

Biodiversity Procedure

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Policy Supported:

[Environmental Sustainability Policy](#)

Preamble:

Biodiversity refers to the number and variety of organisms within a given area, including the variety within and between species. The more diverse a habitat is, the greater its chance of surviving a change or threat to it.

Murdoch University recognises the value of biodiversity and the importance of preventing biodiversity loss through human activities, fire, weeds and introduced species. As the University estate manager, the Property, Development and Commercial Services Office (PDCSO) is responsible for the planning, utilisation and maintenance of University grounds and for ensuring that a harmonious balance is struck between the needs of the University and the preservation of biodiversity in the environments on and surrounding our campuses.

Audience:

Staff, Students

Objectives:

- To integrate biodiversity conservation into land use planning and management.
- To restore, re-vegetate and maintain the variety and condition of native flora and fauna, significant trees, and natural and landscaped habitats on our campuses.
- To conserve any populations of threatened native species and rare ecological communities, and support related Government conservation initiatives.
- To provide linkages between natural vegetation within and surrounding the University's campuses.
- To prevent, control and mitigate against the detrimental impacts of infrastructure construction, fire, pests, weeds, pathogens, inappropriate vehicle access and clearing, all of which negatively impact on biodiversity.

Definitions:

Any defined terms below are specific to this document. The definition of common terms appears in the Murdoch University Dictionary of Terms.

There are no terms.

Implementation Steps:

1. Campus Planning and Biodiversity Preservation

- 1.1 The Sustainability Manager is responsible for the development and implementation of biodiversity management plans and action plans for threatened and high value species, natural reserves, and wetlands. In order to respond effectively to changing conditions and requirements, biodiversity management plans will be reviewed every 2 years for currency and amended as necessary, while Action Plans require updating annually as KPIs are completed and new ones identified.
- 1.2 The majority of biodiversity conservation activities are coordinated by the Sustainability Manager and include volunteers from Murdoch University staff, students, and community members.

2. Areas and Species of Significance on the Perth Campus

- 2.1 The University has identified areas on the Perth campus that have high conservation value and contain important biodiversity corridors. These are identified in the Strategic Master Plan (2016) as fauna and environmental protection areas as well as open space and vegetation buffers. PDCSO has carriage of managing and restoring these areas appropriately.
- 2.2 PDCSO monitors the condition of vegetation, wetlands and threatened species (including Carnaby's Cockatoos, Forest Red-tailed Black Cockatoos, Quendas and Longneck turtles) at the Perth campus and revises management plans accordingly. This ensures the ongoing protection and effective management of these species, some of which are subject to the [Biodiversity Conservation Act 2016](#), the [Wildlife Conservation Act 1950 and Regulations](#) and [Wildlife Conservation Regulations 1970](#).
- 2.3 The Perth campus of the University is home to valuable conservation areas that form part of a chain of lakes and wetlands within Beeliar Regional Park. These include the Chelodina Wetland, the Banksia Woodland and the Melaleuca Swamp reserves. These are shown on campus maps and the Strategic Master Plan (2016).
- 2.4 Although these areas are part of University's land, the University is responsible for managing them in accordance with the [Beeliar Regional Park Management Plan \(BRPMP\)](#). Under this plan, these areas are managed for conservation, teaching and research purposes. The University must protect and enhance these habitats to ensure the survival of upland and wetland ecosystems.
- 2.5 To ensure the University exercises its duty of care responsibly as the custodian of these areas, access on foot via designated walk trails is permitted so that campus users can access them for conservation, teaching and research. However, approval must be obtained from the Sustainability

Manager at PDCSO before any other form of access (such as via a motor vehicle) is undertaken, excluding PDCSO security personnel who may need to access these areas for the purpose of attending an incident or for covert operations.

- 2.6 The University must also take care to mitigate against the following identified threats to the condition and status of wetlands in the park: drainage, excavation and filling; pollution including eutrophication (nutrient enrichment); water level changes; salination; aquatic or declared weeds; aesthetic disruption (that is, threats to the natural and cultural landscape qualities of the areas) and insect pest control. The BRPMP identifies a range of strategies to address these threats. The Sustainability Manager at PDCSO should be consulted prior to conservation, teaching and research activities occurring in these areas to ensure that threats are appropriately managed.

3. Protection and Preservation of Flora and Fauna

- 3.1 The Murdoch University community greatly values the diversity of wildlife found on the University's campuses and for this reason, the feeding of wildlife (including quendas and birds), is not permitted. This practice can upset an animal's dietary balance, create dependence on artificial food sources, disrupt migratory patterns, modify population densities (which in turn can increase transmission of communicable diseases) and cause other species to be displaced. It can also affect normal animal behavior, e.g. cause aggression.
- 3.2 Significant trees will be identified and protected. Trees (both single trees and groups of specimens) are classified as significant on the basis of rarity, aesthetics, shade provision, size/age, natural and/or cultural importance. The Director PDCSO has authority to approve a tree or group of trees for inclusion on the significant tree register.
- 3.3 Activities that have the potential to damage or disturb the bushland, wetlands, trees or fauna on campuses (such as bird trapping, construction and maintenance work or vegetation sampling) should be discussed with the Sustainability Manager prior to commencement. This helps to ensure that such activities do not have any negative or unintended consequences on biodiversity protection and preservation, and that all activities are conducted in accordance with relevant licenses and legislation.
- 3.4 Findings from research and surveys conducted by Murdoch University staff and students on Murdoch University campuses and/or surrounds that have implications for the conservation and management of biodiversity, should be provided in a timely manner to the Sustainability Manager. This information is valuable and may be used to enhance practices to support biodiversity on campuses.

4. Native Vegetation Management, Land Clearing, and Planting

- 4.1 In the areas covered by this Procedure (see Section 2.1 above), tree removal and vegetation clearing on campuses will be avoided where

- possible, compensatory offsets will occur when clearing is unavoidable and clearing will comply with relevant legislation.
- 4.2 In certain circumstances, clearing of native vegetation cannot be carried out without a Permit to Clear from the State and/or Federal Government. Project planning and budgeting must have regard to this legal requirement in the early stages of the project.
 - 4.3 Tree removal and vegetation clearing can only be undertaken by PDCSO, and only with the prior approval of the General Manager Campus Operations & Services, or the Director PDCSO.
 - 4.3.1 Where tree removal cannot be avoided, at least three local native trees shall be planted and maintained for every tree removed, as close to and as soon after the removal as possible. The cost for this work should be considered in project budgets.
 - 4.3.2 Seed collection and plant transplantation should be arranged via the Sustainability Manager prior to land clearing as volunteers and/or grant funding is often available for these activities.
 - 4.3.3 Grasstrees and Zamia palms in any area to be cleared must be removed by a specialist contractor and undergo a 12 month care period before transplant. The cost for this work should be considered in project budgets.
 - 4.3.4 Where vegetation clearing is unavoidable and project budgets allow for it, the top 100mm of topsoil should be carefully removed and stockpiled separately for re-use in landscaping / restoration. Note that compliance with the Weed and Dieback Action Plans and Asbestos Management Plan is required when topsoil is re-used.
 - 4.4 PDCSO is responsible for ensuring that local native species are incorporated into landscape design and management, such that local native plants constitute more than 60% of the plants in each landscaped area (with the exception of courtyards).
 - 4.5 An annual re-vegetation programme of local native trees and / or plants will occur at the Perth campus within remnant bushland, biodiversity corridors and/or reserves in accordance with the Biodiversity Management Plan. This programme supports wildlife habitats, endangered species and the replacement of vegetation due to natural attrition.
 - 4.6 Provenance-correct local native plants or seeds are preferred for use in restoration of remnant bushland and wetland areas. Provenance-correct seeds or plants / cuttings shall be collected from campuses and reserves within a 2km radius of campus (where a collection license is obtained), and used for restoration of remnant vegetation, in order to maintain genetic integrity. This helps to link vegetation on campuses with surrounding environments.
 - 4.7 Plants will be sourced from accredited nurseries that can provide a guarantee that stock is *phytophthora* (dieback) free.
 - 4.8 Refer to the [Tree Management Procedure](#) for guidance on tree management, pruning and removal in landscaped areas of campus, car parks and road verges.

5. Control of Fire, Pests, Weeds and Diseases

- 5.1 Fire, pests, weeds and diseases present significant threats to biodiversity and their control is often subject to government regulation. To this end, the University will undertake the following activities to mitigate against these threats.
- 5.1.1 Prevent the spread of weeds in accordance with the Weed Action Plan.
 - 5.1.2 Prevent the spread of plant diseases (such as phytophthora and marri canker) through the implementation of appropriate hygiene techniques in all grounds operations, in accordance with the Biodiversity Management Plan and the Dieback Action Plan.
 - 5.1.3 Control pests and introduced species in accordance with the *Pest Control Policy* and Pest Action Plan.
 - 5.1.4 Develop and implement sustainable fire control programmes and mechanisms for bushland areas based on current scientific knowledge, and to maintain compliance with local and State government requirements, including annual fire break clearing.
 - 5.1.4.1 Fire break clearing and maintenance equipment and practices must comply with the *Dieback Action Plan* or other accepted *phytophthora* management regimes. At a minimum, this includes carrying out works in dry weather and ensuring equipment is free from dirt and plant material before moving into an area.
 - 5.1.5 Prevent the spread of disease and preserve vegetation by installing physical barriers to motor vehicles and providing guided pedestrian access to remnant bushland areas at suitable locations.

6. Reporting

- 6.1 The Environmental Sustainability Advisory Committee will liaise with the PDCSO to present an annual report to the Senate on the state of biodiversity and the environment.

Performance Indicators:

- Resident and summer black cockatoo populations at the South Street campus are maintained at or above 2015 survey numbers.
- Southern Brown Bandicoot (quenda) capture rates are maintained or increased compared to 2015 survey numbers.
- The Strategic Master Plan (2016) retains 100% of biodiversity reserves, corridors and green spaces, as identified in the April 2009 version of the Plan.
- Numbers of native trees replaced compared to the number approved for clearing under State or Federal clearing permits.

Progress against these Indicators will be included in the Environmental Sustainability Advisory Committee’s annual State of the Environment Report.

Related Documents:

[Tree Management Procedure](#)

[Water Management Policy](#)

Biodiversity Management Plan (available on request)

[Black Cockatoo Action Plan](#)

Dieback Action Plan (available on request)

[European House Borer Action Plan](#)

Pest Action Plan (available on request)

Quenda Action Plan (available on request)

Weed Action Plan (available on request)

Notes for Consultants – Landscaping (available on request)

References:

[Beeliar Regional Park Management Plan \(BRPMP\)](#)

[Biodiversity Conservation Act 2016](#)

[Environmental Protection Act 1986](#)

[Wildlife Conservation Act 1950](#)

[Wildlife Conservation Regulations 1970](#)

[Environmental Protection and Biodiversity Conservation Act 1999](#)

Black Cockatoo Recovery Plans (Federal)

[Forest Red Tailed and Baudin’s](#)

[Carnaby's](#)

[Nursery and Garden Industry Australia](#)

Approval and Implementation:

Approval Authority:	General Manager, Campus Operations and Services
Responsible Officer(s):	Sustainability Manager
Contact Officer:	Sustainability Manager

Revision History:

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