



# Proteaceae Dominated Kwongkan Shrubland: a nationally-protected ecological community

This guide is intended to help the public understand what the Proteaceae Dominated Kwongkan Shrubland ecological community is, why it is nationally protected, what the listing aims to achieve, and what the listing means for people in the region.

## In summary:

- The Proteaceae Dominated Kwongkan Shrubland ecological community is now listed as endangered and protected under Australia's national environment law, the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- The ecological community is found within the south coast region of Western Australia, and is dominated by flowering shrub species from the Proteaceae family (e.g. Banksias, Grevilleas, Hakeas).
- The national Threatened Species Scientific Committee found that the ecological community has undergone a severe reduction in integrity, and has a fragmented geographic distribution that means it is under a severe level of threat over the near future.
- The intent of the listing is to prevent its decline and to provide support to on-ground efforts that ensure its long-term survival and recovery. The Threatened Species Scientific Committee's **conservation advice** outlines a range of priority research and management actions that provide guidance on how to manage, restore and protect the ecological community.
- The listing promotes a co-ordinated, ecosystem-scale approach to threat abatement in the region and supports existing national protection of many threatened species that are found within the ecological community.
- Listing under the EPBC Act means that an activity that is likely to have a significant impact on the ecological community will need to be referred for an environmental impact assessment and approval.
- Routine property maintenance and land management practices carried out in line with laws and guidelines covering native vegetation are typically unlikely to require referral under national environment law. This includes most farming activities.
- The national environment law is triggered by activities that are likely to have a significant adverse impact on a listed ecological community; activities such as large new developments, works or infrastructures. For example, activities that involve permanently clearing large areas of intact and high-quality native vegetation.

## Background

Australia's national environmental law, the EPBC Act, protects what are known as Matters of National Environmental Significance. The Act is only triggered if a particular activity is likely to have a significant impact on any of these matters.

Threatened species and ecological communities are Matters of National Environmental Significance. The EPBC Act defines an ecological community as an assemblage of native species that inhabits a particular area in nature. They often correspond with types of native vegetation, such as a certain kind of woodland or forest or shrubland.

The native plants and animals within an ecological community have different roles and relationships that, together, contribute to the healthy functioning of the environment. Protecting native communities also protects ecosystem services such as good quality air and water; healthy soils; natural prevention or control of erosion and salinity; shelter for stock; and carbon storage. These all contribute to better productivity of our land and water, which benefits people and society.

Human settlements and infrastructures where an ecological community formerly occurred do not form part of the natural environment and are therefore not part of the ecological community. This also applies to sites that have been replaced by crops and exotic pastures, or where the ecological community exists in a highly-degraded or unnatural state.



Kwongkan shrublands near Hopetoun (Department of the Environment)



*Banksia speciosa* (showy banksia), a key species in some parts of the ecological community (Department of the Environment)

## What is the Proteaceae Dominated Kwongkan Shrubland ecological community?

The full name of the ecological community is the *Proteaceae dominated kwongkan shrublands of the southeast coastal floristic province of Western Australia*. Kwongkan (also known as kwongan) is a type of heathland found on the coastal plains of Western Australia. The name is derived from language of the Nyungar/Noongar people.

The key features of the ecological community are:

- The ecological community is mainly found within the Esperance Sandplains and Mallee bioregions with some patches occurring in the adjoining bioregions of south-west Western Australia (see Figure 1). Local government areas across this region are Albany City, Cranbrook Shire, Dundas Shire, Esperance Shire, Gnowangerup Shire, Jerramungup Shire, Kent Shire, Lake Grace Shire, Plantagenet Shire and Ravensthorpe Shire.
- The ecological community is typical of vegetation within some of the reserves across the region, such as Stirling Range National Park, Fitzgerald River National Park and Cape Le Grand National Park.
- The ecological community typically occurs on sandplains, occupying lower and upper slopes and ridges, as well as uplands across its range, where rainfall ranges from approximately 400 to 800 millimetres a year. It typically occurs on:
  - duplex soils and deep to shallow soils on the sandplains
  - sandy soils to clay loam, gravelly loam and loam on quartzite (e.g. The Barrens, Stirlings and Russell Range)
  - greenstone ranges (e.g. Ravensthorpe Range).



- Structurally, the ecological community may be described as proteaceous kwongan shrubland and heath, or mallee heath.
- Typically for this ecological community, plants from the family Proteaceae make up a large component of the flora, including plants from the genera *Adenanthos*, *Banksia*, *Grevillea*, *Hakea*, *Isopogon* and *Lambertia*. The actual Proteaceae species present in the ecological community is variable across its range.
- Widespread and characteristic species within the ecological community include:
  - *Banksia alliiacea*
  - *B. armata* (prickly dryandra)
  - *B. cirsioidea*
  - *B. media* (southern plains banksia)
  - *B. nutans* (nodding banksia)
  - *B. obovata* (wedge-leaved dryandra)
  - *B. sessilis* (parrot bush)
  - *B. speciosa* (showy banksia)
  - *B. tenuis*
  - *Hakea cucullata* (hood-leaved or scallop hakea)
  - *H. corymbosa* (cauliflower hakea)
  - *H. denticulata*
  - *H. drupacea*
  - *H. ferruginea*
  - *H. obliqua* (needles and corks)
  - *H. pandanocarpa*
  - *H. victoria* (royal hakea)
  - *Lambertia inermis*
  - *Beaufortia empetrifolia* (Myrtaceae)
  - *Xanthorrhoea platyphylla* (Xanthorrhoeaceae)
  - *Melaleuca striata* (Myrtaceae).
- Mallee eucalypt trees may be present at varying densities, but providing the vegetation is dominated by Proteaceae species, it is still classified as the ecological community.

The ecological community provides habitat for 45 plant and 15 animal species that are listed as nationally threatened, including:

- critically endangered plant species, such as: *Daviesia glossosema* (maroon-flowered daviesia), *Gastrolobium luteifolium* (yellow-leafed gastrolobium) and *Scaevola macrophylla* (large-flowered scaevola)
- threatened animals include the dibbler, heath mouse, Carnaby's black cockatoo, western bristlebird, western ground parrot, and western whipbird.

## Why is the Proteaceae Dominated Kwongan Shrubland ecological community important?

The region where the ecological community occurs has been identified as a global hotspot of biodiversity and is home to many unique plant species. The ecological community also provides habitat for a range of native birds, mammals, reptiles and other animals. Fifty-four plant and eighteen animal species that are listed as threatened, either nationally or in Western Australia, are known to occur in this ecological community.

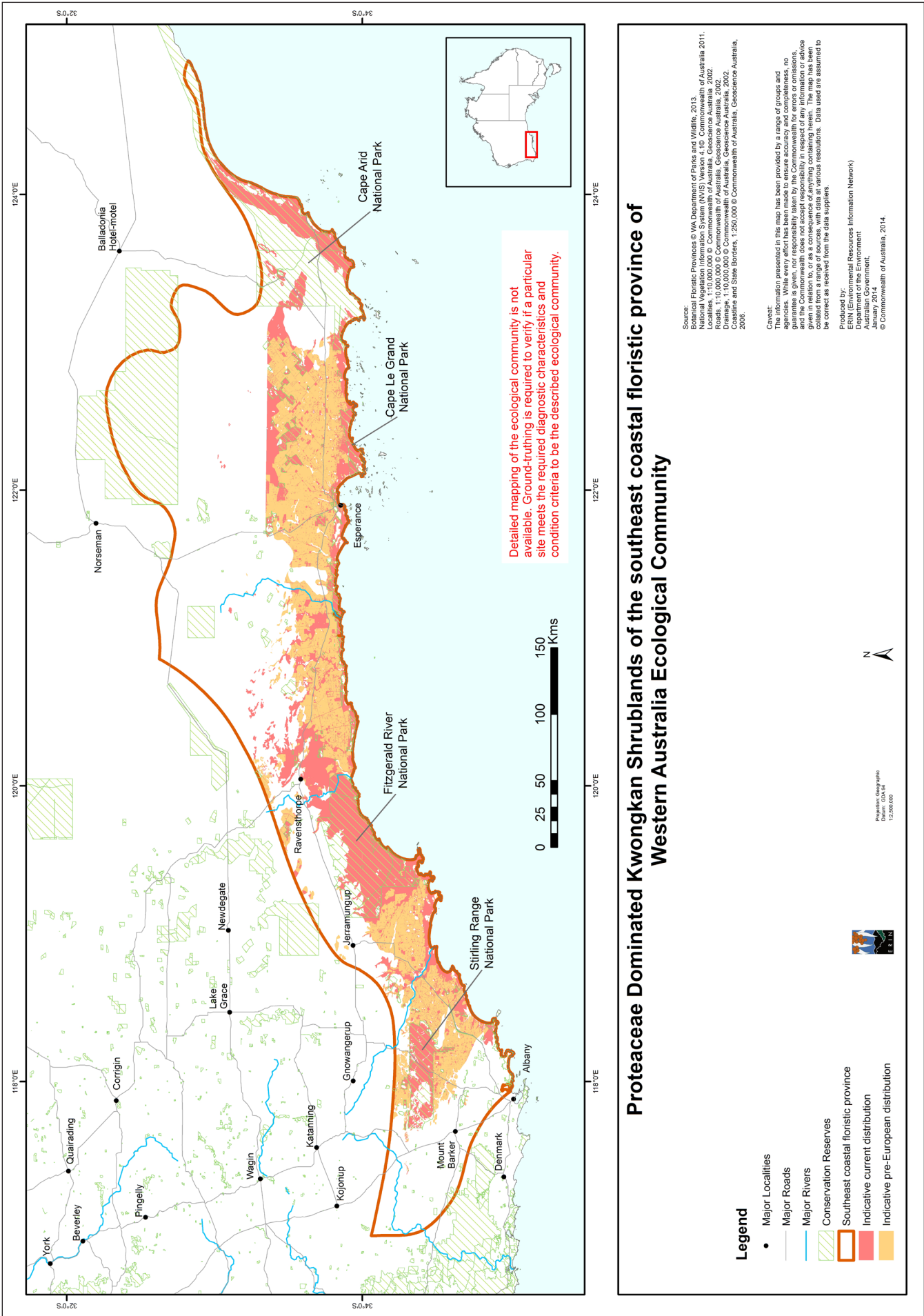
The country of the Nyungar/Noongar and Ngadju Aboriginal people, and their sub-groups or dialectal groups, cover the region where the ecological community occurs. These groups have a strong cultural connection to the ecological community and surrounding environment. The ecological community provides an important resource for Aboriginal people in the form of bush foods, medicines and materials for tools and other significant items. Many patches contain important sites such as ceremonial areas and law grounds.

A large portion of the ecological community has already been lost and remaining areas are vulnerable to the impacts of threats such as dieback due to *Phytophthora cinnamomi*, changing fire regimes, land clearing, invasive species, and climate change. Some of these threats are also affecting areas of the ecological community that occur in reserves. In many areas it now mostly exists as small and fragmented patches. Protection will contribute to a region that is better able to cope with environmental fluctuations and changes.



Fitzgerald River National Park and surrounding lands  
(Department of the Environment)

Figure 1: Location of the Proteaceae Dominated Kwongan Shrubland ecological community, showing indicative current and pre-European distribution.





Degraded roadside, showing loss of the ecological community on the left (Department of the Environment)



Loss of dominant tall structure due to dieback of *Banksia speciosa* (showy banksia), Cape Le Grand National Park (Department of the Environment)

## Why does it need national protection?

In January 2014, the Australian Government Minister for the Environment listed the Proteaceae Dominated Kwongan Shrubland ecological community after considering the advice of the Threatened Species Scientific Committee.

During a rigorous assessment, the scientific evidence supported as it met the eligibility criteria for listing as endangered under national environment law.

Across its range the ecological community has been grouped on a biological basis, bringing together vegetation across the region of similar structure that is dominated by proteaceous species. This forms a nationally unique ecological community that has common threats and management practices. Whilst the ecological community is likely to be present in several shires, it is all included within the South Coast Natural Resource Management (NRM) region, which allows for a co-ordinated NRM approach.

The ecological community is intolerant of frequent disturbance due to land modification and clearance. A reduction in the integrity of the ecological community is evident from observations of dieback due to plant pathogens, effects of altered fire regimes, weed invasion, fragmentation and the subsequent decline or changes to flora and fauna within the ecological community. A reduction in community integrity results in changes to both the species composition and ecological processes that maintain the ecological community. If these changes are ongoing, some native species may persist, but it could lead to the eventual loss of a naturally functioning ecological community overall.

The overall aim of listing is to prevent its decline and to provide support to on-ground efforts that ensure its long-term survival. The **conservation advice** outlines a range of priority research and management actions that provide guidance on how to manage, restore and protect the ecological community.

## What are the benefits of listing an ecological community as nationally threatened?

There are a number of benefits to listing ecological communities under Australia's national environment law:

- Listing an ecological community can help to protect the landscapes that provide connectivity, corridors and refuge essential to protect and improve the ecological function, health and biodiversity of the region. It can protect habitat critical for refuge and recruitment for threatened species and for other species that are under pressure in the region. In turn, this helps foster the ecosystem services associated with an ecological community.
- Listing threatened ecological communities helps protect them from future significant human impacts that may cause further decline. The aim of the national environment law is to ensure the matters of national environmental significance are given due consideration, along with broader economic, social and other issues in the planning of any large projects. Where possible, significant adverse impacts to the environment should be avoided, or the impacts mitigated, reduced or offset, when unavoidable.



- National listing encourages agencies and community/Landcare groups to access environmental funding opportunities for conservation and recovery works. The Australian Government has a variety of funding programs to encourage land managers to continue to conserve biodiversity and ecosystem services on their properties.
- A **conservation advice**, published at the time of listing, provides guidance and options for environmental decision-making, including rehabilitation and conservation initiatives in the region.
- In the case of the Proteaceae Dominated Kwongkan Shrubland ecological community, the listing will:
  - provide landscape-scale protection that complements existing national protection for threatened species that are found within the ecological community (e.g. the Fitzgerald Biosphere Recovery Plan)
  - protect the environmental values, including the ecosystem functions and services associated with the ecological community, which contributes to the long-term productivity of the landscape
  - provide a range of environmental amenity benefits that support tourism and recreation activities.



Regeneration following fire, Fitzgerald River National Park (Department of the Environment)

## What does the listing mean for landholders?

The national environment law is triggered if an action is likely to have a significant impact on the Proteaceae Dominated Kwongkan Shrubland ecological community. If a proposed action is likely to have such an impact, it would require:

- referral (determining if the action may have a significant impact on the ecological community)
- assessment (the scope of the assessment depends on the complexity of the proposed action and impacts)
- a decision on approval from the Minister (who considers the environmental, social and economic factors involved).

Social and economic matters may be taken into account for individual projects that may have a significant impact on the ecological community, through the EPBC Act approvals process. Strict timeframes apply to assessments to ensure decisions are made as quickly as possible.

The normal activities of individual landholders and residents will typically not be affected by a listing. Routine property maintenance, land management and other established practices are unlikely to have a significant impact and so do not typically require referral under national environment law, particularly if carried out in line with other national and state laws covering native vegetation.

For instance, the following actions are unlikely to trigger national environment law:

- ongoing grazing, horticultural or cropping activities
- maintaining existing fences, roads, internal access tracks and firebreaks
- maintaining existing farm gardens and orchards
- maintaining existing farm dams or water storages
- maintaining existing pumps and clearing drainage lines
- replacing and maintaining sheds, yards and other farm buildings
- controlling weeds and spraying for pests on individual properties
- small scale extraction of gypsum and lime for on farm use, as well as small scale gravel extraction for road works.

In all these cases impacts on important patches of the ecological community (e.g. high quality, important corridor for wildlife) should be avoided.

One of the major concerns with some activities is the spread of *Phytophthora* dieback, which has the potential for broader detrimental impacts to the ecological community. Activities in the region should therefore continue to be carried out with appropriate hygiene measures in place to prevent the introduction and spread of dieback (e.g. by cleaning boots, vehicles and machinery).

Whether or not an action is likely to have a significant impact depends upon the sensitivity, value and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts. The major activity that is likely to have a significant impact on the ecological community is permanently clearing large or otherwise important areas of intact or high-quality native vegetation. This might include, for example, major mining, residential, commercial or other industrial development, developing wind farms, building new roads or widening existing roads, or converting large areas into new pastures or cropping fields. To help reduce the significance of actions, the EPBC Act promotes the avoidance and mitigation of impacts from the early planning stage, wherever that is possible.

## Have activities previously been referred under the EPBC Act for this area?

Within the area of the Proteaceae Dominated Kwongkan Shrubland ecological community some developments and activities have previously been referred for consideration under the EPBC Act due to possible impacts on threatened species that are already nationally protected. No activity has been rejected outright, although some were approved with conditions to take better account of significant environmental impacts.

## Where can I get further information?

- The listing process: [www.environment.gov.au/topics/threatened-species-ecological-communities](http://www.environment.gov.au/topics/threatened-species-ecological-communities)
- The EPBC referral and approval process: [www.environment.gov.au/topics/environment-protection](http://www.environment.gov.au/topics/environment-protection)
- Australian Government natural resource management initiatives: [www.nrm.gov.au/](http://www.nrm.gov.au/)
- The Department's Community Information Unit: by phone on **1800 803 772** (freecall), or email at [ciu@environment.gov.au](mailto:ciu@environment.gov.au)
- The EPBC liaison officer with the National Farmers Federation: by email at [environment@nff.org.au](mailto:environment@nff.org.au)



Kwongkan shrublands at East Mount Barren, Fitzgerald River National Park (Department of the Environment)

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