

Capability Statement



Our Company

What began in Melbourne in 1993 with Lincoln Kern (Managing Director) operating as a sole proprietor, has grown into an incorporated company that providing on-ground indigenous vegetation management services as well as the provision of ecological and bushfire consultancy services.

From our office in Victoria, we provide our services to private landowners, small and large scale developers and private and public land managers.

Our mission is to deliver a range of services to survey, assess, manage, enhance and/or recreate indigenous vegetation and habitats in order to conserve indigenous biodiversity and manage bushfire risk. We achieve this by providing clients with assistance at all stages of planning and land management – from project conception, initial design and permit applications, to on-ground ecological restoration works to meet permit conditions if required.

Our ability to provide an integrated approach to projects is a key strength of Practical Ecology. It has made us one of the leading ecological restoration and consulting companies in south-eastern Australia.



Our Services

We provide a wide range of services that are tailored to meet the requirements of each client. Many of these are in response to policy and legislative requirements.

Practical Ecology specialises the provision of services in five core areas:

- Ecological Consulting
- Restoration, Land and Waterway Management
- Bushfire Management and Prescribed Burning
- Mapping and Geographical Information Systems (GIS), and
- Education and Training.

Further information on each of these service areas is provided below.

Ecological Consulting

Practical Ecology's ecological consulting team brings a wealth of experience and skills to projects requiring ecological expertise. They have an in-depth knowledge of the flora and fauna of south-eastern Australia and have an outstanding ability to manage projects for a wide variety of clients. We are able to provide baseline ecological information, identify opportunities and constraints, and provide a practical approach to the application of state and federal government legislation and environmental policy. Our ecological consultants specialise in:



Assistance with Planning and Approval Processes

Preparation of Flora and Fauna (Ecological) Assessments (and Bushfire Risk Assessments) as part of:

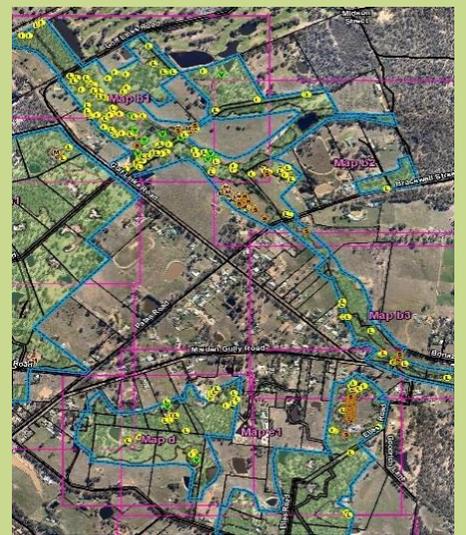
- Local Government Planning Permit Applications and their associated reporting and requirements
- Planning Scheme Amendments, including rezoning State and Federal approvals

Project Profile:

Maiden Gully Native Vegetation Precinct Plan

Practical Ecology completed a flora and fauna (ecological) assessment for the City of Greater Bendigo as part of the Maiden Gully Precinct Structure Plan (PSP). A Native Vegetation Precinct Plan (NVPP) was then subsequently prepared. The assessment area encompassed 260 h, including privately owned land as well as government road reserves and Crown Land.

The main objective of this study was to prioritise areas of vegetation and habitat for future retention and protection in the context of proposed development of the study area. Recommendations for the establishment of a new mixed use area that was largely residential, with remnant patches of native vegetation were provided. These areas aimed to buffer and complement adjoining public and private forested areas while enhancing existing vegetation and fauna habitat corridors.



Flora Surveys and Vegetation Assessments

Our team of botanists regularly assess study sites to:

- compile comprehensive plant lists
- undertake targeted flora surveys for significant species or weeds
- complete Habitat score assessment and other types of vegetation assessments aimed at determining the quality of the vegetation

Our botanists also review databases to determine which species have been recorded in the area and determine if they are likely to occur on your site.

Fauna Surveys and Habitat Assessments

Our zoologists conduct fauna surveys using:

- spotlighting
- trapping, including non-invasive ink-pad traps
- tiles, grid surveys and funnel traps
- bat detectors/recorders
- motion-sensitive infrared camera traps, and
- nest box installation and monitoring

A fauna habitat assessment is also often completed. This involves an assessment of the habitat present within a site to determine its potential to support particular fauna groups or species.

Property Management Plans

Our Property Management Plans initially provide a comprehensive picture of a site's ecological values (and bushfire risk) and determine the important management issues. They then include detailed management recommendations, such as weed control measures, fencing and revegetation.

Due Diligence Assessments

Our due diligence ecological and bushfire assessments help clients make informed decisions before purchasing or developing a property.

Flora and Fauna Salvage and Translocation

Practical Ecology is experienced in incorporating salvage and translocation into our comprehensive Property Management Plans, or can prepare and implement species/project specific Salvage and Translocation Plans depending on your needs.

Peer Review

Developers, councils and other planning authorities often need to check the veracity of ecological (and bushfire risk) information when reviewing planning permit applications. Our knowledge and expertise allows us to undertake this review for our clients.

EPBC Referrals

Practical Ecology's understanding of the assessment and referral processes under the *Environment Protection and Biodiversity Conservation Act 1999* means we give our clients the best chance of satisfying EPBC requirements and minimising the delays often associated with a poorly-prepared submission.



Expert Opinion for Planning Appeals

Sometimes environmental planning issues have to be resolved by a court, Planning Panel or in Victoria, the Victorian Civil and Administrative Tribunal (VCAT). Practical Ecology's expert witnesses are respected as credible environmental and bushfire experts who present complex issues in a clear, concise manner.



Project Profile: EPBC Act Referral for subdivision in Langwarrin, Victoria

The preparation of a Flora and Fauna Assessment and Site Environmental Management Plan, recognised that fauna species listed under the *Environment Protection Biodiversity and Conservation Act 1999* could potentially use a site in Langwarrin as habitat. Of particular concern were potential impacts on Dwarf Galaxia *Galaxiella pusilla* as a result of the residential development proposed on site, given its known occurrence in the adjacent Boggy Creek.

Practical Ecology prepared a concise, yet comprehensive EPBC referral on which the federal assessment process could be based. It included details of the mitigation measure to be implemented as part of the development as guided by our Site Environment Management Plan. Our comprehensive referral ensured that the project was not deemed to be a 'controlled action'. The development was able to proceed provided that the measures comprehensively detailed in the referral were undertaken.

Restoration, Land & Waterway Management

Our Restoration, Land and Waterway Management team combines technical and practical expertise to undertake a wide range of on-ground services related to native vegetation management. We provide a range of services aimed at restoring or recreating habitat for indigenous flora and fauna. For Council bushland reserves or developer-owned sites, these can be integrated into a comprehensive open space establishment program or into an on-going management process that also includes monitoring and reporting by our ecological consultants. These services are often required by government departments aiming to improve the quality of the bushland they manage, or by developers to satisfy permit requirements to 'offset' the removal of native vegetation.

Practical Ecology can implement all aspects of a restoration project or an offset plan, from fencing to weed-control to revegetation to monitoring. Provided, below, is an overview of the on-ground restoration and management services we offer:

Weed Management

Practical Ecology staff have the plant identification skills to recognise weed species and the experience to know the best timing and technique to eliminate them. The weed control techniques we utilise include, but are not limited to:

- herbicide spraying (backpacks and vehicle-mounted rig spraying)
- targeted hand-weeding, particularly in sensitive bushland
- selective burning using handheld 'weed burners'
- prescribed burning to reduce weed cover, and
- invasive shrub and tree control by 'cut and paint' or 'drill and fill'.



Revegetation

Practical Ecology is experienced in installing appropriate indigenous plant species to create thriving, self-sustaining habitats. Healthy, local provenance indigenous plants are sourced from our network of partner nurseries, these are then planted, watered-in and guarded (as required) against browsing animals. A period of maintenance ensures the plants get the start they need to out-compete weeds and becoming self-sustaining.

Wetland and Waterway Management

Practical Ecology has many decades of specialist knowledge in wetlands and waterway management. This includes the planting and maintenance of constructed wetlands in urban settings, rehabilitation of existing waterways and wetlands, and also consultancy related works in the restoration and maintenance of these areas. As part of this process we often prepare lists of suitable indigenous species to be installed and provide details the actual on-ground works, such as weed control or fencing, that are required to complete these projects in a manner aimed at establishing diverse plant communities.

Seed Collection and Direct Seeding

Practical Ecology has experience, and relevant permits, for the collection of seed from locally indigenous plant species for use as part of direct seeding or propagation for future installation as tube stock plantings. Direct Seeding is a way of establishing vegetation by placing these seeds directly into prepared ground where they will germinate and grow. As there is no need to physically install individual plants, it is a cost effective way to establish indigenous vegetation on relatively larger sites.



Project Profile:

Wetland Vegetation and Maintenance Works at Ashcroft Wetland in Williams Landing, Victoria

Practical Ecology has been involved with the ongoing management of Ashcroft Wetland since 2012. We have supplied and installed thousands of wetland plants at the site, following this up with maintenance of these plantings through ongoing weed control. We will continue our involvement within the project over time by nominating appropriate wetland species to plant at the site, ensuring these are supplied and appropriately installed, and again completing a maintenance period aimed at managing the proliferation of weeds.

Erosion Control

Practical Ecology has experience in the installation of various products aimed at controlling erosion. This includes jute matting and mesh, recover matting, silt fencing, sediment control logs and mulching. We often undertake erosion control works as part of other restoration, waterway or land management projects such as revegetation works around waterways or wetlands.

Project Profile:

Offset Management Works at The Range at Croydon, Victoria

This project demonstrates Practical Ecology's capacity to meld our ecological consulting services with the on-ground works undertaken by our Ecological Restoration and Land Management team. The works to be undertaken as part of this project includes:

- baseline and triennial ecological monitoring and reporting
- Offset, Conservation and Tree Protection Zone maintenance, including weed control
- translocation of the EPBC listed, Matted Flax-lily *Dianella amoena*
- seed collection and revegetation
- slashing and ecologically sensitive weed control
- pest animal control as required and rubbish collection.



Fencing

Various types of fencing can be installed by Practical Ecology depending on required objectives and outcomes of a particular project. Fence installation is often installed to isolate conservation areas, denote construction exclusion zones, protect remnant trees and/or exclude rabbit or kangaroos.



Project Profile

Various restoration and land management works at Lollypop Creek within Manor Lakes, Victoria

Practical Ecology is undertaking on-ground restoration and land management works along the Lollypop Creek within Manor Lakes, to Melbourne's West.

Practical Ecology has undertaken preparatory weed control prior to undertaking a prescribed burn at the site. This has been followed up by direct seeding using indigenous species and maintenance of the site, with a particular focus on weed control, will continue through the duration of the project.

Bushfire Management & Prescribed Burning

Bushfire Risk Management

Practical Ecology understands that the management of native vegetation also requires managing the associated bushfire risk. Our integrated approach ensures that bushfire risk management is not considered in isolation, but also considers other, potentially conflicting ecological and environmental land management and legislative objectives and requirements. This approach ensures our clients' understand the full implications of management decisions and design choices to effectively achieve a practical balance between development, bushfire risk and environmental protection.

Practical Ecology continues its long-history of helping both private and public land-managers better manage bushfire risk through a number of key services. These include:

- Bushfire Attack Level (BAL) assessment for Bushfire-Prone Areas;
- Bushfire Management Statements for dwellings and subdivisions;
- Bushland Reserve Fire Management Plans; and
- other bushfire risk management consulting for re-zoning, strategic land management and public and private land managing organisations.

Project Profile: Fire Management Plans for Shire of Yarra Ranges, Victoria

This project provided Fire Management Plans for four Yarra Ranges Council bushland reserves. It also involved the creation of a template for application to other bushland reserves within the Shire.

The process involved an assessment of values and assets (built, social, and ecological) in the context of the potential bushfire conditions at the site. This included flora surveys, identification and consideration of flora and fauna Key Fire Response Species, life stage and EVC growth stage assessments. These and other relevant considerations were used to inform a detailed options analysis and the provision of an ecologically sustainable solution for the effective treatment and management of bushfire risk.



Bushland Reserve Fire Management Plans

Practical Ecology prepares Fire Management Plans to address both bushfire safety and ecological fire regime management.

Often we incorporate these considerations into comprehensive Ecological and Fire Management Plans or provide Fire Management Plans to complement the existing ecological information and management frameworks.

Other Bushfire Management services:

- Specialist advice for strategic planning and planning approvals such as assessment, reporting and representation for planning authorities, planning panels or VCAT
- Bushfire management planning to meet the unique needs of a particular organisation or event
- Tailored assessments of bushfire risk, fire behaviour modelling and specialist bushfire management needs.

Prescribed Burning

From initial planning through to the implementation of on-ground works following a burn, Practical Ecology brings a practical and realistic perspective to all projects involving prescribed burning to ensure quality outcomes on-the-ground. As part of our prescribed burning service we can undertake:

- Ecological Burns to promote ecosystem reinstatement and function from a specific response of plant species or vegetation type
- Biomass Reduction Burns to reduce weed cover and biomass for ongoing management and restoration of indigenous vegetation
- Fuel Reduction Burns to reduce overall fuel hazard within a set management zone
- Candling/Bark burning to reduce overall bark fuel hazard risks, and
- Pile Burns and Fuel Modification.

All prescribed burn operations are comprehensively covered with public liability insurance and staffed with general wildfire trained and accredited Practical Ecology staff. We have a Nationally accredited 'Burn Boss' able to plan and conduct burns.



Project Profile: Prescribed Grassland Burn at Williams Landing, Victoria

Practical Ecology conducted prescribed burns in two of the three large, established grassland reserves within Williams Landing. Our burn teams were strategically positioned to actively monitor and patrol the burn unit boundaries at all times. This was achieved by having 'Mobile Teams' using vehicles with mounted fire-fighting units, patrolling the outer fence line of the reserve, in conjunction with 'Ground Teams', who used both rake hoes and suppression knapsacks on the internal control lines – where vehicle access was restricted – to patrol a slashed control line.

Lighting of the grassland was achieved by igniting the grassy biomass with a drip torch, using a variety of spot and strip lighting patterns. All effort was made to manage and minimise the amount of smoke generated given the close proximity to built up and busy urban areas.

The following day, the successful outcome of the Practical Ecology Burn Team's efforts in achieving the objective to reduce the built-up thatch and grassy biomass was revealed. The burn has opened up inter-tussock spacing in the grassland, in which a flush of new plants are able to germinate. This will assist Practical Ecology's contracting staff to continue to manage and aid in the restoration of the grassland.

Mapping and GIS

As outlined below, Practical Ecology utilises GIS as a fast, efficient method to analyse and display data.

Data Collection and Mapping

Data collection in the is often undertaken with the assistance of hand-held devices such as GPS (Global Positioning Systems) units, Personal Digital Assistants (PDAs), mobile phones and tablets. Our GIS team can create the project specific forms needed for use on these devises as part of our projects. Information pertaining to planning zones, significant flora and fauna, weeds, habitat connectivity, revegetation works, bushfire risk, vegetation types and quality, can also be clearly displayed on maps prepared by our specialist GIS personnel. These can combine the data collected in the field with that supplied by the client and available on existing databases.

GIS Consultation and Training

Our GIS team can work closely alongside clients to provide tailored products. This may include GIS data production from non-GIS source data. We can also produce electronic data collection programs/application for use on hand-held devices, as well as training guides, site-based workshops and ongoing product assistance.

Project Profile

Fauna Linkages and Crossing Structure Design for Frankston City Council, Victoria

This study, undertaken for Frankston City Council, applied a quantitative method to the identification and prioritisation of fauna linkages both at the local and landscape scale. Complex high level GIS analysis was applied to the questions posed by the study using novel approaches developed by our company. The project further built on many years of past experience including a series of projects involving the conservation of threatened species and provision of connectivity for fauna populations. Detailed management recommendations and specifications were provided for two high urgency wildlife corridors and for wildlife crossing structure options to mitigate barriers to faunal movement.



Education and Training

Practical Ecology offers a range of education and training programs that aim to service the needs of private land owners, developers, public land managers and community groups in managing land and indigenous vegetation, flora and fauna. We can develop and organise one day or short courses based on a variety of topics, including but not limited to:

- the identification of indigenous and exotic flora and Ecological Vegetation Classes
- bushland restoration and management techniques, including ecological fire management
- land management planning (for private and public land managers), and
- preparation of contract specifications for restoration projects.



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