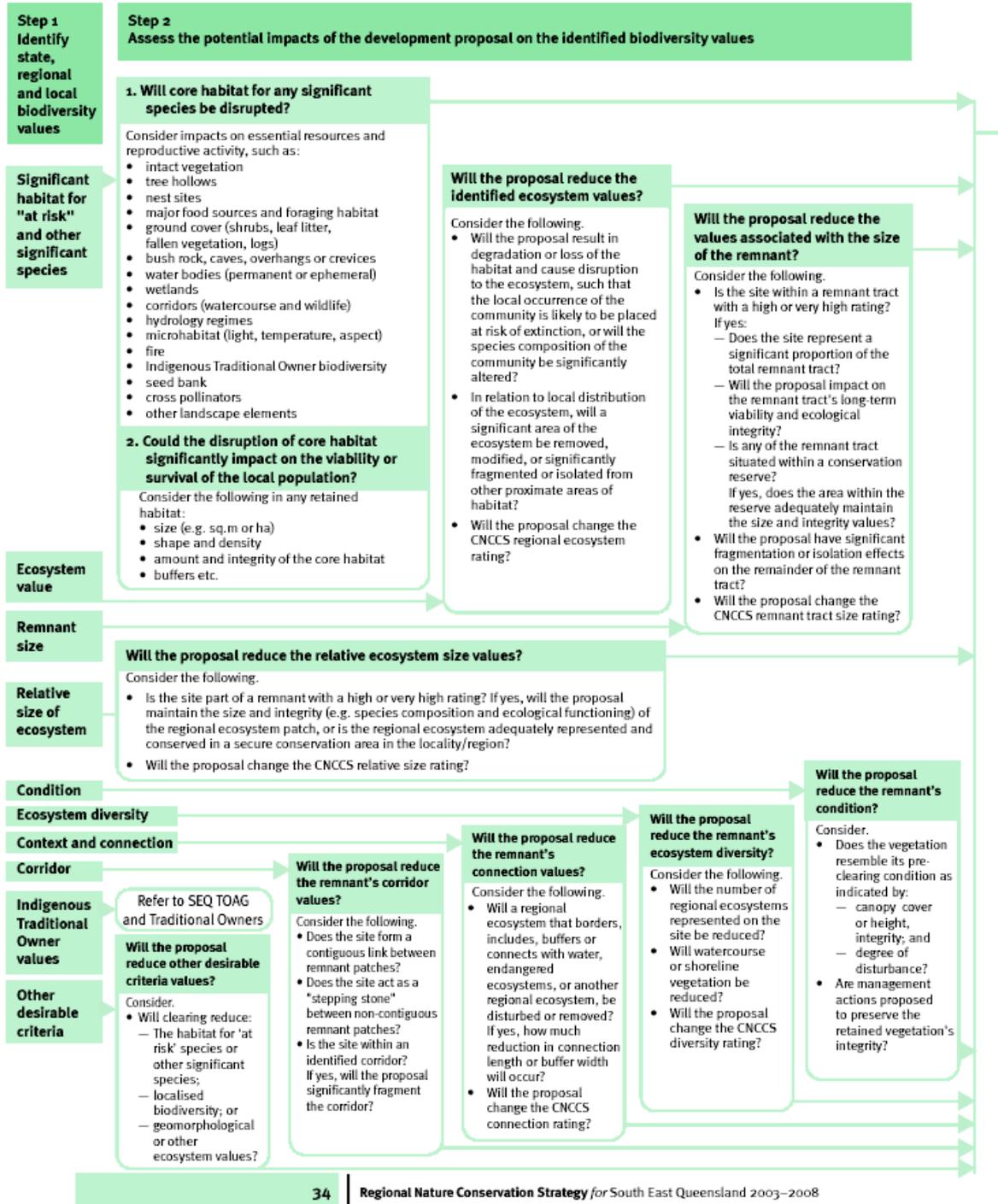


Figure 24 Decision support process (Steps 3,4 and 5) for assessing proposed changes / intensification of use in areas of nature conservation significance (continued)

