

Part B – Local biodiversity planning process

Part B of the Guidelines aims to guide Local Governments through the local biodiversity planning process. Section 20 summarises the activities that are discussed in Part B. Section 20 also indicates where the Guidelines provide advice, statistics or templates to undertake specific local biodiversity planning process activities.

7. Local biodiversity planning framework

Local biodiversity planning is a strategic approach to the protection of biodiversity. Local biodiversity planning will assist Local Governments to:

- ▶ determine the protection status of all Locally Significant Natural Areas (LSNAs)
- ▶ formalise policies and processes to ensure biodiversity considerations are integrated into their assessment of development proposals and construction activities
- ▶ develop and provide incentives to encourage private land conservation
- ▶ plan for the management of local reserves and other Local Government lands to conserve biodiversity.

7.1. Local biodiversity planning Phases

The local biodiversity planning process can be described in four Phases (outlined schematically in Figure 7).

Phase 1. Scoping

This involves initiating the local biodiversity planning process with Council to:

- ▶ adopt a policy that broadly outlines Council's commitment and intent to undertake local biodiversity planning
- ▶ commit resources to complete Phase 2
- ▶ form a Steering Committee/working group.

Phase 2. Preparation of Discussion Paper

The purpose of the Discussion Paper is to inform all stakeholders of the framework to be used to develop the Strategy. It is expected that formal public consultation will be initiated upon completion of a Discussion Paper that addresses the following key outputs:

- ▶ identification of the biodiversity resource
- ▶ development of a vision, objectives and targets for biodiversity retention, protection and management. Natural Area Condition (NAC) targets provide the opportunity for Local Government to formalise their ecological criteria for determining which Local Natural Areas (LNA) are locally significant.

A briefing or proposal to Council (that may form part of the Discussion Paper) will also be required during Phase 2 to advise Council of the proposed framework of the Strategy and obtain commitment of resources to prepare a Strategy (or parts thereof) during Phase 3:

- ▶ identification of the four key components of a Strategy to help meet the NAC targets:

- ▶ Local Planning Policy (LPP) for Biodiversity Conservation
- ▶ Incentives Strategy for Private Land Conservation
- ▶ plan for the management of local reserves and other Local Government lands to conserve biodiversity
- ▶ formalise the protection status of LSNA's.
- ▶ commitment of resources to prepare a Strategy (or part thereof) consistent with the vision, objectives and local biodiversity condition targets.

Phase 3. Preparation of Local Biodiversity Strategy

The Local Biodiversity Strategy applies the objectives and targets developed in the Discussion Paper to develop an Action Plan. The Action Plan will underpin and guide the development and implementation of the Strategy through Phases 3 and 4 and will provide detailed information on how the objectives and targets will be met.

The following are key components of Phase 3:

- ▶ development of a detailed Action Plan
- ▶ preparation of a LPP for Biodiversity Conservation
- ▶ preparation of the Incentives Strategy for Private Land Conservation
- ▶ planning for the management of biodiversity on Local Government land
- ▶ formalisation of the protection status of LSNA's
- ▶ endorsement and finalisation of the Strategy.

The LPP for biodiversity conservation, Incentives Strategy for Private Land Conservation and planning for the management of biodiversity on Local Government lands provide the process for reactive assessment and strategic assessment of all natural areas (on private and public lands) to determine those that are locally significant. The assessment of natural areas to determine those that are locally significant requires completion of a thorough desktop and field assessment utilising information and natural area assessment templates provided within the Guidelines.

Phase 4. Implementation of Local Biodiversity Strategy

Upon completion of the Strategy there will be a number of new activities and existing policy and processes that will need to be implemented, these include:

- ▶ Review/amendment of Town Planning Scheme (TPS)
- ▶ application of LPP
- ▶ application of the Incentives Strategy for Private Land Conservation
- ▶ management of Local Government land for biodiversity outcomes
- ▶ monitoring and review of the Strategy.

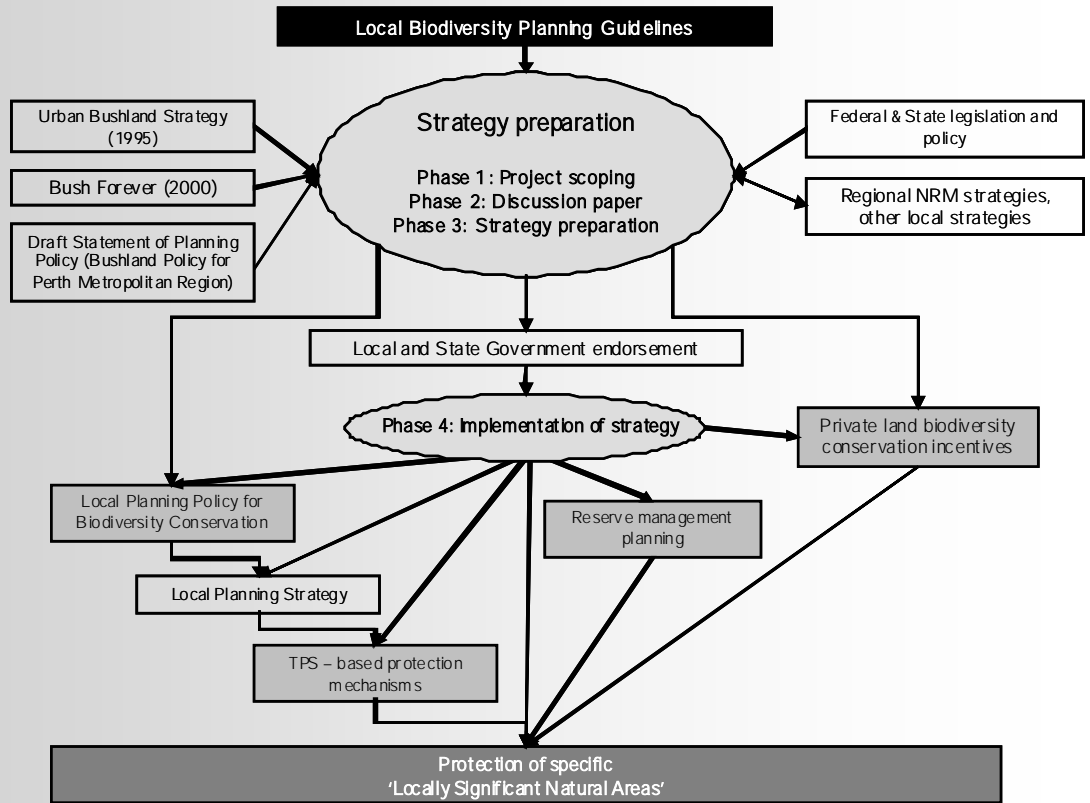


FIGURE 7 Local biodiversity conservation context for the Perth Metropolitan Region (PMR).

8. Scoping (Phase 1)

To initiate the local biodiversity planning process, the Local Government will need to:

- ▶ scope the need for local biodiversity planning and the resources required to undertake the process
- ▶ formally resolve Council's commitment and intent to undertake local biodiversity planning
- ▶ plan for involvement of all stakeholders in the local biodiversity planning process, including local community and State Government
- ▶ establish a Steering Committee.

8.1. Local Government executive and officer support

Local biodiversity planning requires a multi-disciplinary approach across Local Government departments, involving a variety of stakeholders that are internal as well as external to the Local Government. It is suggested that the local biodiversity planning process is progressed by the planning directorate for those Local Governments having more than 100 ha of LNAs existing on private land. In these situations land-use planning decisions are likely to have the greatest influence over the outcome of the local biodiversity planning process. For Local Governments with less than 100 ha of LNA occurring on private land, it may be more appropriate to have the process driven by the directorate primarily responsible for the management of Local Government land (eg Technical Services or Engineering).

8.2. Council support

Council support and commitment for developing and implementing a Local Biodiversity Strategy should be obtained through a Council Agenda Item. An example of a Council Agenda Item for this purpose is provided in Section 13.1 and it briefly discusses the following:

- ▶ what is local biodiversity planning
- ▶ benefits
- ▶ costs
- ▶ potential links to other Council processes
- ▶ Phases of the local biodiversity planning process
- ▶ resolutions expected from Council.

8.3. Biodiversity training

Once Council has given its formal support for local biodiversity planning through a Council resolution, the training needs of staff required to progress biodiversity planning should be considered. The Local Government staff likely to be involved in the local biodiversity planning process is outlined in Section 2.2. Specifically training at this early stage should be aimed at raising the awareness amongst relevant staff of the local biodiversity planning process and their potential role within it. Training of a technical nature should be scoped and opportunities for provision of relevant training during Phases 2 and 3 of the local biodiversity planning process should be considered.

8.4. Formation of a Steering Committee

A Steering Committee should be formed to facilitate the development of the Strategy and assist in dealing with any technical and consultative issues that arise. It is suggested that the Committee consist of the following representatives:

- ▶ Local Government Councillor(s) (aim to have one representative from both environmental advisory and planning committees or equivalent if they exist)
- ▶ executive manager (preferably from the directorate that has the greatest influence over land use planning decisions)
- ▶ Department of Conservation and Land Management (CALM)
- ▶ Department of Environment (DoE)
- ▶ Department for Planning and Infrastructure (DPI)
- ▶ community (aim to have representative(s) from the conservation and development sectors)
- ▶ Indigenous community.

Terms of reference should be established for the committee with an example provided in Section 13.3. The Steering Committee will be responsible for ensuring public consultation is undertaken throughout the local biodiversity planning process. Further guidelines on public consultation are provided in Section 18.

9. Preparation of local biodiversity planning Discussion Paper (Phase 2)

This Phase involves the development of a Discussion Paper to identify the Strategy's directions and engage stakeholders. Consideration of the extent of the biodiversity resource and an understanding of the underlying opportunities and constraints to the protection of the biodiversity resource is required to establish objectives and targets for biodiversity protection and management. Local biodiversity targets based on the Local Significance Criteria will need to be established and adopted so there is a common understanding of what the Local Biodiversity Strategy is aiming to achieve.

The key outputs from the Discussion Paper can be summarised as:

- ▶ identification, quantification and mapping of the natural area resource
- ▶ development of a vision and objectives for the Strategy
- ▶ establishment of Natural Area Condition (NAC) targets to formalise the ecological criteria to be used to identify which Local Natural Areas (LNA) are locally significant
- ▶ identification of the four key components of a Strategy that will help meet the local biodiversity targets:
 - ▶ Local Planning Policy (LPP) for Biodiversity Conservation
 - ▶ Incentives Strategy for Private Land Conservation
 - ▶ Plan for the management of local reserves and other Local Government lands to conserve biodiversity
 - ▶ Formalising the protection status of Locally Significant Natural Areas (LSNAs).
- ▶ formal public consultation following completion of the Discussion Paper.

9.1. Identify the resource

Regional, remotely collected information should be used to establish a preliminary inventory of the biodiversity resources in the area. The inventory should provide sufficient detail to allow for the setting and measurement of objectives as part of the Discussion Paper. The inventory should also assist in the preparation and application of the LPP for Biodiversity Conservation and the Incentives Strategy for Private Land Conservation as part of Phase 3. It is important that the Local Government have access to relevant information and datasets to assist in local biodiversity planning including:

- ▶ mapping of native vegetation, wetlands and waterways
- ▶ basic information for all natural areas:
 - ▶ administrative planning categories
 - ▶ ownership
 - ▶ zoning
 - ▶ vegetation complex
 - ▶ potential to meet Local Significance Criteria.

9.1.1. Integration of biodiversity data into Local Government Geographic Information Systems (GIS)

Interpretation and presentation of biodiversity information is essential for ensuring that important considerations are recognised by decision-makers. The majority of Local Governments within the Perth Metropolitan Region (PMR) have good geographical information systems (GIS) that should be utilised to assist in interpretation and presentation of biodiversity data for:

- ▶ development of the Discussion Paper
- ▶ preparation of the Strategy
- ▶ implementation, monitoring and review of the Strategy and associated policies.

Key datasets that should be integrated into the Local Government GIS are described in Section 9.1.2. Suggestions as to how these datasets might be interpreted and presented are outlined in Section 9.1.3. Some important principles that should be considered when using the GIS datasets outlined in these sections include:

- ▶ assumptions and limitations associated with the data should be clearly recognised and communicated when presenting the information to the community and decision-makers
- ▶ final decisions on whether a LNA is locally significant should be based on field verified information.

9.1.2. Identifying and mapping natural areas

Before preparing a Local Biodiversity Strategy it is important to have a broad understanding of the distribution, extent and type of natural areas within the Local Government. It is also useful to know the protection status, ownership and zoning of these natural areas, as this will influence the strategies considered for protection and management. This section describes the different types of mapping

information and statistics that will assist the development of the Discussion Paper and ultimately the Strategy.

For local biodiversity planning in the PMR, mapped native vegetation, wetlands and waterways can be used to describe the biodiversity resource. These mapped natural areas are broadly identified and described by three major (GIS) datasets:

- ▶ 2001 Perth Bushland Mapping (includes mapping of native vegetation and not just bushland, see discussion below)
- ▶ Geomorphic Wetlands of the Swan Coastal Plain (SCP) (wetlands)
- ▶ Surface Water Hydrology (waterways).



Before preparing a Local Biodiversity Strategy, it is important to have a broad understanding of the distribution of natural areas within the local government area as well as the ownership and zoning of these natural areas. Much of this information can be first examined from available datasets. Photo: J Cullity.

Additional biodiversity related datasets that may be useful to Local Government when preparing a Local Biodiversity Strategy include:

- ▶ Declared Rare and Priority Flora
- ▶ Threatened Ecological Communities
- ▶ Threatened Fauna and Priority Fauna.

The Department of Conservation and Land Management (CALM) should be contacted to obtain the above-mentioned datasets. Any previous reports or surveys of natural areas within the Local Government should be recognised and where appropriate key information summarised. These reports and surveys may identify natural areas that have not been mapped or recognised in regional datasets, and such natural areas should be listed in this stage so that they are appropriately considered in the later stages of the local biodiversity planning process.

A full list of useful datasets is provided in Section 16.3.

2001 Perth bushland mapping

Mapped native vegetation for the whole PMR has been provided to all Local Governments through the 2001 Perth Bushland Mapping dataset (Department for Planning and Infrastructure and Agriculture Western Australia 2001). The Perth Bushland Mapping dataset was prepared by the Department of Agriculture to map all those areas of native vegetation in 2001 that were considered to fall within the 'remnant' and 'modified' native vegetation classes previously used to map native vegetation in the PMR in 1997 for Bush Forever.

The dataset was created by the desktop interpretation of January 2001 digital ortho-photos at a scale of 1:20,000. The Perth Bushland Mapping dataset has been interpreted and analysed with other datasets (for example cadastre, Metropolitan Region Scheme [MRS]) by the Perth Biodiversity Project (PBP) to provide a series of hardcopy maps, digital datasets and statistics for each Local Government to assist in identifying and quantifying the extent of vegetated natural areas within each Local Government. The outputs resulting from the interpretation and analysis of the Perth Bushland Mapping dataset are described in Section 9.1.3.

Aerial photography

Given that the Perth Bushland Mapping dataset and datasets derived from it represent a snap shot in time, it is important that where possible the dataset is viewed with the latest aerial photography available to the Local Government. This will assist in highlighting any significant changes that might have occurred since the native vegetation extent was mapped. Additionally access to aerial photography is essential when preparing for and conducting field assessment of natural areas during preparation and implementation of the Strategy (Phases 3 and 4). Local Government may wish to update the mapping to be reflective of the most recent aerial photography and in doing so they should consider the update protocols outlined in Mapping and Information Instalment 2 (Taylor 2003a).

Geomorphic wetlands of the Swan Coastal Plain (Department of Environment)

Wetlands are biologically some of the most productive and diverse of all the natural areas on the SCP. A detailed description of wetland types across the SCP is contained within the Geomorphic Wetland Mapping dataset held by the Department of Environment (DoE). Mapping and classification of wetlands was carried out at a scale of 1:25,000 with most wetlands also being evaluated with respect to management categories (Conservation, Resource Enhancement, Multiple-use). Note that wetland management categories reflect wetland condition and numerous other factors, and can change over time.

Surface Water Hydrology (DoE)

Channel wetlands which are seasonally or permanently inundated channels (for example, rivers, creeks and artificial channels) along with their associated riparian vegetation perform an important role in the hydrological processes that occur in the region. DoE maintains a hydrography dataset based on Department of Land Information (DLI) topographic information which identifies channel wetlands.

9.1.3. Perth Biodiversity Project mapping and information

The Perth Biodiversity Project has worked with the above mentioned datasets to create a number of new datasets to assist Local Government with local biodiversity planning:

- ▶ Native Vegetation Extent by Administrative Planning Category
- ▶ Native Vegetation Extent by Ownership Category
- ▶ Native Vegetation Extent by Vegetation Complex
- ▶ Native Vegetation Extent by MRS Zoning
- ▶ Potentially Locally Significant Natural Areas (PLSNAs).

Hardcopy maps (Taylor 2003b) and associated digital datasets (Taylor 2003a) of the above have been provided to all metropolitan Local Governments upon request and these are described below. A more detailed description of the datasets and their relevance to local biodiversity planning is provided in Mapping and Information Instalment 2 (Taylor 2003a).

Native Vegetation Extent by Administrative Planning Category (Taylor 2003a)

This dataset and associated map (see Figure 8 as an example) provides a broad overview of the different themes of native vegetation according to existing administrative planning and protection measures:

- ▶ CALM Conservation – any native vegetation located within CALM Conservation Reserves
- ▶ CALM State Forest – any native vegetation located within CALM State Forest Reserves
- ▶ CALM Other – any native vegetation located within CALM reserves that are not Conservation or State Forest
- ▶ Regional Parks (CALM and Bush Forever) – any native vegetation that exists within an existing Regional Park and is either CALM Managed Estate or within a Bush Forever Site
- ▶ Other Regional Parks – any native vegetation not already within CALM Managed Estate or a Bush Forever Site that is located within Regional Parks (may be privately owned or Local Government managed land)
- ▶ Bush Forever (CALM) – any native vegetation located within a Bush Forever Site that is owned or managed by CALM
- ▶ Bush Forever – any native vegetation located within a Bush Forever Site that is not owned or managed by CALM or identified as Regional Park. This includes some areas that may be either private land, State Government land or Local Government managed land. In some cases areas may be subject to on-going negotiations to determine the proportion of the Bush Forever Site to be protected.
- ▶ LNAs – any native vegetation that exists outside of Bush Forever (Swan Coastal Plain), CALM Managed Estate or Regional Parks (these areas have in the past been referred to as Local Biodiversity Areas).

For those areas of native vegetation recognised as Bush Forever Sites or Regional Parks, there are processes in place for negotiating their protection. For areas of native vegetation in CALM Managed Estate, some level of protection can be assumed. LNAs basically represent those areas of native vegetation where there is no official process in place to protect them. These LNAs along with natural areas on Local Government land are the focus of local biodiversity planning.

Section 16.3 and Table 17 provide an overview of the native vegetation extent for each administrative planning category by Local Government. PBP Map 1 (Taylor 2003b) (provided to each Local Government) is a spatial representation of native vegetation extent according to administrative planning category.

Native Vegetation Extent by Ownership Category (Taylor 2003a)

This dataset categorises native vegetation extent according to the ownership categories of:

- ▶ Commonwealth Government
- ▶ State Government
- ▶ Local Government
- ▶ Crown land (unknown)
- ▶ unallocated Crown land (UCL)
- ▶ Private landholder
- ▶ Strata (multiple landholders).

The ownership categories were determined by intersecting native vegetation extent with DLI cadastral datasets (for example, see Figure 9). Some errors may be associated with this dataset and therefore each Local Government is encouraged to check it with its own cadastral datasets. This dataset enables indicative protection status of natural areas to be determined based on ownership categories. Ownership categories are an important consideration when determining opportunities and constraints for protection and management of natural areas and when identifying those areas for which Local Government has a management responsibility (Table 18 and Figure 9). The extent of different administrative planning categories associated with native vegetation on Local Government land is detailed in Table 19.

PBP Map 2 (Taylor 2003b) (provided to each Local Government) is a spatial representation of native vegetation extent by ownership category. Since the focus of the Strategy is on LNAs, the extent of LNAs across different ownership categories will be a consideration when identifying opportunities and constraints for the protection of these areas (Table 20).

Native Vegetation Extent by Vegetation Complex (Taylor 2003a)

This dataset categorises native vegetation extent according to vegetation complexes. For the SCP portion of the PMR, the vegetation complexes described by Heddle et al. (1980) were used. For the Jarrah Forest portion, the Regional Forest Agreement vegetation complexes of Mattiske and Havel (1998) were used. This dataset has been used to generate statistics for the area of each vegetation complex originally occurring and remaining in each Local Government (Table 21). These statistics will be useful when determining objectives for the Strategy. An example of how this information should be displayed for each Local Government can be seen in Figure 10.

PBP Map 3 (Taylor 2003b) (provided to each Local Government) is a spatial representation of native vegetation extent according to vegetation complexes.

Native Vegetation Extent by MRS Zoning (Taylor 2003a)

This dataset categorises native vegetation extent according to MRS Zoning (Table 22). Additionally, Table 22 quantifies the different MRS zonings of LNAs for each Local Government. This dataset is useful for determining the planning constraints associated with the natural area and the degree of threat due to future development. This is another dataset that should be considered when determining appropriate recommendations for protection.

PBP Map 4 (Taylor 2003b) (provided to each Local Government) is a spatial representation of native vegetation extent according to MRS zoning. Figure 11 provides an example of the way in which MRS information should be displayed in the Discussion Paper.

Potentially Locally Significant Natural Areas (Taylor 2003a)

A dataset of PLSNAs has been developed by the Perth Biodiversity Project using remotely collected, regional GIS information to identify those LNAs likely to meet one or more Local Significance Criteria (see Figure 12). It is important to remember that GIS information is not available to address all Local Significance Criteria and GIS datasets are indicative only of the values of LNAs. Field verification is required before a natural area can be identified as 'locally significant'. It is recognised that field assessment of all LNAs will take time and access to some areas may not be possible. The PLSNA dataset will be a valuable tool to Local Government in the interim period to identify areas of high importance that are currently undergoing land use change proposals as well as to prioritise areas for field assessment.

The PLSNA dataset should be considered during preparation of the Discussion Paper as well as during the preparation of the Strategy as it will be useful for assisting Local Government with the establishment of objectives and targets. The PLSNA dataset will also be valuable in Phase 3 and 4 during the preparation and implementation of a LPP for biodiversity conservation and the Incentives Strategy for Private Land Conservation.

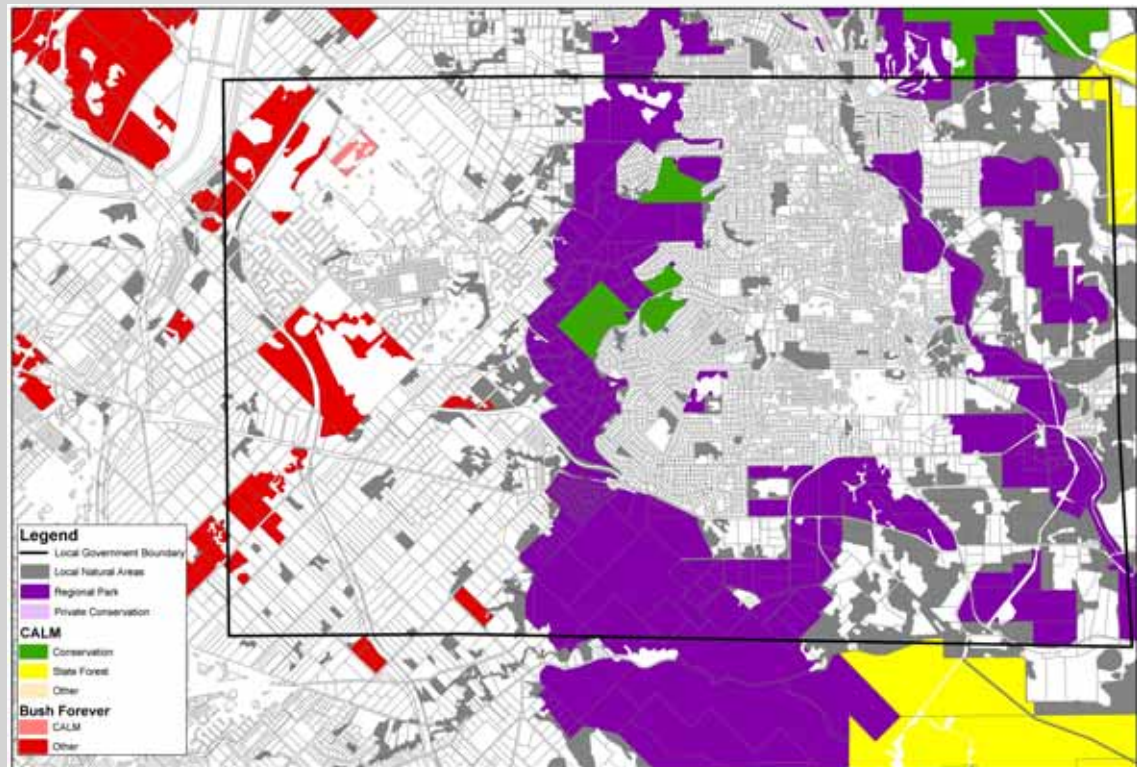


Figure 8. Native Vegetation Extent by Administrative Planning Category (Discussion paper example 1)

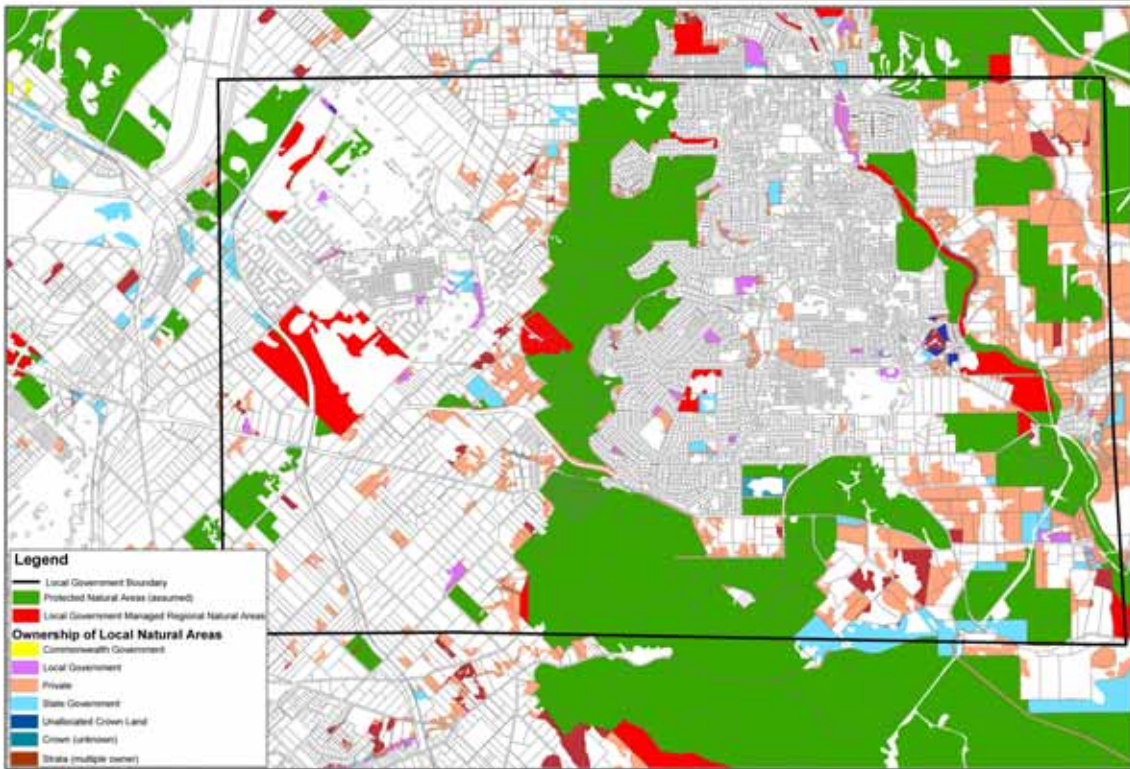


Figure 9. Local Government Controlled Natural Areas and Local Natural Areas by Ownership Category (Discussion Paper example 2)

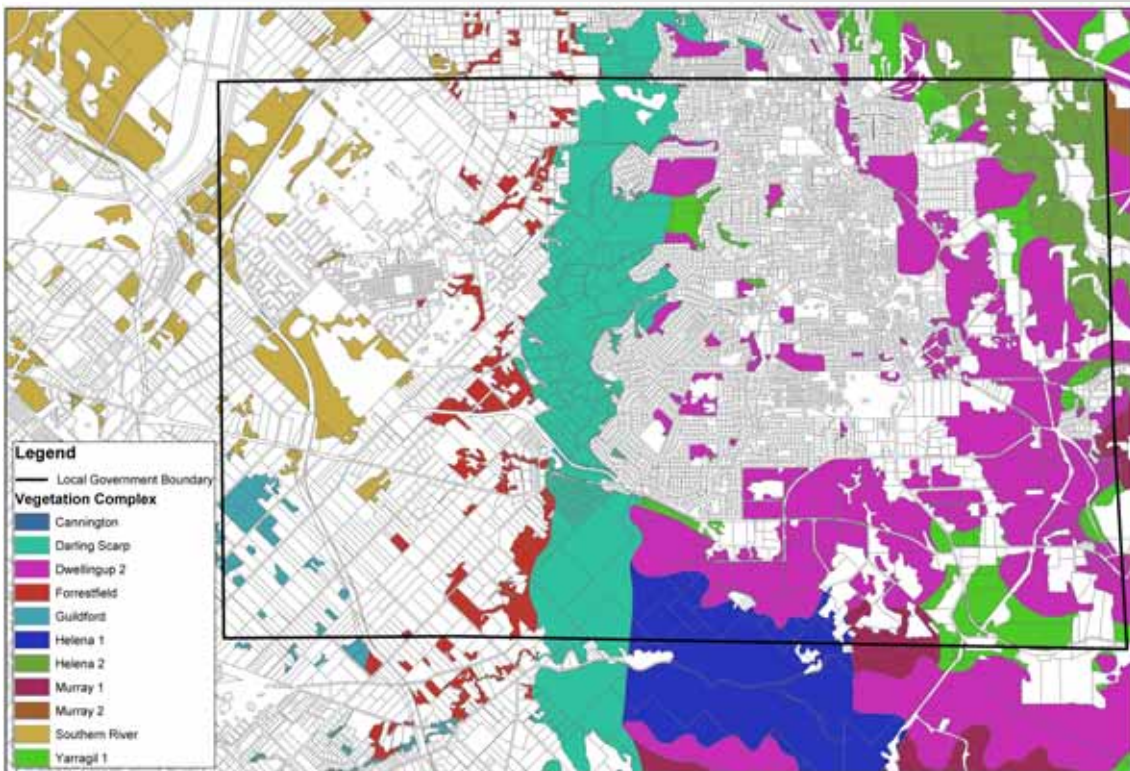


Figure 10. Native Vegetation Extent by Vegetation Complex (Discussion Paper example 3)

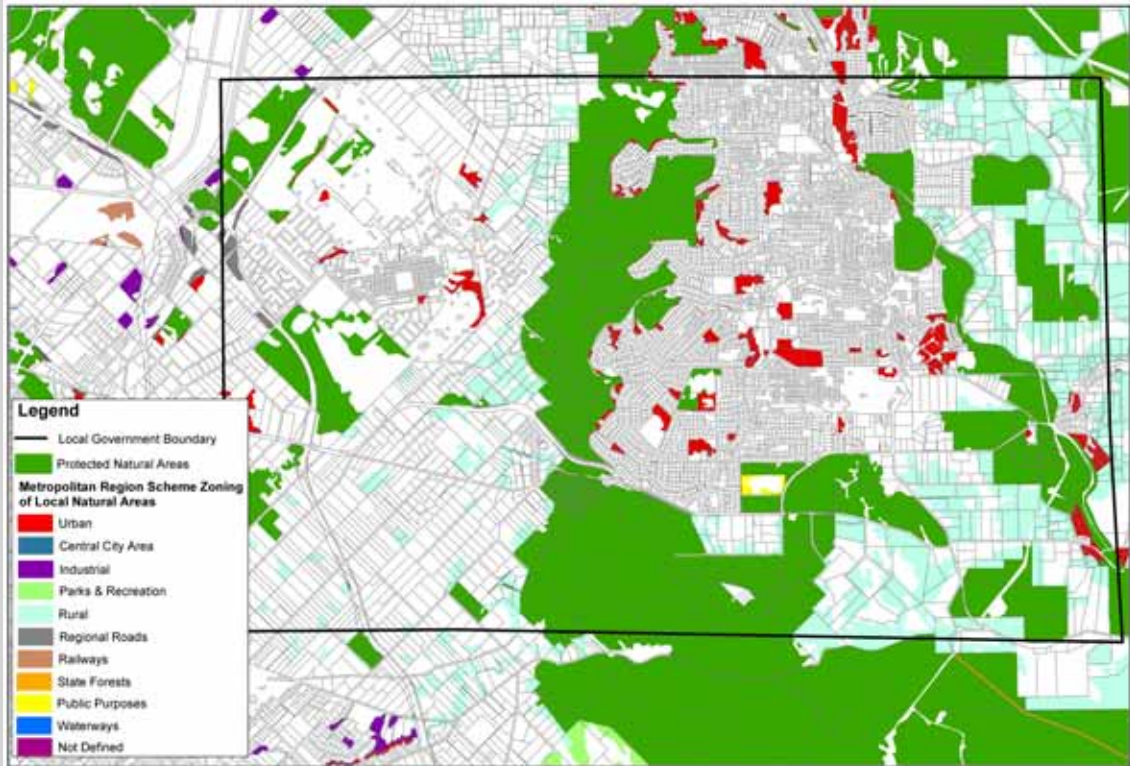


Figure 11 Native Vegetation Extent by MRS Zoning (Discussion Paper example 4)

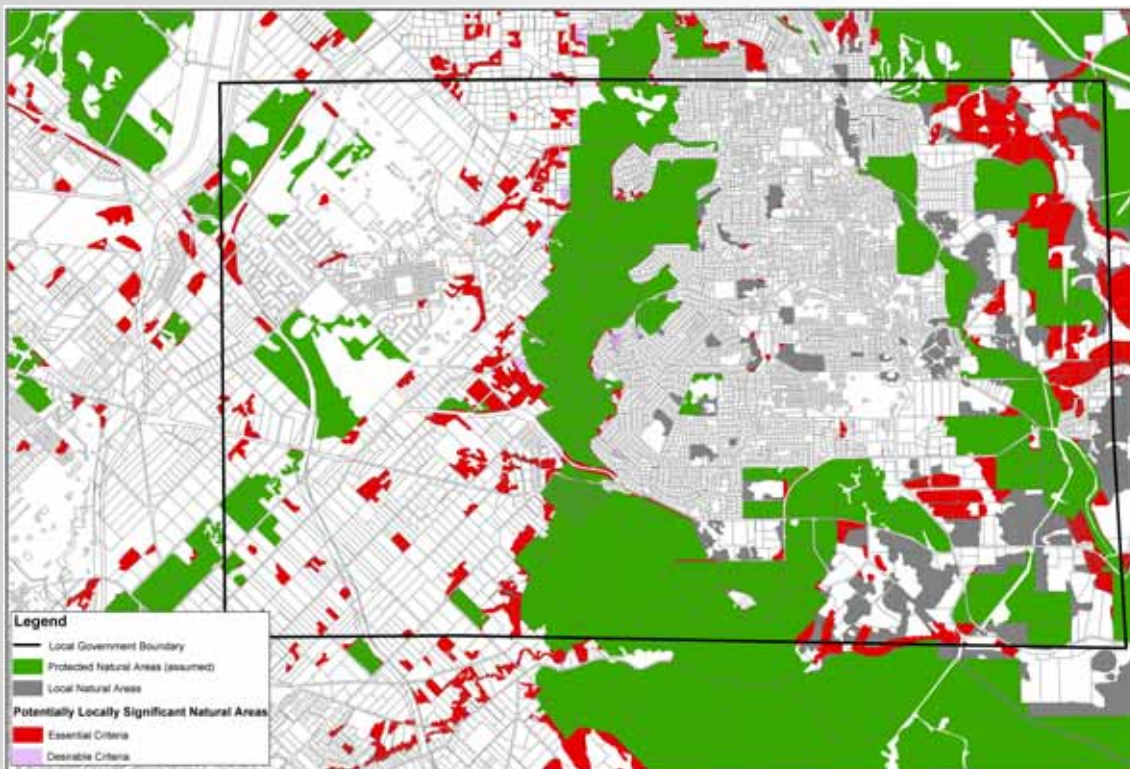


Figure 12 Potentially Locally Significant Natural Areas (Discussion Paper example 5)

9.2. Setting your vision, objectives and targets

A Local Biodiversity Strategy needs to state what the Strategy is working towards so that there is a common understanding amongst stakeholders. These Guidelines promote the use of a vision, objectives and targets to guide the development of a Local Biodiversity Strategy. There should be a clear link between the three levels of vision, objectives and targets. During the development of a Discussion Paper for public consultation, it will be important for Council to state a vision and local biodiversity objective(s) as well as adopting the Local Significance Criteria as Natural Area Condition (NAC) targets for the Local Biodiversity Strategy. This will form the overarching framework of the Action Plan for the Local Biodiversity Strategy that is developed in Phase 3. This Action Plan will also provide:

- ▶ Local Government Resourcing targets (LGR)
- ▶ operational Management Action Targets (MAT) and Management Actions
- ▶ establishment of indicators for monitoring and evaluating implementation of actions and progress towards achieving objectives and targets.

A Local Biodiversity Strategy Action Plan prepared during Phase 3 will detail the specific actions required to achieve the NAC and LGR targets. The Discussion Paper does not need to provide detail of the specific actions required to achieve the targets but should provide an overview of the broad approaches intended to be developed through the preparation of the Strategy (these are discussed in Section 9.3).

9.2.1. General considerations

When setting the vision, objective(s) and local biodiversity targets for the Strategy the broad principles described below should be addressed.

Relationship to national, state and regional biodiversity strategies

When setting objectives and targets, consideration should be given to ensuring where possible that the Local Biodiversity Strategy objectives and targets are complimentary to:

- ▶ National Targets and Objectives for Biodiversity Conservation 2001–2005 (Commonwealth of Australia 2001b)
- ▶ State Biodiversity Strategy - it is proposed that a State Biodiversity Strategy will be prepared as part of the proposed Biodiversity Conservation Act
- ▶ Regional Natural Resource Management (NRM) Strategy - for the PMR the relevant region is either the Swan or the South West NRM region
- ▶ other relevant Federal and State legislation and policy (see Section 3).

SMART objectives and targets

Whilst a vision is a broad aspirational statement, objectives and targets are SMART, that is:

- ▶ Specific - What will be achieved is clearly defined
- ▶ Measurable - There is some way of measuring what will be achieved
- ▶ Achievable - The objective is realistic given the resources available
- ▶ Relevant - The objective is relevant to the project vision
- ▶ Time-bound - There is a time by which the objective is met that is realistic, feasible and meaningful.

Continuous review

Objectives and targets should be reviewed and where necessary refined whilst the strategy is being implemented. When setting SMART objectives and targets they may often be limited by the information available. Through verification of existing information and the collection of new information during the Strategy's implementation, valuable knowledge will enable review and refinement of objectives and targets.

Local Significance Criteria

The objectives and targets of the Strategy should formalise the Local Significance Criteria, which should consist of the standard ecological criteria provided in Section 5 and if desired additional criteria that address other environmental or social values.

Standard ecological criteria

The criteria developed for Bush Forever have been adapted in these Guidelines to provide a consistent approach to Local Significance Criteria in the PMR. The Bush Forever criteria were developed through an extensive public consultation process and can be easily adapted to address local significance. The standard ecological criteria for local biodiversity planning are discussed in detail in Part A, Section 5, and are grouped under the following headings:

- ▶ Representation of ecological communities
- ▶ Diversity
- ▶ Rarity
- ▶ Maintaining ecological processes or natural systems - connectivity
- ▶ Protection of wetland, streamline and estuarine fringing vegetation and coastal vegetation.

It is important that all Local Governments base their Local Biodiversity Strategies on the standard criteria above. This will ensure a consistent approach across the region that can be supported by State and Federal Governments and the Regional NRM group.



Officers from the City of Wanneroo review maps showing ecological linkages. Determining local ecological linkages is an important part of developing a Local Biodiversity Strategy. Local ecological linkages aim to link protected Locally Significant Natural Areas to each other or to other protected natural areas of high conservation value (eg. Bush Forever Sites). Photo: J Cullity.

The standard criteria are listed in Table 7. They take into account current legislation, policies and approaches to biodiversity conservation. In particular, consideration has been given to the principles and criteria being developed under the amendments to the Environmental Protection Act 1986 for land clearing controls and to the Environmental Protection Authority's (EPA) current approach to identifying Regionally Significant Natural Areas (Environmental Protection Authority 2003a; 2003b).

Additional environmental or social criteria

There may be instances where Local Government may wish to include criteria other than the ecological criteria recommended in these Guidelines. The identification and inclusion of other general environmental or social criteria may provide further opportunities for the protection of natural areas high in biodiversity value. These types of criteria are discussed in more detail in Section 5.4.

Consider broad opportunities and constraints

The zoning of land in the Metropolitan Region Scheme (MRS), and the legislative protection of natural areas meeting specific Local Significance Criteria are examples of opportunities and constraints that should be taken into account when setting objectives and targets. More detail is provided in Section 9.2.4 as part of the setting of targets.

9.2.2. Vision

A vision is a broad aspirational statement that defines the desired condition of biodiversity within the Local Government for future generations (eg 50+ years).

One of the steps in setting a vision is to document your values:

- ▶ What is it you value about your Local Government?
- ▶ What is special that you want to maintain?
- ▶ What are the social (for example, lifestyle), economic (for example, tourism) and environmental (for example, urban bushland, Swan River) values?
- ▶ Do these values have local, regional, state, national or international significance? (Australian Local Government Association 1997).

One approach to setting a vision is to visualise and explain or draw how you want your landscape to look in 50 years time. Or a vision statement could simply look something like:

A healthy, biodiverse and sustainable environment for future generations.

OR

Natural areas retained, protected and appropriately managed.

9.2.3. Local biodiversity conservation objective

It is recommended that a long-term (25-30 year timeframe) biodiversity conservation objective is established that is based on the total amount of natural areas to be retained and protected across the Local Government. The extent of LNA required to be retained or protected to contribute to the local biodiversity objective should be determined. Essentially the local biodiversity objective should be a reflection of what will be achieved through completion of the NAC targets outlined below in Section 9.2.4. An example of an objective is "2500 hectares of natural areas, of which 1000 hectares are Local Natural Areas, is to be retained or protected in the Local Government area by 2030".

9.2.4. Local biodiversity targets

Two types of local biodiversity targets called Natural Area Condition (NAC) targets and Local Government Resourcing (LGR) targets should be established, focusing on a 10-20 year timeframe for achievement. NAC targets focus on the retention and protection of biodiversity, whereas LGR targets focus on the major resourcing issues that Local Government must address to enable achievement of the NAC targets.

Natural Area Condition (NAC) targets

It is recommended that NAC targets be used to formalise the Local Significance Criteria. NAC targets should be established to address the following biodiversity themes as outlined in Section 5:

- ▶ Representation of ecological communities (Regional and local representation criteria). The setting of retention and protection % threshold targets for ecological communities will need to consider situations where ecological communities:
 - ▶ require all remaining areas to be protected because less than 10 or 30% remains in the Local Government or across the region
 - ▶ require some natural areas to be retained and protected to meet the threshold (ie more than 10 or 30% remains in the Local Government but less than 10 or 30% are currently protected)
 - ▶ are already adequately protected above the threshold (should consider a target to retain and protect larger viable natural areas)
- ▶ Rarity (Threatened Ecological Communities; Declared Rare and Priority Flora; Specially Protected and Priority Fauna; other Significant Flora and Fauna)
- ▶ Maintaining ecological processes
- ▶ Protection of wetland, streamline, estuarine and coastal vegetation.

The setting of NAC targets should give broad consideration to the opportunities and constraints that apply to the Local Government's Local Natural Areas. It will therefore be important to engage the community in the setting of NAC targets, particularly for those Local Governments that will have to make difficult choices regarding the extent of LSNAs that can be protected on intensively zoned land.

It is recommended the Discussion Paper release a series of options of NAC targets (e.g high, medium and low) with corresponding opportunities and constraints to achieving the targets. It is likely that those NAC targets established to achieve an optimal biodiversity outcome would only be achieved with strong community support, as these will involve the greatest 'trade-offs' or potential cost-implications for the community. The series of options will need to identify the cost (in general terms) and likelihood of achievement associated with a NAC target.

Opportunities and constraints analysis during the setting of NAC's should, as a minimum, consider achievement of biodiversity conservation outcomes, legislation and Government policy on biodiversity conservation, community aspirations and land use planning issues (e.g. zoning and approvals).

To assist with consideration of priorities and opportunities from a 'biodiversity-outcomes perspective', the Local Significance Criteria have been designated as either Essential or Desirable. Section 10.7 provides further guidance on prioritising Locally Significant Natural Areas from an ecological perspective, and also prioritises natural areas based on Federal and State Government legislation and policy.

Broad assessment of the opportunities and constraints associated with the Metropolitan Region Scheme (MRS) zoning and/or ownership is also important in forming NACs. In the simplest form this would involve identifying whether natural areas that would potentially (PLSNA) contribute to a NAC target are zoned for intensive development under the MRS (urban or industrial zoning). It can be assumed that it will not be possible to protect the full extent of natural areas occurring on land that is zoned for intensive development. In these circumstances options available to protect natural areas are limited and should therefore be reflected in the targets set. Furthermore when setting the NAC target for retention and protection of vegetation complexes a target that is specific to each individual vegetation complex may be needed as the zoning constraints may vary for each complex.

Similarly opportunities to retain natural areas on industrial zoned land are likely to be limited to situations where buffers are required between industrial zoned land and other land zonings (eg residential and commercial) or where POS is needed to satisfy recreation needs of the workforce. Consideration should be given to the extent of natural areas retained within industrial zoned land as a proportion of the industrial zoned land previously developed within the Local Government; this will provide some guide as to the extent of natural areas within undeveloped industrial land that might be retained. Where land is zoned for regional roads and railways and it has already been developed it can be assumed that natural areas occurring in these zonings will be retained in the short term but may be lost in the future due to further development of

road or rail infrastructure. Where land has yet to be developed within regional roads or railway zonings it is likely that some natural areas may be able to be retained within the road or rail reserve but they may be lost in the future due to further development of road or rail infrastructure.

The datasets provided by PBP and discussed in Section 9.1 will be useful for establishing the specific NAC targets for each of the biodiversity themes, especially the PLSNAs dataset and vegetation complex statistics.

Local Government Resourcing (LGR) targets

LGR targets can be used to formally recognise the processes and the components of a Local Biodiversity Strategy that are required to achieve the NAC targets. The LGR targets should encompass the four components making up a Local Biodiversity Strategy:

- ▶ LPP for Biodiversity Conservation
- ▶ Incentives Strategy for Private Land Conservation
- ▶ management of Local Government reserves
- ▶ formalisation of the protection status of LSNA's.

Section 19 provides examples of LGR targets that will need to be considered. By setting LGR targets to reflect these components of a Local Biodiversity Strategy, Local Government will be able to show the clear direction and required actions to progress preparation and implementation of the Strategy.

Significant resources will be required to prepare a Local Biodiversity Strategy. For most Local Governments the process to identify and assess LSNA's (through the application of the LPP and the Incentives Strategy for Private Land Conservation) will require significant new resources. Further, Local Governments will need to consider the resourcing of determining which LSNA's will be protected (and how) as well as resourcing the management of those LSNA's that are protected. By developing LGR targets that encompass the four components of a Local Biodiversity Strategy these resourcing issues will be identified and addressed.

9.3. The four components of a Local Biodiversity Strategy

It is important that the four key components of a Strategy (Table 9) are briefly presented in the Discussion Paper to ensure the Strategy's structure is clearly understood by the Council and community. For many Local Governments in the PMR, the preparation and implementation of all four components will be required to achieve the Strategy's targets. This is because many Local Governments will contain a significant amount of native vegetation on private land, in addition to local reserves. For these Local Governments, mechanisms to assist private landholders to manage and protect natural areas in private ownership, as well as implementing a process to assess ecological values as part of land development decisions will be critical to the success of the Local Biodiversity Strategy.

However, for some Local Governments in the PMR, the remaining natural areas within their locality will be only (or mostly) located on public lands. In these instances, it may not be appropriate for a Local Government to develop an Incentives Strategy for Private Land Conservation and/or a LPP to ensure biodiversity values are protected through the land development process. Table 9 below gives some guidance for which components of the Local Biodiversity Strategy should be prepared and established by each Local Government in the PMR. It is based on the mapped extent of natural areas occurring on private lands and on Local Government managed land in each Local Government.

Table 9 Key Components of a Local Biodiversity Strategy Recommended for Each Local Government.

Local Government	Local Planning Policy for Biodiversity Conservation	Incentives Strategy for Biodiversity Conservation	Planning for the Management of Biodiversity on Local Government Lands	Formalisation of Protection Mechanisms
Armadale	✓	✓	✓	✓
Bassendean			✓	
Bayswater			✓	
Belmont			✓	
Cambridge			✓	
Canning	✓		✓	✓
Claremont			✓	
Cockburn	✓	✓	✓	✓
Cottesloe			✓	
East Fremantle			✓	
Fremantle			✓	
Gosnells	✓	✓	✓	✓
Joondalup	✓		✓	✓
Kalamunda	✓	✓	✓	✓
Kwinana	✓	✓	✓	✓
Melville	✓		✓	✓
Mosman Park			✓	
Mundaring	✓	✓	✓	✓
Nedlands			✓	
Peppermint Grove			✓	
Perth			✓	
Rockingham	✓	✓	✓	✓
Serpentine–Jarrahdale	✓	✓	✓	✓
South Perth			✓	
Stirling	✓		✓	✓
Subiaco			✓	
Swan	✓	✓	✓	✓
Victoria Park			✓	
Vincent			✓	
Wanneroo	✓	✓	✓	✓

The four components of the local biodiversity planning process are summarised below. This level of information may be required as part of the Discussion Paper.

9.3.1. Local Planning Policy for Biodiversity Conservation

Local Government should adopt a policy mechanism to guide how biodiversity values are identified and protected through the land development process. The mechanism should be in the form of a LPP. LPPs are prepared under the Town Planning and Development Act 1928 (TPD Act).

The LPP for biodiversity conservation recognises that to adequately assess the impact of proposed developments on natural areas, then information on the biodiversity values of the natural area should be collected using the natural area assessment templates in Section 12. Field assessment of a natural area will confirm whether an area is locally significant or otherwise. Once this has been determined, Local Governments are then in a position to determine whether efforts should be made to protect the natural area (or part thereof) either through the mechanisms available in the land planning and development process and/or any Incentives Strategy prepared by the Local Government.

The Discussion Paper should, in particular, address the Local Government's need for such a policy, as well as explaining the intent of the proposed policy.

9.3.2. Incentives Strategy for Private Land Conservation

The Incentives Strategy will need to set out a package of planning, financial and non-financial incentives available to landholders who voluntarily choose to protect and manage biodiversity values on their property. It provides the main proactive mechanism for engaging private landholders in the protection and management of biodiversity. Any Local Government where significant areas of LNA exist on private land, particularly those Local Governments having more than 100 ha of LNA occurring on private land should consider the development of an Incentives Strategy for Private Land Conservation. Protection and management of LNAs in private ownership will be critical to achieving the biodiversity retention, protection and management objectives and targets of Local, State and Federal Government.

The Discussion Paper should address the need for an Incentives Strategy, including a brief review of current incentives and disincentives for private land conservation. A useful reference for Local Governments considering an Incentives Strategy is *Incentives for Sustainable Land Management: Community cost sharing to conserve biodiversity on private lands* (Bateson 2000).

An Incentives Strategy is essential for raising landholder awareness and capacity to identify, protect and manage biodiversity resources in private ownership. Furthermore, in many cases it will only be through an Incentives Strategy that strategic on-ground assessment of the biodiversity resource will occur on privately owned lands.

9.3.3. Planning for the management of biodiversity on Local Government lands

Local Governments currently manage many natural areas and the appropriate management of these areas is important for maintaining the biodiversity resource. It is also important that these areas are protected and managed appropriately before trying to re-vegetate or create new areas. These Guidelines promote a strategic management approach for natural areas under the control of Local Government based on the central goal of biodiversity conservation. Natural areas under the control of Local Government will need to be prioritised according to their ecological value and their viability to strategically manage these areas to achieve the best biodiversity outcome.

It is also important to remember that managing natural areas under Local Government control for biodiversity should be a separate but complementary process to the provision of support and technical assistance for work undertaken by community groups.

The Discussion Paper will provide an opportunity to identify the current status of management of biodiversity on Local Government lands and major issues facing the Local Government if biodiversity values are to be maintained into the long-term.

9.3.4. Formalising the protection status of Locally Significant Natural Areas

Application of the LPP, Incentives Strategy and planning for the management of biodiversity on Local Government lands will allow identification of LSNAs and where possible negotiate their retention. To achieve formal protection of LSNAs that have been retained will require the Local Government to ensure that appropriate protection mechanisms are contained within their Town Planning Scheme (TPS). The TPS may therefore require amendment or review to introduce the appropriate mechanisms. Once the appropriate mechanisms are recognised within the TPS, Scheme Amendments will need to be initiated to formally recognise the protection of each LSNA. The community should be kept informed as to the protection status of LSNAs and it is recommended that this is done through the regular preparation of maps distinguishing between different protection status categories.

9.4. Formal public consultation

Formal public consultation should be facilitated upon completion of the Discussion Paper through:

- ▶ public comment period on the Discussion Paper
- ▶ community workshop(s) on the Discussion Paper.

It should be the role of the Steering Committee formed in Phase 1, to ensure that issues arising from comments received on the Discussion Paper are adequately resolved through preparation of the Strategy (refer to the example Terms of Reference in Section 13.3).



The development of a Local Biodiversity Strategy will need strong community support. Community consultation (for example, holding workshops such as that shown above) is an important consideration in developing a Strategy. Photo: A Del Marco.

10. Preparation of Local Biodiversity Strategy (Phase 3)

In Phase 3, the key outputs of the Strategy are:

- ▶ preparation of a Local Biodiversity Strategy Action Plan
- ▶ preparation of a Local Planning Policy (LPP) for Biodiversity Conservation
- ▶ development of the Incentives Strategy for Private Land Conservation
- ▶ plan for the management of biodiversity on Local Government lands
- ▶ formalising the protection status of Locally Significant Natural Areas (LSNAs).

The Local Planning Policy (reactive assessment), Incentives Strategy for Private Land Conservation (strategic assessment) and assessment of Local Government managed land (strategic assessment) provide the framework and prioritisation to guide field assessments undertaken during and after completion of Phase 3.

These are discussed in Sections 10.2 – 10.5

10.1. Preparing a Local Biodiversity Strategy Action Plan

An Action Plan should be prepared that underpins and guides the development and implementation of the Strategy. In effect, the Action Plan becomes the long-term framework for biodiversity planning and action in the Local Government. An Action Plan should include the following:

- ▶ Vision
- ▶ Local Biodiversity Objective
- ▶ Local Biodiversity Targets
 - ▶ Natural Area Condition (NAC) targets
 - ▶ Local Government Resourcing (LGR) targets
- ▶ Management Action Targets
- ▶ Management Actions
- ▶ Monitoring and evaluation indicators
 - ▶ NAC indicators
 - ▶ LGR indicators
 - ▶ Management Action Target indicators
 - ▶ Management Action indicators

The vision, objective(s) and local biodiversity targets should have been established in Phase 2 of the local biodiversity planning process. As part of Phase 2, Local Government will have presented a series of options of NAC targets and their implications to the Council and community. Following the public consultation period, the NAC targets will have been determined. The Management Action Targets and Management Actions will now provide the detailed information on how a Local Government will achieve and resource these targets.

- ▶ Management Action Targets are short-term targets (1-5 years), relating mainly to Management Actions. These targets must contribute to the longer-term NAC and LGR targets.
- ▶ Management Actions are specific actions that contribute directly to the Management Action Targets.

An example of an Action Plan is provided in Section 19. Further community consultation is necessary in the preparation and finalisation of an Action Plan.

Monitoring and evaluation

Monitoring and evaluation are important parts of biodiversity conservation to measure, assess and report on the achievements of the Local Biodiversity Strategy and its resultant projects, and then improve the way future projects are implemented. A well-planned and designed Strategy will have monitoring and evaluation considered throughout Strategy planning/design and implementation Phases, rather than at the end of the planning and implementation Phases of the Strategy.

Local Governments should present their monitoring and evaluation program as part of their Action Plan, so that readers can see how particular objectives (and the actions to meet those objectives) are to be measured and assessed.

Local Governments are encouraged to develop indicators for their NAC and LGR targets, Management Action Targets and Management Actions. See Section 19 for an example of how an Action Plan can be presented.

Once an Action Plan is drafted, a Local Government can progressively develop the four components of the Strategy.

10.2. Preparing a Local Planning Policy for Biodiversity Conservation

The preparation of a LPP ensures that biodiversity can be adequately considered in Local Government land-use planning decision-making processes. The LPP is reactive to development and requires development proponents to submit consistent information on natural areas potentially impacted by their proposals. Consistent information is collected by linking the LPP to the standard Natural Area Initial Assessment templates in Section 12.

A sample Local Planning Policy for Biodiversity Conservation is provided in Section 13.2.

10.2.1. Application of a LPP

The application of a LPP is triggered by proposals to rezone, subdivide or develop land containing natural areas. The LPP will ensure that the biodiversity values of natural areas likely to be impacted by development proposals are adequately assessed and where possible retained or protected. It is intended that this policy should be applied at the earliest and most appropriate stage in the planning process. When a development application is received that may impact on a natural area, Local Government should require the proponent to provide a level of information that is satisfactory for assessing whether the natural area meets Local Significance Criteria (see Section 13.2). It is recommended that the Natural Area Initial Assessment templates outlined in Section 12 are used for this purpose.

Once satisfactory information is received from the proponent the Local Government may wish to verify this information by visiting the natural area and/or obtain independent expert advice. Local Government may want to prioritise which sites it may want to verify information based on the potential values of that site gauged from the Potentially Locally Significant Natural Areas (PLSNA) dataset. A suggested prioritisation framework for the purpose of verifying information provided by proponents is discussed in Section 10.7.

When the LPP is implemented, Local Government will be confident that:

- ▶ Local Significance Criteria are transparent and understood by all stakeholders
- ▶ there is consistent application of the policy to all developments
- ▶ decisions to protect natural areas are soundly based
- ▶ natural areas to be protected will have a high chance of being viable.

Refusal/modification of development proposals

As a result of applying the LPP for Biodiversity Conservation, some proposals for land use change or development may be refused, modified or approved (or recommended refusal, modification or approval for subdivision) by Council.

Refusal or modification of a proposal through applying the LPP will result in the retention of all or part of a LSNA. It is important that negotiations between Local Government and development proponents to modify a proposal to retain or partly retain a natural area include resolution to formally protect the natural area. When Local Government refuses a development proposal (or recommends refusal to the determining agency) it is important that the affected landholders are encouraged to formally protect the natural area through the offering of incentives as determined appropriate through the application of the Incentives Strategy for Private Land Conservation.

10.2.2. Resourcing the application of the LPP

It is expected that for most Local Governments it will be the responsibility of both planning and environmental officers to apply the LPP to the relevant development proposals. Local Government planners will require a thorough understanding of the policy as well as the biodiversity protection and management targets identified and adopted by Council.

Any verification by Local Government of information provided by development proponents will require a high level of ecological expertise. The LGR targets in the Local Biodiversity Strategy Action Plan (and set in Phase 2) should have identified options for resourcing the training and employment of staff for ecological assessment.

10.2.3. Relationship of LPP with Clearing Permits (Environmental Protection Act 1986)

Recent amendments to the Environmental Protection (EP) Act 1986 will require a permit to be obtained from the Department of Environment (DoE) for any clearing of native vegetation, unless that clearing is specifically exempt under the Act. It is important that a Local Government's development assessment process complements the Clearing Permits system and that a Local Government is able to reach its own position on each clearing application in light of its own Local Biodiversity Strategy and objectives.

In assessing an application for a permit to clear, the DoE will seek the comment of the Local Government. Therefore Local Government should have a position on each individual application. With a Local Biodiversity Strategy, a Local Government can be in a better position to comment on individual applications and the local biodiversity agenda will be more transparent to the community and Government. Where a permit is required, the DoE will take into account a Local Government's Strategy.

An application to clear may be refused by the DoE where the proposed clearing does not comply with the principles set out under the EP Act (see Appendix 5). The principles in the Act are environmental principles, and only the Department's Chief Executive Officer is able to take into account social or economic considerations.

A number of detailed criteria are being developed by DoE for the application of each of the principles. The standard Local Significance Criteria developed for these Guidelines have taken these DoE criteria into account as were current at the time of publication of these Guidelines.

10.2.4. Opportunities and constraints for the retention or protection of natural areas through the application of the LPP

Local Governments will need to clearly identify the retention and protection mechanism(s) for each LSNA that is to be protected. LSNAs will be protected in a variety of ways and this is because the opportunities and constraints for protection will vary with each natural area under consideration.

Where a natural area is subject to the LPP process, the following are key considerations used to determine which LSNAs should be retained and protected and what mechanism should be used to protect LSNAs:

- ▶ the objectives and targets of the Local Biodiversity Strategy
- ▶ the land use planning processes and zoning
 - ▶ Structure planning process (for areas identified to be rezoned)
 - ▶ Development and subdivision proposals
- ▶ creation of new Local Government reserves
- ▶ ownership and landholder aspirations (the willingness of the landholder and manager – current or proposed to protect and manage the area).

Objectives and local biodiversity targets

The Local Biodiversity Strategy objectives and targets (NAC targets and LGR targets) established in Phase 2 provide guidance as to the extent of LSNAs that need to be retained with recognition of what might be achievable for intensively zoned land. It is likely that the LPP will provide the main process for negotiating the retention and protection of LSNAs on Urban, Urban Deferred and other intensively zoned land under the MRS.

Land-use planning processes and zoning

Options for retention and protection of LSNAs may be limited depending on which stage of the planning process decisions are made (Section 14). Generally, the greater the certainty of development, the higher the financial cost of securing land for the protection of natural areas. Freehold tenure of the land and intensive land-use zonings under the MRS (eg Urban, Industrial) pose the greatest constraints (or potential cost) to the protection of LSNAs. It is important to remember that whilst in some cases a given constraint (for example, Urban zoning) may preclude protection of a natural area, that same constraint may be outweighed by opportunities for protection on another site (e.g. legislative protection, local community support and resources). The opportunities and constraints for the retention and protection of a natural area will need to be clearly documented. They influence the final decision as to whether the natural area is protected and allow the decision-making process to remain transparent.

It is likely the opportunities and constraints for the retention of LSNAs through the application of the LPP will differ in the following circumstances:

- ▶ structure planning process (for areas identified to be rezoned)
- ▶ development and subdivision proposals in accordance with MRS and Town Planning Scheme (TPS) zoning.

Structure planning process

The opportunities to protect natural areas on Urban and Industrial zoned lands are likely to be greater earlier in the land development process (e.g. at the structure planning stage). Where structure plans and outline development plans have already been produced, these will also be significant constraints to protecting additional areas. The LSNA retained and protected through the LPP will be maximised when it can be applied at the structure planning stage of the land-use planning process. Structure planning is likely to occur in the following situations:

- ▶ where the land is being rezoned under the MRS from Rural to Urban (land is still zoned Rural in MRS)
- ▶ where land is zoned Urban in the MRS but no substantial structure planning has occurred.

In these situations information collected through application of the LPP should enable identification, prioritisation and designation of those areas to be protected for all LSNA occurring within the structure plan area. Mechanisms that could be applied in

structure planning situations to retain or protect LSNA include nominal POS, Conservation POS via shared infrastructure costs, self-funding and tax concession donation.

Development and subdivision proposals

The MRS zoning of land may act as an opportunity or a constraint to the protection of natural areas. Rural zoned lands will generally provide greater opportunities for protection of natural areas in private ownership, although opportunities for the protection of a natural area can also arise through the structure planning process of Urban zoned land.

▶ Urban zoning and other intensive land-use zonings

It is likely the LPP will need to be applied to LSNAs occurring on highly constrained land such as lands zoned for urban and industrial land uses under the MRS (see Section 14 for comparison of TPS and MRS zonings). The greatest opportunities for protection of these LSNAs will occur at the structure planning stage.

Some Urban-zoned sites may have already been through the structure planning process, and are awaiting detailed subdivision design and approval. LSNAs on these lands will be more constrained, and it may be extremely difficult to vary development proposal designs to protect such LSNAs, unless they also meet criteria indicating regional (or greater) value that may trigger referral of the proposal to either Federal or State Government Agencies (see Schedule 2, Section 13.2).

Protection options for LSNAs are described in Section 15. These options are often limited by the ability to resource or fund the protection of the LSNA. Most protection of natural areas within Urban-zoned land leads to the site being passed into public ownership for management. The protection of LSNAs on Urban zoned land that meet criteria that are of regional (or greater) value should occur outside of the nominal 10% Public Open Space (POS). Tax concessions for the donation of land and the use of shared infrastructure costs are two ways in which the protection of these sites can be achieved (see Section 15). These mechanisms can be augmented by the POS option and self-funding options.

▶ Rural zoned land and other non-intensive zonings

Lands zoned Rural or similar in the MRS offer the best opportunity for the retention and protection of LSNA in private ownership as the ecological value of the site in most circumstances should be able to be maintained in sympathy with a Rural zoning and use of the land. This approach should result in all or most of the natural areas on rural zoned land being protected. Where application of the LPP to proposals to develop or subdivide LSNAs results in refusal or modification of the proposal, the Local Government may want to consider offering incentives to formalise protection of the natural area (see Section 10.3).

Creation of new Local Government reserves

Reserves created for POS under Section 20A of the TPD Act that are often allocated to Local Government can be utilised as a mechanism for retaining and/or protecting LSNA. The identification of Section 20A reserves normally occurs during the structure planning or subdivision design stages of the land-use planning process. The LPP can be used to facilitate the identification and design of Section 20A reserves during structure planning and subdivision design to protect LSNA. In such circumstances the values of the LSNA should be reflected in the reserve purpose to ensure adequate funding and appropriate Management Actions have been identified for the natural area. Local Governments will need to liaise with the Department for Planning and Infrastructure (DPI) to ensure the appropriate purpose and vesting for a newly created reserve is achieved. This is discussed in more detail in Section 10.4.

Historically many natural areas that are retained through the creation of Section 20A reserves are small and often degrade very quickly with high management costs to maintain or improve the condition of the natural area. Where larger natural areas are

planned for development, Local Government should aim to ensure that natural areas retained as local reserves (for conservation and passive recreation purposes) are designed to maximise viability (see Section 6). The larger and more viable the natural area, the lower the cost associated with management.

As a general rule when reserves fall below 4 ha, proponents and Local Governments should plan to increase these natural areas to the greatest size and most compact shape possible for a given site by encouraging natural regeneration processes and where necessary by revegetation (direct seeding or planting of local provenance material). For all areas especially those of marginal viability, identifying and controlling threats is critical and sufficient funds for active management must be allocated on a regular basis.

Local Governments may choose to seek financial assistance from developers during the planning stage of new projects to cover future management costs of natural areas to be retained within the development area. When planning, remember that small areas not designed to use natural processes to maximise viability will require on-going active management and will cost more to maintain. Alternatively, resources could be directed to manage the larger, more viable areas within a Local Government area as a trade-off for clearing less-viable natural areas for development.

The long-term viability and related management costs are important considerations in determining the future of a natural area. Conducting an assessment of threats and easily measured viability issues (Sections 6.1 and 12) is strongly recommended to not only determine the area's likely management needs, but also provide design guidelines for retention and buffering, should part of the natural area be proposed for clearing. Viability predictions need to be carefully used along with consideration of all other opportunities and constraints. A site's viability is a factor of many variables, and should not be used as the primary reason to protect or forgo a site.

Local Governments may also have concerns that new conservation reserves may be beyond the resources of the Council to manage. These concerns are legitimate and need to be carefully considered after, not during, determination of the site's values.

Ownership and landholder aspirations

Ownership, specifically private ownership, of lands in the PMR is an important consideration in the long-term protection of natural areas.

The attitudes and aspirations of landholders towards their natural areas will need to be carefully addressed. Negative attitudes by landholders towards natural area protection will often arise from an expectation of development potential and the fact that most State and Local Government policy does not adequately recognise the public good obtained from private land conservation. For example, vegetated land is taxed at the same rate as cleared land under most current State and Local Government policy (e.g. land tax; most Local Government rating systems; State Government land valuation system which values Rural zoned land at Urban zone rates in some circumstances).

The ownership of the land and landholder aspirations are valid considerations in local biodiversity planning and should be assessed along with all other considerations. Providing incentives for landholders to protect and manage their natural areas may reverse negative landholder attitudes towards biodiversity conservation. These incentives are discussed in Sections 10.3 and section 15.

10.3. Preparing an Incentives Strategy for Private Land Conservation

The Incentives Strategy for Private Land Conservation provides the framework for delivering incentives to landholders protecting LSNAs. Financial and non-financial incentives to landholders who voluntarily protect LSNAs are important to recognise the public good that is achieved through protection of natural areas on private land. Incentives are particularly important for natural areas identified on private property in rural (or similar) zoned land.

The Incentives Strategy will need to include the following:

- ▶ community survey
- ▶ development of incentives package
- ▶ implementation of incentives package.

10.3.1. Objectives and targets

Based on the objectives and targets established in Phase 2 and identified in the Local Biodiversity Strategy Action Plan (refer to Sections 9.2.3 and 9.2.4), the area of LNA required to be retained, protected and managed on private land will be known or able to be determined. Knowledge of the extent of LNA that needs to be protected (to meet the targets and objectives) and the possible opportunities and constraints to protection will enable determination of the preferred incentives to be offered.

10.3.2. Opportunities and constraints

The opportunities and constraints associated with offering incentives for private land conservation consist mainly of the zoning of the land, landholder acceptability and the ability of the Local Government to sufficiently resource and market incentives to make them attractive to landholders.

The greatest potential for the offering of incentives to engage private landholders in retention and protection of natural areas is for those that occur on Rural zoned lands. These areas are the least constrained in terms of approvals for subdivision or development. Hence, rural landholders in the PMR may be motivated to protect and manage LSNAs in the long-term if it attracts certain financial and non-financial incentives.

Land owners who have previously had development proposals refused through application of the LPP or were unable to gain a permit to clear native vegetation from DoE may also be interested in obtaining incentives to manage the natural area.

For Urban zoned lands and some Rural zoned lands where an development expectation has been created through previous planning approvals, incentives will be much less attractive to landholders.

10.3.3. Development of Incentives Strategy

The development of the Incentives Strategy should involve a survey of landholders, creation of a package of incentives and eligibility criteria, budgeting for implementation of the incentives, and field assessment of natural areas put forward by landholders.

In addition to motivating landholders to protect and manage LSNAs, the Incentives Strategy will provide a means of proactively assessing the ecological values of natural areas that occur on private land. Field assessment is an important part of establishing landholder's eligibility for incentives.

Community survey

It is important to gain some understanding of the community's opinions and attitudes towards incentives before developing the strategy. In particular it will be important to gain an understanding of the specific incentive(s) that are likely to motivate the community to protect and/or manage a natural area in private ownership. The survey needs to be specific about the information you intend to collect and careful consideration should also be given to the target audience for the survey. An example of the survey used by the City of Cockburn is provided in Appendix 6. The survey results should give some indication of the likely uptake of incentives and therefore provide the basis for determining the resourcing costs.

Incentives package and protection mechanisms

Based on the community survey and Local Biodiversity Strategy Action Plan biodiversity objectives and targets, an incentives package that reflects the public good that is derived from private conservation and management of natural areas should be

developed. Some of the potential incentive proposals are outlined in Section 15, and can be summarised as consisting of:

- ▶ removal of disincentives for private land conservation
 - ▶ rate rebate incentives
 - ▶ taxation
- ▶ subdivision for conservation (including subdivision concessions)
- ▶ special grants
- ▶ technical support and advice.

It is important that the incentive provided to landholders to protect and manage their LSNA is formally recognised through landholder commitment to one of the following protection mechanisms (further outlined in Section 15):

- ▶ conservation zoning
- ▶ covenants
- ▶ Voluntary Conservation Agreements (VCAs).

Commitment to a protection mechanism will ensure that incentives are contributing to management standards that will hopefully be maintained into the long-term. Local Governments should work closely with other agencies (e.g. CALM and the National Trust) responsible for private land conservation initiatives in Western Australia.

Eligibility criteria

Local Government is encouraged to target incentives at landholders that have land that is zoned Rural (or similar, for example, Special Rural) and contains a natural area that has been verified through field assessment as being locally significant. Additional eligibility criteria may be considered to further reflect Local Government biodiversity objectives and targets. The eligibility criteria and the process of obtaining funds can be communicated to landholders through the development of an Expression of Interest and Application Forms.

Financial implications

The financial implications of incentives can be initially considered following the community survey. It may be useful for Local Government to commit to funding a specified uptake of incentives to allow the Incentives Strategy to be marketed with greater certainty. Specific financial requirements of Council will be more accurately gauged during implementation of the Strategy. It is likely that the uptake of incentives will be relatively low initially until the Incentives Strategy is marketed, recognised, and accepted by landholders (Bateson 2000).

Example: Funding of the Shire of Busselton's Incentives Strategy for Private Land Conservation

When a proposal for an Incentives Strategy for Private Land Conservation was developed for the Shire of Busselton, a key feature was the way in which the strategy would be funded by Council.

Busselton's Strategy uses two basic types of incentives: a subdivision incentive and a rate rebate incentive (White 2002). Both incentives provide financial assistance to landholders. The subdivision incentive offers an additional subdivision opportunity for lots with particularly high biodiversity values. Biodiversity values present on the resultant new properties are protected under a conservation covenant and the zoning of the land as Bushland Protection in the Shire's Town Planning Scheme.

The rate rebate incentive applies to lots that have specific high biodiversity values but do not qualify for the additional subdivision opportunity. In exchange for entering into a voluntary management agreement (10 year term with the Shire of Busselton) or a conservation covenant (in perpetuity with a recognised covenanting authority) landholders receive either a 35% or 50% reduction in their Local Government rates.

Whilst the subdivision for conservation concept generates funds through extra rates over time, Council was faced with the question of how to find the new money to fund

rate rebates. The solution was relatively simple: use the extra rates generated from the additional lots for conservation to fund the rate relief. The Strategy has the endorsement of the Shire of Busselton and Western Australian Planning Commission.

The concept of subdivision for conservation is applicable to Rural zoned lands in the PMR. (See also Section 15.)

10.3.4. Implementation of an Incentives Strategy for Private Land Conservation

To achieve the most efficient administration of the Incentives Strategy it is suggested that it is implemented annually according to the advice below.

Expressions of interest (EOIs)

EOIs should be sent out in June/July to invite landholders to express interest in having an assessment of their natural area(s) undertaken, which is required to determine eligibility for financial/technical assistance. Landholders with properties containing LNAs should be targeted. LNAs occurring on private land can be determined using the data described in Section 9.1.3 and cross-referencing with the Local Government cadastral dataset. Local Government may want to prioritise which landholders it is likely to send EOIs based on the potential values of their LNA gauged from the PLSNA dataset. Prioritisation for the purposes of field assessment and for the possible offering of incentives for protection or management is discussed in Section 10.7.

Visit landholders and undertake field assessment

Once EOIs have been received and assessed, a Local Government officer with training in ecological assessment should aim to visit interested landholders throughout the Spring period (September – November). Field assessment should be undertaken in accordance with the Natural Area Initial Assessment templates provided in Section 12. The information should be used to determine:

- ▶ whether the LNA meets Local Significance Criteria
- ▶ protection and management recommendations for the natural area.

This information should then form the basis for the Local Government officer and the landholder to develop an application for incentives to address the protection and/or management recommendations.

Assessment panel

An assessment panel should be convened (December) once all the relevant field assessments and application forms have been completed. The assessment panel could either be the Steering Committee formed earlier (see Section 8.4) or a subgroup of the Steering Committee. It is suggested that the terms of reference of the assessment panel address the following:

- ▶ determine which applications will best contribute to meeting the biodiversity objectives and targets of the Local Biodiversity Strategy Action Plan
- ▶ ensure that the incentives and protection mechanism nominated by the applicant are appropriate to the specific circumstances of the natural area
- ▶ where needed, provide further technical input to assist the landholder in protecting or managing the natural areas
- ▶ prepare a list of successful projects in order of priority.

Budgeting

A budget item to the Council should be prepared that includes the list of successful projects in order of priority. The budget item should indicate which projects would have ongoing financial liabilities (eg rate rebates) that will need to be appropriately addressed in subsequent budgets. Successful applicants should be notified in June once Council budget has been finalised. Applications that were recommended for funding by the assessment panel but were not able to be funded by Council should be carried over to the following year for consideration in the incentives scheme.

Formalisation

A letter of acceptance between the landholder and Council should be developed and signed by both parties. The acceptance letter should indicate a) the landholder's commitment to a formal protection mechanism (e.g Voluntary Conservation Agreement) and management actions and b) the Council's commitment to provide the incentive.

Monitoring and evaluation

A process should be established that results in direct contact with landholders by Local Government to ensure compliance with specific agreements and the effectiveness of the management actions in conserving biodiversity.

10.4. Managing biodiversity on Local Government land

A strategic analysis of all natural areas under the control of Local Government should be conducted to determine whether they are locally significant and to assess the on-ground management needs of individual natural areas. Resources to manage these areas can then be strategically allocated to ensure the biodiversity values in each of these areas is maintained. To strategically manage these natural areas to achieve the best biodiversity outcomes, Local Government will need to prioritise natural areas according to their ecological value (based on the Natural Area Condition [NAC] targets) as well as their level of threat. More information on prioritising for management is given in Section 10.7.4.

The following activities will need to be completed for a Local Government to strategically plan for and manage biodiversity occurring on natural areas under Local Government control. These activities will form part of a management action plan.

- ▶ a listing and map of Local Government controlled or managed lands that contain natural areas (Crown reserves, local road reserves, freehold lands and unallocated Crown land [UCL] and unmanaged Reserves [UMR])
- ▶ completed Natural Area Initial Desktop and Field Assessments for all natural areas on -
 - ▶ Local Government controlled lands
 - ▶ unallocated Crown land and unmanaged reserves (where possible)
- ▶ a listing and map of all natural areas on Local Government controlled lands that are confirmed as being locally significant
- ▶ an opportunities and constraints analysis of protection mechanisms for LSNAs on Local Government controlled or managed land, including -
 - ▶ investigation of the potential to strategically use the Local Government reserve estate and/or unallocated Crown land to achieve protection via land swaps or other means
 - ▶ recommendations for changes to the vested purpose of Local Government reserves to recognise biodiversity values
- ▶ preparation and implementation of Threat Abatement Action Plans (interim management plans) for each LSNA
- ▶ identification and prioritisation of reserves requiring comprehensive Conservation Management Plans or reviews of existing management plans
- ▶ estimated costs for implementing management activities documented in Threat Abatement Action Plans and/or Conservation Management Plans
- ▶ identification of monitoring and evaluation needs for biodiversity conservation on Local Government controlled or managed lands.

Local Governments have responsibility for the care and control of numerous Crown reserves. These include reserves where they have management orders under s.46 of the Land Administration Act 1997 (LA Act), local road reserves and freehold lands which they own. They are also involved from time to time in the management of unallocated Crown land and Unmanaged Reserves (UCL/UMR). The appropriate

management of natural areas in Local Government control should be in line with biodiversity principles (discussed in Section 1.6).

In the past Local Governments planned for the management of their reserves in a great variety of ways. Many developed reserve inventories and focused management resources on the most ecologically significant reserves. Others focused on the reserves of most significance to the local community, at times for values other than biodiversity. Others addressed reserve management from an issue-by-issue perspective, such as weeds, *Phytophthora dieback* or feral animals. Some Local Governments with significant roadside vegetation undertook roadside conservation surveys and put policies in place for their management.

Decisions made by Local Government affecting the management (on-ground actions and budgets) of significant natural areas under their control will need to reflect the biodiversity values of each natural area and the level of threat posed to those values. Strategic management will allow Local Governments to justify resource use and allocation of funds on the basis of sound biodiversity conservation principles. One of these key principles is that protecting and managing existing natural areas of biodiversity value should always be a higher priority than allocating resources and funding into reconstruction or creation of habitat on cleared or highly degraded land. Other important matters such as community involvement and participation, safety and training of staff and community volunteers can also be addressed through a strategic management approach.

Natural areas under the control of Local Government will need to be prioritised according to their ecological value (based on the Local Significance Criteria) and their relative viability. Specific steps in this process include:

- ▶ collection and analysis of information on the natural areas in Local Government controlled land via desktop and field assessment
- ▶ determination of how the natural areas in Local Government controlled land will be prioritised for protection and management activities
- ▶ protection of natural areas in Local Government controlled land for conservation purposes in order of priority including reserve vesting, signage and controlling access
- ▶ identification of priority management actions and preparing Management Plans for natural areas in Local Government controlled land
- ▶ estimation of the costs associated with activities identified in Threat Abatement Action Plans and/or Conservation Management Plans
- ▶ support to the on-ground work of community groups including identifying separate resources.

10.4.1. Collect, collate and analyse information

Ecological information for natural areas identified on Local Government controlled land should be collected using the Natural Area Initial Assessment templates (Section 12). The collection of the ecological information and the prioritisation of natural areas are required to identify those natural areas under Local Government control that are the highest priority for protection (in biodiversity terms) and assist in the preparation of Threat Abatement Action Plans. Local Governments should be aiming to incorporate all of the ecological information collected into a reserves inventory/database to assist in the ongoing strategic management of reserves.

10.4.2. Determine priorities for the protection and management of natural areas in Local Government control

Those natural areas in Local Government control meeting Local Significance Criteria (LSNAs) should be prioritised according to relative ecological value, estimated viability and assessed against other environmental, social and economic criteria in an opportunities and constraints analysis for their protection. Consideration will also need to be given to the threats to the natural area that will need to be addressed through management. Other natural areas under Local Government control (not

identified as LSNAs) will also have to be prioritised for their level of protection and management.

An important first step in prioritising Local Government managed LSNA's is assessing the protection status of the highest priority natural areas. This includes reviewing the purposes of reserves that contain natural areas as well as reviewing whether any level of development expectations exist for an area that may impact on biodiversity conservation values (e.g. road expansion, area identified as a future oval). In instances where commitments exist for high priority natural areas under Local Government control, alternatives should be considered or at the very least efforts undertaken to restrict the level of impact to a minimum. Once this has been achieved, management planning can begin to strategically direct resources and funding to the highest priority natural areas in Local Government control.

10.4.3. Securing protection of natural areas in local reserves managed by Local Government

Legislation relating to Crown reserves

For Local Governments reviewing the purposes of reserves under their care and control, it is important to have an understanding of the legislation relating to Crown land, including managed reserves, unallocated Crown land and Unmanaged reserves.

All Crown land in Western Australia is subject to the provisions of the LA Act. The LA Act is administered by the Minister for Planning and Infrastructure and Department for Planning and Infrastructure.

Section 46 of the LA Act provides for management orders to be issued to parties such as Local Governments, and such reserves are known as 'managed reserves'. UMRs are those reserves for which s.46 management orders have not been issued. UCL is Crown land which is not subject to any known interest, and which is not reserved or dedicated as a road or for the purposes of another Act (e.g. Conservation and Land Management Act 1984 [CALM Act]).

UCL and UMR are under the direct management responsibility of the Minister for Planning and Infrastructure. However, arrangements can and have been made for UCL and UMR to be managed by other government agencies. For example, arrangements have been made for UCL and UMR outside of Perth, regional centres and townsites to be managed by Conservation and Land Management (CALM). DPI is also negotiating with the Fire and Emergency Services Authority (FESA) for FESA to provide fire management services on UCL and UMR within Perth, regional centres and townsites.

Reserves created under the LA Act may have an 'A' classification. Special protection is afforded to Class 'A' reserves, in that proposals to significantly amend them must be tabled in Parliament and may be rejected by either House.

It is important to note that prior to the LA Act, the Land Act 1933 provided for reserve classifications of 'A', 'B' and 'C'. The 'B' and 'C' classifications have been discontinued by the LA Act (although existing Class 'B' reserves are preserved, and must still be dealt with in accordance with the relevant provisions of the Land Act 1933).

Reserves set aside under the LA Act for the purposes of the CALM Act are given an even higher level of protection than 'normal' Class 'A' LA Act reserves. Significant amendments to such reserves can only be effected by special Acts of Parliament ('Reserves Bills').

When freehold land is subdivided, often some of the land is vested in the Crown pursuant to s.20A of TPD Act. Purposes for which land may be vested include conservation or protection of the environment or a waterway, pedestrian access way, right-of-way or reserve for water supply, sewerage, drainage, foreshore management, waterway management or recreation. While s.3.53(2) of the Local Government Act 1995 places control and management with Local Governments for 'otherwise unvested facilities', land vested in the Crown for recreation is re-vested (removed from the freehold estate) and reserved for 'public recreation' under the LA Act. DPI then seeks the agreement of the relevant Local Government for the latter to be issued with a management order under s.46 of the LA Act. Such reserves are known as 'Section 20A reserves'.

Reviewing the purposes of reserves managed by Local Government

Reserves may be cancelled, amended or their purpose changed by Ministerial Order under the LA Act dependant on the LA Act's requirements in relation to Class 'A' reserves and reserves subject to the CALM Act (Government of Western Australia 2003e). This offers the opportunity for Local Governments to review the purpose of reserves vested in their control and make recommendations for changes where the current reserve purpose does not include reference to the area's local biodiversity values. However, for Section 20A reserves, there are very strong moral arguments for retaining the purpose for which the land vested in the Crown under the TPD Act (Government of Western Australia 2003f). Even if the reserve(s) is identified as having high conservation value, such as within existing Regional Parks, Bush Forever Sites or System 6 areas (outside Bush Forever Study Area and CALM Managed Estate) or meets Local Significance Criteria, a strong argument will need to be prepared to change the reserve purpose to recognise conservation values if they were not originally recognised in the vesting purpose. However it is important Local Governments pursue this opportunity as ecologically significant natural areas often occur on Local Government reserves that are vested for purposes (such as 'Public Recreation') other than a conservation-focused purpose. This offers no official recognition of the biodiversity values of the reserve. Such vesting purposes may result in biodiversity values being compromised by Local Government when budgeting for asset management and making decisions about developments they may initiate such as for recreational facilities.

It is recognised that Local Governments will need to work closely with State Government agencies in reviewing opportunities and constraints for changes to existing vesting purposes of reserves to ensure biodiversity values are recognised in the purpose. Possible reserve purposes could include Biodiversity Protection, Protection of Indigenous Flora and Fauna, Bushland and Waterway Protection and Nature Conservation. These reserve purposes can be combined with other purposes such as Recreation, Drainage or Public Purposes.

Local Governments may also find that there is UCL or UMR that include natural areas meeting the Local Significance Criteria within a Local Government area. Securing protection of these areas may be possible with the assistance of the State Government. Reserves can be created over UCL at the request of a Local Government, corporate body or Government agency where the land has an intrinsic community value that should be preserved and maintained for the benefit of present and future generations (Government of Western Australia 2003e). Strategic protection through reservation to some UCL could yield significant local biodiversity benefits.

Local Governments should also explore the opportunities and constraints to raising revenue for biodiversity protection and/or management through rationalising reserves created as a consequence of s.20A of the TPD Act. Reserves assessed to have low biodiversity value (those containing natural areas that are not regionally or locally significant) and are not required for the specific vesting purpose could be reviewed for the potential for disposal and the funds acquired used to purchase replacement land of higher biodiversity value. Support for any changes to Section 20A reserves from the DPI is required. Local Governments should contact DPI and review the existing guidelines for further information relating to Section 20A reserves.

10.4.4. Undertaking management actions and preparing management plans for natural areas in Local Government controlled land

A long-term management goal for Local Governments should be to prepare and implement Conservation Management Plans for all securely protected natural areas under their control. Management Plans will not only lead to the strategic and efficient allocation of resources, but also will ensure those areas of highest biodiversity value and/or those areas subject to the greatest threats are properly recognised and actions planned in a coordinated and consistent manner. Management Plans should be reviewed on a regular basis and should include monitoring and evaluation. A management plan is a guide as to how to carry out the actions needed on the ground.

It should be action oriented, designate who is responsible for each action and identify the resources needed to achieve the plan within clearly specified timelines.

There are a number of key activities for consideration in the preparation and/or review of Conservation Management Plans including general reserve description, planning considerations, history of the reserve, social and heritage values, physical features (e.g. geology, soils, landforms), vegetation, flora, fauna, areas where regeneration activities are required, areas where revegetation is required, fire history and fire management planning, protecting landscape values, threat management (including weed, disease and uncontrolled access management), term of the plan and achievable management actions given the resources available.

It is important to remember that once an area has been identified as a LSNA to be protected, that management planning should begin immediately to ensure that biodiversity values are at least maintained and not degraded. Protection of the area and the preparation of a comprehensive Conservation Management Plan will take time and should occur in parallel with the planning and implementation of management actions to control the key threats to biodiversity conservation that are present.

Threats to biodiversity conservation need to be addressed through appropriate management actions. This can be done by assessing the level of threat to biodiversity value posed by a range of factors and processes and determining the appropriate management actions and resources needed to mitigate each threat. Threat Abatement Action Plans can then be prepared either for each individual area or for a given threat across all areas it is affecting.

It is likely that Local Governments will need to prioritise significant natural areas under their control for management efforts as resources and funds are usually limited. This will need to be based on the biodiversity values of each natural area as well as the level of threat. The threats and their level of impact will depend on the individual circumstances of each natural area and so it is difficult to provide a generic prioritisation process to guide Local Government in allocating management resources and funds. Control of the following threats is suggested as the top priority and the bare minimum required but it will depend on the individual circumstances of each natural area:

- ▶ inappropriate fire regimes
- ▶ uncontrolled access and activities
- ▶ weed invasion
- ▶ disease
- ▶ feral animals
- ▶ major factors/processes degrading condition.

The Natural Area Initial Field Assessment A and B templates will provide enough information to identify threats. However, in some cases it will be recorded on the template that more detailed information is required to adequately characterise some of the threats present or thought to be present. Some examples of where more detailed information may be required are discussed below.

- ▶ Disease identification, mapping and control – During the initial field assessment comments will be made on vegetation health. This may indicate the possible presence of Phytophthora Dieback or other diseases/pathogens such as Armillaria. To confirm and map the occurrence of and then control such diseases/pathogens requires specialist knowledge. If a disease such as Phytophthora Dieback is identified as possibly existing in a significant natural area then it will be necessary to engage qualified experts to interpret, map and test for the presence of Phytophthora spp. Advice can then be sought on appropriate control measures. The guidelines prepared for Local Government on the control of dieback caused by Phytophthora spp. should be consulted for further information (Dieback Working Group 2000).
- ▶ Detailed weed survey, prioritisation of weed species for control and mapping of high priority weed species - During the initial field assessment a recommendation will be made as to whether further weed survey and/or mapping is required

depending on the number and extent of weed species present. The species present should then be prioritised for control based on factors such as their distribution, invasiveness and environmental impacts (Dixon and Keighery 1995; CALM 1999; Randall 2000; Brown and Brooks 2002). Further weed mapping may then need to be undertaken for the high priority weed species that were not adequately mapped during the initial field assessment (see Brown and Brooks 2002 for detailed weed mapping techniques). The vegetation condition map and structural plant communities map prepared during the initial field assessment will assist with the prioritisation process and can subsequently be used with the weed distribution maps to further prioritise areas within the site for control efforts (Brown and Brooks 2002).



Phytophthora dieback disease (as shown in this photograph) is an important management issue in many Local Government reserves. Photo: J Cullity.

Some natural areas under Local Government control may already have an existing and current Management Plan, while others may not but may still be subject to various management actions such as fencing or maintenance of fire access tracks (to control threats to their biodiversity value). While Local Governments are encouraged to prepare and implement comprehensive Conservation Management Plans for all natural areas with biodiversity conservation value that are under their control, it is important to remember that threats can be identified and Threat Abatement Action Plans prepared and implemented in the absence of such Management Plans. This is important to ensure that the biodiversity value of a natural area does not degrade in the absence of active management and a Conservation Management Plan.

Local Government will need to identify threats and prepare Threat Abatement Action Plans for all significant natural areas under their control and/or management. This includes those areas not yet in secure protection (e.g. the reserve vesting is 'Public Recreation'), as lack of management action can be one of the biggest threats to biodiversity conservation. Significantly more resources are required to improve a natural area from a degraded condition compared to maintaining or improving a natural area in good or better condition. In addition once many values of natural ecosystems are lost they cannot be restored by human efforts no matter how well managed or resourced.

Collecting additional information

Detailed flora, vegetation and fauna surveys will be necessary to gain a greater understanding of the values of an area and are an important resource in making informed management decisions. Vegetation description and mapping information, (which is collected as part of Natural Area Initial Field Assessment A template), and comprehensive flora and fauna lists are recognised as essential components of Conservation Management Plans. Detailed survey work should first take place on those areas for which significant species or communities are present or believed to be present, as recorded on the Natural Area Initial Field Assessment B template (Section 12.4). This should take place in consultation with CALM, as their staff may need to implement certain actions under legislation or alternatively be required to undertake survey work themselves. If the desktop assessment indicated the likelihood of the presence of significant fauna species, more information will need to be collected with regard to the presence of this species, its habitat requirements and occurrence of suitable habitat within the natural area. Other high priority natural areas without an existing management plan would also be a priority for detailed survey.



Local Government officers undertake weed mapping in a local reserve. Weeds are considered one of the major threat to natural areas. To manage weeds effectively, they should be mapped and prioritised for management control. Photo: R Millar.

Key management activities for Threat Abatement Action Plans and Conservation Management Plans

The key activities discussed below will probably need to be part of Threat Abatement Action Plans for those natural areas without current Conservation Management Plans. They are also key components of comprehensive Conservation Management Plans.

Control of inappropriate fire regimes – development of a fire management plan

Fire management is a significant factor to consider for all natural areas. The extent, intensity, seasonality and frequency of fire can significantly affect the biodiversity conservation values of a natural area as well as cause concern to nearby residents and the community. A fire management plan, developed in conjunction with the Fire and Emergency Services Authority of WA (FESA) (or the relevant fire fighting body), the land owner/manager, local community and any groups involved in the area or its adjacent management zones (e.g. the local conservation group, sporting associations) should address issues of fire prevention, fire preparedness, fire response and recovery of the natural area. A fire management plan will provide greater assurance to the community that fire risk is being managed (and monitored) as well as protect biodiversity values through the planning of strategic fire control access points and tracks, identifying any areas of priority conservation value and if needed developing a mosaic of fire ages. Consideration should be given to prioritisation of weed control based on fire risk, for example, weedygrasses are a high priority for control as they significantly add to the fuel load in natural areas. Post fire response planning is also important to take advantage of weed control opportunities and provide temporary fencing to allow natural regeneration to occur undisturbed. Information collected as part of the fire management plan could provide valuable information into the fire response plans that are developed by FESA.

Control of unauthorised access and activities

Where information collected through desktop and field assessments identifies unauthorised access as a threat, actions such as fencing, rationalisation of tracks and installation of controlled access points must be considered as soon as possible. If a reserve contains landscaped active recreation areas and areas of biodiversity conservation value, it will be important to physically separate the active recreation and conservation areas with clearly defined hard surface boundaries (for example, a limestone path) to minimise disturbance to the conservation areas from weeds, fertiliser, pesticides and watering. The following are all components of controlling unauthorised access and associated activities.

- ▶ Identify conservation areas to all stakeholders

It is important that the community, particularly those living nearby, understand the biodiversity conservation value of a natural area as soon as possible. This is often best achieved through signage, indicating that a reserve is a designated conservation area or has known biodiversity conservation value, or through obvious evidence of management (eg fencing, rubbish removal) in areas most likely to be seen by the public (eg the entry of the reserve). Clearly identify all areas of recognised biodiversity conservation value to all Local Government staff and contractors and update Local Government plans and GIS systems to show conservation areas.
- ▶ Designate management zones

Some reserves controlled by Local Government contain natural areas as well as areas used for other uses and activities, for example, playing fields, picnic areas, tennis courts or club rooms. In these instances, it is important to establish management zones based on land uses within the reserve, for example, conservation, recreation, landscape aesthetics, resource extraction. Natural areas require very different approaches including skills and techniques to manage them compared to active recreation areas. Separating natural areas into different management zones will help to ensure management practices are appropriate to each area.
- ▶ Manage infrastructure

Planning, budgeting and implementing infrastructure in natural areas is often an effective way to control threats as well as increasing public awareness of the biodiversity value of an area. The following provides some examples:

 - ▶ Fence construction and/or maintenance – Planning and budgeting for the construction of fences to control access is often an effective management action to protect biodiversity. Existing fences should be checked and maintained at regular intervals to ensure access is through controlled entry points. Excessive clearing of native vegetation near fences is not necessary and should be avoided.
 - ▶ Path construction and maintenance - Align 'new' paths along existing tracks or other areas of past disturbance. Native vegetation should not be cleared to install paths unless there is absolutely no alternative. In this situation, ask whether a path is truly needed? Remember that every path is an on-going source of disturbance factors within the site. Ensure that imported materials used for construction or maintenance of paths is free of weed seed, diseases and pollutants. Close and revegetate any unnecessary tracks.
 - ▶ Interpretative signage - Interpretative signage clearly indicating the importance of the biodiversity resource should be placed in strategic locations as close to the path as possible. It should not be necessary to clear any native vegetation in erecting the signage. The signage should be robust to avoid maintenance requirements.



It is important that surrounding residents and users of natural areas are aware of the importance of the native flora and fauna existing in local reserves. Signage such as this one raises community awareness. Photo: A Stubber.

Natural Area Restoration Plan (regeneration and revegetation)

Natural area restoration can encompass a broad range of activities from assisted natural regeneration to fabrication of new areas (Figure 13). For the purposes of biodiversity conservation and these Guidelines the definition of natural areas does not include areas created by rehabilitation or fabrication. In addition, only some reconstructed areas are included (areas with original soils and some original vegetation components present). All restoration work needs to be based on the key principles of natural area regeneration (Buchanan 1989). The vegetation condition map prepared during the initial field assessment and associated notes and mapping of various threats will identify areas that require restoration activities. The techniques to be used in these areas will depend on the threat/s present and the condition of the vegetation. Based on the scale of Keighery (1994) areas mapped as in Very Good or better condition still have natural regeneration processes occurring. Therefore restoration needs to focus on controlling threats with as little disturbance as possible to these areas so that natural regeneration can continue unaffected. Good examples of the activities related to natural area restoration are provided in Figure 13.

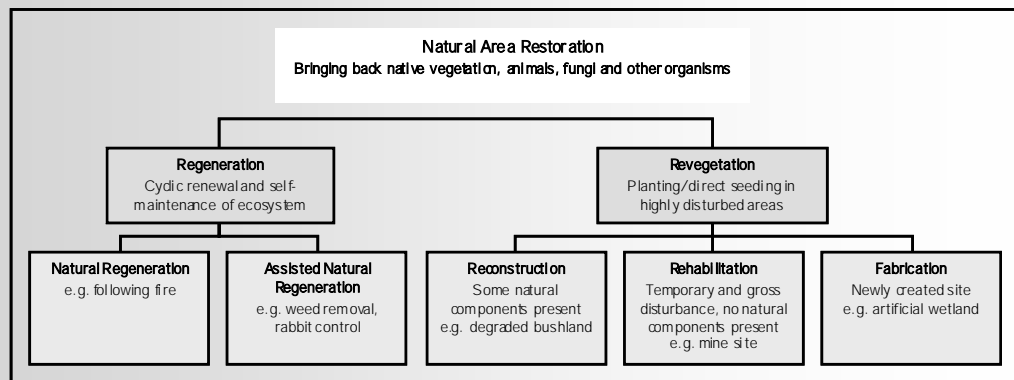


Figure 13: Natural area restoration concepts (adapted from Corbyn unpub. 2003, Kaesehagen unpub. 2001 and McDonald 1996)

Revegetation with local provenance material should not be necessary in Very Good or better condition areas. For areas in Good condition, regeneration techniques may need to be combined with some level of revegetation to compliment the slower rate of natural regeneration that occurs in these more disturbed sites. For areas in Degraded or poorer condition revegetation will be required, however, it must be considered whether allocating resources and funding to revegetate these areas is a management priority.

Weed control is usually one of the major activities required for restoration and should be undertaken in the context of an overall plan for restoration. The field assessment templates will identify weeds that are localised in their distribution within the reserve and can be treated or removed immediately. Weed survey and the identification and mapping of priority species for control will allow development of recommended actions to control weeds as part of a restoration plan. Weed control in Degraded or poorer condition areas may not be a management priority once the need for associated regeneration and revegetation activities are taken into account.

Revegetation not directly associated with management of a significant natural area should be of a low priority. Revegetation by direct seeding and/or planting of local provenance species is most appropriate in the following situations:

- ▶ degraded areas where weed removal has occurred in accordance with restoration planning
- ▶ areas requiring revegetation for erosion control
- ▶ closed tracks if natural regeneration is not occurring
- ▶ degraded wetlands and waterways to restore ecological function and catchment health
- ▶ degraded areas that occur within Regional Ecological Linkages and local ecological linkages.

To meet revegetation requirements a seed collection, storage and propagation strategy is required. The sites and species to be targeted for collection need to be identified well in advance. Time should be allowed to collect enough seed to represent as closely as possible the full range of species expected to occur in the revegetation site. Consideration needs to be given to seed set and maturity times, viability of seed, storage and dormancy issues for targeted species. Some species are better grown from cuttings or propagated through tissue culture.

Strategic rubbish removal may be required as part of the natural area restoration plan. Strategic rubbish removal refers to removal of major rubbish that is threatening the condition of the natural area as identified through the Natural Area Initial Assessment templates (for example, dumped soil, plant material, construction waste). Consider carefully what will be removed and how. In some circumstances, more damage can be done by removal than by leaving the area as it is. Aim to remove material that is obviously posing a threat to vegetation, wetland or waterway condition, for example, dumped garden waste or soil containing invasive weed species. Old cars, car parts and metal objects can be important for fauna habitat especially in frequently burnt areas where few fallen logs remain. Decisions to retain rubbish as possible habitat should be carefully considered as it has the potential to portray an image of neglect and attract further misuse of the reserve. Logs, branches and leaf litter in bushland, wetlands and waterways are also important for fauna habitat and to maintain ecosystem processes, so do not remove them. General rubbish removal can occur for litter such as paper and other waste that is easily collected on foot without damaging the vegetation, wetland or waterway. This simple action demonstrates to the community that the area is valued and is not to be treated as a wasteland.

10.4.5. Estimating management costs

The final outcomes and the decisions made relating to the extent of management of Local Government controlled and managed natural areas often depend on the associated costs. Table 29 in Section 22 provides estimated costs for some management related activities and actions. All costs for the protection and

management of Local Government controlled and managed natural areas should be identified over a five-year period so that they can be integrated into Local Government corporate and financial planning through the Principal Activities Plan.

10.4.6. Support of community groups

There are currently more than 500 community-based natural area management groups operating in the PMR, with varying levels of experience and capacity to manage natural areas. Many of these groups have been actively caring for local reserves for a number of years and many have attracted significant funding for the preservation and management of these areas. They provide the eyes and ears on the ground on a daily basis and can often alert the management authority to issues and threats while they are still relatively easy to manage.



Planting by the Friends of Wilson Wetland Group. Groups such as the Wilson Wetland Group are important to assist in managing and looking after many natural areas. Support and funding of community groups will need to be considered by a Local Government preparing a Local Biodiversity Strategy. Photo: Friends of Wilson Wetland Group (supplied by Urban Nature).

The skill level in each community group varies enormously, with many groups having significant levels of expertise in flora and fauna identification and management which can inform the management of the area, while others will require more technical support from Local Government staff. Most, if not all of these groups seek to work effectively with Local Government and other agencies to undertake effective management of these areas. Support by Local Government of community based natural area management groups requires effective communication and may involve the provision of financial support and technical assistance. Since biodiversity conservation priorities and the priorities of community groups and residents to manage local reserves will not always be identical, Local Government should consider preparing a separate budget for community involvement in the management of natural areas.

Contractual agreements

To formalise communication with and provide financial and technical support to community groups Local Government may like to consider developing a contractual agreement with community groups. The purpose of the contractual agreement would be to ensure that both the Local Government and the community groups are aware of each others vision, roles and responsibilities in relation to the specific management of a natural area. Examples of agreements exist in the Shire of Mundaring and Shire of Kalamunda.

With an effective working agreement between Local Government and community-based natural area management groups, significant biodiversity outcomes can be achieved.

10.4.7. Monitoring and evaluation

Effective, ongoing monitoring and evaluation is the cornerstone of adaptive management. Monitoring and evaluation programs are put in place to gauge the success of management actions as well as identifying areas where changes in objectives or techniques will be beneficial. The initial assessment process completed for all natural areas under Local Government control will provide some of the baseline data needed to design a good program. In particular the vegetation condition map will be invaluable as an indicator that can measure whether management strategies have been successful in maintaining or improving condition over time.

10.5. Formalising the protection status of Locally Significant Natural Areas

To achieve formal protection of Locally Significant Natural Areas (LSNAs), Local Government must ensure that appropriate mechanisms are recognised within their Town Planning Scheme (TPS). This can be achieved through either a:

- ▶ Scheme Review
- ▶ Scheme Amendment.

10.5.1. Scheme Review

A Scheme Review which is required every 5 years under the Town Planning and Development (TPD) Act 1928 provides an opportunity to introduce conservation zones and Special Control Areas to conserve biodiversity. The scheme review process requires Local Governments to prepare a Local Planning Strategy that:

- ▶ sets out the long-term planning directions for the Local Government
- ▶ applies State and regional planning policies
- ▶ provides the rationale for the zones and other provisions of the scheme.

Key outputs of the Local Biodiversity Strategy that ultimately need to be included in the Local Planning Strategy include:

- ▶ Local Biodiversity Strategy Action Plan
- ▶ LPP for Biodiversity Conservation
- ▶ Incentives Strategy for Private Land Conservation
- ▶ protection status of LSNAs.

Importantly, reference should be made in the Local Planning Strategy to the role that the LPP and the Incentives Strategy will play in providing a process for assessing the ecological values of those natural areas not field assessed during the development of the Local Biodiversity Strategy. The WAPC is required to endorse local planning strategies as they provide the strategic basis for a TPS and ensure consistency with State and regional policies (Ministry for Planning 2000).

10.5.2. Scheme Amendment

In situations where a Local Government has recently undertaken and completed a Scheme Review or does not intend on undertaking a Scheme Review for a number of years, the Local Government may wish to initiate a Scheme Amendment to introduce appropriate zoning, Special Control Areas and scheme provisions to recognise formal protection of natural areas.

10.5.3. Protection and retention mechanisms

The following protection and retention mechanisms should be considered for introduction to the TPS through either Scheme Review or Scheme Amendment processes:

- ▶ Conservation zoning

A Conservation zone should be specifically designed to protect and manage natural areas on private land to limit threats and disturbance on them (see Section 15.2). An example of a conservation zone introduced by the Shire of Serpentine Jarrahdale through the scheme amendment process is provided in Appendix 3.
- ▶ Covenant

Conservation covenants are registered on the title of the land to control the use of the land so as to protect the natural area (see Section 15.2). When a conservation covenant is applied, the land should be zoned consistent with the conditions of the covenant (i.e. conservation zoning) because determinations relating to inconsistencies between the TPS and a covenant will rule in favour of the TPS. Alternatively, clauses can be inserted into the TPS to specifically recognise the covenants.
- ▶ Special Control Areas

Special Control Areas can be used as a tool to assist in the retention of Locally Significant Natural Areas. Special Control Areas can be introduced to a scheme to define a particular area of land where a specific planning issue needs to be addressed (e.g. protection of natural areas, see Section 15.2). The provisions applying to the special control area apply in addition to the provisions applying to any underlying zone or reserves and any general provisions of the scheme. An example of the application of Special Control Areas is the Bush Forever Protection Areas recognised in the Draft Statement of Planning Policy (SPP): Bushland Policy for the Perth Metropolitan Region (Western Australian Planning Commission in preparation). Although Special Control Areas cannot be considered as a protection mechanism for natural areas in their own right, they can be used to retain important natural areas (and then a mechanism such as a Conservation zone or covenant can be implemented to protect the area).

10.5.4. Application of protection mechanisms

Once the relevant zonings and provisions for biodiversity conservation are recognised in the TPS, Scheme Amendments can be initiated to formally recognise the protection of LSNAs identified through application of the LPP and the Incentives Strategy following the review or initial amendment of the scheme.

10.5.5. Reporting on Local Natural Area protection status

It is important that the community is kept informed on the current protection status of LNAs within the Local Government area. For this purpose it is recommended that a map showing the following be prepared (see Figure 14):

- ▶ LSNAs – protected (protection formalised through appropriate mechanism)
- ▶ LSNAs - retained (clearing or development of the natural area has been refused but protection has not been formalised)
- ▶ LSNAs - not retained (clearing or development of the natural area has been approved)
- ▶ natural area not locally significant – retained (LNA is not locally significant but clearing or development of the natural area has been refused)
- ▶ natural area not locally significant – not retained (LNA is not locally significant and the clearing or development of the natural area has been approved)
- ▶ Local Natural Areas - not assessed

This map can form part of a Local Government's state of the environment report.

Using the above mapping approach, the Local Government and community are able to track the progress of the Strategy's implementation and the performance and outcomes from the LPP, Incentives Strategy and management of Local Government lands. LNA's that are confirmed as locally significant will be shown as either protected, retained or cleared. LNAs that have not been assessed will be subject to future assessment through either the LPP or Incentives Strategy.

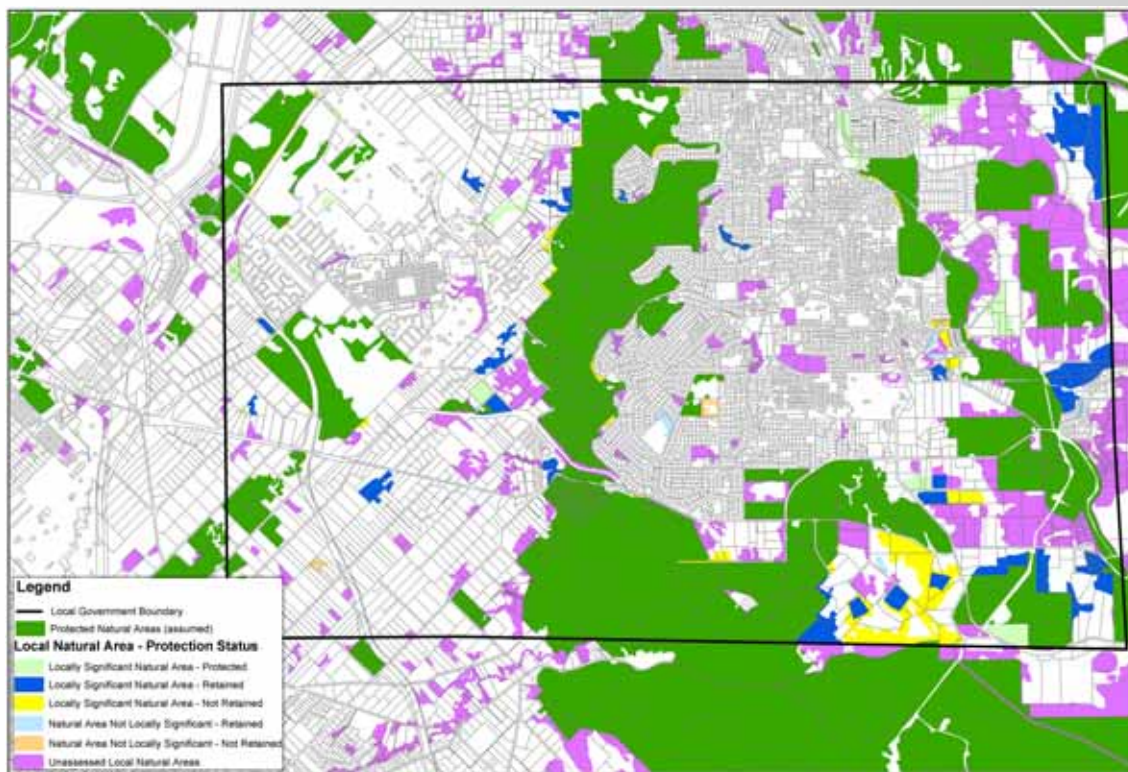


Figure 14 Local Natural Area Protection Status

10.6. Identification of Locally Significant Natural Areas

The assessment of natural areas to verify and determine their biodiversity value is an important part of the LPP, the Incentives Strategy and the management of Local Government lands. To achieve this, these Guidelines encourage a two-stage ecological assessment process: desktop assessment and field assessment. Section 12 in Part C provides standard templates and describes in more detail the type of information that is collected during the desktop and field assessment process. This assessment process is required before any natural area can be classified as locally significant.

10.6.1. Desktop and field assessment

The desktop assessment of natural areas provides important background information required for field assessment. A 'Natural Area Initial Desktop Assessment template' has been developed (refer to Section 12.2) that identifies all the necessary information that will be required prior to undertaking field assessment.

Existing Local Government and community knowledge, together with information from the Potentially Locally Significant Natural Area (PLSNA) dataset can be summarised using the Natural Area Initial Desktop Assessment template provided in these Guidelines (Section 12.2). GIS information is not available to address all Local Significance Criteria. It is worth advertising the intention to compile background information on natural areas before starting the field assessment to allow existing site-specific field based information to be compiled. It can save valuable time and avoid



The desktop assessment of natural areas provides important background information prior to undertaking a field assessment. A 'Natural Areas Initial Desktop Assessment template' has been produced by the Perth Biodiversity Project to assist Local Governments collect this information. Photo: K Savage.

unnecessary replication of information. However, note that the quality of any previously collected field information must be considered before it is used.

The field assessment of natural areas will allow collection of on-ground, area-specific information that is required to determine which areas meet Local Significance Criteria. Field assessment aims to verify the regional, remotely collected information and to collect the area specific information that can only be determined by field investigations. During the field assessment ecological values; current condition; disturbance

factors and threatening processes and, if present; existing management infrastructure is documented. Thus, if an area proves to be locally significant, the initial information required for protection and management is already collected.

Two templates have been produced for the field assessment process – Natural Area Initial Field Assessment A and B templates. These templates are based on current field survey techniques for flora and vegetation survey in the region. Copies of these templates are provided in Sections 12.3 and 12.4 as well as further detailed information relating to the use of the templates (including the skill level of assessors that is required).

The templates can provide the basis for creating and building a standard database on the natural areas occurring within a Local Government area. They may also be used to compile a regional database. Before conducting field assessments, a Natural Area Initial Desktop Assessment template needs to be completed for each LNA so that existing information is compiled and can be checked during the field assessment.

Estimating the viability of natural areas

The viability of a natural area is an important consideration when determining priorities for the protection of Locally Significant Natural Areas and, if necessary, how much of each natural area to protect. It is not possible to establish standard viability criteria for the wide range of viability issues that affect the various ecological communities occurring in the PMR. Guidance to assist Local Governments in predicting viability (based on an assessment of easily measured viability issues affecting natural areas) is provided in Section 6.1. To assist Local Government in incorporating viability issues into the ranking of natural areas, scores have been determined for each of the easily measured viability issues (size, shape, perimeter to area ratio, vegetation condition and connectivity) to provide a Viability Estimate score. This scoring system is provided in the Natural Area Initial



Once all the desktop information has been collected, all natural areas will need to be assessed in the field to determine if they meet Local Significance criteria or otherwise. In this photograph, Local Government officers are using the 'Natural Areas Initial Field Assessment template A' to assess the ecological values of a Local Government reserve. Photo: K Savage.

Assessment Summary template (Section 12.5). This scoring system should be considered as indicative only as it takes into account only some of the issues that determine viability and has not yet been tested in the field.

10.7. Guidance on prioritising Locally Significant Natural Areas

There will be various points in the local biodiversity planning process where Local Governments will need to prioritise Local Natural Areas to maximise protection or management outcomes.

This section provides guidance on a prioritisation process for natural areas based on ecological rationale and it takes into account current legislation and Government policy. The ecological prioritisation framework recommended is designed for where the ecological values of a natural area have been confirmed as locally significant in the field. However, the framework can also be applied to instances where field assessment is yet to occur, and this is described in Section 10.7.3.

Ideally, prioritisation of natural areas for protection or management related purposes should only occur after all areas have been assessed in the field to determine which areas meet the Local Significance Criteria. This includes circumstances where Locally Significant Natural Areas (LSNAs) may be prioritised for:

- ▶ protection or retention within a greater area as part of a development proposal (eg structure plan) being assessed under the LPP
- ▶ delivery of financial/technical assistance to landholders under the Incentives Strategy
- ▶ protection and management where they occur on Local Government managed lands.

For many Local Governments in the PMR, the extent of the biodiversity resource within their area will be extremely large, and much of it may exist in private ownership. In these circumstances prioritisation will often need to occur to sort or target natural areas for field assessment. This includes where Local Governments are:

- ▶ applying the Local Planning Policy for Biodiversity Conservation (LPP)
- ▶ targeting landholders for involvement in the Incentives Strategy for Private Land Conservation
- ▶ planning for the management of biodiversity on Local Government lands.

10.7.1. The ecological prioritisation framework for protection of natural areas

The framework below places natural areas into a primary priority of 1 (A, B, C), 2 or 3 based primarily on ecological values as described by the Local Significance Criteria. In some instances, natural areas may need to be prioritised within the initial Priority 1, 2 and 3. Table 10 provides a suggested framework for further prioritising LSNAs once they have been assigned a priority of 1 (A, B, C), 2 or 3. Some LSNAs will need to go through more steps than others, however within each Priority level, the final ranking is from those areas having the highest viability estimate to those having the lowest. The Natural Area Initial Assessment Summary Template (Section 12.5) provides a simple viability estimate and will indicate whether a natural area meets one or more of the Local Significance Criteria.

In some cases it has not yet been possible to put in place mechanisms to protect these high value LSNAs. In other cases, decisions will already have been made to exclude these areas from Federal, State and/or regional biodiversity conservation plans (such as Bush Forever), due to socio-economic constraints. It may be difficult to protect all Priority 1 LSNAs due to current socio-economic constraints. Therefore the Priority 1 LSNAs have been further broken down into Priority 1A, 1B and 1C.

▶ Priority 1A

The Priority 1A LSNAs are natural areas that are of high value in a regional (or greater) context for their ecological values, even if this has not been formally recognised in current government legislation and/or policy. They are natural areas that:

- ▶ meet any of the regional representation criteria (except for Criteria 1 a) ii) or iii) - see below)
- ▶ meet any of the rarity criteria
- ▶ are part of a regional ecological linkage or
- ▶ meet any of the criteria for protection of wetland, streamline and estuarine fringing vegetation and coastal vegetation.

Where a development proposal has the potential to impact significantly on a Priority 1A LSNA and the Local Government can not prevent the impacts through negotiations with the development proponent, then Local Government is expected, and in some cases required by law, to refer these development proposals to the Federal Government and/or State Government. Referral requirements to the various State and Federal Government agencies are provided in the sample LPP (Section 13.2). It is good practice for these agencies to be notified as soon as possible of proposed developments within high value LSNAs or adjacent to designated conservation areas, even if significant impacts are likely to be avoided. These agencies can provide valuable assistance in developing alternative development options that are compatible with conservation. Various policies and/or guidelines exist to assist in decision-making with regard to these high-value natural areas. It is not the sole responsibility of Local Government to try and protect these areas.

Guidance Statement No. 10 (Environmental Protection Authority 2003a) provides detailed information on what is expected from State Government for development proposals with the potential to remove or negatively impact on natural areas that are of high value in a regional (or greater) context for their ecological values. This includes development proposals within 500 m of designated conservation areas such as Bush Forever Sites or CALM Managed Estate, due to the effects adjacent land uses can have on conservation areas.

▶ Priority 1B

These are LSNAs within the Bush Forever Study Area that only meet the following Local Significance Criterion:

1. Representation a) Regional ii) of an ecological community with only 1500 ha or 30% or less (whichever is the greater) remaining in the IBRA subregion.

This criterion is designated Desirable (see Section 5.2) for the Bush Forever Study Area because of socio-economic constraints. Previous decision-making processes have determined that State Government will allocate resources to protecting and managing regionally significant bushland areas within the Swan Coastal Plain (SCP) portion of the PMR (the Bush Forever Study Area) using a criterion aimed at protecting at least 10% or 400 ha (whichever is the greater) of an ecological community's remaining extent measured across the Bush Forever Study Area (Government of Western Australia 2000a). Thus, while natural areas meeting only Local Significance Criterion 1 a) ii) can still be argued to be of high ecological value, they are designated in these Guidelines as Priority 1B because there is unlikely to be significant support from the State or Federal Government to protect and manage these areas. This situation may change as the new Clearing permit

system under the amended Environmental Protection Act 1986 comes into operation or as Regional Natural Resource Management (NRM) initiatives are developed and resourced.

▶ Priority 1C

These are LSNAs that only meet the following Local Significance Criterion:

1. Representation a) Regional iii) large (greater than 20 ha), viable natural areas in good or better condition of an ecological community with more than 30% remaining within the IBRA subregion.

This criterion is also designated Desirable (see Section 5.2), again due to socio-economic constraints that have required a threshold for retention of native vegetation cover to be set by State and Federal Government policy makers at 30%.

The 30% threshold is a generalisation that is based on a range of studies (Section 17). Unfortunately none of these studies were based in the unique ecological communities of the PMR. In addition, once an ecological community reaches the 30% threshold based on remotely measured statistics derived from satellite imagery or aerial photography, invariably a much smaller proportion than this will remain on the ground that is intact, viable and in good condition and so able to maintain biodiversity. Therefore, for natural areas meeting criterion 1 a) iii) there is the opportunity to select the most viable areas with the best condition and the greatest potential for connectivity to other good condition areas to meet the target of 30%.

It is also important to remember that higher thresholds for native vegetation cover may be required for natural resource management objectives other than biodiversity conservation, for example, maintenance of surface or groundwater quantity and quality.

Priority 2 and Priority 3 - Other Locally Significant Natural Areas

The prioritisation of the remaining LSNAs (those meeting the remaining criteria as listed in Table 11) for retention and protection from a biodiversity perspective can then be made using the following:

- ▶ the designation of the specific criterion or criteria met as either Essential (Priority 2) or Desirable (Priority 3)
- ▶ if only Desirable criteria are met, prioritise according to the number of criteria the natural area meets.

Table 11. Summary of Local Significance Criteria to identify Priority 1, Priority 2 and Priority 3 Locally Significant Natural Areas. Priority 1 LSNAs are of high value in a regional (or greater) context.

Criteria	Primary priority
1. Representation a) Regional	
i) Recognised International, National, State or Regional Conservation Value (outside Bush Forever Sites and CALM Managed Estate), for example, System 6 Areas in the Jarrah Forest outside CALM Managed Estate	Priority 1A
ii) of an ecological community with only 1500 ha or 30% or less (whichever is the greater) remaining in the IBRA subregion	Priority 1A (Jarrah Forest only) Priority 1B (Bush Forever Study Area only)
iii) large (greater than 20 ha), viable natural areas in good or better condition of an ecological community with more than 30% remaining within the IBRA subregion	Priority 1C
iv) of an ecological community with only 1500 ha or 15% or less (whichever is the greater) protected for conservation in the Jarrah Forest IBRA subregion	Priority 1A (Jarrah Forest only)
v) of an ecological community with only 400 ha or 10% or less (whichever is the greater) protected for conservation in Bush Forever Study Area	Priority 1A (Bush Forever Study Area only)
3. Rarity	
i) of an ecological community with only 1500 ha or 10% or less (whichever is the greater) remaining in IBRA subregion	Priority 1A
ii) of an ecological community with only 400 ha or 10% or less (whichever is the greater) remaining in Bush Forever Study Area	Priority 1A
iii) contains a TEC	Priority 1A
iv) contains DRF, Specially Protected Fauna or significant habitat for these fauna	Priority 1A
v) contains Priority or other significant flora or fauna or significant habitat for these fauna	Priority 1A
4. Maintaining Ecological Processes or Natural Systems - Connectivity	
i) natural areas acting as stepping stones in a regionally significant ecological link	Priority 1A
5. Protection of Wetland, Streamline and Estuarine Fringing Vegetation and Coastal Vegetation	
i) Conservation or Resource Enhancement Category Wetland plus buffer	Priority 1A
ii) EPP Lake plus buffer	Priority 1A
iii) riparian vegetation plus buffer	Priority 1A
iv) floodplain area plus buffer	Priority 1A
v) estuarine fringing vegetation plus buffer	Priority 1A
vi) coastal vegetation on foredunes and secondary dunes	Priority 1A

Criteria	Primary priority
1. Representation b) Local	
i) of an ecological community with 10% or less remaining within Local Government area	Priority 2
ii) of an ecological community with 30% or less remaining within Local Government area	Priority 2 Jarrah Forest only Priority 3 Bush Forever Study Area only
iii) large, viable natural areas in good or better condition of an ecological community with more than 30% remaining within Local Government area	Priority 3
2. Diversity	
i) natural area in good or better condition that contains upland and wetland structural plant communities	Priority 2
4. Maintaining Ecological Processes or Natural Systems - Connectivity	
ii) natural areas acting as stepping stones in a locally significant ecological link	Priority 2

10.7.2. Further prioritisation of Priority 1A natural areas based on socio-economic opportunities for protection

In some circumstances further prioritisation of natural areas meeting or having the potential to meet Priority 1A criteria may be required. For example some Local Governments may need to further prioritise natural areas that have been confirmed as meeting Priority 1A criteria (through field assessment) to determine priorities for retention or protection (eg in a District Structure Planning process). This prioritisation process should not be used for prioritising for management. Where natural areas are already protected and it is necessary to prioritise these areas for management, then viability should be used.

An approach to further prioritise natural areas that meet or potentially meet Priority 1A criteria is outlined in Table 12 and is based on the precedent set by application of current Federal and State Government legislation and policy for retention of natural areas (not by ecological values). Local Significance Criteria 3) i), 3) iii) and 3) iv) have been designated a further prioritisation of 1A1 given that Federal and State Government biodiversity conservation legislation and policy is focused primarily on the retention of rare and threatened species and communities. Local Significance Criteria 3) ii) and 3) v) are designated a further prioritisation of 1A2 and 1A4 respectively as the retention of natural areas meeting these criteria compared to other rarity criteria has not been as well supported by Federal and State legislation and policy. Further prioritisation of Priority 1A criteria relating to the protection of wetland, streamline and estuarine fringing vegetation and coastal vegetation are all designated a further prioritisation of 1A4 with the exception being criterion 5) i) which is designated a further prioritisation of 1A3 due to the strong support from the State Government for retention of Conservation and Resource Enhancement category wetlands. The recognition of retaining ecological communities at a certain threshold is relatively new and thus not as strongly integrated into Federal and State Government legislation and policy, consequently a further prioritisation of 1A5 has been designated to Local Significance Criteria 1) ii), 1) iv) and 1) v). Similarly, recognition for the importance of maintaining ecological process through connectivity {criterion 4) i)} is only tenuously reflected in Federal and State Government legislation and policy and as such is designated a further prioritisation of 1A6. Where a natural area meets more than one of these criteria it should be ranked according to the criteria assigned the highest level of priority.

Table 12. Prioritisation within the Priority 1A natural areas based on Federal and State government legislation and policy providing opportunities for protection.

Criteria	Further Prioritisation within Priority 1A	Key Legislation/Policy
3. Rarity		
i) of an ecological community with only 1500 ha or 10% or less (whichever is the greater) remaining in the Interim Bioregionalisation of Australia (IBRA) subregion	1A1	<ul style="list-style-type: none"> ▪ National Targets and Objectives for Biodiversity Conservation 2001–2005 (Commonwealth of Australia 2001b) ▪ EPA Guidance Statement No. 10 (Environmental Protection Authority 2003a)
iii) contains a Threatened Ecological Community (TEC)	1A1	<ul style="list-style-type: none"> ▪ Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (but only for the most threatened TECs) ▪ CALM Draft Policy Statement No. 9 (Department of Conservation and Land Management 2003a) and database of TECs ▪ EPA Guidance Statement No. 33 (Environmental Protection Authority 1997) ▪ EPA Guidance Statement No. 10 (Environmental Protection Authority 2003a)
iv) contains Declared Rare Flora (DRF), Specially Protected Fauna or significant habitat for these fauna	1A1	<ul style="list-style-type: none"> ▪ Environment Protection and Biodiversity Conservation Act 1999 (but not all are listed) ▪ Wildlife Conservation Act 1950 and gazetted flora and fauna lists ▪ EPA Guidance Statement No. 33 (Environmental Protection Authority 1997) ▪ EPA Guidance Statement No. 10 (Environmental Protection Authority 2003a)
ii) of an ecological community with only 400 ha or 10% or less (whichever is the greater) remaining in Bush Forever Study Area	1A2	<ul style="list-style-type: none"> ▪ Bush Forever (Government of WA 2000 a&b) ▪ EPA Guidance Statement No. 10 (Environmental Protection Authority 2003a)
1. Representation a) Regional		
i) Recognised International, National, State or Regional Conservation Value (outside Bush Forever Sites and CALM Managed Estate), for example, System 6 Areas in the Jarrah Forest outside CALM Managed Estate	1A2	<ul style="list-style-type: none"> ▪ EPBC Act for some areas ▪ EPA Guidance Statement No. 33 (Environmental Protection Authority 1997) ▪ Forest Management Plan 2004 – 2013 (Conservation Commission 2003) for proposed conservation reserves ▪ System 6 recommendations in the Jarrah Forest outside CALM Managed Estate (Department of Conservation and Environment 1983) ▪ EPA Guidance Statement No. 10 (Environmental Protection Authority 2003a) ▪ Environment and Natural Resources (ENR) SPP No. 2 (Government of Western Australia 2002e)

Criteria	Further Prioritisation within Priority 1A	Key Legislation/Policy
5. Protection of wetland, streamline and estuarine fringing vegetation and coastal vegetation		
i) Conservation or Resource Enhancement Category Wetland plus buffer	1A3	<ul style="list-style-type: none"> ▪ Water and Rivers Commission Position Statement: Wetlands (Water and Rivers Commission 2001) ▪ Wetlands Conservation Policy for Western Australia (Government of Western Australia 1997) ▪ EPA Position Statement No. 4: Environmental Protection of Wetlands (preliminary) (Environmental Protection Authority 2001) ▪ EPA Guidance Statement No. 33 (Environmental Protection Authority 1997) ▪ ENR SPPNo. 2 (Government of Western Australia 2002e)
3. Rarity		
v) contains Priority or other significant flora or fauna or significant habitat for these fauna	1A4	<ul style="list-style-type: none"> ▪ CALM Draft Statement Policy No. 9 (Department of Conservation and Land Management 2003a) and Priority Flora and Fauna lists ▪ EPA Guidance Statement No. 33 (Environmental Protection Authority 1997) ▪ EPA Guidance Statement No. 10 (Environmental Protection Authority 2003a)
5. Protection of wetland, streamline and estuarine fringing vegetation and coastal vegetation		
ii) Lake identified in the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992 (EPP Lakes) plus buffer	1A4	<ul style="list-style-type: none"> ▪ Environmental Protection (Swan Coastal Plain Lakes) Policy (Government of Western Australia 1992b) ▪ EPA Guidance Statement No. 33 (Environmental Protection Authority 1997) ▪ ENR SPPNo. 2 (Government of Western Australia 2002e)
iii) riparian vegetation plus buffer	1A4	<ul style="list-style-type: none"> ▪ ENR SPPNo. 2 (Government of Western Australia 2002e) ▪ EPA Guidance Statement No. 33 (Environmental Protection Authority 1997) for Swan and Canning Rivers and Ellen Brook ▪ Environmental Protection (Swan and Canning Rivers) Policy (Government of Western Australia 1998a) for natural areas within the Swan River Trust Management Area ▪ Peel-Harvey Coastal Plain Catchment SPP No. 2.1 (Government of Western Australia 1992d) ▪ Environmental Protection (Peel Inlet-Harvey Estuary) Policy (Government of Western Australia 1992a) ▪ WAPC DC Policy 2.3 (Western Australian Planning Commission 2002)

Criteria	Further Prioritisation within Priority 1A	Key Legislation/Policy
iv) floodplain area plus buffer	1A4	<ul style="list-style-type: none"> ▪ EPA Guidance Statement No. 33 (Environmental Protection Authority 1997) ▪ ENR SPP No. 2 (Government of Western Australia 2002e) ▪ Environmental Protection (Swan and Canning Rivers) Policy (Government of Western Australia 1998a) for natural areas within the Swan River Trust Management Area ▪ Peel-Harvey Coastal Plain Catchment SPP No. 2.1 (Government of Western Australia 1992d) ▪ Environmental Protection (Peel Inlet-Harvey Estuary) Policy (Government of Western Australia 1992a) ▪ WAPC DC Policy 2.3 (Western Australian Planning Commission 2002)
v) estuarine fringing vegetation plus buffer	1A4	<ul style="list-style-type: none"> ▪ EPA Guidance Statement No. 33 (Environmental Protection Authority 1997) ▪ ENR SPP No. 2 (Government of Western Australia 2002e) ▪ Environmental Protection (Swan and Canning Rivers) Policy (Government of Western Australia 1998a) for natural areas within the Swan River Trust Management Area ▪ WAPC DC Policy 2.3 (Western Australian Planning Commission 2002)
vi) coastal vegetation on foredunes and secondary dunes	1A4	<ul style="list-style-type: none"> ▪ SPP No. 2.6: State Coastal Planning Policy (Government of Western Australia 2003c) ▪ EPA Guidance Statement No. 33 (Environmental Protection Authority 1997) ▪ ENR SPP No. 2 (Government of Western Australia 2002e) ▪ WAPC DC Policy 2.3 (Western Australian Planning Commission 2002)
1. Representation a) Regional		
ii) of an ecological community with only 1500 ha or 30% or less (whichever is the greater) remaining in the IBRA subregion	1A5 Jarrah Forrest only NB: No areas meet this criterion at present	<ul style="list-style-type: none"> ▪ National Targets and Objectives for Biodiversity Conservation 2001–2005 (Commonwealth of Australia 2001b) ▪ EPA Guidance Statement No. 10 (Environmental Protection Authority 2003a)

Criteria	Further Prioritisation within Priority 1A	Key Legislation/Policy
iv) of an ecological community with only 1500 ha or 15% or less (whichever is the greater) protected for conservation in the Jarrah Forest IBRA subregion	1A5 Jarrah Forrest only NB: only the Darling Scarp vegetation complex meets this criterion at present	<ul style="list-style-type: none"> ▪ Forest Management Plan 2004 – 2013 (Conservation Commission 2003) ▪ EPA Guidance Statement No. 10 (Environmental Protection Authority 2003a)
v) of an ecological community with only 400 ha or 10% or less (whichever is the greater) protected for conservation in Bush Forever Study Area	1A5 Bush Forever Study Area only	<ul style="list-style-type: none"> ▪ Bush Forever (Government of WA 2000 a & b) ▪ EPA Guidance Statement No. 10 (Environmental Protection Authority 2003a)
4. Maintaining ecological processes or natural systems – connectivity		
i) natural areas acting as stepping stones in a regionally significant ecological link	1A6	<ul style="list-style-type: none"> ▪ Bush Forever (Government of WA 2000 a & b) for Bush Forever Study Area ▪ ENR SPPNo. 2 (Government of Western Australia 2002e) ▪ Forest Management Plan 2004 – 2013 (Conservation Commission 2003)

10.7.3. Priorities for Further Investigation (PFI)

Ideally, the prioritisation of natural areas should only occur once a field assessment has been completed and all the ecological values are confirmed. However it is likely that some Local Governments will need to prioritise potentially Locally Significant Natural Areas at some stages in the preparation or implementation of a Strategy. This prioritisation is usually for the purpose of field assessment, although it may also occur when a Local Government is establishing Natural Area Condition (NAC) targets (see Section 9.2.4).

To assist Local Governments where this initial prioritisation process is required, the Perth Biodiversity Project has developed the PLSNA dataset with information relating to 'Priorities for Further Investigation' (see Table 13). This information is based on remotely collected information and is determined using the hierarchy defined in Table 11. The PLSNA and the PFI information should not be used on its own as a valid argument for protecting or not protecting a natural area. These decisions should only be made once a field assessment has been undertaken. However, PFI can be used to assist in the setting of NAC targets, prioritise where field assessments are undertaken first as part of the implementation of the Incentives Strategy and planning for the protection and management of Local Government lands and help prioritise which field assessments undertaken by development proponents as part of the LPP should be field verified by Local Government.

Table 13. Priorities for Further Investigation (PFI) of Local Natural Areas

Priority for Further Investigation	Local Significance Criteria potentially met
PFI 1	<p>Areas potentially meeting one or more Local Significance Criteria that identify PLSNAs of high value in a regional (or greater) context (Table 11)</p> <p>PFI 1A - Areas potentially meeting one or more Essential Local Significance Criteria in the Priority 1 category (Table 11)</p> <p>PFI 1B - Areas potentially meeting only the Desirable Local Significance Criterion 1 a) ii) (Table 11)</p> <p>PFI 1C - Areas potentially meeting only the Desirable Local Significance Criterion 1 a) iii) (Table 11)</p>
PFI 2	Areas potentially meeting one or more Essential Local Significance Criteria that do not also identify PLSNAs of high value in a regional (or greater) context (Table 11)
PFI 3	Areas potentially meeting one or more Desirable Local Significance Criteria but no Essential Local Significance Criteria that do not also identify PLSNAs of high value in a regional (or greater) context (Table 11)
PFI 4	All remaining natural areas of which some may be found to meet Essential or Desirable Local Significance Criteria following field assessment

The PFI information is based on the same criteria and principles used in the ecological prioritisation framework (Section 10.7.1). The highest priority for further investigation are those designated PFI 1A. This dataset can be used by Local Governments to determine which landholders to target with the Incentives Strategy for Private Land Conservation as well determining which natural areas are the highest priorities for field verification through the LPP. An assessment of the PFI information may also be useful in setting NAC targets for the Local Biodiversity Strategy.

Examples of where a Local Government may need to prioritise natural areas before field assessment include:

- ▶ Application of the LPP (verification of information collected by proponents) Local Governments may wish to verify information collected by development proponents as required under the Local Planning Policy. This may be achieved by visiting the natural area and/or obtain independent expert advice. Any verification by Local Government will require a high level of ecological expertise. Resourcing constraints may mean that not every proposal will be able to be verified by the Local Government. In these instances, Local Governments are encouraged to prioritise natural areas based on the potential values of the site (using the PLSNA dataset) to determine those areas requiring field verification.
- ▶ Determining priorities for targeting the Incentive Strategy for Private Land Conservation - As part of the process for determining landholder eligibility for incentives, field assessment is required to determine the ecological significance of the natural area(s). Local Governments with a large extent of natural areas in private ownership may have to prioritise (and target) those natural areas based on the highest potential biodiversity value (using the PLSNA dataset).
- ▶ Determining priorities for field assessment of Local Government controlled land - Local Governments are encouraged to budget for and undertake field assessment of all reserves managed or controlled by Local Government as soon as possible and over a designated timeframe. For those Local Governments with many reserves under their control, some prioritisation to determine which reserves to assess first may be required if the assessment process is to occur over an extended timeframe (eg two years or longer). In these circumstances, it will be important to target those reserves with natural areas that are Potentially Locally Significant Natural Areas (using the PLSNA dataset) and where little or no known

ecological information exists and/or where no management actions are currently being undertaken.

Some Local Governments may need to further prioritise natural areas that have the potential to meet Priority 1A criteria to undertake field assessment (simply because so much of the resource meets PFI 1A). For example approximately 92% of PLSNAs within the City of Swan potentially meet essential Local Significance Criteria that are considered to be of high value in a regional or greater area (PFI - 1A). Further prioritisation of those areas with potential to meet priority 1A criteria can be achieved through applying the subsequent prioritisation process outlined in Table 12 to the PLSNAs dataset.

10.7.4. Prioritisation for the management of natural areas

It is likely that Local Governments will need to prioritise (for management) natural areas under their control because resources are always finite. This will firstly need to be based on the ecological values of these areas and the ecological prioritisation framework for protection (Section 10.7.1) is suitable for this purpose. Further prioritisation of Priority 1A natural areas (as discussed in Section 10.7.2) is not applicable because it is reliant on socio-economic opportunities for protection only.

The next step to prioritise for management requires an analysis of the level of the threats to each natural area as well as the capacity of the Local Government to ameliorate the threat. This will depend on the individual circumstance of each natural area and each Local Government. Therefore a generic process to guide Local Government in the allocation of management resources and funds cannot be provided.

11. Implementation of Local Biodiversity Strategy (Phase 4)

Phase 4 is where the implementation of the Strategy becomes part of everyday business and the Strategy moves into a 'implement, monitor, evaluate, review' process.

Once the Strategy has been prepared (Phase 3) there will be a number of new activities and existing policy that will need to be implemented, to ensure that the outputs of the Strategy are well integrated into existing and future Council processes, these include:

- ▶ amendment of Town Planning Scheme (TPS)
- ▶ application of Local Planning Policy (LPP)
- ▶ application of the Incentives Strategy for Private Land Conservation
- ▶ management of Local Government land for biodiversity outcomes
- ▶ monitoring and review of the Strategy.

11.1. Resourcing ongoing implementation of the Strategy

A Local Government's Principal Activities Plan (PAP) provides an effective way of budgeting for the Strategy's implementation over a five year period. Forecasts of major future expenditure by Local Government (operating and capital) on the development and implementation of the Local Biodiversity Strategy should have been made initially in Phase 1 and continually refined throughout the development of the Strategy during Phases 2 and 3.

Various outputs developed by the Strategy will have ongoing funding implications that will need to be appropriately addressed in PAP, including:

- ▶ application of the LPP
- ▶ application of the Incentives Strategy for Private Land Conservation
- ▶ management of Local Government land for biodiversity outcomes.

An important consideration is that the Local Government has sufficient expertise available to implement these components of the Strategy.

Some of the major considerations that will face Local Governments as they implement their Strategies are discussed below.

11.2. Amendment of Town Planning Scheme

Once the relevant zonings and overlays for biodiversity conservation are recognised in the TPS (see Section 10.5), Scheme Amendments may need to be initiated to formally recognise the protection of additional LSNAs identified through application of the LPP and Incentives Strategy following the review of the scheme.

11.3. Application of Local Planning Policy and Incentives Strategy for Private Land Conservation

The application of the LPP and Incentives Strategy will need to be implemented beyond the finalisation of the Strategy on an ongoing basis. These two mechanisms provide the greatest opportunity to further protect Local Natural Areas (LNA) required to achieve the objectives and targets of the Strategy.

All mapped LNAs that are indicated by the protection status of 'not assessed' will be subject to either the LPP or Incentives Strategy process in the future. Publicly reporting on the protection status of LNAs on a regular basis will be important.

11.4. Manage Local Government controlled natural areas

The management recommendations and actions for Local Government reserves outlined in the Strategy will need to be implemented, monitored and reviewed on a regular basis.

11.5. Monitoring and review of Strategy

Since the Strategy provides the process and framework for assessing the ecological significance of LNAs and for determining their protection status, it is likely that the future of some LNAs will be unknown (unassessed LNAs) when the Strategy is released. Additionally the implementation of management actions for Local Government reserves will be ongoing. Consequently it is important that progress in these areas is adequately communicated to the community. The indicators developed as part of the Local Biodiversity Strategy Action Plan can be used as the basis for reporting to the community on progress towards achieving the objectives and targets of the Strategy. An important and visual way of keeping the community informed of progress in implementing the Strategy is to regularly update the map that indicates the protection status of natural areas in the Local Government (see Figure 14). It is suggested that a progress report including a map of the protection status of natural areas is prepared every 2-3 years.

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