



**WILDLIFE CORRIDOR
STRATEGY
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*Prepared by the EMRC
Environmental Services in Association
with the Shire of Mundaring*

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EXECUTIVE SUMMARY

The Shire of Mundaring's Wildlife Corridor Strategy is an innovative and pro-active initiative which originated from the Shires Environmental Management Strategy, 1996.

The Wildlife Corridor Strategy seeks to establish a network of corridors to assist in the conservation of native flora and fauna species and provides a focus for rehabilitating the environment to create and maintain wildlife habitat. It also establishes local corridor links between existing bushland areas with conservation value and complements the Perth Greenways Plan (Ministry for Planning, 1997) which identified strategic corridor linkages throughout the Perth metropolitan area.

It should be emphasised that this strategy does not place statutory constraints on private landowners, but rather encourages appropriate forms of development and land management practices in areas within, or in proximity to identified wildlife corridors.

Strategies for wildlife corridor implementation incorporate recommendations applicable to the Shire of Mundaring, State Government agencies and private landowners with land which has been identified as a potential wildlife corridor. These recommendations have been categorised into short and medium to long term strategies as summarised below.

Short Term Strategies

Recommendation 1: That Council takes opportunities to promote and encourage community involvement in the wildlife corridor strategy through community presentations and workshops associated with other environmental projects.

Recommendation 2: That private properties included in wildlife corridors be identified on the Shire's property database and that landowners be advised of this through their involvement in the "Tree Canopy and Understorey" Program.

Recommendation 3: That Council accepts vestings of reserves within, or partially within, the designated wildlife corridors.

Recommendation 4: That Council accept land set aside for Public Open Space during subdivision in cases where it is possible to include the designated wildlife corridor as part of the development.

Recommendation 5: That Council undertakes an assessment to determine management zones for the identified wildlife corridors to assist with vegetation protection, management and rehabilitation activities.

Recommendation 6: That Council prioritise wildlife corridors requiring rehabilitation as a long term action plan aimed at determining the resource demands and time frames for implementation.

Recommendation 7: That Council continue to take opportunities, and assist the community, to apply for external funding to rehabilitate designated wildlife corridors as part of its catchment management and landcare initiatives.

Recommendation 8: That joint management agreements be negotiated with State Government Agencies to assist in the establishment and management of wildlife corridors.

Medium to Long Term Strategies

Recommendation 9: That Council continue to take opportunities to acquire, seek vesting and accept land identified as wildlife corridors, subject to financial and resource availability.

Recommendation 10: Undertake rehabilitation works for the wildlife corridor in accordance with the rehabilitation action plan.

1. INTRODUCTION

1.1. Background

The Wildlife Corridor Strategy was originally initiated as a recommendation of the Environmental Management Strategy (Shire of Mundaring, 1996) and incorporated in two EMS Actions, namely:

4.10.1 - Encourage and enforce the establishment of wildlife corridors: and

4.10.3 - Identify and promote wildlife corridor linkages.

The Wildlife Corridor Strategy aims to achieve the above actions through the establishment of an integrated network of wildlife corridors linking local bushland reserves and regional conservation reserves.

The Wildlife Corridor Strategy is an important, long-term initiative which provides opportunities to:

- Identify and link wildlife corridors and reserve buffers with bushland areas of significance.
- Establish an integrated reserve system and facilitate the vesting of reserves to achieve conservation objectives.
- Increase biodiversity and create wildlife habitat.
- Progressively rehabilitate degraded sections of the reserve system and revegetate wildlife corridors identified on private land.
- Improve the quality of creeks where corridors follow watercourses.

The aims and objectives associated with the Wildlife Corridor Strategy are being implemented progressively through other programs that the Shire of Mundaring are involved in such as the Integrated Catchment Management Plan, Urban Hills Bushland Corridor Project and the Tree Canopy and Understorey Program. These programs have the potential to achieve the intent of wildlife corridor establishment through site specific revegetation and rehabilitation measures. The Wildlife Corridor Strategy aims to provide the strategic framework and a guidance document which integrates existing programs and identifies opportunities for future initiatives relating to wildlife corridor establishment.

1.2. Objectives and Proposed Outcomes

The Wildlife Corridor Strategy aims to provide a structured framework to establish an integrated network of corridors that provide adequate linkages between local bushland reserves and regionally significant conservation areas such as the Darling Range Regional Park, System Six and Perth Bushplan reserves. This will also provide community groups with an understanding of how their bushland management efforts contribute to a broader strategy and enable the Shire to determine the acceptability of strategic reserve acquisitions from conservation perspectives.

The Shire of Kalamunda has prepared a draft Wildlife Corridor Strategy which has direct linkages with corridors in the Shire of Mundaring. In addition, the Shire of Swan is interested in becoming pro-actively involved in wildlife corridors as a conservation initiative and is likely to also embark on a strategy in the next few years. It is envisaged that the three Local Governments will work progressively to maintain and establish wildlife corridors throughout the Eastern Hills Region.

The Wildlife Corridor Strategy is aimed at achieving the following outcomes:

- Identify opportunities for providing wildlife corridors in reserves, along all watercourses and other landscape features in the Shire.
- Provide a “blueprint” which identifies the location and extent of wildlife corridors throughout the Shire.
- Encourage and educate the community on the importance of wildlife corridors on private land, along creeklines, major road reserves and other public lands.
- Encourage the retention of existing vegetation and facilitate revegetation on public and private land consistent with the wildlife corridor blueprint.
- Detailed strategies will be formulated during the study process to ensure the implementation of proposed outcomes.

1.3. Regional Conservation Areas

A number of important regional conservation areas and conservation initiatives within, or closely adjacent to, the Shire of Mundaring require consideration as part of the wildlife corridor concept, such as:

- System 6 Conservation Areas
- National Parks
- Darling Range Regional Park
- Perth Bushplan
- Perth's Greenways

1.3.1. System 6 Conservation Areas

There are fifteen System Six Conservation Areas within or partially within the Shire of Mundaring namely:

- M20 Jane Brook
- M21 John Forrest National Park
- M22 Falls Park, Parkerville
- M23 Old Railway Reserve - Midland to Chidlow
- M24 Reserves north west of Chidlow
- M25 Lake Leschenaultia
- M26 Reserves north east of Chidlow
- M27 Reserves north of Lake Manaring
- M28 Reserve C14278, east of Wooroloo
- M29 Greenmount National Park
- M30 Reserve A1847 and C31178, Darlington
- M31 Reserve C32727, Mundaring
- M32 Reserves C18130 and C34103, Sawyers Valley
- M33 Helena River, Darlington
- M34 Helena Valley.

Further background information is available in System 6 'Red Book' (EPA, 1983). In general, the System 6 areas possess high conservation value and contain bushland areas which are essential to the integration of a wildlife corridor system.

Many of the System 6 recommendations advocated the establishment of 'regional parks' to protect and manage larger bushland areas throughout the metropolitan and surrounding areas, such as the Darling Range Regional Park (see Section 1.3.3). The recently released Perth Bushplan (see Section 1.3.4) has incorporated most System 6 Conservation Areas on the Swan Coastal Plain due to their regional significance.

1.3.2. National Parks

There are two National Parks located within the Shire of Mundaring namely the John Forrest National Park and the Greenmount National Park (see Figure 1)

The John Forrest National Park is contained within the System 6 M21 and the Greenmount National Park is contained within System 6 M29.

Due to their long-term conservation status, the National Parks form important wildlife sanctuaries, which would benefit with improved linkages to other bushland areas.

1.3.3. Darling Range Regional Park

The Darling Range Regional Park (DRRP) affects land within the Shire of Mundaring and is aimed at implementing System 6 recommendations. The DRRP also seeks to simplify the management responsibilities of regionally significant bushland areas within the Darling Range for the purposes of conservation and sustainable recreational use.

The DRRP provides a framework of bushland reserves that would be complemented by a network of wildlife corridors linking these regional reserves with other smaller reserves containing conservation values. The boundary of the DRRP is shown in Figures 1 and 2.

1.3.4. Perth Bushplan

Similarly with the DRRP, the Perth Bushplan (Ministry for Planning, 1998) integrates well with the wildlife corridor concept. The Perth Bushplan is aimed at identifying regionally significant bushland within the Swan Coastal Plain of the Perth metropolitan area and includes two sites within Shire of Mundaring (see Figure 1), namely;

- Bushplan Site 215 - Helena River, Helena Valley (part of System Six M33 and M34), and
- Bushplan Site 216 - Adelaide Crescent, Helena Valley.

1.3.5. Perth's Greenways

The Strategic Plan for Perth's Greenways was commissioned by the Ministry for Planning, in association with the Commonwealth Department of Transport and Regional Development in 1997, using

funds gained through the Commonwealth Government's Urban Forests Program.

One of the key objectives of this study was to undertake a regional assessment of the potential and existing corridors along service corridors, rivers, drainage lines, land use zoning's and transportation links within the Perth Metropolitan Region.

In essence, the Perth's Greenways plan provides the regional framework that will be complemented by the Shire of Mundaring's Wildlife Corridor Strategy, which provides the local area corridor linkages and reserve networks.

Proposed Greenways identified in the plan for the Shire of Mundaring Shire of Mundaring (see Figures 1 and 2) include:

- Walking Trail (John Forrest National Park to Lake Leschenaultia)
- Walktrail John Forrest National Park;
- Walktrail State Forest - Greenmount National Park;
- Old Railway Reserves;
- Helena River;
- Hardy Road Railway Reserve, Helena Valley;
- Bibbulman Track
- Toodyay Road
- Jane Brook.

1.4. Methodology and Approach

A detailed methodology and approach for the Wildlife Corridor Strategy study has been defined and can be summarised as follows:

- Task 1: Review background information.
- Task 2: Define Wildlife Corridor Strategy objectives.
- Task 3: Identify Wildlife Corridor Structure and Values.
- Task 4: Determine geographic information system (GIS) mapping requirements.
- Task 5: Prepare Wildlife Corridor map.
- Task 6: Identify linkages with other projects.
- Task 7: EAC review of draft map
- Task 8: Examine reserve vestings and purpose.
- Task 9: Identify mechanisms and strategies for implementation.
- Task 10: Prepare draft report and map.
- Task 11: Refer draft report and map to EAC and Council.
- Task 12: Undertake public review.
- Task 13: Finalise report and map.

2. RESERVE SYSTEM CHARACTERISTICS

2.1. Literature Review

2.1.1. Role of Corridors

According to Dr Dell of the Western Australian Museum (pers comm May 1997) there is limited documentation of the specific roles and functions of wildlife corridors and therefore it is difficult to determine their value. However, we can assume that wildlife corridors are significant for conservation purposes given that they aim to establish, link and extend native bushland. One of the complicating factors regarding wildlife corridors is that different species of birds and animals may require completely different vegetation types and densities. For example bandicoots, fairy wrens and thornbills, require dense shrub cover to protect them from predators.

The tree canopy is important for honey eaters and rainbow bee eaters, which are also ground nesting birds, but require a slightly sloping ground and perching sites to keep an eye on their nesting site and to search for food. Alternatively, the striated pardalote, as well as many other bird species such as galahs and kingfishers need tree hollows for nesting.

The role, function and structure of corridors therefore vary depending on the needs of the individual species which utilise the area. However, it is not feasible to establish the corridor for particular species that may utilise the area given the limited knowledge and information resources regarding fauna species and their particular habitat requirements. For the purposes of the reserves system, it is considered appropriate to initially adopt a generic wildlife corridor role which can be adjusted and modified to suit important fauna types or species over time. A generic corridor would incorporate a vegetation structure which includes tree canopy, multilayer understorey and ground covers.

2.1.2. Use of Corridors

The use of corridors will also influence its structure and characteristics and have implications regarding its establishment. Potential uses for corridors include:

- Use by wildlife (including animals and plants) for movement
- Use by wildlife for habitat
- Functional land use management aids to reduce wind and water erosion and provide shelter (eg windbreaks and shelter-beds)
- Landscape aesthetics and passive recreation use by humans.

It is likely that wildlife corridors will be multi-purpose and be required to accommodate a range of native fauna and human uses. It is important that these corridors are carefully planned and managed to ensure uses are compatible and sustainable and can co-exist in the longer term.

Corridors can also provide a regional representation of the vegetation associations that were present prior to changes to surrounding land.

2.1.3. Characteristics of Corridors

The characteristics of wildlife corridors will affect their ability to fulfil their roles and uses. In general, the following characteristics can be used to determine the effectiveness of corridors.

- Shape
- Size
- Linkages
- Continuity

(i) Shape

The shape of a corridor can vary markedly from a thin, narrow strip of land to an extensive, forested landscape. The term “narrow strip” is therefore relative depending upon the geographic context and animals using the corridor. According to Norton & Nix 1991, corridors linking the rainforest in the Amazon basin may be several hundred metres wide, extend for many kilometres and traverse a multitude of landscape features. Alternatively, a corridor linking a fragmented alpine habitat for a colony of pygmy possums may be a few centimetres in width, several metres long and remain within a single landscape feature.

The corridor is generally viewed as a channel which allows the unrestricted movement of species between important habitat areas, whilst providing a safe environment which in itself may be a temporary habitat (depending upon the needs of the species). If the corridor is too wide, it may not act as a channel and allow the individual to move in an unconstrained manner which may eventually result in the animal being trapped in the corridor. This is known as “sink function” and can also be caused by a corridor that is too narrow and force animals to remain in isolated habitats and not utilise the corridor. In this case, the isolated habitats become sinks.

Remnant bushland is also impacted upon by “edge effects” which has the potential to erode the natural values of bushland usually around perimeter areas. Edge effects are generally caused by incompatible land uses or disturbance adjacent to or within bushland areas. Frequent fire, weed invasion, uncontrolled access to vehicles,

trampling by people and stock and rubbish dumping are common causes of edge effects.

The disturbed areas are unable to retain their natural values and become degraded. Over time, the edge effects may creep into the central parts of bushland, if not appropriately managed, and erode the natural values of core area.

In an urban setting, it is almost impossible to avoid edge effects and bushland is generally managed to restrict bushland impacts to perimeter areas in order to retain the integrity of core areas. Due to their linear shape and high perimeter ratios, wildlife corridors are particularly susceptible to edge effects and need to be carefully managed to ensure natural values are retained. The more complex the structure of the corridor, the higher the level of management is required. For example, a corridor containing overstorey, understorey and a ground cover species will require a carefully structured management approach when compared to a parkland cleared wildlife corridor containing essentially overstorey species.

(ii) Size

Due to the mainly urban and rural land activities that have shaped the Shire since early settlement, many areas of bushland have become fragmented with very limited linkages to other bushland. Therefore any linkage regardless of size could be deemed to be beneficial, however depending upon the reasons for a linkage, the wider the corridor the better.

Optimum corridor width depends upon the strength of the edge effect. The higher the relative mortality rate of the edge, the wider the corridor must be in order to function effectively. Also if the vegetation strip is too narrow, it may not function as a corridor because interior species dependant on cover during movement may not enter it, or may be exposed to increased predation.

(iii) Linkages

According to Harris & Scheck (1991 : 201) “It is becoming increasingly apparent that isolated parks and protected areas will not suffice for the preservation of biological diversity well into the next century. Habitat fragmentation is the most serious threat to biological diversity”.

This statement highlights the importance of identifying and establishing linkages to connect bushland areas threatened by isolation.

(iv) Continuity

The concept of habitat continuity has implications on the characteristics of wildlife corridors.

Barriers such as roads, highways and other built structures may reduce or prevent movement of a variety of organisms, either along or across a corridor.

Corridors can become sinks for native species where mortality rates may be very high for animals that enter the corridor due to lack of connection, resources and poor access to the wider population of animal species

Corridors have the potential to channel species so they may be exposed to increased risks from predators or human induced mortality (motor cars, bikes, hunters) and act as harbours and conduits for exotic species, if poorly managed.

According to Greening Australia (1995), it is not always true that isolated remnants and their animal communities will be better off by being connected to neighbouring fragments. Vegetation corridors can harbour weeds, pest and feral animals; they have the potential to infest otherwise 'quarantined' remnant bush with these species and they may selectively allow the migration of some native species not others, thereby disrupting the ecological balance. These factors need to be taken into account to ensure that corridor establishment is supported with sufficient management resources in order to avoid potential detrimental effects of corridor connection.

2.1.4. Values of Corridors

Corridors play an important part in providing habitat and in facilitating dispersal of wildlife, dispersal of biota and enhancing gene flow between populations, thus increasing the biological diversity of regions.

Corridors can also facilitate the re-colonisation of separated environments affected by disturbance and may represent significant areas of conserved land that provide a regional representation of the vegetation associations which were present prior to changes to the landscape.

The role of wildlife corridors will largely depend upon their characteristics as well as their ability to perform the functions as required by native fauna.

A number of generic roles undertaken by wildlife corridors as described in available reference material have been summarised below and include:

- Increases in the area, quality and ecological function of open space to create an integrated network of ecosystems.
- Maintenance and enhancement of biodiversity and native fauna habitat.
- Provision of habitat for certain species of plants and animals.
- Increasing the conservation significance and regeneration capacity of existing natural vegetation.
- Ability to protect native plant and animal species whose numbers or distribution are locally and regionally endangered.
- Promoting an understanding of the habitat needs for native flora and fauna species.
- Identification of strategic areas for focussing efforts toward habitat protection, conservation and revegetation.
- Increasing awareness of the importance of road, rail, and creek reserves as areas of conservation significance for both flora and fauna.
- Utilisation to combat wind erosion, stream erosion and other forms of land degradation.

2.2. Corridor Structure

For the purposes of this strategy, the structure recommended for wildlife corridors (existing or proposed to be established) in the Shire of Mundaring should ideally incorporate the following aspects:

- Overstorey
- Understorey

2.2.1. Overstorey

The overstorey species mainly refers to the availability of trees as the primary corridor foundation. The canopy layer provides habitat for canopy dwelling fauna (preferably locally native species) and provides shade and shelter for the understorey species. The overstorey species vary, depending upon vegetation communities and soil conditions, with key overstorey species in the Shire of Mundaring comprising of

Eucalyptus (marri, jarrah, wandoo, flooded gum), Casuarina (sheoaks), Melaleuca (paperbarks) as well as a range of introduced tree species already established and undertaking an overstorey function.

2.2.2. Understorey

Understorey provides habitat for ground dwelling animals and ground nesting birds. Dense understorey provides protection from predators such as owls, hawks, eagles, cats, foxes and dogs.

Dense species rich understorey provides a range of flowering plants all year round that can permanently sustain a range of insect and bird species year round.

Corridors with limited species diversity and richness may only be able to sustain a small variety of animals for restricted times during the year. This is important to recognise, as the movement of fauna through the corridor becomes an important management consideration.

The remnant understorey of the Darling Range and eastern part of the Swan Coastal Plain is quite diverse and proposals to enhance or establish wildlife corridors in the Shire of Mundaring should include a range of locally native shrub and ground cover species appropriate to the particular vegetation association present.

Corridors that have a combination of overstorey, understorey and ground cover plants can provide for a multiplicity of functions and create a species diversity and richness that is attractive to a wide variety of insect and bird species and therefore has a higher value.

2.3. Corridor Location and Linkages

The location of potential wildlife corridors was determined utilising available Geographic Information System (GIS) coverage including remnant vegetation and condition (Perth Environment Project database - Ministry for Planning), existing Local Authority reserves and wetland mapping, classification and evaluation (Wetlands of the Swan Coastal Plain database - Water and Rivers Commission).

This information was combined on a cadastral base and cross-referenced with recent aerial photographs. Seasonal watercourses provided a focus for the establishment of east-west corridors and provide the linkage for forested water catchment areas in the south and east to bushland areas and wetlands to the north, west and central parts of the Shire.

Important components of the corridor system are as follows:

- linear reserves;
- watercourses and wetlands;
- local and regional open space; and
- bushland on private land.

2.3.1. Linear Reserves

There is a network of linear reserves in the Shire of Mundaring which include road and highway reserves, drainage reserves, power easements and old railway reserves. These linear reserves form logical corridors with many containing remnant vegetation or linked to other bushland areas with conservation significance. In urban areas, the existing native vegetation in road reserves may constitute a significant component of the remnant vegetation in a particular suburb or locality.

A number of important wildlife corridors have already been identified by the Shire of Mundaring and include the old railway reserves and the numerous creeks which traverse the Shire. These corridors are reinforced by the Perth's Greenways plan which also identified the Helena River and old railway reserves as corridors with secure land tenure and remnant bushland.

Concerns regarding potential increases in fauna mortality as a result of wildlife corridor establishment near highways have been raised (Bennett, 1991) in recognition that these thoroughfares may constitute barriers to fauna movement due to habitat modification, noise, light and exhaust emissions. Although these factors are recognised, it is conceded that the benefits of preserving reserve vegetation and establishing wildlife corridors and habitat far exceed the potential disadvantages associated with barrier effects and fauna mortalities as a result of traffic movements.

2.3.2. Watercourses and Wetlands

The watercourses and wetlands within the Shire of Mundaring constitute the main network or 'skeleton' of the wildlife corridor system. These ecosystems contain important attributes that complement a range of conservation objectives and potentially accommodate multiple uses related to water management.

Watercourses and wetlands are also a focal point for rehabilitation efforts undertaken by dedicated community groups, Friends Groups and therefore are likely to attract resources and external funding to undertake future revegetation activities.

The main watercourses in the Shire include:

- Helena River:
- Woodbridge Creek:
- Jane Brook and
- Wooroloo Brook.

There are also many smaller watercourses including:

- Blackadder Creek;
- Mahogany Creek;
- Bugle Tree Creek;
- Nyaania Creek;
- Convict Creek and

many unnamed creeks and streams.

The wetlands in the Shire mainly relate to watercourses which occur throughout the Shire. These wetlands have been incorporated into the wildlife corridor system, particularly where they correlate with remnant vegetation or known fauna habitat.

2.3.3. Local and Regional Open Space

Crown reserves vested in the Shire of Mundaring or controlled by State Government agencies (Western Australian Planning Commission, Department of Conservation and Land Management, Department of Land Administration and Water Corporation) are important features of the wildlife corridor system, particularly where they contain remnant vegetation or other environmental values of significance to the region.

The linking of existing Crown reserves with a network of linear road reserves, watercourses and remnant bushland areas ensures that the wildlife corridor system is supported by secure land tenure which can be implemented in accordance with most vestings and purpose requirements.

Consultation and ongoing advice to the vesting authorities on the implications of the wildlife corridor strategy aims to address concerns during strategy development so that practicable and mutually acceptable outcomes are achieved.

The Shires Public Open Space Strategy (Shire of Mundaring, 1995) complements the wildlife corridor concept, as many areas identified for POS incorporate creeklines and bushland remnants.

2.3.4. Remnant Bushland

The extent and condition of remnant bushland plays a crucial role in the location and connection of the wildlife corridor system. Good quality vegetation with overstorey and understorey intact is capable of fulfilling a corridor role with minimal management. In contrast, corridors coinciding with degraded vegetation or areas without remnant vegetation require considerable effort and resources for management and rehabilitation.

Remnant vegetation on the private land plays an important role in the long-term sustainability of the wildlife corridors. Measures to protect existing vegetation and revegetate poor condition vegetation on private land are required.

This does not assume that private landowners within wildlife corridors will be restricted in any way regarding the retention of remnant vegetation or the continuation of current landuses. Implementation of the strategy at the private landowner level is therefore likely to focus on education, cooperation and awareness raising in the community. The Shire has already achieved considerable success in the establishment and care of wildlife corridors through the Swan Mundaring Community Catchment Project, Urban Hills Catchment Activities Project and the Urban Hills Bushland Corridor Project. All of these projects received funding assistance through the Natural Heritage Trust and represent partnership projects between adjoining Local Governments and the community.

2.4. Corridor Width

The optimum width of a wildlife corridor is probably one of the most contentious issues for scientists all over the world. For the purposes of this strategy, a corridor width of 100 metres wide is considered an appropriate goal wherever possible. As the wildlife corridors focus on waterways, the 100 metre width (50 metres either side of the creekline) is also consistent with the 'multiple use corridor' concept promoted by the Water and Rivers Commission as part of the water sensitive design approach to planning.

It is recognised however that it is not possible or practical to achieve a 100-metre wide wildlife corridor and therefore a reduced width corridor may only be achievable. In most suburbs throughout the Shire that have been developed for residential purposes there may only be a 20 metre wide reserve or a 5 metre wide easement over the watercourse due to the extent of private land and the Shire would encourage landowners within the corridor to retain remnant vegetation wherever possible.

Factors affecting the actual width of a wildlife corridor (as opposed to the notional 100 metre wide optimum corridor) include:

- Existing reserve status.
- The extent and proximity of private land.
- The extent of remnant vegetation.
- Surrounding land use.
- Known fauna habitat, and
- Importance of linkages.

2.4.1. Existing Reserve Status

The extent and purpose of existing reserves, in relation to the potential for wildlife corridor establishment, have implications regarding corridor width.

Apart from larger bushland reserves and forested public water supply catchments, there are few examples of existing reserves in the Shire of Mundaring that achieve the optimum 100 metre wide corridor width. The old Railway Reserves form major corridors traversing the Shire and range from 30 - 150 metres wide over their nearly 21 kilometre length. However drainage reserves are generally only 5 - 10 metres wide, whilst public open space reserves along watercourses are typically 20 metres wide.

The reserved land within potential wildlife corridors provides the opportunity to establish and consolidate corridors under Shire management and form the foundation to extend corridors beyond reserved land where practical.

2.4.2. The Extent and Proximity of Private Land

The occurrence and proportion of privately owned land within, or adjacent to, wildlife corridors are likely to have a significant impact on the effective width of the corridor. This is particularly relevant where built structures such as houses, sheds, driveways, fences and paved surfaces limit the availability of open ground to establish vegetated corridors. Under these circumstances, it will not be possible to achieve the preferred corridor structure (width, overstorey, understorey etc) and therefore a corridor may be limited to the reserved land and adjacent private land containing remnant vegetation, subject to agreement with the landowner.

This situation is common in residential areas throughout the foothills (eg Swan View, Greenmount) where functional wildlife corridors are restricted to vegetated road reserves and easements. Nevertheless, it is considered appropriate to include private land in residential areas within the optimum 100-metre wide wildlife corridor given

opportunities to encourage landowners to retain remnant trees and replant their properties with native plant species to achieve a limited corridor.

2.4.3. The Extent of Remnant Vegetation

The extent and condition of remnant vegetation plays an important role in corridor width. There are many bushland areas within the Shire that are known to be successfully performing the role of a functional wildlife corridor, which is mainly due to their vegetated state, with common examples including the M22 and M23 Reserves, Jane Brook, Brookside Park and Falls Park.

Where possible, it may be appropriate to extend the corridor beyond the 100 metre wide optimum width to accommodate pockets of remnant vegetation or the habitat of rare/priority listed flora species. In most cases, the existing vegetation within the proposed wildlife corridor will form the skeleton to build upon to ultimately achieve a fully vegetated and functional wildlife corridor.

2.4.4. Surrounding Land Use

The land use activities associated with land within or in proximity of, a wildlife corridor will have an impact on corridor establishment and management. In some cases, it may be necessary to designate buffers around the corridors to minimise the potential impacts of a particular land use. For example, intensive agricultural land use, such as orchards, may result in the export of nutrients and silt into the corridor if not properly managed. Under these circumstances, a vegetated buffer between the land use activity and the wildlife corridor can markedly reduce the impact of pollutants on the corridor by uptaking excessive nutrients, intercepting silts and acting as a windbreak for pesticide drift. The densely vegetated buffer need only be 5 - 10 metres wide to achieve this outcome.

2.4.5. Known Fauna Habitat

Local communities are a prominent source of information regarding fauna habitat areas and it is likely that this local knowledge will play an important role in identifying and protecting fauna habitat through the establishment of wildlife corridors. It is a legislative requirement, under the Wildlife Conservation Act, to protect rare and endangered fauna species and therefore the occurrence of known fauna habitat within or near a wildlife corridor may also affect corridor width.

2.4.6. Importance of Linkages

A wildlife corridor linking a number of key conservation areas (National Parks, Nature Reserves, System 6 Areas, Perth Bushplan Sites and large bushland reserves) have a strategic importance that will require a greater corridor width than a minor corridor linking small and fragmented pockets of degraded bushland.

Clearly, the strategic corridor would ideally be the optimum corridor width (100 metres), whilst the minor corridor may only require a limited width (20 metres) and function based on its lower priority.

The earlier the corridors are established, the more likely it is that they can be recognised and managed as wildlife areas. These corridor linkages need not be formally reserved and can be managed by local community groups and landowners as a community project with the assistance of external funding grants.

2.4.7. Summary

In summary, this strategy promotes the retention and establishment of 100 metre wide wildlife corridors wherever possible with the corridors comprising of overstorey, understorey and ground cover species. It is recognised that this optimum corridor structure and width is not possible to achieve in residential and constrained areas and a reduced corridor may only be feasible.

The identification of wildlife corridors required the application of various planning and environmental data sets. Linear reserves, watercourses, wetlands, local and regional reserves and remnant bushland information sources were combined and enabled the identification of the wildlife corridors. Figures 3 and 4 show the wildlife corridors identified to date using the above information. More detailed maps have been created on the Shires GIS and a set of Wildlife Corridor Maps using the Town planning Scheme templates has also been prepared to assist in corridor identification and management. These maps can also be used by Shire staff for environmental assessments and the planning of strategic vegetation protection and rehabilitation projects.

It is envisaged that the wildlife corridor maps will be periodically reviewed and refined over time, as new information relevant to the strategy becomes available.

3. STRATEGIES FOR IMPLEMENTATION

The implementation of the Wildlife Corridor Strategy is dependent upon the ownership, vesting and control aspects associated with land identified as a wildlife corridor. Opportunities for establishing wildlife corridors on Shire vested reserves will differ from those available for the State Government controlled reserves and private land. This section examines strategies for implementation of the wildlife corridor based on the ownership and control of corridor land under the headings of:

- Shire vested reserves;
- State Government vested or controlled reserves;
- Privately owned land; and
- Funding opportunities.

3.1. Shire Vested Reserves

The main mechanisms for the establishment and management of wildlife corridors for land, currently or potentially controlled by the Shire of Mundaring, are as follows:

- Accept vesting of crown reserve at the request of the State Government;
- Accept land to be reserved as part of the Public Open Space contribution associated with land subdivision;
- Acquire or purchase land under freehold title;
- Rehabilitate and manage corridors through Shire based revegetation and weed control programs.

3.1.1. Accept Vesting of Reserved Crown Land

The Shire of Mundaring is regularly contacted by the Department of Land Administration (DOLA), Land Operations Division, seeking advice to determine if Council is prepared to accept the vesting and responsibility of reserves that are not required for Government purposes. If vesting of the reserve is not required, the Council is also asked if they have any proposed future use for the parcel of land in question.

Should Council accept vesting of the reserve, the control of the land is transferred to the Shire of Mundaring who have the responsibility of maintaining the reserve (fire management, weed control, revegetation etc). The land title for the reserve remains with DOLA (or the relevant State Government agency) to ensure the land is not sold for financial gain.

The Shire may also advise DOLA that they are not prepared to accept vesting of the reserve should it be more appropriate to vest the reserve with another agency which is adjoining, or has large land holdings in the vicinity of the reserve in question, such as the Western Australian Planning Commission (WAPC), the Department of Conservation and Land Management (CALM), the Water Corporation or Main Roads WA.

Preference should be given to the Shire accepting vesting of any reserves contained within a wildlife corridor as a result of reserve referrals from DOLA. This will provide a long term 'land bank' for the establishment of wildlife corridors and their management under a single agency. Under this arrangement, the Shire of Mundaring would have control of reserved land within the wildlife corridor which would facilitate the rehabilitation of these areas through community based revegetation programs currently in operation in the Shire of Mundaring such as the Tree Canopy and Understorey Program and numerous activities associated with the Shires Integrated Catchment Management Plan.

3.1.2. Acceptance of Public Open Space Contributions

As part of the subdivision process, a provision for Public Open Space (POS) is provided based on 10% of the subdivisional area for residential developments and 5% of the subdivisional area for rural subdivisions. The POS provision may also be accepted by the Local Government as cash-in-lieu, providing it is demonstrated that there is sufficient POS in a locality.

Recent subdivision developments, such as the two Parkerville townsite proposals, have focused on the retention of the watercourses as the major POS feature. This has resulted in the establishment of multiple use corridors in accordance with water sensitive urban design principles which enables the POS to provide a range of functions including recreation, environmental protection and drainage management. These multiple use corridors also have the potential to incorporate wildlife corridor functions, particularly when coupled with the retention of remnant vegetation and revegetation of degraded areas to provide a range of fauna habitats.

Developments containing wildlife corridors will need to consider setting POS aside to incorporate multiple use corridors and fauna habitat. There may also be opportunities for the Shire to accept cash-in-lieu as the POS contribution and use funds generated to acquire land in the area for the establishment of wildlife corridors.

The Shire's Public Open Space Strategy provides a useful guide in determining the acceptance of land for open space purposes. The

Wildlife Corridor Strategy complements the POS Strategy and the two documents can be used to determine the appropriateness of Shire acceptance of reserves during the subdivision process.

3.1.3. Acquisition or Purchase of Land

As discussed above, the Shire can acquire land for the purposes of wildlife corridor establishment with funds received as cash-in-lieu for POS as part of the subdivision process. Other mechanisms available to the Shire are associated with the acquisition or purchase of the land under a free hold title. The Shire of Mundaring's Environmental Advisory Committee (EAC) is currently investigating this issue and is expected to report on the outcomes in the near future.

3.2. Land Vested or Controlled by State Government.

Some of the proposed wildlife corridors incorporate land which is under State Government control and therefore it will be necessary for Council to advise the respective agencies on the aims and objectives of this strategy to ensure the corridor land is managed accordingly.

The controlling bodies' knowledge of the wildlife corridor strategy is essential to achieve a coordinated management approach and provides the opportunity to form partnerships or establish joint management agreements with respective agencies.

As parts of the wildlife corridors link bushland reserves associated with the Darling Range Regional Park, it is expected that joint management agreements will become more established with agencies such as CALM, Water Corporation, WAPC and Main Roads WA in order to achieve resource sharing and efficiencies in the management of the regional park. This joint management approach is recognised by Government as essential to achieve cooperation between agencies and is suited to the wildlife corridor establishment and management concept.

3.3. Privately Owned Land

This section primarily deals with existing privately owned land holdings in the Shire which are not subject to subdivision or development and therefore possess limited opportunities to impose conditions relating to wildlife corridor establishment as part of land use changes or development approvals.

According to the draft Wildlife Corridor Strategy Maps (Figures 2 and 3) there are over 4,700 privately owned lots within or partially within the proposed wildlife corridor network for the Shire of Mundaring. The affected lots based on a generalised lot size are as follows:

• Residential (4,000 m ² or less)	1395
• Small rural lots/Special rural (4,000m ² to 2 ha)	782
• Large rural lots (> 2 ha)	<u>2586</u>
Total	4763

It should be recognised that it is not feasible to include many of the residential lots into the wildlife corridor given the extent of modification to the natural environment. Opportunities available for residential landowners to contribute to the wildlife corridor will mainly be limited to the retention the enhancement of the existing natural values through the re establishment of locally native trees and shrub species. Given this approach requires voluntary participation of landowners, it is not practical to impose any provisions for landowners to undertake such activities and the key strategy for implementation relates to education and raising awareness.

The Shires “Tree Canopy and Understorey” Program involves the provision of locally native trees and shrubs to residents for planting on their properties. A total of 55,000 plants were distributed to residents during 1998 based on applications that will improve the environment.

It is envisaged that the Wildlife Corridor Strategy could be linked to this program through the property database system in order to encourage residents to strategically plant native vegetation and assist in re-establishing fauna habitat within identified corridors.

For private landowners with small and large rural lots, there are greater opportunities to establish functional wildlife corridors on their land through the “Tree Canopy and Understorey” as previously mentioned. In addition revegetation activities linked to regional initiatives such as the Swan Mundaring Community Catchment Management Project (SMCCP), and the Swan Avon Integrated Catchment Management (ICM) Programs provide opportunities for private landowners to become actively involved in catchment management and land care. Clearly, education plays an important role in raising awareness and promoting community participation in such programs.

3.4. Land for Wildlife

Land for Wildlife is a voluntary scheme that aims to encourage and assist private landowners to provide habitats for wildlife on their property. The scheme can also include farms, bush blocks, Shire reserves, roadsides and school grounds and has no limitation on the size of the property.

The program is run by CALM who also provide technical advice and assistance. The scheme is free and does not alter the legal status of

the property. It does not convey right of access and does not exclude multiple land use of the property.

This is considered to be a very worthwhile scheme that aims to increase the conservation value of the local area by creating and maintaining wildlife habitats on private land and more importantly, can provide a corridor linking private property's with other remnant bushland and reserves.

3.5. Funding Opportunities

Funding for the implementation of such a comprehensive and long-term environmental project, as the wildlife corridor strategy is an important factor, which has implications regarding its success over time. The main funding opportunities for the wildlife corridor strategy relate to the following programs:

- Natural Heritage Trust;
- Community Conservation Grants;
- Urban Forest Program; and
- Gordon Reid Foundation.

3.5.1. Natural Heritage Trust

National Heritage Trust (NHT) is a Federal Government initiative which replaced the National Landcare Program (NLP) funding and utilises funds generated from the part sale of Telstra.

The NHT program has a series of sub-programs under the headings of:

- Land
- Vegetation
- Rivers
- Biodiversity and
- Coasts and Marine.

The Bushcare program under the vegetation initiative is likely to be the most applicable to the wildlife corridor strategy as it is aimed at projects with objectives regarding the protection and rehabilitation of native vegetation at the local, regional and state level. The Bushcare program was the largest initiative in NHT with an estimated \$330 million devoted by the Federal Government to support projects as part of the \$1.25 billion campaign. A commitment for future funding will be supported with annual \$300 million capital contributions to be made available for environmental activities.

Through NHT funding, Local Government and their communities will have opportunities to actively participate in native vegetation

conservation through partnership arrangements aimed at protecting managing and rehabilitating their local environments.

The Shire of Mundaring has been particularly active in obtaining NHT funds with the latest project (Urban Hill Bushland Corridor Project) focussing specifically on wildlife corridor establishment and management.

3.5.2. Community Conservation Grants

The Minister for the Environment allocates grants each year to help with projects involving flora and fauna conservation and/or land rehabilitation of environmental benefit through the Community Conservation Grants program. The grant funds are available to individual groups and organisations. State and Local Governments are not eligible to apply directly for grant funds, but may participate through the formation of partnership groups.

Larger grants (up to \$80,000) are available to major environmental organisations, however the majority of funding assistance is through direct grants for groups seeking funding for projects ranging between \$500 - \$5,000. The Shire of Mundaring, through organisations such as the Wildflower Society and local community groups, would be able to identify partnership projects to compliment the Wildlife Corridor Strategy that may be eligible for funding under this program.

3.5.3. Urban Forest Program

Grants are available to establish greenways through the Commonwealth Urban Forests program, which was developed to control greenhouse gas emissions and to increase the environmental sustainability of urban areas.

Funds are generally available to establish corridors or linkages within the Perth Metropolitan area. The grants are intended to help develop partnerships between community groups, local government and State Agencies to establish greenways and preference is given to revegetation projects on public land using locally native plant species. The majority of grants are between \$5,000 and \$10,000 and are a potential funding source for future wildlife corridor projects

3.5.4. Gordon Reid Foundation

The basic function of the Gordon Reid Foundation for Conservation is to encourage and sustain action by community organisations to conserve and restore indigenous plants, animals and micro organisms and their natural environments in Western Australia.

The Foundation is funded by the Lotteries Commission and funds are made available annually through advertisements in early December for projects that incorporate one or more of the following objectives:

- Planting local species of trees and understorey;
- Planting buffer strips around revegetation areas;
- Linking remnants with corridors at least 40m wide;
- Fencing remnant vegetation, wetlands and streamlines;
- Establishing seed orchards of local species;
- Direct seeding; and
- Controlling weeds, feral animals, disease and fire.

Gordon Reid Foundation grants generally range from \$2500 to \$5000 and is suited to smaller revegetation projects undertaken within wildlife corridors.

4. IMPLEMENTATION TIMEFRAMES AND RECOMMENDATIONS

A range of implementation strategies have been presented in the previous section of this report outlining opportunities for the establishment and management of wildlife corridors in the Shire of Mundaring. It is important that the selected strategies for implementation are practical and reflect the priorities required to logically progress short, medium and longer-term initiatives.

The implementation time frames and recommendations associated with this strategy are aimed at achieving outcomes based on the current organisational structure and available resources operating in the Shire of Mundaring.

4.1. Short Term (1 - 3 years)

The implementation of short term wildlife corridor initiatives are based on a 1 -3 year time frame which incorporate implementation strategies previously identified, including recommendations under the key headings of:

- Community Participation and Education
- Focus for Rehabilitation Efforts
- Seek Vesting of Corridor Reserves
- Investigate Opportunities for Strategic Acquisition of Corridor Land
- Priority Corridors for Rehabilitation
- Apply for External Funding Grants
- Form Joint Management Agreements

4.1.1. Community Participation and Education

Community involvement and understanding of the wildlife corridor concept is essential and will assist in the future formation of partnerships between the community and the Shire to establish and manage corridors.

Council has an important role in encouraging landowners to ensure that development and use of their land occurs in a manner which maintains the integrity of wildlife corridors. This would include incentives for the establishment and management of wildlife corridors on private land.

The CALM “Land for Wildlife” scheme can also provide advice and assistance to private property owners wishing to protect or create wildlife habitats on their land. Participation in the scheme is free and advice provided by CALM includes,

- how private property owners can integrate wildlife habitat with other uses of private land,
- how to manage remnant bushland and fauna,
- the ecological role and requirements of native flora and fauna,
- how to include wildlife aspects into revegetation schemes and landcare, and
- information about other forms of assistance and incentives that are available.

The Shire of Mundaring could encourage participation by property owners in this important initiative by advising owners of the existence of the scheme.

Ongoing community involvement in the Wildlife Corridor Strategy will mainly focus on corridor establishment, revegetation activities and applications for eternal grants funds to assist in corridor rehabilitation (refer to section 4.1.6).

The Shires Environmental Officers are also involved in community presentations and workshops on a range of topics and the Wildlife Corridor Strategy can be promoted as part of these activities given its integrated nature and linkages with many other environmental projects.

Recommendation 1: That Council takes opportunities to promote and encourage community involvement in the Wildlife Corridor Strategy through community presentations and workshops associated with other environmental projects.

4.1.2. Focus for Rehabilitation Efforts

The wildlife corridors identified in the strategy provide a ‘blueprint’ for areas of significance requiring a greater level of environmental protection and management. Given their strategic importance and their ability to link bushland areas for the benefit of plant and animal populations, it is considered that the wildlife corridors also form a logical focus for rehabilitation efforts.

Considerable effort is already being spent in the Shire of Mundaring on the rehabilitation of the environment through programs such as the “Tree Canopy and Understorey Program” and projects associated with the Shires Integrated Catchment Management Plan, particularly the Urban Hills Bushland Corridor Project which extends from 1999 - 2001.

All of the private land holdings potentially covered by wildlife corridors could be identified on the Shire’s property database so that residents voluntarily seeking plants through the “Tree Canopy and Understorey Program” could be advised that their land is part of a

wildlife corridor. This would assist in encouraging the community to plant vegetation within the corridor to create fauna habitat, and therefore assist in the long-term establishment of vegetated corridors.

Recommendation 2: That private properties included in wildlife corridors are identified on the Shire's property database and those landowners are advised of this through their involvement in the "Tree Canopy and Understorey Program".

4.1.3. Seek Vesting of Corridor Reserves

The Shire is regularly approached by the Department of Land Administration (DOLA) seeking to vest crown reserves to the Shire of Mundaring that are no longer required for State Government purposes.

In cases where these reserves are within, or partially within identified wildlife corridors, it is considered appropriate for the Shire to accept vesting of the reserve. This will enable the corridor system to be gradually reserved over time and will assist in achieving a coordinated management approach through the Shire.

Recommendation 3: That Council accepts vestings of reserves within or partially within, the designated wildlife corridors.

In addition, the Shire is also able to accept land as Public Open Space (POS) through the subdivision process which is later vested in the Shire for recreation or other purposes.

The extent (or area) of land to be set aside is controlled by policy through the Western Australian Planning Commission, however the location of the POS is largely negotiated between the Shire and the developer. Opportunities to incorporate the wildlife corridor as part of the POS component of the subdivision would also assist in achieving a coordinated management approach for the corridor by the Shire.

Recommendation 4: That Council accept land set aside for Public Open Space during subdivision in cases where it is possible to include the designated wildlife corridor as part of the development.

4.1.4. Investigate Opportunities for the Strategic Acquisition

The Shire has the ability to acquire or purchase land of strategic importance, particularly where it is demonstrated that there are economic and community benefits of such acquisition.

The Shire's Environmental Advisory Committee is currently investigating the issue of reserve acquisition and will be reporting back to Council during this year.

4.1.5. Prioritise Corridors for Rehabilitation

The identification of potential wildlife corridors throughout the Shire provides a framework for determining important areas to be protected, managed and rehabilitated. As the wildlife corridor strategy includes Shire vested reserves, State Government controlled crown reserves and privately owned land, it is not clear in regards to which areas making up the corridors should be targeted first to ensure the corridor is progressively established and rehabilitated over time. There is a need for an assessment to determine management zones for the corridors' rehabilitation to identify areas for protection and management. The management zones would be determined using broad scale vegetation condition mapping, water resource management mapping and aerial photography.

This assessment would assist guiding activities within the corridors in a manner consistent with available budgets, resources and level of community involvement. Following the allocation of management zones, it will be necessary to prioritise areas for rehabilitation given that this activity is likely to consume financial and operational resources.

From the Shire's perspective, important corridor areas vested in the Shire of Mundaring with minor rehabilitation requirements would be better to rehabilitate first as opposed to highly degraded land under the control of the State Government.

Recommendation 5: That Council undertakes an assessment to determine management zones for the identified wildlife corridors to assist with vegetation protection, management and rehabilitation activities.

The prioritisation of wildlife corridors to be rehabilitated is likely to form the basis for the long-term resource demands associated with the Wildlife Corridor Strategy.

Recommendation 6: That Council prioritise wildlife corridors requiring rehabilitation as a long term action plan aimed at determining the resource demands and time frames for implementation.

4.1.6. Apply for External Funding Grants

There are a range of grant organisations that make funds available for activities related to wildlife corridor establishment and management. The Shire is eligible to apply for some of these as a Local Government organisation or is required to form partnerships with local community groups to access grant funds.

Although it is recognised that the preparation of applications for external grant funds and the administration of funding projects is resource demanding, the benefits to the organisation and through the establishment of community partnerships associated with the securing and expenditure of grant funds more than compensates for officer time and in-kind contributions from the Shire.

This has been demonstrated through the Shire's involvement in numerous community based rehabilitation projects (eg Falls Park) and with the success of attracting funding from the National Heritage Trust for catchment management and landcare activities.

Recommendation 7: That Council continue to take opportunities, and assist the community, to apply for external funding to rehabilitate designated wildlife corridors as part of its catchment management and landcare initiatives.

4.1.7. Establish Joint Management Agreements

The outcomes of the prioritisation process for the wildlife corridor (Recommendation 6) will be useful in determining the most strategically important corridors under State Government control requiring rehabilitation, although approaches from agencies may lead to the establishment of joint management agreements for lower priority areas of interest and this should be encouraged if feasible.

Prior to the establishment of such agreements, it is considered appropriate to undertake investigations in liaison with relevant government agencies to determine the arrangements and mutually beneficial outcomes associated with the formation of joint management agreements for the wildlife corridor concept. This could include issues such as agency promotion, corporate sponsorship, advertising opportunities and signage as factors that may facilitate active agency involvement and benefits to the Shire.

It will be necessary to approach the respective State Government Agencies based on the priorities and appropriate arrangements as determined in previous recommendations, to seek the establishment of joint management agreements for sections of wildlife corridors within Crown land.

Recommendation 8: That joint management agreements be negotiated with State Government Agencies to assist in the establishment and management of wildlife corridors.

4.2. Medium to Long Term

The medium to long term strategies for wildlife corridor implementation build upon the previously described short term recommendations and are primarily aimed at ongoing actions for the future and include:

- Continuing to acquire and seek vesting of land identified as wildlife corridors;
- Undertaking rehabilitation works in accordance with the priorities and requirements identified in the proposed action plan for wildlife corridor rehabilitation; and
- Investigating incentives for private landowners to establish wildlife corridors.

4.2.1. Wildlife Corridor Acquisition and Vesting

The successful implementation of short term Recommendations 3 and 4 will require an ongoing commitment from the Shire to acquire, seek vesting and accept POS for land which has been identified as wildlife corridors. Active involvement in these initiatives is likely to provide the greatest opportunity to implement the wildlife corridor strategy over time.

Recommendation 9: That Council continue to take opportunities to acquire, seek vesting and accept land identified as wildlife corridors, subject to financial and resource availability.

4.2.2. Undertake Priority Rehabilitation Works

Following the gradual establishment of wildlife corridors, it will be necessary to undertake rehabilitation activities for priority areas determined through previous assessments associated with Recommendations 5 and 6. These activities will be in accordance with a Council endorsed action plan which identifies priorities and

ongoing budgets aimed at achieving the greatest success for wildlife corridor rehabilitation with the least effort and cost.

Recommendation 10: Undertake rehabilitation works for the wildlife corridor in accordance with the rehabilitation action plan.

5. CONCLUSIONS

The Shire of Mundaring's Wildlife Corridor Strategy is an innovative and proactive initiative aimed at protecting and managing the natural environment and provides the opportunity to establish strategic wildlife corridors to assist in the conservation of flora and fauna species.

The strategy provides for local corridor networks and complements the Perth Greenways plan to achieve an integrated reserve system for the benefit of the environment and future generations. The implementation of short term and medium to long term recommendations identified in this strategy will enhance the establishment of wildlife corridors and assist in the management of these important environmental features.

The wildlife corridor concept is also being developed in the Shire of Kalamunda and promoted by other Local Governments with the intent of extending corridors beyond municipal boundaries for the benefit of conserving flora and fauna

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